CLINICAL DECISION MAKING
OF EXPERIENCED DIETITIANS IN
THE ACUTE CARE SETTING

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CERTIFICATE OF AUTHORSHIP

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgment is made in the thesis. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged.

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Name  Ruth Vo

Signature

Date  4th September 2019
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PUBLICATIONS ARISING FROM THIS THESIS


**Abstracts for papers presented at conferences**


**Abstracts for posters presented at conferences**


## ACRONYMS USED IN THIS THESIS

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>CDM</td>
<td>Clinical decision making</td>
</tr>
<tr>
<td>DAA</td>
<td>Dietitians Association of Australia</td>
</tr>
<tr>
<td>BDA</td>
<td>British Dietitians Association</td>
</tr>
<tr>
<td>EBP</td>
<td>Evidence-Based Practice</td>
</tr>
<tr>
<td>SGA</td>
<td>Subjective Global Assessment</td>
</tr>
<tr>
<td>MST</td>
<td>Malnutrition Screening Tool</td>
</tr>
<tr>
<td>EN</td>
<td>Enteral Nutrition</td>
</tr>
<tr>
<td>T/PN</td>
<td>Total/Parenteral Nutrition</td>
</tr>
<tr>
<td>MDT</td>
<td>Multidisciplinary team</td>
</tr>
<tr>
<td>NCPM</td>
<td>Nutrition Care Process Model</td>
</tr>
<tr>
<td>NCPT</td>
<td>Nutrition Care Process Terminology</td>
</tr>
<tr>
<td>ICU</td>
<td>Intensive Care Unit</td>
</tr>
<tr>
<td>NUM</td>
<td>Nurse Unit Manager</td>
</tr>
<tr>
<td>AQF</td>
<td>Australian Qualifications Framework</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
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<td>----------------------------------</td>
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<tr>
<td>Acute care setting</td>
<td>A hospital that has been classified by the Australian Institute of Health and Welfare that provides time-sensitive, individually-orientated diagnostic and curative actions whose primary purpose is to improve health.</td>
</tr>
<tr>
<td>Clinical decision making</td>
<td>The process of making decisions during clinical practice that are concerned with the identification and management of clinical problems.</td>
</tr>
<tr>
<td>Clinical dietetics</td>
<td>The application of the science of nutrition for individual dietary therapy in a professional health care setting by an Accredited Practising Dietitian.</td>
</tr>
<tr>
<td>Critical thinking</td>
<td>Purposeful, self-regulatory judgment which results in interpretation, analysis, evaluation, and inference, as well as explanation of the evidential, conceptual, methodological, criteriological, or contextual considerations upon which that judgment is based.</td>
</tr>
<tr>
<td>Dietitian</td>
<td>An appropriately qualified professional who undertakes the practice of dietetics in individual, group or population settings.</td>
</tr>
<tr>
<td>Problem solving</td>
<td>The process of recognising, defining and analysing a problem to then develop and test solutions followed by evaluating outcomes of such solutions.</td>
</tr>
<tr>
<td>Clinical judgement</td>
<td>The sum of one’s knowledge, cognitive processes, and experience applied to clinical decisions.</td>
</tr>
<tr>
<td>Clinical reasoning</td>
<td>A complex cognitive process that uses formal and informal strategies to gather and analyse patient information, evaluate the significance of this information and weigh alternative actions.</td>
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ABSTRACT

The aim of this research was to deepen understanding of the nature of clinical decision making (CDM) of experienced dietitians in the acute care setting. Research around decision making in clinical dietetics is limited, and research in other areas of dietetics and health care professions offers limited insight into dietitian decision making in the acute care setting. The research reported in this thesis illuminated a nuanced understanding of experienced dietitians’ CDM. This nuanced understanding included how clinical dietitians in acute care make decisions, the place of professional judgement in such decision making, development of CDM expertise and relevance of professional artistry for dietetic practice.

A philosophical hermeneutics approach underpinned this research, utilising three key hermeneutic concepts: hermeneutic circle, a dialogue of question and answer, and fusion of horizons. Text construction involved a series of in-depth semi-structured interviews with ten dietitian participants with a range of 5-30 years of dietetic practice experience. An additional text set was constructed through a reference focus group with five of the ten participants. The reference focus group served as both a member checking strategy and a means for deeper exploration of emerging interpretations.

This research revealed experienced dietitian CDM to be a complex, multidimensional and fluid phenomenon embedded in particular contexts. Core CDM tasks were found to sit within a broad problem identification and solving approach to patient care included prioritising, assessing, care planning, implementing care plans and monitoring patients. These tasks were also revealed to be undertaken through multiple and frequent interactions with other health professionals, patients and carers.

Interprofessional relationships, particularly with medical practitioners, strongly characterised dietitian CDM. These relationships were framed by notions of power to which dietitians strategically responded. Key responses included building relationships, negotiating, advocating, instructing and enabling. Dietitian autonomy was highly contextually dependent on
individual medical practitioners, the clinical specialty, nature of the decision, dietitian expertise and patient scenario.

Dietitian CDM involved multiple cognitive processes but was dominated by clinical judgement. Clinical judgement was revealed as a sophisticated meta reasoning process that was used to manage complexity, guide interactions, individualise patient care plans and synthesise information and knowledge. It enabled efficient and context relevant CDM and was underpinned by both evidence and highly tacit experience-based knowledge. The nature of a dietitian’s CDM was found to change over time and develop through experience. Type and amount of experience, reflection, confidence, supportive workplaces and intrinsic motivation were found to be core interdependent dimensions of developing expertise that shape CDM. The ideal expertise supporting CDM can be depicted by a dietitian with professional artistry with efficiency, adaptability and influence while striving for effective patient care.

The key products of this research are three new models that together offer a conceptual framework which could be used for clinical dietetics education, practice and research. The first, a model of developing dietitian CDM expertise; second, a model of professional artistry in clinical dietetics; and thirdly, a model of the multidimensional nature of dietitian CDM in the acute care setting conveying the core dimensions of tasks, interactions, reasoning, practitioner factors and context.
CHAPTER 1  INTRODUCTION

1.1  RESEARCH OVERVIEW

This thesis reports the findings of research undertaken to deepen understanding of experienced dietitians’ clinical decision making (CDM) in the acute care setting. The research was situated in the interpretive paradigm and utilised a Gadamerian philosophical hermeneutic approach. Two text sets constructed for this research through interviews and a reference focus group were interpreted using hermeneutic strategies of fusion of horizon, hermeneutic circle and dialogue of question and answer.

The focus of the semi-structured interviews was an exploration of what decisions are made by dietitians and what influences these decisions, the role of professional judgement and how expertise that underpins CDM develops following the entry into the profession including the concept of professional artistry. The reference focus group text set provided a form of member checking and facilitated deeper conceptualisation of key themes identified through the interpretation of the interview texts. By combining my interview and reference focus group interpretations I sought to more deeply understand the nature of experienced dietitians’ CDM in the acute care setting.

1.1.1  Research topic and rationale

CDM is an essential and complex component of dietetic practice, and dietitians’ ability to make effective clinical decisions is a significant factor affecting the quality of patient care. CDM is a multidimensional problem-solving activity that focuses on defining patient problems and selecting appropriate therapeutic interventions (Higgs, Jensen, Loftus, & Christensen, 2019). The acute care setting has distinctiveness given the criticality of patient health issues and the focus on short-term treatment as a patient recovers from illness or surgery as different from rehabilitation settings or long term management of chronic illness. CDM involving the use of food and nutrition for wellbeing including as a treatment for patients is complex. Decisions about eating and receiving nutrition can be influenced by environmental, social, behavioural, as well as demographic, psychological,
cultural, economic and physiological factors (Beaudry, Lilley, & Aucoin-Larade, 1991; Freeland-Graves, Nitzke, Academy of Nutrition & Dietetics, 2013; Jones, Furlanetto, Jackson, & Kinn, 2007). The context in which clinical decisions are made can impact on both the process of decision making as well as what decisions can be made by the dietitian for patient care (Carrier et al., 2013; Cervero, 1988; Harper & Maher, 2017; Higgs & Titchen, 2001a). Exploration of how experienced dietitians manage this complexity would inform a better understanding of how to support dietitians in developing the necessary expertise to make clinical decisions and provide quality care for patients in the acute care setting.

Much research in the field of dietetic CDM has been directed towards exploring the acquisition and use of technical knowledge and critical thinking skills for practice and was conducted within the empirco-analytical paradigm. Prior to my research, we have not been able to find any research that has directly reported the nature of dietitian CDM in the acute care context. Instead, dominating dietetics literature has been the development and implementation of research around the Nutrition Care Process Model and Terminology (NCPM/T), a standardised roadmap and language for identifying and solving nutrition problems in any context (Swan et al., 2017). The NCPM is multidimensional, incorporating elements of process, critical thinking, knowledge, interactions with patients/group/stakeholder and emphasises its value in being able to evidence in medical records a dietitian’s effectiveness in a person’s health (Bueche et al., 2008b). As members of the dietetics profession increasingly assert their value and legitimacy among other more established professionals such as those from medicine and nursing, the notion of validating a dietitian’s contribution in the health care environment via the NCPM, a standardised approach to nutrition care, has been welcomed by many dietetic organisations (Dietitians Association of Australia., 2015).

A pivotal component of understanding dietitians’ CDM in the acute care setting is recognition of the broad range of contextual factors in acute care settings that shape how decisions are made and how dietitian decision making expertise develops. Little research has been undertaken that explores the influence of practice setting and its various characterising
elements on dietitians’ CDM. Of concern, recent professional competencies used by universities to guide student assessment, workforce preparation and practice-based education for entry into the dietetics profession have removed any context specific components and focus (Dietitians Association of Australia., 2015; Palermo, Conway, et al., 2016). For example, competencies for graduates no longer relate directly to specific practice setting, such as hospitals or food service or community health. Instead, individual competencies should be able to be observed regardless of the practice setting to accommodate for the increasing variation to roles and settings that dietitians now practice in. This contrasts with an increasing acknowledgement in other health professional literature of the significant influence of a broad range of contextual factors on the nature of CDM, the expertise needed and how this expertise develops (Higgs et al., 2019). Therefore, a deeper understanding of context specific and expertise specific decision making is considered valuable. Continuing with a limited understanding of how acute care dietitian CDM functions and develops may inhibit maintenance and further advancement of the dietitian’s role in delivery of effective care for patients with acute issues in the hospital context. If we can understand it, we can help foster it and therefore contribute more effectively to better patient outcomes. In this thesis, I argue that dietitian CDM needs to be understood by those who formally and informally support the preparation and ongoing professional development of dietitians engaging in this complex practice, such as university academics, placement supervisors and those in the profession who organise and implement professional development. Such research should draw on the perspective of those engaged in CDM (experienced clinical dietitians) in acute care settings.

1.1.2 Research goals and questions
The goal of this research was to explore the nature of experienced dietitian CDM in the acute care setting. In order to deepen my understanding of the topic, I engaged with both interview and reference focus group text sets. Through the gathering of interview text sets, I pursued a deeper and richer understanding of what decisions are made, how they are made including
influences, as well as the role of judgement and artistry and how expertise underpinning decision making develops.

My overarching research question was: What is the nature of dietitian CDM in the acute care setting?

To achieve this understanding, five research sub-questions were devised to guide the research:

1. How do clinical dietitians in acute care make decisions?
2. What is the place of professional judgement in such decision making?
3. When and how does clinical decision making expertise develop?
4. Is the concept and practice of professional artistry relevant for dietetic practice? If so, in what way?

1.1.3 Scope and boundaries of this research

My thesis is based on the perspective that the nature of practice is complex, often messy, unique, value-driven and uncertain (Ewing & Smith, 2001; Fish & Coles, 1998; Schön, 1983). My literature focused on theory relating to CDM and dietetics. CDM is part of clinical practice and linked to professional knowledge, reasoning, skills, traditions and expertise. Key literature on the theoretical framework informing my research is explored in Chapter 2.

This research project is located within the current practice of acute care dietetics, the broader practice of clinical dietetics and the wider provision of health care. From a broad range of potential research areas, this research focuses on the nature of CDM of experienced dietitians in the acute care setting and the expertise that underpins this. The aim of this research was to understand decision making as it is undertaken in acute care settings by experienced practitioners rather than CDM regardless of context. The perspective taken is that clinical decision making, as part of professional practice “is inexplicably interwoven with the context (personal, disciplinary, locational) within which it occurs and must be considered within its context” (Patton and Higgs, 2019, p. 3). My research builds on the hermeneutic methodology of doctoral research in decision making in acute
care cardiorespiratory physiotherapists (Smith, 2006), workplace learning for physiotherapy students (Patton, 2014) and collaborative decision making in early career dietitians (Olsen, 2013). The doctoral work by these three researchers has shown contextual approaches to exploring decision making and developing expertise thereby shaping how I have chosen to build upon their work.

This research explored experienced dietitians who made decisions, by accessing their knowledge and past experiences of decision making in the acute care setting. While CDM is part of the practice of all dietitians with varying levels and types of clinical experience, from student dietitian on clinical placement to the expert clinician, I chose to focus on experienced dietitians. Participants with a minimum of 3 years’ experience were sought to increase the likelihood that they would be able to describe both their existing decision making and the development of their decision making practices. A novice or relatively inexperienced acute care dietitian was expected to have a limited understanding of the development of their CDM and inadequate experience of artistry to draw upon in the semi-structured interview. The research questions were concerned with concepts of professional artistry and expertise which have been shown in other professions to be mostly occurring in professionals with a certain amount of experience (Paterson, Higgs, & Wilcox, 2006). Much is to be learned from the study of experts. However, in the conduct of this research participants were chosen from across the range of clinical experience from three years or greater so as to consider the spectrum of experience and learning (as internal or practitioner contextual factors) that is ongoing and its role in the nature of CDM.

Although clinical dietetics encompasses practice in a number of inpatient and outpatient settings, this research is restricted to exploring clinical dietetic practice as practised within the acute care setting of a hospital. In conducting this research, texts were generated from dietitians practising in large metropolitan hospitals in Western Australia, New South Wales and Victoria. Dietitians from larger acute care hospitals were considered more able to provide perspectives relevant to the research questions. These dietitians were more likely to have been exposed to a range of complexity
inherent in major referrals hospitals and their practice was believed to be comparable to practice elsewhere in Australia and other Western countries (Australian Institute of Health and Welfare, 2015).

1.1.4 Overview of the research approach

An interpretive paradigm was chosen to frame this research for two key reasons. First, the interpretive paradigm places a major focus on interpreting the human world (Denzin & Lincoln, 2000). Second, the interpretive paradigm embraces context as part of the explanation of how human phenomena are shaped and experienced. Therefore, it was ideally suited to this research in its exploration of the nature of dietitian CDM in the specific setting of acute hospitals. A detailed discussion of the research strategy is provided in Chapter 3.

The interpretive paradigm encompasses a number of approaches, from among which philosophical hermeneutics was chosen to guide this research. Philosophical hermeneutics is a method of interpretation well suited to the understanding of human phenomena: it involves a rigorous process of construction and interpretation of texts (including written, visual, experiential and other media or texts). In my research, the construction of semi-structured interview texts and a reference focus group text from experienced dietitian participants led to an integrated interpretation of both text sets. Elements were drawn from Gadamerian philosophical hermeneutics, particularly the hermeneutic circle, fusion of horizons, and dialogue of question and answer, and used in the text construction and interpretation processes.

The interview texts were constructed via the use of in-depth semi-structured interviews. Ten dietitians with at least 5 years dietetic experience and currently practising in an acute care setting were recruited and participated in two interviews each. From this group, five participants subsequently participated in the reference focus group drawing on focus group and member checking techniques to develop the second text set. All interviews except one and the reference focus group were conducted face to face in the practice setting of participants.
1.2 CONTEXTUALISING THE RESEARCH WITHIN CONTEMPORARY DIETETIC PRACTICE

1.2.1 Framing the dietetics profession

The dietetics profession evolved from the home economics domain in the early 1900s (Erickson-Weerts, 1999), generating the philosophy of ‘food as medicine’ through diet therapy believing that ‘the scientific feeding of the sick will be expected to displace drugs’ (Arndt & Bigelow, 2006, p. 379). However, there was a shift away from the food, nutrition and management focus towards nutrition science by the mid-1990s thereby giving rise to clinical dietetics where nutrition therapy in hospital settings became the dominant type of practice (Erickson-Weerts, 1999). During this time the first professional association was created in the USA, then called American Dietetic Association (the now Academy of Nutrition and Dietetics). Today, dietetic associations exist in many countries on every continent. These associations all have their own academic and professional education qualifications and may vary in the scope of dietetic and nutritional activities as they are tailored to the requirements of individual countries and the opportunities available (Hwalla & Koleilat, 2004).

In 2014, 43 dietetic association members of the International Confederation of Dietetic Associations (ICDA) accepted the following definition of a dietitian-nutritionist:

*A professional who applies the science of food and nutrition to promote health, prevent and treat disease to optimise the health of individuals, groups, communities and populations.*

*(International Confederation of Dietetic Associations, 2014a, p. 1)*

Entry into the dietetics profession in Australia requires either a Bachelor degree (with honours) (AQF 7 or 8) or a Master’s degree (AQF 9) that has been accredited by the accreditation council within the Dietitians Association of Australia (DAA) (Dietitians Association of Australia, 2017). A competency-based apprenticeship nature of dietetic education has been in place in Australia since 1993. It is outcome focused, requiring measurement of adequate performance in the workplace, offering portability between practice contexts (Ash, Palermo, & Gallegos, 2019). Competency-based
education (CBE) enables assessment of aspects of professionalism and context-specific complexity within an individual’s performance. Competency standards are used across all health professions in Australia (Gonczi, 2013). In Australia, dietetics is not a registered profession but instead is self-regulated via the DAA with membership of the DAA optional. As a result, it is difficult to estimate the number of practising dietitians in Australia and what proportion work in clinical settings such as acute care.

In the last fifty years, a diverse range of dietitian roles has emerged including clinical, public health, community dietetics, food industry, corporate and foodservice consulting and management as well as private practice (Hwalla & Koleilat, 2004).

The Academy of Nutrition and Dietetics in the US has defined clinical dietetics as:

*a model of practice that involves those activities with and on behalf of clients/patients, especially those activities completed in the client's/patient's presence and with the client's/patient's collaboration. It utilizes the skills, knowledge, and applied judgement of the dietitian whose practice involves nutrition care, medical nutrition therapy and related services provided to individuals and/or groups of all ages to address health promotion; and prevention, delay or management of diseases and/or conditions. (The Academy of Nutrition and Dietetics, 2013)*

Further, over the last twenty years in Australia, a rise in graduates entering the profession combined with other drivers of change such as technology advancements, an aging population, and rising health costs have further driven changing dietitian roles (Meckley, Greenberg, Cohen, & Neumann, 2010) generating new and broader role opportunities. Private practice and food industry have presented as emerging areas of dietetic practice (Palermo, Conway, et al., 2016). In recognition of these changes to where and how dietitians in Australia work, the National Competency Standards for Dietitians have moved away from graduate preparation for specific settings and areas of practice (e.g. food service management) with a greater emphasis on the development of professional attributes that can be applied in any setting (Dietitians Association of Australia., 2015; Palermo, Conway, et al., 2016). These changes to dietetic workforce preparation in Australia
signify a shift away from the long-held dominance of clinical dietetics steering the emphasis of education and assessment of student performance.

1.2.2 Locating clinical dietetics in the health care landscape

Health care organisations are largely responsible for meeting the nutrition and hydration requirements of their patients. Adequate nutrition and hydration is important for general well-being as well as to promote recovery from illness and surgery, and prevent complications associated with malnutrition and dehydration (Cederholm et al., 2017). As part of total patient treatment, optimal nutrition has the potential to increase nutritional, functional, and clinical benefits thereby attributing economic value to the practice of clinical dietetics (Freijer, 2018). Clinical dietitians, and more broadly speaking dietitians, are positioned under the umbrella term ‘allied health’, which represents over 20 various health disciplines such as physiotherapy, occupational therapy, speech pathology, podiatry to name a few. The use of the term allied health was coined in the 1990s and has been utilised to increase autonomy and influence of allied health disciplines (The Department of Health, 2013).

The importance of health context to dietitian practice is highlighted by the Dietitians Association of Australia (DAA) ‘role statements’ for various areas of practice (Dietitians Association of Australia, 2019b). For example, within each of the role statements for ‘diabetes’, ‘corporate nutrition’, ‘primary care’, ‘mental health’, ‘food service’, ‘oncology’, ‘vegetarian’ the DAA describes skills and knowledge needed for practice in these specific areas. Clinical dietetics can include some of these areas but is broader and therefore in Australia is not described specifically nor is acute care dietetics. Instead, role titles and positions are governed locally and therefore dependent on the institution in which the dietitian practices. Clinical dietitians often work in subspecialties within a hospital setting similar to medicine specialties (Baird & Armstrong, 1981). Nutrition support is a strong focus of inpatient dietetic services but crosses the subspecialties and practice settings. For example, where renal nutrition is a specialty, a dietitian would provide nutrition support interventions. In a DAA role statement, nutrition support has been described as:
an area of dietetic practice that involves the nutritional management of people who cannot meet their nutritional needs with normal oral intake alone. They may require specialised food or drinks (oral nutrition support) to fortify or supplement what they are able to eat or may receive nutrition via tube feeding (enteral nutrition support) or intravenously (parenteral nutrition support). (Dietitians Association of Australia, 2016)

Within health care systems, therefore, clinical dietetics is concerned with supporting clients or patients with decisions and provisions of appropriate nutrition as related to their illness, condition or disease. Essentially, clinical dietetics has therapeutic intentions as different from preventative and public health models of practice. Clinical dietitians can work with a specific group of patients or provide general nutrition care to a wide range of patient groups, depending on the geographical and organisational setting in which they work. They can work with people from all age groups and populations within a spectrum of wellness and illness.

1.3 AUSTRALIAN CONTEXT FOR THIS STUDY

1.3.1 The acute care setting in the Australian health system

The acute care setting is characterised by uncertainty and increasing complexity which influences the CDM the health professional needs to engage in. In acute care settings, patients receive diagnostic and curative interventions from medical practitioners and potentially other health professionals. A working definition of ‘acute care’ offered by the World Health Organisation includes:

*The most time-sensitive, individually-orientated diagnostic and curative actions whose primary purpose is to improve health. It encompasses a range of clinical health-care functions, including emergency medicine, trauma care, pre-hospital emergency care, acute care surgery, critical care, urgent care and short-term inpatient stabilisation. (Hirshon et al., 2013, p. 386)*

Dietitians working in the public acute care setting provide nutrition care in a practice setting where the majority of patients needing hospital admission are being treated. While national dietitian workforce data is not available (Health Workforce Australia, 2014), Victorian state data suggest that 78% of dietitians work in the public sector, 7% in rural settings and 40% in the
hospital inpatient setting (Department of Health and Human Services State of Victoria, 2018). Australian acute hospitals are categorised by ownership, that is, whether they are public or private. The governance structures of these hospitals vary by ownership, state and by the size and role of the hospital. In Australia, within all public hospitals in 2016-2017 period, acute hospitals accounted for 82% of all hospitalisations and about 75 % of total time (days) patient care was provided compared to public subacute and non-acute and private hospital settings (Australian Institute of Health and Welfare, 2018). The participants in this study were practising in public hospitals across three different states. In 2011, governments agreed to the establishment of Local Hospital Networks as the new governance structures in public hospitals to decentralise governance (Duckett, 2015). The public hospital has an employer-employee relationship with health professional staff. However, because of their status and mobility, medical practitioners are often in a strong employment bargaining position compared to other professionals such as allied health (Duckett, 2015).

As dietetics is not a registered profession it is difficult to estimate how many dietitians work in Australia therefore difficult to ascertain what proportion of these work in clinical settings. Further, membership of the DAA is not compulsory but as of 2019, including more than 7000 members (Dietitians Association of Australia, 2019a). Dietitians in Australia can self-identify with the title of ‘clinical dietitian’ of their own discretion. However, it is predominately associated with practising in hospital or outpatient clinic settings and supporting patients with illness and disease.

1.3.2 **Clinical dietitians and the multidisciplinary team**

In the acute care setting, dietitians often work with a range of other health care practitioners including those from medical, nursing and allied health professions, as well as foodservice delivery staff and administrative staff. This collective group of health professionals has become known, particularly in clinical settings, as the multidisciplinary team (MDT). In the acute care setting, dietitians can receive referrals to see patients from any of these health care practitioners, and patients can self-refer to see dietitians. Multidisciplinary care provided by a cohesive and well-functioning MDT is associated with improved clinical outcomes (Epstein, 2014).
In Australian acute care settings, a dietitian’s autonomy for decision making is conditional; they can make certain decisions independently and not others. For example, dietitians can independently prescribe an oral nutrition support product in a hospital where a medical practitioner may have the authority to dictate what and when the patient can eat. Autonomy is often most limited in aspects of artificial feeding such as enteral and parenteral nutrition. Decisions regarding the choice of feed, amount and timing of nutrient delivery and how to monitor feeding tolerance are generally the domain of dietitians. However, this can vary depending on the patient and the medical practitioner. Although dietitians can advocate for the route of feeding and when feeds should be ceased, medical practitioners often make these decisions exclusively. The DAA has argued that the National Competency Standards for Dietitians, along with the Code of Conduct and Statement of Ethical Practice, institution job descriptions, organisation accrediting standards, nutrition or dietetic practice guidelines and jurisdiction or federal legislation or regulations, define scope of practice for dietitians in Australia (Dietitians Association of Australia, 2019c) thereby informing scope and boundaries of CDM.

The clinical importance of adequate nutrition and its impact on patient health outcomes is recognised but not always acted on increasing the challenge dietitians experience in hospital settings (Bell, Bauer, Capra, & Pulle, 2014; Keller et al., 2014; Laur, McCullough, Davidson, & Keller, 2015; Tappenden et al., 2013). Medical staff failure to implement recommendations for nutrition care underpins arguments that dietitians should have greater order-writing privileges in all settings of care, depending on their level of expertise (Ryan, Pelly, & Purcell, 2017; Silver & Wellman, 2003; Yandell et al., 2018). Changing the provision of nutrition care in the hospital setting is heavily reliant on strong relationships within the MDT (Laur, Valaitis, Bell, & Keller, 2017). The lack of autonomy that tends to exist in aspects dietitians’ work suggests a need for dietitians to engage effectively with other members of the MDT to participate in and, where relevant, lead nutrition care decisions for patients. Engagement with the MDT is further complicated by the time dependent nature of acute care
provision and the number of other health professionals with overlapping goals for patients.

1.4 STRUCTURE OF THIS THESIS

My thesis contains eight chapters. Chapter 1 is an overview of the thesis and contextualises the research within the dietetics profession and offers insight into the Australian context of clinical dietetics in the acute care setting. In Chapter 2, I provide a background literature review and theoretical framework for the research and rationale for this research. The research methodology, including research questions, and justification for my choice of philosophical hermeneutics as the philosophical framework to guide my research is outlined in Chapter 3. In Chapters 4, 5, 6 and 7 I present the integrated findings from both the interview and reference focus group text sets. I present a summary of the research including A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care Setting in Chapter 8. Also, in Chapter 8, the research is critiqued, its significance and implications highlighted and directions for future research are proposed.

The reader is alerted to a number of key writing features and decisions made in the presentation of this thesis. The terminology used in this thesis reflects an Australian perspective and perspective consistent with dietetics in the acute care setting. As a result, the terminology includes reference to patients\(^1\) rather than clients and dietitian rather than dietician. The presentation of findings in this thesis is consistent with research conducted in the interpretive paradigm. The key features that relate to this paradigm are the presentation of the data in the form of quotes embedded in the text; reference to the author/researcher in the first person such that there is use of ‘I’ and ‘my’, reflecting the embedded nature of the researcher in the construction and interpretation of the text.

\(^1\) The word *patient* is used in this thesis to reflect the terminology used by the participants in this research. The term *client* is at times used outside acute care/hospital settings to match a more consultative role.
CHAPTER 2  LOCATING THE RESEARCH

This chapter locates dietitians’ clinical decision-making within contemporary research, scholarship and professional practice. Engagement with clinic CDM literature revealed the complexity of this phenomenon of decision making including a broad range of terminology used in relation to its use. CDM terminology and meanings adopted for this research are clarified. To further explicate CDM, relevant contemporary health care models that influence clinical decision-making in the acute care setting are explored. Key relevant literature on CDM of closely related professions such as medicine, nursing and other allied health professions are examined to deepen understanding of the theoretical framework in which dietitians’ CDM is situated. The small amount of literature specifically focussed on dietitians’ clinical decision-making is reviewed to determine a current understanding of dietitians’ CDM in the acute care setting.

A key finding of this chapter is the clear absence of research specific to the CDM of experienced dietitians practising in the acute care setting. Research within closely related professions has been used to develop an understanding of CDM more generally. This included the emergence of a contemporary conceptualisation of CDM that involves multiple dimensions, including context, cognition, practitioner characteristics, expertise and interactive elements such as collaboration. Medicine, nursing, physiotherapy and occupational therapy literature, in particular, convey CDM as complex and dynamic given its need to efficiently respond to both context and changes in patient condition. Targeted research in acute care dietetics is needed to better understand CDM in the acute care setting.

2.1 FRAME AND SCOPE OF LITERATURE REVIEW

The previous chapter introduced the context of dietetics in Australia and within the acute care setting. It briefly explored acute care dietetics and identified dietitians as practitioners involved in CDM for patient care. This literature review explored what is known about dietitian CDM in the acute care setting. However, as there was only a small amount of available literature about dietitian decision making, the literature search needed to be
widened. To do this I looked for research exploring decision making of other health care professionals; that is medical practitioners, nurses, occupational therapist and physiotherapists. Therefore, the literature of CDM provided an important broad basis for my research.

A narrative review was chosen and was considered appropriate because of the limitations of available research on the specific topic of dietitian clinical decision making in the acute setting. The literature review was guided by the question, “what is our contemporary understanding of dietitian clinical decision making?” The process of rigorously deciding what literature to include or exclude was iterative but was also guided by the Standards for Reporting Qualitative Research (O’Brien et al, 2014). The framework articulates 21 standards that should be considered when evaluating the quality of research. This framework was used in combination with the scope and boundaries of the research project including practice setting and purpose of the literature review.

As I reviewed the literature on health care professional clinical decision making it became clear that terms and concepts were used interchangeably in reference to CDM. These terms included clinical reasoning, clinical judgement, critical thinking and problem solving. Therefore, I included these terms in search strategies within multiple databases (CINAHL, MEDLINE, PROQUEST, EBSCO-ERIC). In addition to these search terms, in order to explore known literature around CDM expertise the terms ‘expert’, ‘expertise’ and ‘practice’ were also key search terms within both dietetics and other health care professions. Studies that aimed to report outcomes of teaching and educational interventions in order to change CDM performance or capability were excluded from this literature review. This was because my research aim was to understand what decision making is like and how expertise has developed and not with measuring the effectiveness of interventions to ‘improve’ it. Also, literature focused on empirical studies which were located in the acute care setting given I limited the scope of my research to this practice setting.
2.2 DEFINING CLINICAL DECISION MAKING AND RELATED TERMINOLOGY

CDM as a concept and practice has been the subject of a considerable range of literature. It is a complex phenomenon with its richness revealed in the range of stances contemporary scholars have taken to better understand it. Descriptions of CDM are constantly evolving with multiple related and overlapping terms and concepts used by different scholars. This literature review revealed that the terms clinical reasoning, critical thinking, clinical judgement and problem solving are related concepts widely used interchangeably within the CDM literature. In this section, I provide evidence for why it is inappropriate to use these terms interchangeably and how they are different which justifies my choice to use clinical decision making as the umbrella concept to refer to the phenomenon being explored in this research.

Accepted definitions of these terms for this research are provided in Table 2.1. These terms have been considered by some researchers to be (Daly, 2018; Goodman et al., 2018; Manetti, 2019; Standing, 2008; Victor-Chmil, 2013) commonly and sometimes inappropriately used interchangeably within health care research. In literature, these terms are described and used in different ways by different professions (Higgs et al., 2019). For example, the terms clinical reasoning and problem solving dominate medical literature where clinical judgement, clinical reasoning and CDM are more prominent in nursing and allied health literature. In dietetics literature, critical thinking is the dominant term used when referring to cognitive processes used to make clinical decisions (Swan et al., 2017; Trostler & Myers, 2008). These examples highlight a strong influence of profession tradition and health practitioner context on the language used around CDM. With variable definitions, it is difficult for educators and researchers to operationalise, teach and research dietitian CDM (Goodman et al., 2018; Schumacher, 2014; Trostler & Myers, 2008; Williams, 2019).
It is evident from the definitions outlined in Table 2.1 that there are substantial overlap and connection in their meanings. For example, the definition of critical thinking refers to judgement and the definitions of clinical reasoning and problem solving refer to cognitive processes such as analysing. All five definitions (in Table 2.1) have cognitive elements where clinical reasoning, clinical judgement and problem solving could be argued as only cognitive processes. However, CDM has cognitive (reasoning), behavioural (actions) and interactive (involving other individuals) elements. Recently those undertaking concept analysis of clinical reasoning (Simmons, 2010; Yazdani & Abardeh, 2018), clinical judgement (Manetti, 2019) and CDM (Johansen & O’Brien, 2016; Krishnan, 2018) sought to arrive at a clear definition. These authors revealed that one definition often refers to the other concepts or descriptions of attributes or antecedent terms that the primary concept is deemed to comprise. Sharing these findings are various review articles (Daly, 2018; Facione, 2018; Holder, 2018; Victor-Chmil, 2013) that demonstrate the challenge authors experience with being...
able to offer a single concise definition of these concepts, highlighting the complex nature of CDM.

In some dietetics literature (Charney & Peterson, 2013; Goodman et al., 2018; Hickson, Davies, Gokalp, & Harries, 2017; Hickson & Harries, 2016; Williams, 2019), it is common to see critical thinking, clinical judgement and clinical reasoning used interchangeably with explicit definitions often absent. The exception was Trostler and Myers (2008) who first provided a summary of the many various literature-based definitions offered for critical thinking before adopting a definition offered by the American Philosophical Association (1990) used by Facione (2018) to describe associated competencies (interpretation, analysis, evaluation, inference, explanation and self-regulation) and ‘habits of mind’ in order to measure critical thinking in dietitians.

While similarities between CDM, clinical reasoning, critical thinking, clinical judgement and problem solving have been demonstrated, distinctions can also be made, which offer a way to better understand the literature and form a basis to explore decision making processes used in clinical practice. Decision making is common across all the definitions given that decision making involves a process of how a decision is made and what that decision is (Hastie, 2001). Clinical reasoning, clinical judgement, problem solving and critical thinking are components (not exclusively) of decision making processes but don’t represent the phenomenon of CDM in its entirety. Standing (2008) developed a comprehensive definition of CDM from a longitudinal phenomenological study of nurses’ perceptions. The resulting definition was that CDM was a complex process involving observation, information processing, critical thinking, problem solving, clinical judgement, reflective practice, ethical values, professional accountability, science and evidence-based practice in order to select the best course of action to optimise a patient’s health and minimise potential harm. Therefore, I argue that CDM is connected but calls for a distinction between similarly used terms.
CDM can be considered both a precursor and an outcome of clinical reasoning. Making decisions in clinical practice about patient care is facilitated by clinical reasoning processes (Higgs et al., 2019). In a concept analysis of publications between 1964 and 2005, Banning (2008a) described clinical reasoning as a cognitive process involving the application of knowledge and experience to a clinical situation. Banning then placed the cognitive process within the construct of CDM in a review of CDM models highlighting that CDM encompasses multiple elements e.g. reasoning strategies that interplay with each other in order to make choices for a particular patient (Banning, 2008b). Clinical reasoning and CDM are both very complex constructs; however, the literature tends to place clinical reasoning within the phenomenon of CDM.

Critical thinking is considered a key factor in the cognitive processes of clinical reasoning (Kuiper & Pesut, 2004; Standing, 2008) indicating that it is a sub-component of clinical reasoning used by clinicians rather than the entire process. Critical thinking is considered to be a cognitive process that is not discipline-specific and involves various sub-skills such as interpretation, analysis, evaluation and inference used to make logical conclusions (Facione, 2018). Thus, if critical thinking isn’t discipline specific, the bigger constructs of clinical reasoning and CDM are needed to offer insights into the discipline specific nature of the process of making decisions about patient care in a particular setting. Jones (1988) argued that clinical reasoning is discipline specific as it involves the practitioner’s application of critical thinking. Good critical thinking skills are considered to be important for making appropriate decisions (Dwyer, Hogan, & Stewart, 2014).

Problem solving refers to the process or act of identifying and finding solutions to clinical problems (Custers, 2013; Newman, 2012). Once the problem is identified, decisions are made concerning the best course of action that represent solutions to the problem. Swan et al. (2017) suggest that two key problem solving tasks dietitians engage in are determining appropriate nutrition interventions and monitoring and evaluating these interventions.
Clinical judgement refers to the process of making an individual conclusion within a specific context for a specific situation (Victor-Chmil, 2013). Tanner (2006) differentiates clinical judgement in nursing from clinical reasoning and critical thinking, arguing that clinical judgement involves not just cognitive domains, but metacognitive, psychomotor and affective elements. Meaning that clinical judgement is more than the application of knowledge to a specific patient, but also the interplay between aspects of the practitioner and the context (e.g. environment) of care. Hastie (2001) accounts for the tradition of judgement research and its focus on understanding how decision-makers choose courses of actions in conditions of uncertainty. He places judgement within the construct of decision making and proposed (Hastie, 2001, p. 657):

*Decision making refers to the entire process of choosing a course of action. Judgement refers to the components of the larger decision-making process that are concerned with assessing, estimating, and inferring what events will occur and the decision-makers’ evaluative reactions to those outcomes will be.*

It is likely that judgement will feature strongly in dietetic practice in the acute care setting, with many decisions involving human interaction and the potential for critical outcomes in decision making practices.

Understanding and defining CDM involves acknowledging that decisions can take on various forms. Paterson and Higgs (2008) proposed that decision making involves decisions at different levels. Micro-decisions concern process or decisions within decisions; macro-decisions are output decisions or conclusions such as problem identification or intervention plan and meta-decisions are reflective evaluative decisions. Further differentiating CDM is the claim that CDM involves in addition to conscious and unconscious cognitive processes used to make decisions, the disposition of the decision-maker as well as social and contextual dimensions (Patton & Christensen, 2019).

The term clinical decision making has been chosen as the primary term in this thesis because it encompasses how decisions are made (reasoning), what those decisions are and the outcome of those decisions (actions.
undertaken by the dietitian) rather than just the reasoning processes themselves. In this thesis, clinical decision making is defined as:

\textit{the process of making decisions during clinical practice that are concerned with the identification and management of clinical problems.}

The construct CDM is therefore considered to be a suitable umbrella term that refers to the process of choosing between alternative options that may involve clinical reasoning and clinical judgement which occurs often for the purpose of identifying and solving clinical problems. The term clinical decision making is used except in circumstances where an alternative term is more relevant to the concepts being discussed.

2.3 CONTEMPORARY PRACTICE MODELS FRAMING DIETITIAN CDM

This section provides an account of two key contemporary practice models, evidence-based practice and the Nutrition Care Process Model (NCPM) including a critique of how these two models frame current understanding of dietitian CDM. Empirical research on the nature of dietitian CDM in any context or setting is very limited. Evidence-based practice and its core elements of scientific evidence, clinical expertise and patients’ values & preferences has been adopted as a guiding principle for dietetic practice. In Australia, the Nutrition Care Process Model (NCPM) has gradually increased its infiltration into clinical dietetics, offering a standardised care pathway and terminology for health record documentation.

2.3.1 Evidence-Based Practice

Internationally, dietetics has embraced evidence-based practice (EBP) as the mainstay approach to dietetic practice as clearly stated in the international code of good practice (International Confederation of Dietetic Associations, 2014b). The definition of evidence-based dietetics practice that has been developed via international consensus includes:
Evidence-based dietetic practice is about asking questions, systematically finding research evidence, and assessing the validity, applicability and importance of that evidence. This evidence-based information is then combined with the dietitian’s expertise and judgment and the client’s or community’s unique values and circumstances to guide decision-making in dietetics. (International Confederation of Dietetic Associations, 2010)

Nutrition and food behaviour is a complex area with many competing influences posing challenges to the formulation and application of EBP (Freeland-Graves et al., 2013). The conceptualisation of ‘evidence’ has moved from consisting exclusively of scientific fact generated through empirical research towards a multidimensional perspective of “evidence as data, evidence as knowledge and evidence that is argument” (Higgs & Turpin, 2019, p. 468). Decision making involving the nutritional care of patients, therefore, is considered valuable and more effective when an approach embraces not just the scientific evidence, but also clinical expertise and the patient’s values and preferences (Johnston et al., 2019). Some authors offer debate about the specific nature of the relationship between EBP and CDM (Thomas & Young, 2019) given the interrelated nature of making decisions with consideration of ‘evidence’. Thomas and Young present three different but overlapping stances on the relationship between EBP and CDM. Firstly, that EBP is a contributor to the process of CDM; secondly, that EBP is the way in which CDM unfolds; and thirdly, that EBP and CDM are different terms for the ‘same thing’ (2019, p. 139). Based on the aforementioned definition offered on CDM in this thesis (see Section 2.2), I position EBP as a model of health care practice that contributes to the process of CDM rather than synonymous or representing the ideal way CDM should unfold.

Since earlier calls were made to embrace EBP in dietetics to support decision making (Porter & Matel, 1998), a dominant foci of dietitian EBP research has been on quantitative identification and evaluation of dietitians’ technical knowledge, critical appraisal of evidence and the degree to which dietitians incorporate evidence into decision making for patients in particular settings (Gray & Gray, 2002; Vaughan & Manning, 2004; Vogt, Byham-Gray, & Touger-Decker, 2013). With this focus, value has been
placed on understanding how the dietitian complies with a known standard of knowledge and evidence with the underlying assumption being that appropriate use of evidence translates to quality care. However, in other health professions, various authors have commented and researched the contextual, resource and political barriers that exist between ‘knowing’ evidence and ‘doing’ CDM in real-life complex settings thereby emphasising the importance of putting the patient back at the centre of practice (Cochrane et al., 2007; Greenhalgh, Howick, & Maskrey, 2014; Mellor, Naumann, Matthys, Steiber, & Hassapidou, 2018; Richardson, 2017; Siminoff & Step, 2005). Meaning, that sometimes patient views don’t align with EBP, therefore, the patient is not likely to embrace the advice given, regardless of what evidence it is based on.

Dietetics has adopted EBP to guide CDM and this has become more dominant over time (Ash et al., 2019). A focus on cognitive reasoning with scientific evidence is important for a relatively new profession like dietetics seeking to claim expert and specialised knowledge that can account for patient outcomes. However, little is known about how decision making of experienced dietitians in the acute care setting incorporates or resembles these models and to what degree other aspects may be involved in the specific context of the acute care setting.

2.3.2 The Nutrition Care Process Model

Dietetics research about reasoning and decision making has been focused on gaining consensus on a standardised and assessable process that dietitians should use to help validate intervention decisions and subsequent patient outcomes. Splett and Myers (2001) argued that there has been inadequate evidence for the effectiveness of nutrition care and that this was partially because of the degree of variation between how dietitians practise. They contended that standardising processes of nutrition care as well as the language used to describe that care would facilitate strengthening the evidence base concerning the effectiveness of nutrition therapy and its outcomes. These arguments were the impetus for the development of the Nutrition Care Process Model (NCPM) with the intention of replacing other models of the nutrition care process (Lacey & Cross, 2002; Swan et al., 2017).
The NCPM originates from the Academy of Nutrition and Dietetics, USA and has been adopted internationally over the last ten years by Australia, Canada, Japan and Sweden (Hammond, Myers, & Trostler, 2014). The NCPM is described as a systematic method of how dietitians provide nutrition care (Lacey & Pritchett, 2003). The NCPM (see Appendix 9) is framed as a four-step roadmap for identifying and solving problems in any individual or population-based care setting (Swan et al., 2017). The four steps in the model include 1) Nutrition assessment and reassessment; 2) Nutrition Diagnosis; 3) Nutrition Intervention; and 4) Nutrition Monitoring. All of these steps sit within a social context of nutrition care as well as informed by the required qualities and attributes that differentiate dietetic professionals from other professionals (Bueche et al., 2008a). The use of the term ‘diagnosis’ and emphasis in documenting a standardised approach to ‘nutrition diagnosis’ is a contemporary shift towards the medical model that was not present prior to the NCPM within dietetics. Although it does offer a common process and language on which to build competency, the NCPM alone does not offer a deep and rich conceptual understanding of decision making in the acute care setting.

Authors and adopters of the NCPM argue its value for guiding dietetic education, standardising practice, offering a method to advocate a dietitian’s value to public health policy and health care settings and ability to frame electronic health record systems (Hammond et al., 2014). In Australia, the DAA recommends the NCPM as the model for clinical dietetic practice. Although the term ‘decision making’ is mentioned by its authors (Swan et al., 2017), an in-depth discussion of its theoretical underpinnings, meaning or implications for practice is not provided. The core of the NCPM is the interaction between dietitian and patient or group (Swan et al., 2017). A sequence of six clinical judgements was originally referred to in earlier versions of the model (Hakel-Smith & Lewis, 2004) but in revisions, these were replaced with more task orientated language to broaden the model’s reach (Bueche et al., 2008a, 2008b; Hammond et al., 2014; Lacey & Pritchett, 2003). The most updated version (Swan et al., 2017) has completely removed any mention of clinical judgement. Authors argue this was based on the desire to limit the use of terms that have more varied
meaning or interpretation aiming to keep the model easy to use within the varied contexts it applies to.

Key to its origins and function, the NCPM’s primary goal is to standardise the steps taken to provide nutrition care and the way that the dietitian documents the process of care and outcomes to provide evidence for practitioner effectiveness (Swan et al., 2017). This goal is supported by the Nutrition Care Process Terminology (NCPT) (Bueche et al., 2008b) which provides a standardised language to facilitate transparency of rationales for diagnosis and interventions as well as increase ease of auditing and use of electronic documentation. Much of the focus of NCPM based research internationally has been on implementation of the model in the clinical setting (Lovestam, Orrevall, Koochek, & Andersson, 2016; Lövestam et al., 2019; Matthews, Palmer, & Capra, 2018; Van Heukelom et al., 2011; Vivanti, Lewis, & O’ Sullivan, 2018; Vivanti, O’Sullivan, Porter, & Hogg, 2017). To date, there has been no formal evaluation of the model’s efficacy in nutrition care planning outcomes. Nor has there been an exploration of practitioner individuality and impact of time on the undertaking of the nutrition care process, both of which I deem as applicable in real practice.

The NCPM shares similarities with The Nursing Process which is a cyclical, bidirectional process that functions as a “continuous cycle of thought and action” (Doenges, Moorhouse, & Murr, 2010, p. 7). Both are models that represent a metaprocess of care where the medical model has been inserted into the care process, through the terminology and function of diagnosis and intervention outcomes. Benner warned against nurses turning an abstract concept, The Nursing Process, into a fixed behavioural process arguing “the formal model is a substitute for practical mastery, much as a map serves the outsider who lacks the first-hand knowledge of a native” (Benner, 1984, p. 228). Many nurses claim that they don’t use The Nursing Process to solve problems in practice but rather rely on an intuitive and judgement based approach (Benner, Sutphen, & Leonard, 2010; Jarrín, 2010). Similar to the limitations of what The Nursing Process offers nurse practitioners, in dietetics, the NCPM while providing a framework for tasks to undertake does not offer an empirical-based understanding of the nature of CDM dietitians actually use in the acute care setting. It is likely that dietitians in
the acute care setting undertake similar if not identical steps in the NCPM. However, CDM, as revealed in other professions, is a multidimensional and complex phenomenon often characterised by the context in which it occurs. The NCPM may not fully capture the nuanced and context-dependent nature of how experienced dietitians undertake CDM in the acute care setting leaving a gap therefore in our understanding of the phenomenon.

The NCPM through the associated standardised terminology referred to from here on as NCPT, offers a system to capture data in electronic health records that aims to evaluate and justify dietetic interventions and assist with funding decisions. This has likely been an attractive element of adoption in Australia and is reflected in research that has focused only on how NCPT is implemented in an attempt to identify and address barriers (Lövestam et al., 2019; Vivanti et al., 2018; Vivanti et al., 2017). Although familiarity, knowledge and use of the NCPT have increased in Australia, dietitian attitudes regarding NCPT implementation remain conflicted with dietitians expressing preferences not to change due to a perceived lack of benefit to practice (Vivanti et al., 2018). Lövestam et al. (2016) offer insight into the likely role complexity and context plays into deciding how to care for patients. The authors used a Habermasian system and lifeworld lens (Scambler, 2013), to identify barriers and enablers to implementation of the NCPM and Terminology in Sweden. Essentially this was an analytic lens where ‘lifeworld’ referred to the background assumptions and relations in the communication between people and where ‘system’ represented the rationalised impersonal sphere in practice. Habermas argued that the ‘system’ often extends its influence at the expense of the ‘lifeworld’, similarly in healthcare, the biomedical reductionist approach dominating over the patient-centred holistic approach (Scambler, 2013). Dietitian participants shared their struggle suggesting a tension between the technical reductionist elements of the NCPM and its terminology and the highly context specific nature of patient care. However, dietitians in this study thought positively about the NCPM for how it offered standardisation of documentation of decision rationales thereby assisting with recognition of professional contribution to care and supporting thinking processes of inexperienced dietitians. Therefore, it would seem that CDM as occurring in
real practice encounters elements of complexity and context that position the NCPM is inadequate in itself to adequately represent how dietitians engage with patient care.

The philosophical framework used to guide the development and revision of the NCPM is located in a positivist paradigm given the predominant use of the Delphi technique as the main research methodology. When using the Delphi technique, the goal is agreement underpinned by the assumption that consensus is possible and that there is a single reality on an issue. Its purpose serves policy development but has limitations for offering a deeper understanding of CDM as reflected in real settings. In contrast, my research is positioned within an interpretive paradigm, which posits that there is no single reality and that knowledge can be created through the interpretation of a participant’s reality to generate a deep understanding of CDM. The NCPM’s presentation of aspects of dietitian CDM is acontextual and therefore limited in its contribution to understanding the CDM of experienced dietitians in the reality of the acute care setting.

2.4 CDM AS A COGNITIVE PROCESS

There is very little dietetics literature to date on CDM, therefore, this section involves a review of dietetics literature on related concepts including critical thinking and clinical judgement. Critical thinking is the dominant term used in dietetics to refer to cognitive processes used in patient care, with a research focus on the observable tasks and activities involved. Clinical judgement exists within dietetics literature and has been acknowledged as being part of a dietitian’s approach to patient care. Given the scarcity of dietetic literature on CDM, this section will also present models within medical, nursing and other relevant allied health professions such as physiotherapy and occupational therapy. There is a significant body of literature regarding decision making of health care professionals. Given the role and close professional tradition alignment of these professions to dietetics, understanding the theoretical underpinnings of CDM more broadly is considered valuable for better understanding dietitians’ CDM more particularly.
2.4.1 Critical thinking in dietetic practice

Within the very limited research on any facet of CDM in dietetics, the concept of critical thinking is most widely reported. The earliest attempt to describe the decision making of clinical dietitians and students used a Myers-Briggs Type Indicator Test to distinguish styles of decision making between technician, planner, teacher and artist (Mobley, Himburg, Robet, & Easton, 1984). The authors took the view that decision making was an exercise in processing information, congruent with the views held by cognitive psychology at the time. Since then, CDM has focused on embracing EBP and emphasised the need for dietitians to critically engage with evidence while applying it to patient care decisions, hence the need for critical thinking.

The dietetics profession has acknowledged the importance of critical thinking skills in clinical dietetics through its identification of critical thinking as a minimum level competency to enter the profession and to continue to practice within an evidence-based approach (Dietitians Association of Australia., 2015; The British Dietitians Association., 2016). In addition, critical thinking has been consistently referred to within the NCPM as a necessary ability to effectively enact the care process (Swan et al., 2017). Charney and Peterson (2013) described the type of critical thinking skills that are necessary for nutrition assessment and diagnosis. These critical thinking skills (Table 2.3) were incorporated into the latest version of the NCPM as a set of critical thinking tasks that should be undertaken (Swan et al., 2017). Based on the consensus methodology used for NCPM research, dietetics as a profession prefers to use ‘critical thinking’ to refer to the cognitive processes involved in patient care, which based on the examples in Table 2.3, involve decision making at all phases of the NCPM (Swan et al., 2017, p. 2011). This list of tasks, while representing types of decisions dietitians make, does not enhance understanding of how an experienced dietitian engages with these tasks within the context of the acute care setting. There is a benefit to understanding how different dietitians when faced with varying degrees of scenario complexity, approach decision making within the context of the acute care setting.
Table 2.2  Critical thinking tasks involved in dietitian assessment and diagnosis as per the NCPM

<table>
<thead>
<tr>
<th>Stage of the NCPM (Swan et al., 2017)</th>
<th>Critical Thinking Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment &amp; Reassessment</td>
<td>Determining important and relevant data to collect</td>
</tr>
<tr>
<td></td>
<td>Determining the need for additional information</td>
</tr>
<tr>
<td></td>
<td>Selecting assessment tools and procedures that match the situation</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Finding patterns and relationships among the data and possible causes</td>
</tr>
<tr>
<td></td>
<td>Stating the problem clearly and singularly</td>
</tr>
<tr>
<td></td>
<td>Identifying an Etiology that may be resolved, lessened or managed by the Intervention/s</td>
</tr>
<tr>
<td></td>
<td>Identifying signs and symptoms that are measurable or their change may be tracked</td>
</tr>
<tr>
<td></td>
<td>Prioritising identified problems</td>
</tr>
<tr>
<td>Intervention</td>
<td>Setting goals and prioritising</td>
</tr>
<tr>
<td></td>
<td>Defining the nutrition prescription or basic plan</td>
</tr>
<tr>
<td></td>
<td>Making interdisciplinary connections</td>
</tr>
<tr>
<td></td>
<td>Matching intervention strategies with client needs, nutrition diagnosis, and values</td>
</tr>
<tr>
<td></td>
<td>Choosing from among alternative to determine a course of action</td>
</tr>
<tr>
<td>Monitoring &amp; Evaluation</td>
<td>Selecting appropriate outcomes/indicators</td>
</tr>
<tr>
<td></td>
<td>Using appropriate reference standard for comparison</td>
</tr>
<tr>
<td></td>
<td>Explaining variance from expected outcomes</td>
</tr>
<tr>
<td></td>
<td>Deciding between discharge or continued care</td>
</tr>
</tbody>
</table>

In dietetics research, the term critical thinking is primarily used to refer to the analytical processes involved in implementing evidence-based nutrition practice guidelines in decision making. Trostler and Myers (2008) measured a single patient care task of how dietitians decide between measuring or estimating energy requirements for patients in the acute care setting. Their aim was to understand barriers to dietitians using the indirect calorimeter\(^2\) in determining a patient’s nutritional requirements. They used an external critical thinking assessment tool that had included predefined critical thinking skills and dispositions and quantitatively evaluated which of these

\(^2\) Indirect Calorimetry (IC) is a respiratory test, using a machine, that measure the patient's production of carbon dioxide and consumption of oxygen for approximately 30 minutes, until steady state is achieved. The result is entered into an equation to provide a measure of Resting Energy Expenditure. This method is considered superior for accuracy to other simple equations that use only weight and or height to estimate energy requirements.
were present amongst their participants. The main critical thinking skills identified were analysis and open-mindedness. Using interviews, the researchers revealed the most important factor influencing the decision to estimate rather than measure energy requirements was convenience and time. Concern over accuracy followed by the perception of impact were the most important factors considered when participants chose to measure energy expenditure instead of an estimate. Barriers to measurement mostly related to the cost of equipment. This study highlights the role of contextual and resource influences on decision making and not just the perceived therapeutic outcomes that may eventuate from assessment and care plan decisions. However, it assumes the dietitian’s decision making resembles the critical thinking traits already used in the generic assessment tool and was focused on quantitatively assessing the presence of these traits. In addition, this study can only speak to how a dietitian may decide for one specific task within a broad and ongoing process of patient care. Therefore, the findings offer limited insight into the nature of dietitian CDM in the acute care setting.

2.4.2 Clinical judgement and CDM
The use of the term ‘judgement’ in dietetics practice research is not as prominent as critical thinking and has not been explicitly defined. However, clinical judgement in dietetic practice has been recognised by the DAA (Dietitians Association of Australia., 2015) and initially included in the NCPM (Lacey & Pritchett, 2003) as aiding decision making where there are multiple options concerning patient care. Given the limited research on clinical judgment in dietetics, professional judgement literature is included here to articulate a current understanding of the concept and its relevance for the development of a more holistic understanding of dietitian CDM.

Only one study in dietetics has explored clinical judgement in clinical dietitians. Hickson et al. (2017) developed an expert consensus judgement policy for prioritising dietetic referrals in hospital settings that informed training materials for novice dietitians. The authors argued that even ‘expert’ decision makers can be inconsistent with their judgements and that they were unaware of how they were made. Hickson et al argued for the use of a quantitative case based approach to statistically model how information
is weighted in the decision making process of forming optimal judgements. This study offered insight into the common cues experienced dietitians use to make prioritisation decisions. The study does not offer an understanding of how these prioritisation decisions are made in the actual acute care setting. In addition, this work is underpinned by an assumption that there are right and wrong judgements for prioritising referrals, reinforcing an empirico-analytical approach to decision making. This study adopted a definition of judgement and existing evidence that has only provided a fragmented view on dietitian decision making that was removed from practice. Therefore, this highlights the importance of my research which aims to offer a more in-depth understanding of how CDM embedded in practice holistically occurs.

In other health professional literature, sound clinical judgment is recognised as essential for competent nursing practice. Recognising the ambiguity around what clinical judgement refers to, Manetti (2019) undertook a concept analysis seeking to provide a clearer understanding. Manetti’s analysis drew upon both contemporary and seminal nursing literature and other health professional literature finding that clinical judgement is conveyed as a concept synonymous with CDM. The resulting proposed theoretical definition of clinical judgement was “a cognitive process in which the nurse forms a holistic assessment of a patient situation. Critical thinking, clinical reasoning, practical wisdom and intuition are used in the decision making process that ensues” (Manetti, 2019, p. 106). A challenge for studying experienced clinicians is that for experts, clinical judgement is not often consciously articulated, but remains tacit (Benner & Tanner, 1987). Clinical judgement in medicine has also been associated with CDM and often considered the non-objectifiable part of medicine (Kienle & Kiene, 2011). This characteristic of clinical judgement often makes it difficult for research participants to articulate and therefore for researchers to understand. Being subjective in nature also can make clinical judgement less likely to be studied in empirico-analytical dominant research cultures such as dietetics. However, identification of clinical judgement as being a relevant component of health professional decision making in the literature
warranted further exploration in my research on dietitian CDM in the acute care setting.

### 2.4.3 Cognitive models of CDM in other health professions

The literature on CDM in health professions is dominated by representations of CDM as a cognitive process, where models aim to reveal the cognitive architecture of decision making. In particular, within medicine and nursing, cognitive approaches to decision making are often described as analytical, non-analytical or an integration of the two. Analytical approaches include rational and conscious thinking where non-analytical cognition refers to the tacit, automatic and sometimes intuitive thinking that is involved in decision making. Cognitive models, particularly within the medical profession have tended to focus on decision making tasks of diagnosis and intervention planning. These cognitive models, underpinned by a belief that CDM is most influenced by the way a practitioner thinks, focus on cognitive process descriptions of experts in order to gain knowledge of how to improve the accuracy of the diagnosis (Croskerry et al., 2017; National Academies of Sciences, 2015).

**Analytical approaches**

Much of the early research in health professional decision making was informed by psychology and behavioural science, grounded on information processing theory (Oppenheimer & Kelso, 2015). Various models exist that describe decision making approaches based on a common assumption that human responses to health and illness can be identified, measured, and understood (Krishnan, 2018). These analytical approaches often are adapted from each other within different professions or modified slightly as understanding evolves. Examples of these approaches include hypothetico-deductive, probabilistic, deductive, system I, systematic-positivist, and ‘slow’ reasoning (Barrows & Johnson, 1995; Elstein, 2009; Kahneman, 2011; Patel, Arocha, & Zhang, 2005). Analytical decision making is considered conscious, deliberate, explicit, rational and controlled (Lighthall & Vazquez-Guillamet, 2015).

The uncertainties, complexity and multiple realities that exist in the clinical environment are not adequately accounted for in analytical models (Higgs &
Jones, 2008; Stanfield, 2015). The inherently rationalistic approach of analytical models de-emphasises factors such as context, social interactions and emotions which are relevant to the decision making and provision of patient-centred care (Krishnan, 2018; Sladdin, Chaboyer, & Ball, 2018). Caring for the nutritional needs of patients in the acute care setting through quality decision making can be enhanced by the inclusion of patient perceptions, highlighting the importance of communication and collaboration that support improvements in health status (Hazzard, Barone, Mason, Lambert, & McMahon, 2017). Dietitians rely on incorporating a patient’s social and cultural circumstances as well as taste, customs and opinions about food and diet which are difficult to quantify and are best understood through dialogic encounters (Harper & Maher, 2017; Lovestam et al., 2016). Therefore, a rationalistic approach to researching decision making limits various ways of knowing, such as from patients or other practitioners, that can be incorporated into quality CDM that supports the delivery of individualised health care.

**Non-analytical approaches**

Multiple models have been developed across various health professions to represent non-analytical approaches to CDM, with the intuitive model and pattern recognition being the most common (Higgs & Jones, 2008). A defining common characteristic of non-analytical approaches is that the practitioner begins with data, evidence, and or information that signal quick retrieval of experienced-based knowledge resulting in a hypothesis, conclusion or understanding of the patient’s problem (Croskerry, 2017). Research in medicine, nursing and various allied health professions acknowledge the presence, value and validity of intuitive and pattern recognition approaches in making patient-centred clinical decisions (Benner, 1984; Higgs et al., 2019; Melin-Johansson, Palmqvist, & Rönnberg, 2017; Patel & Groen, 1986; Peters et al., 2017; Rew, 1990).

In the medical and nursing literature, intuition is considered an understanding without logic, often described as “knowing without knowing how” (Pearson, 2013, p. 213). In nursing, intuition has been described as the *way* that expert nurses use multiple types of reasoning, rather than a reasoning type itself (Ray, 2018). It is rapid, more completely, more
precisely and less verbally using two or more simultaneous reasoning operations. Intuition is considered difficult to explain, lacks transparency and confirming evidence and therefore attracts criticism (Benner, Hughes, & Sutphen, 2008; Djulbegovic & Elqayam, 2017; Montori & Guyatt, 2008). However, more recent research suggests that clinical decisions made by physicians using an intuitive approach can be just as or more accurate than analytical approaches (Ilgen, Eva, & Regehr, 2016; Norman et al., 2014). Nursing in particular, claims intuitive decision making enables energy efficient and context specific judgements to be made in often complex clinical situations (Miller & Hill, 2018) with superior accuracy demonstrated by experienced clinicians (Melin-Johansson et al., 2017) and novice nurses with familiar scenarios (Price, Zulkosky, White, & Pretz, 2017).

Pattern recognition refers to the ability to recognize relationships among cues and is part of all human perception (Kahneman, 2011). It is particularly associated with experienced clinicians who have a well-structured knowledge base, who gain immediate understanding of a patient’s problem through an automatic information integration such as categorisation and problem presentation (Elstein & Schwarz, 2002; Van De Wiel, Boshuizen, & Schmidt, 2000) or on the instant recognition of similarity to a previously seen case stored in memory (Norman, Young, & Brooks, 2007). In physiotherapy, CDM also involves pattern recognition of predisposing physical, social, cultural, personal and environmental risk factors to injury; patterns of medical conditions, medications or symptoms that signal need for medical intervention; patterns of management strategies; as well as patterns of factors affecting prognosis (Jones, Edwards, & Jensen, 2019).

In summary, known cognitive models are likely to resonate with various cognitive strategies dietitians may use when making clinical decisions in the acute care setting. Experienced dietitians share similar goals as other health professionals in terms of the identification of health related problems, a biopsychosocial approach to understanding them and the need to identify the most efficacious solution to rectify identified problems. However, research to date has offered a limited understanding of the cognitive strategies experienced dietitians in the acute care setting may use to make
decisions. In addition, models that focus on a single type of cognitive approach are insufficient to account for the likelihood that different decisions demand a combination of varied cognitive approaches for dietitians practising in the acute care setting.

**Integrated cognitive models**

Integrated cognitive models refer to those models that include both analytical and non-analytical approaches, considering each as essential to decision making in the clinical setting. These models mostly stem from dual process theory (Stanovich, West, & Toplak, 2012) and continuum cognitive theory (Custers, 2013; Hamm, 1988). Integrated cognitive models have sought to encompass additional cognitive domains such as metacognition, reflection and judgement to represent a more comprehensive view on CDM (Croskerry, 2017; Daly, 2018; Marcum, 2012). Many of these are theoretical or consensus derived and very few have been developed from empirical research with practitioners situated in the context of the acute care setting (Croskerry, 2017; Lambe, O'Reilly, Kelly, & Curristan, 2016).

In Williams (2019) doctoral research, a sequential mixed method was used to determine the relationship between reflection, insight and critical thinking of new dietetics graduates and statistically compared graduates of two professional education programs. Questionnaires were used to measure engagement and need for self-insight and reflection followed by an inventory questionnaire to determine preference for rational or intuitive decision making as per the dual process theory. Williams was unable to answer the comparative research questions quantitatively due to being underpowered. The qualitative interview method implemented revealed the perceptions student dietitians had about what influenced their ability to make nutritional diagnoses in the patient care process. Students identified that confidence and competence in making nutritional diagnoses increased through opportunities to engage in repetitive practice and knowledge accumulation as well as supportive coaching and mentoring from more experienced practitioners. This study offers similar insights gained in other health professions of the role of deliberate practice, feedback and confidence in developing clinical expertise, with this case being specific to the task of deciding on an appropriate nutritional diagnosis.
Variance across integrative cognitive models mostly rests upon whether the different modes of reasoning occur sequentially or synchronously. Croskerry (2017) proposed a theoretical model of CDM in medicine as a linear process, with sequential movements from non-analytical to analytical where analytical cognition moderates intuitive or pattern recognition activities. In contrast, cognitive continuum based models present the reasoning involved in making decisions as more dynamic, with the practitioner changing the cognitive strategy used along a continuum depending on the nature of the task (Custers, 2013; Parker-Tomlin, Boschen, Morrissey, & Glendon, 2017; Standing, 2008). Medical literature around integrated models continues to emphasise the dominance of analytical modes of thinking in order to reduce bias and error when making diagnostic decisions (Croskerry et al., 2017). Comparatively, without de-emphasising analytical approaches, nursing upholds the value of intuitive modes of decision making more so than medicine, having been recognized as a valid reasoning strategy (Ackley, 2013; Tanner, Benner, Chesla, & Gordon, 1993; Traynor, Boland, & Buus, 2010).

In-depth ethnographic work on the clinical reasoning strategies of expert physical therapists further revealed an interplay of different reasoning strategies in clinicians’ daily tasks (e.g. interactive reasoning, diagnostic reasoning, narrative reasoning, ethical reasoning, teaching reasoning) (Edwards, Jones, Carr, Braunack-Mayer, & Jensen, 2004). Instead of contrasting analytical reasoning models with interactive reasoning models, Edwards et al proposed a dialectical decision making model that moves between the cognitive processes needed to diagnose and manage physical disabilities of patients and the narrative or communicative reasoning and action needed to understand and engage patients and caregivers. For either process, critical reflection is required.

A recent doctorate study used inductive text analysis methods of grounded theory to develop an understanding of clinical reasoning in nursing (Ray, 2018). Incorporating both literature and 29 online questionnaire text responses from clinical nurses (fixed and short answer responses) about a
patient scenario (unstructured), Ray developed *The Dynamic Reasoning Theory*. This theory is applicable to nurses in the direct care of patients and presents nursing CDM as a dynamic process centred around core catalysts of patients’ continually changing health status. Nurses engage in multiple (15 identified in this study) reasoning strategies, systematically and sometimes automatically in a slow deliberate nursing process when patients track predictably. However, when presented with unexpected negative health changes, an overlay of a more rapid and dynamic reasoning process involves the use of multiple strategies simultaneously. This dynamic reasoning pathway is an iterative cognitive-perceptual surveillance system which matches a reasoning strategy with the demands of the situation. It runs constantly in order to enable the nurse to identify, attend to and intervene with unexpected changes to the patient.

The multiple reasoning strategies (e.g. inductive reasoning, multilogoical reasoning, verbal reasoning, deductive reasoning) are described as functioning within complex systems termed reasoning architectures (Ray, 2018). These architectures are multilogoical representations of cognitive networks (e.g. general reasoning, dynamic reasoning, information management, analysis-synthesis, interpreting) used to make decisions about how to respond to changing needs and problems of patients’ health. The clinical reasoning strategies used by nurses were demonstrated to be influenced and supported by a range of factors including individual nurse’s motivation and attention, culture on the nursing unit, the environmental context of care, the experience level of the nurse, and thinking habits (Ray, 2018). A key finding was that The Dynamic Reasoning Theory conveyed nursing reasoning as a complex and multidimensional phenomenon that was characterised by the way it responded and adapted to the environment (physical context and specifics of the task in that context) in which the nurse was practising. The main limitation of this study was that by using the simulation method of a low fidelity patient scenario, the respondents needed to apply their own context to the simulation. Therefore, the cognitive strategies discussed by study participants may not be generalizable to the clinical practice of nurses with real patients. Despite this, The Dynamic Reasoning Theory in nursing presents a very comprehensive theory of
nursing decision making, providing explanations of reasoning in situations of uncertainty and complexity and ultimately revealing the complex and dynamic nature of the process. Like nurses, dietitians are faced with the task of making decisions for patients in the acute care setting whose health can unexpectedly negatively change which cascade and influence patients’ nutrition status. Ray’s theory supports the importance of exploring dietitian decision making in a holistic way, to better understand the role of context and complexity in dietitian CDM.

2.5 CDM AS A COLLABORATIVE PROCESS

Decision making processes by which health care decisions are made collaboratively with patients, health care professionals or others is referred to as ‘shared decision making’ or ‘collaborative decision making’ (Costanzo, Doll, & Jensen, 2019; Kiesewetter, Fischer, & Fischer, 2017). Arguments have been made to strive for greater collaboration with patients in the decision making process (Elwyn et al., 2012; Lin & Fagerlin, 2014; Matthias, Salyers, & Frankel, 2013). In addition to patient collaboration, interactive approaches to decision making also include interactions between professionals or within teams.

There are discrepancies in the health care literature about the use of the terms ‘shared’ and ‘collaborative’. O'Grady and Jadad (2010) argued a need to distinguish between the terms shared and collaborative decision making. Unlike shared decision making, in collaborative decision making, the clinician’s role is supportive instead of just informative; the patient’s role is proactive rather than just informative and knowledge is built together rather than exchanged, resulting in optimal actions to improve health, rather than just equity in decision making (O'Grady & Jadad, 2010). The use of the term collaborative better aligns with tenets of patient-centred care and with the goal’s authors have conveyed in research on more interactive approaches to decision making (O'Grady & Jadad, 2010). Therefore, from here on, I will preference the use of collaborative decision making unless another term is more appropriate.

Collaborative decision making has mostly been depicted as decision making that places the patient in an active rather than a passive role in the process.
The literature on collaborative decision making between health care professionals and patients has largely stemmed from the seminal work of Charles, Gafni and Whelan (1997) resulting in various models that attempt to describe the elements, actions and communication that contribute to collaborative decision making (Jack, Maskrey, & Byng, 2018). Core elements that are shared across the various models depicting collaborative approaches are when both clinician and patient are mutually informed, that the best evidence is used, there is deliberation, integration of patient values and a mutually agreed plan of care (Charles, Gafni, & Whelan, 1999; Jack et al., 2018; Kasper, Légaré, Scheibler, & Geiger, 2012; Légaré et al., 2011; White, Malvar, Karr, Lo, & Curtis, 2010). While many argue that collaborative decision making should be mainstreamed (Costanzo et al., 2019; Makoul & Clayman, 2006), implementing this approach is influenced by the nature of the decision, the context of decision making, and the values and readiness of patient and clinician concerning collaboration. These influences can act as barriers to collaborative decision making as well as reasons for why collaboration with patients may not be feasible in certain circumstances.

Moving beyond a transactional description of collaboration, Trede’s (2008) doctoral research developed a model for collaborative decision making in physiotherapy that emphasised the need to be aware of the intentions or motivations to collaborate and in doing so actively seek to democratise roles. Trede’s research highlights an important role of metacognitive skills that practitioners need to facilitate awareness of the implicit elements (intentions, motivations) that inform default or deliberate approaches to decision making. Collaborative decision making requires conscious choices about how to approach decision making, not just about what decisions need to be made with patients.

Interactive approaches to decision making between health professionals have also been studied, either as collaborative decision making (Kiesewetter et al., 2017) or interprofessional collaborative decision making (Légaré et al., 2011). The premise of these models includes acknowledgement of the complexity of patient scenarios and the advancement of technology thereby requiring the involvement of more than one clinician in the CDM of an
individual patient’s care (Kiesewetter et al., 2017). Multidisciplinary teams are a prominent feature of acute care settings with dietitians more often than not interacting with other health professions within teams. A recent systematic review of empirical studies in medicine highlighted the significant influence of increasing amounts of information on team members’ performance and emphasised the importance of interaction and communication in collaborative decision making (Kiesewetter et al., 2017). Although structured processes have been developed to represent ideal interprofessional collaborative decision making (Jack et al., 2018; Légaré et al., 2011) in reality little is known about what decision making looks like in the acute care setting between allied health professionals and other health professionals such as doctors or nurses who have distinctly different roles. There are many factors involved in successful collaboration for the benefit of patient care including ensuring that power dynamics allow for the team to perform effectively (Costanzo et al., 2019, p. 186).

In summary, a broader understanding of CDM has been constructed from the different approaches discussed in this review of the literature. In the fields of medicine, nursing, physiotherapy and occupational therapy, contemporary understanding of CDM are that different approaches to CDM are used depending on numerous variables. CDM is represented in the literature mostly as a cognitive process but involves collaborative approaches between practitioner and patient as well as other practitioners in order to arrive at decisions that best suit each patient’s individual situation.

2.6 EXPERTISE INVOLVED IN CDM

In this section, current perspectives and understanding of how expertise in clinical dietetics is developed and how little is known about how CDM expertise is specifically developed are highlighted. A review of Australian dietetics education research (Morgan, Kelly, Campbell, Hughes, & Reidlinger, 2019) has indicated that the focus has mostly been on university and placement settings exploring views, opinions and assessing professional activities and competency development. In addition, there has been a growing focus on defining and developing the process of gaining advanced
practice credentials with or without clinical specialisation. Expertise in professional practice is understood differently depending on the profession. The nature of expertise in some professions has been portrayed as a form of artistry, often called professional artistry. To provide clarity for this review and my research, I have provided definitions of the interconnected but different terms expert, expertise, clinical expertise, professional artistry and CDM expertise as related to professional practice (see Table 2.3).

Table 2.3  Accepted definitions of terms related to expertise

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Expert</td>
<td>An individual who performs exceptionally well and is held in high regard by their colleagues and their patients (Jensen, Resnik, &amp; Haddad, 2019)</td>
</tr>
<tr>
<td>Expertise</td>
<td>Expert skill and/or knowledge in a particular field (Oxford Dictionaries, 2011)</td>
</tr>
<tr>
<td>Clinical expertise</td>
<td>The proficiency and judgement that individual clinicians acquire through clinical experience and clinical practice (Sackett, Rosenberg, Gray, Haynes, &amp; Richardson, 1996, p. 71)</td>
</tr>
<tr>
<td>Professional artistry</td>
<td>A type of competence that involves a degree of ‘art’ to solving problems in day-to-day practice that cannot easily be described objectively within the scientific paradigm (Higgs &amp; Titchen, 2001b)</td>
</tr>
<tr>
<td>Clinical decision making expertise</td>
<td>The proficiency for making decisions during clinical practice that clinicians acquire through clinical experience and clinical practice (adapted from Sackett et al. (1996))</td>
</tr>
</tbody>
</table>

The concepts of clinical expertise and CDM expertise are poorly defined in the literature with attempts to define these concepts mostly including descriptions of the type of actions ‘expert’ clinicians engage in and what characterises expert CDM. This section explores what is known about clinical expertise and professional artistry and how research on these dimensions of practice contribute to the current understanding of dietitian CDM.

2.6.1 Specialisation and advanced practice in dietetics

In dietetics, the expert clinician is predominately referred to as an ‘advanced practitioner’ with an acceptance that advanced practitioners are likely
specializing in particular areas of dietetic practice. Specialist practice has been defined as a ‘narrowing of the range of work to be done and an increase in depth of knowledge and skills’ (Llahana, 2005).

Professional associations within Australia, USA and Canada have sought consensus within their respective dietetics profession on what generally constitutes ‘advanced practice’. Subsequent policies and standards have been developed that reduce expertise to a list of attributes and skills that a dietitian should be able to evidence. Within the various descriptions of advanced practice, CDM is framed as one part of advanced-level clinical nutrition practice. This highlights that the dietetics profession acknowledges that CDM differs between those that demonstrate advanced practice and those that don’t. American dietitians involved in advanced practice have been surveyed to elicit what constitutes advanced-level clinical nutrition practice (Brody, Byham-Gray, Passannante, Touger-Decker, & O'Sullivan Maillet, 2010, 2011; Brody, Byham-Gray, Touger-Decker, Passannante, & O'Sullivan Maillet, 2012). These studies revealed a consensus that advanced dietitians use advanced knowledge of pathophysiology, pharmacology and metabolism within the Nutrition Care Process. Further, approach to patient care involves ‘expert reasoning’, ‘ethical decision making’; ‘adaptable’, ‘creative’, ‘innovative’; accepting of ambiguity and uncertainty and marries intuition with a ‘big picture’ systematic and process-orientated approach to problem identification and solving in practice (Brody et al., 2012). Highlighting a contextual dimension to expert practice, specialisation or working within a focused area of practice was found to be essential to advanced practice. Advanced practice and specialist dietitians have also been reported to use knowledge from other disciplines e.g. oncology, nephrology (Charuhas Macris, Schilling, & Palko, 2018; Kent et al., 2014; Skipper & Lewis, 2006). However, the cognitive operations used in processing that knowledge most likely varies from those of the originating discipline given cognition is inseparable from language, and language is based on culture (Gadamer, 1989).

American dietetics research concurred with research on advanced practice for dietetics in Canada (Wildish & Evers, 2010) and extended earlier work on advanced practice (McCarthy, 2009; Skipper & Lewis, 2007; Skipper &
Lewis, 2006). These studies highlight an important influence of context on CDM expertise with the specificity of knowledge that a specialised and advanced dietitian is expected to possess and use.

More recently in Australia, new advanced practice competencies were developed to support the credential of Advanced Accredited Practising Dietitian (Dietitians Association of Australia, 2018; Palermo et al., 2017). Similar to international organisations, the Dietitians Association of Australia (DAA) has adopted the theoretical framework of the Dreyfus and Dreyfus (1980) model of skill acquisition to describe expertise. Advanced practice was considered to include evidence-based approaches performed at an advanced level that include higher-level critical thinking skills and the ability to integrate experience from practice into problem solving. Observable dimensions of advanced practice were argued to be the ability to innovate and embrace change, influence others and advocate, have gained recognition and offer inspiration while being outcomes focused to gain impact. While these descriptions offer insight into how the dietitian profession views expertise, further in-depth understanding on how this advanced practice approach to care might be reflected in CDM in the acute care setting is not offered.

Unlike in Australia, overseas there are formal pathways offered by professional bodies that provide accredited specialisation based on established practice and scope of practice standards specific to a specialty. Nutrition support, which is a key focus of dietitians working in the acute care setting, is recognised by the American Dietetics Academy as a specialised area with a Standards of Practice document offering an authoritative statement on expected practice at the competent, proficient and expert level of expertise (Brantley et al., 2014). The Standards of Practice document suggests a means to evaluate the activities of dietitians working in the area of nutrition support to understand their current scope of practice relative to expectations. These activities are mapped against the key tasks of the Nutrition Care Process Model and include descriptions of what advanced level performance of these tasks should involve. The Standard of Practice documents developed for specific practice contexts offer insights into the commonalities and differences that the profession (in the USA at
least) deems acceptable at various levels of expertise. It also presents expertise development as a linear process that dietitians engage in through specific skill and knowledge acquisition towards the attainment of ‘expert’ status.

While the dietetics profession encourages developing CDM expertise that integrates clinical judgement and patient values with evidence-based practice (International Confederation of Dietetic Associations, 2010), current literature and professional associations emphasise a biomedical reductionist model. Our understanding of how dietitians may develop expertise currently lacks adequate description of the nature of how a dietitians CDM moves beyond entry level and evolves towards what the profession has described as advanced practice (Dietitians Association of Australia, 2019c; Palermo et al., 2017). To date, little is known about how CDM expertise develops within the acute care setting.

2.6.2 Expertise in the health professions
The role of understanding clinical expertise in other health professions, given the scarcity in dietetics research, offers insight into potential similarities about the expertise that underpins dietitian CDM. It is generally understood that CDM is not a separate skill acquired independently from other clinical skills that comprise a practitioner’s clinical expertise (Boshuizen & Schmidt, 2019). The goal of understanding CDM is to promote effective decision making in practice where effectiveness is considered to be related to clinical expertise (Jensen et al., 2019). Time and experience alone are not adequate criteria for clinical expertise (Halpern, 2014). In the same way, time and experience alone are likely not adequate for effective CDM. Therefore, by understanding clinical expertise and its development, it may shed light on the development of CDM expertise given how their development coincides.

Conceptualising expertise
The field of expertise research is broad and converges over multiple contexts of expert performance. More specifically, research that has explored the expertise required for health care practitioners’ CDM is the focus of this section. Much of the literature on developing CDM expertise
sits within the broader sphere of how professional competence and practice expertise develops (Epstein & Hundert, 2002).

Health professional expertise in clinical practice is understood in different ways depending on underpinning practice traditions and theoretical stances. Two main theoretical stances drawn from educational research offer explanations of the nature of health professional expertise (Kotzee, 2014). These key theoretical stances are underpinned by rationalistic and constructivist philosophies. A rationalist stance dominates views on medical expertise, identifying experts as those who can rapidly draw inferences based on the development of complex knowledge forms called illness scripts for diagnostic decision making (Boshuizen & Schmidt, 2019; Glaser, Chi, & Farr, 1988). The expert is thus differentiated from novice and intermediate practitioners by how their knowledge is categorised and integrated into CDM. Constructivist theory is founded in psychology contends that individuals construct their knowledge and understanding of the world through experience and reflection on that experience and therefore cannot be context-free (Salkind, 2011). A constructionist view of expertise stems from the seminal work of Dreyfus & Dreyfus Models of Skill Acquisition (Dreyfus & Dreyfus, 1984), Benner’s application of this to nursing (Benner, 1984) and Schöen’s Reflective practice (Schön, 1983). While these models continue to exist as the basis to many health professional practice expertise depictions, including dietitian entry level competency development in Australia (Dietitians Association of Australia., 2015), more contemporary conceptualisations have emerged.

The majority of contemporary conceptualisations of expertise in health professions characterise the behaviours of the expert in comparison to the non-expert. Critics of constructivist models argue for a social realist view where expertise is viewed as more than how the expert practitioner acts or reflects on and interprets their work (Collins, Evans, Ribeiro, & Hall, 2006; Winch, 2010; Young & Muller, 2014). Instead, they argue that expertise is an observable and objective ability that produces an outcome that others cannot, at the same time describing expertise as a social phenomenon where expertise is acknowledged and valued by others. Regardless of which stance is taken, expertise is commonly associated with advanced knowledge and
utilisation within a particular domain (Kotzee, 2014; Van De Wiel et al., 2000; Young & Muller, 2014). Changes to clinical expertise are considered to be partly the result of structural changes to knowledge as seen in medical expertise research (Boshuizen & Schmidt, 2019). Therefore, the nature of clinical expertise that underpins decision making is thought to be dependent on the specific domains from which that knowledge sits within (Schwartz & Elstein, 2008).

Higgs and Jones (2019) have continued to build on past expertise conceptualisations (Glaser et al., 1988; Higgs & Jones, 2000; Higgs & Jones, 2008; Norman, 2005) and propose characteristics of expert practitioners with the recent view of CDM expertise being on a continuum along multiple dimensions. Skill acquisition occurs and capability develops on a time continuum of both professional and personal experiences. Higgs and Jones (2019, p. 41) propose that this expertise continuum involves the dimensions of:

- personal attributes (professional judgement, technical clinical skills, communication and interpersonal skills)
- clinical outcomes
- a sound knowledge base
- cognitive and metacognitive proficiency and;
- informed and chosen practice model and philosophy

Clinical expertise comprises multiple dimensions including the knowledge, reasoning, judgement and attributes that the practitioner brings to the task of CDM ultimately characterising practice actions and clinical outcomes. An important feature of clinical expertise is the many elements that are profession and clinical area specific, therefore highlighting a need to understand CDM expertise within acute care dietetics specifically.
Development of expertise

Developing the ability to make safe, effective and evidence-based decisions is the focus of student education and novice research in health professional literature with a view to increasing competence to a level of independence and autonomy in decision making (Kinchin & Cabot, 2010). Very little research has examined how CDM expertise may continue to develop beyond entry into the profession.

The dominant contemporary theory explaining how CDM expertise develops is deliberate practice theory (Ericsson, 2004) which seeks to account for expert performance in a variety of fields. Using this theory, expertise in CDM is assumed a skill in itself and can therefore be developed through engagement in purposeful professional practice of making clinical decisions in real life or simulated contexts. This purposeful practice needs to include a specific goal, be focused on improvement, seek and gain immediate feedback and must continue to attempt tasks outside one’s comfort zone. Challenges with applying deliberate practice theory to practising and somewhat experienced independent practitioners in the acute care setting with real-time demands include the absence of immediate feedback from mentors or expert clinicians. The aspiring expert needs to continue to monitor their own performance through reflection so as to avoid arrested development which is common when tasks become easier and carried out more automatically (Ericsson, 2008).

Research in medicine (Causer, Barach, & Williams, 2014; Durning et al., 2013) and physiotherapy (Hayward et al., 2013; Jensen, Gwyer, Hack, & Shepard, 2007) have shown the essential role of deliberate practice in developing decision making expertise in the early years of professional practice. While direct patient care in practice settings is undoubtedly essential, other elements have also been considered important for facilitating decision making expertise. Informal and formal professional development activities and resources that enhance professional knowledge were considered important by expert and intermediate medical practitioners (Durning et al., 2013). Where expert doctors saw value in teaching non-experts as a means to continue to evaluate and reflect on their own CDM to help maintain expertise. Ensuring confidence was adequate and increasing
was considered important to developing decision making expertise as it enabled novice physiotherapist to undertake more challenging tasks (Hayward et al., 2013).

In nursing, building on the Dreyfus and Dreyfus (1980) skill acquisition model, the Novice to Expert theory developed by Benner (1982) provided a framework for further nursing expertise research (Bonner & Greenwood, 2006; Fonteyn & Grobe, 1994; Welch & Carter, 2018). Developing nursing expertise is thought to move through five stages: novice, advanced beginner, competent, proficient and expert, enabled through learning from experience in the real-life context of practice (Benner, 1982). The expert nurse is said to have moved from ‘knowing that’ to ‘knowing how’ with CDM becoming more intuitive and holistic. Benner and colleague’s work (Benner, 1982, 1984; Benner & Tanner, 1987; Benner, Tanner, & Chesla, 1992) and subsequent research base on seminal research (Bonner & Greenwood, 2006; Crook, 2001; Dreyfus & Dreyfus, 1996; Lyneham, Parkinson, & Denholm, 2008; Stockhausen, 2006) acknowledge the role of context (clinical speciality, practice setting) in shaping the the process and product of developing CDM expertise. There is less emphasis on cognitive theory and more about describing the behaviours of nurses at different levels of expertise arguing they are not synonymous with years of experience (Ericsson, 2008).

The concept of adaptive expertise has emerged within medicine (Croskerry, 2018; Mylopoulos & Woods, 2009), stemming from educational research (Hatano & Inagaki, 1986), extending Benner’s (1982) work, to argue that there are different forms of expertise. The problem solving focus of CDM in increasingly complex and uncertain contexts demands more than routine expertise (efficiency focused) supporting the view that expertise involves knowledge organisation and use (Mylopoulos, Kulasegaram, & Woods, 2018). Instead, adaptive expertise is seen as essentially the clinician’s ability to problem solve in any given situation, adapting to the needs of the task (Mylopoulos & Woods, 2009). Croskery (2018) has extended Benner’s continuum by positioning adaptive expertise as the next level of expertise after the ‘expert’. The concept of adaptive expertise has come to be understood as “ a context appropriate, balanced cluster of learning
orientated, self-regulatory and metacognitive processes that moderate and mediate the application of abilities and previously acquired knowledge to problem solution, future knowledge acquisition and ultimately effective leadership” (Birney, Beckmann, & Wood, 2012, p. 256) and is considered key to CDM expertise (Jensen et al., 2019). As the complexity of decision making tasks increases particularly in settings such as acute care, it is becoming increasingly apparent that practitioners need to embrace multiple perspectives or approaches to decision making. Capabilities such as innovative, creative and lateral thinking that are stimulated by patient needs and context contribute to a more comprehensive view of expertise (Croskerry, 2018; Ilgen, Eva, de Bruin, Cook, & Regehr, 2018). This more comprehensive view positions the practitioner as an ongoing experiential learner. The development of expertise, therefore, is no longer about reaching an endpoint but about being able to continually adapt to the needs of patients being served (Jensen et al., 2019).

The increasing complexity and uncertainty of contemporary health care contexts call for expertise that can adapt and sensitively respond effectively to the needs of patients within dynamic practice contexts. Dietitians working in the acute care setting are likely facing similar challenges and demands on CDM.

**Professional artistry**

Professional artistry has been viewed as an unconscious element of professional expertise, highly reliant on tacit knowledge and essential to good CDM for the benefit of individual clients (Higgs, Burn, & Jones, 2001). Professional artistry is concerned with ‘practical knowledge, skillful performance or knowing as doing’ (Fish & Coles, 1998, p. 87). According to Schön (1987), artistry also involves going beyond rules and convention, where practitioners test and trial new ways of reasoning, framing problems and strategising and in doing so, building knowledge and expertise. Schön’s term ‘professional artistry’ conveys a sense of mastery at the peak of expertise with these practitioners distinguished by a practice ‘wisdom’, ‘intuition’ or ‘artistry’ (Parry, 2001, p. 200). In occupational therapy, the art of practice has also been conveyed as a way of creating meaning through
context, individualising interventions by considering the patient’s world (Kielhofner, 2009).

Paterson’s doctoral research in occupational therapy developed the concept of professional practice judgement artistry (PPJA) defined as the cognitive, metacognitive and humanistic aspects of judgement in professional practice (Paterson, 2003). The construct of PPJA was further developed with fifty-three occupational therapy educators and practitioners to describe the elements of a model as depicted of occupational therapy practice (Paterson, Higgs, & Wilcox, 2005). Key dimensions were revealed as professionalism, multifaceted judgement, practice artistry and reflexivity. Practice artistry within PPJA was described as embodied knowing, the ability to be in tune with people, the practitioner’s passion, grace and finesse displayed as wise practice (Paterson et al., 2006). The research on PPJA offers insights into the subjective nature of expertise in occupational therapy, suggesting a complex interplay of multiple elements with artistry being a defining component of decision making within practice. It is not known whether practice artistry is relevant in clinical dietetics in the acute care setting. Therefore, it would be valuable to explore if dietitian decision making involves a form of professional artistry in order to deliver quality care.

The nuanced and complex nature of health professionals’ clinical expertise and variance around how different professions view expert practice underscores the importance of exploring the relevance of professional artistry CDM in acute care dietetics.

2.7 CONCLUSION

Contemporary understanding of dietitian CDM is centred within an evidence-based practice framework with research mostly enacted within the empirico-analytical paradigm. The NCPM has become a dominant model of practice that is driving efforts to demonstrate positive patient outcomes as a result of dietitian decision making. The NCPM in Australia is currently a key tool used for training and assessment of entry into the profession as well as a DAA supported means for standardising the terminology used to report patient care. Critical thinking and clinical judgement are considered
important for dietitian CDM as per the literature however a deep understanding of what these concepts mean for dietetics is not available.

Contemporary understanding of CDM in other health professions acknowledges the uncertainty and increasing complexity that characterises the acute care setting supporting the view that no single reasoning process is used while attempting to provide holistic and best patient care. Decision making approaches identified or theorised in other health professions are dominated by representations of decision making as a cognitive process including both analytical and non-analytical reasoning approaches. CDM as a collaborative process between practitioner and patient has gained increasing attention, including in dietetics, in order to promote patient-centred care.

Expertise that underpins dietitian CDM is considered to include a collection of general competencies as outlined by the DAA yet there is very little empirical research to support these competencies. Instead, research has focused on consensus methods to develop credentialing models for advanced practice, with Australia, only having a contextual depiction of advanced dietetic expertise. Expertise research in other health professions suggests that CDM expertise is related to the context of practice and even the domain of knowledge the practitioner possesses. Little is known of the nature of expertise that underpins an experienced dietitian’s CDM in the acute care setting.

2.8 RATIONALE FOR MY RESEARCH

Despite the shared opinion that a dietitian’s approach to nutrition care should acknowledge the psychological, social and cultural aspects of food and nutrition behaviour, there appears to be a stronger emphasis on technical knowledge, EBP and empirico-analytical research in clinical dietetics literature. Established understanding of the various dimensions of CDM and professional expertise in other health professions offers insight as to the nature of CDM of dietitians in the acute care setting. Research in dietetics has focused on critical thinking of students and novice dietitians and how to improve this to achieve safe and competent dietetic practice. The Nutrition Care Process Model and its international and local implementation
dominates research about how dietitians may identify and address nutritional issues in patients with a focus on standardising processes in order to more easily measure outcomes related specifically to dietitian involvement.

The literature supports the notion that context of practice influences the nature of how health professionals make decisions as well as how expertise develops. The various dietetic models of practice draw heavily from other health professions or expert consensus with a focus on how dietitians should ideally practice versus how acute care dietitians actually do make decisions. Advanced practice research in dietetics offers a broad understanding of the attributes and skills experienced dietitians possess without any specific depth of understanding of the expert dietitian in the acute care setting. Understanding the nature of this expertise may assist with the ongoing professional development needs of practicing dietitians as they progress from entry to the profession to advanced practice. This review demonstrates that a number of specific questions remain unanswered: These questions are:

- How do clinical dietitians in acute care make decisions?
- When and how does clinical decision making expertise develop?
- What is the place of professional judgement in such decision making?
- Are the concepts and practice of artistry and judgement relevant for dietetic practice? If so, in what way?

These questions are addressed in this thesis.
CHAPTER 3 RESEARCH METHODS

A philosophical hermeneutic approach was used in this research as the means to gain an understanding of the nature of CDM by acute care dietitians. This chapter provides the rationale for this research approach and describes the specific methods used to construct and interpret texts to reveal meaning. Text construction was achieved through in-depth semi-structured interviews and a reference focus group. This chapter also describes in detail the strategies used to ensure rigour and credibility of the research.

3.1 RESEARCH QUESTIONS

The goal of this research was to develop a deeper understanding of how experienced dietitians made clinical decisions in the acute care setting and how CDM expertise develops. To achieve this understanding, the overarching research question was: What is the nature of dietitian clinical decision making in the acute care setting? Four sub-questions were developed and used to guide the research process.

1. How do clinical dietitians in acute care make decisions?
2. What is the place of professional judgement in such decision making?
3. When and how does clinical decision making expertise develop?
4. Is the concept and practice of professional artistry relevant for dietetic practice? If so, in what way?

Although there has been much research in the area of professional decision making in other health professions in various settings, little to date has been undertaken with dietitians in the acute care setting. My research approach focussed on understanding and illuminating the nature of CDM of dietitians rather than trying to explain or measure patient outcomes of decision making, change decision making behaviours or describe the lived experience of dietitians making clinical decisions in the acute care setting.
3.2 PHILOSOPHICAL FRAMEWORK

3.2.1 Paradigms for studying clinical decision making

A research paradigm is a set of beliefs and worldview that guides actions undertaken within research processes including how data is collected, analysed and how meaning is constructed (Denzin & Lincoln, 2000; Guba & Lincoln, 1994). Elements of any research paradigm include philosophies related to what can be known referred to as the ontological perspective of reality as well as, how something can be known referred to as epistemological perspectives (Higgs & Trede, 2010). Understanding the nature of the chosen research paradigm was important as it provides the framework in which congruence and rigour can be achieved in the research process, and also influences how results of the research should be interpreted (Kivunja & Kuyini, 2017).

Research into CDM has largely used methods found in the tradition of the empirico-analytical paradigm or quantitative research. Within this tradition, the focus of research has been on quantifying decision making outcomes particularly in relation to diagnostic accuracy in medicine (Arocha & Patel, 2008). Quantitative research has also been used to compare decision making variables (e.g. cognition or experimental conditions) and outcomes between different groups (e.g. novice/expert or different clinical specialties) in multiple different health professions (Arocha & Patel, 2008). Research undertaken in a quantitative or empirico-analytical paradigm is underpinned by the epistemological perspective that the world is objective where knowledge can be gained through reason and research can generate laws or theories that are relevant across contexts. The ontological perspective inherent in this paradigm is that the world can be experienced through our senses and that reality can be observed. Based on these characteristics, the quantitative or empirico-analytic paradigm often uses research methods that seek to test, measure, and control outcomes.

Another framework that has guided research in CDM more recently has been the critical paradigm. The goal of research conducted within this paradigm is to ‘improve, reform, empower, change reality or situation’ (Higgs & Trede, 2010, p. 34). The critical paradigm takes the view that
reality is constructed socially and under constant influence from political, cultural, economic, ethnic, and gender values (Scotland, 2012). Knowledge is created socially, is always changing and being influenced by the power relations existing within society (Toth-Cohen, 2008). Within the critical paradigm, the goals of decision making research in the health professions have centred on transformation of the practice of the practitioner. Methodologies commonly employed in CDM research within the critical paradigm are action research and participatory emancipation (Loftus & Smith, 2008).

![Interpretative research paradigm](image)

**Figure 3.1 Philosophical framework informing my research methods**

Research conducted within the interpretive paradigm aims to understand and interpret what participants think or the meaning they have constructed about a phenomenon as opposed to an objective view or just the viewpoint of the researcher. A pictorial summary of how the philosophical framework aligns with the research methods in my research are shown in Figure 3.1. The ontological position of this paradigm is that people construct their own understanding of reality. There is no singular version of reality and the meaning of these realities can be constructed or reconstructed through
interactions between the researcher and the research participants (Chalmers, Manley, & Wasserman, 2009). The epistemological stance accordingly involves the belief that knowledge about the world does not exist separate from our knowing of it (Grix, 2004). Consequently, individuals construct meaning through perceptions and interpretations of experiences (Trede & Higgs, 2009). Research within the interpretive paradigm therefore views CDM as a human activity that is socially, historically and culturally constructed (Higgs & Trede, 2010). The interpretive paradigm accepts that context is vital for knowledge and knowing and should be taken into consideration in any pursuit of understanding (Morgan, 2007).

3.2.2 Rationale for use of interpretive paradigm
The interpretive paradigm was most appropriate to frame my exploration of the nature of CDM of dietitians in the acute care setting for three key reasons. First, I was concerned with understanding dietitians’ CDM from their perspective as opposed to a neutral or objective stance and in so doing acknowledged the existence of multiple constructed realities. Second, my focus was on better understanding and not changing the participants’ approach to CDM therefore a critical paradigm was excluded. Finally, the interpretive paradigm allows for the variation to each dietitian’s constructed reality, how they view their own decision making and the influences on it within their own context. The interpretive paradigm therefore provided an appropriate framework for the development of a deep and rich understanding of the phenomenon of dietitians’ CDM in acute care settings. Highlighted in my review of the literature in Chapter 2, CDM is a complex phenomenon that has been shown to be influenced by the context of the clinician and where decision making is situated. Therefore, a quantitative approach would have not have provided the means of illuminating the diversity and complexity inherent within the activity of CDM.

3.3 RESEARCH APPROACH
A research approach is a methodology located within a research paradigm that frames and guides the actions within the research process. Common research approaches located within the interpretive paradigm used to study decision making have included narrative inquiry, phenomenology and
philosophical hermeneutics (Higgs et al., 2007). From this collection of approaches philosophical hermeneutics was chosen to guide this research.

3.3.1 Philosophical hermeneutics
Hermeneutics is concerned with the human experience but more specifically, the interpreted meaning of this experience, and can be employed to clarify human experiences, to make the unclear clear (Bauman, 1978). Philosophical hermeneutics is not a research method per se but a philosophy that aims to clarify processes framing the development of understanding (Schwandt, 2007). The ontological and epistemological perspectives underpinning philosophical hermeneutics include the understanding that people and the world are interdependent (Benner & Wrubel, 1989) and that knowing or knowledge is embodied within individuals and therefore not strictly observable or easily articulated. Philosophical hermeneutics, therefore, represents an appropriate framework to guide researchers seeking deeper understanding of phenomena as humanly understood and experienced such as dietitians’ CDM practices.

Philosophical hermeneutics as described by Gadamer (Gadamer, 1960/2013) facilitates the development of deeper understanding by providing a framework for revealing new knowledge through interpretation of text. The term text refers broadly to many forms of data that portray the phenomenon being studied e.g., written text, oral and video recordings, interview transcripts and images. Gadamer inextricably linked the processes of interpretation and the development of understanding - “understanding is interpretation, and hence interpretation is the explicit form of understanding” (Gadamer, 1989, p. 307). Further, Gadamer also proposed conditions whereby deeper understanding can be developed. These conditions provided the philosophical framework informing the development of methods and research strategies in this research with the aim of more deeply understanding dietitians’ CDM in acute care settings. The characterising elements of Gadamer’s philosophical hermeneutics that underpinned this research are as follows:
• Language and tradition
• Pre-understandings
• Hermeneutic circle
• Question-answer dialogue
• Fusion of horizons

**Language and tradition**
A fundamental dimension of Gadamer’s hermeneutics is the role that language plays as the medium by which understanding occurs and that understanding occurs through interpreting (Gadamer, 1996, p. 389). The ontological perspective upheld in philosophical hermeneutics is that “through hearing, through language, one gains access to the *logos*, to the world to which we belong” (Gadamer, 1996; Palmer, 1969, p. 208).

Gadamer described knowing as a kind of ‘being-in-the world’ where people hold common meanings and shared practices, essentially inseparable from their world. Language is ‘situated’, meaning it belongs to a tradition. Tradition, according to Gadamer concerns the historical perspective that is embedded in language that takes the form of text thereby positing that understanding always occurs on the basis of our history. In philosophical hermeneutics, there is an intimate relationship between language, history, tradition and the way we come to understand, “experience, thinking, and understanding are linguistic through and through, and in formulating an assertion one only uses the words already belonging to the situation” (Palmer, 1969, p. 203).

Davey (2006, p. 15) argued that philosophical hermeneutics “attempts to articulate what occurs within the *process* of understanding. Philosophical hermeneutics provides a way to articulate how experience becomes knowing and how this knowing changes his or her self. Part of the process of deepening understanding is a reflection upon and acknowledgment of one’s position in time and how this position could have influenced pre-understandings.

**Pre-understandings**
In Gadamer’s hermeneutics, pre-understandings are a person’s bias, perspective or prejudice and are considered simply the conditions by which
we experience the world rather than that which can obstruct the truth. Gadamer considers that people are positioned in particular times, places, cultures and traditions with particular ways of using language (Gadamer, 1960/2013). Therefore, the perspective of the researcher is considered essential and should not be separated from the interpretation but instead made explicit through articulation of their pre-understandings (Gadamer, 1976). Consequently, it is important throughout the process of interpretation, that researchers are aware and question their own pre-understandings and the tradition from which they come. As Gadamer reinforces: “the important thing is to be aware of one’s own bias, so that the text can present itself in all its otherness and thus assert its own truth against one’s own fore-meanings” (Gadamer, 1989, pp. 217-272).

Hermeneutic circle

In an approach to understanding texts, Gadamer (1989) described the hermeneutic circle as a means of developing understanding through constant movement between the part and the whole until harmony is achieved between the parts and the whole. Gadamer (1975, p. 293) saw the hermeneutic circle as “neither subjective nor objective, but [it] describes understanding as the interplay of the movement of tradition and the movement of the interpreter” (p. 293). The interpreter moves between the understanding of the text taken as a whole and its parts and moving back again (Bontekoe, 1996). In the research process, the “whole” may represent the emerging understanding of the research phenomenon while the “parts” may be individual text sets, individual transcripts and individual quotes (Trede & Loftus, 2010). Throughout the whole interpretation process researchers immerse themselves in texts through listening, reading and re-reading each part and move back and forth with the whole in an iterative process. The parts are viewed in light of the whole, and the whole in light of the parts moving towards a deeper and more complete understanding of the phenomenon (Bontekoe, 1996).

Question-answer dialogue

Understanding is participative, conversational and dialogic and is intimately bound to language, with understanding being achieved through a dialogue of question and answer (Gadamer, 1989; Schwandt, 2007). Dialogue in
philosophical hermeneutics requires an openness to texts and begins after the researcher’s pre-understandings are identified allowing the researcher to assume an attitude of openness to the possibilities of how the texts can be understood. Gadamer highlighted the importance of questioning for meaning making where the task of hermeneutics is “bringing the text out of alienation in which it finds itself (as fixed, written form), back into the living present of dialogue, whose primordial fulfillment is question and answer” (Gadamer, 1996, p. 350). During interpretation, the nature and language of the question asked of the text provides the direction of the answer which then directs further dialogue: “with the placing of the question, what is questioned is put in a certain light” (Palmer, 1969, p. 199). Awareness of the linguistic traditions a question is situated within is important for being aware of how one’s perspectives and pre-understandings can guide the dialogue as well as allow for deeper understanding of the perspectives that the language of the answers uses. The language of both question and answers illuminates the tradition in which the perspective is located.

In hermeneutics, dialogues of question and answer are used to construct texts, such as asking questions in interviews, as well as for making meaning of texts, such as when interpreting interview transcripts. The approach to dialoguing with the text aims to give the participants a voice, draw out understanding and to be able to notice the various perspectives within the text with openness to the text with an “attitude of openness to be addressed by the tradition” (Palmer, 1969, p. 209). Gadamer proposed that this can be achieved through a constant cycle of the interpreter remaining aware of what is guiding their understanding and challenging premature conclusions (Gadamer, 1989).

**Fusion of horizons**

Philosophical hermeneutics aims to develop a deeper and more mature understanding of different perspectives and to find common ground between dialogue partners. Gadamer (1989) described our horizon as everything that can be seen from a particular vantage point formed by our historical
consciousness and our pre-judgements or prejudices\(^3\), arguing that this horizon was essential for transposition into another’s horizon to deepen understanding of a phenomenon. The concept of horizon is underpinned by the epistemological assumptions within hermeneutics that knowing is situated in a tradition or a temporal moment in history (Higgs & Trede, 2010). Language facilitates a question-answer dialogue which in the interpretation process promotes a shared understanding between the text and the researcher towards a fusion of horizons (Regan, 2012; Trede & Loftus, 2010). Gadamer (1975) maintained that people seeking understanding do not leave their horizon behind when interpreting but broaden it through a fusing of the interpreter’s initial pre-understandings, the horizon of the text and the initial understanding of the phenomenon. Enriched interpretation within the research process should result in either allowing the text to confirm our existing views or cause us to revise or expand them (Davey, 2006).

3.3.2 Rationale for use of Gadamer’s philosophical hermeneutics to conduct this research

My research aim was to deepen and broaden my understanding of the nature of CDM of dietitians in the acute care setting through dialogue with participants. Hermeneutics has been used as the guiding research approach for understanding collaborative decision making practices of rural early career dietitians (Olsen, 2013) as well as various other aspects of dietetics practice and patient care experiences (Dickson-Swift, Kenny, & Threlkeld, 2015; Gheller, Joy, & Lordly, 2018; Maclellan, Lordly, & Gingras, 2011; Martinsen, Birkelund, & Poulsen, 2017). Given its ontological and epistemological underpinnings, philosophical hermeneutics provided an appropriate framework for exploration and development of a better understanding of the nature of acute care dietitians’ CDM given there are so many gaps in our understanding of this phenomenon.

\(^3\) Gadamer, H. G. (1989). Truth and Method. New York: Crossroad Publishing Corporation. argued that prejudice does not indicate a false judgement; rather, prejudices can have both positive and negative value. Our prejudices are formed by our belonging to a tradition as well as by our experiences (pp. 271-273).
The philosophical hermeneutic approach allowed for a focus on the ideas and experiences of participants in order to elicit a deep understanding of decision making in clinical dietetics in the acute care setting. In other health professions, it is widely acknowledged that many aspects and drivers of CDM are highly tacit, that is, not within conscious awareness of the practitioner (Higgs et al., 2019). The emphasis on question-answer dialogue in philosophical hermeneutics provides a means to make the implicit, more explicit. A philosophical hermeneutic exploration facilitates deep researcher engagement with texts and participants, constantly moving between the parts and the whole in order to portray a new understanding of the phenomenon.

The emphasis philosophical hermeneutics has on the situated nature of language further increases its applicability to the exploration of my research phenomenon. Dietitians’ CDM is firmly situated in health traditions and culture with the community of dietetics having its own professional language. Relationships between texts and interpreters reside within these cultures. The acute care settings in which dietitians make decisions have their own traditions and cultures that can be considered through interpretation of participant perspectives on how they make decisions in these contexts.

As an acute care dietitian, I began this research motivated to uncover a deeper understanding of dietitian CDM in the acute care setting. Recognition of the important place of the researcher in the interpretation process and subsequent development of deeper understandings in philosophical hermeneutics provided an appropriate strategy to facilitate a deeper understanding of my research phenomenon. Given the importance Gadamer places on making explicit the researcher’s pre-understandings, philosophical hermeneutics provided a framework which did not require me to leave my horizon behind.
The Gadamerian concept of fusion of horizons guided my use of a reflexive stance throughout the whole research process and facilitated my identification of new understandings, ensuring that participants’ voices were heard. This reflexive approach at all stages of the research ensured credibility by acknowledging and critiquing the influence of my background in text construction, interpretation and finally portrayal of the phenomenon.

3.3.3 Pre-understandings in relation to this research

At the commencement of this research, I explicated my individual lens and personal frame of reference to strengthen the quality and rigour of this research. My personal frame of reference informed my pre-understandings which in line with hermeneutic methodology cannot completely be put aside when conducting the research. According to Gadamer (1975), a person comes to understand something by considering it from his or her pre-existing perspective or vantage point at a particular point in time and also the influence they as researchers have on the research process. Therefore, my preunderstandings did not present a barrier to the development of deep understanding; in fact, they made it possible. I took deliberate actions during the various stages of research including development of research questions, text construction, and development of interview questions as well as the process of text interpretation to engage in regular self-reflection and make explicit my assumptions. I reflected on how my prior experiences as a health professional as well as the theoretical underpinnings of dietetic practice and previous study and training influenced my pre-understandings.

Before starting this research, I had worked as a dietitian for eight years, seven of those in the acute care setting at three different medium to large tertiary hospitals. I had specialised as a gastrointestinal dietitian for four of those eight years. I had trained in the biomedical sciences as an undergraduate but with postgraduate qualifications in health science.
education taught within the social sciences domain. I brought to this research journey experiential and scientific knowledge in acute care clinical dietetics as well as knowledge in the area of education and supervision of other clinical dietitians and university students. My experience as a practitioner had been confined to metropolitan areas of New South Wales, Australia so I had limited understanding and perspective of the practice of acute care dietitians in rural or regional areas, interstate or overseas.

My background presented potential advantages and challenges to the credibility of the research process. Being an acute care dietitian provided me with a deep understanding of the practice of dietetics within the acute care setting. Prior to and during my research I have consulted on External Advisory boards for two Accredited Nutrition and Dietetics University programs, been a member of NSW Ministry of Health Allied Health Professional Development External Advisory group, and convened the national Gastroenterology Interest Group with DAA; been on the Professional Education & Practice Development Advisory Committee with DAA and formally mentored multiple novice and experienced dietitians. These roles combined with 12 years acute care practice and educator experience, has given me a good understanding of the characteristics of acute care dietetics in Australia. This understanding also had the potential to limit my vision for the ‘new’ or unexpected during the text construction and interpretation phases of my research. This was due to the degree of familiarity I had with the culture of dietetics and the language of CDM literature in health professions. Therefore, during the entire research process I used a reflexive log to document and critique the influence of my background and preunderstandings and how they affected the actions taken and my interpretation.

3.4 TEXT CONSTRUCTION

Texts for interpretation in this study were constructed using two text construction strategies, in-depth semi-structured interviews and a reference focus group of dietitians who were currently practising in acute care settings. The semi-structured interviews used a set of guiding questions that aimed to address all four sub-questions spread across two in-depth interviews for each participant. The reference focus group was used both as
a strategy to enhance rigour through member checking as well as to allow for deeper exploration and interpretation of emerging understanding from initial interviews. Figure 3.2 provides an overview of the text construction process. Texts constructed for interpretation included interview transcripts, concept maps and reference focus group transcripts.

Figure 3.2 Overview of text construction phase

3.4.1 Participants

Participants in this study were dietitians who had direct experience of the phenomenon of CDM in the acute care setting and specifically dietitians who make professional decisions regarding patient care. Participant selection used purposeful sampling once inclusion criteria had been decided. The inclusion criteria (see Table 3.1) were developed to recruit dietitians
who were actively engaged in CDM in the acute care setting and who were willing and available to participate in the research.

Participants with a minimum of 3 years’ experience were sought to increase the likelihood that they would be able to describe both their existing decision making and the development of their decision making. A novice or relatively inexperienced acute care dietitian was expected to have a limited understanding of the development of their CDM and inadequate experience of artistry to draw upon in the semi-structured interview. The research questions were concerned with concepts of professional artistry and expertise which have been shown in other professions to be mostly occurring in professionals with a certain degree of experience (Paterson et al., 2006). A minimum amount of 24 hours worked per week was used to allow both experienced part-time dietitians and dietitians who spent more than 50% of a normal working week (40 hours) to participate. A minimum of 24 hrs per week was set as to promote inclusion of dietitians who have greater exposure on a regular basis to the full continuum of care within the acute care setting. This meant they could draw from recent examples about their decision making from admission to discharge of patients. Those dietitians working within the field of paediatrics were purposefully excluded as it was beyond the scope of this research to explore participant experiences with two distinctly different patient types. In Australia particularly, paediatric care has become quite centralised in distinct metropolitan hospitals.

Context is considered a significant influence on the nature of decision making of health professionals (Higgs et al., 2019). Context can be defined as the “circumstances that form the setting for an event, statement, or idea, and in terms of which it can be fully understood (Oxford Dictionaries, 2011). The centrality of context on practice is further highlighted by Cervero (1988, p. 156) in his contention concerning professionals and their continuing education needs, specifically his assertion that “context is not adjunct to understanding effective practice: rather it is woven into the very fabric of practice”. Therefore, it was beyond the scope of this research to explore the professional decision making of dietitians in all the different practice settings, regions of Australia and experience types that exist,
instead a single practice setting, the acute care setting was chosen. This by no means equated to the assumption leading into the research that the acute care setting’s that participants’ represented are homogenous in nature. More that the pragmatic elements of conducting research call for predetermined scope and boundaries. This was also consistent with the aims of the research to understand deeply the nature of decision making in a single context rather than make comparisons between contexts. Outcomes of research from the acute care setting are critical to understanding the role of dietitian CDM in the nutritional care of the most at-risk patients in the health care system.

**Table 3.1 Participant Inclusion Criteria**

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Actively engaged in practice for greater than or equal to 24 hours per week</td>
</tr>
<tr>
<td>• Equivalent of 3 years or greater experience in the acute care setting</td>
</tr>
<tr>
<td>• Currently practising in an adult acute care setting</td>
</tr>
<tr>
<td>• Willing and able to discuss their clinical decision making</td>
</tr>
</tbody>
</table>

Recruitment of participants was via communication through the email distribution list of the Dietitians Association of Australia (DAA). At the time of recruitment, the DAA had a membership of over 4200 dietitian health professionals who identified as currently working, a significant portion of those were dietitians working in the acute clinical setting. Australian dietitian workforce data has been acknowledged by a government authority as difficult to attain (Health Workforce Australia, 2014). According to DAA membership data in 2017, 36% of members work in hospitals, with 65-85% of dietitian members working in metropolitan or large urban areas (Morgan, 2019). A limitation of this recruitment method was that membership of the DAA is voluntary therefore it was not

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5 An advertisement (see Appendix 2) was also placed in an edition of the DAA weekly newsletter. Respondents to the advertisement who expressed interest were then emailed the relevant consent and participant information statements to confirm their inclusion suitability and formalise entry into the study.

6 This is the most recent data accessible via the Dietitians Association of Australia website.
guaranteed that all relevant potential participants were informed of the research and provided a chance to participate.

Twelve participants initially responded to the recruitment advertisement. At the time of organising interview schedules and sending consent form reminders, two of the potential participants withdrew as they were no longer able to participate in the research. The remaining ten volunteers all met the inclusion criteria and consented to participate in the semi-structured interviews. Consistent with the goals and methods within interpretive research, it was decided that ten participants was an adequate number of participants to begin text construction. As the aim of participant recruitment was the construction of a rich text set that facilitated in-depth understanding of the research phenomenon further recruitment was not considered necessary at that time point. Instead, guiding principles of thematic saturation, adequacy (Guest, Bunce, & Johnson, 2006; Morse, 1995) and redundancy (Rice & Ezzy, 1999; Sandelowski, 2008) guided determination of final numbers of participants as text interpretation proceeded. In addition, based on a proposed model of informational power (Malterud, Siersma, & Guassora, 2016), ten participants were considered to offer adequate informational power. Based on the dimensions of the model, aim was relatively narrow, specificity was dense, theory was applied, dialogue between myself and participants was strong and analysis was case based with no need or intention to compare within the sample. Therefore, whilst engaging in concurrent interpretation of the interview transcripts, I was confident that I had gained adequate informational power to reveal new and meaningful findings with respect to the research question.

The ten participants who volunteered and provided informed consent had a broad range of dietetic practice experience extending from five to thirty-five years. They also worked in a variety of clinical areas including critical care, oncology, renal, surgical and gastroenterology as well as public and private hospital settings. Most participants worked in major cities in Western Australia and New South Wales with one participant working in regional Victoria. See Table 3.2 for a full summary of participant characteristics. Pseudonyms were used in place of participants’ real names to maintain anonymity and confidentiality. In qualitative research it is usual to identify
participants by name rather than a number to retain a sense of identity and human characteristics. This is particularly relevant when research aims are focused on understanding individual human experience.

Participants were from hospitals with at least 250 patient beds which provided a spectrum of patient care diversity and consequently experiences around CDM. This specification aimed to draw participants from a setting where there are greater variety and complexity of clinical scenarios, to inform the semi-structured interviews. As the participants recruited had a broad range of dietetic experience in a wide variety of clinical areas, represented public and private health settings, were from a range of geographical locations and provided rich and meaningful texts further participant recruitment was unnecessary.

All volunteers were female even though there were no gender-based criteria for recruitment or inclusion. The absence of male volunteers was always a high probability given the general gender composition of dietetics being around 95% female (Health Workforce Australia, 2014). Whether male participants would have provided different perspectives on CDM in the acute care setting was not a focus of this research but their insights are valuable and is a perspective that could be explored in future research.
Table 3.2  Profile summary of participants

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Years of experience</th>
<th>Area of work at time of study</th>
<th>Type of hospital setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melissa</td>
<td>35</td>
<td>General, recent history of renal specialist</td>
<td>Public acute group A hospital &amp; private, WA</td>
</tr>
<tr>
<td>Penny</td>
<td>22</td>
<td>Critical Care (Specialist)</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Theresa</td>
<td>17</td>
<td>Renal (Specialist)</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Belinda</td>
<td>12</td>
<td>Oncology/Management</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Kate</td>
<td>11</td>
<td>Critical Care &amp; Head &amp; Neck surgery</td>
<td>Public acute group A hospital, Regional, VIC</td>
</tr>
<tr>
<td>Sally</td>
<td>8</td>
<td>Critical Care (Specialist)</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Alice</td>
<td>8</td>
<td>Gastroenterology</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Lila</td>
<td>7</td>
<td>Gastrointestinal Surgery/Management General</td>
<td>Public acute group A hospital &amp; private, WA</td>
</tr>
<tr>
<td>Sarah</td>
<td>5</td>
<td>General</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Mary</td>
<td>5</td>
<td>General</td>
<td>Public acute group A hospital &amp; private, Major city, WA</td>
</tr>
</tbody>
</table>

3.4.2 Setting

The texts were constructed from ten dietitians representing six individual hospitals from across three different states in Australia. The ten participants were employed by both city and regional acute hospitals. According to the government agency, Australian Institute of Health and Welfare (2015) principal referral hospitals are public acute hospitals that provide a very broad range of services, have a range of highly specialised service units, and have very large patient volumes. Public acute group A hospitals are public acute hospitals that provide a wide range of services but do not provide the breadth of services provided by Principal referral hospitals. See Table 3.2 for participant practice setting details.

3.4.3 Semi-structured interviews

Initial texts for interpretation in this study were constructed from in-depth semi-structured interviews with each of the ten participants. Interviews are considered an effective means to access a person’s perceptions and meaning that is attached to a phenomenon (Berg, 2001). In particular, semi-structured interviews are a common approach in qualitative research (Silverman, 2000). As different from structured interviews, a semi-structured approach allowed me to engage with participants more deeply as these interviews are
characterised by a flexible interaction around a set of pre-determined questions with probing as required to invite reflective perspectives and narratives from participants (DiCocco-Bloom & Crabtree, 2006). Semi-structured interviews were considered an appropriate choice as they aligned with philosophical hermeneutics with its emphasis on question-answer dialogue and fusion of horizons. Other methods such as observation were not included as their suitability for gaining understanding of participant perceptions and interpretations of their own decision making behaviours have been questioned (Minichiello, Aroni, & Hays, 2008).

Text construction via semi-structured interviews took place in the participant’s place of work, that is, their respective acute hospital. The choice of location was the preference of the individual participants which was mostly a pragmatic one as it was convenient and enabled efficient use of the participants’ time. This setting was also my preference as it increased the chance of the participant feeling comfortable during the interviews given it was their place of work and more familiar to them. Locating interviews within the participants’ own practice settings also redressed a potential power imbalance between myself as ‘expert’ researcher and the participants. There was only one interview that was not completed in person, Kate’s interview was conducted electronically via video using Skype. Use of Skype as a communication method for an interview is considered a viable alternative to face-to-face interaction (Iacono, Symonds, & Brown, 2016) This was due to my personal circumstances at the time which limited by ability to fly and therefore necessitated coordination of an alternative mutual time and method that suited Kate.

During the interviews, multiple strategies were used to facilitate construction of deep and rich texts for interpretation that would credibly represent the research phenomenon. One key strategy was the development and use of an interview guide (Appendix 3) that contained the main topics I wanted to discuss with all participants. In keeping with the principles of semi-structured interviewing, a flexible approach to questioning within and around subject areas was adopted to allow participants to discuss important topics in their own terms and in their preferred sequence (Paterson & Higgs, 2005). CDM is considered a tacit and embodied phenomenon that is not
usually put into words or spoken aloud but rather performed (Higgs et al., 2019). As a tacit and embodied phenomenon, CDM can be difficult to access. To address this challenge, during interviews I used the technique of using memorable incidents of patient care to assist participants explore their decision making experiences (Dowding, Ash, & Shakespeare-Finch, 2011). For example, implementation of a memorable incident technique involved me inviting the participants to share an example, both a routine or simple patient scenario and a complex one, describe why and how they were involved and what decisions they made within their identified scenarios.

During the interviews, I reflexively maintained awareness of concepts or processes that participants were discussing that were familiar to me due to our shared tradition. In response, I realised that there was likely greater complexity to these examples than initially understood, so I probed for further detail sometimes suggesting participants explain as if I wasn’t a dietitian about why and how they went about making decisions. This allowed me to access more tacit and automatic elements of their decision making and more deeply question that with which I was familiar.

As a novice researcher, to further strengthen research credibility I sought to test the interview questions and practice my interview technique prior to undertaking interviews with participants. The questions used in the interviews were piloted with two dietitian colleagues, one more senior and one more junior to myself to refine the questions and to practice my interviewing techniques. Initial reflection indicated the need to allocate more time to gaining context to the dietitians’ past and current context. Feedback from pilot participants included the suggestion to break questions down more and ask them gradually. These changes were implemented along with minor alterations to the order of questions. Reflection on how the interview guide was being implemented continued throughout conducting the interviews. I reflected both during and after interviews on how participants interpreted the question or the direction answers were trending. Changes were made that helped participants connect decision making and their usual practice more easily such as exploring answers from previous participants with the current participant. This often assisted the participant in accessing the more embedded and implicit aspects of decision making.
Two in-depth interviews, each approximately 60 minutes in length were conducted with each participant as a complex and multidimensional phenomenon such as CDM is not likely to be understood from one interview. The decision making and judgment practices of professionals has been likened to an iceberg, where the ‘doing’ and ‘experience’ aspects of their practice are easily seen, like the ice above or at the surface of the water (Fish & Coles, 1998). However, understanding the nature of decision making was the key aim of this research, and a more in-depth understanding involved finding out about those aspects of practice that are not so explicit, readily seen or are hidden beneath the water. The aim of the first interview was to build rapport with participants and gain understanding of their practice context, as well as explore how they make clinical decisions and what influences the process.

The period of time between first and second interviews for each participant ranged from 3 days to 1 month. The variation in interview timing was largely due to geographical factors. Participants in Western Australia all completed their first and second interviews within 3 days of each other separated by a weekend due to my need to travel from Sydney. Those participants in NSW were accessible by car negating the need for a quick turnaround in interview times. There was on average 3-4 weeks separating the first and second interviews for NSW participants. An advantage of a gap in time between first and second interviews was that it allowed the possibility of participant reflection on concepts and elements on decision making that following their first interview they were more aware of (Minichiello et al., 2008). Therefore, participants’ thinking about and interpretation of their own decision making could have developed and become more explicit and consequently available for discussion in the second interview.

Second interviews explored concepts that warranted further dialogue given participant responses in the first interviews. These concepts were identified from an initial reflection on interviews as noted in my research journal. For example, a trend was emerging after the first few initial interviews in how participants responded to my first question about a memorable incident ‘What decisions did you make and how did you go about making them?’
Most participants needed elaboration on what I was asking. In the second interview I began with an exploration of participants’ perspectives on why they think most of the participants required elaboration of the topic. This discussion then deepened both participants’ and my own understanding of the role of the meaning dietitians give to the term ‘decision’ and its relationship with dietitians’ position within decision making hierarchies in the acute care setting.

In order to understand the development of CDM expertise, participants were asked during the second interview to graph their professional journey over time since graduation identifying nodal time points or influences. This involved use of probing questions during participant interviews about how they perceived their expertise changed over time since graduation. In response, participants drew lines of different degrees of steepness reflecting their beliefs on what influenced any changes over time. A blank piece of paper was provided and the participants initiated drawing an X and Y axis. The graphs (Appendix 8) were used for both data interpretation and discussion.

In keeping with the Gadamerian philosophical tradition, interview questions as written in the interview guide evolved slightly between first and second interviews and across participants. This was because both of emerging concepts and interpretations as well as the way in which individual participants responded to preceding questions. Wording shifted to suit the participants language. For example, I used terms like ‘recommendations’ when participants felt it more closely aligned with their decision making. Many participants indicated that the elapsed time between interviews prompted a shift in understanding of their own CDM around the concepts introduced and explored in the first interview. This resulted in a more rich and deep portrayal of meaningful concepts around the phenomenon of dietitian CDM.

Interviews were recorded using Philips Voice Tracer digital recorder (DVT5500/00) and a backup copy was recorded using mobile phone software (Samsung voice recorder). Participants were asked for permission for recording both via written consent and verbal consent immediately
preceding the interview. Texts for interpretation were generated by transcription of the audio recordings verbatim using a professional transcription service. All interview transcripts were then checked by myself and crosschecked with the audio and stored in a password protected folder on a personal computer using pseudonyms as file names.

3.4.4 Reference focus group

A reference focus group was formed from a subgroup of the ten dietitians who participated in the semi-structured interviews. At the completion of all the semi-structured interviews, participants were asked if they were willing to participate in a reference focus group at a later stage of the research. The reference focus group had two key functions within my research. First, the reference focus group provided an additional text construction method after participants had been provided with my initial interpretations and had time to reflect on their first and second interviews. Second, it served as a participant checking process to enhance rigour and credibility of the research process by checking if my emerging interpretations of decision making had resonance with the participants’ experience of it. Lincoln and Guba (1985) identify participant checking as a means of providing rigour and credibility to qualitative research by way of helping achieve representative interpretations of a phenomenon.

Using some of the participants from the interviews for inclusion in the reference focus group was congruent with the philosophical hermeneutic strategies that informed my methods. Using the same participants allowed for deeper exploration of the participants own partially interpreted perspectives from the interview transcripts. Having it conducted together offered the opportunity to see if there were further common or varied perspectives on emerging key themes and concepts. Having the participants interact and discuss amongst themselves definitely offered another layer of interpretation and clarity. In addition, this also served as a form of member checking. I was not seeking external confirmation of the ten participants perspectives and therefore my interpretations. Nor was I looking to increase the sampling size by having different and new participants in a focus group.
All 10 participants from the interviews were contacted via email to request participation in the reference focus group and were provided with a participant information and consent form. The inclusion criteria were the same for the interviews as well as a willingness to contribute feedback on my emerging interpretation of interview texts. Five participants responded (see Table 3.3) as being willing and available and the other five declined due to practical reasons. The five participants represented all levels of experience and had variations to clinical areas and inclusion of specialists and non-specialist dietitians however no rural settings and all in NSW. In addition, based on my experiences with interviewing each one of them, I knew that they were able to freely provide opinions and interpretations about their own CDM.

The reference focus group took place approximately 24 months after the completion of all the semi-structured interviews. The length of time between interviews and the reference focus group session was determined by both pragmatic and strategic reasons. I was doing this research part-time but I also needed to reach a level of interpretation that was not yet complete but also not yet so abstract that the reference focus group participants could not engage with it to offer feedback or further discussion. Twenty four months was not considered an issue for the research process given CDM is something that is an everyday phenomenon and I was not looking at changes or to change the nature of their decision making. Engagement was enhanced by refreshing the participants’ awareness of the purpose of the research at the beginning of the reference focus group session and the visual prompts included in the session strategy.

Given the reference focus group took the form of a face to face style focus group, it was conducted in a central location to the participants who had consented to participate. Participants were made aware that they were no longer going to be anonymous to other participants. Steps were taken to ensure a respectful and collegial dynamic was promoted during the focus group with myself affirming the contribution that each participant offered regardless of their titles, experience and roles as a dietitian.
### Table 3.3 Reference focus group participant demographics

<table>
<thead>
<tr>
<th>Pseudonym</th>
<th>Years of experience</th>
<th>Area of work at time of study</th>
<th>Type of hospital setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penny</td>
<td>22</td>
<td>Critical Care (Specialist)</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Belinda</td>
<td>12</td>
<td>Oncology/Management</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Sally</td>
<td>8</td>
<td>Critical Care (Specialist)</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Alice</td>
<td>8</td>
<td>Gastroenterology</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
<tr>
<td>Sarah</td>
<td>5</td>
<td>General</td>
<td>Principal referral public hospital, Major city, NSW</td>
</tr>
</tbody>
</table>

An issue for the credibility of a participant checking process such as this is participants’ privileging the views of the researcher and therefore limiting claims made about transferability of the findings (Estroff, 1995). The following strategy was used to avoid the reference focus group merely accepting my representation of the phenomenon and only undertake tokenistic involvement. Participants were presented with keywords that I had interpreted so far as being themes representing the phenomenon of CDM (see Appendix 6). However, I had omitted the umbrella terms under which these keywords or concepts had been grouped during my emerging interpretation. As a group, participants were invited to represent their perspectives of the nature of their CDM as a concept map (see Appendix 7 for output of this process) on a whiteboard. Participants spent some time looking at the terms before deciding together what they represented. They were then invited to assign labels to common themes as appropriate and use a whiteboard marker to write in any missing themes or concepts they perceived were needed. Participants were encouraged to talk aloud about why they were placing certain concepts in certain positions and discuss the relationship between the concepts they were indicating were linked. Participants contributed equally for the majority of the time and if I observed minimal contribution by any participant, I would directly ask them.

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7 Terms were written on pieces of cut paper with blue tack already attached. A large whiteboard was located on the wall within the meeting room.
what their views were. Throughout the session I probed at certain points to seek clarification on participants’ decisions about how they were representing their decision making or their verbal articulation of their thought process. Divergence of opinion between the participants occurred, which is a positive process in qualitative research (Varpio et al, 2017) and prompted the participants to explore each other’s perspectives further as well as provide an opportunity for myself to probe for clarification and meaning.

Once participants had decided they were satisfied with their representation of CDM in the form of a concept map, I again asked if they thought anything was missing. I then proceeded to show them printed hard copies of my version of the phenomena represented as a concept map and I explained why I had grouped aspects of decision making under certain concepts. I asked for confirmation as to the language I had chosen to use to label certain concepts. Photographs were taken of the reference focus groups’ concept map the discussion was audio recorded using Philips Voice Tracer digital recorder (DVT5500/00) and a mobile phone software (Samsung voice recorder). The reference focus group session went for about two hours and only one was considered necessary. Transcription of the audio recording was outsourced to a professional transcriber as per the interviews immediately after completion of the reference focus group session. The concept map and the transcribed audio recording became additional texts that were then incorporated into further interpretation.

3.5 TEXT INTERPRETATION METHODS

The principles of philosophical hermeneutics guided text interpretation in order to uncover and find meaning from within the text resulting in new understandings of the phenomenon. The nature of interpretive inquiry meant that the process of text interpretation was a fluid and non-linear process occurring throughout the whole research process (Patton, 2015). In order to clearly articulate the processes, I undertook to make meaning, the interpretation of texts section has been categorised into three key processes: i) interpretation during text construction, ii) interpretation subsequent to text construction and iii) interpretation while writing.
3.5.1 Interpretation during text construction

The overlap between text construction and text interpretation can improve the quality of research as long as the researcher refrains from restricting meaning-making possibilities by over relying on initial interpretations (Patton, 2015). In this research, meaning making began from the initial semi-structured interview with the first participant and continued throughout the text construction processes including interviews and the reference focus group discussion. During periods of text construction, I documented emerging themes and concepts in my research journal (Appendix 1) while remaining open to new insights and perspectives being provided by participants.

As more participants were interviewed, I started to record variations and similarities to concepts conveyed by participants, noting topics for further probing. For example, a trend was identified in how participants initially responded to the question ‘What decision did you make’ when discussing a memorable patient scenario. Most participants needed clarification of this question so I noted this as an important concept to seek participant perspectives about during their second interviews. Therefore, I began each second interview with an acknowledgement that many participants’ needed clarification around the question in the first interview about what decisions they made and asked them to consider why they thought they experienced this difficulty. This opened up a deeper discussion about the role of language to describe dietetic practice as well as concepts of autonomy associated with decision making power which are key findings revealed in Chapter 5.

Field notes were not taken during interviews as I decided to focus on my preliminary interpretation of what was being immediately conveyed in order to facilitate deeper dialogue and effective use of probes as needed. However, prior to each interview, I noted my pre-understandings in relation to what I thought about the interview questions and concepts about to be discussed and what I knew of the participants’ background and dietetic experience. Immediately following the interview, I made further notes of my immediate thoughts about the interview process, the participants’ body language and tone when discussing certain topics and the participants’
responses in relation to the emerging understanding of the phenomenon. For the reference focus group, I had made myself aware of the strategies recommended to promote enablers and limit barriers to quality facilitation of focus group methods as per the literature (Jamieson & Williams, 2003; Jayasekara, 2012; Krueger, 2009). For example, prior to and during the reference focus group, I reflected on how the group dynamics could and was assisting participants express and clarify their views. I also explicitly explored my pre-understandings of what I had interpreted so far as the nature of CDM so that these perspectives remain open to new and deeper understanding. During the reference focus group, I maintained an awareness of group dynamics in terms of who was more easily offering perspectives and specifically probed individual participants for their views if I perceived their voice had not yet been heard relative to other group participants. In addition, I maintained a reflexive stance during the reference focus group by recording in my research journal how the group’s emerging perspective differed from my emerging interpretation and what new or deeper insights were being offered.

During the four months, the interviews were conducted, no attempt was made to formally develop themes or categories from within the text but instead I kept new ideas fresh and avoided premature conclusions about the phenomenon that would influence proceeding interviews.

### 3.5.2 Interpretation subsequent to text construction

The interpretation approach I took subsequent to text construction began upon completion of the semi-structured interviews. Prior to this point, I had developed some understanding of the nature of CDM of dietitians in the acute care setting. Some of my pre-understandings were similar to the view’s participants presented on the common processes involved in decision making. Also, some of my pre-understandings were challenged at these early stages. For example, prior to the research I considered that the importance of interacting with medical practitioners was something more relevant to the context of a dietitian working with particular doctors in particular clinical specialties such as surgery given it was my context of practice. Interestingly, interpretation during the interviews revealed that interaction with medical practitioners dominated the process of decision
making regardless of context. I was also beginning to see a multidimensional nature to this interaction between dietitians and medical practitioners and to the decisions involved.

The approach taken for interpretation of texts outlined below began with the interview texts and continued through to and beyond the reference focus group session. While the interpretation process was highly fluid and iterative, five main steps (see Figure 3.2) have been identified to represent the overall approach taken to interpretation subsequent to text construction. The texts generated, transcripts from the interviews and reference focus group, reflexive diary entries and the participant concept map from the reference focus group were incorporated into the ongoing process of interpretation. Steps 1-3 were repeated for all participants, sequentially starting with all participants’ first interviews, then repeating the process with each of the participants’ second interviews. This approach was consistent with the hermeneutic circle’s concept of parts and wholes and was adopted to help highlight similarities and differences between participants with regard to the individual questions and focus areas set out by the interview guide. The general structure of the interview corresponded to the questions that were constructed to answer the research questions.

![Figure 3.3 Steps in the process of text interpretation](image)

Firstly, immersion in the texts involved reading and re-reading the transcripts and listening to the audio files of each individual participant. This step involved listening to audio files and taking note of tone, emotion, pauses and volume as well as reading and re-reading the transcripts and field notes. During this step I engaged in a dialogue of question and answer with the texts and remained open to the texts telling me something new. I asked the texts questions such as:
• What is the opinion or idea that the participant is communicating here?
• What are the initial responses to my questions or probes?
• What is not here?
• What decisions are being made?
• How are decisions being made?

Recording of ideas occurred as I read and listened by highlighting or making notes about anything that was interesting, stood out or was surprising. A reflexive stance was held throughout this process, where I remained aware of my pre-understandings about each main question asked as well as my prior connection with the participant and assumptions about their decision making. Consistent with a philosophical hermeneutic framework I made conscious efforts to acknowledge the otherness of text, as it questioned me; “the text must be allowed to speak, the reader being open to it as a subject in its own right rather than as an object” (Palmer, 1969, p. 197).

Collation and labelling commenced once I had read and listened to and recorded ideas for all transcripts. During this step, I identified recurring words, phrases and concepts by reviewing my notes. I collated these ideas using labels that reflected the essence of what was being conveyed, making sure to take notice of and use the participants’ language. I would at times consult the dictionary to help decide on a label that accurately reflected the essence of what participants were referring to. Collating of ideas was done mainly as lists under the key focus questions of the interview process or categories of concepts. For example, when participants were describing a sequence of decisions and actions that were common to all participants, I used the label of ‘process’ to categorise the decisions, influences and actions sitting within the collective series of tasks. Consistent with philosophical hermeneutics, as categories were formed (the parts) they were entered into a concept map in an online mind mapping tool to capture my overall emerging understanding of the nature of CDM (the whole).

Steps 1-3 were repeated for each participant for both first and second interviews. For each new participant, I maintained a reflexive stance to facilitate an openness to new ideas and avoid simple use of the categories I had already identified. I constantly reminded myself to question what I was reading (the parts) and asked how it was different from my current emergent
understanding (the whole). This process of iterative movement between the
different transcripts and my emerging understanding and then back to the
transcripts demonstrates how the hermeneutic circle underpinned my text
interpretation. In my research this process was both cyclical and progressive
and perhaps best captured by the notion of a spiral rather than a circle
(Paterson & Higgs, 2005). I reached a point of interpretation where I exited
this spiral and presented my emergent understanding (the current concept
map) to the reference focus group. After which, with additional texts
(transcript and participant concept map), I re-entered the hermeneutic circle
or spiral with new texts and repeated the above steps. I also reflected upon
how well my current interpretation had represented the voices of the
participants.

On completion of the first interpretation of all texts, I engaged in a second
reading of the entire text set. In this process, sections of the transcripts were
read together across the participants. For example, descriptions about simple
memorable patient scenarios were read consecutively for all participants,
then their account of a complex memorable scenario followed by their
account of how they believed their decision making skills develop. This was
done to identify any similarities and or differences between the participants
as well as revisit their perspectives within individual texts. Given my
familiarity with the texts after the first round of interpretation, I made a
conscious effort to see how the text could reveal perspectives that were
unfamiliar and different from my current understanding. This was a way of
testing ideas, reflecting on my pre-understandings as I moved between my
emerging understanding (whole) and the individual text (part). Going back
to the text was particularly important at this stage as the levels of abstraction
grew, I needed to ensure that the language I used continued to reflect the
language and the voices of the participants. Supervisors were provided with
preliminary interpretations, concept maps and research journals and in
response offered some further interpretation and questions to facilitate
further probing of the text.

3.5.3 Writing as the final stage of interpretation
Writing the findings of this research provided an additional and final stage
of text interpretation. The thought processes involved in deciding on the
structure of my writing in the form of findings chapters and models involved reflecting on the phenomenon and how it has been conceptualized so far. Prior to commencing writing, my interpretations were in the form of concept maps, lists and categories with supporting excerpts from the text. However, my interpretation had not yet taken a form that specifically addressed the research questions or that had clear connections given the multi-dimensional and complex nature of the phenomenon. Therefore, the process of writing including structuring of chapters, sections and paragraphs facilitated further interpretation and sense making and ultimately enabled clear representation of meaning and the fused horizons of new understanding.

In structuring my writing, I revisited the research question and sub-questions and began writing in response to these while returning back to the texts to remain connected to the participants’ context and identify supporting quotes as evidence of my evolving interpretation. Synthesis of findings occurred during attempts to write in a way that portrayed both the simple and complex elements of CDM. Re-writing and reorganising the writing occurred in response to my deepening understanding of how the various components and dimensions of dietitian decision making were interconnected, which appeared more clearly during the process of writing itself. Preparation for conference abstracts and presentations also facilitated text interpretation through further dialogue with the text again moving between the parts of my findings chapters and the whole product of my research. Feedback at conferences further stimulated my thoughts and facilitated ongoing interpretation. Comments and responses to my interpretations at conferences indicated findings were resonating with other dietitians. Draft versions of my writing presented to my supervisors also offered opportunities for further reflection and question asking of the text to promote both greater depth as well as greater clarity.

Challenges in this stage included managing the complexity of concepts and their interconnectedness while trying to articulate them simply and coherently. Projecting the dimensions, processes and concepts on a whiteboard and probing and thinking deeply about these during the writing phase assisted with the clarification of ideas. The process of writing
prompted me to ask more questions of the text, seek examples of similarities and differences, and deconstruct complex concepts and assign a language to convey the nature of the phenomenon. While writing I also consulted the literature in order to inform decisions about structure and language use.

### 3.5.4 Using theoretical lenses for interpretation of texts

Reading of the literature during interpretation served as a means of critiquing my interpretations as well as identifying and providing frameworks to represent complex dimensions of dietitian CDM. While I consulted the literature, my findings do not integrate the literature when reported in the findings chapter. During interpretation, theoretical lenses of power, knowledge and clinical reasoning were used to frame findings as it was decided that doing so would assist representation of the new knowledge in a language that is known and understood. This use of literature didn’t detract from what was unique or new in my research findings but rather situated the findings in the context of what is known and understood and illuminated and guided the reader to its meaning. The theoretical lens used to frame the final stages of interpretation in Chapters 5 and 6 were power and clinical reasoning.

The concept of power as informed by Freire (1985) and Weber’s bases of power (Uphoff, 1989) provided a theoretical lens through which I viewed and subsequently refined my interpretations of the nature and role of interactions in dietitian decision making. The concept of power in social settings, as described by Freire and Weber provided an appropriate thread to link the facets of the interactions portrayed by participants as central to dietitian decision making. Emerging understanding of the interactions dietitians engage in for the purposes of decision making offered a view on power that it is a force that is both exerted upon dietitians but also that dietitians exert on others. Therefore, I used a definition of power that reflected participant descriptions of how it played out in the acute care setting which become a lens with which to view the texts. This included viewing power as a parent concept as defined by Max Weber’s “the probability that one actor within a social relationship will be in a position to carry out his own will despite resistance, regardless of the basis on which this probability rests” (Uphoff, 1989, p. 152). Freire (1985) provides the
dialectical view of power that it is both a positive and negative force and that those who are dominated by power often internalise this to then reinforce the domination over others. The nuanced influence of power is revealed through the notions of ‘power over’ and ‘power to’ (Pansardi, 2012, p. 73), including decision making involving actions concerning how to use power and how to respond to it as an external force.

My view of power was informed by theoretical lens within the literature and therefore influenced the structure of my findings presenting interactions in the context of power relations and then how dietitians respond to these power relations for the purpose of decision making.

CDM of health professionals involves cognitive processes that incorporate various types of knowledge. Health professionals use various forms of knowledge that broadly fall under evidence-based (e.g. research findings) and experience-based (e.g. how different foods might influence different patients’ nausea after surgery in different ways given there is no objective evidence on this). Evidence-based practice recognizes the need to integrate both evidence-based knowledge and experience-based knowledge in order to engage in CDM that aligns with evidence-based practice (Higgs & Turpin, 2019; Sackett, Straus, Richardson, Rosenberg, & Haynes, 2000).

Higgs and Titchen (1995), building on the theoretical perspectives developed by Polanyi (1966) and Rhyle (1945) constructed a framework for CDM that included three types of knowledge: propositional, professional craft and personal knowledge. Propositional knowledge is generated from research and theory whereas professional-craft and personal knowledge are experience-based (Higgs & Turpin, 2019). Propositional knowledge is often explicit in that it can be easily transferred verbally, and can include facts, concepts and knowledge of published clinical research (Smith, Meyer, Stagnitti, & Schoo, 2016). Propositional knowledge can include both broad and more domain-specific or specialised knowledge that practitioners consider possession and use of distinguishes them from other health professions (Masley, Havrilko, Mahnensmith, Aubert, & Jette, 2011). Literature about known models of clinical reasoning in the health professions (Higgs, Jones, Loftus, & Christensen, 2008) were used to
determine the frameworks and labels most appropriate to articulate findings of the cognitive dimensions of decision making. Inductive reasoning and subtypes such as pattern recognition (Schmidt, Norman, & Boshuizen, 1990) as well as the Hypothetico-deductive reasoning model (HDR) (Barrows, Norman, Neufeld, & Feightner, 1982; Elstein, Shulman, & Sprafka, 1978) were represented in the interpretations of the text (see Chapter 2.3). These known categories of reasoning were used to frame the findings so that the reader can be drawn to the nuances and variations that exist within a dietitian’s reasoning given the similarities found with other health practitioners.

3.5.5 Summary of the interpretation of texts

Text interpretation occurred during text construction, subsequent to it and during the writing of this thesis. The final product is the fusion of the horizons of the texts and my horizon, offering new knowledge of the nature of dietitian CDM in the acute care setting. Hermeneutic principles that guided the process of interpretation included:

- A reflexive stance was held whereby I repeatedly made explicit my pre-understandings, my horizon, in relation to the research questions and the participants while continuing to question my emerging understanding in order to preserve the meaning held in the texts and ensure that participants’ voices were heard.

- Use of the hermeneutic circle as a strategy to guide moving between the parts (individual texts, participants) and the whole (my emerging understanding of the phenomenon).

- Engaged in a question-answer dialogue with the text, asking questions of it in relation to the research questions while remaining open to the text speaking to me while acknowledging the situated nature of language and tradition.

This process of interpretation continued until I was confident that I had reached sufficient depth and richness to be able to credibly represent the phenomenon of CDM without the need for additional texts. I acknowledge that the fusion of horizons could continue to further deepen understanding of the phenomenon, but for the practical purposes of this research, the interpretation process was halted in order for findings to be reported.
3.6 ETHICAL CONDUCT OF THIS RESEARCH

This study was conducted with ethical approval from the Charles Sturt University Ethics in Human Research Committee (Approval Number: 405/2013/05, see Appendix 5). Ethical issues that were identified as part of this research included autonomy, for example, informed consent, anonymity, confidentiality and wellbeing of participants. All participants were provided with an information sheet prior to consenting to the interviews and the reference focus group session outlining the purpose of the research and their freedom to withdraw at any time without prejudice was emphasised. Written consent was gained from all participants and no one withdrew from the study.

Steps were taken to manage any actual or perceived power differentials in the interviews. As I am an experienced dietitian and some of the participants had or did work with me or were known to me, they may have felt obliged to express views consistent with my own. Being known to the participants may have had some advantages in terms of feeling comfortable to converse during interviews but I still made a point of emphasising to participants that there were no wrong or right answers. The manner of dialogue I used always sought to delve deeper into the views and interpretations of the participants’ experiences versus seeking confirmation of my own pre-understandings.

Anonymity was maintained through the use of pseudonyms and limiting detail about the participants and their place of work in the collection, handling and reporting of data. Confidentiality was maintained by keeping all notes, electronic data, transcripts and audio files in a secure place. It was also possible that participants could experience some distress discussing past and present experiences during the interviews. It was explained to each participant prior to commencing the interview that they could ask to cease at any time point and discontinue. The risk of emotional discomfort during interviews was managed by forewarning participants of the nature of the interview at the start and they were encouraged to indicate to me when they were experiencing discomfort. I remained alert and aware of the verbal and
non-verbal cues received by the participant during the interview in order to provide pauses or cease the interview. No participants reported any discomfort during the interviews or reference focus group session.

3.7 SUMMARY OF STRATEGIES TO ENSURE QUALITY

Quality in qualitative research is represented in the process used and its products while being inseparable from the ontological and epistemological foundations on which the research is based (Thorne, 2016). In this chapter, I have made reference to strategies that were employed to ensure quality. I chose three main criteria, that is rigour, transparency and credibility (Grbich, 2010) to review and ensure quality in my research.

3.7.1 Rigour

Rigour in qualitative research refers to the strength of the research design and the appropriateness of the method to answer the research questions (Morse, 2015). In practice, having a reflexive stance ensured there was internal coherence between the relevant theory, philosophical framework and research approach used in this research. I used a reflexive approach throughout the whole research journey. Reflexivity can be considered as critical self-reflection as well as an awareness of one’s role as the researcher (Schwandt, 2007). Reflexivity served as a means to help maintain coherence between the hermeneutic approaches used, the methods used to construct the texts as well as the interpretive actions that helped reveal new meaning. This was enacted through keeping a journal during the text construction and interpretation phases as evidence and a point of reference to the role my pre-understandings, reasoning and opinions were playing in the process. I then used these reflections as the basis to provide systematic and transparent account of the actual method used to generate findings.

The rigour of research can also be strengthened through peer briefing where conversations can function to strengthen the researcher’s reflexivity by probing her biases, exploration of meanings and testing of emergent understandings (Fleming, Gaidys, & Robb, 2003; Lincoln & Guba, 1985). Peer review with supervisors occurred frequently and focussed on the research actions, text interpretations and determining the direction of upcoming interviews and text interpretation and writing. Throughout this
research I was part of a research group within Charles Sturt University (CSU) comprising several other students at different stages of their candidature who were undertaking qualitative research in separate but related fields as well as their supervisors. I participated in workshops where I presented my research progress, received critical feedback that challenged my thinking and broadened my perspective. I also presented at research forums within CSU as well as professional conferences where my understanding was further developed through discussion with academic and practitioner peers as to the relevance of my research.

3.7.2 Transparency

The researcher is a central figure in qualitative research who actively builds, selects and interprets texts. Therefore, this human factor is potentially a great strength and a fundamental weakness of qualitative investigation and interpretation – a scientific two-edged sword (Patton, 2015). The researcher's central role highlights the significant contribution of transparency to credibility in qualitative research. Transparent research provides readers with sufficient information to enable them to understand the research context, assess the quality of the research, and make decisions on the relevance and usefulness of the research to their situations. Throughout this chapter I have been transparent about the practical steps that were taken when implementing hermeneutic principles of question and answer dialogue, making clear my pre-understandings, engaging in the hermeneutic circle during interpretation and my attention and location of the tradition and language of the text.

Throughout this research, I maintained a research journal in which at all stages, including question formation, text construction, text interpretation and writing, I reflectively recorded my influence on the research. I undertook critical self-reflection to identify how the research process was influenced by my social background, assumptions, positioning, and behaviour.
3.7.3 Credibility

Credibility refers to the “confidence in the truth of the data and interpretations of them” (Polit, 2018, p. 492) and draws on and builds upon the portrayal of rigour in the research process. With the aim of producing research that is trustworthy, credibility was achieved through various means. Throughout this chapter, I have described reflexivity as being applied in different phases of the research to make my influence explicit on the development of new understandings and thus authentically represent the voices of the participants. In addition, I ensured adequate time was spent with participants gaining their perspectives, using two in-depth interviews as well as a reference focus group session. Pilot interviews were conducted to ensure I had adequate experience and understanding of optimal interview technique which has been reported in this chapter. Participant checking is considered a useful strategy to enhance quality and, in this research, occurred through the use of the reference focus group where participants engaged with partially interpreted text (Birt, Scott, Cavers, Campbell, & Walter, 2016). This process sought to identify resonance between my emerging interpretations with the perspectives and experiences of participants.

Credibility was also enhanced by demonstrating that the research product revealed knowledge that was consistent with the way in which texts were constructed. That is, the texts reflect the experiences and views of dietitians in the acute care setting. Strategies included maintaining structural coherence during the research process by ensuring there were no inconsistencies between the text and text interpretation in that all interpretations were accounted for and linked to an original text. Using verbatim participant quotes from transcripts in the reporting process illustrated this connection to interpretation.

Being familiar with the setting in which participants worked meant that I employed strategies to ensure credibility throughout the research process including reflection on how my pre-understandings and personal experiences may have influenced text construction and interpretation. Having an initial common ground with participants could also be seen as a
strength due to my awareness of a common language and tradition which
philosophical hermeneutics promotes as part of developing understanding:

To stand within a tradition does not limit the freedom of knowledge but
makes it possible. Gadamer (1975, p. 324)

Credible and rigorous research requires participants’ perspectives to be
represented as faithfully as possible (Bowden & Green, 2010). A reflexive
stance was held through my pre-understandings and personal frame of
reference made explicit and journaled to increase awareness of the nature of
my own horizon relative to participants’ horizons. Throughout the research
process, I reflexively identified factors that might have influenced
participants’ ability to represent their views authentically. During interviews
and reference focus group interactions, I emphasised that I had no
expectations regarding outcomes. I used paraphrasing techniques to clarify
participant meaning and perspectives.

This research was based on an understanding of the philosophical principles
that inform interpretive research, a vision of the phenomenon under
investigation, and the ability to develop ethical, rigorous, and transparent
research strategies creatively and credibly. Implementation of the strategies
summarised above shows that my research has been carried out in a
rigorous, transparent and ultimately credible way.

3.8 READING THE FINDINGS CHAPTERS OF THIS THESIS

The findings of this research are presented in the next four chapters of this
thesis. Chapter 4 reveals the task-orientated processes involved in making
decisions. Chapter 5 focuses on interactions dietitians engaged in and the
role of those interactions for purposes of CDM. Next, Chapter 6 provides a
deep exploration of the reasoning processes that facilitate decision making.
Finally, in Chapter 7 findings relating to the evolving nature of dietitian
CDM over time are provided. A summary of each of the chapter findings is
illustrated in Figure 3.3.

In Chapters 4-7, participant quotes are used to substantiate the
interpretations presented in the text. These quotes are taken verbatim from
the interview and reference focus group transcripts. Quotes are indented and
presented in a different font to the rest of the thesis to clearly identify them and the participants’ voices in the thesis. To aid the reader, I have made minor editorial changes to the quotes to improve their readability. These include use of square bracket ([ ]) to insert words that aid the flow and understanding of the text; removal of words like “um” and “like” or correction of grammar to conceal any non-native English speaking participants’ identity and preserve their confidentiality. In doing this I took care to ensure the message of the text was not altered in any way. All quotes have been identified by reference to the participant pseudonyms and the source. The two interviews with the participants are referred to as ‘I1’ or ‘I2’ and the reference focus group as ‘Focus Group’.

![Figure 3.4 Organisation of findings by chapters](image)

3.9 CONCLUSION

In this research, I used an interpretive approach to develop a deeper understanding of the nature of dietitian CDM in the acute care setting.
Research methods were guided by Gadamerian philosophical hermeneutics including the construction and interpretation of texts from discussions with dietitians working within the acute care setting. Two text sets were constructed. Firstly, via in-depth semi-structured interviews with ten practising dietitians with experience levels ranging between 5-35 years and secondly a reference focus group compromising of five of these ten dietitian participants. Hermeneutic strategies guided text interpretation and resulted in a deeper understanding of the nature of dietitian CDM in the acute care setting.
CHAPTER 4  CORE TASKS INVOLVED IN ACUTE CARE DIETITIAN CLINICAL DECISION MAKING

A key aim of this research was to understand the nature of dietitians’ CDM in the acute care setting. The central thesis developed in this and subsequent chapters is that dietitians’ CDM in the acute care setting is a complex phenomenon involving a set of core tasks geared towards improving patient nutrition-health which is facilitated by a meta process of clinical judgement and management of interpersonal relations within a power nexus.

In the acute care setting, dietitian CDM is largely driven by a core task-orientated process that often recurs for the duration of a patient’s hospital admission or until completion of care goals. This process is influenced by various contextual elements including the traditions of dietetic practice and what language is used to describe decision making practices; the roles and responsibilities of acute care dietitians; and the nature of the acute care setting itself. CDM is centred on engagement in five core patient-centred tasks that include prioritising, assessing, care planning, implementing care plans and monitoring patients. Decision making involves the integrated use of reasoning and judgement informed by complex and developed knowledge systems and mediated through practitioner reflection.

Within each of these five core tasks, dietitians gather and process information relevant to individual patients which involves communication with each patient, carers and other health professionals. Throughout dietitian-patient interactions during hospital admission, these core tasks are progressively refined towards the achievement of the intended goal of improving the health and nutrition-related status of patients.

This chapter explores findings that illuminate the task-oriented processes that were common to all participants and core to the role of caring for the nutrition of patients. It begins by addressing three elements that frame the findings in this and remaining findings chapters. These include the role of language as a tool that needed to be understood to access decision making, then locating decision making within a dietitians’ roles and responsibilities and then the influence of the acute care setting context itself. Context, that
is, personal, disciplinary, locational elements, is a recurring theme throughout the thesis and is further examined when it is most appropriate and enlightening to do so. The chapter then delves into a deeper separate portrayal of each of the five main decision making tasks.

4.1 THE ROLE OF LANGUAGE IN SHAPING PERSPECTIVES ON DIETITIAN CLINICAL DECISION MAKING

Understanding of dietitian CDM in the acute care setting was deepened by foregrounding how participants responded to the language used in the interview questions. Examination of the language used by researcher and participants is congruent with a Gadamerian philosophical hermeneutic research approach and in my research revealed new understandings about dietitian decision making. Within this approach, new understandings were revealed through the use of questions, hence language, when participants were asked about ‘what decisions did they make?’

My choice of the word ‘decision’ was based on my preunderstandings informed by my immersion in decision making literature prior to this research as well as my definition of the concept (see Chapter 2.1). This was my initial horizon. Use of the term ‘decision’ was intentional given my aim was to make implicit understandings of decision making more explicit through questioning. My pre-understandings of dietitian decision making were that it was highly cognitive and that many elements occurred without dietitians’ awareness. By choosing to use the term ‘decision making’ I was using language to signal to the participant to intentionally reflect and think about how they go about deciding how to care for patients. The participants’ responses to the word ‘decision’ in itself revealed their own initial horizon which mostly included intervention decisions. For example, when asked specifically what decisions did you make, Belinda responded with:

\[\text{Obviously, the decision would be how many supplements the patient should have and what other strategies I would suggest to manage her diarrhoea. (Belinda, I1)}\]

This initial perspective on participants’ own decision making as decisions concerned with interventions was influenced by how language has been
used within the traditions and culture of the dietetics profession. In the following quote, Alice highlights how her perspectives on decision making are influenced by the tradition of what language is used to describe the practice of what a dietitian does in the acute care setting.

*I guess when you say decisions it encompasses every part of our practice from assessment to recommendations but we never use that term, we never use that decision term when we think about our practice...it’s about what I’m recommending, what information I’m providing, what type of assessment I do and how I come about the conclusions. All of those are the decisions but I don’t use that specific term ‘decisions’ because I guess when we’re taught that or when you look at what a dietitian does it breaks it down to all the different parts that we do.*  
*(Alice, I2)*

Participant understanding of their own CDM evolved during the interview process. Many participants’ association with the word ‘decision’ moved from just being concerned with the decision of what intervention they chose for their patients to understand that their decision making involved a continuous process of small and large decisions. Some decisions in practice are made with participants having awareness of how they are making them and some were quite automatic, such as those involving inductive reasoning and clinical judgement (Chapter 6). In response to a question about why most participants initially didn’t resonate with the term ‘decision making’, Sarah’s reveals how strongly she associates decision making with making decisions about which intervention to recommend.

*I suppose I straightaway just thought decision making, well, just looking at what intervention actually does occur with the patient and forgetting all the other little decisions that lead to that...*  
*(Sarah, I2 )*

Sally expressed how she associated decisions with power and autonomy, and in her clinical area of critical care, she assigns overall power with the consultant medical practitioner. The notion of power and autonomy is discussed in Chapter 5.

*I don’t think we use the terminology ‘decision making’ so much. Because we don’t have the overall control of our patient care, especially not in my field, it wouldn’t be really appropriate to do so.*  
*(Sally, I2)*
Participant responses indicated the perceived meaning of the word ‘decision’ was thought to be related to intentional, summative and aware acts of decision making. Penny expressed insight into how most of the participants initially didn’t resonate with the term ‘decision’ offering an explanation of it likely being because the decisions they did make were often not conscious ones.

I’m happy to agree that I make thousands of decisions a week...but some of them are so, I mean, it’s not like I’m consciously saying right, now I’m going to make a decision about the tube feed formula, now I’m going to make a decision about the rate; will I round up or down. Now I’m going to make a decision – but they are decisions none the less. (Penny, I2)

While most participants did not readily connect the process they engage in to care for patients as ‘decision making’, Melissa was the exception. Melissa was the most experienced participant in this study with over 30 years of clinical experience, with over 25 of those as a specialist- this potentially influenced her response. In the interview when asked what decisions she made in a simple and complex patient scenario, she quickly responded with listing some of the decisions she made for a patient that occurred both before and after she had decided on the recommended intervention. She demonstrated confidence in using the term ‘decision’ as it resonated with what she perceived her role in the acute care setting involved. She felt that everything she does is based on a decision including the way you approach the five core tasks, i.e. prioritising, assessing, care planning, implementing care plans and monitoring patients. In the following quote she highlights some of the small decisions that are made during the process of moving through the five core tasks such as how she is going to talk to the patient, and what order she asks questions:

Our decisions aren’t just that end product, it’s what we do along the way and that end product or intervention is just sort of the decision we come to based on all of those other decisions to collect information along the way. (Melissa, I2)

Examining how participants engaged with the language used in the research process revealed that dietitians don’t commonly use the term ‘decision making’ to describe processes involved with patient care. The dominant perspective of decision making referred to decisions about interventions.
The passage of time throughout the research process as participants moved from one interview to a second in itself revealed an evolving understanding that participants developed about their own decision making.

4.2 LOCATING DECISION MAKING WITHIN ROLES & RESPONSIBILITIES OF DIETITIANS IN ACUTE CARE SETTING

The primary role and responsibility of the dietitian working in the acute care setting is to identify and address patients’ nutritional issues within hospital settings. This role of identifying and addressing nutritional issues also translated to be a fundamental goal of CDM for dietitians working in the acute care setting but it was not the only goal of their professional work. Understanding the participant’s daily responsibilities in the acute care setting revealed where their CDM sits within the broader context of their roles and responsibilities of being employed as a dietitian in the acute care setting.

All participants revealed that decision making involved continuous engagement in the core tasks of prioritising patients, assessing patients, care planning, and implementing and monitoring these care plans. These five tasks were central to the role of being a dietitian and the responsibility for providing evidence-based nutritional care for patients and are discussed in further detail in sections 4.4-4.9 respectively.

Participants revealed a common responsibility they have in the acute care setting of identifying and addressing nutritional issues in patients. Participants sometimes identified these issues themselves or issues might be brought to the dietitians’ attention by the patient or other health professionals. This responsibility dominated their daily schedules in combination with decisions about how they managed their time with other competing non-patient care tasks. These various other tasks (see Table 4.1) were considered part of their role and responsibility as a dietitian within their department and hospital.
### Other Responsibilities

<table>
<thead>
<tr>
<th>Other Responsibilities</th>
<th>Participant Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical workload prioritisation</td>
<td>When I first come in in the morning, I'll be looking at the ward list, so I'll go onto the computer, look on our system ... so that will go through different patients, different wards. I'll go through my list first and see if my patients, who I was seeing from the day before, who I need to review, are they still on the list, and if they are, I would prioritise my patients for the day. (Mary, I1)</td>
</tr>
<tr>
<td>Patient handover</td>
<td>If they (patient) have moved on to another ward, I would hand over to another dietitian. (Mary, I1)</td>
</tr>
<tr>
<td>Workload allocation</td>
<td>Then we hold the meeting half an hour after everybody starts work, which is the morning allocation meeting, we call it. Everyone sort of runs through their ward load for the day or whatever meetings they've got on and prior commitments. (Alice, I1)</td>
</tr>
</tbody>
</table>
| Administration                 | **Emails**  
**Entering statistics**  
**Management/staff supervision/report writing**  
Depends on the day, so, I usually start my day with doing some management tasks like, workload schedule or planning the student placement timetable, catching up with staff. I always arrange in the morning is the first hour is supervision with staff. (Belinda, I1)  
Then there's other sort of clerical things that I do as part of my role, like keeping statistics and keeping with CBORD notes, returning emails or writing emails. I'll check the phone messages as well and things like that. I might catch up on stats from the previous day. (Alice, I1)  
I usually get that (seeing patients) done in the first half of the day and then can have the rest of the day for coaching and supervision and other things I do as a senior and management stuff. (Lila, I1) |
| Quality improvement projects and/or research | I do have lots of projects that I'm working on as well, so on a quiet day I would work on the projects. (Mary, I1)  
That's a new thing that I'm trying to get used to, is doing a bit of QI in the office, which I quite struggle with, especially when the list of patients lately especially blows out and you're thinking there's patients to be seen, trying to make sure that you still fulfil your commitment for QI and all that other stuff. (Alice, I2) |
| Meeting attendance             | We have a multidisciplinary team meeting once a week and that actually works really well and its nurse driven. The nurses present the case and the doctors sit in and comment on the case and then everyone else is there. (Penny, I1) |
| Outpatient clinics             | The afternoon would be planning for the clinic the next day. If it wasn't an inpatient-based day like today then I would spend most of my time down in the renal unit and then in the afternoon it would be an outpatient clinic or vice versa, i.e. I'd have the schedules switched around so morning or afternoon would be slightly different (Theresa, I1)  
Once a month then in that mix, on a Wednesday morning, is my outpatient HEN clinic, which I go to. (Sarah, I1) |

---

Table 4.1  Additional dietitian responsibilities in the acute care setting
The variation in how much time these tasks demanded influenced the decisions participants made about patient prioritisation. For example, if the participants had a day with more meetings or deadlines for reports or projects then they would make time management decisions that involve seeing fewer patients or spending less time on patient care. While nearly all of these other tasks were common amongst the participants, management was specific to Belinda and Lila whose formal responsibilities involved a management role accounting for approximately half of their work time.

Examining the broader context of their roles and responsibilities also facilitated consideration of how the participants perceived their role as a decision-maker within a wider range of clinical and managerial responsibilities they engaged in within the acute care setting.

4.3 THE INFLUENCE OF THE ACUTE CARE CONTEXT

The nature of the acute care setting itself also significantly influenced the approach undertaken by the participants in the process of CDM in order to increase its effectiveness for addressing patient nutritional issues.

Participants indicated that the fast pace of the hospital environment is reflected by how quickly patient related events occur and change as well as the pace at which health professionals need to practice. The participants explained that this meant that they were required to think and make decisions quickly in order to work as efficiently as possible.

Efficient decision making was considered by participants advantageous in the acute care setting and required dietitians to access and use knowledge and information quickly. Melissa highlighted that it was having reliable and readily available baseline knowledge in a lot of medical areas or knowing where to source that knowledge that facilitated this type of quick decision making. This need for efficiency raised an important tension where efficiency often had to be balanced with the responsibility to provide safe and quality care for their patients. Melissa, along with many of the other participants explained that rapid decision making was important because of the need for efficiency as there were often more patients needing to be seen than they had time to see.
Well you can take your time to make sure what you’re doing is safe but at the same time you can’t spend half a day researching a topic so you can then go back to the patient with this ideal. (Melissa, I1)

In the acute care setting, dietitians need to be aware of the hospital wide emphasis on working towards an expected discharge date for patients and consequently make decisions related to a patient’s discharge. Similar to the other participants in this study, Mary shares how her responsibility involves preparing patients for the predicted discharge date which was often decided by other health professionals and doing all she could to not delay this.

I feel like you have to think quick, you have to think on your feet, and always plan ahead of time in thinking about discharge, because in our hospital we’re quite pushed for time for our own estimated discharge. (Mary, I1)

The nature of the acute care setting and the way in which the participants practised within it could be described as ‘fluid’. Fluid in the sense that its core focus, patients, are constantly changing in terms of their health status, therefore, the dietitian’s data source which informs their decision making is also changing. The hospital ward environment itself is rarely static, as patients physically move around the hospital day to day or within a day and members of the multidisciplinary team (MDT) change daily, weekly or periodically. This all contributes to an ever-changing ward landscape in which acute care dietitians need to make important clinical decisions that influence patients’ wellbeing. This dynamic nature of the acute care setting demanded a high degree of flexibility from participants. Sally shares how important flexibility is in making decisions in this environment.

... because the patients aren’t always available. Your plans might not go to plan and you have to be able to quickly identify that and modify the plan accordingly, as opposed to a rehab hospital where things might happen over a course of weeks as opposed to a course of a couple of hours or a couple of days. (Sally, I1)

The participants revealed that due to the constantly changing status of patients, both health status and physical whereabouts, dietitians were required to try to predict the patient journey in advance. This was particularly true for trying to predict the length of patient access, which in
turn informed when and what they decided to do for patients both from a monitoring and intervention perspective. The nature of it being a hospital also meant that the dietitian approached the patient to offer care as opposed to the patient seeking help from the dietitian such as occurs in outpatient contexts. This, in turn, meant that the CDM of the participants occurred over multiple occasions for the one patient as the participants indicated they would decide to often review the progress of an intervention at various points in time. This process of reviewing and monitoring patients is discussed in further detail in section 4.7.

The degree to which a patient has the ability to communicate with the dietitian is quite varied in the acute care setting. Participants revealed that the patients they cared for often couldn’t engage with them due to the acuity of their conditions and or mental state. In the following quote, Belinda highlights some of these defining elements of the acute care environment that influence dietitian decisions around interacting with patients.

...if the patient doesn't want to talk to you, you can't talk to them. It is a bit different from outpatient where they come in to see you and you know they want to see you. In acute hospitals, you go in to see them and you never know whether they are well enough to talk to you, whether they in a bad mood, whether they just have just had an emergency.
(Belinda, I1)

In summary, participants primarily associated the term ‘decision’ with what interventions were needed for patients while evolving their understanding of how decisions occur throughout the whole process of moving through the five core tasks. These findings reveal the role of professional culture and tradition and one’s perceived roles and responsibilities on how dietitians perceive decision making in the acute care setting and how this then shapes language used to described practice. The acute care setting itself provides a dynamic and fast-paced environment in which dietitian decision making occurs demanding a degree of efficiency to achieve effective patient care.

### 4.4 CORE TASKS OF DIETITIAN CLINICAL DECISION MAKING IN THE ACUTE CARE SETTING

Dietitian CDM in the acute care setting involves a core process of five main tasks that are all aimed at identifying nutritional issues and strategies to
improve patient nutrition related health outcomes. All participants in this study indicated that they engaged in these tasks and made decisions about how to undertake them. This core process that emerged from the participant interviews included the following five tasks that were mostly undertaken consecutively and repeatedly for each patient during an episode of care throughout the patient’s hospital admission:

1. Prioritising which patients they would see and when
2. Conducting a nutrition assessment with chosen patients
3. Developing a care plan
4. Implementing the care plan
5. Monitoring interventions and outcomes until either hospital or care discharge.

Within each of the above five tasks, the participants collected and interpreted a broad range of information from multiple sources which were inputs into the decision-making process. Information collected and interpreted included objective and subjective data about the patient and the patient’s context gathered from the patient, carer, other health professionals and the patient’s medical record. The participants made continuous decisions about patient information to collect and how to analyse and interpret it.

Participants revealed through the patient scenarios discussed in the interviews that they undertook these tasks for each individual patient they cared for and that it was a progressive process over multiple episodes of care throughout each patient’s inpatient admission. For example, once the participant prioritised a patient to see on a given day, often but not always in a single episode of care she would assess, develop and implement a care plan. Then over time, on determined days after the initial episode of care, the participant engaged in the task of monitoring the patient’s nutritional status and intervention. This monitoring often occurred multiple times before the patient was discharged from hospital or transferred to another area of the hospital.
Figure 4.1 illustrates core decision making tasks, including, prioritising, assessing, care planning, implementing care plan and monitoring patients for dietitians in the acute care setting that occur in a repetitive yet progressive cycle over the duration of the patient admission within the fluid context of the acute care setting. This core process involves decision inputs (e.g. clinical information, patient preferences, dietary intake) into decision making ultimately aiming towards the outcome of improved patient health and nutrition-related outcomes.

Figure 4.1 Core tasks involved in dietitian CDM in the acute care setting

4.5 PRIORITISING

In the acute care setting, the participants made frequent daily decisions about which patients to see as well as when to see them shaped by various influences. The participants referred to this as prioritisation while emphasising that efficient prioritisation of patients influenced subsequent decision making tasks. The outcome of prioritisation decisions commonly
involved creating a list or signalling on a printed ward list an order of priority which patients need to be seen.

Participants indicated this prioritisation process involved making decisions that answered the following key questions that directed how they managed their time:

- What other commitments do I have today other than seeing patients?
- Which patients *ideally* should be seen today?
- Which patients *must* be seen today?
- Why have the new patients been referred and by who?
- Which patients can be left to be seen tomorrow?
- Which patients take priority over others and why?
- Which patients need a new assessment or a review?
- When is the patient likely to be available to be seen?
- Which referrals are appropriate?
- When to review patients that were already under their care?

Prioritisation decisions were made by all participants initially at the start of their workday and were revisited throughout the day. Participants indicated prioritisation decisions were necessary because more patients needed to be seen than there was time available. As discussed in section 4.1.2, participants had additional professional responsibilities that required their time outside of direct patient care. As with patient care tasks, the time that these additional responsibilities demanded varied day-to-day therefore prioritising patients involved factoring in what else needed to be accomplished within the workday. Gathering small amounts of patient information in order to make decisions about prioritising was a common process participants engaged in at the beginning of the day.
A lot of the time, there are more patients than I can physically see in a day that I have on my list to see and so I’ll go through a process of working out how much I could fit in in the day and culling where required. I just check in on every patient there, screening for new referrals. It’s like a 30-second process, going bed to bed, which I just ask the nurse is there any nutrition issues. I check if they’re nil by mouth, if there’s plans for them to get either a diet or any nasogastric feeds or what the plan is for nutrition. (Sally, I1)

Prioritisation decisions for dietitians in the acute care setting are informed by department and hospital protocols but mostly by clinical judgement underpinned by knowledge of the clinical and nutritional needs of patients. The process the participants engaged in involved taking into consideration the predicted nutritional and clinical needs of the patient, the resources available to the dietitian to attend to the patient as well as the opinions and perspectives of other MDT members. The role of clinical judgement in CDM is explored in greater depth in Chapter 6, section 6.5.

All of the participants indicated that there was a hospital-specific dietetic department prioritisation protocol developed by their managers that informed their patient prioritisation decisions. The protocol categorised and ranked certain nutritional and medical problems in order of priority. For example, for most participants, their protocols indicated that patients needing or receiving enteral or parenteral nutrition were the highest priority. This seemed to be based on the degree of nutritional risk if the problem is not attended to by a certain period. Sally described a practical example based on the protocol in her department comparing different priorities between types of nutrition interventions:

So priority one patients being patients on enteral feeds or TPN (total parenteral nutrition), and then progressing down to priority two, which would be oral nutrition support. (Sally, I1)

While all participants indicated they considered a protocol when making prioritisation decisions, their decision making did not depend upon the protocol exclusively. Most participants referred to integrating a broad range of patient factors when making decisions about the priority of individual patients. These included:
• Referral reason
• Who the referral is from
• Clinical indicators depicting a degree of nutritional need or risk e.g.
  o If a patient is fasting
  o Planned for or are currently being fed enterally or parenterally
  o Medical admission reason
  o Age is greater than 65 years old
  o Unstable bodyweight
  o Poor tolerance of current nutrition support regime
  o Malnutrition (current or at risk)
  o Unstable nutritional intake (oral or via a tube)
  o Refeeding syndrome risk\textsuperscript{8}
• Expected time of discharge from the hospital

While the above patient factors used to make a prioritisation decision were commonly reported, there was definitely variation amongst the participants as to how they incorporated these into their reasoning processes used to decide whether they saw patients and in what priority order. This variation occurred due to a number of influences on the dietitian’s decision making.

First, a key influence on prioritisation decisions was the dietitians’ accumulated total and specific experience and knowledge within a clinical area patient group. Penny and Sally both worked in ICU and both identified the limitation of using their respective department prioritisation protocols given that nearly all their patients are usually classified as first priority so they often made decisions about how to distinguish priorities within this. Penny indicated that her clinical experience influenced how she made the decision about which patients are a higher priority in her unit. Higher priority patients were those where the current nutrition support plan initiated by the ICU team was not providing the specific patient adequate nutrition and therefore, she decided a full nutrition assessment was required straight away. She used pattern recognition to quickly recognise how the current feed rate deviates from what she expects a patient of a certain size and gender to be on based on her extensive experience which indicates the

\textsuperscript{8} Refeeding syndrome can be defined as the potentially fatal shifts in fluids and electrolytes that may occur in malnourished patients receiving artificial refeeding Solomon, S., & Kirby, D. (1990). The refeeding syndrome: a review. \textit{Journal of Parenteral and Enteral Nutrition}, 14(1), 90-97. doi:10.1177/0148607719001400190
degree of priority a patient may be (see Chapter 6, section 6.3 for more on pattern recognition).

*It’s a combination of rule of thumb that we’ve established in the hospital and my own sense of what rates tend to be common from past experience. You know you do these calculations a lot and, you know, decent size older man ends up on 70-80mls/hour and a small woman ends up on 50-60 and that tends to be the pattern and you get used to what rates even with the other feeds that are different energy density, you get used to what kind of rates you’ve ended up on.* (Penny, I1)

In the following quote, Alice reveals how getting more experience with having to make these prioritisation decisions assists with making better and more efficient decisions.

*I think as you become more confident and you have more experience you understand the system a bit more and you learn to have better predictions of where the patient journey will be and that has helped me prioritise a bit better and more efficiently.* (Alice, I1)

A second influence on the way the participants made prioritisation decisions was the location of the patient information that informed the decisions. For some participants, they had adequate information to prioritise their day by accessing electronic patient information from their office. As different to other participants who chose to make prioritisation decisions once screening the written medical record located on the ward where the patient was situated. Despite Penny and Sally both working in ICU, the decision making actually occurred in different proximities to the patient due to the role of electronic medical records for Penny. Both engaged in a comprehensive screening process of all patients in their ICU. Sally indicated she physically needed to go to the patient’s bedside and briefly read their medical file and talk with the nursing staff. Alternatively, Penny sought out the same information to help her make the prioritisation decision from her computer in the dietitians’ department, quite a distance away from the patient and without the involvement of any other health professionals given her unit uses electronic notes instead of handwritten notes.

Third, prioritisation decisions were also influenced by the specific knowledge the participant has about the types of medical problems patients face in particular clinical areas and the subsequent common patient nutritional issues, thereby assisting with making predictions about what
patient nutritional needs may be. Alice indicated that it was her understanding of the nutritional implications of the medical conditions and diseases that gastroenterology patients had that influenced how she decided to deviate from the prioritisation protocol. She felt the decision making for patients under her care may be different if made by someone who wasn’t familiar with her clinical area.

A referral could be for high-energy, high-protein, and is not a high priority in the ward list but it may be a patient that I know or know is also quite severely malnourished, so I might put them as a priority one. Whereas someone who is not familiar with my caseload may not prioritise them. (Alice, I1)

A fourth influence on how dietitians make prioritisation decisions were resource constraints in the form of staffing. The majority of participants referred to some degree of being short-staffed. For Sarah, a critical lack of dietetic staff in her department resulted in the need to distribute the workload amongst the remaining staff. Sarah indicated that this reinforced the department-wide need to base decisions strictly on the prioritisation protocol. In her department, this resulted in making decisions collaboratively with her dietitian colleagues concerning which and when patients are seen.

The fifth influence on decision making on which patients were seen as a priority over others was the referring practices and opinions of other members of the multidisciplinary team (MDT). Theresa shared how the frequent changes to members on the medical team can influence a doctor’s understanding of ward or hospital practice and policy thereby directly impact on how the doctor refers to the dietitian. For example, a new junior doctor rotating into the renal team, unaware as yet of it being hospital policy to refer to a dietitian for every patient needing of having enteral feeding, fails to do so, which potentially occurs every time there is rotation. The referrals the dietitian does or doesn’t receive influences the decision making process involved in prioritising patients. Theresa also indicated that staff shortages meant that prioritisation decisions become even more important and sometimes it is who “cries the loudest” (I1). Decision making therefore, involved her factoring in the perspectives of others but her clinical judgment
always factored in the patient’s clinical and nutritional indicators of risk. She explains the approach she takes when making prioritisation decisions and how it varies depending on the demands of other colleagues, the patient and her own time needs.

*It would be a matter of discussing with either the nurse that had referred that patient or figuring that out myself based on the biochemistry...or I would determine who I need to see based on our screening process, i.e. like formal malnutrition screenings. Sometimes it’s based on the urgency, so how close they are to discharge or if there are any burning clinical needs such as a tube feed or TPN. (Theresa, I1)*

In summary, decision making for the purpose of prioritising which patients to see and when was often the first task of the dietitian’s day working in the acute care setting. While the process involved in prioritising patient care was influenced by the hospital and department protocols it was dominated by the participants’ clinical judgement developed through experience with specific types of patients. Variation to what and how prioritisation decisions were made were due to influences including the experience of the dietitian, access and location to patient information, possession of clinical speciality knowledge, resource constraints and the referring practices and opinions of other MDT members. While there was variation amongst the participants as to what is deemed a priority, the focus of making decisions that assess nutritional risk for their own patient group was common amongst all participants.

4.6 ASSESSING

Dietitians make decisions as to if and how they undertake a nutrition assessment after a patient has been prioritised to be seen. Nutrition assessment is a core action and skill of the dietitian and involves a systematic process of collecting specific patient biopsychosocial information then analysing and evaluating it in order to inform decisions about the nature and cause of nutrition-related health problems. This nutrition assessment process then informs decisions concerning a care plan to address these issues. The decisions involved in a nutrition assessment and how they are made were revealed implicitly and explicitly in the interviews
when participants were asked to share a memorable simple and complex patient scenario.

Nutrition assessment involved several key decisions that informed a decision making process leading towards a determination of the cause/s of the patient’s problem and then ultimate development of a nutrition care plan. During the process of a nutrition assessment, there was constant movement between decisions and actions concerning which information to collect and then how to analyse and interpret this information once gained. This cycle of information collection and analysis was aimed at deciding on a list of the main nutritional problems or issues that the dietitian would then develop strategies to address. Figure 4.2 illustrates this core process occurring within the task of nutrition assessment. This process was undertaken via clinical reasoning and judgement processes and is explored further in Chapter 6.

![Decision making tasks involved in the nutrition assessment](image)

**Figure 4.2 Decision making tasks involved in the nutrition assessment**

The participants described an approach to understanding their patients through nutrition assessment that aligned with a biopsychosocial approach. The biopsychosocial model of health supports the integration of biological, psychological and social factors in the assessment, prevention and treatment of diseases (White, 2005). Participants acknowledged the multilayered, complex and integrated nature of health and described how these factors are co-dependent on a patient’s nutritional status. Therefore, decision making for individual patient nutrition issues involved exploring, analysing and evaluating information about a patient from multiple angles of their
wellbeing. This included understanding medical conditions and symptoms and the physiological effect on the body, both biochemically and physically. The dietitians also cared about patients’ social contexts as well as their feelings, opinions, attitudes and knowledge around their own wellbeing. Consideration of all biopsychosocial factors while assessing and deciding on care plans was deemed necessary by participants given the wide variety of potential causes and influences on a patient’s nutritional status. In the following quote, Alice likened nutrition assessment to multilayered problem solving.

*So the patient has a nutritional problem and you're trying to solve it. Within that big problem, there are little things that you will come across with monitoring or social things that arise that you will change to problem solve, so eventually to solve that big issue of whatever it is that you're trying to improve, what your nutritional goals are... it's a whole big problem with little processes of problem solving layered through.*

(Alice, I2)

Participants undertook an initial assessment and then decided on intervals of time to monitor the patient with repeated review assessments. They both occur along a time continuum from initial contact with the patient to either patient discharge from the hospital or from the dietitian’s care. The components of an initial nutrition assessment are similar to those involved in reviewing the patient in the sense that up to date data is gathered and analysed and decisions made as to what the care plan should now be. The difference is that a review assessment also involved the evaluation of the previous care plan the participant had put in place as well as the overall health progress of the patient.

*I have to use that assessment process of gathering as much data as possible to decide if there are any concerns with the provision of nutrition.*

(Sally, I2)

### 4.6.1 Decision making for information collection

Dietitians engage in a process of gathering information about the patient once having decided that a nutrition assessment is warranted. Within this process, the participants revealed that they make decisions about the type of information needed, the source of the information and the method they will use to attain it. The information gathering process was essential to the
decision making involved with determining a patient’s nutritional status or identifying any problems and understanding the influences on the patient’s situation. The process of collecting information about a patient for the purposes of conducting an assessment was more often an iterative approach facilitated by reasoning about what information was needed and interpreting it to then inform further information gathering. Reasoning approaches are explored in depth in Chapter 6.

The dietitians in this study revealed a set of common types of information, sources and collection methods that they each used to make decisions (Table 4.2).

**Table 4.2  Patient information gathering in nutrition assessment**

<table>
<thead>
<tr>
<th>Information Type</th>
<th>Information Source</th>
<th>Collection Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anthropometry</td>
<td>Patient</td>
<td>Asking</td>
</tr>
<tr>
<td>Biochemistry</td>
<td>Doctor</td>
<td>Reading</td>
</tr>
<tr>
<td>Clinical symptoms</td>
<td>Nurse</td>
<td>Measuring</td>
</tr>
<tr>
<td>Psychosocial</td>
<td>Patient’s family</td>
<td>Researching</td>
</tr>
<tr>
<td>Medications</td>
<td>Other Allied Health</td>
<td>Observing</td>
</tr>
<tr>
<td>Medical</td>
<td>Medical file (written/electronic)</td>
<td></td>
</tr>
<tr>
<td>Physical</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietary</td>
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</tbody>
</table>

So it’s the ABCD data that we get as a dietitian, but also the clinical side as well. (Belinda, I1)

When I first get onto the ward, I would read through their medical file first, to get more information about what their background is. Then I would gather any other information, say biochemistry results. Yeah, and then I’ll go in to have a chat with the patient. On our assessment form, it’s very structured, it’s got lots of questions about diet history and anthropometry, things like that. I’ll collect this information and we’ve got an assessment form as well of nutritional status, called the PGSGA, so I’ll also perform that for the patient’s nutritional status. Basically, find out information from the patient about what’s impacting their intake and what has caused the weight loss. (Sarah, I1)

And the clinical symptoms, because even she is not English speaking background and the nursing staff are not very good with keeping food charts, because I always try to stick my head in around lunchtime. So, I know, whether she’s eating enough and I always see piles of food, like, her husband bringing in and it’s still not eating. (Belinda, I1)

I got a bit of history from himself and his wife, found out food preferences and things like that. He was already on some antiemetic and also some medications to help with his bowels and things like that…the patient reported he could only manage spoonsful of things at a time. (Sarah, I1)
The participants in this study revealed the most common and ideal approach to information gathering involved deciding to access medical history, medication list and even a social history from reading the medical file. They would then approach the patient and ask about clinical and nutrition impact symptoms as well as dietary intake and patterns as well as measuring anthropometry, examining muscle and fat stores subjectively and asking about a weight history. While with the patient, the participants also made decisions as to whether there was clarification needed about any of the information gathered from sources other than the patient such as reports from nursing staff or doctors, or even back to reading the medical file again.

All participants indicated they had to choose what questions were needed to be asked in order to get the information they had decided was important to have about the patient. There was also a need to decide how to ask the question in order to get the most valuable response from the patient. This was considered important by many of the participants given the physical, mental and emotional state of their patients due to the nature of their medical issues or even their values and opinions. The dietitian was focused on asking questions in a way that established and maintained rapport with the patient as well as seeking information necessary to help decide what the nutritional issues may be. These factors sometimes influenced how the patient interacted with the dietitian as Melissa indicates in the following quote.

...we decide how we're going to talk to the patient, what questions are we going to ask. We have a sort of a format that you follow but I think everything that comes out of our mouth is a decision about something, we've decided to ask them what they had for their breakfast or their height first or something. (Melissa, I2)

Engaging with the patient through a consultation style interaction was the most common type of information gathering method reported by the participants. Participants also consulted other members of the MDT and patient family members seeking patient information when they experienced difficulty sourcing adequate information directly from the patient or the medical file. Many of the participants made decisions to communicate with the nursing staff responsible for a specific patient and ask questions about
the patient. Information that was often sought from the nurse concerned the patient’s current or past symptoms, medical treatment plans or even the nurse’s observations of the patient’s food intake. Similarly, when a patient was unable to provide sufficient detail due to their condition, language barriers or cognition, participants decided to contact an available carer or relative. This information was used by the dietitian to inform decisions about any new nutritional concerns or evaluate known ones as part of an ongoing cycle of review. In the following quote, Mary provided a common example of how dietitians interacted with others for patient information for the purpose of a nutrition assessment.

*If the patient is not able to give me a lot of information, I might ring the family members, or I would ask the nurses if they have seen the patient eat and how much they've managed.* (Mary, I1)

Dietitians in the acute care setting made decisions about what patient-specific data they need and where to source this data. The data commonly collected concerned the patient’s medical, social, nutritional and dietary status, both before and during the current admission. This information was deemed relevant to help decide upon the presence of any nutrition health related problems. The role and nuances of interacting with the patient, carers and other professionals are the focus of Chapter 5 where a deeper portrayal of the interdependence of the dietitian and others for gathering information is provided.

### 4.6.2 Decision making for information interpretation and analysis

The dietitians in the study engaged in decision making about the interpretation of patient data that was collected during the assessment process. This was a highly cognitive process and involved use of both straightforward analytical reasoning processes as well as a more complex and nuanced clinical judgement to help decide the meaning of the information gathered. This section focuses on the decision making involved in interpreting patient data with the nature of the cognitive processes involved in decision making discussed in more detail in Chapter 6.

The decision making process involved in interpreting patient data was driven by three main questions which participants had in common. This was
revealed in the interviews by responses to questions about why they needed to do an assessment and their rationale for seeking out and interpreting mentioned information.

1. What if any, is the patient’s nutrition-related health problem/s?
2. What caused or is influencing these problem/s?
3. How can the problem be managed or fixed?

This question asking and answering approach was involved in the hypothetico–deductive reasoning approach where data analysis and interpretation of patient related data guided further relevant data collection. A detailed examination of the cognitive process of data analysis and interpretation in the nutrition assessment is found in Chapter 6, Section 6.4.2.

A common focus of the nutrition assessment was a determination of current and previous nutritional intake and what may be influencing this. This was often the focus because two of the most common reasons for a referral to the dietitian were reports that the patient had not been or was predicted to not be consuming adequate nutrition. Therefore, the participants would decide how to go about understanding the influences on the patient’s poor oral intake which often involved deciding to collect more or different information.

Mary gave an example of how her decision to enquire about the cause of changes to oral intake and the patient’s response then steered the focus of her assessment and further data collection:

_I think if I asked them about what's affecting your intake, they bring up different issues like sore gums, poor fitting dentures, and that drives me towards one direction (Mary, I1)_

Dietitians decided how to interpret information collected in a nutrition assessment by evaluating it in reference to established normal biomedical markers and standards. Participants indicated this was particularly true for the objective data gathered such as pathology, anthropometry and quantitative dietary intake. Doing so assisted with the decision of determining if or what the nutrition health related problem may be. One of the most common analysis decisions that all participants attempted was the determination of a patient’s weight history as a percentage over a certain
time period. For example, they determined that the patient had lost 15% of total body weight in three months and could input this into a validated malnutrition assessment tool that assigned risk to patients with the percentage of weight loss over set time periods. Other comparisons made included blood test results with reference ranges for common and specific blood compounds, electrolytes, proteins and trace elements. The participants working in ICU had various objective measures they frequently made sense of in order to understand the complexity of a patient’s medical status and implications for feeding and nutritional needs.

It was a common decision for dietitians to make comparisons of the patient’s dietary intake to reference ranges for energy, protein and some electrolyte and micronutrient values to help determine if intake is adequate, high or low. Different participants would sometimes focus on different nutrients depending on the patient’s medical problems but all of the participants referred to evaluating energy (kilojoules) and protein (grams) intake. In order to make meaning of the patient’s current or past intake, the participants decided to calculate the current estimated energy and protein needs of their patient. This calculation was deemed essential in particular for deciding on how much enteral feed formula or parenteral solution the dietitian recommended that patient have. The participants who gave examples of patients they did this for referred to standard equations that were available. They decided which equation was most appropriate for the patient and then what data to enter which were often bodyweight and or height depending on the equation as well as factors multiplied to calculate basal metabolic rates such as activity, injury or stress. While this process involved a systematic use of calculations, it also involved making a clinical judgment around appropriate use of which body weight and which factors to incorporate into the calculation. The nature and use of clinical judgment is explored in greater depth in Section 6.5.

Decisions around determining nutritional requirements relied upon weighing up the relevance of clinical factors that influence how the body utilises fuel such as disease and acute states. Participants also utilised specific evidence and experience-based knowledge to decide which factors to use in the equations as well as when to recalculate the patients’ nutritional
requirements so that it is more accurate. Belinda gave an example of what she takes into consideration when deciding on the nutritional requirements of her oncology patients.

...based on her weight, her clinical issues, her stress factor...usually her stress factor is much higher when she is on chemotherapy, but after she is off the chemotherapy her requirements are not as high as before. But then when the disease comes back, then her requirements go up again. (Belinda, I1)

4.6.3 Decision making for identification of nutritional issues

The primary goal of data interpretation in the nutrition assessment was to facilitate the decision of what are the patient’s current nutritional issues. Participants referred to the outcome of this decision as to their ‘overall assessment’ or ‘assessment conclusion’ with only a couple of participants mentioning ‘nutritional diagnosis’ with many of the participants describing it as a process of putting it all together. Essentially this decision was made via clinical reasoning, most commonly the hypothetico-deductive reasoning approach. A rich description of the nature of this reasoning approach and how it facilitated decisions on what the nutritional issues including the incorporation of various types of knowledge are is discussed in depth in Chapter 6.

A common way many of the participants initiated their response to the question of what decisions they made in the interview was a summarised account of what they had decided the patient’s nutritional issues were. Belinda’s articulation of the patient scenario she proceeded to discuss captures a summary of both the nutritional issues but also the influencing circumstances of the nutritional issues (malnutrition, refeeding syndrome risk) and what she decided the patient needed as a result.

54 years old, admitted with deconditioning, not managing at home. They found him on the floor, been there for days. Basically, on a background of alcohol abuse and came in really malnourished, really confused, skin and bones, so SGA=C re-feeding syndrome risk and encephalopathy, so needing nutrition support. (Alice, I1)

While participants indicated they always attempted a full nutrition assessment with their patients as the first step of engaging in the care process, some indicated that in some instances they needed to decide not to
do an assessment. This decision in itself was a result of assessing a small amount of information and being able to make sense of that to then make a decision to not conduct a comprehensive nutrition assessment at that time. For Sally, this occurred most often when she had identified patients from her prioritisation screening process that were currently without any form of nutrition in ICU. From an initial reading of the notes, Sally identified that the patient had a very poor prognosis and there were no clear plans to actively provide nutrition support. In this instance, Sally used her knowledge of common patient treatment journeys and considered her time management concerns and decided she was doing what was both appropriate for the patient and her own schedule by not doing a nutrition assessment. This issue of time also factored into Melissa’s decision to not conduct a full nutrition assessment on a pre-weight loss surgery patient that was referred by the surgeon for education on pre-surgery diet requirements. Melissa used her clinical judgement that incorporated her knowledge of nutritional needs and risk in this patient group and decided to prioritise simply making sure the patient had what she needed to be safe independently at home.

*I thought I’d spend enough time to make sure this lady is safe, gets what she needs but not too much time so I can get on with the next patient.*

*(Melissa, I1)*

In summary, the nutrition assessment was often the first direct contact the dietitian had with a patient in the process of providing nutrition care in the acute care setting. It involved a systematic yet dynamic process of deciding which patient biopsychosocial and nutrition data to collect and then how to interpret, analyse and evaluate that data in order to arrive at a final conclusion of what the most important nutrition health related problems were for that patient. This would then input into the decision making concerning what the nutritional care plan should be that addresses these identified problems.

### 4.7 CARE PLANNING

Choosing the most appropriate strategies that address the nutritional needs identified during the nutrition assessment was the primary focus of dietitian
decision making in the acute care setting. These strategies were both direct and indirect interventions with the patient that formed what the participants referred to as either the ‘care plan’ or ‘the plan’. The most common goal of care plans was to meet the nutritional requirements of the patient.

The decision making process undertaken to determine the care plan for a specific patient involved various reasoning processes (Chapter 6) that included the dietitian asking a series of questions that evaluate and analyse the patient-specific information. This was a cognitive process made explicit by the participants in the interviews when they were asked how they decided on specific interventions for the examples they shared. Interpretation of the interview texts revealed a common set of questions that underpinned participant care planning decision making, these are summarised below:

- What are the nutritional problems to prioritise?
- What are the current barriers to nutrition intervention?
- How might the mediating circumstances of the patient’s life influence current or future nutritional needs and therefore how should care plans incorporate these?
- What is the best care plan for hospital and/or home?
- What are the strategies to try to improve nutritional deficits identified and meet nutritional needs?
- What part of the care plan needs consultation with the medical team?
- What preparation is involved in preparing the patient for discharge?
- Who else needs to be involved in the nutrition care plan?
- To what degree is it safe to deviate from the ideal intervention?

All participants used all of these questions to guide decision making on the most appropriate care plan except for the questions concerning discharge which were often not necessary for participants working in ICU. The dietitian made decisions about what strategies may help address the patient’s identified nutrition problems both with and without the patient’s direct involvement and at times in consultation with the medical team treating the patient. This inclusion of others is examined in Chapter 5.

4.7.1 Types of care plan decisions
Care plans for patients in the acute care setting involved deciding on some common nutrition interventions to address the nutritional issues identified in
the assessment process. When asked in the interviews to describe a memorable simple and complex patient scenario, participants initially responded with what they decided to *do or recommend* for the patient. These were interventions that the dietitian deemed would address the problem/s they had identified. They were dominated by nutrition support\(^9\) interventions with minimal reference to counselling or education. Table 2 outlines the various types of interventions the participants revealed they commonly recommended for their patients which were always documented in the care plan in the patient’s medical file.

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\(^9\) Nutrition support refers to part of nutrition therapy which is a component of medical treatment that can include oral, enteral, and parenteral nutrition to maintain or restore optimal nutrition status and health. A.S.P.E.N. (2018). What is Nutrition Support Therapy. Retrieved from [https://www.nutritioncare.org/About_Clinical_Nutrition/What_is_Nutrition_Support_Therapy/](https://www.nutritioncare.org/About_Clinical_Nutrition/What_is_Nutrition_Support_Therapy/)
**Table 4.3 Types of nutrition intervention decisions as part of a care plan**

<table>
<thead>
<tr>
<th>Nutrition Intervention</th>
<th>Evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requiring a nasogastric tube</td>
<td>At this point, I had suggested Enteral feeding or NG feeding for this particular patient because I felt he wasn’t meeting his requirements and predicted that he wasn’t going to be able to meet his nutritional requirements. (Penny, I1)</td>
</tr>
<tr>
<td>Selecting an enteral feed formula</td>
<td><em>I had decided that the most appropriate thing to do was start with a basic isotonic formula without fibre, just to see how she absorbs it before doing anything else.</em> (Sally I1)</td>
</tr>
<tr>
<td>Enteral feed rate progression</td>
<td><em>For example, if the target volume of formula is two litres a day and they need 80 ml per hour I will decide whether we start straight at the 80 ml per hour, which is rarely the case, or if we start at a lower rate and how quickly it’s increased based on their previous nutrition status or any anticipated issues with intestinal absorption of the feed.</em> (Sally, I1)</td>
</tr>
<tr>
<td>Additional vitamin, mineral or trace element supplementation</td>
<td><em>To ensure that the doctors replace his electrolytes arrangements as well as giving him vitamin and multivitamin and actually withheld any oral supplements until my next review.</em> (Alice, I1)</td>
</tr>
<tr>
<td>Type of oral supplement</td>
<td><em>For this particular patient group looking at what the recommendations or the guidelines are...so I used that as part of something in the back of my mind when I’m making the decision. Also, fluid and what I think would be what the patient would be compliant to, to make a decision on which type of feeds to use or which flavour to pick. Also at which meal it’s most likely the patient will have it as well.</em> (Alice I1)</td>
</tr>
<tr>
<td>Therapeutic diet</td>
<td><em>For some patients I would go solely with therapeutic diet...if they've lost weight, and if I'm confident that they will be able to eat a little bit more as I've recommended, then I’ll go with adding fats to their meals and having high protein food, using high protein nourishing fluid recipes...</em> (Mary, I1)</td>
</tr>
<tr>
<td>Dietary Education</td>
<td><em>I did provide some education, high-energy high-protein education, and we discussed strategies about stimulating the appetite and small, frequent meals and things like that to help manage nausea and also to assist with getting more energy and protein and nutrients in.</em> (Sarah, I1)</td>
</tr>
</tbody>
</table>

The participants were required to gain support from a doctor for nutrition support interventions that required a device (enteral feeding tube or intravenous catheter) to be inserted into the patient. Therefore, the dietitian often decided on a need for this form of nutrition e.g. nasogastric or parenteral and communicated this to the doctor involved in this patient’s
care. The decision making needed here for implementing these types of nutrition support are discussed in detail in Chapter 5 given it required advocating on behalf of the patient. Although the decision to provide these nutrition support interventions required doctor approval, the dietitian did make decisions around the specifics of the nutrition support regimen. This included deciding on which formula to use, what rate to start at and how to progress the rate towards the goal which would provide the ideal estimated nutritional requirements they had calculated. These decisions were guided by the information collected and analysed during the nutrition assessment. This was the common process involved for participants who worked on the wards where most of the participants worked but was slightly different for dietitians working in ICU. In the ICU, participants indicated that doctors and or nurses frequently initiated nutrition support therefore for Penny, Sally and Kate their decisions were often to determine the appropriateness of current interventions for their patients.

4.7.2 Deciding about hospital discharge

Care planning decisions involved determining and advising on the appropriate timing of discharge and what the nutritional needs of the patient may be on discharge. During the admission, the dietitian made predictions based on the inpatient assessment about the needs a patient may have after leaving the hospital. Decisions were made concerning what intervention may need to continue once the patient is discharged. For many patients, this involved the dietitian deciding to continue oral nutrition support or to provide dietary education so that the home diet was optimised for the nutritional goals. The dietitian often made decisions about patients’ discharge needs in advance of the predicted discharge and developed a care plan accordingly. In the following quote, Alice shared how she learned to predict common discharge timing for her patients and therefore ensured she made decisions accordingly in a timely manner.

*Usually, a lot of the things I do as well is discharge planning because it moves quite fast within the third or fourth review that I do. I plan for supplements to go home with an education as well. (Alice, I1)*
The timing of when a patient was ready to be discharged is rarely the responsibility or within the power of the dietitian to decide. However, there were circumstances when the dietitian decided to try and influence the timing of discharge because of the patient’s nutritional needs. For the participants, these decisions were often around delaying discharge due to the risk that premature discharge could have on the patients’ health and wellbeing. This was particularly relevant for patients who had food insecurity or were being discharged with non-oral feeding methods. Sarah and Theresa both shared examples of where the discharging of a patient was complex as it involved the need to influence the doctor’s decision so that discharge could be delayed. They made the decision that certain outcomes needed to be achieved before the patient was safe to be discharged yet neither were able to influence the decision of when their patient was discharged. In Sarah’s example, the outcome was actually very negative and resulted in the patient representing to hospital with complications. Sarah reflected on this incident and her potential role highlighting the efforts she made to communicate with the medical team in advance while also acknowledging a sense of powerlessness in relation to discharge decisions when there is disagreement between herself and the medical team.

I think you just become used to the team having the final say, ‘No, they’re fine. They’re going’...I always try and plan ahead and try and liaise with the team and say, ‘Look, please give us a heads up. We need at least two to three days. This is what needs to be ordered. This is how long it takes to get delivered to the patient if they’re going home on feeds. Give us a heads up earlier than the day of discharge’. (Sarah, I1)

This highlights the complex nature of decision making in hospitals around patient discharge and that while dietitians make care plans concerning discharge, they ultimately don’t have the final say. Understanding where the authority lies with discharge decisions facilitated the dietitians to initiate advocating for an ideal discharge process for the patient. Advocating is examined more in Chapter 5.

4.7.3 Deciding about care plans with no interventions

In certain circumstances, dietitians made decisions not to intervene straight away but instead monitor the patient’s situation over a determined timeframe. This could be due to the patient being too unwell to provide
nutrition to or that there were more complex issues that needed to be addressed first. When participants decided not to intervene, the decision making process involved the use of clinical judgement. This was because it often involved weighing up the role of nutrition within the bigger picture of the patient’s health circumstances.

Theresa shared an example of a complex patient scenario in which a thorough nutrition assessment revealed the multiple social, psychological and financial influences on her patient’s nutritional issues with renal disease. Theresa made the decision to not provide any nutrition interventions initially but instead decided to collaborate with other health care staff including a home care nurse, pharmacist and social worker who were more suited to addressing these factors.

I’m actually pulling back the depth and extent of my intervention because I can’t solve those problems or they need to be solved before I can really do an effective job. She can’t afford to buy her medications because she’s got debts racked up everywhere because she doesn’t know how to manage her money. (Theresa, I1)

Deciding on the plan not to intervene was also sometimes necessary with patients who were too unwell to provide nutrition to such as in ICU or when a patient is in the end stages of their life. The decision not to provide nutrition in these instances was nearly always decided by a doctor, therefore the decision the dietitian made was to either to accept this decision or not. Sometimes there were circumstances where the participants disagreed with the doctor and therefore decided to advocate on behalf of the patient in order to try and have the patient fed sooner. The process of advocating is explored in greater depth in Chapter 5, section 5.5.

4.7.4 The influence of context in care plan decisions

While the predominant influence on decision making concerning a nutrition care plan was the biopsychosocial and nutrition domains of a patient’s past, current and predicted health and nutrition status, there were other indirect contextual influences on these decisions. These included the resources available in the hospital or clinical area the participants were situated in as
well as the expertise of the dietitian and often the opinions and preferences of the doctors they worked with.

**Resources**

The dietitian decisions around what strategies to recommend to address a patient’s nutritional issues are at times influenced by resource availability. This included a lack of resources such as time or unavailability of a nutrition support product option. All participants indicated that time was a resource in limited supply resulting in prioritisation decisions. However, a lack of resources in terms of staffing sometimes meant that there were instances where there wasn’t adequate time to create care plans that were completely aligned with practice guidelines or the ideal plan. Melissa indicated this was very true of the many years she spent specialising in renal nutrition in a major teaching hospital. A lack of adequate dietetic staff allocated to the renal area meant Melissa felt like she was offering a band-aid service to her patients. She couldn’t always choose interventions for her patients recommended by guidelines and therefore felt like her care plans were not able to help support the prevention of nutrition-related renal problems.

_I was the ambulance at the bottom of the cliff waiting for the person to fall rather than being at the top stopping them from falling._ (Melissa, I1)

The nutrition support options that are available to dietitians to choose from to offer patients also shaped the care plan. Amongst the participants in this study, therapy options varied between hospital settings but all participants indicated that their hospital could not stock all oral supplement products available in all flavours or compositions. Therefore, the participants had to choose strategies that worked within the available products at their hospital. One disadvantage of this as indicated by Belinda was an oncology patient who had swallowing issues who needed thickened fluids but the stocked options were very limited and she couldn’t offer the patient a greater variety that may have resulted in better nutrition and fluid intake.

**Dietitian expertise**

Expertise, that is, the dietetic skills and knowledge that the dietitian possessed also influenced how dietitians approach decision making in care planning. All participants in this study had a minimum of five years of
professional experience indicating a moderate amount of general clinical nutrition expertise. Most participants had been specialising in a particular clinical area for greater than two years, all except for Mary and Sarah. This experience in a particular clinical area seemed to influence the evidence and experience-based knowledge they held which informed their decision making in developing appropriate interventions for patients in that clinical area. Knowledge increased over time that was from both practice experience of learning via patient scenarios but also repeated exposure to use and viewing of specific guidelines and literature.

*I did learn all those different strategies, what works and what didn’t, to be able to apply to the next bunch of patients.* (Lila, I1)

A lack of experience in a particular clinical area sometimes resulted in limited knowledge of what the ideal care plan should involve. For some participants, this uncertainty resulted in changing their approach to involve more reliance on reading specific literature and guidelines or consulting experienced dietitians from that clinical area. The effect of experience on CDM is explored in more depth in Chapter 7.

**Medical practitioner opinions**

Participants clearly articulated that dietitians do not have complete autonomy in decision making about what is included in the nutrition care plan in the acute care setting. Dietitians can recommend a plan but it can be changed at any point by a doctor, with or without consulting the dietitian. Sometimes opinions differed between medical practitioners and the dietitian on what the care plan should be which often lead to the dietitian making decisions about how to advocate or negotiate for the patient. The influence of the dietitian’s relationship with the medical practitioner and the role of advocacy with doctors in the process of making and implementing care plan decisions for patients is explored in greater depth in Chapter 5.

Participants indicated that medical practitioners have a strong influence on if and how the scientific evidence related to a proposed nutrition intervention was used to formulate a patient care plan. For example, if a medical practitioner indicated that they didn’t want a certain intervention for their patient, participants described how they would then need to choose the
best alternative in order to try and address the nutritional issues they had identified. Lila gave an example of working with a surgeon who preferred not to insert nasogastric tubes whenever possible. Her ideal plan would be to start using the patient’s gastrointestinal tract knowing that there were no contraindications and that her evidence-based knowledge indicated she should. However, she had to instead plan for ongoing use of parenteral nutrition.

That was kind of the challenge and gently kind of reminding him but then he just said to me, ‘It’s cruel’. She did have a sore throat. He had some illogical reason behind it like ‘I don’t like putting tubes down’. I kind of left it and at least they were giving her PN for that time. (Lila, I1)

Given the nature of power within this relationship, the opinion of the medical practitioner dictated patient care decisions. Some participants communicated frustration with these situations but they continued to focus on continuing to build a good rapport with the medical practitioner in question. Power and the need to build relationships are discussed in depth in Chapter 5.

4.7.5 Conclusion
The main focus of dietitian CDM in the acute care setting was the decisions made concerning what interventions to choose to achieve the best outcomes for their patients. The processes dietitians engaged in while making care plan decisions were dominated by the use of clinical judgement underpinned by the use of scientific evidence and characterised by varying degrees of involvement of the patient and the medical team. Contextual influences on these decisions included the patients’ biopsychosocial characteristics as well as the resources available in the hospital environment. The dietitians’ clinical expertise and in many instances, a doctor’s opinion and preferences were considered influential in the process of developing a tailored nutrition care plan.

4.8 IMPLEMENTING CARE PLAN
Caring for patients in the acute care setting required dietitians to make decisions about how to implement the care plan, not just what the ideal care plan should be to address nutritional issues. A key finding of this research was that implementing a care plan for a patient involved the need to decide
who, when and how to involve others to successfully action the dietitian’s decision. These other people included health professionals, patient carers or family and support staff such as foodservice and administration personnel. Some of the most common decisions made in this step related to various broad yet key questions participants asked and answered during this process. Participants revealed a common set of problem-solving questions that they engage in when seeking to determine and implement an appropriate care plan for each individual patient. These included:

- Does the care plan require a doctor’s approval, if so, which doctor and what is the best approach to advocate for the patient?
- Who and what support is needed for the care plan?
- Who does the care plan need to be communicated to and what is the best way to present your clinical decisions?
- What is the ideal and agreed timing of the intervention?
- What needs to be ordered and from where?
- Who needs to actually carry out the intervention and how?
- What strategies are relevant to help motivate a patient to a different stage of change?
- If, when and how is it required to compromise on recommended care plans?
- What information should be prioritised when educating a patient?
- When and how do emotional and mental support and encouragement need to be offered to the patient?

Interacting with others, including deciding who, how and when, was a core focus of decision making relating to implementing care plans. This was because for nearly all common interventions, implementing solutions to a patient’s nutritional problems involved other people that cared for the patient. For example, when Alice decided that her patient had inadequate energy and protein intake and that the most appropriate solution was to offer high energy and protein oral nutrition supplements, she then decided how this needed to be put in place. Practically this involves administrative tasks like ordering the supplements electronically as well as asking a dietitian assistant to send one to the patient as soon as possible. It may also involve enlisting the support of nursing staff to help encourage the patient to consume recommended nutrition supplements.
Usually ordering supplements on CBORD\textsuperscript{10} or for particular patients I might need to communicate with the doctors and communicate with the nurses and working with the diet assistants. (Alice, II)

Table 4.4 outlines the common nutrition interventions the participants revealed they decide for their patients and who else needed to be involved to safely and effectively implement these.

<table>
<thead>
<tr>
<th>Care plan type</th>
<th>People involved in implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enteral Feeding</td>
<td>Doctor/s, Nurse, Radiologist, Patient</td>
</tr>
<tr>
<td></td>
<td>Radiographer, Foodservice staff, +/- Gastroenterologist</td>
</tr>
<tr>
<td>Parenteral feeding</td>
<td>Multiple Doctors, Pharmacist, Clinical Nurse, Specialist, +/- ICU Doctor</td>
</tr>
<tr>
<td></td>
<td>Radiographer, Pathologist, Nurse, Patient</td>
</tr>
<tr>
<td>Vitamin, mineral or trace element supplementation</td>
<td>Doctor, Pharmacist</td>
</tr>
<tr>
<td></td>
<td>Pathologist, Nurse</td>
</tr>
<tr>
<td>Oral nutrition support</td>
<td>Patient, Foodservice staff, Dietitian Assistants</td>
</tr>
<tr>
<td></td>
<td>Nurse, +/- Doctor, +/- Nutrition supplement company</td>
</tr>
<tr>
<td>Dietary Education</td>
<td>Patient, Patient’s family/carer</td>
</tr>
<tr>
<td></td>
<td>+/- Interpreter</td>
</tr>
<tr>
<td>Therapeutic diet changes</td>
<td>Foodservice, Dietitian Assistants, Patient</td>
</tr>
<tr>
<td></td>
<td>Ward clerk, Nurse, +/- Speech Pathologist</td>
</tr>
</tbody>
</table>

For most nutrition interventions, there was a multistep process needed for implementation that was guided by decisions made by the dietitian as to who needed to be involved, what they needed to do and when it needed to

\textsuperscript{10} CBORD is the software used to manage the foodservice management of patient’s in most public hospital systems. It requires input of patient dietary needs and preferences by dietitians and is the dominant way that dietitians communicate to the food service department about each patient. It therefore automates the allowed and requested meal and snack orders
happen. The dominant types of interactions that facilitated implementing care plans were those relating to advocating for the patient, negotiating with medical practitioners and giving instructions. The interacting involved in dietitian CDM is discussed in depth in Chapter 5.

Dietitians made decisions about the timing of implementing all or parts of the care plan they recommended for the patient. These decisions were influenced by the acute care context which made it possible to have strategies implemented over the course of varying admission lengths of time, therefore providing access to patients by the dietitians over multiple time points. Some participants provided examples of decisions that involved not implementing strategies to address nutritional issues straight away. These decisions took the form of clinical judgement which factored in what was practical and suitable for the patient’s medical, physical and emotional need at that time. Alice shared in the following quote the process involved in deciding not to educate patients too early on in their admission on how they may correct nutritional imbalances in their diet. Instead, Alice decided to implement education closer to the patient’s discharge to increase the chances of the patients’ understanding and retention of information.

*I make an assessment of what their nutrition needs are and what they should be doing but I don't necessarily recommend everything or bombard them with information at that initial assessment or the next one. (Alice, I2)*

Decisions concerning implementing strategies relating to providing dietary education to the patient were quite variable amongst the participants. This seemed to be mostly influenced by the decision’s dietitians made about what was a priority to dedicate time to in the inpatient setting. Participants used counselling and information sharing strategies to educate patients on ways to be independent with improving or changing their nutritional status once discharged from hospital. Some participants indicated that they provided more education more frequently than others and this was directly related to the clinical context of the patient. For example, Belinda frequently educated her patients on food safety and future symptom management as well as the role of adequate nutrition for her patients about to undergo chemotherapy. Whereas Penny, Kate and Sally provided minimal education because of
seeing patients in the ICU setting where patients were nearly always transferred to a ward setting before leaving the hospital. Theresa, a renal dietitian, identified that she often made decisions about not providing detailed education in the acute care setting but rather giving just enough to get patients home safely and further their education in an outpatient clinic instead.

*I don’t do much education inpatient-wise anymore. It’s just not the right environment and if I do do it, it's TLC until I can make some sort of outpatient arrangement. If I get referrals for, say, education, I really do assess whether it’s appropriate or not and the majority of cases I don’t actually do education. I’ll just give them a few little tips before they go.* (Theresa I1)

Dietitians make decisions about how to implement the decided care plan for their patients and this was dominated by the decision of who to involve and how to communicate with them. Acute care dietitians also frequently made decisions about what part of the care plan is a priority to implement now versus later which commonly involved minimising or delaying in-depth counselling and education provision until close to discharge or care is continued in the outpatient context.

### 4.9 MONITORING PATIENTS

The final yet recurring core task involved in CDM for dietitians in the acute care setting concerned monitoring the care plan already implemented and the patient’s health and nutritional status during the hospital admission. Monitoring for dietitians involved re-entering an episode of care with the patient at a chosen time and assessing nutritional progress. Monitoring of a patient was viewed by participants as an essential and standard part of the usual care provided to patients by dietitians. The participants engaged in a similar process of assessing the status of a patient in terms of information gathering and cognitive reasoning processes similar to the initial assessment discussed in section 4.6. However, it is discussed here as a separate focus of decision making given how the participants distinguish the task of monitoring as a separate time dependent step in the patient care process that was influenced by different factors to the initial assessment.
All participants indicated they made a set of common decisions that informed how they engage with nutritional monitoring of their patients. These mainly included:

1. Timing of review, that is, when next to go and see the patient
2. What information is needed to effectively assess and evaluate the patient's progress after implementing a care plan
3. What the care plan will be as a result of the current review

Monitoring decisions were considered by the dietitian at all stages of the patient care journey particularly when deciding on a care plan as it coincided with deciding how the dietitian was going to determine if the strategies were effective. How the dietitian had decided to monitor a patient was, for some participants part of the documentation they provided in the medical record, particularly with high-risk patients or the initial assessment. However, the physical act of going back and evaluating and monitoring patient progress was a recurring step undertaken by the dietitian after the initial assessment or contact with the patient or until they decided to discharge the patient from care.

Monitoring of a patient’s health and nutritional status was essential for the care dietitians provided due to the frequent changes that occurred to a patient’s clinical status. Changes to a patient’s clinical status were common for more acutely unwell patients, particularly in the ICU. Dietitians recognised that the biomedical variables were very changeable. This recognition influenced the frequency of reviews of nutrition support. Sally explains in the following quote how dynamic the patients in ICU are with respect to change over time.

...things happen with patients within a matter of hours rather than necessarily a week or so. I could go on one day and they're tolerating their feeds and everything is fine and then the next day it could all be changed and so I need to obviously check that that's the case. (Sally, I1)

Participants caring for patients outside the ICU setting indicated a need to monitor their patients, so they could get direct feedback about whether the interventions had actually been implemented and whether they were having the effect intended.
Dietitians made decisions about when to monitor their patients based on their knowledge of prioritising the clinical and nutrition needs of the patient they identified upon the last contact. As discussed in Section 4.5, there was always a need to prioritise contact with patients because of demand being greater than time available. Each working day, dietitians would see a collection of patients for the purposes of both conducting an initial assessment or review. Therefore, deciding on the timing of review was influenced by the total demands on a dietitian’s day as well as the clinical need of the patient resulting in a decision on what was likely a safe and effective approach to care. There were some examples provided by participants that indicated there was some pattern to how they approach timing of monitoring related to what the nutrition intervention was. Alice indicated this when describing how she decided to monitor patients who start on parenteral nutrition.

*Initially, when I start anyone on TPN I would probably monitor them a little bit more frequently, just to make sure that their tolerance and progression and electrolytes are all within normal range. It will be like daily checks of bloods, review maybe every two or three days. As the patient becomes more stable in regards to TPN I may review them twice a week from then on. It depends on whether there's changes in their progression with official output or progression of diet and may review them a bit more frequently if I'm anticipating there might be more changes to the regime in terms of oral versus TPN and titrating that. (Alice I1)*

This example also highlights the decision all participants made of identifying relevant information that is deemed necessary to help assess and evaluate a patient’s progress after implementing an intervention. This process is very similar to that undertaken in the initial nutrition assessment discussed in Section 4.6. However, for monitoring, the dietitians tailored it to the current clinical and nutrition concerns and the potential interaction of these with the intervention in place. The dietitians chose to monitor and collect data at each review that when interpreted and evaluated should help assess whether the intervention is having the outcome intended or is in the process of doing so. Below is a list of the common categories of information that participants indicated they collected and analysed during a patient review:
• Anthropometric changes such as body weight and body fluid, muscle and fat loss;
• Nutrition-related biochemistry results from blood tests;
• Clinical signs and symptoms such as bowel function, nausea, vomiting, reflux, chewing, taste and swallowing issues; wound and skin integrity. Fluid inputs and outputs from tubes and drains and normal bodily functions;
• Dietary or nutritional intake since the last contact – quantitative and or qualitative data;
• Patient experiences and compliance with both medical and nutritional interventions;
• Current and planned medical treatment and procedures;
• Progress of other health care interventions that impact on nutrition such nursing reports, gross and fine motor function changes as per physiotherapist and occupational therapist.

Dietitians used evidence-based and experience-based knowledge to inform decisions about how this information should be interpreted in order to evaluate the progress of a patient. This knowledge involved both general clinical nutrition knowledge as well as specialist knowledge gained from working within a particular clinical area for an extended period of time. Through clinical reasoning, the participants made decisions about whether the current interventions were appropriate to either continue or that they needed changing. This involved the same process of decision making involved in determining a care plan and how to implement it as discussed in Sections 4.7 and 4.8. Belinda provided a common example in the following quote of how she evaluated new information and its implications on the current intervention.

So, whenever she has, say, diarrhoea, I need to think about whether I need to stop the supplement for a while or change other things to make her feel a bit better before I introduce it again. (Belinda, I1)

Sometimes the outcome of the review was to simply keep monitoring until discharge of the patient. Sometimes the changes needed were small because the patient indicated a change in preferences to some food or supplement item being provided. Sometimes the outcome decision was actually to escalate interventions further given signs of the nutritional decline of the
patient. Regardless, the essence of monitoring involved making decisions about what information would indicate progress towards resolution of the nutritional problems identified.

4.10 SUMMARY OF KEY FINDINGS IN THIS CHAPTER
The CDM of dietitians working in the acute care setting was focussed around five core tasks:

1. Prioritising
2. Assessing
3. Care planning
4. Implementing care plans and
5. Monitoring patients

These tasks were sequential and recurring for which dietitians made decisions about the timing and frequency of patient contact and care. The decision making that occurred within and for these tasks was dominated by the use of clinical judgement informed by multiple knowledge types and the dietitian’s experience. The process of undertaking these five core decision making tasks involved, at different points, the patient, carers and other health professionals. This highlights the integral role of making decisions on how to address identified nutritional issues.
CHAPTER 5 THE INTERACTIVE NATURE OF DIETITIAN CLINICAL DECISION MAKING IN THE ACUTE CARE SETTING

Dietitian decision making is a highly social phenomenon with complex power relations with various other health care professionals and patients. Dietitian CDM relied on a constant process of building, maintaining and actively participating in two key sets of relationships. These included the relationship and subsequent communication occurring between:

- Dietitian and the multidisciplinary team (MDT)
- Dietitian and the patient

Dietitians place an importance on being aware and choosing approaches to interacting that suited each instance of patient care or problem and that reflected the presence of established power relations between professionals. The participants chose to respond to existing power relations in five key ways: by building and maintaining relationships, advocating on behalf of the patient; negotiating decisions; instructing health care staff and patients, and enabling patients.

5.1 FRAME AND SCOPE OF CHAPTER - RELATIONSHIP CONTEXT AND PARTICIPANT RESPONSES TO POWER

In this chapter, the concept of power (as referred to in Chapter 3, section 3.5.4) is used as a lens to examine the nature of dietitians’ professional relationships and the consequent dietitian behaviours. Participants described varying degrees of power that existed within their professional relationships dependent on with whom interactions occurred in the process of decision making. Commonly there was power imbalance that required participant response in their pursuit of improved health and nutrition-related outcomes for patients. Power was framed by participants as influencing the autonomy of their CDM.
The influence of power within these relationships on the dietitians’ CDM is best understood by first exploring the context of the dietitians’ relationships in the acute care setting as perceived by the participants. This chapter will then examine the varied ways that participants responded to and behaved within these relationships for the purposes of CDM (see Figure 5.1).

![Diagram](image)

**Figure 5.1 Scope and framework of chapter - relationship context and participant responses to power**

### 5.2 THE DIETITIAN AND THE MULTIDISCIPLINARY TEAM

Participants described how their CDM nearly always involved interacting with at least one other health professional from the MDT. These health professionals referred to by participants when sharing specific case scenarios in the interviews included medical practitioners, nurses and allied health professionals such as speech pathologists and social workers. The term ‘team’ was used in various ways including to refer to the group of medical practitioners within a clinical specialty or the collection of health care professionals from various disciplines that are situated either in a common physical space or within a clinical speciality. Essentially ‘team’ signalled colocation of various clinical staff in a shared clinical space. Participants made decisions about who to interact with depending on the nature of the required decision. There were differences in the nature of the relationships the participants had between different health professionals that
were influenced by the clinical speciality and the participant’s specific experience within that speciality. However, all participants identified the relationship with the medical practitioner/s within the MDT as more influential on their CDM than any other relationship. There were variations between participants as to the degree of autonomy they perceived they had for decision making within different medical teams and clinical specialties. Participants conveyed the importance of awareness of the locus of control and its impact on their autonomy in all of their decision making.

*Whatever decision we make is about where do we think we sit in that power hierarchy. (Sarah, Focus Group.)*

The nature of these relationships and the variations communicated by participants are now discussed.

### 5.2.1 Perceptions of the MDT as a whole

Participants communicated a strong sense that as dietitians they possessed different levels of power relative to other members of the MDT, in particular, perception of less power than what they deemed helpful to be more effective for patient care in the acute care setting. The influence of this power was fluid, with different team members, including the dietitian, asserting different levels of power at different times. The nature of power at play between the dietitian and other members of the MDT was largely determined by individual personalities and group dynamics as well as practitioners’ experience. This influence of power contributed to the context-dependent nature of the relationships that dietitians engaged in for decision making. All participants described the importance of constant awareness and assessment of who has power to influence their decision making about patient care at particular points in time when working in MDTs. In the following quote, Theresa shares how belonging to the MDT involved the need for an awareness of who has power relative to herself and how to navigate this during interactions.
Even though I know that diet plays a more important role than some other things, sometimes, I sometimes feel like we’re still playing this little game of climbing up the hierarchy and then we get knocked back down again. That’s dominated by the personalities in our unit… like, if I’m sitting in an environment where it’s just the doctors and myself you feel almost equal at times. If it’s a more multidisciplinary environment then you’ve got to know your place sometimes and you’ve got to play a game with the politics. (Theresa, I2)

Participants conveyed the distinctions in power they attributed to health professionals in the MDT in both obvious and subtle ways. The common perspective that the medical practitioner was a key influence on participant decision making was conveyed when nearly all participants responded to a direct question about influences on decision making, with the omission of nurses or other allied health professionals. However, nurses and other allied health professionals were discussed mainly when participants were explaining how they went about decision making for specific memorable patient scenarios. For example, in the following quote, Lila summarised the process of implementing a care plan for a particular patient and refers to who she needed to share decision making power with while care caring for a patient that had surgery.

She was an ileostomy and so she wasn’t like the other cases who just had a hemicolectomy. She had the stoma. She had a high output stoma as well, so we were trying oral rehydration solutions, all the medications to help assist with that, so lots of liaising with the team about getting that right, stoma nurse, lots of involvement with the stoma nurse. She was involved and her diabetes … there was the diabetes educator involved as well and the speech pathologist. (Lila, I1)

Only Theresa directly attributed nurses to having a greater influence than herself in her clinical speciality. The views expressed by Theresa in the following quote illustrated the sense of there being different levels of power within the MDT, indicating the lower level in which dietitians sit relative to the medical practitioner and nurses.

I sometimes feel like we’re second-rate allied health … third-rate because doctors come first and in the renal unit the nurses are the next most important thing. Then there’s us and we’re on the periphery sometimes. (Theresa, I2)

Participant perceptions of power at play within the MDT had common elements regardless of how they located themselves within the MDT. In the
following sections, the nature of dietitians’ interactions with specific health professionals is examined. This facilitates a more nuanced understanding of the context, including the respective relationships and power differentials between dietitians and members of MDTs.

5.2.2 Medical practitioner

Participants’ relationships with medical practitioners were of utmost importance. Medical teams consisted of various medical practitioners of different levels of experience. Each team was led by one or more Consultant who was the most senior member of the team and thereby a key influence on participant decision making. All participants indicated that their relationship with medical practitioners involved an acknowledgement of the greater degree of power that doctors have over all aspects of patient care, including nutrition related interventions. This greater degree of medical practitioners’ power was evidenced in participants’ descriptions of medical practitioner’s willingness to accept or reject advice and their overall responsibility for patient care. Participants expressed this imbalance of power in varied but similar ways and have been summarised into Table 5.1. Participants assigned ultimate power to the medical practitioner irrespective of the participants’ experience or clinical speciality. The participants believed that scope of practice, professional identity, autonomy, culture and the hierarchy within organisational structures, all contributed to assignment of power mostly to medical practitioners, as conveyed by Penny in the following quote.

*We don’t have the power to implement best practice... [Due to] all the things under scope of practice, the professional identity, the autonomy, the culture, the hierarchy in organisational structure, the way that the doctors were trained, the way that we are trained. (Penny, Focus Group)*

Awareness of the complex nature of a dietitian’s power relations was coupled with self-awareness of a need to shape their own communication and actions to respond in ways that would be advantageous for patient outcomes, ideally by influencing a medical practitioner’s own decision making. Effective use of various communication strategies (see section 5.4-5.8) demanded a reflective ability to monitor how the interaction with a medical practitioner was influencing both the implementation of evidence-
based practice and the state of the professional relationship. There were variations to how the participants’ autonomy in decision making was influenced by a medical practitioner’s use of overall power in decision making which is discussed in Section 5.2.4.

### Table 5.1 Participants’ perspectives on power within their CDM process

<table>
<thead>
<tr>
<th>Elements of Power</th>
<th>Participant Evidence</th>
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<tbody>
<tr>
<td>Power to accept or reject dietitian advice</td>
<td><em>They’re (Intensivists in ICU) the ones that have to take our advice or not (Penny I2)</em>&lt;br&gt;I don’t feel like I’m the main decision maker within the team because I’ve always thought the doctor’s role is to make medical and clinical decisions for the patient, and we would make our recommendations to them and they’re the ones who would make the ultimate decisions. (Mary, I1)*</td>
</tr>
<tr>
<td>Power to approve changes to nutrition interventions</td>
<td><em>Or allow us to make changes without them interfering with them, so it really is them giving us permission to do that. Like you can’t just go there and start doing it. (Penny, I2)</em></td>
</tr>
<tr>
<td>Power based on having overall patient responsibility</td>
<td><em>They are the ones who have clinical governance over patients, and physicians have got a greater impact on the overall medical care of the patient. And I see myself as a part of that team that contributes to the overall physician (Mary, I2)]</em>&lt;br&gt;<em>We’re not legally responsible for the patient outcome in the way that the doctor that’s assigned to them is. (Penny, Focus Group)</em></td>
</tr>
<tr>
<td>Power to have final say for patient care</td>
<td><em>I would definitely be a decision maker or influencer, maybe, with the final decision always coming from the surgeon. (Lila, I2)</em>&lt;br&gt;<em>I feel like the buck doesn’t lie with us with patient care. It lies with the treating team. So sometimes I think it is a little bit unique [to the acute care setting] as we’re not the final decision maker. (Sarah, Focus Group)</em>&lt;br&gt;...because we don’t have the overall control of our patient care. (Sally, I2)*</td>
</tr>
</tbody>
</table>

Medical practitioner dominance of various aspects of dietitian decision making, over time, shaped some participants’ reasoning involved in certain
decisions. Repeated experiences reinforced how a medical practitioner had the power to disagree and therefore reject recommendations made by participants for certain types of care particularly for more aggressive interventions such as enteral or parenteral nutrition. For some participants this appeared to result in an internalisation of a medical practitioner’s power subsequently influencing care plan recommendations. Belinda and Alice described examples of how repeated decisions by particular doctors to not accept their advice concerning feeding patients via a nasogastric tube ultimately led to them being reluctant to recommend it at all for future patients.

I often reflect on whether I don’t suggest NG tubes enough because I think I’ve been knocked back so many times, so I think, well if you are not going to do it, I’m not going to suggest it, so, I think my reasoning skills are impacted by the past experience. (Belinda, I1)

Alice, concerning a patient who had liver failure:

I might not even push for NG feeds even though I know that the guidelines recommend it. (Alice, I2)

Instead, these participants implemented a strategy of building a more supportive relationship with a medical practitioner who has differing opinions about certain nutrition support interventions. Building supportive relationships are discussed further in Section 5.4.

Some of the more experienced participants revealed a tension between how medical practitioners used their power and how participants felt that they should. This was mostly related to when participants felt that the medical practitioner had inadequate knowledge or understanding about a patient nutritional issue yet communicated as if they did. In the following quote, Theresa conveyed her attitude and resistance to what she believed is baseless power exercised by some medical practitioners due to their lack of knowledge about renal nutrition. It is important to note that while Theresa’s expression appears quite aggressive, it was equally matched in the interviews with her passion and conviction to advocate for patients and have respectful relationships with other health professionals.
...I gave some updates to the renal physicians about particular topics [recently] and it really dawned on me that they don’t have a clue about nutrition. They’re very good bluffers and if you weren’t very confident and didn’t push them, you’d just automatically assume that they knew what they were talking about...I like to have that internal drive to actually stay on top of things, literature-wise, to reinforce why I am the expert and that’s why they should refer things to me and to have the confidence to actually rip up them when they say the incorrect thing. (Theresa, I2)

There were differences seen between less and more experienced participants as to perceptions of power attributed to medical practitioners. The less experienced participants tended to attribute power to senior medical practitioners and express a degree of intimidation that could be present within interactions. Confidence in their role within the MDT was a contributing factor to this sense of intimidation (Chapter 7, section 7.7). In the following quote, Mary shared that despite her 5 years of acute care experience...

*I still get a bit nervous talking to big consultants. (Mary, I1)*

The doctor-dietitian relationship was highly influential in the participants’ CDM. Participants perceived that medical practitioners had overall power to accept or reject their advice, approve changes to nutrition interventions and have the final say about patient care. The participants’ decision making, therefore, was shaped by the repeated interactions that occurred for the purposes of patient care, with both internalisation, acceptance and resistance of this dominant form of power.

5.2.3 Nurse

All participants indicated they engaged in frequent interactions with the nursing staff who were caring for the same patients they were. This interaction, for the most part, was described as pragmatic where the participants had power to ask the nurses to perform certain tasks but also depended on the nurse to perform these tasks adequately. Participants described an interdependent relationship with nurses where they relied on nurses for information about the patient but also needed to convey information about the patient to the nurses. Overall, participants believed that nurses did not have the same degree of power to influence their CDM
as medical practitioners. However, through discussion about memorable patient scenarios it was clear that in many instances, nurses were valued and necessary for various decisions about patient nutrition care plans.

Participants relied on nurses to be able to accurately and appropriately carry out tasks associated with certain nutrition interventions in order to assist achieve patient care goals. Examples provided by participants included monitoring and collecting dietary intake information during admission and administering oral supplements. These were tasks dietitians are trained and skilled to do yet had limited time to complete. Other tasks participants relied upon nurses to do were beyond the accepted role of a dietitian such as administering nutrition support such as enteral and parenteral nutrition, collecting bodily fluid volumes and administering micronutrients. This interdependence on providing nutritional care for patients between participants and nurses was evident in Sarah’s example of preparing a patient to go home with a feeding tube. Sarah relied upon the nurse to train the patient in the use of the feeding tube, where Sarah felt her role was to initiate and facilitate the process.

*Being a new PEG, just sort of getting him trained up on that and on the ward all the nurses do that kind of thing. We facilitate but most of the time the nurses train the water flushes. (Sarah, I1)*

The interdependent nature of the relationship with nursing staff was also seen to influence what participants decided in relation to nutrition intervention recommendations. In the following quote, Sally provides an example of the power some nurses had due to what Sally has come to believe about the competence of some nurses to implement tasks accurately and effectively. Sally needed nurses to administer an additional supplement via the feeding tube. However, she was aware of how additional tasks were competing with the numerous other tasks that nurses were already needing to complete for patient care. She had learned in her ward that some nurses were reluctant to adhere consistently to her recommendations and therefore adversely influenced the adequacy of the nutrition provision.
... my decision might be limited by the competency of the nursing staff who might be carrying out the plan, which sounds a bit silly but it is something that might come to play. E.g. I would like to have protein supplementation for my patients in ICU; however, the decision to go ahead with that is limited by the likely compliance or attitude of the nursing staff in extra tasks that they'll need to acquire. (Sally, I1)

Participants used their knowledge of what is a priority to accept or reject referrals from a nurse. This decision depended on the dietitian’s perceived appropriateness of the referral. In some instances, the nurse was instructed by a medical practitioner to refer to the dietitian but in some examples, participants indicated that nurses generated the referral themselves. Participants also identified the nuanced nature of the power of nursing staff to influence referrals. For example, nurse seniority affected the degree of influence on referrals. Theresa shared how the renal services manager seemed to have a different ideology about the role of the dietitian thinking that Theresa was only needed to see complex patients and that nurses completed most of the nutrition education. Theresa had issues about how nurses decided on what is complex and found this use of power by a senior nurse to be obstructive to good patient care. Theresa also provided an example of how she felt that inadequate knowledge of even senior nurses about nutrition and the dietitian’s role could increase the number of inappropriate referrals. Theresa then had to decide whether to accept or reject these referrals.

The nursing staff play a big role because...they'll flag appropriate patients for you. Alternatively, I've got a beautiful NUM but she hasn't got a clue about... what would be a priority patient for me. She refers lots of patients my way but a lot of them are not necessarily a priority. (Theresa, I1)

Referrals received from nursing staff were often considered less influential than those received from medical practitioners. The following quote provides insight into how Melissa perceived and responded to a nursing generated referral which contrasted with her explanation of how she would often prioritise acting on a referral from a medical practitioner. Melissa’s view is consistent with how participants consistently placed a high value on the relationship between themselves and the medical practitioner often above that of their relationship with the nurse. This might mean that despite
the medical practitioner’s referral being of a lower priority, participants may place value on attending to it sooner or more thoroughly relative to a nursing referral. With nursing referrals, some participants made decisions to assign less priority to certain referrals made by a nurse. For example, instead of fulfilling the referral with a full nutrition assessment, the dietitian instead makes a request for the nurse to complete a patient food record. This allows for data gathering that the dietitian can revisit at a later time whilst attending to other referrals. Melissa offered an example as per below.

But if it’s been, say, a nursing referral and you check out all the little bits and pieces, I’ll go... I’ll say to them, look, I’ve had this referral but I checked it out, I don’t think it’s valid but what about we do some food records just to see what’s going on? (Melissa, I1)

Participants generally viewed nursing staff as valid and useful members of the multidisciplinary team that have distinct roles in the care of patients. However, within the multidisciplinary team, nursing roles were still strongly influenced by the power that medical practitioners had in the acute care setting to oversee patient care. There were certain examples that some participants provided where nursing staff were key informants for other members of the MDT including the dietitian. Given the close proximity of the nurse to the patient 24hrs a day compared with the shorter timeframes the medical practitioner or the dietitian spent with patients, participants relied upon the knowledge nurses gained all the time about the patient’s current and predicted health status. In the following quote, Penny provided an example of a regular meeting that occurred in the ICU to discuss individual patient cases in order to have a more coordinated approach to working towards discharging the patient. Nurses had a dominant role in informing other health professionals in this meeting. However, other participants provided examples of similar meetings where it was the medical practitioner that steered the meeting and controlled the agenda.

We have a multidisciplinary team meeting once a week and that actually works really well and its nurse driven. The nurses present the case and the doctors sit in and comment on the case and then everyone else is there. And I do love the atmosphere of those meetings. I think the round should be a bit more like that. It would be nice. (Penny, I1)
In conclusion, the nature of the participants’ interaction with nursing staff was predominately pragmatic with interdependence between dietitian and nurses necessary for the nutritional care of patients. Participants relied on nurses to execute certain nutrition related interventions as well as being a source of patient information that in turn influenced decision making about care plans. Medical practitioners often conferred power to nurses for referrals as well as nurses autonomously generating referrals to request participants to see certain patients. Participants clearly indicated they had power to accept or reject referrals from nursing staff and approached this interaction differently to receiving a referral from a medical practitioner.

5.2.4 Allied health
Participants identified themselves as being one of the various allied health professionals that constituted the MDT in the acute care setting. Other key allied health professional members of the MDT included speech pathologists and social workers. Participants were also aware of other allied health professionals who had distinct and important roles in overall patient care with whom participants needed to engage with depending on the patient circumstances. In the interviews, individual allied health professionals were mostly referred to in passing when explaining what actions participants took for patient care as opposed to as a key influence on decision making. In most circumstances, participants didn’t perceive that other allied health professionals as team members held any power over dietitians. Examples of interactions with other specific allied health professionals were infrequent and rarely the focus of explaining CDM. This is in stark contrast to participant relations with medical practitioners.

Understanding of the participants’ relationship with other allied health professionals was helped by illuminating how a dietitian’s role intersects with allied health professionals’ roles. The power interplay in the following example Alice provided highlights the complex nature of how power is used by health professionals with respect to each other to achieve optimum patient care. In the following example, the key players are the Speech Pathologist, Alice and the medical practitioner, noting the silent player, the
patient for whom all this concern. The patient had liver failure and was quite malnourished and drowsy due to the severity of his condition. In this instance, the ‘team’ refers to the gastroenterology team made up of medical practitioners of different rankings.

The speech pathologist had put in a puree and extremely thickened fluids which he wasn't eating very well. At this point, I had suggested Enteral feeding or NG feeding for this particular patient because I felt he wasn't meeting his requirements and predicted that he wasn't going to be able to meet his nutritional requirements. So when I suggested this to the team, because he has a history of such noncompliance to the treatment of his cirrhosis, they didn't really want to go down that track. They thought that he would just remove the tube, so they just wanted me to provide supplements. Then I suggested, 'Well, this is the actual case. I can't really give him any supplements. Do you want to take the risk and give him that or do you want to keep him on the extremely thickened fluids?' Then the doctors overrode the speech pathologist and put him on just a normal fluid diet and then so once his bloods had corrected, I commenced him on oral supplements and I think it was just one or two while he's still re-feeding. (Alice, 11)

Alice’s example highlights how a Speech Pathologist can influence what diet a patient is allowed and therefore what nutrition interventions are feasible but how the medical practitioner can override both the dietitian and the speech pathologist. Kate also communicated the distinct power that a Speech Pathologist has in her clinical area of head and neck surgery. She attributed specific power that a speech pathologist had in dictating certain aspects of patient care regarding diet, speech and breathing apparatus for which the rest of the MDT takes heed.

Participants described how dietitians in the acute care setting were commonly grouped and associated with other allied health professionals as having a common supportive role in the medical care of patients. Therefore, at times, participants were involved in collective actions concerning patient care in the acute care setting and therefore assigned or used collective power to influence other professionals’ clinical decisions. In the following quote, Sarah explained the outcome of a complex patient scenario investigation where a patient was discharged prematurely in Sarah’s opinion and was subsequently readmitted with complications. During the original patient admission, Sarah’s interaction with the interns and registrars, the less powerful medical practitioners of the medical team, did not result in the
actions she thought was best for the patient. As a result of the poor patient outcome, a senior nurse assigned power to all allied health professionals through the provision of direct mobile phone access to the consultant medical practitioner who could then be better informed by allied health professionals and make decisions accordingly.

*Because that was escalated the surgical NUM, not just of that ward but the whole surgery, said that in future he [Nurse Unit Manager] gives permission for all allied health to directly contact consultants if you’re not happy with the registrar’s or intern’s answers. (Sarah, I1)*

Participants expressed the important contribution of their presence and participation in pragmatic and collegial relationships with other allied health professionals in the MDT to their decision making. Allied health professionals, particularly speech pathologists at times had power to influence dietitians’ decision making. It was clear that like dietitians, decision making of other allied health professionals was also superseded by the medical practitioners.

### 5.2.5 The varied nature of dietitian autonomy

The level of power assigned by and attributed to medical practitioners, nursing staff and other allied health professionals contributed to the contextual nature of and largely limited dietitian autonomy in CDM. Questions in the interviews about how participants perceived themselves as decision makers illuminated notions of control and autonomy. A key finding from this research was that dietitians’ autonomy in decision-making was highly dependent on a range of contextual factors including the medical practitioners, the clinical speciality, the nature of the decision and the circumstances of the patient scenario.

The following group discussion within the reference focus group illustrates the highly varied degree of autonomy participants believed they had in the acute care setting after being invited to describe how they go about deciding what autonomy they may have in any given scenario. All participants in the interviews and focus group shared how they proactively tried to increase their decision making autonomy. However, there were differences amongst
participants as to how proactive and resilient each individual dietitian felt due to their experience and confidence levels.

Penny: Sometimes you’re actually told explicitly by the doctor, ‘You don’t have to worry about that. Why don’t you just do it yourself? You should find out how to chart that yourself. I’ll sign off on anything you find out’… So you actually are getting permission from the person who would normally sign off to do that yourself. Otherwise, sometimes it’s just pushing the boundary, seeing if you can get the nurse to just put the feed on without something happening.

Belinda: I guess there’s a lot around your experience as well, like the experience you have in talking to and knowing about the team and the relationship. They all impact on how much you can push the boundaries.

Penny: If you’ve been in the team a long time, the nurse is much more likely to just turn the feed on because you said because they have seen you chart it before. They figure they’ll just say you told them to and they won’t get in trouble. But if you were new and they didn’t know you, they probably are less likely to just do what you said.

Belinda: But that’s the interesting part because it’s probably going back to your clinical judgement in your previous experience. It reflects back on your experience of how you interact with this group of people.

Penny: And your confidence.

Sally: It really depends on the individual nurse, the individual doctor… you have to have a perfect alignment of the good nurse and good doctor to just go ahead and do things without their permission.

Penny: I like that, the perfect alignment. It’s exactly right. That’s such a perfect description.

Sally: But then there’s certain situations where you know from your professional experience that certain doctors will want a specific thing and out of professional courtesy you run everything by them.

Sarah: Also in regard to in your clinical judgement what the final recommendation should be and when, is quite different [to the medical practitioners’]. You are going to need to pick your battles. So, for example, if you’ve got your sort of power within a certain team, you might push for something a whole lot more as opposed to if you’re just visiting one ward to see one patient within a team that you don’t even know. Are you going to push a whole lot of your recommendations … Or is that going to be more detrimental to your power in the future within that team or to the dietitian who normally looks after patients within that team?

The degree of autonomy a participant had was generally conveyed as being dependent on the degree to which the dietitian was responsible for the patient outcomes attributed to that decision. For example, decisions that related to interventions such as enteral or parenteral feeding that involved patient risk for both insertion of tubes and lines and provision of nutrients
via that means could potentially impact on the overall medical status of the patient. Given the medical practitioner was responsible for the medical outcomes of the patient, the dietitian had less autonomy in situations where nutrition interventions involved more patient risk or influenced other active medical therapies. Many participants conveyed this relationship through examples of how the degree of autonomy they had in decision making depended on the nature of the decision to be made. Despite some variation, participants shared a common understanding that determining autonomy for a particular decision involved understanding to what degree they were responsible for the outcome of that decision. Penny’s articulation of the nature of her autonomy in her ICU captures this in the following quote.

Ultimately the responsibility for the patient’s outcome does not sit with us in the same explicit way that it does the intensivist who’s in charge that week. But I know that this varies between different ICU’s whether you could just say to the nurse ‘Change him to this feed at this rate’ or whether you say ‘Recommend if team is happy changing to this other formula’ that I recommend as being more appropriate? and certainly in my ICU in my position I am just going up to the nurse and saying ‘I brought you a bottle of this to swap to’ and they’re not going ‘Oh, who said you could do that?’, so in that sense I’m not just recommending stuff, I’m actually changing what is happening with patient care...And so I’m a decision maker in that respect, but in terms of the whole team and how everyone fits together, it’s still quite a peripheral field in which to be making decisions...The extent to which we’re responsible for the outcome is the extent to which we can be a decision maker in a particular setting...that’s what profession is. It's responsibility. And your autonomy is your responsibility. (Penny, I2)

Participants clarified that complete autonomy was never their goal nor a reality for CDM in the acute care setting. Participants placed importance in the process of considering the needs, values and preferences of other members of the MDT and the patient when making decisions about patient care. Using clinical judgement to make decisions facilitated this process of considering the degree of autonomy the participant had for a particular decision while weighing up the contribution of evidence and opinions of the MDT and patient. While there were instances where participants communicated disagreement about the limited autonomy they may have in certain situations, generally participants sought to use their power to collaborate. The following quote illustrates the common view of how dietitian autonomy for decision making is dependent on multiple variables.
including the opinions of others. Lila sheds light on the power she has assigned to other health professionals, particularly medical practitioners as well as the weight she placed on using evidence relative to this in her decision making approach. It is important to note that she lastly mentioned the role that the patient has in agreeing to care plan decisions.

*The evidence is still the base, definitely, for where I come up with my decisions but then ultimately it will be a team based decision, based on everyone else's opinions and what they're all trying to achieve as well and how that's going to fit in, especially the surgeon. Then, yeah, they're probably the ... and the patient of course as well and what they're going to agree to and be happy with.* (Lila, I1)

Further complicating dietitian autonomy for decision making was its dynamic nature. This was evidenced when participants changed roles or work locations and their autonomy in decision making changed for the same types of decisions. This was primarily due to the change to the medical practitioners that the participants now worked with. This presented a source of frustration for the participants and highlighted the degree of power medical practitioners often have to assign greater or lesser autonomy to dietitians in their decision making. Theresa illustrated this finding in the following quote through her description of a period in her career where she was rotated to a peripheral acute hospital. This change was after she had spent a considerable amount of time building supportive relationships with the medical practitioners in her area of speciality at a larger hospital which had resulted in greater autonomy in her decision making. She expressed feelings of extreme frustration as a result of the difference.

*I hated it because all the things I previously had some control over I felt there was no respect accorded to what you did.* (Theresa, I2)

Participants described how they developed an awareness of the fluid nature of their decision making autonomy depending on the type of decision and the medical practitioner. Over time, through experience in a particular clinical specialty and MDT participants indicated they better understood the types of decisions they needed permission for and those that didn’t require permission. In the following quote Kate illuminated the subjective and dynamic nature of the participants’ autonomy in the acute care setting.
In my setting it’s more to do with the relationship with the team...I know the staff consultant, I can make this decision or with other consultants, I will think that they want me to consult them or in other scenarios I will need to ask their permission to do things. I will find that the junior dietitians struggle with knowing what they are allowed to do and what they are allowed to change without talking to the doctors and where to draw that line because it is quite grey and I’ve just had more experience in it and I know the clinicians better to know what I can do without their input in things. So there is a lot of greyness in terms of where you draw the line in what you are allowed to do and what you are allowed to change and how much you interact with the other members of the team and how much you can tell them and what you recommend and I think that’s quite subjective. (Kate, I2)

Participant autonomy for certain decisions varied between clinical specialties. This was due to both the variation of the nutrition knowledge held by particular medical practitioners and the nature of the decisions needed for patient care in that particular speciality. Table 5.2 provides examples of how individual participants experienced differences in their decision making autonomy depending on the clinical speciality or the nature of the patient scenario.
### Table 5.2 Factors contributing to variance in participant autonomy in decision making

<table>
<thead>
<tr>
<th>Element of variance</th>
<th>Participant Exemplars</th>
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<tbody>
<tr>
<td>Surgical specialties vs non-surgical specialties</td>
<td><em>For example, in the surgical area, medical practitioners are a lot more aware of nutritional recommendations and diet progression postop but in some other area my decisions may not be as important, and they may listen to us, but they may not always go ahead with what we recommend. Yeah, so I think it varies with the area. (Mary, I2)</em></td>
</tr>
<tr>
<td>ICU vs Head and Neck Surgery on the ward</td>
<td><em>I think outside of ICU the knowledge of the team in terms of nutrition support is much poorer and they are generally happier to be guided by myself as a dietitian as the expert in the field. (Kate, I2)</em></td>
</tr>
<tr>
<td>Simple versus complex patient scenarios.</td>
<td><em>After our last session, it made me think about it when I'm actually seeing patients, what sort of control I had. I found that in the simple cases, yes, I would decide the goal rate, what the feed was for simple little things. The nurses would follow that and there’d be no real dramas. However, in the more complex cases obviously my role would be more so, I guess, as somebody to check that all the minor details had been considered in their nutrition care that somebody who is specialised in ICU nutrition could only tell. (Sally, I2)</em></td>
</tr>
<tr>
<td>Degree of dietitian familiarity with MDT</td>
<td><em>You can tell when somebody is covering you that they don’t really want to get involved too much or push any boundaries or make any outrageous decisions. They just fly under the radar and it might be the same when you go on to a ward. So that might also influence how you decide on things, what your position is in that environment. And it’s different for different situations within the same clinician, whether they’re covering or whether you’re in your own normal environment but you don’t have perfect alignment and you’ve got that one nurse who always checks with the doctor or you’ve got the intensivist who never does feeding or ... something is not aligned and then your power is different. (Sarah, Focus Group)</em></td>
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Decision making autonomy was also influenced by the dietitian’s experience and knowledge. This was most evident amongst the participants who were most experienced and had specialised in a particular clinical area for a period of time. The highly developed clinical judgement and knowledge that the specialist participants had developed over time increased
their confidence in their own CDM to achieve safe and positive outcomes for their patients. Even those participants with less experience or not yet specialising indicated that with more experience they developed greater confidence to take more initiative to seek greater responsibility with decision making. In the following quote, Lila shared how experience and subsequent confidence facilitated her ability to assert her power to influence a medical practitioner’s decision making.

*I think it also probably comes with experience, in that seeing lots of similar cases. You might become more of a decision maker, probably through more confidence or seeing a pattern or just your experience with those patients, so you know if someone's had a hemicolectomy, they’re likely to be on diet by day X. By day X I’m saying to the surgeon, Hey, why have you still got them on nourishing fluids? Can I progress and bowels are open?* (Lila, I2)

Melissa unpacked the factors underpinning her decision making a little more and included in addition to being experienced the appearance of being experienced as well as the approach she used when she moved into a new clinical area.

*I don’t know whether it’s an age thing and they’re sort of my age and they respect the age and experience, or just my approach to them, but they don’t very often question what I want to do.* (Melissa, I1)

This also highlights an important role that perceived trust and credibility has in how participants interact with the medical practitioner which is discussed further in Section 5.4.

In summary, the nature of the relationship between dietitians and the MDT is complex and fluid. It is dependent on unique elements of power that differ between medical practitioner, nurses and other allied health professionals. The social nature of the participant’s decision making was strongly characterised by dominance of medical practitioner power over decisions concerning nutrition interventions. Health professionals within the MDT were both a source of information about the patient as well as necessary for carrying out dietitian interventions, particularly nurses. Participants had varying degrees of autonomy in decision making which depending on the nature of the decision, the relationship with individual medical practitioners and nurses and the clinical specialty. The highly social nature of dietitian
CDM prompted a constant need to have awareness of their self with respect to others and make decisions about how to respond to the way medical practitioners assert their power over dietitian decision making for patient interventions.

5.3 THE DIETITIAN AND THE PATIENT

The patient was central to the participants’ purpose for decision making and yet the main interaction was not always with the patient for dietetic practice in the acute care setting. While in this study I did not directly observe patient and dietitian interactions, discussions about memorable patient scenarios provided insight into the nature of the relationship participants had with patients. Participants described ‘talking’ or ‘discussing’ with the patient which predominately occurred during the interaction required for undertaking a nutrition assessment with the patient. At times when the patient or the dietitian deemed valuable, the patient was represented or joined by a carer or family member. All participants conveyed the motivation was for patient care and wherever possible, decisions were made with the patient. The reference focus group reinforced the view that the patient is the essential person within all the interpersonal interactions that occur within decision making processes.

I want to highlight the patient because for me that’s the central thing and your clinical decision making about the case can happen without a nurse or a doctor being involved but it can’t happen without a patient. (Penny, Focus Group)

Patients’ roles in decision making, including the degree to which patients could directly influence decisions concerning their own care, varied between participants. This difference was most prominent between participants who cared for patients in clinical specialties where a patient’s ability to communicate was quite limited. For most participants when a patient could not talk with the dietitian, power was assigned to family or carers to act on a patient’s behalf. However, in settings such as ICU, for Penny, Sally, Kate and Lila, even relating to patient family members was not appropriate at times. The following quote highlights some of the challenges acute care dietitians can have in relating to patients given how
their medical status can often limit a patient’s ability to engage with the dietitian.

It’s very difficult to get more information about the patient’s background because often they are... well, they are intubated and sedated or aren’t awake and so I can’t actually talk to them. Also, it’s often a rough time for the family and so if the family are there at the bedside, I’ll very delicately talk to them about the patient’s previous nutrition habits. I won’t give them a call to get the details because they’re usually not in the best frame of mind to be getting phone call from the ICU. (Sally, 11)

For participants not caring for critically ill patients, there was more reference to direct interaction with patients and these participants generally believed that the patient should have the power to make decisions with the dietitian. This was evidenced by both examples of direct interactions or through statements such as how Sarah identified the wishes of the patient as an influence in her CDM.

A lot of the time you’re not just the decision maker because a lot of it lies with what the patient or the client themselves want to do. They need to make the decision as well. (Sarah, 12)

In reality, the nature of these interactions between participants and patients changed frequently across the admission due to changes in patients’ health status and subsequent communication ability. This meant that participants needed to constantly choose the most appropriate approach when relating to patients always in the best interest of the patient. Further complicating these interactions was patients’ ability to decline assessment and or suggested interventions due to the requirement for dietitians to always seek patients’ informed consent before proceeding. The dynamic nature of patient interactions was commonly experienced by Sally who worked in the ICU. As an example, improvement in patients’ condition resulted in increased alertness and the improved ability to communicate with the dietitian. In the following quote Sally shares how she perceived this change to patient communication and gives an example of how this impacts on her decision making process.
It’s almost a different brain that I have to use with those patients. Obviously, it’s still trying to achieve the same goal of optimising nutrition but, the human element makes me switch over to a whole different ... it’s like there’s no flow chart because I just have to go with whatever the patient is saying... Sometimes they’re awake and can actually tell me what’s going on, so they might be able to tell me something isn’t going well or something might suit them better...for example, somebody who has just started eating but still has nasogastric feeds might tell me, I might prefer to have the feeds just at night or just during the day... (Sally, I1)

There were times where participants decided to override patient choice for no intervention and used their power to provide care. As an example, Alice shared how the nature of the relationship needed during the admission of patients with alcoholic liver disease wasn’t always clear. There were unique situations where participants made decisions about the appropriateness in offering advice or education to patients and decided not to proceed. For example, Alice often predicted a degree of compliance patients may have with a given intervention to influence her decision making around engaging with patients.

... in the back of my mind, if I’m recommending something, I’m questioning whether the patient is going to be compliant to that... For discharge planning, I never gave him education to go home or I never gave him continuous supplements at home because obviously he discharged himself and I couldn’t do that. I didn’t do that pre-emptively because I guess I didn’t think he was going to do that anyway. I think I’ve learnt over time to know which patients to work hard on and which patients I might be wasting my time. An indication is if they are saying to me that they want to stop alcohol. I would do everything I can to assist them to improve their nutrition but obviously if someone ... for this example he was still verbally abusive and still planning to drink. Then I just didn’t see the point in making that recommendation. (Alice, I1)

In summary, in the acute care setting, CDM was undertaken for the patient but not necessarily with the patient by most participants. Interactions with patients were fluid in nature and strongly influenced by the ability of the patient to communicate and engage with the dietitian, often determined by type or severity of illness. The relationship with a patient often included interactions with the patient’s family and or carer to support gaining or providing understanding about the patient’s nutritional issues.

5.4 BUILDING SUPPORTIVE RELATIONSHIPS

In response to the nature of power in the various interaction’s participants engaged in for CDM, investing time and effort in building and maintaining
supportive relationships was considered of high importance. Participants shared how it was a priority to build and maintain supportive relationships with members of the MDT. Common approaches used by participants were to engage with MDT members in a way that promoted the development of understanding of the other person and promoted the development of a dietitian’s positive reputation.

5.4.1 Supportive relationships as a priority for CDM

The relationships that participants most prioritised were those between themselves, the medical team, and the individual medical practitioners within this team. The participants conveyed a shared sentiment that more supportive doctor-dietitian relationships led to greater mutual respect and consequently increased participant influence on medical practitioner decision making about nutritional issues. The strength of the participants’ relationships was considered to subsequently influence efforts to advocate, negotiate and consult with medical practitioners concerning patient care decisions.

*I think it goes back to the relationship that you have with the rest of the team members as well, and if you are quite distant, I think it's hard to then be able to approach them and stand up for the patient’s nutritional needs or make a recommendation.* (Mary, I2)

The interpersonal skills needed for relationship building were considered by the participants to be trademarks of an expert dietitian. Strategic use of interpersonal skills when building supportive relationships were thought by many of the participants to result in influence on medical practitioner decision making that then positively impacted patient outcomes. Alice’s quote is representative of the participants’ views more generally in that an expert in acute care dietetics has the clinical skills, knowledge and experience but highlights that it is…

*Their [expert dietitian] approach to communication, professionalism, language, and relationship with the medical staff that really sets them apart.* (Alice, I2)

This skill of being able to engage in influential interactions was also a mark of professional artistry which is examined further in Section 7.8.
In addition to developing relationships with the MDT, some participants indicated that they made deliberate decisions to focus on building relationships with patients in order to optimise care for them. Situations where the participant thought the patient would be admitted or continue to require their services increased the importance participants placed on building supportive relationships. For example, Theresa explained in the following quote how she identified the importance of investing in relationship building with a particular patient, predicting an extended period of care based on information found in the assessment of the medical practitioners. The irritation she referred to was related to the challenges Theresa perceived in the patient’s social and emotional capabilities for interaction.

> Once the team had made their assessment about what the plan was for this person, I knew it was going to be a case of establishing a long-term relationship with this patient who really irritates me but you have to put that to the side. (Theresa, I1)

The participants who made minimal inference about building relationships with patients drew upon patient scenarios that were very straightforward or that were complex and involved patients who couldn’t communicate. Therefore, this could explain why there wasn’t a focus by most participants on building relationships with patients in the acute care setting. Also, relationships with health professionals continued over much longer time spans relative to that with individual patients for most of the participants, except for Theresa who also related to patients with chronic renal failure as outpatients over months to years.

### 5.4.2 Gaining understanding

The construction of influential relationships with other health professionals or patients was built on understanding of the people with whom the participants interacted. This involved intentional efforts to develop understanding of patient perspectives and values as well as learning about the opinions and personalities of medical practitioners through their interactions themselves.
Some participants articulated how they developed an understanding of the consultant medical practitioners they interacted with on a regular basis, isolating elements of the medical practitioner’s personality or communication style. Knowledge of how a particular medical practitioner preferred to interact with others was used to inform decisions about how the participants responded in circumstances where the medical practitioners asserted their power for a particular decision. In the following quotes, Lila and Melissa illustrate their understanding of how the surgeons they worked with tended to interact, indicating a degree of interpretation participants undertook to direct responding to the surgeon.

*He's short and sharp. He is a surgeon, so knowing how he is. He's very quiet and gentle.* (Lila, I1)

Melissa also illuminates the power that this surgeon asserts when he communicates.

*I thought knowing what surgeons can be like, they can be…you know if they say something's black then, you know, often it's black whether it is or it isn't.* (Melissa, I1)

Knowing how medical teams work in the acute care setting was foundational to participants gaining an understanding that aided in building relationships with medical practitioners. Participants experienced variation in how different types of medical teams functioned and approached making decisions for patient care. Participants considered knowledge of variances as strategic for being influential with the different medical practitioners. This knowledge formed a type of contextual knowledge gained through experience which is discussed further in Chapter 6. In the following quote, Sarah alluded to the notion of a ‘game’ in the sense that there were rules to learn, people to understand that then informed strategies about how to achieve influential outcomes in decision making.

*I think when you learn how teams work and you learn how to play the game and get your recommendations actually able to reach the patient level …I think you learn the different strategies to actually get your decisions executed.* (Sarah, I2)
The capability underpinning the dietitians’ communication and supportive relationship building approaches was not actively developed through training for all participants. Many participants developed effective relationships with medical practitioners and other members of the MDT though working in the acute care setting itself and reflecting on those experiences. Making effort to gain understanding about another team member, particularly those with more power was important, but as Penny also shared, it was just as important to make sure that you were showing the other person that you understood their views, essentially legitimising their position of power.

...you’re showing you’re committed to that working relationship which is certainly something I was completely oblivious of in the beginning of my career. I would have every battle, whether it was fruitless or not, and it took a lot of maturity to realise that the relationship with that person, that you have to get them to do something for you tomorrow and next week and next month is more valuable than just making yourself be right today...I just had no idea about that at the beginning... showing that you can compromise or that you’re listening to them and you’ve thought about what their priorities are which may be completely different from yours. So showing that you get that, I think, that is what makes them trust you and then you do get more autonomy because they know that you’re not just going to go off and do something that they disagree with. (Penny, Focus Group)

Some participants were explicit about how they approached building relationships with patients that also included intentionally seeking understanding about a patient’s perspectives and values. All participants sought information about a patient’s biopsychosocial circumstances as part of a nutrition assessment. However, only Belinda and Theresa offered examples of an approach that was characterised by a highly empathetic style of interaction that focused on understanding the patient. Theresa, in particular, expressed strong values around spending time building rapport with patients through active listening and providing empathy. Given that the patients she cared for had a chronic condition, they usually presented to hospital frequently or she saw them in an outpatient clinic intermittently. Theresa made decisions to use these patient contact occasions to learn about any psychosocial concerns concerning the specific health or nutrition issues. Theresa felt that this, in turn, helped build a relationship where the patient
felt respected and understood providing a good foundation for her to help
the patient with their nutritional issues. In the following quote, Theresa
described a specific example of how she interacted with patients in order to
learn how the diagnosis of renal disease affected them emotionally and
physically. It is a clear example of learning the values and preferences of
her patients through empathy and listening.

Sometimes the questions that I ask I can see they’re in this state of
shellshock and I go ‘Tell me about your journey. What’s happened? How
did you come to have renal failure?’ They have never been given that
opportunity before to just debrief about it and that’s why they cry.
(Theresa, I1)

5.4.3 Building rapport, establishing reputation

Building rapport and establishing a positive reputation was considered by
participants as an important part of forming influential relationships within
the MDT. Making decisions to deliberately interact in a way that created
positive perspectives on the dietitians’ role in patient care involved
proactively building rapport with and earning respect from MDT members
and particularly with medical practitioners.

Developing and maintaining good rapport with medical practitioners was
seen as an important part of creating a positive reputation. This involved
understanding and responding to the needs and requests of medical
practitioners concerning patients under their care. This often meant that
participants prioritised requests from members of the medical team as long
as it didn’t compromise patient safety or quality of care. Theresa’s
consideration of how the medical team perceived her role and value within
the larger MDT indicated she assigned a degree of power to the medical
practitioner and significant weight to her reputation concerning patient care.

There are other people around the place that politically you want to see
their referrals first. They will influence my practice. (Theresa, I1)

Similarly, Alice shared how a request or a call from a senior member of the
medical team she worked with may strongly inform decision making about
referrals. Alice revealed there was value in agreeing to see patients sooner
rather than later when senior doctors in her clinical area referred to her. This
was part of an ongoing decision she made to build and maintain a positive
reputation with the referrer. Receiving a referral directly from a senior doctor was then compared to getting an electronic referral which often didn’t indicate clearly who was requesting her involvement in a particular patient’s care. The following quote highlights her thoughts around this decision which was made using clinical judgement given she weighed up the balance of maintaining the relationship with medical practitioners and needs and safety of patients. She anticipated that by favouring the requests from a medical practitioner, she would develop and maintain rapport.

*I guess part of it is to keep a good relationship. It sounds a bit bad but I guess it’s just, I think, to demonstrate to them your role and your worth and keeping a good rapport I think with medical practitioners. (Alice, I1)*

Establishing and maintaining a good rapport with the nursing staff participants regularly worked with was also considered important as part of the larger goal of keeping a positive reputation within the MDT. While overall, this relationship with nursing staff was not the dominant one discussed by participants in the interviews, a couple of the participants who specialised placed importance on influencing how a nurse perceives them. Given the nature of the relationship illuminated in section 5.2.2, it was clear that participants felt that having a good rapport with nursing staff assisted when dietitians had to involve nurses in implementation of nutrition care plans. In the following quote, Lila highlighted this in her example of how she decided to handle a situation where the nurse had forgotten to undertake and record a routine observation important for parenteral nutrition (PN). Lila engaged in a positive and constructive communication style so as to preserve the relationships she had built with the nurse.

*Maintaining the relationships or dealing with people one on one on the ward. E.g. my peritonecology that’s on PN and the nurse had forgotten and hadn’t done a blood sugar today and obviously that’s quite important to keep an eye on. She was quite defensive, preserving that relationship by saying, ‘Oh, I just noticed it hasn’t been done yet today...Was that something you were planning to do later?’ She was like, ‘Yeah, we were just going to do random times.’ There weren’t any set times but all the other days had been like 6 am, 6 pm, a set time... I know what I need to achieve and I need to know what his blood sugar level is to see how this PN is going but that's more important, is to not put them offside. (Lila, I2)*
Gaining respect from the medical practitioners they worked with was considered very important by participants. Participants sought respect for their professional contribution to patient care including their knowledge and expertise and willingness to participate in improving patient outcomes. Melissa talked about gaining respect from the medical team during her long period as a renal specialist and contrasted this with working in her new role, particularly with new teams in a quick patient turnover medical assessment unit. Melissa found that the medical team in her new role were open to her advice, she thought because of her ‘mature face’ but expressed how it isn’t the same as the feeling she was used to having that they listened because you’ve earned their respect. Instead, now she has to earn their respect by how she communicates her decision making about recommended interventions. Theresa agreed and went even further, ranking the level of importance of respect gained by the seniority of who is affording her respect. In the following example, Theresa shared her positive feelings about the reputation she has established with the director of the Renal Service. This supported the shared sense that participants deliberately sought to develop this respect from others, and valued it highly when gained despite the perception of power differences between dietitians and medical practitioners.

It's so nice to have that sort of feedback that whatever the other doctors think the director thinks we're hot shit and that's great and that helps your confidence to know that she's always thinking about you and she'll often flick stuff to me for comment that I will reply. 'Thanks for thinking of me', because I do think she does think we're great. There's this other level of frustration at having to work so far down the totem. (Theresa, 12)

Ongoing investment by dietitians in their relationship with the medical practitioners was more feasible for the participants who specialised and therefore spent continuous periods of time with the same medical consultants. This was particularly true for the experienced specialists, such as Theresa and Penny, who had been working in the same hospital and clinical area for at least 12 years. During this time, they had built supportive relationships but also made decisions about how to preserve the respect that was now part of these relationships. Maintaining the supportive and
respective nature of these relationships enhanced their degree of influence in medical practitioners’ decision making. In the following quote, Theresa gave an example of an outcome of effectively maintaining a supportive relationship over time. She described how it enabled successful advocacy on a broader set of issues, such as medication prescription, which sat outside of a dietitian’s traditional role.

*The longer you’re in a particular area it’s like the more you know the more you feel like you can have more of a say in a particular patient's case. It's often me suggesting to new registrars, ‘can we start an ACE inhibitor on this patient or whatever? Why aren't they on Lasix?’, that sort of thing. That's something you wouldn't do even if you were experienced but just moving into a new area. (Theresa, I1)*

A key challenge participants identified for maintaining a positive reputation with medical practitioners was when medical practitioners working in a clinical area or physical location change. Participants indicated that when medical practitioners changed, they needed to start over in establishing a reputation with the new staff. These staff changes could occur frequently so it directly impacted on how the participants approached advocating and negotiating with medical practitioners in order to influence their decision making. Despite a dietitian’s best effort at preserving this supportive relationship with known medical practitioners, they are not protected from what Penny termed ‘climate change’. She indicated that ICU is particularly vulnerable to change in senior medical staff which meant that there was a regular need to initiate gaining respect and building rapport with medical staff. In the following quote Penny reflected on how hard it can be for dietitians when senior medical practitioners change given the efforts required to establish a positive reputation with a medical practitioner in the first place.

*You only need maybe a couple of the intensivists in a small ICU to leave – and maybe they were the most supportive ones and be replaced by people who don't really value Allied Health and then the whole thing just becomes a waste of the dietitian even going there, because nobody listens to them. (Penny, I2)*

It was interesting to see how some participants measured the success of their efforts to establish positive reputations with particular medical practitioners.
Success was considered as when the medical practitioner conferred power onto the participants not just for decision making but for other professional tasks and roles such as education and research. As Lila shares, it was at times like a ‘give and take’ arrangement mainly through the exchange of time and effort. To ‘take’ and gain influence in certain decisions about patient care, participants saw the benefit in offering their time and effort in activities that benefit the other team members such as interprofessional learning and quality improvement activities.

I have a very good relationship with him in that he asks me to do presentations to his students... I feel when I can give him things, he is more willing to discuss things with me. It's about considering the whole team, especially the consultants. I do try very hard. I know if you can get them on board, which can be very, very difficult, after a while they just let you do what you want and trust what you're going to do and you can actually make a lot more change. (Lila, I1)

In summary, all participants made it clear that building rapport and maintaining a positive reputation with medical practitioners was essential in their role for patient care. Participants sought to accomplish this through gaining an understanding of the opinions, personalities and preferences of the medical practitioners with whom they worked. Being seen and heard as well as providing professional contributions to the learning and development of other MDT members was considered valuable in the process of building and maintaining supportive professional relationships. While building rapport with patients was identified in passing by various participants only a couple actually emphasised this as a focus of their professional interactions in the acute care setting.

5.5 ADVOCATING

Participants regularly made decisions to advocate on behalf of the patient on various aspects of health and nutrition related care plans. Advocating refers to the actions participants undertook to make their own or a patient’s voice heard concerning a patient’s health and wellbeing. The need for advocating was a consequence of the imbalance of power between the dietitian and the medical practitioner which characterised the nature of the relationship.
between the two health professionals. Some participants were explicit about the need for advocating for the nutrition of their patients with the medical practitioner and others described approaches they took to influence a medical practitioner’s decision making that resembled advocacy. Driving the advocacy that participants engaged in was the common goal of achieving better health and nutrition outcomes for patients. The ability to advocate effectively on behalf of the patient was considered an essential skill for being a dietitian in the acute care setting.

_As an acute care dietitian, you have to be able to negotiate plans and advocate for the patient._ (Sally, I1)

Advocating for patients involved a process of identifying when it was necessary, who best to advocate to and what communication approach to use to increase the probability of success. Having a supportive relationship with the medical practitioner was considered essential for effectively advocating for the nutritional issues of patients in the acute care setting.

### 5.5.1 Reasons for patient advocacy

The common reasons underpinning participants’ decisions to advocate for patients with medical practitioners included addressing perceived knowledge gaps around patients’ nutritional needs and dietitians’ role in addressing these. Identifying when patient advocacy was needed was most influenced by the characteristics of the patient scenario. Three main purposes for advocating emerged which included seeking agreement for certain nutrition interventions, requesting action be taken or tasks to be done that sat outside of a dietitian’s scope of practice, and for increasing awareness of patient current issues or risks. In essence this was how the participants used their power to alert the medical practitioner that action was needed to help a patient. The three key reasons participants advocate on behalf of patients are summarised with evidence in the form of participant quotes and examples in Table 5.3.
Table 5.3  Reasons for participants deciding to advocate on behalf of the patient

<table>
<thead>
<tr>
<th>Reason</th>
<th>Participant Exemplars</th>
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| Seeking agreement for certain nutrition intervention recommendations    | At this point, I had suggested Enteral feeding or NG feeding for this particular patient because I felt he wasn’t meeting his requirements and predicted that he wasn’t going to be able to meet his nutritional requirements during this admission. (Alice, I1)  
It’s not a decision of mine but trying to point out things to the surgeon to allow me to allow them to drink. (Lila, I1) |
| Requesting action be taken or tasks be done outside of a dietitian’s permitted scope of practice | Sarah explained how after speaking with a patient and their family, she decided that an oral supplement was needed but more likely to be consumed if it was charted on the medication chart. So she ‘liaised with the team’ requesting that the intern chart the supplement so the nurses would administer it. |
| Increasing awareness of patient current nutritional issues or risks     | This was particularly true for participants in ICU or surgical areas, such as Penny, Sally and Lila, whose patients were often initially without any form of nutritional intake either due to recent surgery or critical illness.  

Then really just a lot of advocating for the patient so they all don’t forget about nutrition and suddenly they’ve been fasting for five days or whatever it may be. That is what I spend all my time and energy on, just being there and reminding them (medical practitioners), so are you going to let them drink today or are we going to start or EN or what are you going to do. (Sally, I1)  

A lot of it is advocating for the patient and sharing what I find out so the whole team can do a good job. (Lila, I1) |
|                                                                         | I might not make a lot of the final decisions myself but I might facilitate the conversations or raise awareness of issues or highlight the patient core nutrition adequacy of things. I think there is good evidence in the ICU setting that units should have dietitians involved in patient nutrition support and I think that’s not necessarily the direct intervention but facilitating the communication and increasing skill levels of the team so they are able to manage the nutrition of the patient when you are not around. (Kate, I2) |
Advocating relied upon participants’ belief that medical practitioners also had the patients’ best interests in mind when making care plan decisions. The overall impression participants provided when talking about patient care in the interviews was that in the acute care setting, the medical practitioners had an overwhelming range of tasks, people and information that they had a finite time to process and engage with for every single patient’s care during admission. This contextual influence underpinned the participants’ need to advocate regularly for patients and decisions about how best to do so.

5.5.2 Deciding with whom to advocate
Following a decision to advocate, participants’ made decisions about which medical practitioner they should advocate to. This was a choice given that for the one patient, there are numerous medical practitioners that are involved in that patient’s care from either one or more specialty teams. Deciding who to advocate to involved identifying the medical practitioner who in that moment of time, for that particular patient, had the power to respond. The decision who to advocate to was also in part determined by the seniority of medical practitioners and in part by who was physically present and accessible. The reason for advocacy also influenced who was chosen to advocate to.

Participants all worked in one or more specific clinical areas, therefore the decision involved determining which medical practitioner specifically should be the one they need to approach. Decisions about who to advocate to were therefore unique to the circumstances and clinical specialty of the individual patient in question. This required knowledge of the structure of each different medical team that the participants worked with as well as the variations of experience, opinions on nutrition, and roles that each medical practitioner had within each specific medical team. In addition, participants conveyed consideration of which medical practitioner was available or rostered on at that present time. This was a type of experience-based knowledge that was very useful for advocating for patients and is examined further in section 6.2.2.

...you need to know the medical structure very well in a bigger hospital. In here you need to know who you talk to. (Belinda, II)
The nature of the reason for advocating was a key influence on the decision making about which medical practitioner would be most appropriate to advocate to. This often included deciding whether a junior medical practitioner or a more senior medical practitioner was the ideal person to communicate with. Some participants indicated that if there was greater nutritional risk to the patient and if a positive advocacy outcome was not achieved, in the interests of time, participants would make the decision to directly contact the medical practitioner with the greatest power to give an instant answer. Yet at the same time, participants had to consider the usual lines of communication they had learned are preferred with most medical teams – that they contact the junior medical practitioner to convey the message to the most appropriate person in the medical team. In the following quote, Lila shares how her decision making differs between why she decides to deal with a consultant as opposed to a registrar who is more junior and has less power in decision making about patient care.

...only keeping my most important priorities for them. Everything else I’d deal with the registrar but the big decisions I’d just go with him with one question. (Lila, I1)

Some participants provided examples of what can happen if they don’t decide on the ideal person to advocate to first off. This was evidenced when participants reflected on questions about whether they would have done anything differently in the memorable patient scenarios. The example Alice provided reinforced the importance she placed on being proactive in communicating with more senior medical practitioners earlier on. For the patient scenario Alice shared, she had her nutrition care plan questioned and a request was communicated to her via the intern to evaluate if the protein content of the parenteral nutrition formulation she had decided was appropriate. Instead of advocating to the consultant to support her decision on the composition of the nutrition formula, she instead only communicated with the most junior medical practitioner of the team, the intern, who lacked any power to agree or disagree with her clinical decisions.
I think I only communicated my justifications with the interns. I think next time I will be more confident to speak directly to the registrars and if not the consultant, if that’s what he was requesting. (Alice, I1)

Who the dietitian identifies as the most appropriate medical practitioner to advocate to also influences the communication approaches used during the interactions.

5.5.3 Communication strategies used for advocating

In order to increase the probability of a positive outcome when advocating with medical practitioners, participants engaged a range of communication approaches. These included direct and succinct consultation that demonstrated an appreciation of the time poor nature of most consultant level medical practitioners; confident yet polite despite not always feeling confident; assertive; and when required, persistent and stoic. A summary and participants’ evidence of these approaches is provided in Table 5.4. These communication approaches were used often in combination and were considered in light of who the medical practitioner was and the nature of the reason advocacy was needed.

Consulting on patient care was conveyed by some participants as important for increasing awareness and seeking agreement for recommendations on starting or changing nutrition interventions. Participants felt that there was a need to position themselves physically and in a timely way so that they were present for discussions around patient care. Being present and being seen in order to be able to offer advice was not always easy both from a time management perspective and the number of other competing voices within the MDT. These efforts ultimately culminated in being physically seen and available to consult in discussions within the flow of a busy medical team’s work routine, which participants felt increased the immediate awareness of the potential contribution the dietitian can have in improving patient outcomes. As Penny suggested, a lack of presence was considered to negatively impact on a dietitian’s ability to offer advice that could positively impact on the health and nutrition of the patient.

...if you can be in part of that discussion then you’ve made yourself part of the care plan, but if you’re not there at that time then you’re definitely on the outer in terms of affecting what they’re doing. (Penny, I1)
Consulting on the more specific elements of nutrition interventions was also a regular part of advocating for patient care that was thought to improve patients’ nutritional status. This was particularly important for clinical areas or interventions where participants had less autonomy due to a patient’s illness severity such as critical care and gastrointestinal surgery. Some participants acknowledged that some medical practitioners were equipped to make decisions about a patient’s nutrition such as the rate or volume of an enteral feed. However, participants believed that their professional expertise in clinical nutrition contributed to the achievement of positive outcomes for patients. This was particularly true for more invasive nutrition support interventions or in clinical specialties where the patients were more medically unstable. As Sally shares in the following quote

_I guess the doctors might be able to very easily, just like I can with a normal patient’s enteral feed or TPN, okay, the goal rate is 80 ml an hour. Whereas I might consider the finer details and alert them to those and work together in forming a plan._ (Sally, I2)
Table 5.4  Communication approaches used by participants when advocating

<table>
<thead>
<tr>
<th>Communication Approach</th>
<th>Participant Exemplars</th>
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<tbody>
<tr>
<td>Direct and Succinct</td>
<td>I’d just go with him with one question, yes or no, and get him to give me a yes or no and then I can go forward. Asking and talking about this, that and the other, he’s just going to switch off. (Lila, I1)</td>
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<tr>
<td>Confident and polite</td>
<td>Well I think if they think that they can intimidate you, they will. So right from the start... and having an old face helps, you can... I just always very politely and friendly and... but try to be confident ’cause inside I’m not like that at all, I’m a mess. So just sort of a confident, mature approach with them. (Melissa, I1)</td>
</tr>
<tr>
<td>Assertive</td>
<td>Assertive – in my speciality at least, I don’t wait for doctors to refer patients to me. I don’t wait for them to make decisions necessarily about when a patient needs a low-potassium diet. I take the reins and say ‘Right, this is what you need. (Theresa, I2)</td>
</tr>
<tr>
<td>Persistent</td>
<td>For Belinda she persisted for nearly a month in making the haematology doctors aware that the patient’s oral nutritional intake was worsening and should be supplemented with nasogastric feeding. Because the status of the patient didn’t change, the need to attempt to negotiate continued and Belinda felt it was her responsibility to continue to seek support for her recommendations. For Sarah it was daily conversations with the medical team to feedback the patient’s poor nutritional progress and request that they don’t get discharged prematurely. ...be stoic as well when there's obviously lots of other people with interests in the patient's nutrition, other than yourself, such as doctors or nurses or whatever else. (Sally, I1) Whereas with certain teams I found out that you had to not just say this is what I think. You had to really sort of persist and be really assertive and very ... even just about how you would present your decision or your plan, recommendation, to the team. (Sarah, I2)</td>
</tr>
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Participants varied in their determination of appropriate levels of assertiveness. The more experienced participants tended to be more
confident about asserting their recommendations for the patient. The experienced participants such as Penny, Lila and Theresa used their clinical judgement to balance assertiveness with the knowledge of how supportive the relationship was that they had with the relevant medical practitioner. Generally, the more supportive the relationship that they had built over time, the more comfortable they were being assertive. This is likely correlated with the confidence that had developed over time which is explored further in Chapter 7. Theresa expressed her opinion that generally novice dietitians tended not to be as assertive as more experienced dietitians. Lila felt that more experience increased her confidence that in turn helped her advocate more assertively for the patients when challenging a medical practitioner’s decisions about nutrition interventions. She compared this to the approach to what less experienced dietitians may take.

*Less experienced ...not completely new grads but even less experienced...there is more of that stand back. That part is mine. I'll do that and then my job is done. (Lila, I2)*

In summary, advocating on behalf of the patient was a prominent response to the nature of power between the dietitian and medical practitioners. Advocating involved carefully deciding when advocacy was needed, the most appropriate medical practitioner to approach and consideration of communication strategies that would increase the probability of gaining support. Advocacy was a way that participants used what power they did have to give a voice to the needs and concerns of patients, while also shining a light on the role and contributions dietitians can provide for patient care.

5.6 NEGOTIATING
Negotiating was a type of interacting that all participants engaged in for discussing decisions about developing and implementing nutrition care plans. Negotiating was conveyed as a needed response to the nature of power in the medical practitioner-dietitian relationship while some participants did provide examples of negotiating being used with patients. Negotiating involved participants making decisions about using an approach that was thought could increase the probability that the outcome was
favourable to the dietitian’s aim, that is, to improve the health and nutrition of the patient.

Participants revealed that medical practitioners and dietitians sometimes had different opinions on both large and small aspects of nutrition interventions and therefore negotiation was needed. Participants described medical practitioners as generally cautious about allowing any intervention that posed any further risk to the already sick patient. Some participants were in clinical specialties where the degree of instability in the patient’s current health already meant that any nutrition intervention posed potential risk. Therefore, negotiating was a necessary form of interaction to implement any of the nutrition care plans for some of the participants. This was particularly true for participants working in ICU or surgical clinical specialties such as Lila.

*That kind of negotiation with the surgeon. I think that probably influences every nutrition intervention that I want to do.* (Lila, 12)

The following sections explore how negotiating involved selecting the ideal timing for the other person, providing clear and credible rationales for the points of discussion, and knowing when and how to compromise.

### 5.6.1 Choosing the right time

Consideration and reflection about when to initiate negotiation were seen as useful for trying to increase the effectiveness of the process for patient care. Participants conveyed that due to the busy schedule of the medical practitioners in the acute care setting, there was need for knowledge and awareness of most ideal times to engage in a conversation that promoted a positive and constructive exchange.

Participants indicated they needed to decide an ideal time to approach the medical practitioner they had identified as most suitable to negotiate with. The main influence on this decision was the medical practitioner’s personal disposition and time schedule and the knowledge the dietitian had of each of these. Most commonly, any negotiation was done after gathering and analysing the latest patient information and formulating a nutrition care plan. It was after deciding what part of this plan required agreement or
approval from a medical practitioner that participants then proceeded to negotiate. For some participants, it was important to choose a time, right down to the hour of the day, which they thought medical practitioner would be most receptive. This knowledge the dietitian had of when the medical practitioner would be most receptive was developed over time through attempts to build supportive relationships as well as through trial and error. In the following quote, Lila reveals how her decision of choosing the ideal timing is specific for the individual medical practitioner and closely relates to medical practitioners’ personal traits and characteristics.

...picking their moods as well and picking when the time is best to speak to him. I know getting him the day after the operation is good. He’s very keen. He’s very involved because it’s the day post op, so he really, really cares. He cares all the time but they care more immediately post-op, so getting him then where he is in the best frame of mind. (Lila, I1)

Identifying the timing for negotiation also coincided with an awareness by the participants on how their approach to communicating could influence the outcome of the negotiation. In the following quote, Penny describes power differences between herself and the medical practitioner. Awareness of these differences prompted her to pause and reflect before approaching medical practitioners for support for her recommendations. This thoughtfulness facilitated consideration of what communication approach in this instance may be more effective in negotiation. Penny indicated that she didn’t think the reality of needing the medical practitioners to value your input changed how she made her clinical decision but it affected how she presented her decisions.

...you might be more hesitant just coming right out and saying something that you know will be disagreed with or won’t be valued. (Penny, I2)

Once deciding on the appropriate time to negotiate, participants conveyed there was a need to consider what and how to communicate during negotiation.
5.6.2 Providing rationales

When negotiating with medical practitioners for certain nutrition interventions or changes to current ones, participants considered it necessary and helpful to articulate clear and credible rationales for their decisions. Therefore, negotiation about patient care decisions involved a conversation where the dietitian justified recommendations. Predominately, rationales were based on what participants referred to as evidence-based guidelines or scientific literature.

Using credible rationales during negotiating was thought by participants to increase medical practitioners’ receptivity to a dietitian’s point of view. This approach to negotiation was thought to be particularly influential in clinical specialties where patients were more unwell and the nutrition interventions in question posed more impact on the patient’s status. Providing credible rationales became even more necessary when the participants were negotiating with medical practitioners they hadn’t yet established a positive reputation with. How the dietitian interacted with the medical practitioner and expressed opinions became both important for the immediate patient concern but also shaping the relationship with the medical practitioner. Melissa highlighted this when she described changes she encountered when moving from a long time clinical speciality to working with MDT’s that were new to her.

*You can’t just go up to them and say what you want them to do, you have to back it up with evidence, you have to sell yourself more.* (Melissa, I2)

In the following quote, Lila reinforced the nuances of working with medical practitioners she has learned what is a more influential approach when trying to negotiate enteral or parenteral feeding after major surgery.

*He’s very good if you can show him the facts but he doesn’t want to sit there and you to bore him to tears.* (Lila, I1)

Using credible rationales while negotiating with medical practitioners was likened to being able to explain your reasoning about decision making. Being transparent but being able to communicate reasoning clearly was thought to be valuable in trying to negotiate with medical practitioners. In
the following quote, Belinda suggested it is one of the communication skills necessary for a dietitian to have in the acute care setting.

*Communication skills, but it’s a different type of communication skills it’s more, you actually need to be able to explain your reasoning very well.* (Belinda, I1)

Negotiating aspects of a patient’s nutrition intervention were conveyed as particularly important when there was explicit disagreement between the dietitian and the medical team. Alice provided an example of how she used evidence-based rationales to defend her decision for the nutrient composition of a parenteral nutrition regime for a patient. The example highlights how she approached negotiating as well as how being questioned prompted consideration about how she conveys her reasoning when discussing with medical practitioners who have greater power over patient care.

This particular one was challenging and significant to me only because my intervention was questioned. This is a man who came in for a bladder cancer and ended up having some bowel resections but was complicated post-op with multiple fistulas and required TPN for nutrition support....the treating team was quite aggressively questioning my interventions in terms of whether I was being a bit conservative with how much TPN I was providing with the patient and there were continuous requests for me to change the regime. It resulted in me consulting with a senior dietitian as well as doing my own research about nutrition management in fistulas and looking at protein requirement, whether it varied in this particular case or not. Coming back to the team...not just saying, ‘this is what the patient needs’, but giving them some evidence and backing up my clinical judgement as well. That was, I think to me, was a good learning experience because I think that’s an important skill that [a]clinical dietitian has to back up what we do with evidence and research rather than just...‘because this is how I was taught’. Sometimes when someone questions you, you do question yourself as well, whether you’re doing everything you can for the patient or what you’re doing is justified with evidence. (Alice, I1)

Alice’s example also shows the role of evidence-based knowledge and how clinical judgement is used in CDM. These concepts are examined in Chapter 6.

Negotiating sometimes took on the form of relaying reasons for why participants won’t be engaging in care for a patient after receiving a referral from a nurse. Many participants referred to this frequent interaction as
‘liaising’. Liaising essentially involved the participants justifying their reasons for not fulfilling the referral request and giving the nurse a chance to respond to decisions concerning the dietitians’ proceeding actions or no action.

Yes, and most of the time, because we have to sort of action it, we'll just liaise with the nurse and let them know it's not appropriate and perhaps refer when they're on the ward. Then we'll just document something. (Sarah, I1)

5.6.3 Compromising

Negotiating aspects of nutrition care plans sometimes involved compromising on the specifics of the plan depending on the patient scenario. Participants indicated compromising was part of the interactions they had with both medical practitioners as well as patients. Knowing when and what to compromise on was considered a skill by some participants necessary for building and maintaining supportive relationships in the acute care setting.

Participants identified that flexibility was central to reaching a mutually agreeable care plan. This involved ‘big picture’ thinking while considering the needs and wants of everyone the decision might impact. Lila shared how compromising in this way increased the probability of influencing the outcome for patient care decisions.

You have to be flexible with your clinical decisions to fit with how it's going to work for everyone else as well. Otherwise, it doesn't work and they'll just say no and you won't get anywhere and that's worse for the patient than getting a little bit done for them. (Lila, I1)

Careful consideration was underpinned by knowing when to compromise while negotiating with medical practitioners. Participants used clinical judgement to assess the risk to the patient when considering when to accommodate the preferences of the medical practitioners. This commonly occurred when the participants wanted to provide nutrition support, but the medical practitioner preferred to withhold any form of nutrition intervention. For example, requesting feeding via a feeding tube or intravenous line. In the following quote, Melissa shared how she had to
decide what impact that compromising had on both the patient and the relationship she was trying to build with the surgeon.

Making sure that you’re doing the right thing by the patient but at the same time not upsetting the surgeon’s plans. (Melissa, I1)

Compromise while negotiating care plans for patients could be complicated by the number of people this sometimes involved, increasing the level of challenge. This was common for more complex patient scenario’s where there were multiple clinical speciality teams involved with all providing opinions on the patient’s care. In the following quote, Penny provides an analogy of how difficult this process can be.

It was like three people trying to walk around in a sack! And get the sack to move along. (Penny, I1)

The ability to compromise when negotiating care plans directly with patients was also a focus of the discussion around interacting for some of the participants. Not being able to compromise was thought to result in ineffective care for the patient. Melissa expressed her values around active listening and compromise in order to influence the decisions of patients to comply with dietary advice.

I have worked with dietitians who are very black and white…it doesn’t work well with patients ‘cause you can’t be black and white with patients because…well you put them offside, which I’ve seen in the past, or they listen very politely and go yeah, yeah, yeah, and walk out the door and don’t pay attention to anything you’ve said. So I think if you listen to them and come to that middle ground, you’re more likely to get them…to comply with the things they can do so they will in some way be safer from their diet even though it’s not the ideal…(Melissa, I2)

This also highlights how negotiation was a tool used by dietitians to assert power in order to help patients choose the ideal actions to improve their own nutrition.

Some participants identified approaches to negotiating with patients that involved compromising with the patient on elements of the patient’s diet.
In summary, participants needed to negotiate mostly with medical practitioners. Key elements of trying to negotiate successfully were:

- choosing the right time to have conversations that suited the individual medical practitioner
- communicating credible rationales for intervention decisions based on evidence
- knowing when and how to compromise on aspects of care

Negotiating with patients occurred when participants approached gaining the preferences and opinions of patients about oral diet interventions.

5.7 INSTRUCTING

In the acute care setting, dietitians engaged with other health professionals and patients by guiding or giving instructions for others to act on or gain compliance. Instructing was a way for participants to use what power they had to try to improve the health and nutrition of the patients for whom they were caring. Given the nature of relationships participants had, as discussed earlier in this chapter, instructing mostly occurred between dietitians and patients or nurses. Instructing was different from other modes of interacting in that it was where the participants assumed greater power than those whom they were instructing. However, participants clearly conveyed that instructing was a positive use of their power that needed to involve a respectful and considerate approach.

5.7.1 Instructing nurses

Dietitians often decided to instruct nurses through the provision of information as to what was required to implement a care plan for a patient. This exchange most commonly occurred through verbal communication with nurses in order to facilitate implementation of nutrition interventions.
that sat within the nurses’ usual role. For example, a few of the participants indicated they would approach nurses and inform them of the plan to change or continue at a certain enteral feed rate, or request food charts are kept with a record of the patient’s oral intake from this time forward. There was emphasis put on the need to provide these instructions verbally despite the instructions also being written in the patient’s medical file. Sally indicated that in her ICU it was essential to have face-to-face conversations with nurses when communicating patient care plans.

...because in ICU they don’t read notes. I need to tell everyone verbally what’s going on for it to actually stick in their head. (Sally, I1)

Instructing at times involved reminding nurses of expectations that had already been communicated.

Then just reminding the nursing staff this patient isn’t meant to be having a whole bunch of other fluids so don’t just offer tea and coffee for no reason. If you’re going to offer a fluid, offer the fluid that’s in the fridge, I’ll show you where it is, that kind of thing (Penny, I1)

Theresa offered further insight into helpful and unhelpful approaches to giving instructions to nurses. In the following example, Theresa believed that she was in a position to give instructions, but her original approach was not received well. This patient scenario offered a learning experience for Theresa to consider how the nurse might better receive her instructions in order for the task of weighing patients to actually occur. Theresa believed that her lack of experience with working effectively with people in the acute care setting as a novice dietitian influenced her decisions about how to give instructions in this instance.

I left a message once. I was about three years out and I’d written in the notes, ‘Please weigh’, and underlined it. The NUM came up to me and she said, ‘Nurses were really offended that you did that’. I was like, ‘What the f### are you talking about? Why? I don’t understand’. Then I went, maybe it’s because I didn’t talk to them. Maybe I should have gone and actually tapped them on the shoulder and said, ‘Could you please’... From that point onwards I do that. I go and personally say, ‘Look, I’ve written it in the notes but could you just, when you get him up, do that?’ That’s silly stupid personal interaction you need to have. It’s crazy and then I realised they don’t read the notes anyway, so what’s the point. (Theresa, I2)
5.7.2 Seeking compliance from patients

There were various reasons participants interacted with patients whether it was for information in a nutrition assessment, to gain understanding or to negotiate aspects of a care plan. However, some participants indicated that they also communicated with patients in order to give instructions about their recommended care plan, seeking compliance from the patient. The language some participants used to describe their decision making and subsequent choices to interact with patients provided insight into the nature of power between patients and dietitians. Some participants felt it was their responsibility to take the lead and direct patients with professional recommendations about their nutrition. This approach to patient care often reinforced that some participants measured successful interactions with patients as those that resulted in compliance. The following quote from Alice provided a descriptive account of a simple patient scenario she shared in the interview. The patient had liver failure which contributed to the presentation of malnutrition for which Alice had been facilitating nutrition support throughout the admission.

...we started looking at the process of getting him home and then he had a fall and started becoming a bit more bedbound. At that point, my nutrition support didn’t change at all because he was actually quite compliant to being able to meet his nutritional requirements and his weight had been actually stable. Pretty much up until he went home there weren’t many changes that I did to his nutrition support and I was just really waiting for a discharge plan to make further recommendations for him to go home. (Alice, I1)

Educating a patient was mentioned by a few participants but was quite limited compared to the other forms of interaction and intervention seen in examples offered in the interviews. Educating and explaining the types of actions participants wanted the patient to engage in was a way of interacting that participants used their power as a health professional to help improve patient nutrition and health related outcomes. The example Mary offered in the following quote reflected the sentiment of the dietitian being the expert on nutrition. Mary conveyed how she put effort into trying to explain to a patient the importance of realising that he had nutritional issues that she wanted him to take advice about. Mary was motivated to try and help the patient and decided to achieve this by persuading the patient of her point of
‘Challenging’ patients therefore were sometimes labelled as such when gaining compliance through instruction proved unsuccessful from the view of the participant.

*Sometimes the challenges I come across are patients who don’t actually see the weight loss as an issue. I may get a 75-year-old who’s lost more than five kilos but they may weigh ninety kilos, and therefore they are now eighty-five, and they don’t actually see that as an issue because they think they’re overweight, and they think they are not moving around as much, so they don’t need to eat as much as before, and that may present as a challenge to try and get them to think that is a nutritional risk, and it could put them at risk of malnutrition... it takes a lot of explaining and getting them to see that that could be a problem.* (Mary, I1)

In summary, giving instructions to nurses in order to help implement and monitor nutrition interventions was a common form of interacting that all participants engaged in. Interacting with patients in order to implement certain interventions also involved an element of instructing that was aimed at seeking compliance with the dietitians’ recommendations.

### 5.8 ENABLING

Enabling refers to the type of interacting participants engaged with patients when trying to empower the patient. This included purposefully involving the patient in decision making as well as communicating in a way that assigned power to the patient to enact their care. The examples used to illustrate how dietitians enabled patients through their interactions represent the patient-centred approach and empathy-based values some participants conveyed they used. It shouldn’t be assumed that the other participants didn’t engage in an approach to patient care that seeks to enable patients. However it was beyond the scope of this research to specifically focus on dietitian and patient interaction. A key finding was that the nature of the decision and the patient scenario strongly influenced participants’ choices about the most appropriate interactions including decisions to enable patients. Some participants, particularly those in ICU, simply cared for patients who were commonly not in a position to interact at all or adequately therefore it was not a prominent part of how they discussed their decision making.
Some participants conveyed an approach that intentionally involved the patient in the process of deciding elements of the nutrition care plan. As explored in Section 4.6, assessing a patient commonly involved the participant asking questions, listening and receiving information that then informed decision making about the patient. After learning about the patient, the participant would often formulate a proposed plan and then discuss this with the patient. Participants shared how this conversation with the patient would involve explaining the nature of the nutritional problem as determined by the dietitian, the implications of these issues on the patient’s overall health and acuity of the condition and then proceed to propose a plan. By explaining, the participant sought to help the patient be in a more informed position to offer their opinion about the recommendations. This was the common decision making approach used by participants for non-complex patient scenarios whose care plans involved therapeutic diet changes and oral nutrition support with nutrition supplements. In the following quote, Mary described deciding with the patient a care plan that takes into consideration the patients’ individual circumstances.

…together with the patient, raise the issues with them what are my concerns and then formulate a plan that's suitable for them in hospital and in the home environment (Mary, I1)

Specific communication strategies used in order to meet the needs of patient circumstances provided a way of enabling the patient. In the example of a complex patient scenario Theresa shared, it can be seen how finding relevant ways to convey information and evaluate a patient’s understanding was needed in order to try and help the patient help themselves. Theresa engaged the patient’s partner as well as alternative methods of communication in order to equip the patient with what was thought to help that patient know how to make different dietary choices and take much needed medication. In addition, at key time points, Theresa brought together other health professionals such as social worker, medical practitioner, community nurse and specialist nurse with the partner to collaborate on the patient’s behalf to identify health and care goals and appropriate strategies to achieve these. Theresa’s example also highlights the complexities of how sometimes patients are not in a position to have control over their own
health. Navigating this proved to be a challenge for Theresa but she felt that there was some progress given the communication approach she and other members of the MDT adopted.

_We've had a number of different approaches, so I've tried the big stick approach of 'You can't drink like that. You can't eat that'. Of course that's not going to work. We've tried the approach of I wouldn't say being her friend but just saying, 'Jill, what's going on? Why are things deteriorating?' She denies to your face that things are a problem. When you get the partner, different story. He can tell us the truth but he can't change her behaviour. So we've sat down with her and her partner and we've provided pictorial resources for her. We have arranged for her to have her medication delivered to her house so that barrier of her actually getting out there and buying Resonium and taking it herself has been reduced. (Theresa, I1)_

Empowering patients to feel a sense of control over their own health was a strong value that Belinda held that shaped her CDM with patients. Belinda described how this approach developed over time through reflection and working with patient groups who lacked significant control over their own health due to the nature of their conditions such as in haematology and oncology. Through self-directed professional development, she increased her awareness of the importance of using an approach that empowered patients battling cancer. She shifted from seeing her responsibility as convincing and instructing to gain compliance to sharing her professional knowledge to enable the patient to make their own informed choices. Belinda also viewed her role as a support person during the patient’s journey which influenced the way she interacted with patients.

_A lot of my work is actually to prepare the patient to go through the journey... basically telling them, 'first week you will go through that and second week you will go through that', and get them to ease into the idea of it is going to be tough. And in some sense, a lot of my role is to support the patient. I try to give the control back to the patient instead of, previously I did a lot of telling them about the seriousness of the situation and warning them to do it, but now I give them the control. It's their choice to decide their goal, it's my responsibility to tell them what is the ideal goal for them and whether and how they can achieve it or not. (Belinda, I1)"

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11 Resonium is a prescriptive medication used to reduce plasma levels of potassium. It is common therapy used for patients with various degrees of renal failure.
5.9 CHAPTER SUMMARY OF KEY FINDINGS

Dietitians are involved in a constant process of building, maintaining and actively participating in various relationships with medical practitioners, patient and their carers and other members of the multidisciplinary team such as nurses and other allied health professionals. Within these relationships, participants described varying degrees of power that the dietitian had relative to who she was relating to in the process of decision making. Commonly, decision making power was held by medical practitioners and participants responded to this in pursuit of improved health and nutrition related outcomes for patients. The main ways the participants responded to the nature of power within relationships with medical practitioners, nurses, other allied health professionals and patients included:

- building and maintaining supportive relationships
- advocating to medical practitioners on behalf of the patient
- negotiating decisions using a timely, rationale based and if needed compromising approach
- giving instructions to nurses and patients to facilitate patient care and positive outcomes with a focus on compliance
- enabling patients by empowering them to be part of CDM about their own nutritional issues driven by patient-centeredness and empathy
CHAPTER 6    NATURE OF CLINICAL REASONING IN DIETITIAN CLINICAL DECISION MAKING

Dietitian clinical reasoning included various cognitive strategies that facilitated decision making within the five core tasks of prioritising, assessing, care planning, implementing care plans and monitoring patients. Different types of reasoning strategies were identified throughout the research and have been categorised into inductive reasoning, hypothetico-deductive reasoning (HDR) and clinical judgement. These clinical reasoning approaches used two main forms of knowledge: evidence-based and experience-based knowledge in various combinations. The way these knowledges were combined for use in practice depended on the type and amount of knowledge the participant possessed as well as the nature of the decision. The use of inductive reasoning, HDR and clinical judgement involved fluid movement between each type of reasoning that was influenced by task complexity and dietitians were aware of when they were being used. The individual clinical reasoning of participants changed with ongoing practice experience and this, in turn, shaped the nature of their CDM.

In Chapter 2, the embedded nature of reasoning and judgement was largely tacit and therefore difficult to talk about. To better understand participants’ cognitive decision making processes participants were specifically asked to reflect upon how they made decisions for patient care. In addition to a discussion around memorable patient scenarios, participants were asked to consider if and how clinical judgement was involved in their decision making. Explicit exploration of clinical judgement, as a known concept, facilitated deeper exploration of its involvement in decision making.

This chapter begins with an examination of contextual influences, particularly patient complexity on the nature of task complexity and the relationship to required reasoning processes. The main two categories of knowledge used are explored followed by findings related to types of reasoning including inductive, HDR and clinical judgement. The components of dietitian clinical reasoning that are provided as findings in
this chapter are illustrated in Figure 6.1. The type of reasoning (inductive, HDR and clinical judgement) used was dependent on knowledge and task complexity and strongly influenced by patient context and the dietitian’s experience which together shaped how decisions were made.

![Figure 6.1 Components of clinical reasoning in dietitian CDM](image)

**Figure 6.1  Components of clinical reasoning in dietitian CDM**

### 6.1  THE ROLE OF TASK COMPLEXITY IN CLINICAL REASONING

The cognitive demand as related to task complexity in CDM was a key driver of the clinical reasoning needed by participants. The participants described a task spectrum from ‘simple’ to ‘complex’ which corresponded to the degree of cognitive demand required for a particular task. That is more ‘complex’ tasks had higher cognitive demand than ‘simple’ tasks. The more complex a task, the more likely the clinical reasoning involved was dominated by clinical judgement. However, participant response to task complexity was also shaped by their experience which enabled them to leverage skills and knowledge they had developed over time. Therefore, what was considered by one participant as complex was dependent on their knowledge and experience and degree of familiarity with the tasks in question.
To examine the nature of decision making more deeply, participants were asked to explore their decision making for both a simple and complex memorable patient scenario. The characteristics that participants described as simple and complex are summarised in Table 6.1 with evidence in the form of participant quotes. Participants agreed that decision making for simple patient scenarios was generally easy due to tasks being considered straightforward, patient care mostly going according to plan and familiarity of the medical or nutrition problems. Patient scenarios were considered complex when a solution to a patient problem was not immediately discernible or available to the participant. This occurred with increased severity of patient illness, greater amounts of ambiguity, challenging interactions with other health professionals and or patients and their carers. The characterising elements of complexity were often found in combination within a patient scenario adding further to the cognitive demand of the task. Given that the task complexity of patient care varied, participants responded accordingly with different reasoning processes in order to make decisions utilising their different types of knowledge and reasoning skills.

**Table 6.1 Characteristics of tasks as a function of complexity**

<table>
<thead>
<tr>
<th>Task Characteristics</th>
<th>Participant Exemplars</th>
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</thead>
<tbody>
<tr>
<td>SIMPLE</td>
<td></td>
</tr>
<tr>
<td>The care and events during the patient admission proceed according to plan</td>
<td>All right, well, a standard sort of patient that goes to plan would be someone like a patient who comes in with head injury or like a stroke. Within 24 hours of admission they don’t anticipate that they’re going to get extubated or be eating within 24 hours, so tube feeds commenced. (Sally, I1)</td>
</tr>
<tr>
<td>The nutritional issues and best therapeutic intervention are easily identified and implemented without obstruction</td>
<td>I just noticed he’d started tube feed so I just had to do an assessment to make sure that the tube feed rate is correct. So it was pretty standard one that doesn’t take very long to do. (Penny, I1)</td>
</tr>
<tr>
<td>The characteristics of the patient scenario are very familiar to the dietitian</td>
<td>Very typical AML patient. All her symptoms are what I expect, so nothing is a surprise to me and I’m able to get good information about what she is eating at every single review...just a very typical AML patient. (Belinda, I1, pg8) These are pretty much typical presentations of a lot of my patients, working in medical gastro. With him...the expected thing that I usually do, treating the re-feeding syndrome, providing nutrition support for his liver cirrhosis and basically working him up and getting him nourished again. (Alice, I1)</td>
</tr>
<tr>
<td>Severity of patient illness</td>
<td>Anything that could go wrong did... She came in with pneumonia and wasn’t able to breathe because of her lung infection and so required to be intubated and ventilated. Along with that she actually ended up on ECMO, which means she required the assistance of a machine to take over the function of her lungs because they were so bad. Because of ECMO she had to be laid flat while receiving enteral feeds. She was fluid overloaded but had high protein requirements. She didn’t tolerate feeds, she developed pancreatitis and necrosis, renal failure, and diarrhoea and had blocked feeding tubes and also required parenteral nutrition. They were pretty straightforward things that I might see every day in 10 different patients but was just all in one. (Sally, I1)</td>
</tr>
<tr>
<td>A complex psychosocial patient context</td>
<td>Not only was she morbidly obese and literally couldn’t sit in her dialysis chair, she also has an intellectual impairment and major social issues. (Theresa, I1)</td>
</tr>
<tr>
<td>Ambiguity or uncertainty in the individual patient scenario</td>
<td>They were here in the hospital for two and a half months. Intense patient, she was the most complex because she was the first one the hospital did, before getting policies and procedures and work practices and everything in place, so we don’t know what to expect. (Lila, I1) Those difficult cases that which haematology a patient always goes, you don’t know where they’re heading, she is a newly diagnosed [SL – diffuse large B-cell lymphoma]. So, she already has three months history of poor appetite, Vietnamese background, difficult behaviour, and because her lymphoma is in her stomach, duodenum, kidney, pretty much her GIT tract wasn’t really working well. (Belinda, I1) But it meant that everything then was changed and so I was kind of managing people in ICU who weren’t familiar at all with intestinal failure and the patient who was used to managing how her gut was before, but we weren’t actually sure what the effects of the new procedure would be, so that was all going to be a little bit different. (Penny, I1)</td>
</tr>
<tr>
<td>Multiple or difficult interactions with patients, carers and/or other health professionals</td>
<td>Complex...not so much nutritional management of the patient but in terms of dealing with the teams and discharge planning. It was all around discharge planning...Every day I was liaising with the team, colorectal team, just about how the patient was going and things like that. (Sarah, I1) ...because my intervention was questioned... the treating team was quite aggressively questioning my interventions in terms of whether I was being a bit conservative with how much TPN I was providing with the patient and there were continuous requests for me to change the regime. (Alice, I1) ... that case management meeting about this patient was at the initiation of the social worker and myself. The rest of the team, I don’t think they get what case conferencing is about and they all work in little siloes and that had been the problem to that point. (Theresa, I1)</td>
</tr>
</tbody>
</table>
6.2 KNOWLEDGE USE IN DIETITIAN CLINICAL REASONING

Knowledge use is fundamental to all reasoning processes used by dietitians when making clinical decisions in the acute care setting. This research revealed that while dietitians use different types and amounts of knowledge during reasoning for decision making, it can be categorised into two main types: evidence-based and experience-based (Figure 6.2). Evidence-based knowledge referred to biomedical and scientific information, policies and procedures and protocols and guidelines. Experience-based knowledge included knowledge about how to undertake the processes needed in decision making, knowledge about the practice context and professional craft knowledge.

![Diagram of Types of knowledge used in Dietitian clinical reasoning]

*Figure 6.2 Types of knowledge used in Dietitian clinical reasoning*

Importantly, these two types of knowledge were used in combination with each other when participants made decisions. The knowledge needed varied depending on the task complexity, the participant’s type and amount of experience, time and resources available to the dietitian and the context in which decision making occurred. Less experienced participants had a
greater reliance on evidence-based knowledge. Where the more experienced participants used knowledge that was highly developed and complex which seamlessly integrated into a fluid and efficient approach to decision making.

In the following quote, Lila provides an example of the multiple types of knowledge used in her care decision for a patient with a stoma.

*With the stoma management, it would have purely been research, past experience with patients, what I’d learnt from other dietitians. (Lila, I1)*

Knowledge use is not separate from reasoning but instead, reasoning is highly dependent on various types of knowledge to guide and inform decision making. The two main types of knowledge, evidence and experience-based, are now explored individually.

**6.2.1 Evidence-based knowledge**

The reasoning involved in making decisions about a patient’s nutrition health related problems was nearly always informed by what the participants referred to as ‘evidence’ or ‘clinical’ knowledge. To participants, reasoning that used evidence-based knowledge involved critically incorporating sources of facts that had been accepted by peers and the scientific community. Examples of evidence that participants used included biomedical and nutrition facts, protocols, policies and clinical guidelines. These examples are summarised in Table 6.2. As conveyed by Melissa in the following quote, participants considered having enough baseline clinical knowledge in multiple clinical categories was important for being a dietitian in the acute care setting and to facilitate efficient decision making.

*You do need to be able to make fairly rapid decisions and think on your feet, so you do need quite a good baseline of knowledge in a lot of [clinical] areas or to know how to quickly get that information that you need. (Melissa, I1)*
<table>
<thead>
<tr>
<th>Type of Evidence</th>
<th>Participant Exemplars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biomedical and nutritional science facts</td>
<td>That sort of stuff you just had to rote learn...you have to have that sort of different food composition knowledge. (Theresa, I2)</td>
</tr>
<tr>
<td>Department and hospital protocols and policies</td>
<td>There are various guidelines, documents that are more local about different areas that I also refer to and we've developed policies for the hospital that mostly I was involved in developing, but it helps to establish a consensus about the practice that you want to have. (Penny, I1)</td>
</tr>
</tbody>
</table>
| Published international or national clinical practice guidelines | The ESPEN Guidelines, which is one of the guidelines that I use for high energy and protein requirements for liver patients. (Alice, I1)  
...the early feeding within 24 hours. It's a number of level-one studies. It's a practice guideline. (Sally, I1)  
So evidence. From the workshops or the articles. It's an interest area of mine, so reading the evidence and the suggestions, like the intestinal failure guide and all of those kinds of things. That's where the knowledge was coming from. (Lila, I1)  
Because a well-recognised guideline based on a review of evidence is kind of like the ‘bedrock’ of the evidence base. (Penny, I1) |

Participants placed high importance on making decisions that were based on available evidence. When describing their decision making, generally participants’ first response emphasised the type of evidence they based their decisions on. This emphasis was demonstrated in expressions such as ‘obviously’ or ‘definitely’ or ‘firstly’ the evidence… *Obviously the evidence and whatever I've read and background knowledge that I have.* (Lila, I1). However, the participants rarely relied solely on evidence, but rather used it as a building block on which they used knowledge gained from experience. The more complex reasoning of clinical judgement was used to discern how to incorporate the evidence into decision making. For example, Belinda explained the multifaceted nature of what influenced her decision making for a patient scenario which included evidenced-based knowledge but also highlighted the role experience-based knowledge had in her decision making for a patient with cancer.
Participants also identified that they possessed and used evidenced-based knowledge that was specific to particular clinical areas. Penny, Theresa and Melissa, who had spent the majority of their professional experience specialising in a single clinical area demonstrated this most obviously and extensively. All participants described evidence in terms of categories of nutritional or medical problems or interventions such that specific evidence was used in specific clinical areas. Specific evidence-based knowledge informed how nutrition support interventions were given for specific patient groups, e.g. the specific best practice is for nutrient composition such as energy and protein requirements. Melissa and Theresa had worked in the clinical area of renal for many years and therefore had developed large amounts of useful knowledge on renal disease itself, how it is medically diagnosed and treated as well as its relationship to a patient’s nutrition. In the following quote, Theresa explained the importance of her role in the acute care setting for acquiring and using knowledge specific to the medical therapy within her clinical area.

The other thing that's probably unique to the acute care setting is the understanding of the medical procedures and that sort of stuff...it's actually important to understand what they do and what they mean and what the implications are because that's where we understand how serious some of the conditions are. (Theresa, I1)

Initial professional training provided a baseline and mandatory knowledge to qualify as a dietitian. Further evidenced-based knowledge was sought when the participants realised they had inadequate understanding of particular conditions, diseases or recommended nutrition therapies to make sound decisions in a particular patient scenario. This occurred commonly when dietitians rotated into different clinical areas or when specialist dietitians encountered a patient with medical or nutritional issues they were not familiar with. For example, Belinda explained how she sometimes refreshed her memory around chemotherapy protocols given there are so many different types. In the following quote, Alice described how she
proactively sought evidence to improve her understanding in response to being in a new clinical area or having a patient that is unfamiliar to her.

*If I’m unsure about something then I might look up the evidence or the guidelines. Usually when I go into a certain new area or clinical area, I would already have looked at what the usual dietary management is or what the recommendations are and having that knowledge already before.* (Alice, I1)

Using evidence-based knowledge also involved knowing how to use it. This involved the ability to critically evaluate the appropriateness of evidence to inform specific clinical decisions. Being able to evaluate the credibility, relevance and type of evidence before it was implemented by the participant was considered crucial to ensuring that evidence would be used in an appropriate way. Penny, for example, placed a high value on this cognitive process to both ensure her decision making was accurate and effective and to maintain or gain credibility amongst the medical practitioners.

*It's not stopping learning and questioning all the material potentially that there is on that topic... I think the essence of it is critically evaluating what the evidence base is and being really familiar with the whole evidence base and its weaknesses. And, yeah questioning it and being able to make it make sense... fudge over that bit because it doesn’t – the mechanism isn’t understood – knowing why it isn’t understood and which parts of it aren’t understood and which bits are still, need to be teased out.* (Penny, I2)

Dietitians have a strong reliance on and highly value evidence-based knowledge as part of reasoning in CDM. Evidence-based knowledge includes both general and specific facts sourced from scientific literature, biomedical and nutritional science and local and international protocols and guidelines. Evidence-based knowledge was a key input into the reasoning process, was used in combination with experience-based knowledge and was accrued and developed over time via knowledge gap identification when engaging in specific patient scenarios.

### 6.2.2 Experience-based knowledge

In this research experienced-based knowledge referred to the collective knowledge derived from the dietitians’ actual experience caring for patients. As a result of experience, participants accumulated knowledge about context as well as how to undertake various skill-based processes that were
involved in various tasks they performed during decision making. Knowledge of what worked best for patient care for similar patient problems, often attained through reflecting on individual episodes of care became part of a dietitian’s stored memory. Much of this knowledge was tacit in nature, embedded within the dietitians’ cognition. Participants revealed a strong dependence on ‘experience’ as a main source of knowledge input to their decision making.

**Knowledge about processes**

Participants communicated they had knowledge about *how to* undertake the various process-based tasks they engaged in for patient care. During the interviews, participants indicated they undertook a set of common patient related process tasks that were specific to the fundamental role of the dietitian caring for patients in the acute care setting. The main knowledge of process was related to the clinical tasks such as standard screening and prioritising, nutrition assessment, physical and diet composition assessment and relevant calculations for nutrient intake and provision. Examples and participant exemplars of knowledge that was needed for routine tasks have been summarised in Table 6.2.
### Table 6.3  Examples of process tasks participants had knowledge of how to undertake

<table>
<thead>
<tr>
<th>Process tasks needing knowledge of how to</th>
<th>Participant exemplars</th>
</tr>
</thead>
<tbody>
<tr>
<td>Screen to identify and prioritise patients for assessment and treatment</td>
<td>...the way that I would determine who I need to see is based on our screening process, i.e. like formal screenings, so malnutrition assessment. (Theresa, I1)</td>
</tr>
<tr>
<td>Undertake a standard nutrition assessment</td>
<td>Including when and how to collect information There are core skills like nutrition assessment and those things (Penny, I2)</td>
</tr>
<tr>
<td>Conduct a physical assessment</td>
<td>It’s standard for us to complete the SGA(^{12}) for all new patients that we see, so I completed the SGA. (Sarah, I1) I’ll also do a physical assessment, just whatever I possibly can do, to see their current lean tissue and fat stores. (Sally, I1)</td>
</tr>
<tr>
<td>Conduct a quantitative and qualitative assessment of a patient’s nutritional intake</td>
<td>I would obviously take a diet history and in my case, I always do a quantitative one, so I’d always actually work out roughly how many calories, how much protein they’re consuming...I always do cross-check for the quality of their diet, so look at how many serves of fruit and veg they’re eating. (Theresa, I1)</td>
</tr>
<tr>
<td>Calculate nutritional requirements</td>
<td>So I use a number of standard methods for estimating energy requirements and protein requirements which are based on international guidelines. (Penny, I1)</td>
</tr>
<tr>
<td>Calculate enteral and parenteral nutrition feeding regimes</td>
<td>I’ll decide and calculate what the most appropriate formula and volume of the formula to give via the feeding tube to the patient. (Sally, I1)</td>
</tr>
<tr>
<td>Order diets and nutrition support items</td>
<td>I do all the admin tasks, order supplements, etcetera (Belinda, I1)</td>
</tr>
<tr>
<td>Document in the patient medical record</td>
<td>I would always document in the notes and say every day. (Lila, I1)</td>
</tr>
</tbody>
</table>

These tasks involved a standardised process that guided how the participants undertook tasks for all patients. Knowledge of how to carry out certain tasks

\(^{12}\) Subjective Global Assessment (SGA) - a validated tool to assessment malnutrition and malnutrition risk
was fundamental to the role of the dietitian in the acute care setting, supported clinical reasoning and was gained from both professional training as well as professional practice experience.

**Contextual knowledge**

The participants also revealed they used highly specific knowledge related to the context in which they made clinical decisions. This included knowledge of the resources, people, organisational expectations and processes as well as what the acute care setting was like. This knowledge was specific to an individual ward or unit, clinical area as well as the hospital itself. Contextual knowledge strongly influenced the decisions participants made about interacting particularly given the nature of power in the various relationships they had (see Chapter 5).

Decisions about interacting for patient care were shaped by knowledge of which health professionals the dietitian should communicate and build professional relationships with. Participants developed this knowledge of who to contact, and their role for any individual patient through experience in different clinical specialties. When the participant rotated into a new clinical area or when other health professionals, such as doctors, rotated into the clinical area, this knowledge was updated. Knowledge needed about who to interact with represented the ever-changing nature of the acute system and how changes in personnel meant the participants needed to constantly remain aware of their own knowledge.

*So, you need to know who to contact and so as to develop the relationship a bit better. (Belinda, I1)*

Some of the participants conveyed the use of knowledge about how their decisions and recommendations for patient care may affect the decisions of other members of the MDT. Knowing what decisions the participant could make without involvement of the medical practitioner was developed through working in specific clinical specialties, units or wards within the hospital as it was not the same for all contexts.

*...knowing which interventions are likely to impact on other aspects of care and which interventions we can safely provide without anyone thinking twice about it or commenting on things. (Kate, I2)*
Knowledge of the context around the patient particularly about the role, traits and professional opinions of other health professionals was clearly an input into the reasoning and clinical judgement involved in patient care. Participants were particularly focused on the importance of knowledge about medical practitioners which is explained by the greater power doctors have in most situations as per Chapter 5.

Professional craft knowledge
Participants communicated a type of experience-based knowledge that was gained from the actual practice of caring for patients in particular situations that has been called professional craft knowledge in CDM literature (Higgs & Titchen, 1995). As introduced in Chapter 2, professional craft knowledge has been considered more intuitive (clinical) knowledge which includes a knowing of ‘what’ and ‘when’ as well as ‘how’ (Higgs & Titchen, 1995, p. 9). Professional craft knowledge was often used in combination with evidence-based knowledge inputting into the process of using clinical judgement to make decisions. The type of knowledge gained from direct experience in itself became a product of experience to then input into future decision making for similar patient scenarios. Participants generally thought that with more experience, there was more experienced-based knowledge available for retrieval for decision making.

*If you’ve been exposed to a lot of areas and patients and problems that you’ve got that little backlog of things to fall back on. (Melissa, I1)*

Similar to evidenced-based knowledge in specific clinical areas, length of time gaining experience in a specific clinical area facilitated the development of specific professional craft knowledge. Knowledge based on experience was clearly categorised based on the clinical area that the experience was in. Professional craft knowledge within a specific clinical area influenced when or how participants deviated from protocols. For example, while prioritisation protocols were commonly used in all departments, Alice explained how knowledge based on her experience working in the area of gastroenterology, more specifically liver failure, affected how she decided to prioritise seeing patients.
So with experience, you learn to prioritise as you work as a dietitian to know obviously who is more important to see earlier on or who you can wait till a bit later...but someone who doesn’t know my caseload might prioritise differently. (Alice, I1)

Professional craft knowledge included accounts of what strategies have worked with past patient scenarios. This also included knowledge of what didn’t work, that then combined with reflection about that experience, was incorporated in the dietitian’s knowledge. The main examples provided by participants were related to decisions about the manipulation of dietary components either via food or tube formula. The feedback that the participants sought from patients during the monitoring process then informed a process of evaluation of the outcome of the specifics of the intervention. The participants acknowledged that different therapies could affect patients in varying ways so the patient themselves became an important source of information around what could work for future patients in similar circumstances. In the following quote, Belinda highlighted the importance she placed on the patient feedback of her decisions on how to manipulate the diet of someone going through chemotherapy to reduce nausea. The opening line to her response also highlighted the tension that existed between the general acceptance that dietitian decision making should be evidenced-based and the important contribution of experience. Belinda was confident to share how her decisions for patient care were strongly informed by experience-based knowledge.

Although people don’t want to say it but I think experience contributes a lot and especially the patients' story, so that contributes a lot to my decision making...like a textbook or people will say, a hot meal will cause more nausea but nothing [is] stronger than actually another person telling you, ‘I had the chemotherapy and this made me feel sick’...I will suggest certain things because of [what] other patients have told me... (Belinda, I1)

In the interviews, it was clear that participants made distinctions between evidence and experience-based knowledge. Evidence-based knowledge was considered accessible to anyone, where professional craft knowledge relied on repeated and specific experience. Therefore, professional craft knowledge often tacit in nature was embedded in the memory of the individual dietitian. Professional craft knowledge was often the main type of
knowledge used for more inductive approaches to reasoning because of its tacit nature (Section 6.3). This distinction was highlighted when a few of the participants discussed their experiences of teaching dietetic students. In the following quote, Melissa described how the responsibility of teaching student dietitians about how to do what a dietitian needs to do, highlighted the embedded nature of her professional craft knowledge.

... when you have students you actually have to backtrack and think why have I said that? And then you start looking, well I've based this on the evidence or the diet sheets or the protocols and you actually start to think through. Or the person in front of you, they're not willing to do this but they're willing to do something else. (Melissa, I2)

In summary, participants developed and used evidence-based and experience-based knowledge to make clinical decisions. Knowledge was developed through training, ongoing professional development but mostly through gaining experience in a particular clinical context. More experienced participants had developed highly complex experience-based knowledge structures that were often tacit in nature. Knowledge was both an input into decision making as well as a product of the experience of decision making for patient care.

6.3 INDUCTIVE REASONING APPROACHES IN DIETITIAN CLINICAL DECISION MAKING

Inductive reasoning processes facilitated some clinical decisions by dietitians. The participants in this research made conclusions for current patient decision making tasks based on observations and experiences of specific past patient scenarios. Participants’ reflection on their reasoning highlighted the use of automatic processes with little to no awareness by the participants at the time of the decision. Table 6.3 provides evidence of the various characteristics of inductive reasoning approaches described by participants. These included pattern recognition, intuition, sensing, ‘gut feeling’, automatic cue matching and rapid impression making.

Awareness of the use of inductive approaches to reasoning within their own decision making varied between participants. Most participants struggled to articulate how they made the decisions that seemed automatic yet appropriate for the individual patient. Most participants recognised that they
made decisions that were rapid, subconscious and underpinned by knowledge stored in memory from past patient experiences. Participants more commonly described using inductive reasoning approaches for decisions when prioritising patients as well as when deciding on the specifics of nutrition care plans and implementation. The use of inductive reasoning was dependent on the participants’ level of knowledge, in particular, their experience-based knowledge. Participants stressed that when making rapid decisions they drew on past experiences of similar patient care scenarios.
Table 6.4 Characteristics of inductive reasoning approaches used by participants

<table>
<thead>
<tr>
<th>Characteristics of inductive reasoning</th>
<th>Participant Exemplars</th>
</tr>
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<tbody>
<tr>
<td>Recognising patterns between current patient and past scenarios</td>
<td>Penny often connected the pattern of patients’ admission reason or main medical diagnosis with their visually estimated bodyweight with stored knowledge and was able to decide quickly whether the current enteral feed rate started by the intensivist is likely to be providing adequate nutrition.</td>
</tr>
<tr>
<td>Pattern is stored in memory as schemas which are made up of complex and embedded knowledge</td>
<td>...with a pattern, you know, the sort of set schema that fit particular areas and following what you would normally do for a patient that fits that schema and then modifying it according to where the patient doesn’t fit that schema. And often the schema is based on something in a guideline or something that I’ve read, but, I’ve been aware that just general reading you pick up, you know, you think, you know, I’ve got the impression that this is the case, but I can’t actually pinpoint where I have that, but my feeling is that this is the case and then later on you’ll find some article that, you know, oh yeah I remember reading that now. That’s where I got it from. But, you, it’s kind of, becomes a cloud of impression (Penny, I1)</td>
</tr>
<tr>
<td>Automatic retrieval of knowledge</td>
<td></td>
</tr>
<tr>
<td>Generates an impression</td>
<td></td>
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<tr>
<td>Sensing</td>
<td></td>
</tr>
<tr>
<td>Visual cues stimulate retrieval of knowledge</td>
<td>I think it’s probably just collecting information and experience of seeing this one is equal to that one. (Belinda, I1)</td>
</tr>
<tr>
<td>Quickly matching cues in current patient scenario with knowledge</td>
<td>...like a voice inside you that tells you, yep this is important. It just comes up when you look at it. (Mary, I1)</td>
</tr>
<tr>
<td>Intuitive/sensing</td>
<td>That gut feel...based on experience and past situations and just somehow the brain pulls all those little random bits of information together and you make that decision which turns out quite appropriate. (Melissa, I1)</td>
</tr>
<tr>
<td>Subconscious/Rapid</td>
<td>I guess where the intuitive part comes in is usually when you’re incorporating experience rather than facts or rather than a schema and saying this kind of patient, I’ve seen patients like this before and this worked best for them even though you can’t articulate it (Penny, I2)</td>
</tr>
<tr>
<td>Relies on tacit experience-based knowledge</td>
<td>...it’s just my gut feeling that I would do this in this situation and I can’t necessarily explain the thought process I have to get to there, it is just the right thing to do. (Kate, I2)</td>
</tr>
<tr>
<td>Difficult to articulate process</td>
<td>Sally explains her decision to not increase a patients feed rate was due to… that intuition that maybe it wasn’t the right time (Sally, I2)</td>
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</table>
Pattern recognition, intuition and ‘gut feeling’ were all referred to by most of the participants when trying to describe how they approached some decision making. Penny, who was an experienced specialist in ICU, conveyed insight into her own reasoning using language that reflected the field of literature around reasoning. The following quote provides an example of how Penny described her thinking using known types of inductive reasoning, pattern recognition.

*And I think pattern recognition is a big thing because after I consented to be a part of this, I was kind of thinking how am I making these decisions? And it is about patterns, it's about fitting something onto a matrix you already have and identifying where it doesn't fit and then managing those bits separately, but otherwise just going with what you already know works for that pattern. (Penny, I1)*

Other participants offered nuanced descriptions of reasoning that seemed to occur with minimal awareness that overlapped significantly with Penny’s detailed description of the use of pattern recognition.

Understanding the nature of CDM was deepened by describing the common yet different ways participants attempted to make explicit a cognitive process that was occurring automatically. The highly tacit nature of inductive reasoning approaches participants used in decision making was reinforced. Key characteristics of inductive reasoning approaches included that it occurred rapidly, relied on experienced-based knowledge for matching current cues in patient scenarios and often seemed intuitive. Inductive reasoning was rarely used in isolation for decision making and often integrated within the hypothetico-deductive approach and as part of clinical judgement.

### 6.4 HYPOTHETICO-DEDUCTIVE REASONING AND THE NUTRITION ASSESSMENT

Within the process of conducting a nutrition assessment, participants engaged in a reasoning process that integrated both inductive and deductive approaches to making decisions that resembled the hypothetico-deductive reasoning (HDR) model (refer to Chapter 2.4). The main function of the HDR process was to generate informed, justifiable and rational conclusions.
about what the main nutritional issues were at the time and what interventions should be implemented. This was facilitated through four main cognitive processes: generating initial impressions, analysing and interpreting data, making a conclusion and evaluating (see Figure 6.3). The HDR process was primarily used by participants to conduct nutrition assessments and monitor patient progress.

Participants commenced the HDR process when they developed an initial impression about patient problems (hypothesis), some even developed predictions about the likely required intervention. This was an inductive reasoning approach (as discussed in section 6.3) based on initial information gained from the referral or initial scan of the medical record. This initial impression was followed by a nutritional assessment within which the dietitian collected both a standard and targeted range of patient information. This data was then interpreted and analysed leading to either further data collection to facilitate better understanding about potential problems or deciding on conclusions about what nutrition issues were present and what action should be taken to address these. Making conclusions would usually be followed by implementing interventions as per discussion in Section 4.8. Participants would then monitor the patient at decided points over time in which previous conclusions would be evaluated. This often led back to an iterative process of data collection and analysis followed by conclusions about the patient’s progress becoming a reasoning action cycle. The HDR process could be repeated for each monitoring episode of care. Figure 6.3 below illustrates this reasoning approach, using both the four main cognitive processes showing how it integrates with the actions the dietitian takes in the process of the nutrition assessment.
When reasoning during nutrition assessment and monitoring tasks, participants also utilised inductive reasoning and the more complex reasoning process of clinical judgement. Participants used these different reasoning approaches in an integrated way at various times or decision points for each episode of patient care. Sally provided an explanation of the approach she used to make decisions in scenarios where the patient is unconscious. She connected strongly to the description of her reasoning process as a deliberate and conscious movement through a decision tree.

*This happens, okay, that means we have to go down this path. This happens and we have to go down that path. If there's not enough protein here then we need to add this or whatever it might be. It's like this gigantic flow chart in my head sort of thing.* (Sally, I2)

Each of the four main phases of the HDR process as seen in participant patient examples are now discussed. A separate discussion of each stage.
highlights the multiple cognitive steps involved and differentiates HDR from the rapid and unconscious nature of inductive reasoning.

### 6.4.1 Generating initial impressions

Generating an initial impression of what the nutritional issues may be and or what intervention may be needed was often done via an inductive approach underpinned by complex knowledge networks (Section 6.3). All participants gave examples of how before undertaking a nutrition assessment they often made predictions about likely issues for their patients mostly based on small amounts of data such as patients’ medical diagnosis and current or proposed medical treatment. In the following quote, Theresa provided an example of her first impression given during an account of a simple patient scenario.

*So this patient, who is a long-term haemodialysis patient, ... is not eating, and their nutritional status is declining and their either malnourished already or on that slippery slope of becoming malnourished.* (Theresa, I1)

Making initial impressions informed further decision making about what additional data is needed to understand and assess a patient’s past, current and potential nutritional issues that are considered in light of the initial impression. For Belinda who worked with patients undergoing different types of cancer therapy, seeing what treatment protocol the patient was on resulted in an impression of how treatment side effects are likely to impact on the patient’s nutrition through a process of inductive reasoning. This then informed a decision about how to collect information that will provide more detail on the specifics of the treatment journey for the patient before proceeding with a full nutrition assessment.

*The first thing I check is what protocol the patient has and I go to the website so I know what is likely to happen so I know what the patient journey is going to be so I know how I should plan my reviews and what the patient may need from me next week.* (Belinda, I1)

Participants generally received initial patient data through a routine screening process that underpinned the generation of an initial impression. For some participants this screening process involved reviewing a printed list of patients and their admission reasons and admission date on their
ward. Commonly participants generated impressions based on referral reasons communicated electronically or verbally from other health professionals. Some participants sought further information and quickly scanned the medical file or asked a nurse to gather a small set of information that was then used to generate an initial impression via inductive reasoning. Preliminary information about a patient before undertaking a nutrition assessment was also gathered through review of completed validated screening tools. In the following quote, Mary shares how data from a screening tool used to identify malnutrition risk prompted her recognition of potential causes for malnutrition resulting in targeted questioning of the patient in the process of data collection.

A fairly typical case I would see is, you know, your typical nourishing diet patients who come in with weight loss. Usually, we get quite a bit of referrals from the Care Co-ordination Team in the Emergency department and they do malnutrition screening for all over sixty-five patients. On there there’s two questions, one about loss appetite and weight loss, any recent weight loss. It’s a bit like your MST\(^\text{13}\). When I get this sort of referral it’s always alarm bells about cooking skills and patients who are living alone, socio-economic status and things like that. (Mary, I1)

In summary, initial impressions are mainly generated via an inductive reasoning approach after gathering small amounts of patient data which then influenced subsequent routine and targeted data collection.

### 6.4.2 Analysing and interpreting data

Analysing and interpreting data was a core part of a nutrition assessment undertaken routinely involving a process of collecting standard biopsychosocial and clinical area specific information from and about the patient (Chapter 4.6.1). Once data collection commenced, an iterative process of data analysis and data collection occurred where preliminary interpretation guided more specific data collection to increase understanding about the patient’s situation. Data analysis and interpretation involved

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\(^\text{13}\) MST- Malnutrition Screening Tool refers to a short validated question based tool used in health care settings to identify risk of malnutrition
analytical thinking with input of both evidence and experience-based knowledge.

Through discussion about specific simple and complex patient scenarios, participants revealed that their analysis and interpretation relied solely on a cognitive process of question-asking to make sense of the data collected. Table 6.5 outlines common questions participants asked of the data collected that facilitated data analysis and interpretation in the nutrition assessment process. Types of questions centred around critically interpreting and evaluating the relevance, meaning and interactions between biopsychosocial and dietary information about the patient that facilitate problem identification and solving. In order to answer many of these questions, the participants relied upon various types of knowledge in order to make accurate and appropriate interpretations. For example, to evaluate numerical or quantitative data such as biochemistry values, calories and protein in the diet or weight changes, the participants used their knowledge of normal and acceptable ranges to then make comparisons. Evidence-based knowledge that was specific to a clinical area was also used in this process.

Table 6.5 Common questions used in clinical practice to guide patient information analysis during a nutrition assessment

<table>
<thead>
<tr>
<th>Question</th>
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<tr>
<td>How do past and current medical issues impact on nutrition?</td>
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<tr>
<td>How does the past and present psychosocial context of patients influence their health and wellbeing?</td>
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<tr>
<td>Are there any drug/nutrient interactions and how can this be managed?</td>
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<tr>
<td>What blood tests are worth checking and to what degree do they deviate from normal ranges?</td>
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<tr>
<td>What clinical symptoms are influencing a patient’s nutrition, what has caused them and how long are they likely to be present?</td>
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<tr>
<td>What dietary intake to focus on and to what degree does it deviate for their estimated nutritional needs, both macronutrient and micronutrient?</td>
</tr>
<tr>
<td>Is the nutrition support regime already in place by doctors appropriate?</td>
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<tr>
<td>What method is most appropriate to use to calculate nutritional needs?</td>
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<tr>
<td>How does the patient data collected compare to expected norms or standards given the medical diagnosis and prognosis?</td>
</tr>
<tr>
<td>What nutritional problems does the patient have now and at risk of developing?</td>
</tr>
<tr>
<td>What don’t I know that you need to know for the case and how do I find out the required information?</td>
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</table>
The iterative nature of data collection and analysis highlighted how the participants took an investigative approach to deepen their understanding of potential nutritional issues and what may have caused them. In the following quote, Theresa provides details about the multiple steps of data collection she takes when doing a nutrition assessment of what she referred to as a straightforward scenario in her clinical area of renal. This example highlights how data collection and analysis coincides for a dietitian who has experience in the clinical area.

Okay, so from my perspective we literally look at things like their anthropometry, how much weight they've been losing because in this case they'd be losing weight unintentionally. We do a physical assessment and look at their muscle and fat stores. I would look at how much fluid they're gaining in between the dialysis sessions, talk to them about all the clinical symptoms that would be of interest to us as a dietitian, so appetite would be the typical ones, dry mouth, are they nauseous, are they vomiting, are they constipated, do they still produce urine? I'd have a look at the combination of medications that they're on because that tells you how good or bad, say, for example, their phosphate might be or whether things are being monitored closely. I would obviously take a diet history and in my case, I always do a quantitative one, so I'd always actually work out roughly how many calories, how much protein they're consuming. I'd calculate how much they need based on our guidelines. I always do cross-check for the quality of their diet, so look at how many serves of fruit and veg they're eating, and then talk to them about other things that might be influencing their intake. For dialysis patients it's what happens on your dialysis day and what's different on a non-dialysis day. Are there social influences on that? Are there physical influences from the effects of dialysis, so talk to them about other factors that might be influencing that? We use the PGSAG tool there, so in addition to collecting that information we'd actually give them a numeric score. (Theresa, I1)

Once deciding that enough data had been collected and analysed to reach a sufficient understanding of what is going on for the patient nutritionally, the dietitian then moved to a process of deducing conclusions.

6.4.3 Making conclusions

Conclusions were made about what nutritional issues were present as well as what interventions may be indicated to address these. Generally speaking, in most patient scenarios, participants reached conclusions deductively based on the interpretation of data preceding making conclusions. In many instances, the absence of clear information or high levels of complexity in a nutrition assessment often called upon use of the more complex reasoning
process of clinical judgement (Section 6.5). Experience and evidence-based knowledge was also an input into this step of the HDR process.

Making conclusions about a patient’s nutritional status was identified by participants as the primary role of a dietitian in the acute care setting and the nutrition assessment the primary means by which these conclusions were made. This perspective was made obvious when responses to questions about ‘what decisions did you make’ for a memorable patient scenario resulted in communicating the conclusions they made about nutritional issues and interventions. Then when probed ‘how did you come to decide this’, most participants then responded with ‘from the nutrition assessment’ and the data collected in it.

*Basically based on her history of not eating for so long and because chemotherapy patients and haematology patients are at risk of refeeding syndrome because of electrolyte imbalance. (Belinda, I1)*

Participants’ explanations of how they made decisions were dominated by how they came to conclusions about what interventions they recommended. Making decisions about what interventions were needed for a patient involved use of multiple knowledge sources. When using evidence to make conclusions, critical analysis of the evidence was undertaken alongside use of clinical judgement (Section 6.5.4) to ensure that the decisions made suited each patient. This was particularly evident when participants were deciding what evidence to rely on to support intervention decisions including appropriately analysing the quality and suitability of the evidence that is connected to the patient’s clinical situation.

*Analytical skills in deciphering literature to know what sort of things are required for a patient or what sort of literature is applicable or even relevant to your patient. (Sally, I1)*

Conclusions about what nutritional issues were present became the rationale for decisions about intervention recommendations for individual patients. This involved drawing connections between the data participants had collected, analysed and interpreted and the often, multiple conclusions the participant made about the patient’s nutritional status. While making connections between nutrition issues and nutrition interventions relied on
use of all forms of knowledge, the dietitians’ knowledge of the medical condition and recommended therapeutic interventions was particularly important. In the following quote, Alice explained her conclusions about what interventions she recommended based on her conclusions of what nutritional issues she identified through data collection and interpretation.

I guess there were multiple reasons why I came to that suggestion. One was that he was quite dysphasic\(^\text{14}\) and quite drowsy and confused. Two was he wasn’t going to be able to eat adequately. He was quite malnourished and if he was to continue like that he would deteriorate even more and the third would be of his higher requirements while he was in liver failure. (Alice, I1)

Interpreting patient information in a nutrition assessment also resulted in making predictions about what the patient’s potential future nutritional issues may be prompting decision making about and planning for these issues. Many of the participants described a predictive component of decision-making that was particularly reliant upon their specific experience with specific patient groups in specific clinical areas. The specialist participants particularly highlighted how important their specialty experience-based knowledge was in making predictions about what potential nutritional issues may arise, particularly when there were difficulties collecting usual amounts of patient information during the nutrition assessment. Sally provided an example of when gaps in the available patient data limited the process of deciding with certainty the patient’s current nutritional status (for example malnourished or not) but allowed decisions on potential future feeding issues.

Putting all of that information together, I will perhaps not be able to identify what their nutrition status is but I might be able to identify if there are any anticipated issues with feeding, by taking into account the medical issues, say, for example, a patient with a brain haemorrhage. (Sally I1)

Sarah gives an example of how her conclusions involved both clear picture of a patient’s current nutritional status as well as a prediction about what

\(^{14}\) Dysphasic refers to impairment of speech and verbal comprehension particularly associated with brain injury
future risks are involved therefore warranting certain monitoring interventions by the medical team.

_Because I did put in his nutrition assessment that he could potentially be at risk of deranged electrolytes and possible re-feeding syndrome because of his poor nutrition for a little bit prior to admission and the vomiting._ (Sarah, I1)

In summary, participants made conclusions about what the nutritional issues appear to be as well as recommended interventions as a result of the preceding data analysis and interpretation. Being able to provide justifiable rationales for these conclusions was the goal of the nutrition assessment and the focus of dietitian decision making. Making conclusions also involved predictions about future nutritional risk which was also reliant on the dietitian’s knowledge and clinical judgement.

### 6.4.4 Evaluating conclusions through monitoring

Dietitians made decisions about if, when and how to monitor a patient’s nutritional and health status after the initial assessment or intervention has been put in place, as demonstrated in Chapter 4.9. Evaluating previous conclusions about what the nutritional issues were and what effects the current interventions were having on these was essential for facilitating ongoing patient improvement. Essentially participants re-entered the cycle of data collection, interpretation and making new conclusions based on this analysis in a new episode of care (see Figure 6.3).

Clinical judgement was often used to decide when to review patients and engage in an ongoing review of their nutrition status (Section 6.5). However, the decision making that occurred on most occasions, particularly simple scenarios, involved deductive reasoning. Once again, the participants collected patient information that is specific to being able to evaluate the effectiveness of the intervention that they recommended at the previous episode of care. Information about the overall condition of the patient was collected, including outcomes of medical tests or therapies that had been undertaken since the last episode of care as well as clinical observations.
How do I know that? I just know that because I see him every day. He hasn’t been tolerating much at all now. Every time he takes clear fluids or nourishment he’s had vomits. He’s got some thickening of his small bowel, so he’s sending him for a GG swallow today to see if there’s anything else going on there. I think he’s got gastroparesis post-op as well. He’s Ethiopian, very poor English. Getting great detail from him is tricky but I also know that when he was on clear fluids previously and vomiting I had him on clear fluid supplements. Now he’s off those because he doesn’t want them anymore because he’s been vomiting on them, so just that aversion. I know that even if he starts taking fluids well now I’m not going to go anywhere near meeting his energy and protein requirements and I need that PN until they sort out his gut pretty much. (Lila, I1)

After collecting new information, participants then engaged in the same reasoning process they used to make original conclusions to decide whether these need to be revised. The conclusions made as a result of a single nutrition review then informed future actions about monitoring the patient. In the following quote, Sally shares how she evaluated her current care plans in order to determine whether her previous conclusions and intervention decisions were accurate or appropriate.

Through a monitoring process, so after reviewing the patient, after whatever that solution has been implemented, I would have in the previous recommendations set out, I guess, the criteria of what I would be looking out for. Okay, I’ve arrived at the solution that this is the right feed for this patient; however I want their abdomen to be checked, abdominal distention, their nasogastric aspirates, their bowel activity, etcetera. Therefore upon review, if all of those factors are ticked off, then that would mean that it’s I guess the right intervention decision. (Sally, I2)

Given the dietitian’s aim of improving a patient’s status, positive changes to their nutritional status are expected. Furthermore, evaluation of assumed progress was needed due to how quickly the status of some patients in the acute care setting changed.

6.4.5 Conclusions
Hypothetico-deductive reasoning was a dominant approach used within the process of the nutrition assessment and subsequent monitoring episodes of care. This reasoning approach was a combination of an inductive process of making initial impressions, followed by an iterative process of data collection and analysis in order to deduce conclusions about nutritional
issues and interventions. Both evidence and experience-based knowledge were inputs into this reasoning approach, both with and without the participants’ conscious awareness. Using the HDR approach to patient care decisions helped facilitate the provision of care that had clear and well supported justifiable rationales.

6.5 DECISION MAKING AND THE DIETITIAN’S CLINICAL JUDGEMENT

Clinical judgement is a meta reasoning process used by dietitians, often in combination with inductive reasoning and HDR to make patient-centred decisions within all five core tasks of prioritising, assessing, care planning, implementing and monitoring. A dietitian’s clinical judgement was characterised by fluid use of complex knowledge structures developed from specific clinical experience and the efficient incorporation of the patient context while weighing up the relevance of information relating to patients’ past and present health states in order to decide on the best course of action at the time. Interpretation of participant perspectives on clinical judgement illuminated three key ways the dietitians’ clinical judgement was used to make patient-centred decisions. These are:

- Managing complexity
- Guiding interacting
- Individualising care plans

Clinical judgement, as a more complex reasoning process than inductive reasoning or HDR, was needed due to the emphasis dietitians placed on considering the context of the patient, including the patients’ health, mental and social factors as well as the sociocultural elements within the environment of the acute care setting. Clinical judgement involved reasoning towards decisions that were based on both objective (e.g. research evidence) and subjective (e.g. contextual elements) evidence. In the following quote, Kate positioned clinical judgement within dietitian CDM as the means by which decisions were made that suit the individual patient scenario. This highlighted the temporal nature of clinical judgement in that it is a reasoning process that accommodates for changes to patient scenarios over time.
So I think a lot of it becomes very subjective in what you decide for the individual patient by your own decisions rather than just something you can calculate with an equation and your interactions with other members of the team about how you decide things. I think a lot of the decisions we make as dietitians there is an element of science and evidence in it but there is also some subjective assessment of what you think is best in that clinical scenario. (Kate, I2)

The cognitive elements of the participants’ decision making were rarely obvious or self-evident in the interviews. Two main strategies were used to assist the participants to make their cognition more explicit. When discussing both simple and complex patient scenarios, participants were asked questions such as ‘what informed your decision?’ or ‘how did you know to do that?’ The second strategy involved questioning participants about the role of clinical judgement in acute care decision making given its presence in other allied health CDM literature. Participants were then encouraged to explore more deeply the concept of their clinical judgement. While all participants felt strongly that clinical judgement was an integral part of their approach to making decisions, they experienced difficulty articulating the nature of their clinical judgement. This was demonstrated by some participants often pausing during responses, using phrases like ‘I don’t know’ or ‘it’s hard to say’. Responses were randomly structured indicating that many participants did not have a full understanding of their own clinical judgement or when it was being used. However, throughout the interview participants’ understanding of this facet of decision making was clarified as it was being spoken about.

The main uses and characteristics of clinical judgement in dietitian CDM are examined in depth in the following sections.

6.5.1 Clinical judgement as a meta reasoning process

The process of using clinical judgement to make patient-centred clinical decisions involved the dietitian evaluating and synthesising large amounts of various information and knowledge therefore emerging as a meta reasoning process. The types of information included the multiple social, medical, anthropometric, biochemical, symptom and dietary intake data collected during a nutrition assessment and at various review time points. It also included information about the physical environment around the patient
in the acute care setting that is susceptible to change. Evidence-based and experience-based knowledge was used and integrated with spoken information to make a decision that was considered best for the patient at a particular moment in time. The nuanced skill involved with any dietitian’s clinical judgement involved the appropriate application of this synthesised knowledge and information. In the following two quotes, Sarah and Penny describe clinical judgement as this integration and appropriate use of a broad range of knowledge.

I would say I take all the things that are in the literature, all that I know, all the information I’ve gathered about the patient, what’s going on for the patient right now, what the priorities are, and sort of pick and choose from the literature and the evidence and recommendations and evidence-based guidelines and things like that, take from that what would be suitable for the patient at that time and maybe apply that. (Sarah, I2)

I mean when I said it before about making a thousand decisions a week, I guess all of them really are clinical judgement, but a lot of them are just such momentary trivial things and when I think of clinical judgement I’m really thinking of the kind of stuff we do when we’re taking in a large number of bits of data and synthesising them. (Penny, I2)

Clinical judgement was used by participants to evaluate the relevance of evidence in light of a patient’s individual circumstances. This included reasoning about to what degree literature, guidelines and department protocols should dictate the decisions about patient interventions. There were times when the participant’s clinical judgement indicated that the best thing for the patient was to deviate from a guideline. In these instances, clinical judgement involved participant assessment of the consequences including risks and benefits of doing so given the specific circumstances of the patient’s scenario resulting in a decision that wouldn’t compromise the patient’s safety. Sally expressed the importance of balancing patient outcomes with ‘doing right by the department’ when her clinical judgement indicated she needed to deviate from policies or guidelines. Melissa highlighted an example of how she used clinical judgement to determine when it is not appropriate to apply the evidence directly for an older person who has barriers to self-care.
I mean you don't consciously think about it but you do because you're thinking you... you look at all the factors that are impacting on this patient and what their nutrition diagnosis is. So you do have to weigh up what's going to be best for this patient even if it's as simple as what sort of supplement. If they're old and frail and going home to look after themselves, you don't put them on a super strict diet that there's no way of managing, even if that's what the textbooks or the evidence recommends. (Melissa, I1)

Melissa’s identification that she didn’t consciously think about clinical judgement highlighted an intuitive dimension of clinical judgement, indicating that some clinicians may not have full awareness of what comprises their clinical judgement or when it is being used. Other participants also described an intuitive element involved in their clinical judgement which likely related to the subconscious use of highly tacit experienced-based knowledge. Lila suggested that when the evidence is inadequate on its own when making a decision for a specific patient, she synthesised it with other influences including her intuition.

...your intuition and what the patient are like, what the team is like and what their practices are is all together to then what you actually do, put all that together and then influence your judgement and what you end up doing. (Lila, I2)

The expertise involved in clinical judgement was largely built on experience, therefore, dietitians’ clinical judgement is distinguishable from reasoning utilising only evidence-based knowledge to make decisions. This reinforced the perspective that a dietitian’s CDM with clinical judgement was not just about having the specific knowledge but about the skill of using it with other relevant patient information and incorporating it all together for quality decision making. In the following quote, Lila expressed her view of clinical judgement indicating that it is a necessary and defining skill for being a dietitian.

Anyone can get the evidence. Anyone can probably Google the evidence and figure out what you would do for someone that's post lap band or had bowel surgery. A patient could get that information but I suppose your clinical judgement is then applying it with considering the patient's whole case, other diseases, other things that might be impacting on them, finances, anything...that's what makes us the professional. (Lila, I2)
Rigid use of evidence in the acute care setting was not considered by participants ideal for maintaining supportive relationships, which were needed for patient advocacy. Clinical judgement was used to help weigh up the benefits and risks of making decisions that incorporated the opinions of doctors that differed from the participants’ understanding of the evidence-based practice. This was common for all participants. Lila shared how in her area of specialty gastrointestinal surgery she was repeatedly faced with the decision as to what degree she was comfortable to deviate from her knowledge of evidence-based practice without affecting patient nutritional outcomes because she had to factor in the opinions of surgeons she worked with. Lila’s clinical judgement involved bringing together her knowledge of the opinions and values of the surgeon as well as the patient factors and make decisions about how to proceed to care for the patient. This example highlighted the role of how clinical judgement is involved with having a flexible approach to deciding about patient care with other health professionals.

*You have to be flexible with that [the evidence] to fit with how it’s going to work for everyone else as well. Otherwise, it doesn’t work and they’ll [surgeon] just say no and you won’t get anywhere and that’s worse for the patient than getting a little bit done for them.* (Lila, I1)

A dietitian with a holistic view of patient care uses clinical judgement so that it can incorporate a large amount of important information and influential patient factors to decide on how to improve a patient’s nutrition and wellbeing. Clinical judgement was considered by most of the participants as the bringing together of objective and subjective, trivial and important components of what has and can influence a person’s health, nutrition and wellbeing. In the following quote, Melissa captured the essence of how being a dietitian who tried to provide effective care for patients involves consideration of the ‘bigger picture’ for which the reasoning process of clinical judgement involves when making decision.

*You really have to think about the bigger picture and there are so many elements to consider. There’s all the medical history, the medications, the blood results, then you bring that altogether based on your diet knowledge which is coming from the evidence-based on articles, protocols, guidelines, and then develop a plan that meets all of that scientific side but also something that the patient is willing and able to do.* (Melissa, I1)
In summary, the cognitive process of synthesising patient information and dietitian knowledge was a defining characteristic of clinical judgement and paramount to being able to make decisions that try to meet the needs of individual patients. Clinical judgement involved identifying the limitations and appropriateness of available evidence and evaluating it while considering the context of the patient and then synthesising it with various knowledge types to make decisions that are appropriate and best serve the needs of patients.

6.5.2 Using clinical judgement to manage complexity

Clinical judgement was one of the cognitive processes used to solve problems in complex patient situations. Complexity occurred when there was greater acuity of patient conditions, ambiguity, complex psychosocial context and multiple or difficult interactions with others needed (section 6.1). Often in complex situations, there was no single right solution to a problem, so clinical judgement was often a means by which the dietitian made decisions suited to the specifics of the patient.

Participants revealed the role of clinical judgement when presented with challenging patient scenarios where they made care plan decisions that deviated from usual clinical protocols. Sally revealed that she used her clinical judgement to decide on a nutrition care plan when the patient’s variables were not standard or did not fit into usual practice guidelines. For example, practice guidelines for ICU nutrition state that patients need to be fed within 24 hours of admission to ICU. Other guidelines also say the patient’s bed head should be elevated at 30 degrees while feeding via enteral feeding tube to reduce risk of aspiration into the lungs. The patient example Sally shared had high nutritional requirements as per calculations with relevant equations. Sally explained a scenario where she couldn’t adhere to these guidelines in her care plan due to the nature of the patient’s medical treatment requirements. Yet there was an absence of evidence that pertained to all of these issues within the one patient that would direct care planning. Therefore, she had to problem solve delivery of nutrition in a way that approached as close as possible to the ideal nutrient provision, that is, feed
as early as possible, with the lowest feed volume as possible but as high as protein provision as possible all while trying to minimise aspiration risk. The sole use of evidence-base knowledge could not offer appropriate solutions due to the inherent complexity. Therefore, this complex scenario required clinical judgement based decision making to develop an optimal care plan.

...because there are so many areas where we can refer to books and whatnot but there isn't much good quality level of evidence to guide every little recommendation that we make and so much of what I do, I suppose, is guided by my clinical judgement. Based on x, y and z, which x I've had a patient where this happened and this worked well. Y, this happened and this worked well. Z ... combining all those factors, this is probably the way to go based on those factors but there's no particular tactile evidence to support it. (Sally, I2)

Increased uncertainty in patient scenarios generally resulted in the use of clinical judgement to facilitate decision making. This uncertainty was often represented by gaps or limitations in available information to inform decision making. Participants gave examples of inadequate evidence about therapeutic interventions that specifically matched the patient scenario at hand. Mary described how she brought together experience and knowledge of the patient for decision making when faced with what she perceived as limited scientific evidence.

Yeah, and knowing that there is, that it's an area with limited evidence. I know that there's no clear cut answer to it, so I'm using my experience, I'm using what I know about the patient, and how it fits in with what the department does to make that overall decision so I feel comfortable with that. (Mary, I2)

When there was inadequate information available from or about the patient’s nutritional and symptom history, this often resulted in increased reliance on clinical judgement to make decisions about identifying nutritional issues and strategies to address them. Limitations in information and evidence resulted in more reliance on experienced-based knowledge while using clinical judgement to weigh up risk and benefit of certain possible actions. For some participants, particularly those who had less experience in a particular clinical area, the presence of uncertainty increased their own uncertainty about what the outcome of their decision making concerning interventions would be. In the following quote, Sarah describes
how when a patient scenario doesn’t connect with evidence and guidelines, she relied on her clinical judgement to provide safe care.

*I think for me that's [clinical judgement use] usually when maybe something doesn’t quite fit exactly as it should. There might not be one certain thing that should definitely happen for a certain patient based on literature. If in doubt just trust your clinical judgement, as long as it’s not going to be dangerous or detrimental to the patient.* (Sarah, I2)

For Penny, a highly experienced specialist in the ICU setting, complexity was also sometimes a catalyst for greater use of a more empirical approach to reasoning. This was commonly used in combination with her clinical judgement given the ambiguity of some patient scenarios as well as the need to synthesise multiple types of clinical observations as she monitored the patient. In the following quote, Penny explained how she approached making decisions about how to intervene over multiple episodes of care for a patient who had intestinal failure, a very complex nutritional and medical problem.

*Well, it was just empirical. So I started with low doses of things and you're really relying on the nurses to keep good records of what outputs how much it is and how – what it's looking like and in the gastro ward they're very good at describing using really salient terms, but in ICU then I guess they don’t have the same sense of which descriptive words are relevant when you’re documenting what the output it and so I was kind of going to see the patient more so I could look at it myself. And really just judging from how the patient is feeling and how the output is looking and kind of just titrating what we did day-by-day. I guess I've got some default schemas, or I might extrapolate a general principle if I can’t see a good reason why it wouldn’t apply, like, just sort of stretch it to fit that patient.* (Penny, I1)

Clinical judgement also dominated the reasoning approach used to make prioritisation decisions that were not straightforward and therefore complex. All the participants shared that they often began their workday with a focus on prioritising which patients needed to be seen and in what order. The clinical judgement used to make these prioritisation decisions involved comparing the degree of risk and need among patients within their workload. Inductive reasoning was often used to do this. However, the participants then had to consider the identified risk with the protocols and guidelines concerning prioritisation in place in their department or hospital. This clinical judgement relied upon both tacit and scientific knowledge.
participants had developed in their specialised area. A few of the participants, particularly in ICU, Penny, Sally and Kate identified that the patients in their ward are all technically highest priority according to the protocol. Therefore, clinical judgement was the reasoning process these participants used to distinguish between all of their high priority patients in order to decide in what sequence the patients should be seen. This involved use of experience-based knowledge developed from time spent in their specific clinical area. In the following quote, Sally gives an example of how she prioritised priority one patients (according to the protocol) using her clinical judgement.

So priority one patients being patients on enteral feeds or TPN, and then progressing down to priority two, which would be oral nutrition support. Therefore I might have a bunch of 10 patients on enteral feed and another two or three on oral nutrition. I'll see the enteral feeds first or I'll use my clinical judgement if there's an enteral feed that's stable at goal rate and somebody not eating who doesn't have a tube feed. (Sally, I1)

In more complex patient scenarios, clinical judgement was used when the HDR approach to reasoning was no longer suitable to help make decisions to resolve the present problems. During the patient admission, new problems could arise, that necessitated a different approach to problem solving. Clinical judgement facilitated decision making when these problems became complex, in that the specifics of the patient situation started to deviate from what participants referred to as the ‘standard’.

I think for me I always start with a process, step-by-step process, to try and resolve that problem but from what I experienced is that you do that to a certain point where the patient deviates from the standard and you end up trying to problem-solve with another issue or problem that arises. (Alice, I2)

Using clinical judgement to make decisions about problem solving, participants weighed up elements of what was considered best practice for managing certain nutritional issues as well as what was feasible in the specific ward context. This relied upon incorporation of evidence-based, context and experience-based knowledge to make care plan decisions that were both likely to resolve the issues and were practically achievable in the
patient’s context. For example, for Sally in ICU, a strategy that aimed to increase protein provision without increasing calories to a patient being fed via a fine bore nasogastric tube needed to factor in the willingness of nursing staff to be very diligent to flush the tube carefully as well as administer a protein supplement in addition to usual feed management. Sally relied on her clinical judgement to guide decision making about delivery of nutrition in this and similar instances.

In summary, clinical judgement was the dominant reasoning process used by dietitians when managing complexity. Clinical judgement enabled consideration of patient scenarios that deviated from typical situations within specific clinical areas as well as when there was greater uncertainty present. The participants’ clinical judgement relied upon the evidence and experience-based knowledge specific to the clinical specialty that the patient’s medical issues belonged to.

6.5.3 Using clinical judgement for interacting

Clinical judgement dominated dietitian decision making about how to interact with others concerning patient care. Clinical judgement about interacting with patients, carers and other health professionals involved the use of a subjective evaluation of the nuances of the relationship the dietitian had with the other person with which communicating was necessary. The participants revealed they used clinical judgement about when to communicate, why that communication was necessary for patient care and then how to engage with that person effectively. These decisions are mostly underpinned by clinical judgements because they involved essential knowledge and consideration of context including people surrounding the patient as well as the clinical and biopsychosocial factors unique to the individual patient scenario. Essentially there was no single right decision to be made concerning the communication that was required by the dietitian to provide care for the patient, therefore requiring clinical judgement to make the best decision for that scenario at the time.

...a lot of things that you do requires clinical judgment, such as you’ve got to know when to bring things up with the doctors, the right timing. (Melissa, I2)
The type of communication decisions where clinical judgement was commonly used was when advocating to the medical practitioners involved in the patient’s care. As revealed in Chapter 5, dietitian CDM in the acute care setting involved a strong focus on knowing and deciding how to advocate to the medical practitioner about various nutrition interventions. Clinical judgement, therefore, was dependent on knowledge of the medical practitioners responsible for that individual patient in that specific clinical area.

*Not my ultimate decision but I use my clinical judgement to hopefully influence their decision at the best of times.* (Lila, I1)

Making decisions concerning the identification of the most appropriate person to advocate to involved using knowledge of the responsibilities, opinions and preferences of doctors concerning the patients’ health and nutrition. The majority of participants in this study worked across two or more clinical areas which by default involved the dietitian needing to have knowledge of multiple doctors and their views on nutrition intervention. Sally explained her decision for a complex patient scenario and how being able to identify the key medical practitioners that weren’t directly located in ICU was crucial to improving the patient’s nutritional status. In the following quote, Sally described the connection between who she has to advocate to, the medical practitioners’ opinions and preferences and her clinical decisions which were true for all participants.

*It would depend on the particular team or consultant, very much so, actually. Probably more so than clinical guidelines would as to what recommendations I make. Because often the consultant that’s in charge on the day, whether it be the ICU team or surgical team or whatever, will often change ... even if it’s ever so slightly, they all have their own little preferences or their own clinical judgement that will guide what they would normally do in that situation, which I would then have to adapt to.* (Sally, I2)

Clinical judgement was the reasoning process used to weigh up the degree of assertiveness that could be used without compromising the respect and rapport that had been developed within the dietitian’s relationship with the medical practitioner. This was most apparent for the dietitians who had been specialising for a greater degree of time indicating they had already
developed supportive relationships which they valued and made explicit efforts to maintain. Clinical judgement also facilitated decision making about when not to be assertive in certain circumstances when trying to achieve support for certain nutrition interventions. Melissa expressed her views that it was experience that assisted with developing the clinical judgement to know when it is safe for the patient and appropriate to not persist pushing for what she would consider the ideal evidenced-based decision given it clashed with the preference of the doctor in charge. Melissa did not believe that this nuanced use of clinical judgement was developed in novice dietitians. Less experienced participants which were those who had not yet specialised and spent significant time in the one specialty with the same medical practitioner consultants conveyed less confidence in making clinical judgements that deviated from the ideal intervention. Lila also revealed that it is important to know when to accept a difference of opinion for the sake of future attempts to solicit support from a doctor for other patients. In the following quote, Lila shared how she managed her responsibility to advocate for patient care while keeping a relationship with the doctor in circumstances where she hadn’t yet gained support for what she believes to be the ideal intervention for the patient.

*I would always document in writing every day, ’Can you just consider this?’ So they know it’s still top of mind but ultimately the decision is theirs and if you just rub them up the wrong way essentially you’re probably going to get nowhere with any of your patients in the future as well.* (Lila, II)

In summary, the dietitians’ clinical judgement underpinned various decisions that were important for interacting within and around each episode of patient care. Dietitians developed relationships, particularly with medical practitioners through which they sought support at certain instances for relevant nutrition interventions. The timing, with who and the way in which this occurred was predominately decided upon using clinical judgement, particularly in circumstances where there was need for being assertive or there is a difference of opinion.
6.5.4 Using clinical judgement to individualise care plans

Use of clinical judgement enabled the dietitians in this study to decide on care plans that were unique or specific to the needs of individual patients. Clinical judgement was deemed to be necessary to decide on strategies that aimed to achieve nutritional goals because it was rare to have a patient that perfectly matched the representation in practice guidelines or scientific literature. Dietitian clinical judgement was used to create a tailored approach to patient care particularly when the patient situation and clinical variables changed and required re-evaluation. Clinical judgement also facilitated decisions about how to provide individualised dietary education to patients. Clinical judgement was used to determine how these changes mattered to current and future nutrition care planning resulting in further clinical decisions made about what interventions might now be suitable.

Clinical judgement was a reasoning process needed to reach patient-centred decisions about care as there were many decisions that needed to be directed by the context of the patient rather than simply the evidence. More specifically, care plan decisions were best for a patient when they were tailored to consider the multiple variables that were specific and unique to the patient but could also change quickly before during and after episodes of care. Through the course of a patient’s stay in hospital, the dietitian sought information related to and evaluated the influence of the patient’s social, emotional, physical and mental past and present situation in order to develop care plans that were best suited to the patient’s life situation. In the following quote, Alice explained how the reality of caring for patients required clinical judgement to arrive at decisions that cater to the patient’s needs. Clinical judgement incorporated these variables with broader contextual knowledge such as the nature of specific wards and evidence-based knowledge to facilitate development of an individualised care plan.
...a lot of dietitians will say that half of their decision making is based on clinical judgement because we’re dealing with something that can change so quickly – life, food, nutrition, health and patients. You can’t always apply textbook or guidelines standardly...it’s just looking at the patient as a person. I think that a lot of the times I do that... just assessing this person as they are, what their outcomes are going to be like, what their life’s like helps me. I think that’s behind a lot of my clinical decisions or clinical judgement as well as the experience of how things go in healthcare because you can’t pigeonhole patients, so you can’t just do the same for everyone. (Alice, I2)

Clinical judgement allows for skilful management of all contextual elements of a patient scenario in order to provide an individualised care plan. The dietitians described the evaluation of influences on the ideal strategy to a patient not eating well to help determine how aggressively to advocate for certain interventions. Examples of these contextual influences could be whether a patient is palliative, awaiting treatment or surgery. A common example shared by the participants was that there could be two patients that both have inadequate nutritional intake that can’t be improved through oral nutrition support so objectively, the decision would be to provide nasogastric feeding. The dietitian’s clinical judgement was guided by questions that sought to decipher the specific appropriateness of this intervention given the individual circumstances. Sarah explained how caring for patients with cancer can often require clinical judgement of how this intervention would affect other aspects such as quality of life rather than just nutritional outcomes:

They might both, for example, need enteral feeds. Then in an oncology setting, well, what’s your clinical judgement...what’s the aim of enteral feeding with this patient? What’s it going to achieve versus someone else maybe who needs feeds because they’re in the ICU and intubated. (Sarah I2)

Making individualised care plans relied on clinical judgement that was influenced by previous experience with similar patient scenarios. This experience informed the reasoning process that could result in decisions to not intervene for a patient. This clinical judgement relied on experience-based knowledge concerning common outcomes when scenarios involved certain combinations of patient factors and health diagnoses resulting in a prediction by the dietitian about likely outcomes from certain nutrition
interventions. Clinical judgements in these circumstances were highly individual to the patient scenario involving evaluation of risk and benefit for implementing certain nutrition care plans. In the following quote, Alice shared an example of her clinical judgement that was used to decide not to treat a patient’s malnutrition aggressively. She used her knowledge of the patient’s disease process, the patient’s willingness to engage in therapy and remain an inpatient weighed up against the invasive nature of inserting and feeding via a nasogastric tube and decided that in this instance, less intervention was more appropriate for the patient.

*My decision was not to assess him and not make any recommendations because I didn't feel that it would improve his outcome. Textbook wise, you see a malnourished patient and you should make recommendations to improve it but because I've worked in the hospital settings you see patient outcomes, you've experienced it, so my clinical judgement was that he wasn't appropriate for any type of aggressive nutrition support.*  
(Alice, I1)

Clinical judgement was also involved in deciding how to provide individualised dietary education to patients. Not all participants in this study worked in clinical areas where providing education was a regular part of their role with patient care. However, for those participants that did, education that was individualised was considered to be more effective at improving patients’ understanding of their nutritional needs and therefore creating positive change for their health and wellbeing. Tailoring education relied on not just the dietitian’s knowledge of the biomedical and nutritional elements of information that needed to be communicated but also awareness and consideration of how the patient best receives information. Clinical judgement was involved in deciding not just what concepts and information should be shared at certain time points but also how best to explain and share recommendations with the patient. In many circumstances, this required clinical judgement because the patient context was complex and achievement of successful outcomes required overcoming barriers to communication. For example, in the following quote, Theresa shared how she used her clinical judgement to problem solve communicating important dietary strategies that have significant impacts on the patient’s renal function when the patient couldn’t read or write.
Clinical judgement was the reasoning process used by dietitians when deciding on when and how to monitor individual patients. Judgement was needed because the decision involved consideration of more than just the medical diagnosis or the identified nutritional issue or even what intervention was in place. Deciding on when and what to monitor during the course of a patient’s admission involved evaluating what changes have or haven’t been made as well as making predictions about what changes are likely to occur after each episode of care. Therefore, this was a decision highly reliant on experienced-based knowledge while interpreting patient information over time. Belinda gave an example of how she considered the psychosocial elements of the patient’s situation as well when using clinical judgement to determine when she will next review her patient on the oncology ward.

*With this particular patient, although there isn’t many changes in my intervention, I felt I needed to give reviews twice a week so I can help keep her on track. So, there is a combination of things influencing my decision. There’s always the acuteness of what I need to do therapeutically using what I know about the patient and then there’s whether they need more positive reinforcement. (Belinda, I1)*

In the following quote, Penny gave a good example of how the task of developing a feeding regime for a specific patient is a task that is common and standard to acute care dietitians and is reliant on knowledge of how to do calculations but it is also integrated with other types of knowledge such as contextual knowledge and her clinical judgement.

*So I use a number of standard methods for estimating energy requirements and protein requirements which are based on international guidelines. He hasn’t been fluid overloaded and they’re actually doing dialysis, so I wasn’t really worrying about restricting fluid, and so fluid didn’t end up being a consideration in the feed formula choice, and then because he’s malnourished, I just wanted him to have extra micronutrients but I didn’t actually calculate how much above the IDR or anything. I just wanted to have a formula that would generously provide his needs and the standard feed formula we use in ICU will give him about double his requirements for micronutrients and give him – meet his estimated protein requirements if I follow those guidelines. So it filled my requirements. (Penny, I1)*
In summary, individualising care plans for patients was a mainstay of the dietitians’ approach to patient-centred decision making. Clinical judgement as a reasoning process facilitated the various decisions that tailored a care plan to the physical, social mental and medical factors influencing on the patient’s nutrition.

6.5.5 Conclusions
Clinical judgement was a meta-reasoning process developed over time and used by all participants involving the conscious and subconscious synthesis of significant amounts of information in order to make decisions and provide patient care. Participants used clinical judgement to make a decision when dealing with complexity, to guide communication and negotiation with medical practitioners about patient care and to individualise patient care plans allowing for greater involvement of patient preferences and context. Clinical judgement was influenced by the type and amount of the dietitian’s experience, reliant on knowledge structures, particularly experienced-based and was mostly tacit in nature. The participants considered clinical judgement an integral part of their approach to CDM.

6.6 THE IMPACT OF EXPERIENCE ON DIETITIAN REASONING
Clinical experience, including amount and type, significantly shaped the nature of reasoning used among the participants. Clinical judgement and inductive reasoning approaches were shaped and developed by the dietitian’s professional experience. With experience, participants indicated that they developed greater amounts of experience-based knowledge, confidence, and competence which informed and helped develop clinical judgement as a reasoning process useful for decision making in their clinical area. The role that a HDR approach to decision making had was mostly influenced by the patient scenario characteristics, in particular, degree of complexity.

As dietitians become more experienced, their clinical judgement became seamlessly integrated into a comprehensive and sophisticated multifaceted reasoning process. Distinctions between more experienced and less
experienced participants were seen in responses to probing questions about how they made decisions within the simple and complex patient scenarios shared in the interviews. The five participants with least number of years and specialised experience overall articulated at some point that clinical judgement was one aspect of how they made decisions. Furthermore, the more experienced participants Theresa, Penny, Melissa, Belinda and Kate never referred directly to clinical judgement at all to explain their decision making until the second interview when they were explicitly asked to consider its role in dietitian CDM. Instead, initially, reasoning was expressed as a comprehensive patient-specific approach to problem solving and less like a set of components of or steps to make decisions. The following quote from Kate reflected a common element accounting for the embedded and tacit nature of reasoning with experience indicating how dietitians may become less consciously aware of when clinical judgement is being used.

*I think it's always been there to some extent so you become more experienced and competent in your ability and have more knowledge in particular areas that it becomes more evident or probably stronger, but I guess I'm not necessarily aware of that on a conscious level. (Kate, I2)*

Regardless of the total amount of experience, simply with increasing experience, participants perceived their reasoning became more efficient. Experience made the unfamiliar patient familiar, prompted learning and development of experience-based knowledge. This learning in turn enabled quicker, more holistic and context driven decision making which participants have indicated represents using clinical judgement. However, over time, this reasoning process became more automatic resulting in less awareness of when and how decisions were being made. Mary, the participant with less total experience than the others, shared in the following quote how experience changed the nature of her decision making, with it moving from more conscious to less conscious.
I was just reflecting back on my practice as a new dietitian, and I think back then I was a lot more conscious of each decision that I made, because I think about it, and then am a little bit worried as whether I’m making the wrong decisions, you reflect a lot more back then. Whereas I can see myself through that journey now, that when I’m seeing a patient, it all comes naturally to me, and I guess that comes with experience, you tend to, you’ve seen a lot more, you know what to do, you don’t tend to think about your decisions as much, yeah, you don’t see that as a decision. (Mary, I2)

Clinical judgement was characterised by specific knowledge and skills accumulated from the participants’ specific clinical area experience. Therefore, one dietitian’s clinical judgement functioned differently for another dietitian who had not worked in that same clinical area for a similar length of time. Extended periods of time spent with focus experienced in one or two clinical areas developed greater experience-based knowledge which were fundamental elements of any dietitian’s clinical judgement. The specialist dietitians, Theresa and Penny, were often a point of contact for other less experienced dietitians working in their speciality area for expert advice. While the evidence within a specific clinical area is accessible by all, the complex and experience-based knowledge that they possess created clinical judgement that can only be accessed from the expert dietitians themselves. Theresa made this distinction of what specialist experience does for her clinical judgement in the following quote.

My clinical judgement is slightly different from other people with less expertise in that particular area. I think it plays a huge role in the decision making that I would make about a diet or the prescription or the education that I’d give a patient. (Theresa, I2)

Experience increased confidence about clinical judgement use in CDM. Those with the greatest experience in this study expressed greater confidence with their decision making overall but also a confidence in using clinical judgement. This was seen in the interviews through their matter of fact tone, confident physical expression and lack of verbal justification offered for how clinical judgement is part of their decision making. There was greater confidence to use clinical judgement and deviate from protocols and guidelines in those dietitians with more experience, and particularly in scenarios within their specialty. In patient situations where there was greater
complexity, more ambiguity or large information gaps, clinical judgement played a greater role in deciding what to do for a patient to manage their nutritional problems. The dietitians with greater specialised experience expressed less hesitation and greater certainty about their decisions which often involved the need to evaluate when the evidence is not applicable in its entirety because of the context of the patient. However, all participants, regardless of relative experience, shared how confidence in using clinical judgement sat within a continuum with increases occurring with ongoing experience.

*With experience, I think you become a bit more certain about yourself and confident about your clinical judgement as well. So, yeah, I think that just came with time.* (Mary, I1)

More experience was considered to increase the range of schemas available for recognising patterns for inductive reasoning approaches. Each patient care episode was an opportunity to gain more specific and complex experienced-based knowledge constructs that are available for retrieval. Penny explained in the following quote how experience facilitated greater accuracy with recognising patterns despite complexity or ambiguity.

*I think it’s right from the start, but you, I guess, can incorporate a wider range of situations into your schema. It’s like recognising patterns when there’s a lot of other interference going on, you get better at, and you, I guess, collect a few more schemas as you go along.* (Penny, I2)

Experience facilitates more skilful handling of the subjective and contextual elements of decision making which underpin clinical judgement. Over time, some participants suggested that direct patient care experience fostered an appreciation and competence to incorporate the specific influences and variables of a particular patient scenario. This is opposed to the reliance early career dietitians tend to have on objective theoretical facts or guidelines to inform what intervention is best. Melissa articulated this clearly when sharing in the interviews how helping students to make clinical decisions that consider context like her clinical judgement would. She emphasised that is a challenge for students when on practical placement who have not yet had adequate opportunity to explore the diversity and uncertainty present within caring for inpatient nutritional needs.
It's always been right or wrong and then suddenly there's this in-between ground and that's really hard to deal with because your brain worked right or wrong and now you've got this middle area that's sort of OK. (Melissa, I1)

The reasoning process required was not always discernable to participants prior to engaging in the process. After making initial impressions, followed by further information collection and analysis, the initial impressions were sometimes no longer considered accurate. This was common for when the patient was able to be highly involved in both providing significant amounts of information as well as in a shared decision making approach. The nature of how the patient engaged in this decision making and what information they provided, with the participant valuing the patient’s perspective on how to manage their own health and nutrition meant that a mostly deductive process to arriving at decisions was no longer the most appropriate. Mary felt that it was experience that assisted with managing change to initial impressions due to unexpected information or greater patient involvement. This often meant she moved fluidly into using her clinical judgement to make further decisions about what the nutritional issues may be and what strategies will be beneficial to help the patient.

I do go in with a sort of mindset about what to expect, but it may turn out completely differently, and I think experience probably has helped me to know how to handle it. (Mary, I1)

Limited experience in patient care in a clinical specialty a participant was not as familiar with prompted preference for use of the HDR approach to make decisions. The role of a more deductive process with more complex tasks suggests a relationship between the reasoning needed and task complexity. HDR reasoning during complex tasks was often slower and involved more steps and conscious analysis of patient data, often seeking new information to test assumptions about what the nutritional problems were and what interventions were appropriate. In these instances, there was less use of inductive reasoning and conscious evaluation of the dietitians’ available knowledge needed for making decisions. In the following quote, Mary explained how managing a patient that she had no or limited experience in prompted her to engage in more deliberate analysis and
evaluation of what information she has and needs to support decision making.

*I think when I get a challenging case or something that’s new that I don’t know a lot about, then I’ve got to think of A, B and C, talk to different people, more experienced colleagues about it, and it then, yeah, it just helps you to... you go back to the basics, you look through the literature, and then you make decisions to know how to match that patient, and I think that would require me to think more about it.* (Mary, I2)

More experience in solving patient problems, weighing up broader aspects of patient care and reflecting on practice facilitated the development of further reflection and clinical judgement. Penny believed she started as a graduate with good propositional knowledge but lacked a holistic view of patient care which didn’t develop until greater experience was gained. Sally felt that her limited experience as a new graduate not only meant she relied on the literature and guidelines more to inform her decision making but she also had less awareness of what she didn’t know.

*It was probably just pure ignorance as to what I was missing back then... I probably just referred to books and thinking I’m doing the right thing but having no other reference point other than textbooks or lecture notes or whatever, to know that it might not be the most appropriate solution for the patient. Luckily they were simple cases.* (Sally, I2)

In summary, the nature of the different reasoning processes used to make decisions strongly related to the dietitian’s individual experience and the knowledge developed from these experiences. Over time, experience facilitated deeper incorporation of knowledge and more seamless use of clinical judgement into decision making, often making this process a less conscious one for the dietitian. As patient involvement in decision making increased, so did the need to use multiple reasoning processes to arrive at recommendations for patient care. The complexity of patient contexts often prompted a slower more deliberate reasoning process in all participants regardless of experience. Participants with more experience in a specific clinical area appeared to move more seamlessly between the various reasoning processes as needed and often with limited awareness.

### 6.7 SUMMARY OF CHAPTER FINDINGS

Dietitians move between reasoning processes in a fluid way that is influenced by amount and type of experience, knowledge use and the
demand of the decision making task. Participant understanding of their own reasoning processes evolved during the interviews, given this involved using questions that aimed to make their cognition more explicit. In the context of the acute care setting, dietitians placed a high value on arriving at decisions that have evidence-based rationales and therefore commonly engaged in hypothetic-deductive reasoning particularly while undertaking a nutrition assessment. Clinical judgement was the meta reasoning process used that dominated decision making in the acute care setting. Clinical judgement was needed in order to manage complexity, individualise care plans, guide interactions with others concerning patient care and the complex reasoning process used to synthesise information and different types of knowledge. Sound clinical judgement was considered an essential and important component of the way experienced dietitians make decisions given the constant changing, often ambiguous and subjective nature of patient care in the acute care setting.
CHAPTER 7 THE EVOLVING NATURE OF DIETITIAN CLINICAL DECISION MAKING IN THE ACUTE CARE SETTING

The nature of dietitian CDM changes over time. Through repeated engagement in experiences that challenge the capability of the dietitian, combined with reflection within and on experience, CDM expertise develops. This chapter examines influences on CDM expertise development through experience and how this varies between participants. Influences such as confidence, workplace environments, and the intrinsic motivation of the participants are described. Professional artistry, considered by participants as the ideal type of individual expertise in clinical dietetics was characterised by efficiency, adaptability and influence supported by crucial supporting practitioner elements. Expertise in this research refers to the ability to undertake high levels of performance on a particular task or domain.

7.1 FRAME AND SCOPE OF CHAPTER
This chapter focusses on two key findings and is structured as such. Firstly, in sections 7.2 to 7.7, how participants’ CDM expertise developed over time including influences and their interdependent relationships is explored. This first part of the chapter begins with A Model of Developing Dietitian CDM Expertise (Figure 7.1) with sections 7.3-7.7 providing an in-depth understanding of the dimensions present within the model. Then in section 7.8, professional artistry is depicted as the ideal expertise that underpins effective CDM in clinical dietetics. This final part of the chapter includes A Model of Professional Artistry in Clinical Dietetics (Figure 7.2).

The exercise of graphing and discussing participants views on how the CDM expertise developed revealed common facilitating factors involved in the development of capabilities required for CDM as well as differences that were specific to the individual practitioner. The concept of professional artistry, known to be present in other allied health professions (refer to Chapter 2.6.2), was intentionally introduced to participants during the
interviews to facilitate exploration of this concept and how it might relate to dietetics.

It was considered valuable to explore the concept of professional artistry in this research given its representation of expertise and professional judgement in other health professionals (see Chapter 2). Gaining perspectives on the relevance of professional artistry in clinical dietetics was used in the interviews to draw out participant considerations about how expertise is viewed of which CDM is a primary component. Exploring professional artistry as a potential representation of expertise was valuable in gaining an understanding of the multidimensional nature of expertise in clinical dietetics that extends beyond skill and knowledge utilisation.

7.2 A MODEL OF DEVELOPING DIETITIAN CDM EXPERTISE

A Model of Developing Dietitian CDM Expertise (Figure 7.1) was developed in order to depict the crucial relationship between gaining experience that is scaffolded to challenge the dietitian’s capability, reflection on this experience and the dietitian’s confidence. The model seeks to bring to the forefront the key elements participants revealed were influential on their own expertise development. Developing from experience involves ongoing reflection in and on practice. Gaining confidence also then, in turn, supports performance in the practice of CDM that can improve quality of care. This experience – reflection – confidence interdependence continues over time throughout the various phases and transitions of the dietitian’s professional journey. Influencing learning from experience and the development of confidence is a supportive workplace and the intrinsic motivation of the dietitian. Gaining experience in a supportive workplace helps build confidence. A dietitian with high levels of confidence combined with intrinsic motivation tends to proactively seek out and generate further experiences to be challenged by and subsequently develop further from. The dietitian with intrinsic motivation takes advantages of the supportive workplace to drive development further. As revealed throughout the remaining sections of this chapter and now illustrated in the model, developing expertise is multidimensional with each dimension existing on a spectrum of degree to which they contribute to the process of developing expertise over time.
Figure 7.1  A Model of Developing Dietitian CDM Expertise
7.3 THE ROLE OF CHALLENGING EXPERIENCES IN DEVELOPING CDM EXPERTISE

Participation in direct patient care experiences was considered fundamental to the development of CDM expertise. A main catalyst to the enhancement of participants’ CDM expertise was engagement in professional experiences that challenged the participants’ current ability. Challenging experiences were identified by participants during the interviews when they described the development of their CDM expertise. Challenging experiences were those that created tension between current ability and future capability for CDM. These included different phases of experience such as, entering specialisation and transitioning between jobs, roles and clinical areas. How the dietitian responded to this tension was influential on how CDM expertise developed from these experiences.

Most participants made distinctions between phases in their career to date, with early-career experience marked by steep learning curves, given the frequent exposure to unfamiliar patient care scenarios utilising the limited knowledge they possessed at the time. This was the initial focus of the participant’s descriptions of mapping their journey of CDM expertise development. The characteristics that participants had in common that marked the first 2-3 years after becoming a credentialed dietitian were lower levels of confidence; dominance of rule-based reasoning approaches; less developed clinical judgement and a higher reliance on evidence-based knowledge (Chapter 6). In the following quote, Sarah highlighted how her decision making differed earlier in her career to now 5 years on.

When I first graduated, probably that first year since graduation, most of my decision making was guided by what I had learnt and what I had been taught and what was in literature. Whereas now it's probably more ... it’s influenced by experiences of working as a dietitian. (Sarah, I2)

Participants recalled their first couple of years working in acute care dietetics as involving steep learning curves due to engaging with many new and unfamiliar patient care experiences. Rotation into a new clinical specialty occurred more frequently than further down their experience timeline. These new experiences enabled increased development of experience-based knowledge. However, there was still a strong reliance and
focus on evidence-based knowledge acquired from their tertiary education and scientific literature (Chapter 6.2). Belinda provided a metaphor for her development in this period in the following quote.

*And obviously it is my first job here, so I think I am just like a sponge in that I learnt a lot in that year. (Belinda, I1)*

The development of CDM expertise in acute hospital dietitians is influenced by the type of clinical specialty worked in and the responsibilities therein. When asked to explain their decision making development journey, nearly all participants identified changes to rates of growth coinciding with a change to the clinical specialty or clinical responsibility they were given. New rotations into new clinical specialties provided opportunities to develop new and greater context and experience-based knowledge in a particular clinical speciality. This knowledge then informed decision making often resulting in greater confidence in CDM with patients from that area.

Specialising refers to the time when a dietitian remains in a particular clinical specialty within the hospital which involves a focus on a patient group with similar medical problems. At the time of the interviews, all participants except two, Mary and Sarah, were specialising in a particular clinical specialty and had been for at least two years. The process of immersion in a clinical speciality allowed for time to realise the gaps in knowledge and skills needed to perform at higher levels of efficiency and effectiveness. In the following quote, Sally shares how spending more time in an area allowed her to invest in her professional development in a more targeted way.

*Over that time, I guess I have had the ability to really sink my teeth into one area, knowing that I’ll hopefully stay there and actually have the time to invest in improving my knowledge and therefore ability in making recommendations. (Sally, I2)*

The participants who identified themselves as specialists in a clinical specialty attributed a steep development in their clinical reasoning skills through learning from challenges faced in the initial phase of working in their specialty area. This included learning new clinical knowledge, having
to manage more complex patient problems as well as develop and manage new and often difficult inter-professional relationships. These challenges created a tension that illuminated gaps in what skills, knowledge and understanding they needed, prompting decisions to act to resolve these gaps. They associated steep learning with a sense of challenge and being ‘thrown in the deep end’ (Sally, I2) given they were managing more complex cases independently and with less assistance or supervision. Taking initiative to contribute to solutions of complex patient scenarios often contributed to reinforcing the position of power Sally had in the role of specialist and leader within her clinical speciality. For Theresa in her area of renal nutrition, when presented with challenges that demanded greater demonstration of her decision-making expertise, she thrived as it boosted her confidence.

*I have just taken the reins now and gone screw it, you’re talking about an area of research that is my speciality and area of expertise, so I’m going to be the lead here.* (Theresa, I2)

The development journey described by Melissa in her interviews illuminated the nature of how transitioning from familiar to unfamiliar experiences influenced CDM. Melissa had specialised for 30 years and she indicated she was recognised by the profession as an expert in her clinical specialty. Her decision making appeared efficient and automatic, dominated by the seamless use of clinical judgement informed by high levels and complex knowledge structures. This was interpreted from her description of how she approached decision making for patient scenarios she recalled from her clinical speciality. Melissa transitioned out of her clinical speciality of 30 years into a new workplace and a new clinical caseload. The change in roles illuminated how focussed her knowledge had become and how her confidence in her clinical specialty did not directly transfer to her new clinical role. She explained how this had been challenging given she needed to learn new knowledge that would guide her decision making and develop new supportive relationships with MDT members. In the following quote, she reflected on how suboptimal her knowledge in other areas had become after her lengthy specialist experience.
Because if you specialise in the area for a long time you do try and keep up in other areas but you perhaps don’t do it as well you should.
(Melissa, I2)

In summary, experiences that challenge the dietitians’ various types of knowledge and skill levels provide a means for that dietitian to make decisions that help meet the demands of the task. In particular, changing clinical specialties, specialising, increasing patient complexity and taking on senior responsibilities were common catalysts for expertise development. Successfully undertaking these types of experiences increased confidence.

7.4 THE ROLE OF REFLECTION IN DEVELOPING CDM EXPERTISE

Reflection was communicated by participants as a thinking process that they engaged in both during individual episodes of care as well as over the course of practice experience. Reflection facilitated evaluation of influences on CDM and how their practice could be improved as a result. Reflection was also conveyed as the process needed to benefit from experience and develop expertise, particularly in the discussion about professional artistry (see section 7.8). Without reflection, experience wasn’t considered enough to develop expertise. The participants’ reflection was made more explicit in the interviews when they were asked if they would have done anything different in the specific patient scenarios they discussed. Reflection occurred both informally and formally with others. Reflection also included an awareness of self during and after decision making and respective actions, particularly when navigating power relations and responding accordingly. The more experienced dietitians tended to convey reflection as part of the fluid cognitive processes used in cognition as different from a separate activity. For some participants, reflection operated simultaneously with reasoning processes to monitor and regulate their own thinking. This section examines how participants conveyed reflection as a process that happened at different times with respect to decision making about patient care.
7.4.1 Reflection as a process

Reflection was a process that the dietitian engaged in at different time points with respect to patient care as well as both individually and with others. Participants indicated they reflected on their decision making while monitoring a patient as well as once care for that a patient has ceased. This was the type of reflection that was most explicit in the interviews particularly given the participants were specifically asked if they would have done anything differently. For some participants, the way they thought about their practice was highly reflective and an almost continuous process of analysing their own thinking within decision making.

Timing of reflection

Reflection on decision making was commonly a part of the monitoring process that all dietitians engaged in. This reflection was closely connected to evaluating patient outcomes with respect to what the participant expected to occur. When outcomes started to diverge from expectations then many participants began to question the process they used to arrive at intervention decisions. This also involved reflection on what knowledge was missing to continue with decision making once the dietitian has realised she was unsure of an element within the patient scenario. Reflection during patient monitoring was a process that helped increase the dietitians’ awareness of the influences on more inductive approaches to reasoning. Given how rapid and often subconscious inductive reasoning was, reflection allowed for consideration of what contributed to the decision and an evaluation of the reasoning process. In the following quote, Alice represented this common approach to reflection during patient monitoring in response to asking how did she make decisions about monitoring with her memorable patient scenarios.

"If after a while on the TPN, he's losing a truckload of weight and his abdomen still isn't corrected and there's no other sort of indication why he should lose so much weight or muscle or protein... if it's still poor, then I may need to go back and just check my intervention decision, whether I'm doing the right thing or not...the second example was that I just used my experience and instinct and knowledge [gained] previously and choose an intervention. Then if I'm unsure of something I might just double check that what I'm doing is the right thing and then adjust my intervention if need be. (Alice, I1)"
Reflection by participants involved consciously thinking about the experience of patient care that had just completed, this often being when the patient had been discharged from the hospital or their care. This was made explicit in the interviews after discussion of each individual simple and complex patient scenario. The focus of this reflection was often on what actions the dietitian could have done or done differently in order to improve or change the outcome. A common point of reflection that Sarah, Theresa and Alice communicated were decisions they made about how to advocate to the medical team. On reflection they thought they could have decided to communicate about patient issues sooner and even be more assertive with the team in order to improve outcomes for the patient. In the following quote, Theresa showed a strong degree of patient-centredness as she identified what could have been her responsibility to do differently to help the patient. It showed concern for the patient’s wellbeing and how her practice influenced patient outcomes even when the decision making sat outside traditional scope of practice for acute care dietitians.

_We shouldn’t have discharged her from hospital. Well, that’s not my responsibility but I think we could have probably pressed better as an inpatient team about, no, we really can’t discharge her. We could see the problems looming a long time before the nephrologist could really because he’s only ever had 10-minute snapshots of this lady when he saw her in clinic._ (Theresa, I1)

Sarah also identified how she could have been more assertive when trying to advocate for delayed discharge given the patient’s poor tolerance to the enteral feeding

_Reflecting back on it, even though the patient was in discharge lounge and all the nurses on the ward are pushing patients out and there’s this commotion and stress, just knowing not to be afraid to stand your ground._ (Sarah, I1)

**Reflecting with others**

Some participants communicated how reflection for them involved other health professionals. For a few of the participants, the task of supervising and teaching students allowed for more opportunities to reflect on why they made decisions for patients the way they did. This often helped with refreshing their knowledge on certain topics or understanding further their
rationales for decision making, in turn, determining whether decisions were justified or should be changed for next time. Kate also highlighted the role other people have in prompting reflection on decision making. Experienced colleagues facilitated reflection through conversation either via Kate seeking advice or through more formal means of clinical supervision.

*I've had formal clinical supervision in many of the roles that I've had and I think having a formal relationship with a more experienced clinician often helps you reflect on cases and discuss cases. (Kate, I2)*

Informal discussions with colleagues were another means of facilitating reflection on practice for some of the participants. Participants explained how this enabled them to learn from others on how they might change or improve clinical decisions for similar patient scenarios in the future. This was more likely to occur if participants were working in an environment where they felt supported by their peers and management. Not all participants had or did work in environments that provided for peer interaction or supportive discussion. In the following quote, Alice shared how over time as her confidence increased with experience and when changing jobs this allowed for greater openness to learning through reflective discussion with others about patient management versus solely independently.

*... what I do differently is I actually reflect out in the open. Whereas a lot of times before I reflected internally and just looked things up or researched something I didn't know. Whereas now I do that but I also reflect through other people's experience and have an open discussion about something. I find that in the last three years that's what I do a lot of and I find that it's as worthwhile as just reading up something in a paper or doing research, something like that, just as helpful. (Alice, I2)*

**Reflection changes over time**

Reflection was considered by participants as a means by which they could continue to learn from experience. Reflection was mainly communicated as a process that was intentional and deliberate that was focussed on looking back on an experience that had just happened. How and when reflection occurred concerning decision making seemed to change over time as the participants developed from a novice practitioner to a more experienced one. For some participants, there was more intentional conscious reflection
as a junior dietitian but it often becomes more informal and automatic over time with experience. Kate shared in the following quote her perspective on how reflective practice has changed with experience. Since no longer being a novice dietitian, reflection as a deliberate act has become less common unless she is dealing with a complex problem. This could also be highlighting how reflection can become a more intertwined process in reasoning while making decisions as she has become more experienced rather than evidence that Kate no longer reflects.

_I think it’s something I probably don’t do a lot of now as a more experienced clinician. I feel like you are often very busy and under a lot of pressure to get things done and to be efficient and to get on to the next task. So sometimes I don’t stop and think about what I’ve done well or what I could’ve done better or how the situation could’ve been managed differently. I probably did that more as a more junior clinician. But I think my reflection will be quite informal on a day to day basis when I become unsure of something. But I think I do a lot more reflection on things as a student than what you do or I have done as a practicing clinician._ (Kate, I2)

For some participants, a more continuous way of reflecting about their thinking in decision making was present in addition to reflecting specifically while monitoring and after patient discharge. It was clear from the way that the more experienced participants talked about their decision making and professional experience, that reflection was more than just a conscious act of looking back at experience. More experienced participants tended to express their CDM in more of an overall evaluation or big picture description versus an individual patient focused way. This awareness of their own cognition seemed to regulate their decision making and learning from experience, involved awareness of their limitations but resulted in decisions about actions to minimise these limitations. This type of reflective thinking was more obvious in the interviews with Theresa, Penny and Melissa. It’s difficult to say whether this was due to their greater experience compared to other participants, a consequence of the context of their workplace or some innate characteristic that influenced their decision making approach. It was beyond the scope of this research to focus more deeply on the nuances and mechanics of reflection, so instead it has been interpreted as different reflection than reflecting on actions. In the following quote, Penny described a shift in her thinking that happened partway during
her professional experience so far that involved a greater emphasis on knowing what informed her reasoning in decision making. Consequently, she self-initiated behaviours that would keep her engaged in a critical stance about her reasoning for patient intervention decisions.

Why was I doing it this way, I'm not going to do it this way. I’m going to have a folder and I’m to put them all in there and I’m going to have a little timeline that I’m just going to do on a blank piece of paper every week. And I’m going to do this and that’s going to keep track of things and you start thinking about why am I doing stuff? (Penny, I2)

Melissa demonstrated an ability and a stance she took to be aware of her own knowledge. This, in turn, influenced decisions about how she makes decisions so as to seek out new knowledge given she has identified gaps in her own thinking.

I like to think I know what I don’t know and I know that I never know everything. (Melissa, I2)

7.4.2 Learning through reflection

Reflection was a way in which the participants learned from experience and therefore changed practice as part of developing expertise. More specifically, participant examples indicated reflection could lead to greater awareness of the influences on their own decision making such as information and knowledge gaps or interpersonal skills. Reflecting on specific patient scenarios also directly influenced future decision making about similar patients or issues faced in previous experience.

Belinda shared how she reflected on her interpersonal skills, specifically her ability to read patient emotional cues. Over time because of realising this, she has made deliberate efforts to improve this while working with a patient suffering from various cancers.

... because I know sometimes I’m not very good with picking up sadness and wasn’t really focusing on giving much positive reinforcement. But now I try hard to make them to feel better ... because I’ve read a lot about self-control... I try to give the control back to the patient instead of, I think, previously I focused on telling them about the seriousness of the situation and trying to persuade them to do it, but now I give them the control. (Belinda, I1)
When sharing her experience with a simple patient scenario, Mary indicated that reflection on decision making in that specific experience highlighted that she had insufficient knowledge about medical treatment aspects of patient care. Reflection then led to action taking about rectifying this gap in knowledge in order to improve her practice for future similar patients.

*From that experience, I realised that I don’t know a lot about bowel medications used with children, so that prompted me to read more into it. In this case it was more my knowledge of the medical side of things that I needed to improve on to be able to manage the patient better.* (Mary, I1)

Patient outcomes that did not occur as the dietitian would have preferred also prompted reflection and subsequent changes to decision making. Specifically, unsuccessful attempts to solicit support from a medical practitioner was an influence on the dietitians’ future decision making. Both Alice and Belinda explained scenarios where their request to a doctor for feeding the patient via a nasogastric tube was denied. For Belinda, she reflected on this experience and others like it and how she thought it may have started to impact her decisions for other patients that also may need nasogastric tube feeding. This is an example of how reflection occurred and awareness increased but how it may not result in positive changes to decision making in the future.

*I often reflect on whether I don’t suggest NG tubes enough because I think I’ve been knocked back so many times, so I think well if you are not going to do it, I’m not going to suggest it, so I think my reasoning is impacted by the past experience.* (Belinda, I1)

Some of the participants indicated a reflective stance on their attempts to negotiate with the medical practitioner in a specific patient scenario. This reflection in the interviews revealed how they questioned themselves as to whether they made this decision appropriately given the outcome of seeking support through negotiation did not go as anticipated. Sarah and Alice gave examples of a patient scenario that involved the need to negotiate for a nutrition intervention but the medical practitioner did not agree with their clinical decision. Both of them questioned whether they should have identified a different doctor to begin with. Sarah had decided on dealing
with the registrar within the surgical team, but in retrospect, she reflected on whether she should have gone directly to the Consultant surgeon. She explained the flaw in her initial decision may have been due to her feeling of lack of power in these situations.

*Being the dietitian you just sort of think, oh, well, the last decision falls with the team, doesn’t it? (Sarah, II)*

In summary, most participants conveyed reflection as a deliberate conscious action that involved looking back at an experience that facilitated the development of expertise. Reflection occurred during monitoring a patient, as it often facilitated changes needed to a reasoning process to continue with more appropriate decision making. Reflection about the overall patient care experience often occurred once the patient was discharged from the dietitian’s care. The main outcome of the reflection was improvement to future decision making that should result in a more efficient reasoning process or more appropriate intervention decisions. For the more experienced dietitians in this study, reflection also became incorporated in their way of thinking about their own thinking and how that impacted on their decision making forming a characterising element of professional artistry (see Section 7.8).

**7.5 THE EFFECT OF THE DIETITIAN’S WORKPLACE ON DEVELOPING CDM EXPERTISE**

The context in which some of the participants worked influenced the way and degree to which they developed confidence and how they benefited from experience. This included the degree of support they felt from their dietetic department and managers as well as learning opportunities provided in their practice community. In addition, some participants identified other health professionals they worked alongside within their clinical specialty as influential on their clinical decision-making. When supportive of the dietitian’s professional development, both the dietitian’s department and their wider practice context contributed positively to the growth of CDM expertise.

A supportive environment had a positive influence on participant confidence and in turn, contributed strongly to the development of CDM expertise. For
Mary this came in the form of activities such as journal club or clinical case discussions with other health professionals. She had minimal access to other dietitians given she was a sole dietitian clinician so she made decisions to seek out learning opportunities within the larger organisation or external to it. She indicated that these learning opportunities helped develop her confidence in her CDM. For Alice, a supportive dietetic department allowed her to develop a greater repertoire of reflective practice by encouraging collaborative learning and open discussion. Penny, having experienced a range of workplaces, in the following quote shared her views on the relationship between a supportive environment and confidence in decision making.

Maybe earlier in your career when you’re less confident of your own judgements if you were having this environment that didn’t value it, it might take you longer to develop that confidence cause you’re not having it shored up by anyone around you. (Penny, I2)

A positive dietetic department culture that actively supported the dietitians was considered a strong influence on the development of some participants’ perception of their CDM expertise. Some of the participants had experienced department cultures in earlier employment that weren’t conducive to professional development and therefore, in turn, their decision making expertise. This was due to either limited mentoring and supervision and or a different focus for dietitian time and resources. Alice and Sally experienced minimal to no supervision or mentoring with no guidance or feedback on practice from their managers in one of their earlier roles. Penny had a manager who advised her not to worry about professional development and to stop asking questions. Each of these participants indicated that more growth in decision making expertise and subsequent confidence in related tasks increased significantly in the department culture that proactively offered regular supervision, feedback and practice support. In the following quote, Sally described the contrast between the degrees of support she had experienced in two different departments and how this impacted on her CDM development.
...the managers, the senior staff, everyone was just so positive and wanted to invest in everyone’s potential... even just simple things like supervision with your manager was really effective in setting goals for the future and making sure that you’re on track and have a plan and looking to improve things. Whereas at my previous department, it was more so focused on just show up and do your work, be efficient and don’t cause trouble...it wasn’t about learning. (Sally, I2)

Workplace environments that involved learning from other health professionals were seen as influential on expertise development. When coupled with the participants’ motivation to learn from experience and reflect on practice, having to communicate their reasoning when challenged was seen by participants as helpful. For example, when Penny first started in her current specialist role, the medical practitioners in ICU promoted an environment that routinely and openly challenged both hers and each other’s decision making which she perceived helped foster her critical thinking and reasoning skills. Penny felt this environment supported her expertise development by modelling how to use credible evidence to support decision making as well as valuing the role of nutrition in the care of their patients. By responding to these challenges within the routine of practice and reflecting on her decision making, Penny indicated that her confidence increased as she embraced their critical use of evidence in decision making for patient care. Combined with a high level of interest in her clinical specialty, Penny felt she thrived in this environment and considered it a significant influence on the development of her decision making expertise in critical care nutrition.

They [ICU doctors] will challenge people to give what the evidence base is of what they’ve just said explicitly. It’s quite confronting. And I just find it so exciting to be around and that was the point where I, kind of went, ‘Oh, why do we do what we do?’ and then started really questioning stuff and looking things up and discussing things and, kind of, being part of the scientific community which is so sad that took so long. (Penny, I2)

While it was seen that there is a relationship with practice context and dietitian decision making skill development, it was clear that a supportive environment allowed for greater enhancement of a process that was underpinned by learning from experience. Integral to this was how supportive environments assisted with increasing the dietitian’s confidence. Confidence is discussed further in Section 7.7.
7.6 THE EFFECT OF DIETITIAN MOTIVATION IN DEVELOPING CDM CAPABILITY

The development of CDM expertise was often facilitated by the dietitian’s degree of motivation, specifically intrinsic motivation\(^\text{15}\). While sharing their career journey in the second interviews, a few of the participants expressed their approach to opportunities and challenges which were marked by high degrees of intrinsic motivation. Intrinsic motivation enabled enhanced learning and development from the professional and clinical experiences of the participants. Many of the participants were motivated towards increased understanding and competency in the skills and knowledge required for mastering patient problem solving. Underpinning this was the desire to help and improve the health of the patients for which they were responsible. They were also motivated towards attaining increased autonomy, achieving purpose and having standing in their professional community.

Multiple participants expressed that experience alone was not enough to develop expertise for quality CDM. It was believed by many of the participants that personal traits contributed to the development of high levels of specialised CDM expertise in those dietitians who had been acknowledged as experts in their speciality area. It was clear that they were considered experts in the dietetics community given the reference these participants made to being contacted by other dietitians for advice and support with CDM in their specialty area. Intrinsic motivation was manifested through passion, dedication and focus in their clinical practice and was considered to be a key facilitator of learning from experience. All the participants believed that CDM expertise involved more than just knowledge and experience but many also struggled to articulate what that ‘more’ was. Sally expressed this in her response:

\(\text{15} \quad \text{“The inherent tendency to seek out novelty and challenges, to extend and exercise one’s capacities, to explore, and to learn ”} \quad \text{Ryan, R. M., & Deci, E. L. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being American Psychologist, 55(1), 68-78.}\)
I think it might have to be some individual traits in utilising that 20 years to the best of their talent... it's not being lazy for one and obviously having a passion about the area that you're working in enough to always reflect on your practice and continually improve and not just allowing yourself to plateau... I guess there must be an individual flair of some sort. (Sally, I2)

Penny, a highly experienced intensive care dietitian, discovered her passion for critical care nutrition while covering a role temporarily. After succeeding at gaining a speciality job permanently she expressed her internal motivation to master the role. She indicated that this drive resulted in reflective decisions on how she practised, including improving her knowledge and skills for patient care as well as how she interacted with the other members of the MDT in the ICU. This she felt helped push her forward to excel in her role and responsibility to make decisions that improve the nutrition and health of her patients.

*I just want to be the best intensive care dietitian there ever was.* (Penny, I2)

Theresa, a highly experienced specialist dietitian in renal nutrition, also revealed a high degree of intrinsic motivation that was influential on her decision making skill development. Theresa explained the role of her drive towards an increased and comprehensive understanding of the various knowledge and information that informs CDM. This included a strong desire to increase her understanding of the decision making of medical practitioners she worked with and what influenced their treatment decisions. This internal motivation resulted in continuous questioning of why certain decisions were made and what knowledge informed those creating a practice of formal and informal professional development.

*I think it's because I'm the sort of person that likes to understand an area in its totality. I don't just look at the evidence-based guidelines. I want to understand why do they do this particular therapy for somebody who has nephrotic syndrome? What's the rationale behind that? Why do they use medications like that? What's the efficacy? That's where I fit in.* (Theresa, I2)

A few of the participants were clear that they were motivated by the purpose of improving the outcomes for the patient. While assumptions can be made that health care professionals are obviously driven by the desire to help
patients, it was clear in this research that this formed a core purpose for a few of the participants in particular. An example was Penny, bettering the outcomes for the patient was a core part of her perceived role as an expert critical care dietitian. Penny’s ability to reflect openly in the interviews on the components contributing to the development of her decision making expertise illuminated the multidimensional nature of CDM and the role of the practitioner themselves.

_The other part of it which is also essential, but it’s not the intellectual part is wanting to use that for the good of the world. Because just sitting in a room going ‘I know all about renal nutrition’ you’re not actually a practitioner cause for a practitioner to exist there has to be someone they’re practising on and I don’t think there’s any point, like you’re not a good practitioner if you know all that stuff, but it’s not benefiting the patients._ (Penny, I2)

Individual participants provided insights into how their intrinsic motivation influenced their approach to learning from experience. This, in turn, impacted the development of their CDM expertise. The more motivated they were, the more they perceived their decision making improved. Intrinsic motivation was one part of multiple influences on how dietitians developed CDM expertise over time.

### 7.7 THE PROCESS OF DEVELOPING CONFIDENCE AND ITS INFLUENCE ON DIETITIAN DECISION MAKING

This research revealed a strong relationship between the development and approach to CDM and the confidence the participant possessed. Confidence was both conveyed as an effect of recurrent CDM experience over time as well as a cause of enhancing the quality of care the dietitian provided as a result of their CDM. Participants indicated they had lower amounts of confidence as a dietitian making decisions earlier in their career but it increased over time through reflecting on successful outcomes and receiving feedback. Also, the greater the confidence, the more it helped facilitate decision making in itself particularly in complex or challenging situations. This was particularly significant amongst the participants who were experienced specialists.

Confidence was the term used by all participants to describe a positive belief in their ability to perform or make a judgement related to CDM
adequately. The greater the confidence the greater the perceived ability participants had about engaging in CDM tasks. Participants considered it an important part of being competent in decision making.

I guess it's the confidence in yourself as a clinician that you actually understand what you're doing. (Alice, I2)

Therefore, from here on confidence will be the term referred to when discussing the construct that involves the participant’s belief in their capability to make clinical decisions and successfully undertake the various processes involved with this.

### 7.7.1 Confidence in early career decision making

Confidence in CDM capability was low earlier in the careers of all the participants in this study. This coincided with higher amounts of self-doubt and subsequent second guessing of their decisions and judgements. These doubts surrounded their knowledge levels and the therapeutic outcome expectations for individual patient scenarios.

Earlier in my career, there was more self-doubt No, I don’t think I had that (confidence) earlier on. Earlier on being a new dietitian, I think I’m still a little bit unsure about certain areas, and obviously my knowledge was so small and I would still doubt myself a little bit when I see a patient, am I doing the right thing? Is that going to work or not? With time, I think, seeing more patients you know what to expect, and that collection of thinking just grows with time... and I think with knowledge you know that that is what you would be expecting. (Mary, I2)

Low confidence levels were often conveyed by participants as like a physiological and emotional response such as nerves or trepidation when exposed to a new clinical problem or challenging patient scenario. At times, self-doubt resulted in greater consultation with other more experienced clinicians, less efficiency and therefore less autonomy with their decision making. These initial periods of lower confidence levels were mainly attributed to working in new clinical specialties they had little or no experience in as well as still being unfamiliar with the people and systems involved with patient care. Penny indicated she had less confidence in her ability to interpret and analyse the multiple information variables earlier in her career, particularly in more complex scenarios. Complex patient scenarios required her to prioritise patient issues which often involved using
clinical judgement to isolate which issues should be the main focus of nutrition interventions. Having less confidence in her clinical judgement sometimes meant she didn’t feel confident in communicating a decision to deprioritise standard dietary interventions for known conditions.

So I think you start off with this sort of a basic set of schemas and the more complications there are the less you are at applying them because, or at least myself at that stage, I just wasn’t good at incorporating all those different things. And having that bigger picture view and I certainly wouldn’t have had the confidence to say ‘Listen let’s not worry about the blood pressure right now, because these complications have actually made me think that this is a different priority and I’ve seen – I can see myself as a student, you know, hammering on with my long, long diet history because that what I come for, but the patients keeling over and, you know, just unable to change direction cause I don’t really know how to do that. (Penny, I2)

Participants revealed that their self-doubt lessened as knowledge and skill increased gradually over time through repeated successful experiences in making clinical decisions for patients, therefore, increasing their perceived confidence.

7.7.2 Increasing confidence through experience

Self-perceived confidence of participants increased through having greater amounts of experience. This included both direct patient care decision making experiences as well as undertaking other professional responsibilities. Over the length of their professional career so far, the participants illuminated the value of learning and refining the skills and general and specific knowledge required for CDM. As discussed in section 7.3, experience was essential to develop CDM expertise. This section examines what type of experiences tended to influence confidence directly.

Greater confidence was associated with a sense of mastery of familiar tasks often related to repeated experience with similar patient scenarios in a given clinical specialty. Given the multiple processes involved in CDM, confidence increased when the participants developed greater clarity about what these processes required of them to achieve a successful outcome for the patient. The most common example is how focussed experienced while specialising increased knowledge and reasoning skills required for making decisions within the specific clinical specialties. The longer they spent in a
particular clinical specialty, the greater the confidence they felt doing so. Kate shared this view in the following quote.

And I guess the feeling that you’ve often seen patients similar beforehand. You’ve managed patients with similar diagnosis and have been in that scenario previously with other similar patients. (Kate, I2)

With more experience, all participants felt more confident about using their clinical judgement in decision making. This feeling of greater confidence fed back into the decision making process increasing assertiveness to advocate and negotiate with medical practitioners. When advocacy and negotiation efforts were successful, confidence increased. Increased confidence, in turn, seemed to empower the participants to take more initiative to advocate more for the patient’s nutritional concerns. These successful outcomes tended to then increase a dietitian’s sense of influence within the MDT. Mary shared how experience over time assisted with increasing certainty about her role as a dietitian and the decisions that she made.

With experience, I think you become a bit more certain about yourself and confident about your judgement as well. I think that just came with time. (Mary, I1)

Becoming a stable or permanent member of the MDT was described by many participants as influential for increasing confidence. Most often becoming a stable member of the MDT team coincided with attaining a specialist position in a clinical speciality. The sense of ownership and security that came with being permanent and a specialist seemed to allow for a focus and investment into the development of CDM expertise in their speciality area that those who were not specialists yet did not convey. Penny described the effect of becoming permanent and a specialist on gaining confidence to assert her role as a critical care dietitian.

I think owning your job and not just being in a locum or being in an area that you’ve decided is your specialty area is another time when you get that professional identity. It’s sort of forging your identity as a person where if you’re at some social thing, they say what do you do?” and the point where you say very proudly, I’m a critical care dietitian. (Penny, I2)
Confidence was considered essential to the dietitian developing a positive reputation of being a credible and reliable source of advice within the MDT. Being confident in the role of a specialist or nutrition expert relative to the other members of the team was important for being able to advocate and negotiate with medical practitioners. In the following quote, Alice described the relationship between the confidence needed to identify with being an important source of advice on patient care and interacting effectively with medical practitioners.

> When you don't have that confidence I think you're not perceiving yourself as a specialist or know something enough to actually have an argument or have a conversation with the doctors. (Alice, I2)

Confidence in CDM was also positively influenced by gaining experience with tasks outside of direct patient care. For some of the participants, increased responsibility in other non-patient roles increased confidence in being a trusted and respected dietitian. Having to teach and supervise the practice of other dietitians not only increased confidence but also allowed for further reflection on their own decision-making. For Theresa, teaching and academic responsibilities created a strong sense of duty to perform as expected to result in an increased drive to increase and then prove her dietetics knowledge that she used in decision making. For other participants such as Kate, Lila and Belinda, having senior roles within the department and hospital provided challenges that facilitated increased knowledge and confidence that then fed back into the decision making process for patient care.

> Even though that role isn't clinical I was still seeing some clinical patients but it helped me with that immensely, understanding the whole hospital, everyone else's role in the hospital, all the doctors ... every person that contributes to the patient's care, I have a better understanding of now in doing that role, which I think gives me the confidence in my clinical. (Lila, I2)

Increased confidence was often an effect of more experience, particularly when specialising. Experience with other responsibilities related to the acute care setting such as management, supervision and teaching also enhanced confidence in managing patients. Confidence also positively influenced the process of decision making, particularly in relation to communication
needed for patient care consequently helping improve the quality of patient care.

7.7.3 Increasing confidence through external feedback

Participant confidence was increased when external feedback was received in the mode of recognition of expertise and professional contribution as well as the identification of positive patient outcomes. This feedback came in the form of direct verbal expression from either managers or supervisors or other health professionals. Feedback was also indirect taking the form of increased support, respect and belief by other health professionals in the capability of the participants to make clinical decisions for the patients’ health and nutritional concerns. Recognition of dietitian expertise by other health professionals, particularly the medical practitioners, increased confidence which ultimately continued to positively affect how participants decided to influence the opinions and decision making of health professionals in the MDT about patient care.

Feedback in the form of positive affirmation from other health professionals was helpful in boosting participant confidence in their role in making decisions about patient care. Lila provided a specific example of how the positive feedback from the surgeon and hospital management she worked with influenced her confidence with managing patients in her specialty area. This feedback came in the form of trust and support of implementing evidence-based recommendations for the nutritional management of patients in a new surgical service. Receipt of this support reinforced her belief in her capability to independently care for and make sound clinical decisions for these patients. Coupled with the clinical experience that she gained managing the patients directly, she saw this as a key influence in the development of her CDM expertise in her clinical specialty.

*I think it’s probably being thrown into those things and other people having confidence in you … and by now thinking maybe I can do this okay, where before I would question that a lot. Then that would probably affect my decision making a lot, my judgement. Now I have confidence in speaking to all these people and having to deal with the surgeon and in other areas of the hospital as well. Yeah, that helps a lot.*

(Lila, I2)
Confidence increased when the participants were given greater autonomy for decision making by medical practitioners which was perceived by participants as a type of feedback. Greater autonomy came as a result of building relationships over time including establishing a positive reputation as discussed in Chapter 5. A reputation that involved the perception of the dietitian as a valuable and effective member of the MDT was considered a positive influence on the confidence of participants. The timing in participants’ career when this seemed to occur was identified as a crucial influence on the development of their decision making expertise. In the following quote, Alice described this relationship between other people’s perception of her skills and her developing confidence.

*Being allowed to work more independently and having people perceive me as being a guru or someone that was an expert gave me that boost and that confidence to recognise that I’ve come a long way from being a student and I can just only get better and I don’t need to keep second guessing myself.* (Alice, I2)

For many, this external feedback in the form of an expectation of skill performance had a cyclical influence on confidence in decision making. The participants worked at gaining autonomy and respect in their capability to make decisions but once gained, they worked hard at maintaining it and in turn invested in further knowledge and skill development. Direct feedback from managers or supervisors provided for a positive influence on confidence. Not all participants indicated they received this at crucial times in their expertise development. For those that did, feedback that involved identification of strengths and weaknesses, and positive affirmations that were consistent over time seemed to assist with increasing and maintain belief in the participant’s capability.

*I guess feedback you get through performance appraisals or through supervisors is helpful. The feedback I’ve had is really strong clinical skills and my areas of weakness are more interpersonal or related to communication or things like that. So, I guess if you get similar feedback through different performance appraisals or different supervisors that helps to develop your confidence.* (Kate, I2)

Feedback that affirmed the dietitians’ positive role in patient care or the participants’ professional skills was an influence on increasing their confidence in their decision making. This feedback was helpful coming
from direct managers, supervisors as well as other health professionals, particularly the medical practitioner.

7.7.4 Conclusion
Confidence held by the dietitian to undertake decision making tasks increased with time through experience. The amount of confidence varied depending on the degree of knowledge and skill the dietitian believed she possessed that was needed for patient care decision making as well as interacting with others such as for advocating. Successful experiences, such as positive patient outcomes related to their decision making and the development of a positive reputation with medical practitioners contributed to increased confidence. Building confidence was aided by feedback gained from others such as patients, doctors and more senior colleagues. This included feedback in the form of validation of the dietitian’s role in helping patients, verbal encouragement and recognition of their contribution in the MDT. Increased confidence supported decisions to advocate and negotiate effectively as well as take action based on clinical judgement in times of complexity. Confidence, therefore, was an integral part of participants increasing their autonomy while developing expertise.

7.8 MORE THAN EXPERIENCE - A MODEL OF PROFESSIONAL ARTISTRY IN CLINICAL DIETETICS
Professional artistry was revealed as a complex depiction of the ideal expertise a dietitian can possess that enables effective CDM in clinical dietetics. The clinical dietitian demonstrating professional artistry was thought to be characterised by three key observable dimensions of practice: efficiency, adaptability and influence. Being efficient was considered to be due to use of the dietitians’ sophisticated clinical judgement as well as a fluid and creative problem solving approach. Adaptability involved the dietitian with artistry effectively responding to the constant change and complexity inherit in clinical practice. This adaptability was thought to be supported via by metacognitive skills and a commitment to professional development that helped foster skills and knowledge that met the demands of practice. Professional artistry was also characterised by the dietitian
having influence and this was enabled by use of empathy-based communication and possession of strong and agile interpersonal skills. A Model of Professional Artistry in Clinical Dietetics (Figure 7.2) has been developed for this thesis. The model conveys the complex interdependence of professional artistry as revealed by participants, illustrating the key dimensions and supporting elements that distinguished a professional artist dietitian. Importantly, the model enables professional artistry to be distinguished from expertise or experience level of the dietitian. This section will begin with framing how the concept was explored with participants and how this revealed the complex nature of professional artistry in clinical dietetics to then be followed by an in-depth exploration of the model and its components.

7.8.1 Challenges in accessing dietitian professional artistry

In the second interviews, the concept of professional artistry was introduced to participants by posing the question as to whether they thought it was relevant to dietitians in the acute care setting. To assist participants and to ensure there was shared understanding of the use of the term, professional artistry was explained as a type of competence that involves a degree of ‘art’ to solving problems in day-to-day practice that cannot easily be described objectively within the scientific paradigm (Higgs & Titchen, 2001b)

The participants held varying and common perspectives on artistry with many struggling to articulate their views. Their perspectives changed and evolved during the interviews. Many of the participants felt that the term, professional artistry, didn’t resonate strongly with them although the explanation of the concept did. Many struggled with reconciling the concept of artistry with their professional training and practice within the biomedical sciences paradigm where clinical decisions are meant to be made based on scientific evidence and propositional knowledge. In contrast, Penny’s offered a depth of insight and reflection on artistry that was distinguishable from other participants. Her language use and immediate connection with the concept of artistry was evidenced by her personal interest and enthusiasm in explaining her own decision making. Penny offered rich insight into this phenomenon with a dominant focus on artistry being about a ‘way’ of problem solving that was quite distinct. The other participants
acknowledged that there was this ‘way’ that some dietitians are able to approach practice that cannot be explained purely by the possession of clinical knowledge and technical skills.

*It's not related to their intelligence. It's something about them.* (Theresa, I2)

To assist participants in developing some clarity on their thoughts, a hypothetical situation was presented to them: two dietitians with the exact same number of years’ experience in the same specialty. Participants were then asked if they thought they would both possess artistry. Each participant thought artistry could not be taught. Penny, however, wasn’t convinced it couldn’t be taught but more that people just learned from experience at different speeds so everyone could develop it but some don’t because events and circumstances intercept the learning pathway. All participants agreed that it was more than just competence or experience that facilitated the development of artistry in clinical dietetics.

*Even competency, that doesn't even describe what I've seen. Heaps of people can be competent or experienced even.* (Sarah, I2)

Participants who thought that artistry could not be taught believed this was due to a person’s individual innate qualities or traits. Individual qualities were often referred to by participants as ‘personality’. While personality was ill-defined by participants, they did connect the development and manifestation of artistry as being dependent on unteachable personal qualities that the dietitian brings to professional practice.

*Personality is quite broad, isn’t it? Whatever it is in their ... yeah, it definitely comes down to an individual person. I don't think you could say everyone does have it, regardless of years of experience or their clinical judgment or all of those kinds of things.* (Lila, I2)

While many participants considered artistry dependent on individual qualities, their perspectives offered common elements that they all considered key characteristics of a dietitian in possession of professional artistry. These three dimensions and corresponding supporting elements (refer to Figure 7.2) are now explored.
7.8.2 Efficiency
The professional artist practitioner was considered efficient in CDM and patient care as a whole due to the possession and use of sophisticated clinical judgement and fluid and creative problem solving. Central to these supporting elements was a background of extensive, focussed and meaningful experience that developed a strong knowledge network of both evidence and highly tacit experience-based knowledge.

**Sophisticated clinical judgement**
A key mechanism by which dietitians with artistry were thought to manage patient problems efficiently was through the seamless and skilful use of sophisticated clinical judgement. Clinical judgement was informed by high amounts of speciality experience-based knowledge combined with
significant experience that aided in being able to quickly and accurately identify, analyse, synthesise and communicate patient information in an almost seamless way.

Clinical judgement was revealed as a meta reasoning process (see Chapter 6.5) that involved seamless use of complex knowledge structures developed from specific clinical experience and the efficient incorporation of the patient context. Clinical judgement involved weighing up the relevance of information relating to patients’ past and present health states in order to decide on the best course of action at the time. Sophisticated clinical judgement as involved in professional artistry was superior in that it involved accuracy and intuitiveness that participants believed was superior to just any practitioner’s clinical judgement. Most participants considered this possible for dietitians who worked in clinical specialties for extended periods of time, such as specialists. This highlights how sophisticated and well developed a dietitian’s clinical judgement becomes when extended periods of time are spent solving similar and often complex clinical problems.

*There's more to that than just being more experienced or knowing more... there's a sort of magic of putting it all together. And putting it all together first go not casting around for something else we could try because we can't work out what's going wrong, but... it's so efficient... you kind of somehow in the groove of looking after that kind of patient and you won't miss stuff because you're used to picking up those details because they're salient details for that kind of patient every time.* (Penny, 12)

Participants considered there to be an art to the efficient way in which relevant information and knowledge is identified and used in order to diagnose and develop solutions to patient problems. This process seemed to be reliant upon frequent use of highly tacit experience-based knowledge and its automatic retrieval and effective use in problem solving. So, it was about not just having large amounts of knowledge relevant to a clinical problem but skilful, efficient and timely use of it across the continuum of patient care.
I think that person would have a lot of information in their head, but they can pick up the right information based on their experience and their knowledge. So, they know where – what sort of decision to make because they're pulling them up from the right places. (Mary, I2)

The artist was thought to be efficient because the execution of their sophisticated clinical judgement involved large degrees of automatic reasoning such as pattern recognition and intuition. In the following quote, Penny provides an analogy that speaks to the capacity for the professional artist practitioner to handle complexity so much more efficiently due to the experience-based knowledge used in their sophisticated clinical judgement.

...one glance being able to know what's going on for the patient and just by the smell knowing what kind of bypass they had or affliction, you know, which that's not in the competency list – that's something else that you bring being able to do that in a more efficient way cause you've just got this, like, juggling more balls in the air and not having to even look at them. (Penny, I2)

**Fluid and creative problem solving**

Professional artistry was conveyed as engaging in fluid and creative problem solving that has a holistic approach to the patient’s needs. This requires the dietitian to have an eye for the details that surround the patient’s main medical concerns that are the focus of the hospital admission. Artistry according to Penny is like piecing together a puzzle. This is done by being able to see relevant and significant information where others without artistry wouldn’t, synthesise and interpret it correctly then strategically incorporate it into a care plan that delivers positive results for the patient. She made a useful comparison between the approach of a dietitian who is unlikely to possess artistry in their practice so far and someone who already does.
And a student or a new grad could work out that person’s nutrition requirements with no trouble and work out with the standard feed a suitable regime and communicate to the nursing staff how to implement that. But an artist would notice that in the medical history there was, for some reason, the patient was on pancreatic enzyme replacement but there’s no diagnosis in the medical history that goes with that and no one’s really questioned it because we’re focusing on the heart surgery and the patient has a bit of diarrhoea that the nurses have commented on... the clinician with artistry has noticed that and has gone ‘why is there no condition in the medical history – they’ve just written out the medications’... whoever wrote them obviously didn’t think what they were. They’ve just listed the list that the patient brought in and never has put the thing together but the clinician with artistry does and says ‘well maybe the loose stools are because this patient does have pancreatic insufficiency, even though I can’t see in the medical history why that is, maybe we should find this out, get back to the GP, discover the missing whatever’. They start some enzyme, know how to do it for tube feeding and then voila the diarrhoea has gone, and that’s like ta-da! And that’s the artistry is picking up the little extra bits of information and incorporating that into the plan. Therefore I think it [artistry] fits because if you just say expertise or competence or something, you can plod along and tick off competencies one by one and it doesn’t have a connotation that really matches the difference between someone plodding along and doing trial and error on their patient and the extra magic that the word ‘art’ kind of gives it to imply just how smooth and seamlessly someone who sees those patients all the time would approach the same thing. (Penny, I2)

Most participants depicted the dietitian with artistry as having the ability to effectively and efficiently solve patient clinical problems. This involved rapid synthesis and analysis of patient health and nutrition information in a fluid manner. A well-developed knowledge network, often highly tacit, informing sophisticated clinical judgement resulted in timely and if needed creative strategies to manage complex problems. The ability to solve problems efficiently and creatively was thought by some participants to be distinct from a dietitian who may not yet possess artistry and therefore doesn’t appear to solve patient problems with the same degree of flair.

... it’s about the problem solving with the sense of cool, kind of calm, confidence that it could be ... maybe another clinician might freak out and be like, Oh, my goodness. Whereas someone who possesses that whatever it is, is sort of just calm and can, Okay, let’s try this. (Sarah, I2)

The dietitian with artistry was considered to have the ability to develop creative solutions to patient problems. This may have included quickly formulating strategies to overcome obstacles to ideal patient care that
related to the patient context such as resource constraints or challenging interpersonal communication. Melissa didn’t connect with the word ‘art’ but agreed there is need for creative problem solving. This view was shared by Theresa who believed that the dietitian with artistry would be able to quickly assess the nature of the patient’s health related nutritional issues and develop solutions that may be found ‘outside of the box’. She argued that complex patient problems involved so much more than identifying the right nutrition therapy for the medical condition. Managing complex patients required developing strategies beyond the scientific evidence, which involved consideration of how it was going to work for the patient. For example, Theresa assisted a patient’s carer with a feeding tube issue who benefited from her suggestion of using a non-traditional approach to timing and delivery of feed formula. Theresa could see the stress and fatigue the ‘best practice’ approach was causing and instead had the confidence to recommend trialing an alternative method.

"I think it's to look at the picture and go, okay, what can we do? What are all of the options, not just what are the only options according to the best practice guidelines? To me, I was trusting my instinct." (Theresa, I2)

Theresa believed that this outside of the box problem solving was aided by her focus on using empathy-based communication (see section 7.8.4) that involved spending time being with and listening to patients and carers, seeing it from their perspective.

There were differences in how participants perceived artistry relevant to dietetics in the acute care setting. Both Penny and Sally identified themselves as critical care dietitians, with Sally just beginning her specialty career where Penny has over 15 years’ experience as a specialist. Penny easily identified with artistry in her practice with an emphasis on sophisticated clinical judgement whereas Sally associated artistry with patient communication therefore felt that given her practice was dominated by non-oral nutrition support with little patient involvement in her CDM, artistry was not as relevant. In the following example, Sally shares how artistry in ICU would involve being able to engage in creative problem solving in complex patient scenarios. Sally often preferred to explain her practice as a more objective and scientific process of data analysis and
evidence use. Her example highlights that efficiency in problem solving was synonymous with her views of professional artistry in action.

You have to have the ability to, at the drop of a hat, explore ... when there's a problem explore all possible solutions to fit into the box that you need it to. Quickly analyse, okay, I need somebody who needs to be fed but they can't put an NG in because they've got low platelets. They can't eat because they've got mucositis. They can't eat as well because they've got cholecystitis. TPN isn't really indicated because they've got a functioning gastrointestinal tract. How are we going to feed them and coming up with the right answer for that patient on the spot and thinking of the five different options and what's the best one for that patient. (Sally, I2)

Being efficient was a key characteristic of what participants considered was professional artistry in clinical dietetics. Being efficient was enabled through use of sophisticated clinical judgement and fluid and creative problem solving, both of which relied upon the significant and focussed clinical experience the dietitian would have gained.

7.8.3 Adapatability
The dietitian with professional artistry was perceived to be able to adapt themselves and their practice in response to change in order to continue being effective for patient care. Enabling this adaptability was the professional artist practitioners’ metacognitive skills and their continuous professional development commitment.

Metacognitive skills
Participants conveyed that dietitians with professional artistry use a type of higher order cognitive ability, that involves habits of reflecting on practice, self-awareness and even emotional regulation. These behaviours are grouped under metacognitive skills.

The dietitian with professional artistry was considered someone who values and puts effort into continuous and meaningful reflection in and on practice. Effective reflection skills were considered by many participants as the means by which the artist has made use of the clinical experiences and professional opportunities available to them in order to learn and therefore improve the knowledge and skills needed for patient care. Reflection was important not just for patient care CDM but for the various interprofessional
relationships that were needed for practice in the acute setting. Some participants thought only some dietitians possessed this degree of reflective skill to enable development of artistry. Penny suggested that reflective ability was the difference in why some people developed artistry and why some don’t but maintained her opinion that anybody had the potential for developing artistry. She likened the professional artist dietitian who continually reflects to a concert pianist who not only can play perfectly but actually cause an emotive response.

...you know the concert pianist who is the one that really moves you and the ones that are just technically brilliant but you feel nothing, maybe the ones that move you are more reflective or they have something else that they've brought to it, but technical competence and being able to do what I describe as artistry doesn't necessarily involve some spark of magic that no one else has. (Penny, I2)

Coupled with exceptional reflection skills was the degree of self-awareness the professional artist practitioner had in the moments that facilitated a useful assessment of who they are, their role, with respect to those around them. Knowing the solution to a patient problem was not enough and the complexity of clinical practice in the acute setting was thought to offer many experiences where the professional artist dietitian needed to be aware of the dietitian’s role, goals and needs with respect to the patients, other health professionals and even the organisation. Self-awareness relied on a high level of confidence with consideration of others and was part of how the artist used their sophisticated clinical judgement. In the following quote Lila gives an example of where she thought artistry was in action in her own practice when engaging with a nurse who could have attended to one of the issues a patient had. Lila suggested that pausing, being aware of her own thoughts, considering others and gaining the ‘big picture’ was important.

I knew his vitamin D was not normal but right now, it's not even worth mentioning [to the nurse] but I just wanted to say, "Hey, I have noticed it but let’s deal with that later." Yeah, definitely, stepping back and taking the whole picture in before I suppose enforcing or recommending our interventions. (Lila, I2)

Responding to change was thought to need the ability to regulate one’s own emotions, which also involved self-awareness and reflection. The acute care
practice setting was characterised as a fast-paced and dynamic context in which some of the most complex and unstable patient issues are treated. Dietitians are exposed to these regardless of whether the patient’s nutrition is of primary concern. Being able to adapt to the fluctuations in a patient’s condition in order to remain effective and engaged in practice was considered to rely upon the ability to regulate the emotional responses that occur in professional practice. Mary used the term ‘emotional intelligence’ to refer to this where others described a type of resilience that resembled the artist’s ability to ‘keep on going’ ultimately facilitating the actions needed to appropriately respond to change and complexity in the acute setting.

I think EQ [emotional intelligence] may have a role in this and it’s also important to have optimistic thinking because I think as acute care dietitians you see a lot of grief and things like that in hospital, and if you don’t know how to deal with that, it can have a huge impact on you. (Mary, I2)

**Committed to professional development**

A commitment to ongoing professional development, coupled with metacognitive skills, was considered to enable the adaptability characterising professional artistry in clinical dietetics. A professional artist practitioners’ commitment was described as including passion and strong intrinsic motivation that seeks opportunities and takes necessary actions to promote continuous growth and development in their specific professional role.

The artist was described as someone who is obviously passionate about their specific area of expertise and their role in patient care. This passion was thought to be fuel for the reflection needed when engaging in regular and meaningful professional development. Participants indicated that the artist is a dietitian who is not satisfied with reaching a particular level of expertise, but is committed to constantly evaluating their practice to ensure continuous growth and learning. In the following quote, Sally shares her views which were shared by other participants that indicates that the artist is someone is dedicated and focused and due to a passion for their role.
...it’s not being lazy for one and obviously having a passion about the area that you’re working in enough to always reflect on your practice and continually improve and not just allowing yourself to plateau. (Sally, I2)

Passion was often described simultaneously with the motivation the dietitian with professional artistry would have. Artistry was understood in more depth after participants were asked if they thought artistry could be taught, revealing the role of intrinsic motivation in how the dietitian can more easily adapt to the demands of their professional roles. All participants except Penny concluded that they didn’t think it could, given the personal unteachable aspects that contributed to their view of artistry. Penny, instead placed a significant emphasis on how the individual dietitian that possessed high amounts of intrinsic motivation and dedication is likely to invest the time for practice and reflection on that practice that enables ongoing development of artistry.

The one that isn’t as motivated or isn’t as interested isn’t going to do ten thousand hours. But if you make them do it, they would be just as good I reckon. I really do reckon. But I think the difference is...the trajectory might be faster for someone who does more questioning and reflecting and is more motivated. (Penny, I2)

Intrinsic motivation and passion were described as working together fueling a drive towards mastery of skills and knowledge underpinned by self-awareness of there is always more to know as a health professional.

...when there is that thirst for knowledge, I don’t know everything, I’m wanting to learn (Lila, I2)

Professional development commitment with metacognitive skills supported the characterising element of the professional artist practitioner being someone who can easily and appropriately adapt to the change and demands of their professional roles in order to deliver effective care for patients. Adaptability supported the development and practice of efficiency and influence in clinical dietetics.
7.8.4 Influence

Dietitians with artistry were thought to be able to influence the people involved with the patient’s nutritional care as well as the patient in order to achieve positive outcomes for the patient. Being influential involved using empathy-based communication when interacting with patients and other health professionals as well as use of strong and agile interpersonal skills. While all participants indicated interacting with others was essential to the process of CDM (see Chapter 5), it was the dietitian with artistry that was consistently able to engage with people in an influential way for the benefit of the patient.

*Empathy-based communication*

An empathetic approach to interacting with others, particularly the patient, was thought to be foundational to being able to influence the patient and their health for the better. Empathy-based communication was described as actively building rapport and gaining a shared understanding of the persons concerns and issues.

The empathetic way that the professional artist practitioner communicated verbally and with body language was thought to be a skill that supported effectiveness as a dietitian. The focus on describing professional artistry was influenced by the participant’s individual clinical practice area depending on whether it was dominated by regular and crucial verbal interactions with patients in order to deliver nutrition therapy or education. Therefore, there was variation to the emphasis some participants placed on communicating effectively with patients themselves. For the participants who didn’t need to communicate as much with patients, they emphasised the need to have empathy when communicating with the other health professionals they interacted with for patient care. Mary in particular struggled the most to link the concept of artistry to the practice of acute care dietitians. However, she did identify that while knowledge and skills are essential, artistry cannot exist without that ability to connect with the patient. This connection she thought was dependent on the personal attributes, such as empathy, of the dietitian.
When you watch them with similar kinds of patients, I think that one that thrives would have a lot more empathy, would be able to connect with a patient better. I think part of it can be the way your personality is as well because, if you’re a warm person, you’re open, you get people talking really easily, and get them to open up, then that also helps a lot in that consult. Then the patient is a lot more likely to listen to what you’re saying, and they can be motivated as well. (Mary, I2)

The dietitian with artistry had the communication ability to seek and develop a shared understanding with the patient of their own issues and concerns. Developing this understanding was conveyed as having and using good active listening skills in order to gain a more holistic view of the patient’s situation. For Theresa, this aspect of patient care dominated her viewpoint on artistry in dietetics, feeling strongly that it was a critical element of her role in order to be influential and therefore gain positive outcomes for the patient. Theresa believed that the dietitian with artistry incorporates the whole human approach by using a collaborative communication style with the patient. This included the ability to identify issues, including non-nutritional ones, early on in the patient’s admission, that were going to influence how nutritional care may be provided. In the following quote, Theresa captures what she considers is involved in effective clinical dietetics: the science, being the clinical knowledge and skills and, ‘art’ for which she thinks is characterised by effective empathy-based communication with the patient.

There is an art and a science to dietetics...That’s the artistry. It’s the way you describe what you’re going to provide but incorporating the patient in that decision making process. (Theresa, I2)

**Strong & agile interpersonal skills**

Artistry involving strong and agile interpersonal skills was considered the dietitian’s ability to identify and utilise a variety of different strategies that best suited the person and problems involved. These strategies were thought to be implemented effectively to promote positive outcomes for patients.

The ability to interact and communicate with patients in a way that enhances the patients understanding and empowered them to want to participate in improving their own health was considered a demonstration of artistry. Communicating complex concepts to patients using creative or diverse
strategies such as adapting word choice, tone and manner to suit the individual patient during the course of each patient interaction was considered artistry. Theresa felt that this communication required high levels of interpersonal skills, use of empathy and the ability to choose verbal expression that suited the individual patient. While it was thought that all dietitians should start their career with being able to communicate effectively, it was experience coupled with strong and agile interpersonal skills that supported the dietitian’s degree of influence and effectiveness. Knowing the therapeutic intervention, the patient may need was important but being able to communicate it effectively and efficiently was considered a characteristic of professional artistry in clinical dietetics. In the following quote, Theresa used the example of advice giving through offering a meal plan to share how it was the ‘way’ the dietitian engages that makes the difference, not just the content.

\[
\text{At the end of the day you've still got the same meal plan but it's the way you got through to a patient that there's artistry in that. (Theresa, I2)}
\]

Artistry is also in how the dietitian can engage consistently with the medical practitioners in an influential manner which required strong and agile interpersonal skills. As discussed in Chapter 5, an essential part of CDM was deciding how to advocate and negotiate with a medical practitioner. While these skills were considered necessary for all dietitian CDM, the dietitian with artistry was thought to be able to do so consistently and successfully and therefore to be more effective in influencing the medical practitioner’s decision making concerning a patient’s nutritional issues. Artistry involved effective advocacy for the patient with the doctors. This involved the use of strong interpersonal skills that enabled fostering and maintaining professional relationships. In the following quote, Alice shares while she acknowledges artistry must include the dietitian’s clinical knowledge and skills developed from significant experience it is the whole approach to interaction that signifies artistry.

\[
\text{Obviously, their skills and knowledge and the years of experience but I guess from what I've observed is their approach to communication, professionalism, language, relationship with the medical staff and their influence on them. (Alice, I2)}
\]
In summary, professional artistry was accepted by participants as being relevant to clinical dietetics as the special type of capability that is more than the combination of knowledge and clinical skill from experience. Perspectives varied as to whether professional artistry could be taught but all participants considered it something all dietitians had potential for. *A Model of Professional Artistry in Clinical Dietetics* (Figure 7.2) brings to attention the key observable dimensions and their supporting elements. Professional artistry in clinical dietetics was characterised by an approach to practice that involved efficiency, due to their sophisticated clinical judgement and use of fluid and creative problem solving; adaptability, supported by strong metacognitive skills and a commitment to professional development; and influence, which is enabled by use of empathy-based communication with strong and agile interpersonal skills.

### 7.9 SUMMARY OF CHAPTER FINDINGS

A key finding in this chapter is that experienced clinical dietitians in the acute care setting possess expertise that is a complex and highly nuanced artistic way of practice that blends multiple social, cognitive and personal dimensions to respond to the individual needs of patients and be effective in doing so.

The nature of dietitian CDM in the acute care setting develops over time, through experience, evolving from a rule dominated process beginning in university education and workplace training towards a fluid and judgement dominated process resembling professional artistry. As shown in *A Model of Developing Dietitian CDM Expertise* (Figure 7.1), CDM expertise development is facilitated through a cycle of reflection on experience coinciding with the development of confidence, maintain a constant interplay between them. Influenced by intrinsic motivation, the dietitian maintains a tension within their skill capability, by means of seeking or exposing herself to challenges that generate further learning from the experience-reflection cycle. Increasing confidence also then supports performance in patient care by way of equipping the dietitian to take initiative and engage in further challenging experiences. Key influences on how the dietitian benefits from experience are supportive workplaces and
intrinsic motivation. Over time these elements work together towards greater quality of care and autonomy in practice.

The nature of expertise that extends beyond significant clinical knowledge and skill was accepted as professional artistry in clinical dietetics. The dietitian with professional artistry was characterised by efficiency, adaptability and influence which were supported by sophisticated clinical judgement and use of fluid and creative problem solving; strong metacognitive skills and a commitment to professional development; use of empathy-based communication with strong and agile interpersonal skills. These have been represented in *A Model of Professional Artistry in Clinical Dietetics (Figure 7.2)*. Ultimately, CDM expertise evolves over time through the addition and integration of key factors. The dietitian who is most effective at delivering positive outcomes for patients was considered someone who likely possesses and utilises a type of professional artistry which requires more than just experience.
CHAPTER 8 CONCLUSION AND IMPLICATIONS FOR PRACTICE, EDUCATION AND RESEARCH

In Chapter 2, I argued that improving the quality of acute care dietetic practice required dedicated research into the nature of acute care dietitian CDM because of how fundamental effective decision making is to improving patient health outcomes. Stemming from this argument, the aim of my research was to develop a deeper understanding of the nature of dietitian CDM in the acute care setting.

The thesis I have developed is that clinical decision making of experienced dietitians in the acute care setting is a complex phenomenon involving a set of core tasks geared towards improving patient nutrition-health which is facilitated by a meta process of clinical judgement and management of interpersonal relations within a power nexus. Development of CDM expertise over time relies on practitioner and workplace characteristics that promote learning from adequate challenging experiences that maintain a constant tension within the dietitian’s professional capacity. Expertise in clinical dietetics can be understood in terms of professional artistry and that this is characterised, in turn, by efficiency, adaptability and influence.

The enhanced understanding of how dietitians in the acute care setting make clinical decisions and how expertise underpinning CDM develops stemming from this research makes a valuable contribution to the practice, education and professional development of dietitians. This is particularly important in the current climate where workplace pressures are increasing and there is an increased demand to provide efficient and effective health care outcomes.

In this final chapter, I draw the thesis to a close by summarising my research findings in relation to the research questions. This chapter also presents A Model of the Multidimensional Nature of Dietitian CDM in the Acute care setting (Figure 8.2) that conceptualises an answer to my overarching research question. I also critically evaluate the contribution of this research with respect to both the field of CDM literature in both dietetics and other similar professions and my research approach in order to demonstrate the
value of the new knowledge my research has contributed. In addition, I offer potential implications of my research as well as suggestions for future research.

8.1 SUMMARY OF RESEARCH FINDINGS
In my research, the overarching research question was: What is the nature of clinical decision making in dietitians in the acute care setting?

Four sub-questions were posed to guide the research process.

1. How do clinical dietitians in acute care make decisions?
2. What is the place of professional judgement in such decision making?
3. When and how does clinical decision making expertise develop?
4. Is the concept and practice of professional artistry relevant for dietetic practice? If so, in what way?

Guided by the research questions, a deeper understanding has been developed of the nature of dietitian CDM in the acute care setting. The answers to the research sub-questions are discussed in-depth in the following paragraphs.

Dietitian participants revealed they make decisions about how to identify and solve patient health and nutrition related problems through a set of recurring core tasks of prioritising, assessing, care planning, implementing care plans and monitoring patients. Making decisions involves various reasoning strategies including inductive reasoning and hypothetico-deductive reasoning that draws upon evidence and experience-based knowledge. An essential reasoning approach for the complex and often ambiguous nature of the acute care setting was the use of clinical judgement which resembled a meta process that guided nearly all decision making.

Dietitian participants needed to interact with other health professionals for many decisions given the variation to dietitian autonomy. In particular, dietitian participants needed to make decisions about how to develop and implement care plans with medical practitioners as well as nursing staff, other allied health and patients. Written communication through documenting of nutrition care in the medical record was standard practice
for dietitians in this study. Furthermore, my findings highlight the importance of verbally communicating decisions and their rationales in an effective and time-sensitive manner. The interprofessional nature of decision making involved navigating power relations with key strategies including building relationships, advocating, negotiating, instructing and enabling. These professional relationships and interactions were key influences on how CDM occurred for dietitian participants as well as the individual dietitian’s experience, skills and personal attributes. Dietitian participants constantly needed to consider and evaluate contextual elements for decision making that related to clinical specialty, resources, culture and the nature of the practice environment itself.

Clinical judgement, as dietitian participants referred to, played an essential role in CDM in the acute care setting. Clinical judgement represented a meta process of reasoning that supported decision making that suited the individual patient scenario and the contextual elements associated with that. Clinical judgement was used to manage complexity in which there was no obvious solution. Complexity was characterised by increased severity of patient illness, greater amounts of ambiguity, challenging interactions with other health professionals and or patients and their carers. Clinical judgement was also used to guide the various interactions required for decision making, particularly navigating power relations with medical practitioners as well as determining appropriate communication approaches with patients and carers. Clinical judgement was essential for deciding on how to individualise patient care plans including evaluating the unique and individual biopsychosocial elements of a patient scenario. Clinical judgement was the complex reasoning approach used to synthesise information and knowledge, including evidence, for decision making. While participants conveyed the importance of evidence to inform their decision making, clinical judgement was the cognitive process that determined if, what and how evidence is relevant with respect to individual patient scenarios and contexts.

The nature of dietitian CDM changes over time as clinical expertise develops. Type and amount of experience, reflection, confidence, supportive workplaces and intrinsic motivation are core interdependent dimensions of
developing CDM expertise that was conceptualised through A Model of Developing Dietitian CDM Expertise (Figure 7.1) presented in Chapter 7, section 7.8. CDM expertise was understood to develop over time through a context-dependent interplay of dietitian experience, reflection and confidence. Being able to focus deeply through specialisation was a catalyst for increased autonomy, confidence and specialised knowledge development as well as offering valuable time to build supportive relationships with other health professions. A strong degree of intrinsic motivation manifested through self-directed learning, passion and drive for greater autonomy was found to be a variable yet important component for ongoing development. The dietitian with intrinsic motivation sought to maintain tension between current capability and growth through seeking out new and challenging experiences to learn from. Dietitian workplaces and the degree of support provided to developing dietitians can also influence the way and degree to which confidence and subsequent CDM expertise is developed. Adequate support included feedback from managers and supervisors, recognition of expertise from other health professionals and adequate provision of learning.

The concept of professional artistry was considered relevant for dietetics practice in the acute care setting. While there was an initial reluctance for some dietitian participants to describe practice using ‘artistry’, their descriptions of the expertise that underpins CDM in clinical dietetics can be depicted by professional artistry. An understanding of professional artistry as it is perceived by dietitians in the acute care setting has been represented in a Model of Professional Artistry in Clinical Dietetics (Figure 7.2, Chapter 7). The clinical expertise of the dietitian with professional artistry was thought to be patient-centred, efficient and influential. These three characteristics were considered to be evident in the way a dietitian with professional artistry solves problems, communicates and behaves in the practice setting ultimately seeking and achieving effective health outcomes for patients. These core characteristics are supported by the dietitians’ personal attributes, high levels of interpersonal skills and advanced reasoning. Professional artistry was considered to develop through skilful and repeated engagement in reflection within and on experience that
resulted in strategic action to improve one’s own personal and professional development.

Figure 8.1 summarises the key points from each of the findings chapters, showing how they contribute to the development of the three key models.
Figure 8.1  Summary of key points from findings chapters
8.2 A MODEL OF THE MULTIDIMENSIONAL NATURE OF DIETITIAN CDM IN THE ACUTE CARE SETTING

The CDM of dietitians in the acute care setting emerged from this research as fundamentally centred on making clinical decisions to assist with the goal of improving individual patients’ health. Integral to dietitians’ primary goal of improving health is a belief in the important role nutrition plays in mitigating negative changes in and improving short and long-term health status. The findings of this research have informed the development of A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care setting (Figure 8.2). This model diagrammatically reflects the nature of making decisions for patient care through the synergistic relationship between five key dimensions:

1. Tasks
2. Interactions
3. Reasoning
4. Practitioner factors
5. Context
Figure 8.2  A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care Setting
8.2.1  Tasks
The dietitian in the acute care setting is focussed on carrying out the core
tasks of prioritising, assessing, care planning, implementing care plans and
monitoring patients throughout admission. Within each of the above five
tasks, a broad range of information from multiple sources are collected and
interpreted becoming inputs into the decision-making process. Dietitians
make continuous decisions about what patient information to collect and
how to analyse and interpret it. Information collected and interpreted
includes objective and subjective data about the patient and the patient’s
context gathered from the patient, carer, other health professionals and the
patient’s medical record. These tasks are sequential and recurring for which
dietitians make decisions about the timing and frequency of patient contact
and care. While these tasks are routine in patient care, they are incorporated
into decision making in a highly fluid manner as part of a bigger holistic
problem identification and solving approach concerned with the individual
patient’s current and predicted health and nutrition needs. The other
dimensions of interactions, reasoning, practitioner factors and context shape
and inform how these tasks are carried out and the outcome of these tasks
for the patient. These core tasks are located in the centre of the model
(Figure 8.2) signifying their fundamental place in decision making.
However, the model brings to the forefront the dimensions of the
interactions, reasoning, practitioner factors and contextual elements that are
incorporated in a situation-dependent manner as determined by the meta
process of the dietitian’s clinical judgement.

8.2.2  Interactions
Dietitian CDM is a social phenomenon dependent on effective interactions
with other professionals such as medical practitioners, nurses, allied health
professional as well as patients and their carers. What and how decisions are
made are strongly interconnected to the therapeutic and professional
relationships built with other health professionals and the patient, requiring
various types of communication as part of the process of decision making.
These interactions are strongly characterised by power relations which
dominate dietitian decision making at multiple stages throughout the core
decision making tasks. The nature of this power is very dependent on the
individual personalities, beliefs, values and preferences as well as group
dynamics within health care teams. The power relations between a dietitian
and medical practitioner are of particular significance given the greater
authority medical practitioners have within decision making hierarchies in
hospital settings. Due to the nature of power within these various
relationships, dietitians decide how to respond to power through three key
types of interactions. These are building supportive relationships,
negotiating and advocating, and instructing and enabling. Building
relationships and maintaining relationships opens opportunities for the
dietitians to gain understanding of MDT members’ opinions, roles and
responsibilities about patient care as well as build rapport and establish a
reputation that highlights the dietitian’s professional value for enhanced
patient outcomes. This is particularly necessary due to the constant
movement of health care staff within and across clinical specialties and
practice environments within an individual hospital. Advocating and
negotiating with medical practitioners concerning nutrition interventions are
key strategies necessary for interprofessional work. Instructing nursing staff
and in certain circumstances, patients and carers facilitate implementation
and sharing of care plans. Enabling patients through collaborative decision
making approaches that empower patients in relation to their own nutrition
and health care are ideal and important strategies that are underpinned by
empathy and patient-centredness. While the patient is central to dietitian
decision making, interaction in decision making does not always involve the
patient due to varying degrees to which the patient can communicate due to
their clinical status.

8.2.3 Reasoning
The clinical reasoning processes experienced dietitians engage in are often
highly complex with the meta process of clinical judgement interwoven
throughout. Sound clinical judgement is considered an essential given the
constant changing, often ambiguous and subjective nature of patient care in
the acute care setting. A dietitian’s clinical judgement is characterised by
fluid use of complex knowledge structures developed from specific clinical
experience and the efficient incorporation of the patient context while
weighing up the relevance of information relating to the patients’ past and
present health state in order to decide on the best course of action at the time. Clinical judgement plays a critical role in the management of complexity, individualisation of care plans, interactions with others concerning patient care and the complex reasoning process used to synthesise information and different types of knowledge.

Experienced dietitians’ clinical reasoning is highly tacit, automatic and complex involving significant use of inductive reasoning approaches that involve pattern recognition, sensing, intuition and ‘gut feeling’. Analytical reasoning, particularly hypothetico-deductive reasoning guides the nutrition assessment process which is focussed on identifying relevant nutritional issues. A multifaceted knowledge base of both evidence and highly tacit experience-based knowledge is used often without explicit awareness of the dietitian at the time. Tension can exist between use of highly tacit inductive reasoning approaches (e.g. pattern recognition and intuition) and the need to justify decisions with evidence-based rationales to other health professionals. Clinical judgement was found to be a meta process managing this tension, utilising metacognitive skills to maintain awareness of the influences on decision making. Dietitians move between different reasoning processes in a fluid way that is influenced by the dietitian’s knowledge, expertise and the nature of particular decision making tasks for individual patients.

Metacognition is an important skill and process to engage in for decision making. Metacognition can take the form of reflection on and during patient care as well as awareness of and ability to alter their own thinking. Metacognitive reflection facilitates ability to evaluate oneself and any external influences on decision making and how reasoning might change to assist deliver better quality care. The ability to reflect on experience is considered essential to evaluate decisions while making them as well as on awareness of outcomes so as to redirect, alter and steer the process of care towards more ideal outcomes for the patient.

8.2.4 Practitioner factors

The dietitians’ individual experience, both amount and type, personal attributes, roles and responsibilities and interpersonal skills were found to be
significant factors that shaped the nature of CDM in the acute care setting. The type and amount of clinical experience was a key influence on shaping the nature of clinical reasoning as it developed over time. Dietitians with more experience and time spent specialising and subsequently working with familiar health professionals conveyed greater confidence to engage in advocating and negotiating and an overall greater sense of autonomy in decision making.

Personal attributes of the individual dietitian such as confidence, empathy, patient-centredness, and intrinsic motivation were influential on how practitioners enacted decision making and engaged with ongoing experience. Confidence was both a product of experience but also a driver towards deciding when and how to negotiate and advocate with medical practitioners given identified power imbalances. Intrinsic motivation influenced how the dietitian engaged in interprofessional interactions such as advocacy and negotiation as well as how expertise develops then continues to shape the nature of CDM. A focus on improved outcomes for patients is supported by an approach characterised by empathy and patient-centredness.

Interpersonal skills such as assertiveness, compromise, social and emotional awareness were considered crucial to effectively and professionally navigate the power relations that were prominent in most interactions in the acute care setting. The ability to build rapport, be persistent yet respectful, articulate rationales in an efficient and relevant way was useful for being able to gain benefit for the patient through building relationships, advocating and negotiating with medical practitioners.

The specific and current roles and responsibilities of the dietitian including those that weren’t directly related to patient care (e.g. management, research, administration, meetings, supervision) also influenced the day to day nature of decision making. Whether the dietitian specialised or not, was responsible for other dietitians or not and other responsibilities they had influenced decision making particularly for decisions related to prioritising referrals and managing time for patient care.
8.2.5 Context

Contextual factors in the form of resources, culture, practice environment and clinical speciality shape and influence what and how decision making occurred for the five core tasks. The practice environment in which CDM occurs includes both the acute hospital itself as well as the different wards and units of a hospital that can share and differ in their defining characteristics. Practice environment also included the managers and supervisors that were responsible for clinical governance of the dietitian, ideally providing a supportive environment. The acute care setting as a whole offers a fast and dynamic routine that influences the nature of CDM. In particular, there is need for efficient decision making and for the dietitian to be able to adapt to change effectively. The resources (time, budget, therapies available) available to the dietitian by the health care system and or hospital enables and or limits thereby impacting what and how decisions are made for patient care.

The clinical specialty, both the health professionals belonging to it and in which the patient has been admitted under were a constant influence on how the dietitian engaged in her CDM. In particular, the medical profession and nurses were mostly grouped in specific locations in the hospital as well as identifying as a collective of health professionals that had a culture that influenced how nutrition was valued and hence the role of the dietitian. The dietitian placed importance on understanding this culture as well as the opinions and preferences of members of each different specialty their workload included. Each clinical specialty could have nutritional and medical problems, knowledge and processes that were unique to the specialty.

8.3 CONTRIBUTION OF MY RESEARCH AND RELATED LITERATURE

This research has added new knowledge to the field of decision making and expertise in clinical dietetics in acute care settings which have the potential to be more broadly applicable to the practice of dietetics as well as decision making by a range of health care professionals. This section locates my findings within the larger context of decision making and expertise research within which I will argue my findings offer extensions and enrichments to
current understanding of this phenomenon. My research has provided deeper perspectives on the nature of dietitian CDM in acute care settings than previously reported in the literature including how dietitians make clinical decisions. In addition, my research offers insights into the artistry of expertise that underpins CDM and how it develops in dietitians in the acute care setting.

8.3.1 The nature of experienced dietitian CDM in the acute care setting

*Experienced dietitian CDM is complex, fluid, and multidimensional*

The CDM of experienced dietitians in the acute care setting is a complex fluid and multidimensional process. My findings are consistent with other clinical reasoning and CDM models in other professions underpinned by an argument for a multi-dimensional non-linear portrayal of CDM (Higgs et al., 2019; Madani et al., 2018). In dietetics, my findings have similarities with the key steps outlined in the Nutrition Care Process Model (NCPM) (Swan et al., 2017) and British Dietitian’s Association (BDA) Model and Process for Nutrition and Dietetic Practice (The British Dietitians Association., 2016) (Appendix 9). For the most part, the cognitive tasks involved in prioritising, assessing, care planning, implementing care plans and monitoring patients found in my study are similar to the general steps included in the NCPM’s description of critical thinking and the BDA Model and Process ‘critical reasoning’. My research findings differed in that the process of engaging in the five core tasks was found to be a tool rather than the main dimension of decision making, bringing to the forefront the importance of interactions, reasoning, practitioner factors and context. These dimensions have been conceptualised in *A Model of the Multidimensional Nature of Dietitian CDM in the Acute care setting* (Figure 8.2). My research has provided a deeper understanding of how these dimensions integrate for the purposes of CDM. As depicted in the model, the relationship between these dimensions is continuous with no boundaries depicting a constant interlocking that is managed by the dietitian’s clinical judgement.
As a result of my research, differences between the NCPM and my findings on the nature of CDM have been brought to light. The NCPM offers a framework for dietitians as to how a dietitian should identify and attempt to solve nutrition related problems in a systematic evidence-based way and report outcomes of interventions. Authors of the NCPM acknowledge that while the care process is represented as a sequential cyclical set of steps undertaken in the care process, in practice it is likely not always a linear process, particularly for more experienced dietitians (Swan et al., 2017). Internationally and within Australia, adoption of the standardised reporting model offered through the associated Nutrition Care Process Terminology (NCPT) (Academy of Nutrition and Dietetics, 2019; Bueche et al., 2008b) is being used as a tool to improve a dietitian’s clinical effectiveness. Therefore implementing the NCPM/NCPT seems to offer a way to take advantage of the emerging and growing changes to care documentation with the integration of electronic health records making way for opportunities to collect quantifiable evidence of nutrition care (Gibbons, 2017; Vivanti et al., 2018). The NCPT therefore, has been valuable for helping dietitians formally communicate their CDM when documenting nutrition care (Lovestam et al., 2016; Lövestam et al., 2019; Vivanti et al., 2017).

The NCPM value is limited where it doesn’t (nor claims to) offer understanding of how CDM actually occurs within a specific context and how the various influences shape how the dietitian makes decisions about patient care. In addition, the NCPM focuses on a technical-reductionist approach to decision making and limits reference to any non-analytical reasoning or judgement based thinking. Being a general framework for decision making and logical thinking, it doesn’t offer context specific or expertise specific understanding of what capabilities might underpin dietitian decision making in the acute care setting. Unlike the NCPM, my research offers an understanding of how interactions, reasoning, practitioner factors and context influence how the dietitian engages in decision making for nutrition care in the acute care setting. This new understanding indicates the importance of the acute care dietitian’s expertise needed to facilitate this complex interplay of multiple dimensions through sound clinical judgement.
The multifaceted nature of dietitian CDM in the acute care setting that my findings revealed is particularly comparable to the profession of nursing. One study in particular that resonates was the doctoral work that developed the Dynamic Reasoning Theory (Ray, 2018). In this study ‘reasoning’ was used to represent the whole process of how nurses choose to provide care, in the same way I have chosen to use CDM. The overlap in concepts used in the literature was discussed earlier in this thesis (see Chapter 2, section 2.2). Using a grounded theory methodology and interviewing nurses, the author argues the iterative nature of reasoning in how it involves multiple (15 types) cognitive strategies that nurses (via the nursing process) match to the patient situation so as to be able to continuously respond to the changes to the patients’ health. These changes in the patient were shown to be the primary catalyst for which reasoning approach was used and needed. Reasoning ability was influenced by the nurses’ experience, motivation, wellbeing and context of practice. So too, dietitian participants indicated the varied reasoning strategies they used that were dependent on the patient scenario and their own knowledge and experience with clinical judgement guiding the process. My research therefore, reveals that multiple reasoning strategies are needed in CDM as well as how these strategies are used by the dietitians in order to be able to respond to changing needs of patients in the acute care setting.

Dietitian CDM is embedded in context

My research offers a deeper understanding as to how context affects the nature of dietitian CDM in the acute care setting. The multiple processes involved in dietitian CDM are embedded in the context in which they are occurring and therefore context is an essential factor for consideration when making and implementing a decision. Contextual influences identified in my study including clinical speciality, culture, practice environment and resources and the other health professionals related to these (within the acute care setting) resonate with those acknowledged in the literature (Adams, Goyder, Heneghan, Brand, & Ajjawi, 2017; Byrnes, Young, Mudge, Banks, & Bauer, 2019; Desroches, Lapointe, Deschenes, Gagnon, & Legare, 2011; Gibbs, Drey, & Baldwin, 2019; Hedberg & Larsson, 2004; Smith, Higgs, & Ellis, 2008). My findings are consistent with research that
has shown how professions and their practice languages are situated in professional cultures (Peters et al., 2017). The language dietitians in my research used to describe the reasoning and processes employed in their CDM therefore offer perspectives on the current traditions and culture associated with dietetics in the acute care setting and more broadly clinical dietetics. Emphasising and including the role of context in discussions about how CDM occurs and capabilities develop will support dietetic practice that can help meet the demands of the setting and situation in which decisions are being made.

In particular, participants emphasised the role that clinical speciality has in how decisions are made about patient care within that clinical speciality. Clinical speciality influences the doctor-dietitian interaction, similar to that found in doctor-nursing interactions in an ethnographic study of ICU and neurology units (Liberati, 2017; Liberati, Gorli, & Scaratti, 2016). Authors of these studies argue that this is due to the level of acuity on wards; patient’s state of awareness; different approaches to clinical care (e.g. holistic vs specialised) that vary between specialties. Clinical specialties have cultures of practice adopted by various professions working within them that confer meaning to patient care, shape professional identities and regulate interprofessional boundaries (Alexanian, Kitto, Rak, & Reeves, 2015; Foronda, MacWilliams, & McArthur, 2016; Liberati, 2017). For example, in my research, the dietitians who had more time and experience within a particular specialty had greater awareness and knowledge of the practices specific to the context in which patient care was taking place, which is then used in clinical judgement. Therefore, clinical judgement is shaped by the context in which the dietitian’s experience has been gained as well as the clinical judgement itself being influenced by the context in which CDM is occurring.

Context seems to account for differences in decision making even in patients with similar clinical conditions. For example, participants often indicated that how one dietitian prioritises an enteral feed in ICU may be different to a non-ICU setting in the acute hospital or how a referral for malnutrition may be managed differently depending on the ward, and even as some participants indicated who the referral was from. In a study of
expert physicians (Durning, Artino, Pangaro, van der Vleuten, & Schuwirth, 2011), this impact of context is explained through what is termed situated cognition where physician factors, patient factors, encounter factors all contribute to cognitive load where reasoning approaches need to balance goals. In a study on collaborative decision making in early career rural dietitians, the degree to which dietitians could engage with their patients was dependent on context, with trends seen across clinical specialties highlighting what others have said that CDM is considered as situational (Samuelson, Trede, & Higgs, 2016). The degree of interaction that is possible is dependent on the context and nature of the task, not just the capability of the practitioner to enable patients through collaboration. My study reinforces this finding and also highlights how the acute care setting itself provides a context in which how CDM occurs is strongly influenced by the acuity of a patient’s illness and associated ability to communicate with the dietitian. The situational nature of dietitian CDM in the acute care setting was also represented in my research by the presence of hierarchy within and across the MDT which directly shapes the way dietitians need to engage in CDM.

Clinical judgement plays an essential role in dietitian CDM
Dietitians in my research privileged the essential role and value of clinical judgement, a sophisticated, context dependent and often tacit meta reasoning approach that extends beyond conscious logical thinking. Clinical judgement was revealed as essential to CDM as it allowed the dietitian to respond to the inherent complexity and ambiguity characterising the acute care setting. To date, my research offers the first in-depth understanding of the nature of dietitian clinical judgement, what it is and its role in clinical decision making in the acute setting.

Clinical judgement was conveyed as a meta-reasoning process that involved multiple reasoning approaches and thereby is not reducible to any individual one. My findings support previous research about reasoning and cognitive frameworks that attest to CDM involving a range of reasoning approaches that range from highly analytical to intuitive and pattern recognition (Adams et al., 2017; Croskerry et al., 2017) and that these are often used in an integrated way depending on the nature of the task or decision (Custers,
My research compares broadly to expert decision making in other disciplines that have found intuitive and pattern recognition to be dominant reasoning approaches used in CDM in the process of routine care (Gillespie, Chaboyer, St John, Morley, & Nieuwenhoven, 2015; Jones et al., 2019; Norman et al., 2007; Peters et al., 2017; Rew, 1990; Simmons, Lanuza, Fonteyn, Hicks, & Holm, 2003; Smith et al., 2008). Clinical judgement in my research was described as the overarching strategy that facilitated this integration of the necessary cognitive strategies. Comparable findings of the importance and use of clinical judgement and the multiple reasoning strategies needed for dietitian CDM position dietetics alongside disciplines such as medicine, nursing and more established allied health professions, showing a clear move beyond a technical role.

The rich account of the nature of clinical judgement that my findings offer suggests that clinical judgement is not interchangeable with concepts currently used in the dietetics literature. Dietetics literature to date tends to embrace critical thinking as a key construct representing the cognitive process in decision making and research is dominated by attempts to measure its presence in practice (Charney & Peterson, 2013; Goodman et al., 2018; Williams, 2019) using established concept definitions from other fields (Facione, 2018). My research positions critical thinking as one of the various cognitive strategies needed in CDM. Attempts to describe critical thinking in dietetic practice (Charney & Peterson, 2013) have involved using definitions from other fields (Facione, 2018) and assigning associated thinking tasks necessary for the nutrition care process that are differentiated across the novice to expert continuum according to the Dreyfus and Dreyfus (1980) model. In this way, CDM has been portrayed as involving clearly defined thinking tasks that mostly focus on analytical reasoning strategies not dissimilar to the hypothetico-deductive reasoning revealed to occur mostly in the core task of nutrition assessment (Charney & Peterson, 2013). My research differs in its suggestion that CDM involves cognitive processes, like clinical judgement, that is difficult to articulate given the complex, sophisticated and highly tacit nature. In dietetics literature, the construct of judgement is referred to within professional processes, standards and models of practice (Brantley et al., 2014; Dietitians
Association of Australia., 2015; The British Dietitians Association., 2016), however, it is used without explicit description. The poorly defined understanding of clinical judgement in dietetics is why some authors (Swan et al., 2017) have chosen to remove it from practice guidelines, policies and frameworks, instead opting for more measurable and analytical constructs such as critical thinking. I would argue that while clinical judgement is complex and hard to define, it’s relevance for CDM as shown by my research, indicates the need to include it in meaningful conversations about dietetic practice in the acute care setting.

Clinical judgement facilitated the synthesis of information, context and evidence in order to individualise patient care. This finding aligns with the view that decision making is a process of co-constructing knowledge in a situation that best serves the patient, rather than just evidence driven (Chin-Yee & Upshur, 2018). It has been shown in nursing that practitioners who can incorporate scientific and professional craft knowledge using judgement are better able to respond contextually and appropriately to their patients (James, Andershed, Gustavsson, & Ternestedt, 2010; Nieminen, Mannevaara, & Fagerström, 2011).

In my research, dietitian clinical judgement facilitated the weighing up of relevant information and knowledge in light of the multiple contextual elements of the patient’s situation. This included judging what is likely to be effective, feasible, supported and safe not just from the perspective of the patient and the dietitian’s expertise but while considering the other health professional perspectives. These findings are supported by research that found that the practice setting of integrative dietitians is a strong influence on the judgement and critical thinking used in decision making (Goodman et al., 2018). The nature of clinical judgement in terms of its consideration of context found in my research also helps explain findings in a survey-based study of decision making for oral nutrition support (ONS) in UK dietitians (Gibbs et al., 2019). These authors noted there were differences in influences on decision making reported in the survey results compared with those responses provided by study participants who were presented with actual patient scenarios. Patient scenario responses revealed that a strong influence on CDM was the considerations of the ease of implementation of
ONS which itself was specific to the context of practice, citing use of clinical judgement to decide. While the authors argued the different responses between survey and patient scenario responses was a limitation of their study, my findings provide understanding as to why this may have occurred. That when presented with an actual patient scenario versus acontextual questions, dietitians consider the relevant contextual variables unique to that situation for which clinical judgement facilitates the weighing up of these variables in light of other important information.

My research highlighted the role of clinical judgement in determining when, how or if protocols should be applied for patient care such as when prioritising patients. In my findings, dietitians indicated a judgement approach to prioritisation was important due to role of context specific to each specialty and MDT even though there were common principles that guided prioritisation decisions. In practice, there was a requirement to weigh up the needs and wants of patients, other health professionals as well as protocols while constantly evaluating patient safety with other competing variables such as time and resources which were often specific to the unit or ward within the hospital. Interestingly, this finding differs from the factorial survey approach used in a dietetics study where Hickson et al (2017) sought to standardise patient prioritisation decisions. The authors’ aim was to generate an expert model of dietitian CDM for prioritising patients to be seen in the acute care setting in order to limit variability and remove bias. The underlying assumption held by authors was that there are right and wrong judgements and therefore variability in decision making about which patients are important to see is not wanted. The authors produced a generic decision making policy, built on the biochemical, clinical and physiological cues in patients that represent a hierarchy of nutritional risk, that they argue could be used to improve the effectiveness and quality of professional judgements. However, my research suggests that each unit, ward, clinical specialty and patient context influences how the dietitian decides, using clinical judgement, what is a priority patient, indicating a variability and reliance upon understanding the contextual nuances in which CDM takes place. I suggest that protocols have a role for ensuring safety and risk management; however, prioritisation decisions can and need to be informed
by the specific context of the patient and dietitian that can be facilitated by the dietitian’s clinical judgement.

My research highlighted how the dietitian’s experience and knowledge shape the nature and use of clinical judgement in CDM. Participants initially struggled to articulate what clinical judgement was like in practice while simultaneously expressing that it was an essential and dominant approach used in decision making. The difficulty to articulate their clinical judgement may be explained by literature that describes the tacit nature of experience-based knowledge that clinical judgement relies upon (Eraut, 2000). My findings on the nature of clinical judgement are similar to the literature which suggests it likely involves elements of intuitive and less analytical reasoning whose nature and use in decision making is influenced by the type and amount of experience on judgement and intuition (Melin-Johansson et al., 2017; Van den Brink, Holbrechts, Brand, Stolper, & Van Royen, 2019). The dietitian’s experience also influenced how clinical judgement was used to weigh up the relevance of evidence. In many instances, it was not suitable or feasible to directly apply evidence to a patient scenario and therefore intuitive judgements were relied upon to direct decision making. This same tension between evidence and intuition has been seen in nursing decision making, where experience was the reference point to check appropriateness of intuition (Traynor et al., 2010). Experience-based clinical judgement therefore may be likened to the ‘clinical experience’ component of recent evidence-based practice models (Johnston et al., 2019). Therefore, a deeper understanding of dietitian clinical judgement informs a deeper understanding of how evidence-based practice can work for quality care in acute care dietetics.

Clinical judgement is recognised by multiple other professions as part of the approach used for making patient care decisions in the acute care setting. My findings revealed the essential role clinical judgement as a meta process that facilitates multiple reasoning processes, synthesis of evidence and experience-based knowledge, context and the patient scenario so as to individualise patient care. My research has offered a deep understanding of the nature of the use of clinical judgement in CDM that has been absent from dietetics literature in which the empirico-analytical paradigm of
standardising and measuring still dominates. The importance of clinical judgement for dietitian CDM elevates dietetic practice in the acute care setting technical skill and knowledge, revealing a specific expertise needed to enact quality individualised patient care.

**Interprofessional interactions are a key influence in dietitian CDM in the acute care setting**

My findings have placed interprofessional interactions not at the periphery of influence on CDM but as one of the main influences on the nature of dietitian CDM in the acute care setting. Successfully navigating power relations was considered essential for effective patient care – participants conveyed that you couldn’t have one without the other. Interacting, communicating and navigating power relations are pivotal to efforts to make and implement clinical decisions in order to provide quality care. Most discussions in the literature revolve around power between patient and dietitian (e.g. the focus of collaborative decision making) or gender-focused (Seher, 2018). Where my findings have highlighted the role of power in interprofessional relationships and how this influences dietitian CDM.

My research reveals that in the acute care setting, dietitian CDM is an interactive phenomenon that engages interpersonal elements together with technical and cognitive elements integrated to suit the needs of the task in a specific context. The importance of interpersonal communication has more recently been reflected in dietetic competencies that are acknowledging the move in health care from a dominant medical model towards a social model of health care where communicating for better care with patients and stakeholders is important (Ash et al., 2019). While interpersonal communication and collaboration is highlighted as important in dietetic practice (Cant & Aroni, 2008), the dietitian-client interaction is what dominates the research and dialogue around the emotional and relational elements of practice (Morris, Herrmann, Liles, & Roskell, 2018; Swan et al., 2017; Vrchota, 2011). Whereas my dietitian participants emphasised the effort and time they regularly spend on communicating with members of the MDT. The need to focus on interprofessional interactions in my study is comparable to Milosavljevic et al’s (2011) small observational study of hospital dietitians in which it was found that communication consumed 41%
of the dietitian’s time versus 23% with actual patient care (indirect and direct). Therefore, my research offers a basis for how and why interpersonal communication between a dietitian and other health professionals and not just dietitian and patient is a key dimension of making decisions that seek quality patient care in the acute care setting.

My findings show that dietitian decision making sits on a spectrum of autonomy, a view shared by interprofessional practice literature (D'Amour, Ferrada-Videla, San Martin Rodriguez, & Beaulieu, 2005). Croker, Higgs, and Trede (2016) argue different settings have different needs for collaboration and identify the role of power which accounts for different ways collaboration occurs in different contexts and the challenges health professionals face in attempts to collaborate. My participants described working within what Croker et al. (2016) named ‘dispersed’ teams in that profession specific departments are responsible for rostering and allocation of practitioners to certain specialties or areas. Therefore, quality CDM requires dietitians to develop and use interpersonal communication and social awareness capabilities that enable effective interactions with other health professionals that involve power imbalances.

My findings emphasise the importance for CDM of dietitians having a supportive relationship with medical practitioners, particularly those with a higher status within a strong decision making hierarchy in the acute care setting. Medical dominance in relation to legal responsibility in decision making hierarchies has been shown to have a direct impact on the nature of interactions between different professions in the acute care setting (Alexanian et al., 2015; Byrnes et al., 2019; Lewin & Reeves, 2011; Manias, 2015). The dietitian participants in my research conveyed a sense of lack of power within health care teams, a sentiment shared by other dietitian (Byrnes et al., 2019; Vrchota, 2011) and nursing and allied health literature (Georgiou, Pапathanassoglou, & Pavlakis, 2017; Kenny & Adamson, 1992). The issue of power and associated medical dominance is considered to involve default behaviours of doctors using communication to legitimise their decision making power (Finn, Learmonth, & Reedy, 2010). Research within surgical medicine has argued that these power differences in MDTs represent a form of unproductive hierarchy and can stifle greater function of
health care teams and patient safety (Greenberg et al., 2007). Dietitian participants emphasised the value of gaining understanding of their medical practitioner colleagues, considering their beliefs and opinions about nutrition for their patients, representing the role of empathy that other authors have argued is central to combating power issues in health care teams. My research therefore contributes to this ongoing discussion of how the nature of power in the relationships exists and what may be needed to engage in effective interprofessional practice. Thereby highlighting the importance in acute care dietetics for an awareness of where and with whom power is situated.

Dietitians made decisions on how to respond to medical dominance in the MDT which included advocating and negotiating, interactions that are not necessarily explained by teamwork or collaboration. These communication behaviours were aligned with findings from Tighe’s (2016) doctoral work on dietitian decision making about artificial nutrition revealing how acute care dietitians make concerted efforts to be heard by being known, making a difference and speaking up. My findings are also relevant to ethnographic studies on interprofessional practice in ethnographic studies that have observed multiple health professionals, including dietitians in the acute care setting (Alexanian et al., 2015; Lewin & Reeves, 2011; Manias, 2015). The authors of these previously cited studies argue that the notion of teamwork as a form of regular interaction with a shared identity may have little relevance in the acute care setting given its focus on providing episodic treatment in a fast-moving environment. These same studies found that the dominance of the medical profession, referred to as ‘medical dominance’, had a direct impact on interprofessional communication and professional autonomy of other health professionals. In those two studies, interactions between doctors and allied health professions were described as opportunistic where informal, ad hoc, backstage communication was seen to facilitate greater interprofessional communication due to difficulties with communicating with medical staff in meetings or rounds. So, while teamwork and collaboration may be ideals, dietitians may benefit from being prepared to engage in interprofessional work and communication that is opportunistic and time sensitive. The interprofessional work involved in
CDM therefore requires that the dietitian has an awareness of the specific practice environment and learns the routines, needs and demands of medical practitioners in the acute care setting.

The capabilities that underpin the interpersonal interactions needed for navigating power relations revealed in my research can be understood in light of research on interpersonal influence and power (Raven, 2008). Also, the main responses to power seen in my research – building relationships, negotiating, advocating, instructing and enabling have also been revealed in other studies to be facilitated through emotional intelligence capabilities (Hutchinson, Hurley, Kozlowski, & Whitehair, 2018). Descriptions of emotional intelligence capabilities in the literature overlap with descriptions in my research of metacognition, empathy and intuition suggesting that emotional intelligence is interrelated to reasoning dimensions in dietitian CDM (Dunphy et al., 2010; Ilgen et al., 2018; Kuiper & Pesut, 2004; Lehmann, 2008). Professional communication and team building/leadership were identified as important competency priorities in a 10 year follow-up of a dietetic cohort being studied to understanding career pathways and influences on these (Plint, Ball, Hughes, & Desbrow, 2016). Plint’s and colleagues’ study revealed that a dietitian’s anticipation of remaining in the profession rested on being challenged, the workplace being flexible and being recognised, highlighting notions of autonomy and control which are underpinned by power. This literature helps explain why in my research a dietitian’s autonomy in CDM was dependent on her ability to interact and communicate in a way that builds relationships and rapport while gaining respect from medical practitioners over time. Therefore, dietitians encountering medical dominance and the acute care setting’s inherit complexity are likely to be more capable of engaging in influential communication if they possess adequate amounts of emotional intelligence and interpersonal skills.

### 8.3.2 The nature of expertise underpinning dietitian CDM in the acute care setting

My findings on the situated nature of CDM expertise and how it develops in the acute care setting builds on research in various fields such as professional socialisation, professional identity, practice capabilities,
experiential learning and confidence. This section critiques my research key findings around the central contribution of confidence and experience to expertise development, the social-contextual nature of this process and how professional artistry provides an image of the nature of expertise in clinical dietetics.

**Confidence and experience are central to the development of dietitian CDM expertise**

A key finding of my research was that the dietitian’s CDM expertise developed through experience of dietetic practice in context. There was a strong interplay between experience and confidence mediated by intrinsic motivation and reflection that supports the argument that experience alone is not synonymous with expertise in CDM. To date, no dietetics research has specifically explored how CDM expertise develops, instead, most dietetics practice literature has adopted known skill development models (Benner, 1982; Dreyfus & Dreyfus, 1980) and applied them to explain competency development (Dietitians Association of Australia., 2015; Khan & Ramachandran, 2012). Williams (2019) doctoral research that used mixed methods to explore developing student competence in diagnostic reasoning highlighted the role of confidence and coaching. My findings extend Williams’ work by identifying that confidence continues to be significant in enabling further development beyond proficiency levels.

Findings in my research are supported by expertise research in nursing where expert nursing practice is thought to develop through risk taking, deliberate practice, social models and mentors and recognition of expertise (Bonner & Greenwood, 2006; Haag-Heitman, 2008). Similar to research with medical interns (Durning et al., 2013) and physiotherapists (Hayward et al., 2013) my participants had the steepest learning curve early on in their career through deliberate practice and supportive environments and that expertise continues to develop more implicitly. Specialisation for some of my participants prompted more accelerated development given it allowed for focused knowledge and skill development. These findings are similar to Bonner and Greenwood (2006) findings where nephrology nurses’ focused experience resulted in practitioners viewing decision making, actions and their consequences more broadly and in longer term, gaining a holistic
‘bigger picture’ view of practice. Therefore, there is value in the dietitian engaging in practice experiences that challenge capabilities as well as open opportunities that involve sufficient time to focus and gain depth of expertise that is deemed credible by peers and professional community.

My research speaks to the capabilities needed for CDM in the acute care setting which have commonalities with the in-depth research in physiotherapy that explored the development of practice capabilities (Patton, 2014). In particular, my findings bring to the forefront the significant role of confidence in developing dietitian CDM expertise and is positioned in the literature concerning self-efficacy (Bandura, 1993; Wainwright & Gwyer, 2017). Confidence was not just a product of experience - it was an active dimension of practice that mediated, along with intrinsic motivation, the pursuit of further challenging experiences to learn and grow from. Confidence also facilitated important decision making interactions such as negotiation and advocacy with more powerful health professionals.

*Developing CDM expertise is a social-contextual dependent process*

My research revealed the social-contextual nature of how dietitians’ expertise develops. My research asserts that clinical dietetics expertise development is a social phenomenon strongly dependent on the practice context and the people within it during an ongoing process of professional socialisation and professional identity development. Research on dietitians’ professional socialisation and the influences that shape this process is limited and without the solid body of inquiry seen in other health professionals (see medicine, nursing and physiotherapy; Gingras, 2009a, 2009b, 2010; Lordly & Maclellan, 2012; Maclellan et al., 2011). My findings have provided a broader and richer understanding of how practice context, as well as the earlier professional socialisation a dietitian, may have engaged in, influence not just how decisions are made but also how expertise develops.

The practice setting and relational nature of practice in the acute care setting was found to be influential for expertise development beyond entry to the profession in agreement with the definition of professional socialisation
offered by Macintosh (2003) as “a career long iterative process of reworking professional identity” (p. 739). This finding is similar to professional socialisation research in nursing which has identified that professional socialisation extends beyond entry into the profession (Johnson, Cowin, Wilson, & Young, 2012). Deppoliti (2008) found that regardless of what stage of socialisation a nurse is at, relationships with other nurses, mentors and the patient themselves are critical to further development. However, dietetics research to date has been focused on how dietitians become socialised into the profession as students (Maclellan & Lordly, 2008). Maclellan et al. (2011) posited a model of professional socialisation for dietetics through application of a framework derived from an integrative review of dietetics and nursing literature. The authors’ ‘post-socialisation’ phase in this model supports the notion that socialisation is ongoing after professional education where the dietitian is constantly redefining their professional identity. While my research supports this argument, my participants, all of which had been practising for more than five years, revealed how the specific people, culture and traditions of the acute care setting context itself shaped how they developed expertise. Therefore, there is value in considering the specific knowledge, interpersonal and practice behaviours required for specific settings when supporting and fostering clinical dietetics expertise given the changes dietitians often make to where they practice well beyond their first practice experience.

Dietitians in my study highlighted the influence of not only the cultural and environmental context but also the interactions with other health professionals and patient for the development of clinical expertise. These findings are similar to the doctoral work of Ajjawi (2009) which sought to explore how clinical reasoning develops in physiotherapists and whether professional socialisation was an appropriate framework to interpret this journey. A key finding in her study was the view that clinical reasoning is embedded in practice and therefore best learned through the process of professional socialisation. Additional similarities were the role of a supportive workplace and managers and what Ajjawi refers to as belonging to a community of practice with other health professionals and
physiotherapists while learning to reason. However, in my research, interactions for CDM were conveyed as often including a power struggle that dietitians had to decide how to navigate, often involving having to defend their decision making, have it ignored or critiqued. The high staff turnover and movement across hospital clinical areas is characteristic of the acute care setting. This aspect of the acute setting offered repeated need to develop new supportive relationships and to try gain recognition for their expertise and thereby contribute positively to patient outcomes. These challenging interactions were often helpful in the process of refining, questioning and reflecting on practice which helped facilitate further expertise development that facilitates context specific CDM. Therefore, perhaps benefits exist to expertise when belonging to a challenging community of practice that shapes and helps develop necessary tools and skills to engage more effectively in interprofessional work in the acute care setting.

Development of expertise coincided with the development of professional identity both of which were intertwined with external perception and recognition of individual dietitian’s contribution to patient care. This finding suggests that expertise is not siloed but co-constructed with the network of professionals also involved in patient care and even the patients themselves. Brady (2018), through building on the sociology of expertise literature also argued for the relational nature of expertise in dietetics. Through the development of a theory of feminist sociology of expertise Brady argues that for dietitians, like other feminised professions, expertise is coproduced between the dietitians and others of whom have varying degrees of power. Dietitians in my study revealed that the development of clinical expertise coincided with the professional relationships that they needed to develop and maintain for decision making in patient care. Within these relationships, gaining recognition of their expertise was both a goal and a product of interactions for patient care. This importance of external feedback through recognition of expertise was similar to that found in nephrology nurses (Bonner, 2003; Bonner & Walker, 2004) where increased trust from more senior colleagues and medical practitioners enabled greater scope of practice and autonomy.
In particular, the doctor-dietitian relationship was emphasised as the key relationship that informed the interpersonal and communication skills often needed to navigate existing power differentials. This was similar to Deppoliti (2008) who explored how nurses in hospital settings construct their professional identity, the process of negotiating power and authority with doctors influenced how one identifies one’s skills, expertise and knowledge as different from others in the acute care setting. A sense of powerlessness was commonly expressed by participants in my study. However, those with more experience, a more developed professional identity, felt more confident and equipped to seek to rectify the degree of powerlessness. The presence and role of these complex hierarchical power relations are absent in dietetics professional and educational policies yet at the same time there is a focus of increasing the recognition and respect that the profession deems it is deserving of (Seher, 2018). My research reinforces the need to include the notions of power, relationships and context in discussions around expertise development given how interconnected and interdependent they are to the expertise performance of the clinical dietitian.

Intrinsic motivation was seen to be influential in how dietitians sought to forge their professional identity which involved seeking ways for greater growth in capabilities, autonomy and having these recognised by other professionals in the health care team so as to exert greater influence in decision making. These findings about the role of intrinsic motivation are supported by theories around self-determination: that humans have evolved inner resources for personality development and behavioural self-regulation (Ryan, Kuhl, & Deci, 1997). Social-contextual conditions can facilitate or undermine intrinsic motivation (Ryan & Deci, 2000) which supports the relationship between practice experience, supportive workplace and confidence indicated on A Model of Developing Dietitian CDM Expertise (see Figure 7.1).

**Professional artistry as a depiction of expertise in clinical dietetics**

In my research, professional artistry was presented as a concept which dietitians equated with clinical dietetics expertise. Professional artistry as perceived by dietitians in my research sits outside of technical expertise
frameworks and emphasises the need to be patient-centred, efficient and influential in practice in the acute care setting. Dietetics literature describing expertise is dominated by methods aiming to objectively assess expertise and develop advanced practice credentials by professional organisations in both Australia (Palermo et al., 2017; Palermo, Conway, et al., 2016) and overseas (Brantley et al., 2014; Brody et al., 2012; Skipper & Lewis, 2006; Wildish & Evers, 2010). While these advanced practice frameworks offer some insights that were similar to my findings on artistry, they were often quite general and used ‘advanced’ or ‘expert’ in front of nouns used to describe routine dietetic practice. In Australia, recent advanced practice competencies are non-specific to practice context in keeping with graduate competencies and present the views of experienced dietitians and academics (Dietitians Association of Australia, 2018; Palermo et al., 2017). Advanced accredited practising dietitians were considered as those who have advanced critical thinking skills are ‘client-centred’ ‘outcomes focussed’, have ‘high level interpersonal skills’, ‘advocate and influence’, engage in ‘effective teamwork’, exhibit ‘listening and negotiation skills’, and are dietitians ‘looking for opportunities to extend scope of practice’. These are similar to elements revealed in my study to be involved in CDM in practice, developing expertise and the concept of artistry. By describing expertise as professional artistry, my research elevates clinical dietetics expertise beyond possession of credentials, specialisation and technical skills of which further research and revisions of advanced practice models can consider.

Professional artistry as described by occupational therapy (OT) research (Paterson et al., 2005, 2006) shares common ideas about how my findings conceptualise artistry in dietetic practice. As reviewed in Chapter 2, Professional Practice Judgement Artistry (PPJA) is defined as “the capacity of professional artist practitioners to make highly skilled micro-, macro-, and meta-judgements that are optimal for the circumstances and the context’ (Paterson & Higgs, 2001, p. 2) and a way of making decisions (Paterson et al., 2005) has similarities to my findings. PPJ Artistry has professionalism (e.g. client-centred practice), multifaceted judgement (OT practice wisdom, mutual decision making), practice artistry (OT identity and knowing in practice), reflexivity (as an outcome of PPJA that enables ongoing growth.
and capability and as the process itself of PPJA) sitting within art-science-humanism. Developing artistry in occupational therapy involves similar elements to my study such as feedback, modelling, experience, reflection, trial and error, professional training (Williams & Paterson, 2009). Artistry is perceived as being at the very heart of OT practice through a key role it plays in the establishment of therapeutic relationships. My findings concerning artistry offer a broader view of ‘therapeutic relationships’ to include those relationships with other health professionals in the acute care setting, in particular medical practitioners, with the need to respond to power differentials. My research highlights the presence of sophisticated and nuanced expertise that is needed for the highly complex social interactions that involves navigating power hierarchies that are present in the acute care setting. I would argue therefore that clinical dietetics too is both an art and science and the way that the dietitian skilfully enacts this for quality patient care demands professional artistry.

Important to my insights into professional artistry is whether it can be taught for which participants had differing views. What was unanimous was the view that a dietitian with professional artistry is someone who can respond to the current demands of practice, while developing the capabilities needed for a future practice which can be uncertain and unpredictable. This finding share attributes with the concept of adaptive expertise in medicine which was introduced in Chapter 2. Adaptive expertise has been characterised to reside at the pinnacle of the expertise spectrum arguing that what is needed is more than just an accurate use of expert knowledge in decision making (Croskerry, 2018; Mylopoulos et al., 2018; Mylopoulos & Woods, 2009; Woods & Mylopoulos, 2015). Characteristics of adaptive expertise have been theorised to include the ability to embrace multiple perspectives and can make connections between them; critical thinking skills; metacognition (reflection, mindfulness); efficiency of thought, flexibility, innovation; transfer concepts to different contexts which promotes ongoing development of expertise; to avoid stopping developing, one needs ongoing questioning, active learning with deliberate practice. Conceptualisations of adaptive expertise and my findings on professional artistry also overlap with considerations of the expert’s ability to counteract tendencies toward
automaticity as concluded by a review of deliberate practice and expert performance (Ericsson, 2008). The expert will deliberately seek out opportunities to attain desired goals and increase their level of performance reinforcing my findings about the growth-orientated disposition of the dietitian with professional artistry. While my research has not offered answers as to whether all aspects of described artistry can be taught, understanding their role for effective practice in the acute care setting can be valuable for dietitians aiming for the pinnacle of expertise and those around them supporting them in that continuous journey.

My findings on artistry share in the characteristics of adaptive expertise and expert performance but my research also extends on this understanding of adaptive cognitive capabilities. A key difference is how core dimensions in professional artistry in dietetics included descriptions concerning the artistry of interactions that are characterised being very influential and adaptable and the supporting capabilities enabling these. Therefore, my research expands on cognitive and knowledge-centric depictions of expertise offering an emphasis on the interprofessional skills and communication needed to perform with professional artistry in clinical dietetics. This relational dimension therefore is relevant in the formal and informal processes of evaluating a clinical dietitian’s performance which my research presents as being centred around the notion of effective practice.

8.3.3 Conclusion
Critique of my findings through engagement with related literature has offered further depth to the new knowledge my research has provided in the areas of CDM and dietitian expertise. Revealing the similarities my research shares with other research in established health professions (medicine, nursing, physiotherapy and occupational therapy) supports the argument that dietetics as a profession belongs in that same space. A deeper and more nuanced understanding of CDM expertise in dietetics and its breadth to include strong artistry, contextual, judgement and interpersonal dimensions supports the conclusion that clinical dietetics is placed to offer patient care that is sophisticated and situation dependent moving it further away from a simply technical profession. Quality and effective dietetic care in the acute care setting relies on practitioner and interpersonal dimensions given the
embedded nature of context, relationships and complexity in practice supporting the conclusion that the nature of dietitian CDM cannot be reduced to a stepwise process. Therefore, my A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care Setting (Figure 8.2) and the Model of Developing Dietitian CDM Expertise (Figure 7.1 in Chapter 7) doesn’t seek to displace any standardised care processes but I would argue both can be used to provide insight and understanding to the capabilities and influences involved in dietetic practice in the acute care setting.

My findings provide new knowledge to the dietetics profession revealing the complex, fluid and multidimensional nature of making clinical decisions about patient care. My research revealed clinical judgement to be a sophisticated and essential reasoning strategy used to make multiple types of decisions within the context and relational dependent process of patient care. Developing expertise in clinical dietetics is intertwined with the ongoing process of professional socialisation including the new construct of practice context socialisation. A dietitian’s confidence and professional and personal capabilities that have grown through reflection on and through deliberate practice experience support the development of expertise. Awareness and effective navigation of power relations in the acute care setting is essential for interpersonal interactions that support quality decision making underpinned by emotional intelligence and metacognitive capabilities. My research also offers a new view on clinical dietetics expertise found within the concept of professional artistry that extends beyond possession of expert knowledge and clinical skill emphasising the importance of being efficient, patient-centred and influential in practice.

8.4 CRITIQUE OF RESEARCH APPROACH
In conducting this research I chose to use an interpretive approach, with philosophical hermeneutics guiding all phases of the research. As discussed in Chapter 3, I made this choice because my research aim was to deepen my understanding of dietitians’ CDM based on interpretations and perceptions. In addition, this choice was informed by the limited previous understanding of CDM as experienced by experienced practitioners’ currently practising clinical dietetics. Use of an interpretive approach has also revealed insights
not obtained using a positivist paradigm and therefore has implications for assessing the contribution of these findings to broader understanding of dietitian CDM.

8.4.1 Transferability of the findings

The emphasis in qualitative research is to present the findings in such a way as to enable readers to determine the transferability of those findings to their own situation (Cypress, 2017). To do so readers need to be able to understand the context of the research, judge its quality, and make decisions about the relevance and usefulness of the research in application to their situations. The notion of transferability contrasts with research undertaken in an empirico-analytical paradigm, where the research methodology may be directly generalizable to a wider population. This distinction means that the findings in this thesis represent an understanding of decision making as undertaken by the experienced dietitians in this study. The methods used in my research have been valuable for developing a rich and deep understanding of phenomena that is not reducible to quantitative and generalisable assessment. In the subsequent discussion I consider factors influencing the transferability of the findings and develop the argument that this research has meaning beyond the participants in this study.

The research was conducted in Australia with dietitians from different geographical locations. The texts constructed in this research were derived from the experiences of 10 dietitians with clinical experience ranging from 5-30 years that were working across six different large metropolitan hospitals across three different states. The participants were included because they represented examples of the range of expertise that clinical dietitians can have including the amount of experience but also type in terms of specialisation or generalist. While some of the participants were highly specialised in a specific clinical area (critical care, renal, gastroenterology), all participants had had varied experience across different clinical specialties throughout their accumulated years of experience (oncology, general surgery, neurology, orthopaedics, geriatrics, respiratory, vascular surgery, palliative care, cardiology, endocrinology) as well as both inpatient and outpatient patient care. My reflection on the text construction and interpretation was that the interviews provided examples of acute
hospital dietetic practice that were typical of the broader practice of acute hospital clinical dietetics in Australia and as such would be transferable to other acute care dietitians and settings reaching saturation with ten participants. I made this judgement based on a number of factors. Firstly, my immersion in the interview and reference focus group texts revealed that the practice of acute care dietetics showed commonality in terms of use of common language to refer to problems, similar interventions and common organisational structures. Second, the participants’ practice in this study was comparable with my knowledge of acute care dietetics in other settings, with outcomes of discussions in which I had participated at a national level as the expected competencies of entry level dietitians as well as CDM processes used by more experienced dietitians, my reading of clinical dietetics texts and journal articles. In addition, findings were presented to participants within the framework of a reference focus group as a form of member checking as well as testing transferability of findings via presentations at national dietetics and allied health conferences. The findings of my research may be less transferable outside Australia, though I believe they would be transferable at least to the United Kingdom, Canada and New Zealand, where acute care clinical dietetics resembles that in Australia.

The scope of this research was limited to adult acute care dietetics in medium to large metropolitan hospitals. As such less transferability may be possible to dietetic practice in smaller regional and rural hospitals, community outpatient, private practice, paediatric or rehabilitation settings, or outside usual working hours. While there could be an argument that this project could have been extended to more sites and practitioners, the in-depth interviews generated a substantial amount of data. The final numbers of participants were guided by my conclusion that I had reached a level of saturation, redundancy and adequacy in relation to text construction.

8.4.2 Credibility of the findings
This research offers a credible contribution to the knowledge of decision making in clinical dietetics in the acute care setting substantiated by the detailed description in Chapter 3 of the strategies used to ensure rigour of the research (in particular the congruence between research paradigm, aims
questions and design, the use of more than one text construction strategy, and debriefing and critique by my peers and supervisors). A key aspect of ensuring research credibility was the adoption of philosophical hermeneutics as a guiding, reflexive strategy. I have described how I used a reflexive approach to the construction and interpretation of texts in order to portray the participants’ decision making and ensure the credibility of the findings. This aspect of the credibility of the research was further established in Chapters 4-7 with extensive use of quotes and examples to ground the findings in the words and experiences of participants.

8.5 IMPLICATIONS OF THIS RESEARCH

My research has offered new knowledge and a deeper understanding of the nature of CDM, the nature of expertise underpinning decision making in the acute care setting and how this expertise may develop. I have identified that CDM is complex, fluid and multidimensional and that developing CDM expertise involves the interdependent elements of experience, reflection, confidence, supportive workplace and intrinsic motivation that facilitate its refinement and change over time. I have also offered professional artistry as a depiction of the ideal expertise in clinical dietetics where effective practice is characterised by efficiency, adaptability and influence. From my findings that speak to how experienced dietitians make clinical decisions and how this CDM expertise develops, I have deduced several implications for consideration in the professional development and practice of acute care dietitians, interdisciplinary practice as well as university education and workforce preparation.

8.5.1 Interprofessional practice and education

In my research, I found that the relationships of my dietitian participants with other health care practitioners and patients had a significant impact on decision making approaches. The notions of power and autonomy in decision making are important concepts that could inform interprofessional education that seeks to promote effective interprofessional practice. Dietitians need to be equipped with interpersonal capabilities that facilitate the pursuit of better outcomes for patients given the highly social nature of
CDM in the acute care setting. Hierarchy and power within the MDT as found in my research and supported by earlier literature (Mandel & Garey, 1993) suggest the need of dietitians to focus on and understand the concept and realistic use of power in the workplace.

My research suggests that the patient’s condition, clinical speciality as well as the encultured medical dominance in decision making hierarchies influence the interprofessional work that is needed for the purposes of dietitian CDM. Aside from the medico-legal boundaries that specific scope of practice for dietitians, many decisions and approaches to interactions were decided on a case by case basis due to the differing opinions, preferences and perspectives medical practitioners had on the dietitian’s role in patient care. Participant dietitians indicated they needed to place significant value, time and effort on developing supportive relationships with medical practitioners so as to increase a doctor’s trust and respect in their expertise for contributing to decision making. Medical dominance in the acute care setting affects the interprofessional work of all professions, not just dietetics. Interprofessional education (IPE) strategies, in professional training settings for students as well as practice environments might be useful to help develop capabilities for CDM as well as promote awareness amongst multiple professions of each other’s roles, expertise and the influence of power and autonomy on interprofessional practice.

The socialisation of health professions begins in university and continues into practice settings throughout one’s career continuing to inform professional identity. Cultures of practice settings and values of established clinical speciality teams and units have been shown to influence ideas and views of emerging medical practitioners (Bleakley, 2011; Liberati, 2017; Peters et al., 2017). It is generally considered that medicine can often overlook the role of nutrition and thereby its key advocate, the dietitian, for multiple reasons including a scarcity of adequate nutritional education and because much of the current medical practice revolves around pharmaceutical and procedure orientated care (Adams, Lindell, Kohlmeier, & Zeisel, 2006; Kris-Etherton et al., 2014; Laur et al., 2016). Given the interdependence of dietitian decision making and the medical practitioner,
perhaps occupational integration at more fundamental levels offer an advantage for each profession.

Effective IPE may have the potential to promote autonomy for dietitians where it is currently lacking whether that be due to a lack of understanding of the dietitian’s role and capacity to contribute to patient care or diminished shared understanding over the physiological role of nutrition in therapeutic interventions. Getting the timing, context and format appropriate for participants in IPE strategies are important considerations for any efforts to enhance collaboration and cooperation (Lewis, 2018). Baker, Egan-Lee, Martimianakis, and Reeves (2011) argued that careful consideration of the power relationships between health care professions is needed when planning IPE. These authors found that even with the best intentions to promote collaboration and teamwork, IPE can equally reinforce traditional power relationships. Failure of interprofessional practice can be attributed to perceived threats to professional identity (McNeil, Mitchell, & Parker, 2013). Given the power struggles and variation in ideas about IP interactions, perhaps occupational integration at more fundamental levels is needed. This may include dietitians belonging to clinical specialties, including governance and economic responsibility, rather than belonging to dietitian departments within hospitals. This challenges traditional notions of organisation in hospitals and thereby prompts questions about how are people organised to provide the greatest integration (Finn et al., 2010). Allowing the dietitian to work at their capacity may ultimately enhance patient care.

My findings can inform expectations about the nature of CDM for dietitians choosing to enter the acute care practice setting. By doing so, the dietitian can reflect upon how well suited they may be to the practice of dietetics where autonomy is highly dependent on a hierarchy often outside of their control. Dietitians wanting to practice in acute care settings should be ready to commit to the development of interpersonal skills that include negotiation and advocacy as well as the situation dependent skills of enabling patients through collaborative approaches to decision making. These are skills that need to be fostered and promoted by dietitians and their managers through active reflection and proactive professional development. Opportunities
could be offered to dietitians to learn and harness skilled negotiation, and advocacy skills which my findings have shown necessary for CDM in the acute care setting. Interventions to improve assertiveness communication have been shown to be effective in multiple professions (Omura, Maguire, Levett-Jones, & Stone, 2017). Communication skills for decision making may be better positioned outside of just another technical ability to teach and measure improvements. The emotional and relational elements of CDM call on the need to coincide instruction with emotional intelligence, social intelligence and reflective practice capabilities (Australian Commission on Safety and Quality in Health Care, 2011).

8.5.2 For university education and workforce preparation

A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care Setting (Figure 8.2) offers a framework and language that may inform and help lessen the gap between the content of dietetics education and training and the realities of practice. The fact that participants struggled to identify ‘decision making’ with the multiple micro decisions that are made highlights how the traditions and language of professions introduced during early training shape perceptions about CDM in practice. Dietetics education tends to be dominated by a medical model of standards and measurable elements of nutrients, food and eating (Gingras, 2009a, 2010; Maclellan et al., 2011) where in real practice, dietitians deal with acutely unwell people where differing relationships with food and social contexts are very important. The relational and emotional aspects of dietetic practice are important attributes that need to be part of the pedagogy and framework for preparing dietitians for the subjective realities of practice given the paucity of dietetic curricula that privileges embodied knowledge (experience, intuitive and judgement) over technical knowledge (Gingras, 2010; Hodges, 2006). I would argue there is value in infusing the language of CDM reflected in A Model of the Multidimensional Nature of Dietitian CDM in the Acute Care Setting (Figure 8.2) into university curriculum, classroom discussions and assessment, making explicit that it involves multiple dimensions (social, cognitive and personal) and not just the language of standardised tasks such as those that dominate the NCPM. Given my findings support the notion of CDM expertise development coinciding with
professional socialisation which starts in university, educators have a role to play in framing practice of clinical dietetics in a multidimensional way that involves the need to make choices about how to think, communicate, act and relate to others.

One of the key features of clinical practice is that of uncertainty (Hall 2002). Shulman (2005) has described education in the professions as requiring pedagogies of uncertainty, as professional practice typically requires individuals to make decisions on available evidence regardless of how incomplete it might be. Therefore, introducing a dialogue about subjective, judgement and contextual elements of practice early as part of the socialisation process in university. This may help normalise the integration of ‘evidence’ and ‘phronesis’ as relevant to the development and use of clinical judgement in health care (Chin-Yee & Upshur, 2018). In dietitian CDM, some decisions are conscious, and some aren’t but being aware that there are decisions at multiple points in episodes of care might empower dietitians to feel agency and ownership in decision making earlier. I, therefore, suggest there is benefit to be gained from infusing CDM principles throughout the entire university education programme and not solely within clinical or therapeutic subjects.

My findings have brought to the forefront the importance of confidence in the development of CDM expertise. I contend that clinical educators responsible for the supervision and assessment of students on placements could increase emphasis on the role of confidence aligned with reaching learning milestones and mandatory competencies. Similarly, to how confidence was influenced by the relationships the participants in the study had with other professionals in the acute care setting, the relationship the student has with the clinical educator or supervisor could be crucial to prompting or inhibiting confidence development. Confidence levels can mediate responses to practice experience as students choose to reflect on those same experiences and initiate new ones. Confidence was identified not just as a passive product of experience but an integral input into driving ongoing expertise development and engagement in influential communication within power relations, both of which were drivers of quality decision making. Confidence, therefore, is necessary for practice in
the acute care setting and for facilitating ongoing professional development. Supervisors may benefit from training on how to recognise, monitor and evaluate students’ confidence and self-efficacy as well as including it in ongoing dialogue between student and supervising dietitian. This has potential to support learning in practice settings which is a crucial role that supervisors have in addition to the role of assessment of entry level competency. There is value in acknowledgement of the emotional dimensions of practice (Lehmann, 2008) which coincide with developing CDM expertise through placement experiences. Normalising the discussion of feelings such as confidence, failure and fear during debriefing, feedback and assessment procedures, both student and supervisor can be more aware of what is enabling and restricting self-efficacy and subsequent learning from experience.

There may be advantages to maximising opportunities for actual practice, with exposure to complexity, uncertainty and need to communicate and relate to others being beneficial for developing CDM expertise. Croskerry et al. (2017) argued for medicine that while the importance of sound reasoning and thinking for problem solving is acknowledged in curricular, there is often inadequate amounts of time and curriculum dedicated to doing just that. While there are challenges dietetic programs face with offering adequate practical placement opportunities (National Health Workforce Taskforce, 2008; Palermo, Capra, et al., 2016), simulation and or high fidelity e-learning offers a way to prompt earlier development of clinical reasoning approaches such as pattern recognition and clinical judgement development (Christensen, Villanueva, & Grieve, 2019). Whether it be simulation or opportunities in real practice settings, education and learning may be enhanced with a greater emphasis on modelling and coaching thinking of dietitians, integrated with instruction on attainment of knowledge, process and technical skills (van Graan & Williams, 2017). Modelling thinking can involve simple strategies whether in simulation or placement, of asking students questions such as ‘so what do you think of this patient’ earlier on in the patient scenario. The timing of these questions demands that the supervisor has awareness of their own thinking and knows how to make this explicit which may require training and reflection of their
own clinical education capability which has been shown to be valuable (Delany & Golding, 2014). But by doing so, and strategically choosing when to ask the student probing questions, student awareness of what is informing their developing understanding of the patient scenario can be enhanced.

8.5.3 Professional development and practice implications

My interpretations of the challenges experienced by dietitian participants in CDM revealed they often needed to pose deeper questions about autonomy, professional identity and how they related to others for decision making. The dietitians in my study revealed that their CDM approaches and expertise changed with experience, both professional and life, being shaped by their intrinsic motivation, workplace environments, changing roles and responsibilities and the people with whom they practised with. The findings of this study underscore the importance of both practitioners and workplaces taking responsibility for the ongoing development of dietitian CDM expertise.

The dietitian participants in my study communicated the interdependent nature of their confidence in CDM activities and workplace contexts. Supportive workplace cultures that promote and engage in critical reflection, timely and meaningful feedback and opportunities to recognise expertise promote confidence where lack of feedback can hinder it. Confidence supported a dietitian’s initiative to engage in challenging experiences, build relationships increase autonomy, approach challenging interactions with health practitioners with greater power including negotiation advocacy. These were important actions for everyday CDM as well as the development of dietitian CDM expertise. Therefore, managers, supervisors and dietitians, may benefit from using both A Model of the Multidimensional Nature of Dietitian CDM in the Acute care setting (Figure 8.2) and A Model of Developing Dietitian CDM Expertise (Figure 7.1) to inform clinical supervision and staff development frameworks. Mentoring and coaching of practising dietitians could include dialogues about what is
influencing CDM practice as well as what is hindering and or enabling CDM expertise development.

The development of CDM expertise by participants in my research was interconnected with ongoing professional socialisation in the acute care setting context and subsequent development and ongoing refinement of their professional identities. In Australia, university programs have responded to DAA’s National Competency changes that have moved away from practice context specific competency frameworks for entry level dietitians. There may be disadvantages to this change based on my findings that have highlighted the crucial role that context has in shaping the practice and development of dietitians’ CDM. Therefore, health care services, managers and dietitians need to be aware of the limitations that workforce preparation may have for CDM of dietitians in a specific setting such as acute care. As a result, one could argue there is even greater need for more structured, context specific orientation or internship programs that holistically help dietitians new to the acute care setting be socialised and to evaluate capabilities needed for CDM in the acute care setting. Socialisation need not be passive and restricted to workforce preparation and entry. A focus on what professional identity is, influences on it and incorporation into mandatory clinical supervision programs may be beneficial (Petty, Thomson, & Altamimi, 2016) so as to bring awareness to what needs to be done to develop it further given its role in CDM expertise. A contextual approach to educational and professional development interventions has been highlighted by dietetic practice research as important given the significant influence practice settings have on dietitians (Harper & Maher, 2017).

The social nature of CDM in dietetic practice in acute care settings has highlighted the need for capabilities to enable dietitians to effectively communicate their CDM. Currently, there is a significant emphasis on standardising the language used in the medical record to document the nutrition care process or similar that the dietitian undertook to arrive at what nutrition problems have been identified and the interventions proposed (Matthews et al., 2018; O’Sullivan, Lo, & Vivanti, 2018; Vivanti et al., 2018). While this is argued and even shown potential to improve case-based
funding and clarity of what dietitians involve in the process of making key clinical decisions, my findings emphasise the need also for dietitians to be able to effectively communicate their reasoning, give instructions, and increase awareness of CDM orally, often face to face. Some sites of implementation of the NCPM and terminology have argued that the process of learning the standardised language and needing to document accordingly has helped bring dietitians’ reasoning to more conscious awareness, making links between nutrition diagnosis, aetiology, evidence and subsequently recommended interventions and monitoring strategies (Lövestam et al., 2019). An appropriate expectation is that a standardised documentation approach can coincide with the socio-contextual conditions in which decision making occurs.

The interpersonal skills and oral communication skills needed to succinctly and effectively convey reasoning, decisions and instructions to time-poor health professionals that involve power differentials or competing priorities were considered crucial for dietitian CDM in the acute care setting. Therefore, clinical supervision and professional development strategies could ensure these interpersonal dimensions of dietitian CDM and practice are addressed, monitored and evaluated in a constructive and supportive manner. This may raise questions as to the value of ongoing peer observation and feedback for experienced dietitians coinciding with collegial discussion about patient care and CDM. The practice of observing peers for professional development in dietetics is traditionally limited to students or new graduates entering the workforce.

My findings spoke to notions of expert and advanced practice in dietetics, reflected in participants’ perspectives on the concept of professional artistry in clinical dietetics. The Model of Dietitian CDM Expertise Development (Figure 7.1) highlights the various elements and dimensions of how CDM expertise may develop towards a form of artistry. Dietitians of any experience level can use this model to reflect upon areas of their professional development that may need focus and maintain awareness of the various influences on their expertise development. Dietitian participants indicated a levelling off effect in perceived growth in CDM expertise after the first few years and particularly once settling into a clinical speciality.
However, participants all conveyed a belief that the amount of experience is not synonymous with sound CDM practice or advanced practice and artistry is not synonymous with being an expert in a particular domain. The current advanced practice model and credentialing processes in Australia offer dietitians opportunities to undergo evaluation against criteria which are not specific to a context of practice (Dietitians Association of Australia, 2018). However, my Model for Professional Artistry in Clinical Dietetics (Figure 7.3) offers more context specific conceptualisation of what participants considered the pinnacle of clinical dietetics expertise. This may be used as a reflection tool for self-directed professional learning as well as having potential to inform role expectations at certain levels of practice as deemed by organisations such as DAA. My research may also highlight consideration for practice specific advanced practice accreditation similar to what is available in the USA as different from what the DAA offers here in Australia.

At the very minimum, my findings about artistry in clinical dietetics provide a language to communicate what may be considered important for the quality practice of clinical dietetics and what helps transform routine experience into professional artistry. My model of CDM expertise development can help recognise the importance for practitioners to make decisions that maintain a tension between what they are already capable of and challenging experiences that help strengthen them or develop new capabilities. Supervisors, mentors and managers may also be mindful of this when having to make difficult decisions around balancing the benefits of dietitian specialisation (i.e. focus and depth, development of supportive professional relationships) with adequate and meaningful variation and experience in different clinical specialties. Meaning there is growth occurring during the struggle of new, complex and immersive practice experiences that demand new skills, knowledge and capabilities for CDM.

8.6 DIRECTIONS FOR FURTHER RESEARCH
It was the intention of this research to explore the nature of CDM of experienced dietitians practising in the acute care setting. This included gaining a deeper understanding of how dietitians make decisions, what influences decision making and how CDM expertise may have developed.
The findings provide a rich foundation of ideas for future research in this area. The scope of my research was limited to adult, acute care settings. Therefore, a focus for further research would be to conduct comparative studies of dietitian decision making in community, rehabilitation and outpatient settings as well as in rural and paediatric practice settings. Opportunities also exist to now consider the effects of application of the three models produced from this research to dietetic education and practice. Within experienced dietitian CDM in acute care settings, there are also a number of areas that could be pursued for deeper understanding. Some examples include:

- Investigating patient outcomes and their relationship to CDM expertise
- Understanding in greater depth the differences between the nature of CDM between novice and experienced dietitians
- Understanding how decisions are made under uncertainty
- Understanding in greater depth the role of practitioner personal attributes and dispositions in CDM and expertise development
- Exploring whether an understanding of the characteristics of experienced dietitian CDM and artistry enables practitioners to develop expertise more readily
- Seeking understanding of the skill’s clinical supervisors, educators and mentors need to support the development of CDM expertise
- Exploring suitable ways to promote interpersonal skills and interprofessional behaviours that foster enhanced cooperation and patient-centred care
- Exploring the optimal approaches to practice context socialisation of dietitians entering the acute care setting
- More research using a sociology approach to practice in acute care settings
- Exploring the perspectives of other health professionals concerning dietitian CDM in acute care settings and their role in patient care in a multidisciplinary team

Regardless of the direction of future research, a clear implication arising from this study for future research in this field is that given the extent to
which context was inherently woven into decision making, attempting to remove context from research design would result in a poor representation of the real nature of the decision being made. The findings of this research also strongly suggest that attempts to understand dietitian CDM require a perspective in which the likelihood of multiple explanations of decision making is possible rather than the pursuit of a single universal understanding of decision making. Therefore, research that employs qualitative methods such as an interpretive approach may continue to offer further insights into dietitian CDM and expertise.

8.7 CONCLUSIONS AND FINAL REFLECTION

I embarked on this research thinking I would illuminate experienced dietitians’ thinking that underpinned decision making, believing it was more than knowledge and technical ability to follow a standardised process. My journey led to the discovery that routine tasks and expertise are just some of the components of the complex process of dietitian CDM. The dietitians’ reasoning, personal characteristics as well as routine tasks are interwoven with the necessary interactions the dietitian engages in to manage power differentials and the contextual elements of decision making. Dietitian CDM cannot be reduced to any single component. Instead, there is a synergistic relationship between multiple components that operate in any given moment of time that is dependent on constantly changing variables.

Through this research process I learned most of all the habit of reflexivity in keeping check where my voice starts and ends with respect to my participants and how this plays out while interviewing and interpreting. I learned the value in looking for what is not there during the interpretation process. I learned the value of writing as an interpretation process itself as opposed to writing findings once it was considered that interpretation was complete. My interviewing skills were honed as were my insights into managing convergence and divergence in opinion during the whole research process. I learned how to ask better and deeper questions of the text. I learned the essential role of having a deep understanding of the research paradigm and its associated philosophical underpinnings and how this needs to inform the whole research process.
There have been many times during this research and the writing of this thesis that I have struggled to conceive how language could ever do the phenomenon of decision making justice. By facing this challenge, I have come to appreciate language itself and how the use of it has the power to make muddy water seem crystal clear. Beginning with multiple realities of decision making from my ten participants, with some elements of decision making even difficult to articulate with language, I am confident I have given these realities a voice. Having now completed this thesis, I am almost surprised at how logical and straightforward the findings and representation of dietitian decision making has emerged.

I end this thesis on a more personal note. Throughout my PhD candidature, I have encountered a significant change in both my professional and personal life. Embracing parenthood to my two beautiful boys has been a catalyst to fundamental personal changes that have spilled over to my professional life. Deeper travels into parenthood have coincided with an in-depth exploration of how my profession cares for patients in the ever-changing environment of acute care. This change has been happening within the broader context of what society is asking of health care professionals, and within that, dietitian expertise. Personal and professional experiences during this PhD journey have presented a need to ask deeper and more challenging questions of myself and my profession. Question asking involves risk taking and the challenge to hear answers you may not be expecting and to have the courage wrestle with the discomfort of this before looking to take action with new understanding. Change is inevitable and we need to continuously remain equipped to drive it and adapt to it. I look forward to continuing to offer my contribution as part of the collaborative effort to provide effective health care.
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intuition in the nursing process and decision-making—A mixed-


APPENDICES

Appendix 1  Excerpt of research journal throughout interviews

14/01/2014

Pre--We have a professional relationship already prior to this interview. I consider her to be an expert dietitian and a great role model. I know she has specialised in renal dietetics for many years. I expect her to be quite articulate but I expect her decision making is quite automatic so it may be hard to extract how she goes about making decisions.

Post--I think this interview strongly identified the role of context and speciality and how it affects the decision making. This dietitian’s decision making seemed to be heavily influenced by the patient demographic and the multidisciplinary team. The clinical scenarios didn’t vary too much but the things that did that affected how she made her clinical decisions were the patients’ situation and the health teams’ priorities. She was quite passionate about her patients and getting the best outcome. She clearly was in the habit of identifying barriers to her interventions and was quite proactive in trying to have these removed even if they were outside the traditional scope of a dietitians practice. Her perspective was wide when making decisions and took into account other team members opinions as well as the patients. Decisions are education versus nutrition support were a strong focus of her practice.

11/2/14

So I have done 4 second interviews so far. I'm quite enjoying the process. I'm still trying to work out whether it's because it seems like the questions are producing the answers I expected and then I'm hearing what I expected to hear. I'm concerned that I'm not going to be able to see what is different to what I'm expecting. I'm assuming that as long as I remain open to hearing something different to my pre-judgements that I will see this when I immerse myself once the interviews are transcribed.

In terms of emerging thoughts about what I am hearing, it seems that how the clinician identifies themselves as a decision maker is relative to their expertise, confidence and context of working. For example Theresa associates her role as a renal specialist as a decision maker. She has quite a large amount of specialised and overall experience as an acute dietitian. She spoke with confidence that she easily sees herself as making many decisions regarding the nutrition care of her patients. This is also true for Penny who is an experienced critical care dietitian. Whereas another critical care dietitian who is less experienced as Penny sees herself more as a consultant versus an ultimate decision maker. They both agreed that the medical team have ultimate say but one viewed their role differently. I feel that the clinician’s view of their clinical decision making was related to the degree of autonomy and respect they had earned from those that can influence the execution of their decisions.
Appendix 2  Participant recruitment advertisement

50 word recruitment advertisement for DAA email distribution

PhD research participants wanted for interviews.
If you are an acute care dietician with greater than 3 years’ experience interested in participating in a qualitative study exploring the nature of clinical decision making and judgement in acute care dietetics, please contact Ruth Vo via ruthv_ef@hotmail.com or 0431205768 for more information.
Appendix 3  Interview Guides

Interview Protocol: Interview 1

Opening statement:

Thank you for giving your time today. As was explained in the information sheet provided earlier, this interview and any that proceed it are being used as part of my PhD research that is exploring the clinical decision making of acute care dietitians. Today the interview will be more like a conversation and isn’t likely to be any more than an hour. I can assure you that anything that you say here is will be kept confidential and only ever heard by myself and or my research supervisors. If it is okay with you, I will be using this digital recorder throughout the whole interview so that our conversation can be transcribed as to ensure I don’t miss anything. Is that okay?

At any point in time, don’t hesitate to ask for clarification on any of the questions and you can decline to answer any question that you choose. Also, please tell me at any point if you wish to cease the interview. Are there any questions?

Questions:

1. Can you tell me why you became a dietitian?
2. When did you graduate? What has been your employment journey up until this point?
3. How did you come to work in the acute setting as a dietitian?
4. Do you remember any dietitians that were influential in your university training or early years of dietetics? Why were they so influential?
5. What is your current role and how long have you been in it? Can you describe your key responsibilities day to day in your current role? Run me through a typical day...
6. Other than the fact that your patients are acutely unwell, what is different about an acute care hospital dietitian compared to any other hospital dietitian? Do you think there are certain skills or knowledge that we have to have?
7. Can I get you to think of a patient case you have been involved with recently. Let’s firstly start with one that went as you expected, or shall we say, usual? Can you tell me:
   a. Patients background and why you were involved with the patient
   b. Did you have to make any decisions in relation to this case?
   c. What were they?
   d. How did you make these decisions?
   e. What would you do differently next time?
   f. Did you learn anything new from this case?
8. Ok, what about a case that was challenging, significant or unique? Perhaps one that didn’t go as expected?
   a. Patients background and why you were involved with the patient
   b. Did you have to make any decisions in relation to this case?
   c. What were they?
   d. How did you make these decisions?
   e. What would you do differently next time?
   f. Did you learn anything new from this case?
9. Could you describe some of the influences around your decision making that you make for the patients you see day to day?
10. Is there anything else you wanted to add to any of the questions I have asked so far?
Interview 2 Questions

Q: It seems that the way dietitians perceive decision making is in the context of recommendations.

- Would you agree?
- Do you perceive yourself as a decision maker or something else e.g. the one who makes recommendations.
- Where do your decisions start and stop, what about recommendations?
- What role do you perceive you have in your clinical area with respect to decisions around the nutrition of your patients
  - Is there a decision making cycle.
  - Is it more about micro decisions around monitoring? Is it more focused on the process.

Q: Do an activity that gets participants to graph their journey of ability to make decisions/recommendations over time. Ask about what has caused the changes.

Q: Introduce judgement concept i.e clinical judgement. Do they think this has a role on dietitians process of making recommendations/decisions?

- as weighing up evidence,
- not clear cut
- element of intuition & practice wisdom

Q: Introduce concept of artistry by describing what an artist might look like with their craft. Ask whether they think this concept applies to dietetics. Need to unpack how I would describe it first.

- Artistry in the context of professional practice refers to a type of competence that involves a degree of ‘art’ to solving problems in day-to-day practice that cannot easily be described objectively within the scientific paradigm
Appendix 4  Reference focus group guide

Reference GROUP April 21

Aim: my goal here is to clarify what I have already interpreted through the data and hopefully by doing this there will be a whole other depth created from this discussion.

Layout key terms/concepts developed from interpretation so far and ask if you were to do a concept map, what would this look like?

Ask what they would label it.

Ask what is missing?
Appendix 5  Ethics Approval

SCHOOL OF COMMUNITY HEALTH
FACULTY OF SCIENCE
PO Box 789
Albury NSW
Australia 2640
Tel: +61 2 6051 5230
Fax: + 61 2 6031 9238
Email: secretary@CHF@csu.edu.au

11 October 2013

Ms Ruth Vo
Dietetics Department
Liverpool Hospital
Locked Bag 7103
LIVERPOOL BC NSW 1871

Via email: ruthv@hotmaill.com

Dear Ruth,

The School of Community Health Ethics in Human Research Committee has approved your proposal entitled, "The nature of professional decision-making by acute care dietitians" for a twelve month period from 11 October 2013.

The protocol number issued with respect to this project is 405/2013/05. Please be sure to quote this number when responding to any request made by the Committee.

You must notify the Committee immediately should your research differ in any way from that proposed. You are also required to complete a Progress Report form, which can be downloaded from http://www.csu.edu.au/research/ethics/safety/human/ehrmanaging, and return it on completion of your research project, or by 11 October 2014 if your research has not been completed by that date.

The Committee wishes you well in your research.

Yours sincerely

Ms Linda Beverly
Executive Officer
School of Community Health Ethics Committee
Direct Telephone: (02) 6051 5203
Email: ethics@CHF@csu.edu.au

cc: M Curtin; M Smith; N Patton
Appendix 6.7.1 Information statement and consent form (interviews)

PARTICIPANT INFORMATION STATEMENT: GROUP 1

Title of project: The nature of professional decision making by acute care dietitians

Purpose of study
The aim is to understand the nature of professional decision making in clinical dietetics in the acute setting. The outcome of this study is expected to be new knowledge about the decision making practices of dietitians working in the acute setting. This new knowledge should increase understanding about this aspect of practice which can then inform teaching and learning strategies for tertiary education, clinical placement and continuing professional development.

Participant inclusion criteria
Participants will need to have the following to be considered for inclusion into the study:
- at least 3 years clinical experience
- currently working in the adult acute care setting
- currently working with a 0.5-1.0 full time equivalent appointment
- willing to discuss their practice

Description of study
This study will involve participants being a part of semi-structured interviews that will create a text (dialogue from the interview) that will then be interpreted by the investigator. Multiple (2-5) interviews, which may take up to an hour each, will be required and will take place at a location convenient to the participants. Some interviews that occur after the initial may be conducted by phone at the discretion of the investigator. Transcripts will be generated from the electronically recorded interviews and interpreted in search of new understanding of the decision making of acute care dietitians.

Requirements of Participation
Consenting participants will be expected to:
- be available for 2-5 interviews of approximately 1 hour in length either by telephone or face-to-face which will be electronically recorded
- discuss their decision making practices including detailed reflections on moments in clinical practice

Confidentiality and disclosure of information
The semi-structured interviews will be electronically recorded. A pseudonym will be provided to all participants to assist with de-identification. Research data will be stored in a secure location. If you give us your permission by signing this document, discussions of findings will be had with supervisors and the reference group but at no time will your actual identity be revealed due to consistent use of pseudonyms. In any publication, the names of the participants will be excluded. Consent will be obtained from all participants.

Risk or Financial Costs
Minimal risk is associated with participating in this study and may include experience a range of emotions when asked to reflect on practice during the interviews that may cause discomfort or dissatisfaction. At any point, participants will be able to cease the interview as desired. If discomfort is experienced, participants will be encouraged to inform the researcher who will work with the participant to seek appropriate support. We cannot and do not guarantee or promise that you will receive any benefits from this study. It is not anticipated that you will incur any additional costs if you participate in this study. You will not receive any payment for participation in this study.

www.csu.edu.au
CRR09 Provider Numbers/Charles Sturt University are 00005F (NSW), 019473 (VIC) and 029600 (ACT). ABN: 83 679 768 651
Your consent

Your decision whether or not to participate will not prejudice your relationship with the investigator, his or her place of work or the university. If you decide to participate, you are free to withdraw from the study at any time. Non-participation or withdrawal will not result in any penalty or discriminatory treatment.

If you have any questions, please feel free to ask us. If you have any additional questions later, your study coordinator, Ms Ruth Vo, (02) 67396766 or 0433735765 or ruth_vo@hotmail.com will be happy to answer them.

The School of Community Health Ethics Committee has approved this project. If you have any complaints or reservations about the ethical conduct of this project, you may contact the Committee through the Executive Officer:

Linda Bently
School of Community Health
Charles Sturt University
PO Box 769
ALBURY NSW 2640
Ph: 02 60519203

Any issues you raise will be treated in confidence and investigated fully and you will be informed of the outcome.

You will be given a copy of this form to keep.
CONSENT FORM – GROUP 1

Title of project: The nature of professional decision making by acute care dietitians

1. I _______________________________ of ________________________________ agree to participate as a subject in the study described in the subject information statement set out above or attached to this form.

2. I acknowledge that I have read the Participant Information Statement, which explains why I have been selected, the aims of the study and the nature and the possible risks of the investigation, and the statement has been explained to me to my satisfaction.

3. Before signing this Consent Form, I have been given the opportunity to ask any questions relating to any possible physical and mental harm I might suffer as a result of my participation. I have received satisfactory answers to any questions that I have asked.

4. My decision whether or not to participate will not prejudice my present or future treatment or my relationship with the investigator or any other institution cooperating in this study. If I decide to participate, I am free to withdraw my consent and to discontinue my participation at any time without prejudice.

5. I understand that any information or personal details gathered in the course of this research about me are confidential and that neither my name nor any other identifying information will be used or published without my written permission.

6. I understand that interviews will be audio taped.

7. I understand that if I have any questions relating to my participation in the research, I may contact the study co-ordinator, Ms Vo on telephone 67386766, who will be happy to answer them.

8. I acknowledge receipt of a copy of this Consent Form and the Participant Information Statement.

The School of Community Health Ethics Committee has approved this study. I understand that if I have any complaints or concerns about the research I can contact the Executive Officer:

Linda Beverly
School of Community Health
Charles Sturt University
PO Box 799
ALBURY NSW 2640
Ph: 02 60519203

Signature of subject: __________________________

Please PRINT name: __________________________

Date: __________________________

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CRICOS Provider Number for Charles Sturt University are 00915F (NSW), 01470A (VIC) and 00216B (ACT). ABN: 83 037 708 661
PARTICIPANT INFORMATION STATEMENT: Group 2

Title of project: The nature of professional decision making by acute care dietitians

Purpose of study
The aim is to understand the nature of professional decision making in clinical dietetics in the acute setting. The outcome of this study is expected to be new knowledge about the decision making practices of dietitians working in the acute setting. This new knowledge should increase understanding about the aspect of practice which can then inform teaching and learning strategies for tertiary education, clinical placement and continuing professional development.

Participant inclusion criteria
Participants will need to have the following to be considered for inclusion into the study:
• at least 3 years clinical experience
• currently working in the adult acute care setting
• currently working with a 0.5-1.0 full time equivalent appointment
• willing to discuss their practice
• participated in the in-depth semi-structured interviews
• willing to contribute feedback on the researcher’s emerging interpretation of interview text

Description of study
Following the first two interviews as participants in Group 1, a reference group will be created from amongst interviewed participants that will help provide feedback to the investigator on the direction and gaps in the interpreted meaning being created throughout the research process.

Requirements of Participation
Consenting participants will be expected to:
• respond to an invitation to be part of a reference group that will need to comment on developing findings in the form of a focus group (likely once off occasion, likely face-to-face meeting of ~1 hour in length)
• discuss their decision making practices including detailed reflections on moments in clinical practice

Confidentiality and disclosure of information
It is unavoidable that your identity may be revealed while participating in the focus group. Research data will be stored in a secure location. If you give us your permission by signing this document, discussions of findings will be had with supervisors but at no time will your actual identity be revealed to them due to consistent use of pseudonyms. In any publication, information will be provided in such a way that you cannot be identified.

Risk or Financial Costs
Minimal risk is associated with participating in this study and may include experience a range of emotions when asked to reflect on practice during the interviews that may cause discomfort or dissolution. At any point, participants will be able to cease the interview as desired. If discomfort is experienced, participants will be encouraged to inform the researcher who will work with the participant to seek appropriate support. We cannot and do not guarantee or promise that you will receive any benefits from this study. It is not anticipated that you will incur any additional costs if you participate in this study. You will not receive any payment for participation in this study.

Your consent

www.csu.edu.au

CRICOS Provider Number for Charles Sturt University are 00007F (NSW), 015475 (VIC) and 02950D (ACT). ABN: 81 0876 706 551
Your decision whether or not to participate will not prejudice your relationship with the investigator, his or her place of work or the university. If you decide to participate, you are free to withdraw from the study at any time. Non-participation or withdrawal will not result in any penalty or discriminatory treatment.

If you have any questions, please feel free to ask us. If you have any additional questions later, your study coordinator, Ms Ruth Yo, (02) 67386766 or 0431255768 or ruth_y@hotmail.com will be happy to answer them.

The School of Community Health Ethics Committee has approved this project. If you have any complaints or reservations about the ethical conduct of this project, you may contact the Committee through the Executive Officer:

Linda Beverley
School of Community Health
Charles Sturt University
PO Box 789
ALBURY NSW 2640
Ph: 02 60325223

Any issues you raise will be treated in confidence and investigated fully and you will be informed of the outcome.

You will be given a copy of this form to keep.
CONSENT FORM – Group 2

Title of project: The nature of professional decision making by acute care dietitians

1. I ........................................................................................................................................ of ................................................................. agree to participate as a subject in the study described in the subject information statement set out above (or attached to this form).

2. I acknowledge that I have read the Participant Information Statement, which explains why I have been selected, the aims of the study and the nature and the possible risks of the investigation, and the statement has been explained to me to my satisfaction.

3. Before signing this Consent Form, I have been given the opportunity to ask any questions relating to any possible physical and mental harm I might suffer as a result of my participation. I have received satisfactory answers to any questions that I have asked.

4. My decision whether or not to participate will not prejudice my present or future treatment or my relationship with the investigator or any other institution cooperating in this study. If I decide to participate, I am free to withdraw my consent and to discontinue my participation at any time without prejudice.

5. I understand that any information or personal details gathered in the course of this research about me are confidential and that neither my name nor any other identifying information will be published without my written permission.

6. I understand that the focus group meeting will be audio taped.

7. I understand that if I have any questions relating to my participation in this research, I may contact the study co-ordinator, Ms Vo on telephone 87386766, who will be happy to answer them.

8. I acknowledge receipt of a copy of this Consent Form and the Participant Information Statement.

The School of Community Health Ethics Committee has approved this study. I understand that if I have any complaints or concerns about this research I can contact the Executive Officer:

Linda Beverly
School of Community Health
Charles Sturt University
PO Box 759
Albury, NSW 2640
Ph: 02 60519203

Signature of subject: __________________________

Please PRINT name: __________________________

Date: __________________________

www.csu.edu.au

CRICOS Provider Numbers for Charles Sturt University are 00051F (NSW), 019470 (VIC) and 00598B (ACT). ABN: 83 976 706 551
Appendix 6 My preliminary interpretation represented as a concept map preceding reference focus group
Appendix 7  Participant concept map created in Reference Group
Appendix 8  Summary graphs of participant expertise development from Interview 2
Appendix 9  NCPM and BDA process models

Nutrition Care Process Model (Swan et al., 2017, p. 2008)
