Perceptions of clinical leadership in the St. John Ambulance Service in WA: A research report

Dr David Stanley

Summary:

Aim: To identify how clinical leadership is perceived by paramedics and ambulance personal in the course of their everyday work and the effectiveness and consequences of the application of clinical leadership in pre-hospital care delivery.

Background: Paramedics deliver emergency pre-hospital care to the public as part of a small team or in individual situations. Leadership skills are needed to achieve complex tasks in a variety of situations, to support team working, maintain or promote high morale and deal with or stimulate change and quality initiatives.

Method: A questionnaire (with a supporting information letter) was distributed via in-service training sessions to all St. John Ambulance operational staff in WA between February 2010 and November 2010 (n = 250). The methodological principals supporting the study are based on phenomenology. Analysis of the quantitative data was via SPSS software and qualitative data was analysed by spreadsheet and word documents.

Results: Most respondents suggested that they thought clinical leaders had the skills and abilities to do their job. Most thought clinical leaders were involved in team work, the generation of new ideas, were great communicators and involved others appropriately. Most didn't care where their experience was from or what sort of experience it was as long as they had valid road side experience. Most didn't value research insights or qualifications. What mattered was that the values of the clinical leaders were matched by their actions and abilities.

Many saw clinical leaders as teachers or guides, while others recognised that they didn't all have the skills to teach or tutor. Most thought they should have an influence on clinical care, but only half saw that they could influence organisational issues. Clinical leaders were seen to be visible role models, skilled, experienced clinically focused, approachable, knowledgeable, driven by their desire to provide high quality care, and change practice. They were seen to be team members, teachers and guides who make decisions often under pressure.

Conclusion: It is hoped that with a better understanding of clinical leadership and how it is perceived by paramedics and ambulance officers, they will be able to play a more effective part in service improvement, impacting positively on pre-hospital care delivery. As well, a more effective understanding will be gained of how clinical leadership impacts on the effectiveness and delivery of pre-hospital care and how the ambulance service can bolster and support greater clinical leadership and service improvement.

Recommendations:
Recommendation 1:
Gain additional skills to support the development and application of clinical leadership e.g. an understanding of; successfully motivating others, team working/team building skills, change management skills (linked to the best practice quality / standards agenda), clinical decision making skills, teaching / guiding skills.

Recommendation 2:
Develop or clarify clinical leadership roles and if needed establish a clear role description.

Recommendation 3:
Build better links between clinical leaders and the St. John Ambulance administration (organisation).

Recommendation 4:
As an adjunct to clinical leader education the final recommendation is to focus on the development of change management skills so that clinical leaders can make significant and often dramatic proposals for simple and profound change that may have the effect of improving frontline and core service provision.

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A. Questionnaire
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1. Justification for the Study

1.1 Background:

Clinical Team Leaders are experienced paramedics with St. John Ambulance WA Incorporated that are employed to shape and influence pre-hospital health service care and culture through effective clinical leadership. Many leadership theories have developed primarily from management paradigms. However, these theories may be ineffective in helping clinical team leaders and paramedics to gain insight into clinical leadership or to develop and implement clinical leadership skills. It is important to recognise that leadership theories based on the management paradigm may not be appropriate for all clinical applications. It was proposed that by exploring paramedics perceptions of clinical leadership ambulance services will be well equipped to provide strong clinical leadership behaviours that are consistent with leadership qualities and create an enabling culture for managing complex change and quality health improvement.

1.2 Context

St John Ambulance WA Inc. provides ambulance services to all of Western Australia through either paid or volunteer staff. This study examined the perceptions of paid ambulance service staff who attended in-service education session between February 2010 and November 2010. This meant there was a potential to access all paid ambulance staff, of which there are approximately 500 operating out of 42 metropolitan and regional stations. Of these, 250 staff who accessed in-service training opportunities were provided with an opportunity to complete the questionnaire.

1.3 Implications for the study

There are a number of reasons offered that support and justify this research:

1. Leadership for paramedics is poorly documented and there is almost no specific research related to paramedics and clinical leadership. Therefore, gaps appear in what is known about the concept of clinical leadership and its application within the ambulance service.

2. When leadership is studied or written about, it is often based on management or leadership principles developed from the management domain, leading to further misconceptions about the relationship of leadership to clinical/professional functions.

3. Education and the development of future paramedic leaders should be based on a clear understanding of the concept of clinical leadership. Without investigating this it is likely that all paramedic education will do is propagate the misconceptions and fill knowledge gaps with inappropriate ‘management’ based concepts that may fail to support the growth of clinical leaders for the future.

4. This is a personal area of interest and formed the basis of one of the researchers doctoral studies between 2001 – 2005, as such there is extensive insights into this area of investigation (from a nursing perspective) and it is hoped that this will facilitate insights into the paramedic domain of practice from a clinical leader perspective.

2. Aims and Objectives:

2.1 Aims

The aim of the study was to:

> To identify how clinical leadership is perceived by paramedics in the course of their everyday work and the effectiveness and consequences of the application of clinical leadership in pre-hospital care delivery.

2.2 Objectives

The objectives of the study were:

1. To identify who the clinical leaders were in the ambulance service.

2. To identify the attributes and characteristics of clinical leaders in pre-hospital care.

3. To identify clinical leadership skill sets/practices/elements that influence effective pre-hospital care.

4. To explore recommendations for understanding and improving the application of clinical leadership in the St. John's Ambulance Service in WA.

3. Limitations:

Accessing regional staff for the purposes of this study is important, but more difficult. It is seen as vital to gain an insight into regional staff's perceptions of clinical leadership as these may vary from their Perth based counterparts. Access to these staff members will occur via refresher training or by mail out. Volunteer ambulance staff will not be accessed for this research.

4. Literature Review:

The literature search began with the consultation of a wide range of journals and books, previous research papers and Government documents. Searches were made of the terms; 'Clinical Leadership,' 'Paramedic Leadership,' 'Pre-Hospital Care Leadership,' and 'Ambulance Service Leadership'.

The literature review was informed by a consideration of literature about leadership and clinical leadership, as well as associated topics including literature related to change, the service improvement agenda in the Western Australian Department of Health, organisational structure and culture, health professional boundaries and their relationship to leadership roles within health care, authority, emergency service systems and power.

The literature considered for this proposal was accessed via library databases and included, MEDLINE, ProQuest, CINAHL, EMBASE, Allied and Complementary Medicine (AMED), Your Journals @ Ovid and Journals @ Ovid Full Text, The date

parameters in most cases represented the limits of the search facilities within the respective databases, although in some cases search limits were drawn in the early 1990's to limit the volume of information gathered. As well, as the libraries and their computer databases' a number of websites were accessed for additional or supporting information. These included: www.modernnhs.nhs.uk (NHS Modernisation Agency), www.kingsfund.org.uk (Kings Fund), www.rcna.org.au (Royal College of Nursing Australia), www.anmc.org.au (Australian Nursing and Midwifery Council), www.doh.gov.uk/publication (Department of Health), www.healthwa.gov.au (Western Australian Department of Health) www.cgsupport.org (NHS Clinical Governance Support Team, CGST), www.nursingleadership.co.uk (NHS Leadership Centre), www.chiwales.nhs.uk (Centre for Health Improvement) and St John Ambulance WA. (http://www.ambulance.net.au).

Some of the literature discovered was arrived at in a serendipitous fashion during random journal searches or from contacts with nursing / professional colleagues. No specific country was excluded from the search, although much of the literature originates from the Australia, the United Kingdom, the United States of America and New Zealand.

4.1 Leadership and Clinical Leadership.

There is a wealth of literature that deals with the role, nature and purpose of nursing leadership, the value of developing and nurturing nurse leaders and the characteristics of nurse leaders. Research papers, articles and books about nursing leadership are evident in large numbers and address the nature and purpose of leadership (Footit, 1999; McKinnon, 1999; Salvage, 1999; Shepherd, 2000; Horton-Deutsch and Mohr, 2001; Nohre, 2001; O'Neill, 2001; Ripporn and Monaghan, 2001; Wedderburn-Tate, 1999; Williams et al, 2001; Daly, Speed & Jackson, 2005 and Frankel, 2008) and leadership styles (Girvin, 1996; Wedderburn-Tate, 1999; Alimo-Metcalf and Alimo-Metcalf, 2000; Bowles and Bowles, 2000 and Moiden, 2002).

As well there are a multitude of articles and books about nursing leadership characteristics (McSherry and Brown, 1997; Bower, 2000; Cook, 2001a; Wedderburn-Tate, 1999; Chambers, 2002; Crouch, 2002; McCormack and Garbett, 2003) and the developmental needs of those who aspire to leadership positions also remains a central pillar in nursing leadership publications (Rowden, 1998; Cunningham, 2000; Miller, 2000; Bulley, 2001; Cook, 2001b; Firth, 2001; Bostock, 2003; Watson, 2008).

There is much less of this type of literature related to paramedic leadership and nothing at all could be found of an empirical nature related to paramedics and clinical leadership.

It is important to note that much of the literature reviewed uses the terms 'leadership' and 'management' interchangeably with little attempt to define either term (Lett, 2002; Cook, 2001c; Stanley, 2006a, 2006b) and as a result, much of it fails to clarify who the leaders are, other than deference to their hierarchical position.

The pool of information related to clinical leadership from a paramedic clinical or pre-hospital activity / care intervention perspective is therefore very shallow and in direr

need of research to generate insights or information and knowledge about the application and perception of clinical leadership.

A number of publications were identified that outlined clinical leadership definitions. From a pharmacology perspective (Berwick, 1994, and Schneider, 1999) conclude that a clinical leader is an expert in their field and that expertise and knowledge should be used to drive (lead) reform. These views are supported by Stanton, Lemer and Mountford (2010) who write from a medical perspective and add empowerment and confidence to the definition so that clinical staff can improve the quality of health care. Malcolm et al, (2003) too, writing about doctors in New Zealand, see clinical leaders as partners with other health professionals, acting to promote the best care for the patient indicating that although they may be accountable to managers, they have not 'crossed over to the other side' (p.654) and that they remain focused on their clinical role.

From a nursing perspective, few empirically based studies were identified. Of those that were, three investigated clinical nurse leadership (Christian and Norman, 1998; Cook, 2001a and 2001c; Stanley, 2006a, 2006b), while Firth (2002) explored the balance between the clinical and managerial roles of ward leaders. Cosens et al (2000) identified ward 'opinion leaders' and McCormack and Garbett (2003) considered the characteristics and skills of 'practice developers.'

Christian and Norman (1998) investigated clinical leadership as part of a comprehensive evaluation of twenty-eight Nursing Development Units (NDU) in England. Each unit was led by a Clinical Leader (CL), a senior registered nurse whose role is to take day-to-day responsibility for the standard of care in the NDU and support successful and lasting change. The specific aims of the study were, 'to profile the characteristics of the CLs,' to 'describe the perceived role of the CL' and to identify the responsibilities from which 'the core role set for clinical leaders' (p. 109) in NDU's could be discerned. The research involved using a questionnaire and interviews to gather data from the staff identified as CL's in each NDU. Twenty-eight Nursing Developing Units were included over the three years of the study and 25 participants responded to the questionnaire, were interviewed and became involved in the study. Christian and Norman's (1998) study concluded that there was considerable conflict that existed between the CL's managerial responsibilities and their leadership potential. Those CL's low in the organisational hierarchy felt they did not have the authority to make their leadership vision a reality, while those with managerial responsibility and therefore some authority felt they couldn't extricate themselves from the day-to-day management to be able to think strategically and lead the NDU. Christian and Norman (1998) suggested that the CL's role required re-evaluation. In effect, although the posts these senior nurses held was called 'clinical leader', few felt able to lead their units effectively because they either didn't have the authority to change practice or they had the authority, but were deflected into other issues apart from clinical leadership.

Cook (2001c) explored clinical leadership from the perspective of a critical examination of the nursing leadership themes from the United Kingdom (UK), United States of America (USA) and Australian nursing literature as well as a set of five interviews with clinical leaders in the UK and study tours of the USA and Australia. Cook (2001c) concluded that while leadership was seen in each country as important and that it impacted directly on the standard of care, the application and type of clinical nurse leadership varied from country to country.

The result of Cook's (2001a) research is a model that identifies factors, which influence leadership styles and how these are linked to approaches of nursing care and information about a course to prepare nurses to carry greater clinical leadership responsibility. Cook (2001a) identified his, 'clinical leaders' by using a 'purposive sample' (Cook, 2001a, p. 34) that sought the opinions of a cross section of nurses and nursing students who identified the participants to be interviewed. Cook (2001c) provides few details about the interviews he undertook, other than to indicate he interviewed five, 'English nurse leaders' (p. 42). He goes on through to define a clinical leader as 'a nurse directly involved in providing clinical care that continuously improves the care through influencing others.' He then adds that it is their relationship to clinical activity that sets a clinical leader apart from a 'generic' nurse leader. Clinical leaders he suggests, 'create new ways of working,' while 'nurse manager(s)' are seen as responsible for 'implementing' new ways of working (p. 39). Harper (1995) with a perspective similar to Cook (2001c) also sees a clinical leader as, 'one who possesses clinical expertise in a specialty practice area and who uses interpersonal skills to enable nurses and other health care providers to deliver quality patient care' (p. 81).

The most recent and largest study by Stanley (2006a, 2006b, 2008) explored who the clinical leaders where within one large NHS Trust in the UK and explored the experience of being a clinical leader. This study found that clinical leaders were present in significant numbers and that they existed across all levels of staff, but they were rarely seen in senior clinical or management roles. The study also showed that contemporary leadership theories failed to explain why clinical leaders were followed. It led to the development of a new leadership theory "Congruent Leadership" (Stanley, 2006a, 2006b, 2008, 2011; Bishop 2009).

In relation to paramedic practice and clinical leadership there is significantly less empirical data. There is much written describing the executive level leadership involvement in the ambulance service, but very little about leadership at a clinical level. From the UK, Woollard (2006) outlined the role of the Paramedic Practitioner and implies that clinical leadership is increasingly featured in this developing role. Stirling et al. (2007) and Cooper et al. (2004) in a similar vein to Woollard (2006), outlines the emerging role of paramedics with expanded scope of practice in rural Australian communities. Both articles describe the expanded roles paramedics are being asked to take and suggest these roles require paramedics to develop greater leadership responsibilities. However, neither article defines or explicitly mentions clinical leadership as a feature of the paramedics skill set.

The net result of the literature search was that there is limited research related to clinical leadership from a paramedic perspective. This suggests a need to follow up and explore clinical leadership as it relates to the experience and perceptions of paramedics, ambulance officers and clinical team leaders.

5. Study Design:

5.1 Research design

The research process followed the steps outlined below:

1. Ethical approval was sought and secured for the study from Curtin University, Human Research Ethics Committee, approval number: SON&M 1-2010. (were the primary researcher worked at the commencement of the study)
2. Appropriate funding to support the study was secured from The Australian College of Ambulance Professionals WA Branch.
3. Appropriate dates/times for the study distribution were agreed.
4. Data was collected, analysed and results were collated.
5. Report produced and publication opportunities sought.

The plan for this research is set out in Figure 1.1. The study began with a detailed literature review related to clinical leadership. The next step was to seek ethical approval from the Curtin University Human Research Ethics committee. The study involved a questionnaire surveying all of the paramedic staff that were currently employed in the ambulance service in Western Australiaand who attended in-service education between February 2010 and November 2010 (n = 250).

The questionnaire used was specifically designed for this study although it is a modified version of a questionnaire used to explore clinical nurse leadership in the UK (Stanley, 2006a 2006b). The main purpose of the questionnaire was to identify who the clinical leaders are in the ambulance service, to identify the attributes and characteristics of clinical leaders in pre-hospital care and to identify clinical leadership skill sets/practices/elements that influence effective pre-hospital care.

5.2 Methodology

The methodological principles of the research rest upon phenomenology. This theoretical framework best supports this study approach as phenomenology was developed from a form of systematic enquiry that leads to the development of an understanding of the nature of peoples transactions with themselves, others and their perceptions (Tarling & Crofts, 2002). This approach places emphasis on how people experience a particular phenomenon (in this case clinical leadership) and helps evolve an insight into this phenomenon (Parahoo, 1997).

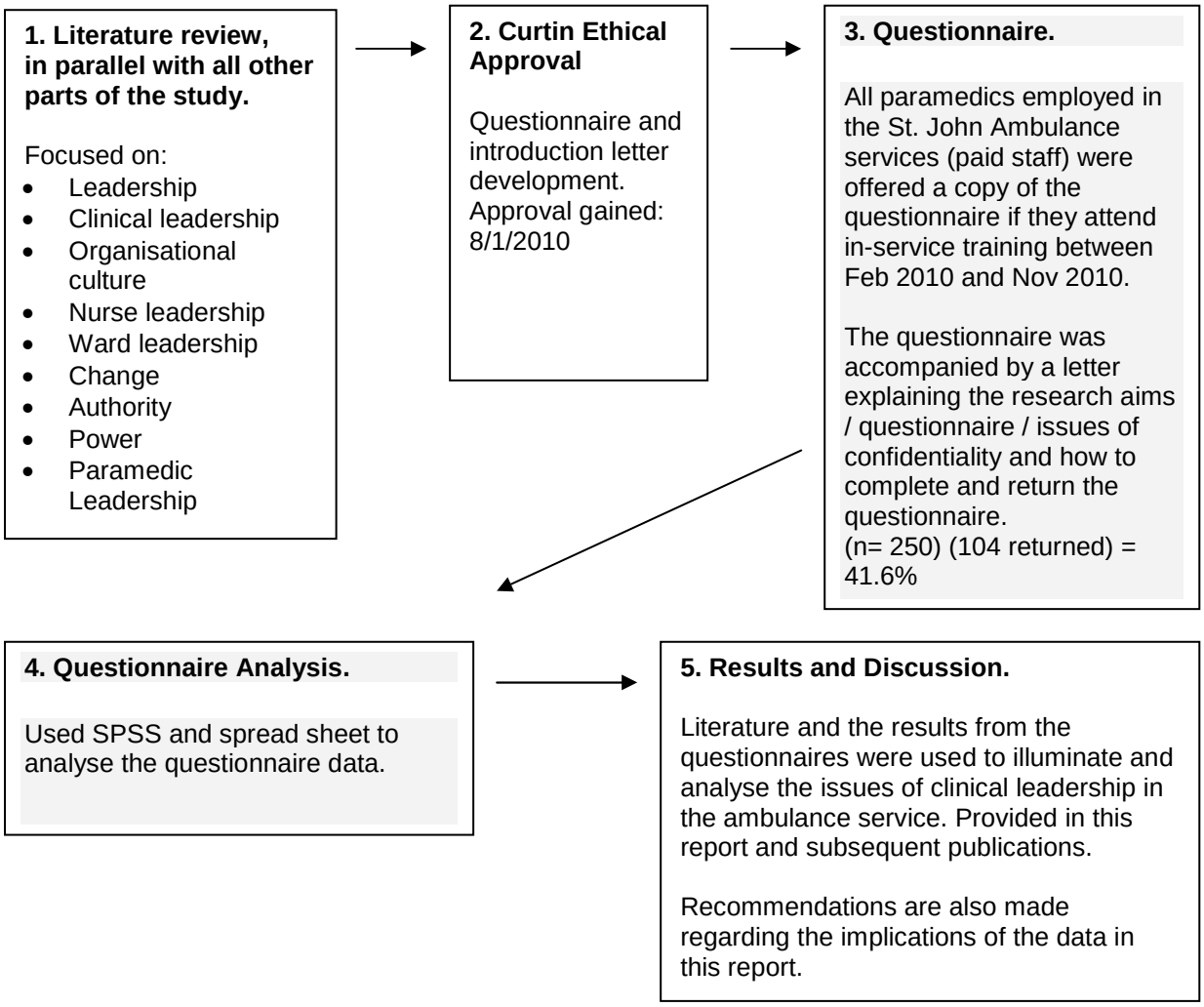
The data gathered has been used to assess the concept of clinical leadership and test the application of established leadership theories.

5.3 Method

The principle method employed to generate data in this study was a questionnaire. Questionnaire development was preceded by an extensive literature review, consultation with colleagues and past experience of its use in a similar UK study. The advantage of using a questionnaire is that it allows larger numbers of people to offer their views and potentially respond to the questions asked. Importantly, questionnaires are also less expensive and less time consuming than other sampling methods, they support easier approaches to distribution, secure respondent anonymity, promote a reduction in researcher bias and although the design of the questionnaire involves care, this questionnaire is modified from one used in

previous, similar studies. Significantly, the questionnaire supports a rapid and easy approach to data analysis (Parahoo, 1997; Cormack, 2000; May, 2001). The questionnaire design followed the recommendations and guidance offered by Gilbert (2001) (see Appendix A).

Figure 1.1: Research Process Summary.



5.4 Population / sample

Questionnaire was offered to 250 paid (non-volunteer) ambulance service staff who attended in-service education between February 2010 and November 2010. In all, 104 questionnaires were returned for analysis, a return rate of 41.6%.

5.5 Data Collection

Data was collected via a specifically designed questionnaire.

5.6 Analysis

Questionnaire data was analysed initially with the aid of an SPSS computer package and manual data configuration was used with qualitative data as required.

6. Ethical Considerations:

Each questionnaire (Appendix A) was provided with an accompanying explanation letter (Appendix B) outlining the research aims and addressing issues of confidentiality, ethical approval and the participant's right to withdraw with impunity (by simply not returning the questionnaire). No participant information was linked to individual respondents and participant anonymity has been assured.

Ethical consideration such as integrity, respect for persons, justice and beneficence was addressed in keeping with the National Health and Medical Research Council, Australian Code for the Responsible Conduct of Research (2007). Ethical approval was sought and obtained through the Curtin University, Human Research Ethics Committee (Number: SON&M 1- 2010).

All data remains securely locked in a file at the University of Western Australia where the primary research now works. Returned questionnaires will be destroyed after 5 years.

7. Results.

The results are presented as clearly and as simply as possible.

7.1 Who took part?

Of the 250 ambulance service staff who attended in-service education between February 2010 and November 2010, 104 returned questionnaires, a return rate of 41.6%.

Of those respondents, their average length of service with the St. John Ambulance Service was just under 7 years (6.9 years), with the longest service of any respondent being 30 years (question 12).

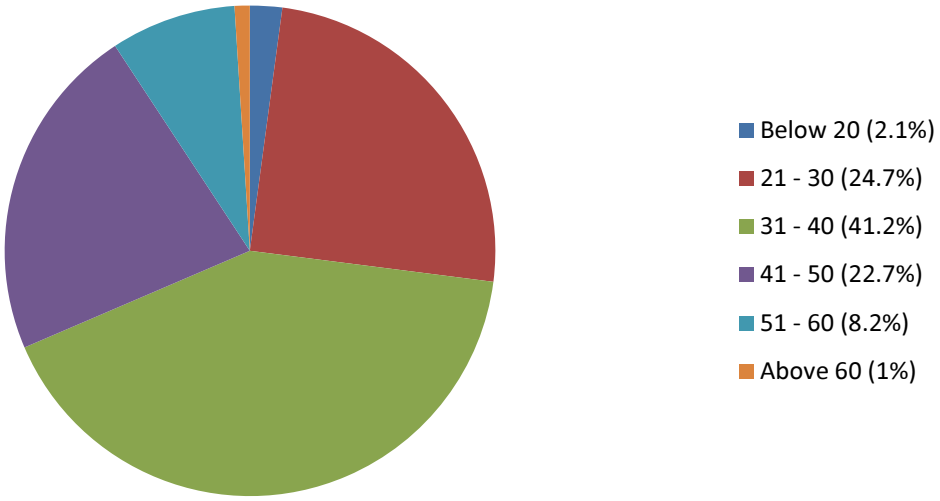
In terms of formal leadership training, 40.6% indicated that they had some sort of formal leadership training (although it was not clear what this constituted) and 59.4% indicated that they had not (question13).

In terms of formal management training, 26% indicated that they had had some sort of management training while almost ¾ indicated that they had not (74%) (question14).

The gender make-up of the respondents is in keeping with the profile of the ambulance service with 64.1% indicating that they were male, and 35.9% indicating that they were female (question 15). Current ambulance service demographic data for WA indicates that of the approximately 500 ambulance staff employed at the time of the study, 319 are male, a comparable 63.8%.

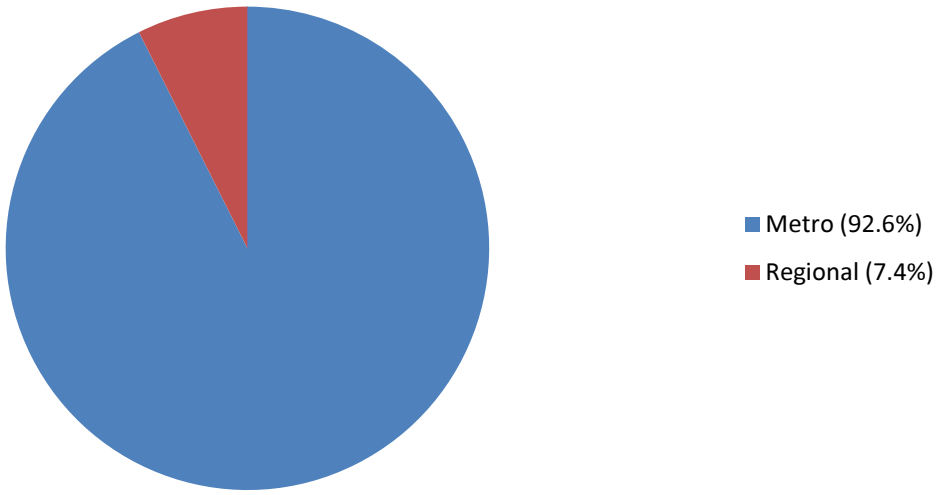
The distribution of the ages of respondents (question 16) is shown in figure 2, below.

Figure 2: Age ranges



While it was hoped that accessing regional ambulance service staff would be possible, only 7.4% of respondents indicated that they were based in regional areas. While 92.6% stated that they were based in the Metropolitan area (see Figure 3) (question 17).

Figure 3: Locations of respondents



7.2 How do you know a clinical team leader?

The first question of the survey sought to explore the qualities and characteristics of a clinical leader/clinical team leader. Respondents were offered a list of 54 attributes or descriptive words taken from a wide range of literature describing leaders. They were asked to indicate with a "tick" those characteristics/attributes they saw as "most" identifiable with clinical leaders/clinical team leaders. The most commonly selected attributes are shown on the list below.

Qualities / characteristics "**most**" identified with clinical leaders:

1. 96.2% is clinically competent / is approachable
2. 93.3% has integrity and is honest / is a role model for others in practice
3. 91.3% is supportive
4. 90.4% is a mentor / is consistent
5. 89.4% is an effective communicator
6. 88.6% is a critical thinker / directs and helps people
7. 86.5% can be a decision maker
8. 85.6% inspires confidence / is visible in practice

Other terms that may have been expected to be associated with leadership roles such as vision (a term commonly affiliated with leadership) and creativity (associated with transformational leadership) were selected much less commonly. With vision rated as important by only 51% and creativity and innovation by a modest 61% of respondents.

The second part of question 1 sought to explore the qualities and characteristics least attributable to a clinical leader/clinical team leader. Respondents were offered the same list of 54 attributes or descriptive words and asked to indicate with a "cross" those characteristics/attributes they saw as "least" identifiable with clinical leaders/clinical team leaders. The most commonly selected attributes are shown on the list below.

Qualities and characteristics "**least**" identified with clinical leaders.

1. 84.1% is controlling
2. 68.8% works alone (should be part of a team?)
3. 56.8% is conservative
4. 52.3% is artistic / imaginative
5. 51.1% is an administrator
6. 47.7% deals with reward and punishment
7. 45.5% is responsible for others duty / responsibilities
8. 44.3% takes calculated risks

In question 2 respondents were asked to suggest other qualities or characteristics not on the list of 52 attributes. Many additional words were suggested. The following list offers the most common (the number in brackets indicates that it was offered by this many respondents, the asterisk indicates that the word is also on the list of 52 offered in question 1.

Trustworthy
Responsible
None judgemental (2)
Ambitious
Ethical behaviour (2)
Not a dreamer
Humble (2)
Reliable
Visibility *
Enthusiastic
Pro-active
Experienced *
Friendly / approachable (4) *
Knowledgeable (5) *

In question 3 respondents were asked if they saw themselves as clinical leaders. Less than half, (41.5%) said they did. As such 59.5% said they did not see themselves as clinical leaders and indicated that they did not because they thought they needed more training, more education, more knowledge, more skills, better communication skills, more confidence, more experience, more leadership experience, or simply did not want the responsibility.

However, in response to question 4, 65.2% of respondents thought their paramedic/ambulance role allowed them to engage in leadership and collaboration. When asked why this was the case most responded that they felt this as they either worked with new people, including students, were involved in training, influencing others in various ways, strove to improve their practice, provided feedback to others, saw themselves as a clinical presence, were involved in asking questions, had a mentor role, saw themselves as setting high standards, sharing knowledge and sharing their experiences.

Of all respondents, only 25% thought that their colleagues saw them as clinical leaders. When asked to offer a reason, most indicated that they had not had enough time in job, were inexperienced, where not academic enough or not qualified. Others said they had no passion to be seen as a leader, that leadership was related more to higher level roles and management and not people on ambulances.

Of the few that thought their colleagues did see them as a clinical leader, most suggest it was because they had the experience, had their colleagues' respect, had the education and the experience in the service, that their work reflected best practice and related clinical experience. They also said it was because people asked for their opinion and advice, because they were approachable and knowledgeable, had valuable experiences or because they supported people.

Question 6 asked respondents to indicate if they thought there were barriers that hindered effective clinical leadership? Most (59.6%) said "yes". Some said "no" (39.2%) and 1 person (1.3%) was not sure. When asked for the reason for the barriers a number of responses were offered. These included:

resistance from colleagues to change,
poor level of training or training that was lacking,
organisational structures that get in the way,
the lack of a degree,
no real clinical pathway,
unclear processes for advancement,
"inability to deal with dickheads based at Belmont",
no opportunity,
no recognition,
old ways of doing things,
a lack of experience,
people's egos,
current management culture,
a lack of transparency (within the organisation),
poor organisational support for progression,
cost of training / studies,
"working with crusty old farts" (this may relate to the first point).

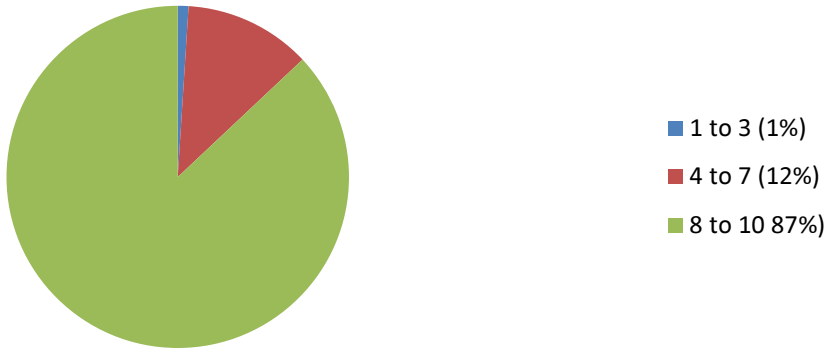
7.3 Perceptions, experiences and understanding clinical leadership

Question 7 was divided into 10 parts and sought to explore the respondents understanding, perceptions and experiences of clinical leadership. Respondents were offered a number of statements with a 10 point Likert scale to indicate their opinion, with 1 being "not relevant" or "not important" and 10 being "very relevant" or "very important." With each question between 3 and 5 respondents did not answer so responses are from between 99 and 101 people or 95.1% to 97.1% of the sample.

To simplify the results, responses were grouped into statistical sets of responses for Likert scale points at 1-3, 4-7 and 8-10.

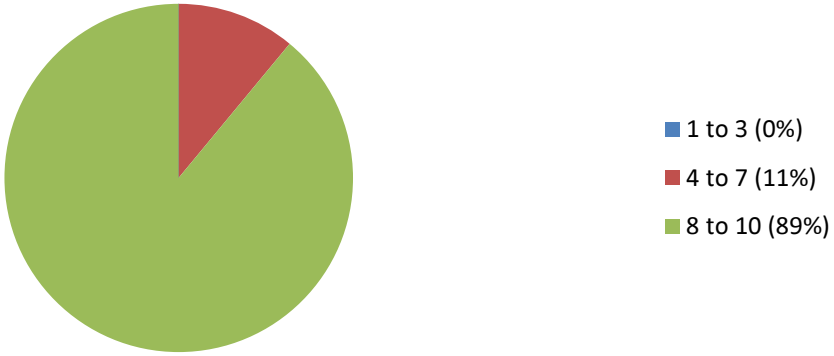
Thus when asked in question 7.1 if clinical leaders had the skills and resources necessary to perform tasks, 87% selected either 8, 9, or 10 (with 55% selecting 10), indicating that the majority of respondents thought that clinical leaders have the skills and resources necessary to perform tasks effectively (see Figure 4). Fewer, 63% (8-10) thought that clinical leaders were able to observe on the job activity without involvement (question 7.2).

Figure 4: Skills and resources necessary to perform tasks.



In question 7.3 respondents were asked to indicate if they thought clinical leaders were able to work with a team (see Figure 5). A majority (89%) selected scores of 8-10 and confirmed that they thought clinical leaders are able to work with the team.

Figure 5: Able to work in a team

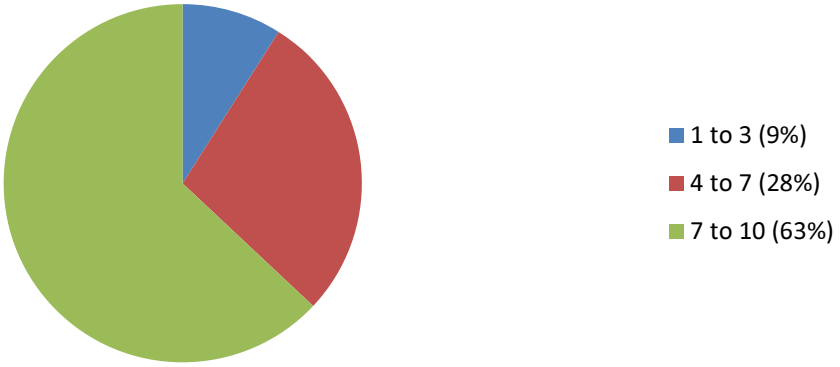


A similar number (85.2%) (8-10) also thought clinical leaders encouraged initiative, involvement and innovation from co-workers (question 7.4).

Slightly fewer (81.8%) (8-10) indicated that clinical leaders recognise optimal performance and express appreciation in a timely manner (question 7.5).

Only 63% of respondents selected a score of either 8-10, suggesting that 37% of respondents thought that clinical leaders did not (or should not) initiate care and lead action and procedures (see Figure 6). However, the majority did see clinical leaders as care initiators and having a role in taking the lead with clinical procedures (question 7.6).

Figure 6: Initiation of care and able to lead action and procedures



Question 7.7 sought to explore if respondents saw clinical leaders as having a high moral character and acting accordingly on what was right or wrong. Almost ¾ of respondents (72%) (8-10) suggested that clinical leaders did know what was right and wrong and did act accordingly, thus having a high moral character.

Question 7.8 sought to explore the application of this moral character by asking if respondents thought clinical leaders would be willing to take risks for things they believed in. Less than half (47.5%) (8-10) indicated that clinical leaders would be willing to take risks for things they believe in.

A very high number of respondents (92.1%) (8-10) thought that clinical leaders are able to communicate effectively (question 7.9) and almost as many (87.2%) (8-10) saw clinical leaders as flexible, responsive and able to improvise (question 7.10).

7.4 Clinical leadership defined

Question 8 asked respondents to define clinical leadership. A great number of responses were provided with most respondents simply using a set of descriptive words to describe their “ideal” clinical leader. Many of these were then repeated in response to question 9 (What skills do you have, or need, to facilitate you to become a clinical leader) or copied from the list of 52 words offered in question 1. As such the report combines responses to question 8 and 9 into a collection of words used both to define and describe a clinical leader and the skill set they need.

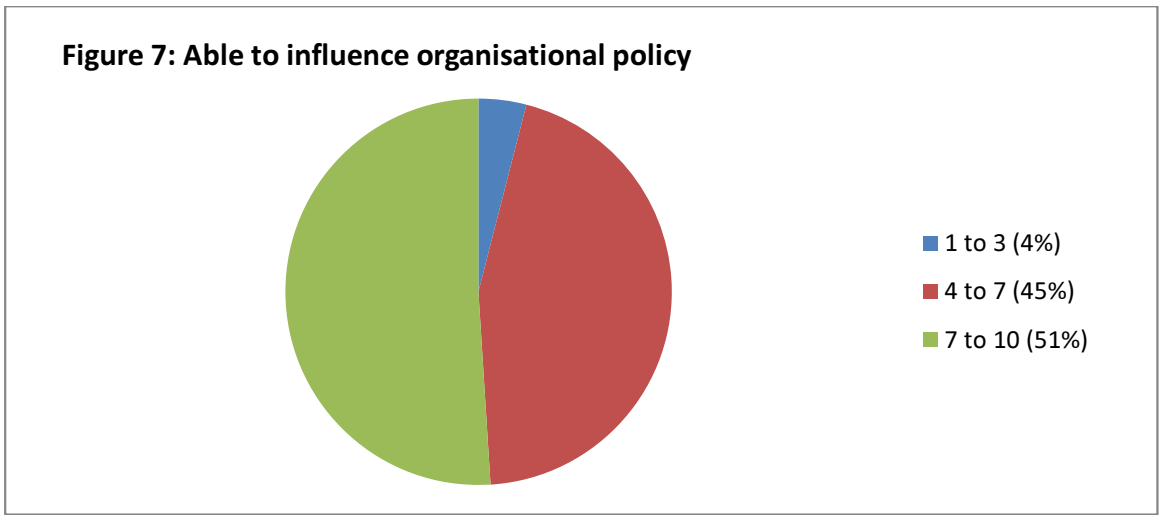
Words used included:

Team developer,
Team worker,
Supporter,
Educator,
Creation of a positive environment,
Initiative,
Innovation,
Change promotion,
Vocal,
Know their peers,
Trustworthy,
Bridge between on road staff and management,
Excellent clinical skills,
Guide,
There for road crews to call on (visible),
Advocates for on road crews,
Approachable,
Professional,
Work well under pressure,
Quick clear decisions,
Lead by example,
Provide leadership and support within the realm of clinical practice,
Motivator,
Maintaining standards,
Promotes best practice,
Direction,
Elite knowledge,
Putting the patient first,
Good listener,
Stand by others,
Inspirational,
Confidence.

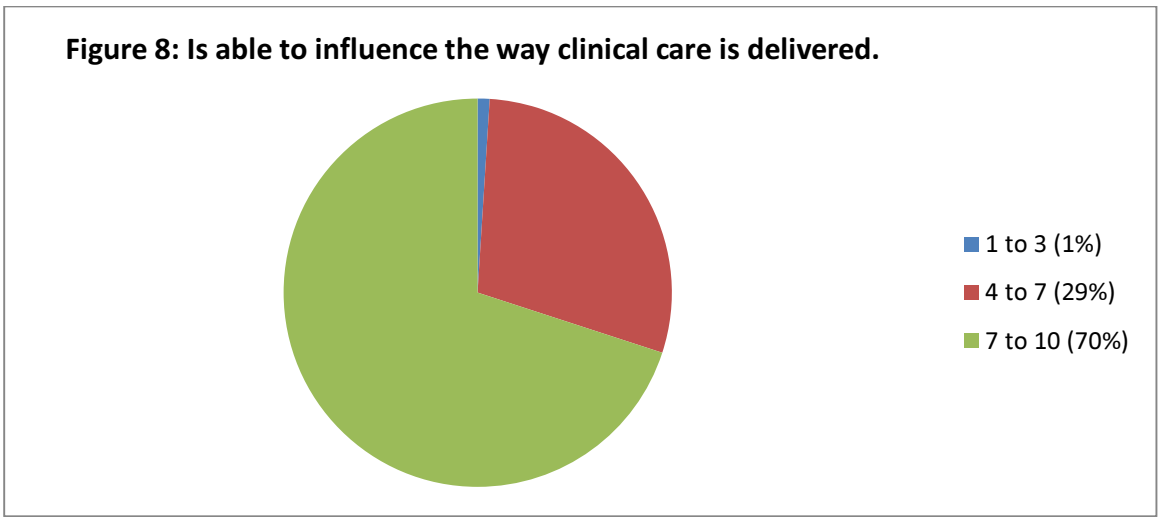
7.5 Further views on clinical leadership

Question 10 had 15 parts that also sought to explore the respondents' experiences, perceptions and understanding of clinical leadership. The same Likert scale used in question 7 was used again and the analysis again grouped responses into three areas of the Likert scale (1-3, 4-7, 8-10).

Question 10.1 asked respondents if they thought clinical leaders could influence organisational policy. About half (51%) (8-10) agreed or felt strongly that they could very few (4%) felt they could not and 45% felt they could have at least some influence (see Figure 7).



Question 10.2 asked if respondents thought clinical leaders could influence the way clinical care is delivered, with 70% (8-10) agreeing or strongly agreeing that they could. Only 1% felt they could not influence care in some way.

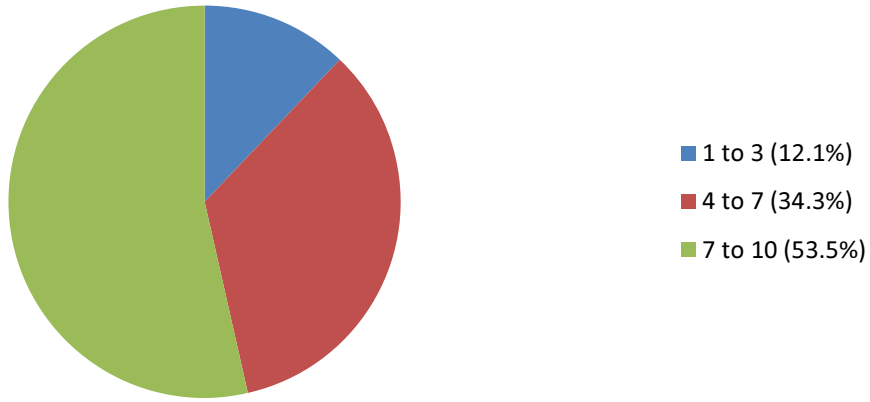


A majority of respondents (67.3%) (8-10) thought clinical leaders were involved in staff development education (question 10.3) and slightly more (69.4%) (8-10) thought clinical leaders supported other staff (question 10.4).

Just over half (53.5%) (8-10) saw clinical leaders as being available across shifts (question 10.5) (see Figure 9) and a majority (72%)(8-10) saw clinical leaders as having road side experience of greater than 5 years (question 10.6).

Question 10.7 asked if clinical leaders needed to have advanced critical care training, with 69% (8-10) suggesting this was desirable or agreeing strongly with this statement and about the same percentage (68.3%) (8-10) indicated that clinical leaders should have advanced critical care experience (question 10.8).

Figure 9: Are Clinical team leaders avaibale across shifts?

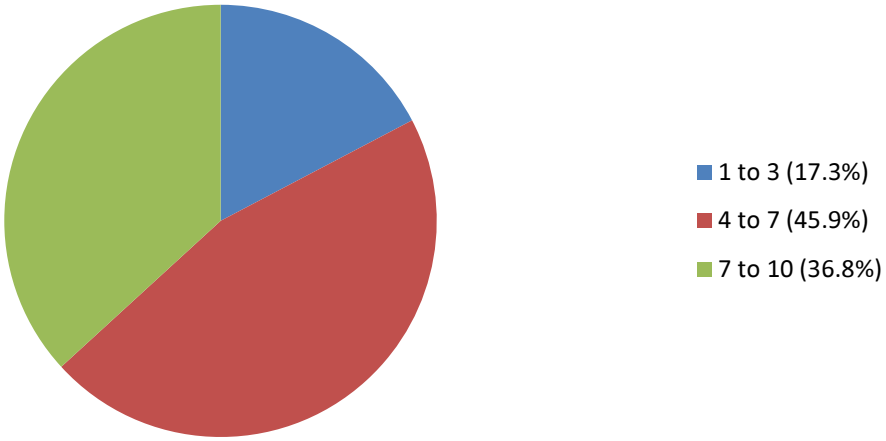


Question 10.9 and 10.10 explored the clinical leaders' relationship with teaching and tutorial activity. As such 63.7% (8-10) thought clinical leaders should have tutorial / teaching experience and slightly fewer (60%) (8-10) indicated that clinical leaders had tutorial / teaching training.

Questions 10.11 and 10.12 dealt with the question of where ambulance staff had gained their experience. As such only 13% (8-10) felt it was important if a clinical leader had international paramedic clinical experience and only 50.6% (8-10) saw having local Perth or WA paramedic experience as important for a clinical leader.

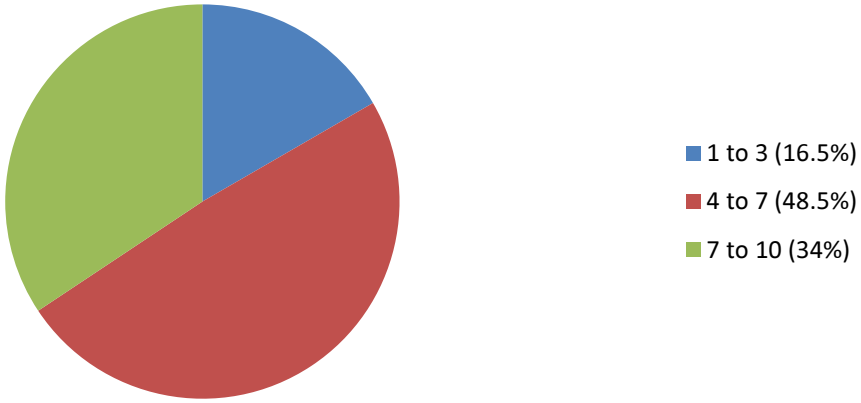
Question 10.13 and 10.14 explored the relationship of clinical leadership and research. Respondents indicated that in terms of both research training (see Figure 10) and research experience only 36.8% (8-10) agreed that this was a requirement for a clinical leader. Most agreed it was useful, but not a key requirement.

Figure 10: Should have reserach training



The final question in this set (question 10.15) sought to explore if an undergraduate degree was a significant requirements for a clinical leader. However, only 34% (8-10) agreed that it was relevant or necessary for a clinical leader. Many felt undergraduate experiences were of limited value (see Figure 11).

Figure 11: Needs to hold an undergraduete qualification



7.6 Other comments

Respondents were asked to add “any other comments” and while few were received. Those that where, are included below:

- Can clinical team leaders be posted to the country (regional areas) for short periods (2 days) to pass on skills and have one-on-one training with them?
- High qualifications and experience while useful are not essential, many talented leaders have little or none, attitude and the ability to motivate and inspire is more important.
- Clinical leadership should include the ability to follow up on jobs and provide feedback to on-road staff from a clinical perspective. At present there does not seem to be a mechanism whereby AO’s and AP’s are called on to justify their course of action whether it be good or bad.
- Clinical leadership is exactly that! A sound knowledge of the field in which the person works and possesses a leadership quality that inspires others to improve in their profession.
- I don’t know what the role is. I don’t think they (management) do either. Is there a job description?
- Need to have a “can do” attitude. Not about pieces of paper (qualifications).
- Clinical leadership is both a top/down and bottom/up process. Senior management must have a contemporary handle on clinical leadership / governance to ensure a clear vision to staff and a way forward.
- The clinical team leaders in Perth are the only contact that I have ever had with a clinical leader and I can only speak of my high regard for their support and knowledge within their role.

- We need clinical leaders!!!

8. Discussion:

8.1 Participants

With a return rate of 41.6%, an average length of service with the St. John Ambulance service of just under 7 years and an almost 60/40 ratio of male/female respondents. The study participants can be said to offer a fair profile of the St. John Ambulance service in WA. However, the regional respondents made up only a small proportion of the sample at 7.4% and it is acknowledged that this ratio could have been higher.

8.2 Management/leadership training.

While understanding management or having formal leadership training or education are not considered prerequisites for success as a leader (or manager) it was interesting to note that few respondents had had formal leadership training (40.6%), (although it was not clear what this consisted of) and fewer still had had any formal management training or education (26%). This is not unusual and in a similar study (Stanley, 2006a, 2006b, 2008 and 2011) only half the respondents indicated that they had had any leadership and half again that they had had any management training. These results indicate that clinical leadership effectiveness is not dependent upon formal management or leadership training, although I would argue that leadership training specifically targeted at the needs of clinical leaders can be effective in supporting change and promoting higher standards of practice. While this hypothesis is yet to be fully tested, my experience in this area of education over the past 6 years has shown that specific, clinically focused leadership instruction can impact positively on the performance of clinical leaders and the application of clinical leadership. This view is also behind leadership development programs instituted in the UK, National Health Service (NHS) and Western Australian Department of Health in recent years.

8.3 How to recognise a clinical team leader

The results offer a clear picture of what ambulance service staff are looking for in a clinical team leader. They seem to be speaking of a person that is part of a team (team member) and is visible and involved in the team. Clinical team leaders should be supportive, trustworthy, approachable, a motivator. They should be an educator and guide in clinical practice. They should be able to promote change, have initiative, be innovative, have a positive impact on standards and use best practice. They should have excellent clinical skills and knowledge, be a role model, inspire confidence and lead by example. Have excellent communication skills and be a confident decision maker. As well they should be guided in their practice by their values about excellent patient care.

Other terms or functions that may have been expected to be associated with leadership roles such as management responsibilities, visionary and creativity were selected much less commonly or seen as unrelated to clinical leadership functions. There absence from the top characteristics indicates that traditional leadership theories such as transformational leadership and situational leadership may not offer

a base on which to understand approaches to clinical team leadership. These views are linked to concepts respondents viewed as least associated with clinical leadership, with controlling topping the list. This is absolutely constant with the research results from a clinical leadership study by Stanley between 2001 – 2005 (Stanley 2006a, 2006b, 2008, 2011; Bishop 2009). In this earlier study nurses sited "controlling" as the least desirable characteristic of a clinical leader at a percentage of 78.1% supporting dissociation between a clinical leaders' leadership role and any hint of a management function. Clinical leaders were also shunned if they worked alone or held other attributes of a manager (administrator, dealt with reward and punishment, is conservative).

All these views were supported when respondents were asked to suggest other qualities or characteristics not on the list of 54 attributes provided in the questionnaire. None of these additional words supported a management focus and while many repeated the attributes on the list provided, additional words (such as trustworthy, responsible, none judgemental, ethical behaviour, humble, reliable, enthusiastic and pro-active) confirmed the view that clinical leaders were not managers, were not seen to be in management positions and lead by virtue of their values and beliefs about quality service provision. Team working, visibility, effective communication skills and their desire to deliver excellent outcomes as part of their professional identity dominate the profile of a clinical leader/clinical team leader.

8.4 Who are the clinical leaders?

Respondents were asked if they saw themselves as clinical leaders. Most, (59.5%) said they did not because they thought they needed more training, more education, more knowledge, more skills, better communication skills, more confidence, more experience, more leadership experience, or simply did not want the responsibility. Many however, (65.2%) saw their paramedic/ambulance role as allowing them to engage in leadership and collaboration, so that while most recognised the need for and place of clinical leadership (a view supported by Woollard, 2006), few thought they had the skills to undertake this responsibility.

Of all the respondents, only 25% thought their colleagues saw them as a clinical leader, suggesting that it was because they had clinical experience, had their colleagues' respect, had relevant education in ambulance work, that their work reflected best practice and related clinical experience. They also said it was because people asked for their opinion and advice, because they were approachable and knowledgeable, had valuable experiences or because they supported people. None said it was because they were skilled managers, had a vision or were able to effectively control others. These views again supported the notion that leadership and management functions were different and that management skills were unlooked for in a clinical leader/clinical team leader.

8.5 What is stopping more leadership?

Many (59.6%) respondents indicated they thought there were a number of barriers that hindered effective clinical leadership or leadership development. The types of barriers hinted at can be grouped into three main areas. These include:

1. **Management/organisational issues:**

These included comments that suggested issues such as no real clinical pathway, organisational structures that get in the way of leadership or unclear processes for advancement. A perceived lack of opportunities, the current management culture and poor organisational support for progression, a lack of transparency and a perceived lack of recognition. Comments offered summed up some of the frustrations related to this area.

"I don't know what the role is. I don't think they (management) do either. Is there a job description?"

"Clinical leadership is both a top/down and bottom/up process. Senior management must have a contemporary handle on clinical leadership / governance to ensure a clear vision to staff and a way forward."

2. **Resistance issues:**
   These included issues such as resistance from colleagues to change, a tendency to cling to old ways of doing things, people's egos and working with people who are unhappy or unable to accept new ways of working.

3. **Training issues:**
   The third barrier related to a perception that training support was lacking or that the level of training was too low. Others suggested the lack of a degree, a lack of experience or the cost of training/studies could be issues that prevented their leadership development/progression.

It is not clear which of these three issues offers the greatest threat to the successful implementation or development of the clinical team leader role and the strategies for dealing with each will vary. However, it is clear that almost 60% of those surveyed felt there were issues and that for the clinical team leader role to succeed addressing each of these barriers is a necessity. Addressing the training issues will be the easiest option, but it may not yield the greatest results if the organisational issues and issues of staff resistance to change are not also addressed. Addressing staff attitudes and the perceived organisational barriers rest on dealing with organisational culture and shifting these barriers can be an altogether tougher undertaking.

8.6 Perceptions, experiences and understanding clinical leadership.

A main aim of the study was to explore the respondents understanding, perceptions and experiences of clinical leadership. The majority of respondents recognised that clinical leaders/clinical team leaders have the skills and resources necessary to perform tasks effectively, are able to observe on the job activity without necessarily getting involved, work well in a team and communicate effectively. Clinical leaders/clinical team leaders were seen as flexible, responsive and able to improvise and to encourage initiative, involvement and innovation from co-workers. As well they were thought to be able to express appreciation in a timely manner when optimal performance was recognised.

Clinical leaders/clinical team leaders were seen by most respondents to be responsible for initiating care and leading clinical actions (although 37% of respondents saw this taking place less commonly). They were also seen to have high moral character and to be acting accordingly on what was right or wrong. Although when it came to the application of their moral character less than half were thought to be able to take risks for things they believed in.

Clinical leaders/clinical team leaders were not thought to be successful in influencing organisational policy, while 70% of respondents thought clinical leaders could strongly influence the way clinical care was delivered.

Clinical leaders/clinical team leaders were seen to be involved in staff development education and support for staff with most recognising their role in education/teaching/tutorial support although there was a hint that more effort needed to be put into gaining educational skills to support their educational/support role.

In terms of experience, international experience was not valued highly or seen as essential and even local Perth, WA experience was only seen as essential by half the respondents. What was seen as valuable was any road side (clinical) experience. As such clinical leaders/clinical team leaders who were visible at the road side with high quality clinical skills were acknowledged as valuable, but it was suggested that they were less visible than other clinical staff as they may not always cover a 24 hour shift pattern. Experiences of rural or regional practice was not sought in the questionnaire, but from the one comment below it may be relevant to incorporate regional practice or experience into the clinical leader/clinical team leaders role.

> Can clinical team leaders be posted to the country (regional areas) for short periods (2 days) to pass on skills and have one-on-one training with them?

The majority of respondents saw clinical leaders/clinical team leaders as needing advanced critical care experience and training supporting the skills and clinical expertise focus of the clinical leader/clinical team leader role. Stirling et al. (2007) also support the development of an advanced scope of practice for paramedics and while their study related to rural communities these and Woollards (2006) comments support the development of greater clinical expertise for leading ambulance or paramedical staff. Research skills or training were not seen as essential and only 36.8% of respondents saw research experiences as a function of a clinical leader/clinical team leader's role. Likewise an undergraduate degree was not regarded by the majority of respondents as a significant requirement for a clinical leader to function effectively. In support of these views one respondent said, you "need to have a "can do" attitude." (the role was) "Not about pieces of paper (qualifications)."

8.7 Clinical leadership defined

When asked to define clinical leadership a great number of responses were provided, most respondents simply used a set of descriptive words to describe their "ideal" clinical leader. But it seems that what is looked for in a clinical leader is someone that is a team developer, team worker, supporter, educator, creator of a positive environment, someone with initiative, who is innovative, who can promote change, who is vocal, knows their peers, is trustworthy, offers a bridge between on road staff and management, has excellent clinical skills, is a guide, is there for road crews to call on, visible at the road side, an advocate for road crews, is approachable, professional, who works well under pressure, who can make quick clear decisions, who leads by example, who provides leadership and support within the realm of clinical practice, who is a motivator, maintains standards, promotes best

practice, offers direction, has elite knowledge, puts the patient first, is a good listener, will stand by others, who is inspirational, and who is confident.

8.8 Summary

This may sound like a tall order, however most respondents (almost 90%) suggested that they thought clinical leaders had the skills and abilities to do their job. Most thought clinical leaders were involved in team work, new ideas, were great communicators and involved others appropriately. Most didn't care where the experience was from or what sort of experience it was. However, they wanted experienced practitioners. Most didn't value research insights or qualifications. What mattered was that the values of the clinical leaders were matched by their actions and abilities.

Many saw clinical leaders as teachers or guides, but others recognised that they didn't all have the skills to teach or tutor. Most thought they should have an influence on clinical care, but only half saw that they could influence organisational issues. Clinical leaders were seen to be visible role models, skilled, experienced clinically focused, approachable, knowledgeable, driven by their desire to provide high quality care, and change practice if they could, they are team members, teachers and guides who make decisions often under pressure.

Recent literature about clinical leadership (from nursing) and this research study indicated that clinical leaders are followed not for their vision or creativity, but because they are there, they care (are skilled and experienced) and that this showed at the road side. Clinical leaders were not recognised because of their position, seniority, ability to control other staff, creativity or vision, but because their beliefs about care were on show and were matched (congruent) with their actions.They built their approach to clinical leadership on a foundation of care and clinical practice that was fundamental to their view of care / clinical service provision and how patients (and colleagues) should be cared for. As such they were visibly and actively involved in care provision and it is proposed that clinical leaders/clinical team leaders display Congruent Leadership (Stanley 2006a, 2006b, 2008, 2011; Bishop 2009). As such, they are followed not because they have vision or are overly creative (although they may be) or because they have links to a management function, but because they have their values and beliefs on show and these are reflected in their actions, skills and experience.

9. Conclusion:

As one respondent indicated; *"We need clinical leaders!!!"* (in the St. John Ambulance Service). I would agree and suggest the study results indicate that they are needed and effective when used appropriately. They are clearly doing a significant job and are evidently leading as was intended. This comment from another respondent makes this clear; *"The clinical team leaders in Perth are the only contact that I have ever had with a clinical leader and I can only speak of my high regard for their support and knowledge within their role."* The research offers a picture of what general ambulance and parametrical staff think of the clinical team leader role and clinical leadership. There is support for this role and the direction the role should take. It should remain firmly focused on a clinical leadership function, with the emphasis very much on the clinical aspects of the role. Linking the role with

management functions would be a mistake and weaken what can be achieved with this role. Clinical leaders/clinical team leaders in the St. John Ambulance Service in WA are recognised for their ability to work with and in teams, to communicate well, to offer high quality clinical skills and to support and teach other ambulance staff. There is room for some improvement in the skill set of clinical leaders to gain even greater benefit from the role (these are offered as recommendations below).

10. Recommendations:

The results indicate that the development of the clinical team leader role has been well conceived, but there may be some refinements that could be employed to enhance the role and bolster the quality it adds to the St. John Ambulance service in W.A.

Recommendation 1:
While clinical team leaders have many clinical and communication skills additional skill sets may need to be considered to enhance their value:
These include skills or an understanding of:

- Successfully motivating others
- Team working / team building skills
- Change management skills (linked to the best practice quality / standards agenda)
- Clinical decision making skills
- Teaching / guiding skills

All these skills relate to gaining power in relation to influencing others and quality processes. Those skills related to management practices are not suggested as being needed for clinical leaders and a real advantage the clinical team leaders role has is that it is divorced from a pure management role and can directly impact on or influence to clinical/road–side issues that impact directly on the public's perception of the service offered by St. John Ambulance.

Recommendation 2:
It was implied by a number of respondents that a clear role description for the clinical team leaders was lacking. If this is the case, a clear role description based on an understanding of how clinical leaders can add value to the St. John Ambulance service may need to be developed.

Recommendation 3:
It was suggested in the study that clinical leaders have good links and working relationships with road based teams and ambulance officers. However, a number of comments indicated that better links needed to be built so that clinical leaders could influence the organisation more effectively: these positions are potentially the organisations clinical eyes and ears. This recommendation relates to an information gathering and liaison role rather than a diversion into management goals and objectives. These are related, but again the advantage clinical team leaders have (in not being seen as managers) may be surrendered if they are drawn into management functions. This recommendation proposes the consideration of a strategy to enhance the links between clinical team leaders, road side staff and the senior management team, with clinical team leaders using the respect they have and

their visibility in clinical areas to be the “bottom/up” link and feedback valuable information and advice to the organisation.

Recommendation 4:
Recommendation 1 suggests that understanding change management tools and strategies may be a useful adjunct to clinical team leader education. This recommendation is taken further here by suggesting that it is with the development of change management tools that clinical leaders can make significant and often dramatic proposals (arrived at from working at the coal face) for simple and profound change that may have the effect of improving frontline and core service provision. My thoughts here are that if the most experienced and skilled clinical staff are given skills and strategies to take their ideas and thoughts about improving the service forward then genuine and rich change and improvement in service provision and quality standards can be achieved.

There will always be new ideas and better ways to facilitate the service offered. This recommendation suggests that this key group of clinical staff can enhance their leadership potential if they have the skills and latitude to suggest and develop new initiatives and strategies. The first recommendation suggests the skills of change management be taught, this recommendation proposes they are encouraged and supported to use them and propose change.

Recommendation 5:
Further research is required. Now that a pool of clinical team leaders have been established it is recommended that an evaluation or further study be undertaken to assess the success and impact of their role.

Final comment: One of the barriers identified related to organisational culture issues. While it is beyond this research report to make recommendations about culture change, it may be wise to consider the impact of organisational culture on the successful implementation and development of the clinical leader role.

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Appendix A

PERCEPTIONS OF PARAMEDIC CLINICAL LEADERSHIP QUESTIONNAIRE

Date of design: November 2009

Please read the information in the box below and on the covering letter carefully **BEFORE** answering any of the following questions.

Any information provided will be dealt with in the strictest confidence.

The information you provide will only ever be available to the researcher.

You do not need to put your name or any other name on this questionnaire.

You can be assured that this questionnaire is related only to this research and NOT to your employer or employment, again any information you provide will be kept safe and confidential.

Please complete every part of the questionnaire and do not leave any questions unanswered.

Please return the questionnaire at the end of refresher training or post back to the researcher with the envelope provided. Thank you for your assistance and participation.

1. Please put a tick ✓ next to the qualities / characteristics listed below that you would <u>MOST</u> identify with clinical leadership and a × next to the qualities / characteristics you would <u>LEAST</u> identify with clinical leadership. Consider each quality / characteristic carefully and if you can't decide, leave the space blank.

Copes well with change		Is a motivator		Deals with routine	
Sets direction (planning)		Is controlling		Is consistent	
Considers relationships valuable		Has management experience		Copes well with Complexity	
Flexible		Is a teacher		Is visible in practice	
A guide		Is a mentor		Is a visionary	
Sets goals and targets		Is a negotiator		Directs and helps people	
Has integrity and is honest		Is responsible for others duty/responsibilities		Deals with reward / punishment	
Is inspirational		Takes calculated risks		Aligns people	
Is a critical thinker		Is a regulator		Counts on trust	
Is creative / innovative		Is analytical		Deals with resources allocation	
Is clinically competent		Is an administrator		Maintenance of relationships	
Is artistic / imaginative		Is conservative		Inspires confidence	
Is supportive		Is an advocate		Is articulate	
Is a change agent		Is approachable		Is just / fair	
Can be a decision maker		Is a coach		Manages staff	
Has a healthy sense of humour		Is caring / compassionate		Is an effective communicator	
Evaluates the performance of staff		Is a role model for others in practice		Resolves conflict	
Works alone		Must have relevant postgraduate training		Is courageous	

2. Are there any other qualities or characteristics that are not on the list above that you would identify with clinical leadership in your paramedic role?

_____

_____

3. Based on these qualities. Do you see yourself as a clinical leader? YES NO
Please state why?

4. Would you say your role as Paramedic allows you to engage in leading and collaborating in clinical practice? YES NO
Please state why?

5. Do you think your colleagues see you as a Clinical Leader? YES NO (Why or why not?)

6. Are there any barriers that hinder or diminish your ability to be an effective clinical leader? YES NO If so, please describe them.

7. With reference to your experience, perceptions and understanding of clinical leadership. Rate the following statements on a scale of 1 – 10 (circle the number closest to your view with: 1 = "not relevant" or "not important" and 10 = "very relevant" or "very important").

Clinical leaders…:

7.1 Have the skills and resources necessary to perform tasks effectively.

1 2 3 4 5 6 7 8 9 10

7.2 Are able to observe on the job activity without involvement. **1 2 3 4 5 6 7 8 9 10**
7.3 Are able to work within the team. **1 2 3 4 5 6 7 8 9 10**
7.4 Encourage initiative, involvement and innovation from co-workers. **1 2 3 4 5 6 7 8 9 10**
7.5 Recognise optimal performance and express appreciation in a timely manner. **1 2 3 4 5 6 7 8 9 10**
7.6 Initiate care and lead action and procedures. **1 2 3 4 5 6 7 8 9 10**
7.7 Have high moral character, know what is right and wrong and act accordingly. **1 2 3 4 5 6 7 8 9 10**
7.8 Are willing to take risks for something they believe in, whether for people or ideals. **1 2 3 4 5 6 7 8 9 10**
7.9 Are able to communicate well, presenting ideas logically and effectively. **1 2 3 4 5 6 7 8 9 10**
7.10 Are flexible, able to improvise and can respond to a variety of situations with appropriate skills and interventions. **1 2 3 4 5 6 7 8 9 10**

8. How would you define clinical leadership?

_____
_____
_____
_____
_____
_____

9. If clinical leaders are to lead in all dimensions of paramedic practice, what skills do you have (or need) to facilitate this or allow you to achieve this?

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

10. With reference to your experience, perceptions and understanding of clinical leadership. Rate the following statements on a scale of 1 – 10 (circle the number closest to your view with: 1 = "strongly disagree" and 10 = "strongly agree").

Clinical leaders…:

10.1 Influence organisational policy	**1 2 3 4 5 6 7 8 9 10**
10.2 Influences the way clinical care is delivered	**1 2 3 4 5 6 7 8 9 10**
10.3 Are involved in staff development education	**1 2 3 4 5 6 7 8 9 10**
10.4 Provide staff support	**1 2 3 4 5 6 7 8 9 10**
10.5 Are constantly available across shifts	**1 2 3 4 5 6 7 8 9 10**
10.6 Have road experience of greater than 5 years	**1 2 3 4 5 6 7 8 9 10**
10.7 Have advanced critical care training	**1 2 3 4 5 6 7 8 9 10**
10.8 Have advanced critical care experience	**1 2 3 4 5 6 7 8 9 10**
10.9 Have teaching / tutorial experience	**1 2 3 4 5 6 7 8 9 10**
10.10 Have teaching / tutorial training	**1 2 3 4 5 6 7 8 9 10**
10.11 Have international paramedic experience	**1 2 3 4 5 6 7 8 9 10**
10.12 Have local (Perth / WA) experience	**1 2 3 4 5 6 7 8 9 10**

10.13 Have research training	**1 2 3 4 5 6 7 8 9 10**
10.14 Have research experience	**1 2 3 4 5 6 7 8 9 10**
10.15 Holds an undergraduate qualification	**1 2 3 4 5 6 7 8 9 10**

11. Please feel free to add any other comments related to your understanding of clinical leadership.

_____
_____
_____
_____
_____
_____
_____

About you:

12. How long have you been an paramedic (years/ months) _____/_____

_____

13. Have you undertaken any formal education in relation to leadership? YES NO
If so, what?

_____

14. Have you undertaken any formal education in relation to management? YES NO If so what?

_____

15. Are you male / female (Please circle as appropriate)

_____

16. Please indicate your age with a tick next to the corresponding figures on the scale below.

Below 20
21 – 30
31 – 40
41 – 50
51 – 60
Above 60

17. Please indicate the nature of your work location with a tick next to the locations offered below.

Metropolitan

Regional

Thank You:
Again you can be reassured that any information provided will be kept confidential and dealt with in the strictest confidence.
Thank you for your assistance in completing this questionnaire. If you have any questions or concerns that this questionnaire has raised. You can contact the researcher at D.Stanley@curtin.edu.au
Please return the completed questionnaire in the envelope provided or to the appropriate collection point.

Appendix B

Date of Design November 2010.

PERCEPTIONS OF PARAMEDIC CLINICAL LEADERSHIP QUESTIONNAIRE

Dear Paramedic Colleague,
You are invited to take part in this research study, however before you decide to do so or not, it is important for you to understand why the research is being undertaken and what it will involve. Please read the following information carefully.

This research project aims to identify how clinical leadership skills are perceived by paramedics in the course of their everyday work and the effectiveness and consequences of such skills in pre-hospital care delivery.

The purpose of the attached questionnaire is:
1. To identify who the clinical leaders are in the ambulance service
2. To identify the attributes and characteristics of clinical leaders in pre-hospital care.
3. To identify clinical leadership skill sets/practices/ elements that influence effective pre-hospital
   care

It is hoped that you feel confident to be able to help with this study. The research is purely related to a St. John Ambulance Service / Curtin University of Technology research project and is **in no way** related to your employment or employer or the WA Department of Health. As such you can be assured that any information provided will be dealt with in the strictest confidence. The information you provide will only be available to the researcher and is unable to be linked with your name, work position or address. All the information collected will be kept safe and confidential. You are not identifiable as a result of participating in this study.

The research has been approved by the Curtin University of Technology Human Research Ethics Committee (2009).

Participation is not compulsory and I know you are very busy with your clinical activities, but your views and opinions on this matter are vital to this research project and as the questionnaire should take no more than a five minutes to complete can I urge you to find a few minutes to complete and return it.

If you have any concerns about the way in which this research is being conducted, you may contact the Manager, Research Ethics at Curtin University of Technology on 92662784 quoting Curtin University of Technology Ethics Approval Number SON&M 1-2010. Thank you for your time in considering this request to be involved in this study.

Respectfully yours,

Appendix C

Custom Tables

Question 1:		Count	%
Qualities most identified with clinical leadership	copes well with change	83	79.8%
	sets direction (planning)	88	84.6%
	considers relationships valuable	78	75.0%
	Flexible	88	84.6%
	a guide	86	82.7%
	sets goals and targets	77	74.0%
	has integrity and is honest	97	93.3%
	is inspirational	76	73.1%
	is a critical thinker	92	88.5%
	is creative/innovative	64	61.5%
	is clinically competent	100	96.2%
	is artistic/imaginative	25	24.0%
	is supportive	95	91.3%
	is a change agent	57	54.8%
	can be a decision maker	90	86.5%
	has a healthy sense of humour	73	70.2%
	evaluates the performance of staff	82	78.8%
	works alone	19	18.3%
	is a motivator	90	86.5%
	is controlling	10	9.6%
	has management experience	38	36.5%
	is a teacher	77	74.0%
	is a mentor	94	90.4%
	is a negotiator	60	57.7%
	is responsiblie for others duty/responsibilities	33	31.7%
	takes calculated risks	32	30.8%
	is a regulator	40	38.5%
	is analytical	79	76.0%
	is an administrator	33	31.7%
	is conservative	21	20.2%
	is an advocate	71	68.3%
	is approachable	100	96.2%
	is a coach	74	71.2%
	is caring/compassionate	74	71.2%
	is a role model for others in practice	97	93.3%
	must have relevant postgrad training	44	42.3%
	deals with routine	52	50.0%
	is consistent	94	90.4%
	copes well with complexity	86	82.7%
	is visible in practice	89	85.6%
	is a visionary	53	51.0%
	directs and helps people	92	88.5%

	deals with reward/punishment	42	40.4%
	aligns people	52	50.0%
	counts on trust	56	53.8%
	deals with resources allocation	51	49.0%
	maintenance of relationships	61	58.7%
	inspires confidence	89	85.6%
	is articulate	76	73.1%
	is just/fair	89	85.6%
	manages staff	41	39.4%
	is an effective communicator	93	89.4%
	resolves conflict	68	65.4%
	is courageous	50	48.1%
	Total	104	

Question 1		Count	%
Qualities least identified with clinical leadership	copes well with change	4	4.5%
	sets direction (planning)	1	1.1%
	considers relationships valuable	12	13.6%
	Flexible	4	4.5%
	a guide	3	3.4%
	sets goals and targets	7	8.0%
	has integrity and is honest	2	2.3%
	is inspirational	8	9.1%
	is a critical thinker	1	1.1%
	is creative/innovative	11	12.5%
	is clinically competent	1	1.1%
	is artistic/imaginative	46	52.3%
	is supportive	1	1.1%
	is a change agent	19	21.6%
	can be a decision maker	3	3.4%
	has a healthy sense of humour	15	17.0%
	evaluates the performance of staff	9	10.2%
	works alone	60	68.2%
	is a motivator	3	3.4%
	is controlling	74	84.1%
	has management experience	39	44.3%
	is a teacher	12	13.6%
	is a mentor	0	.0%
	is a negotiator	18	20.5%
	is responsiblie for others duty/responsibilities	40	45.5%
	takes calculated risks	39	44.3%
	is a regulator	27	30.7%
	is analytical	7	8.0%
	is an administrator	45	51.1%
	is conservative	50	56.8%

	is an advocate	10	11.4%
	is approachable	0	.0%
	is a coach	7	8.0%
	is caring/compassionate	11	12.5%
	is a role model for others in practice	1	1.1%
	must have relevant postgrad training	35	39.8%
	deals with routine	21	23.9%
	is consistent	3	3.4%
	copes well with complexity	1	1.1%
	is visible in practice	3	3.4%
	is a visionary	22	25.0%
	directs and helps people	5	5.7%
	deals with reward/punishment	42	47.7%
	aligns people	26	29.5%
	counts on trust	16	18.2%
	deals with resources allocation	33	37.5%
	maintenance of relationships	17	19.3%
	inspires confidence	3	3.4%
	is articulate	7	8.0%
	is just/fair	5	5.7%
	manages staff	35	39.8%
	is an effective communicator	3	3.4%
	resolves conflict	22	25.0%
	is courageous	22	25.0%
	Total	88	100.0%

Statistics

Question 3 – 6	N	
	Valid	Missing
Q3 Do you see yourself as a clinical leader?	89	15
Q4 Role allows to engage in leading and collaborating?	89	15
Q5 Colleagues see you as a Clinical Leader?	80	24
Q6 Barriers that hinder or diminish ability?	79	25

Q3 Do you see yourself as a clinical leader?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	36	34.6	40.4	40.4
	No	53	51.0	59.6	100.0
	Total	89	85.6	100.0	
Missing	System	15	14.4		
Total		104	100.0		

Q4 Role allows to engage in leading and collaborating?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	58	55.8	65.2	65.2

	No	30	28.8	33.7	98.9
	Yes and No	1	1.0	1.1	100.0
	Total	89	85.6	100.0	
Missing	System	15	14.4		
Total		104	100.0		

Q5 Colleagues see you as a Clinical Leader?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	20	19.2	25.0	25.0
	No	58	55.8	72.5	97.5
	Yes and No	2	1.9	2.5	100.0
	Total	80	76.9	100.0	
Missing	System	24	23.1		
Total		104	100.0		

Q6 Barriers that hinder or diminish ability?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	47	45.2	59.5	59.5
	No	31	29.8	39.2	98.7
	Yes and No	1	1.0	1.3	100.0
	Total	79	76.0	100.0	
Missing	System	25	24.0		
Total		104	100.0		

Statistics

Question 7	N		Mean	Std. Deviation
	Valid	Missing		
Q7.1 Have skills and resources necessary to perform tasks	100	4	8.97	1.507
Q7.2 Able to observe on the job activity without involvement	100	4	7.68	2.265
Q7.3 Able to work within the team	100	4	9.08	1.419
Q7.4 Initiative, involvement & innovation from co-workers	101	3	8.63	1.736
Q7.5 Optimal performance & appreciation in timely manner	99	5	8.53	1.728
Q7.6 Initiate care and lead action and procedures	100	4	7.52	2.456
Q7.7 Have high moral character	100	4	8.72	1.843
Q7.8 Take risks for something they believe in	99	5	6.78	2.663
Q7.9 Communicate well, present ideas logically and effectively	101	3	9.13	1.294
Q7.10 Are flexible, able to improvise and can respond	101	3	8.99	1.432

Q7.1 Have skills and resources necessary to perform tasks

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	1.0	1.0	1.0
	5	5	4.8	5.0	6.0
	6	2	1.9	2.0	8.0

	7	5	4.8	5.0	13.0
	8	16	15.4	16.0	29.0
	9	16	15.4	16.0	45.0
	very relevant or very important	55	52.9	55.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q7.2 Able to observe on the job activity without involvement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not relevant or not important	2	1.9	2.0	2.0
	2	1	1.0	1.0	3.0
	3	4	3.8	4.0	7.0
	4	2	1.9	2.0	9.0
	5	8	7.7	8.0	17.0
	6	12	11.5	12.0	29.0
	7	8	7.7	8.0	37.0
	8	17	16.3	17.0	54.0
	9	20	19.2	20.0	74.0
	very relevant or very important	26	25.0	26.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q7.3 Able to work within the team

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	1.0	1.0	1.0
	5	5	4.8	5.0	6.0
	6	1	1.0	1.0	7.0
	7	4	3.8	4.0	11.0
	8	13	12.5	13.0	24.0
	9	19	18.3	19.0	43.0
	very relevant or very important	57	54.8	57.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q7.4 Initiative, involvement & innovation from co-workers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.0	1.0	1.0
	3	3	2.9	3.0	4.0
	5	3	2.9	3.0	6.9
	6	3	2.9	3.0	9.9
	7	5	4.8	5.0	14.9

	8	22	21.2	21.8	36.6
	9	23	22.1	22.8	59.4
	very relevant or very important	41	39.4	40.6	100.0
	Total	101	97.1	100.0	
Missing	System	3	2.9		
Total		104	100.0		

Q7.5 Optimal performance & appreciation in timely manner

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.0	1.0	1.0
	3	2	1.9	2.0	3.0
	5	5	4.8	5.1	8.1
	6	3	2.9	3.0	11.1
	7	7	6.7	7.1	18.2
	8	22	21.2	22.2	40.4
	9	22	21.2	22.2	62.6
	very relevant or very important	37	35.6	37.4	100.0
	Total	99	95.2	100.0	
Missing	System	5	4.8		
Total		104	100.0		

Q7.6 Initiate care and lead action and procedures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not relevant or not important	3	2.9	3.0	3.0
	2	3	2.9	3.0	6.0
	3	3	2.9	3.0	9.0
	4	4	3.8	4.0	13.0
	5	9	8.7	9.0	22.0
	6	4	3.8	4.0	26.0
	7	11	10.6	11.0	37.0
	8	20	19.2	20.0	57.0
	9	18	17.3	18.0	75.0
	very relevant or very important	25	24.0	25.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q7.7 Have high moral character

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not relevant or not important	1	1.0	1.0	1.0
	3	1	1.0	1.0	2.0
	4	1	1.0	1.0	3.0
	5	6	5.8	6.0	9.0
	6	4	3.8	4.0	13.0
	7	5	4.8	5.0	18.0
	8	15	14.4	15.0	33.0
	9	15	14.4	15.0	48.0
	very relevant or very important	52	50.0	52.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q7.8 Take risks for something they believe in

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	not relevant or not important	6	5.8	6.1	6.1
	2	4	3.8	4.0	10.1
	3	6	5.8	6.1	16.2
	4	1	1.0	1.0	17.2
	5	12	11.5	12.1	29.3
	6	9	8.7	9.1	38.4
	7	14	13.5	14.1	52.5
	8	17	16.3	17.2	69.7
	9	13	12.5	13.1	82.8
	very relevant or very important	17	16.3	17.2	100.0
	Total	99	95.2	100.0	
Missing	System	5	4.8		
Total		104	100.0		

Q7.9 Communicate well, present ideas logically and effectively

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	4	1	1.0	1.0	1.0
	5	3	2.9	3.0	4.0
	6	3	2.9	3.0	6.9
	7	1	1.0	1.0	7.9
	8	12	11.5	11.9	19.8
	9	28	26.9	27.7	47.5
	very relevant or very important	53	51.0	52.5	100.0
	Total	101	97.1	100.0	
Missing	System	3	2.9		
Total		104	100.0		

Q7.10 Are flexible, able to improvise and can respond

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	5	6	5.8	5.9	5.9
	6	3	2.9	3.0	8.9
	7	4	3.8	4.0	12.9
	8	13	12.5	12.9	25.7
	9	22	21.2	21.8	47.5
	very relevant or very important	53	51.0	52.5	100.0
	Total	101	97.1	100.0	
Missing	System	3	2.9		
Total		104	100.0		

Statistics

Question 10	N		Mean	Std. Deviation
	Valid	Missing		
Q10.1 Influence organisational policy	100	4	7.33	2.035
Q10.2 influences the way clinical care is delivered	100	4	8.19	1.733
Q10.3 are involved in staff development education	101	3	7.96	1.870
Q10.4 provide staff support	101	3	8.21	1.878
Q10.5 are constantly available across shifts	99	5	7.33	2.825
Q10.6 have road experience of greater than 5 years	100	4	18.46	99.061
Q10.7 have advanced critical care training	100	4	18.04	99.112
Q10.8 have advanced critical care experience	98	6	7.92	2.269
Q10.9 have teaching / tutorial experience	99	5	7.70	1.972
Q10.10 have teaching / tutorial training	95	9	7.58	2.035
Q10.11 have international paramedic experience	96	8	4.22	2.625
Q10.12 have local (Perth/WA) experience	97	7	7.05	2.717
Q10.13 have research training	98	6	6.31	2.501
Q10.14 have research experience	98	6	6.24	2.585
Q10.15 holds an undergraduate qualification	97	7	16.58	100.823

Q10.1 Influence organisational policy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.0	1.0
	3	3	2.9	3.0	4.0
	4	6	5.8	6.0	10.0
	5	9	8.7	9.0	19.0
	6	13	12.5	13.0	32.0
	7	17	16.3	17.0	49.0
	8	20	19.2	20.0	69.0
	9	13	12.5	13.0	82.0
	strongly agree	18	17.3	18.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q10.2 influences the way clinical care is delivered

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	1.0	1.0	1.0
	4	3	2.9	3.0	4.0
	5	6	5.8	6.0	10.0
	6	6	5.8	6.0	16.0
	7	14	13.5	14.0	30.0
	8	18	17.3	18.0	48.0
	9	24	23.1	24.0	72.0
	strongly agree	28	26.9	28.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q10.3 are involved in staff development education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	1	1.0	1.0	1.0
	3	2	1.9	2.0	3.0
	4	3	2.9	3.0	5.9
	5	5	4.8	5.0	10.9
	6	9	8.7	8.9	19.8
	7	13	12.5	12.9	32.7
	8	24	23.1	23.8	56.4
	9	18	17.3	17.8	74.3
	strongly agree	26	25.0	25.7	100.0
	Total	101	97.1	100.0	
Missing	System	3	2.9		
Total		104	100.0		

Q10.4 provide staff support

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	1.0	1.0	1.0
	4	5	4.8	5.0	5.9
	5	7	6.7	6.9	12.9
	6	5	4.8	5.0	17.8
	7	13	12.5	12.9	30.7
	8	13	12.5	12.9	43.6
	9	24	23.1	23.8	67.3
	strongly agree	33	31.7	32.7	100.0
	Total	101	97.1	100.0	
Missing	System	3	2.9		
Total		104	100.0		

Q10.5 are constantly available across shifts

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	5.8	6.1	6.1
	2	2	1.9	2.0	8.1
	3	4	3.8	4.0	12.1
	4	4	3.8	4.0	16.2
	5	11	10.6	11.1	27.3
	6	8	7.7	8.1	35.4
	7	11	10.6	11.1	46.5
	8	4	3.8	4.0	50.5
	9	14	13.5	14.1	64.6
	strongly agree	35	33.7	35.4	100.0
	Total	99	95.2	100.0	
Missing	System	5	4.8		
Total		104	100.0		

Q10.6 have road experience of greater than 5 years

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3	1	1.0	1.0	1.0
	4	1	1.0	1.0	2.0
	5	8	7.7	8.0	10.0
	6	6	5.8	6.0	16.0
	7	11	10.6	11.0	27.0
	8	10	9.6	10.0	37.0
	9	13	12.5	13.0	50.0
	strongly agree	49	47.1	49.0	99.0
	999	1	1.0	1.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q10.7 have advanced critical care training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.0	1.0
	2	3	2.9	3.0	4.0
	3	3	2.9	3.0	7.0
	4	1	1.0	1.0	8.0
	5	5	4.8	5.0	13.0
	6	6	5.8	6.0	19.0
	7	11	10.6	11.0	30.0
	8	13	12.5	13.0	43.0
	9	17	16.3	17.0	60.0
	strongly agree	39	37.5	39.0	99.0
	999	1	1.0	1.0	100.0
	Total	100	96.2	100.0	
Missing	System	4	3.8		
Total		104	100.0		

Q10.8 have advanced critical care experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	1	1.0	1.0	1.0
	2	2	1.9	2.0	3.1
	3	3	2.9	3.1	6.1
	4	3	2.9	3.1	9.2
	5	8	7.7	8.2	17.3
	6	6	5.8	6.1	23.5
	7	8	7.7	8.2	31.6
	8	20	19.2	20.4	52.0
	9	12	11.5	12.2	64.3
	strongly agree	35	33.7	35.7	100.0
	Total	98	94.2	100.0	
Missing	System	6	5.8		
Total		104	100.0		

Q10.9 have teaching / tutorial experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	1.9	2.0	2.0
	3	1	1.0	1.0	3.0
	4	2	1.9	2.0	5.1
	5	10	9.6	10.1	15.2
	6	9	8.7	9.1	24.2
	7	12	11.5	12.1	36.4
	8	26	25.0	26.3	62.6
	9	17	16.3	17.2	79.8
	strongly agree	20	19.2	20.2	100.0
	Total	99	95.2	100.0	
Missing	System	5	4.8		
Total		104	100.0		

Q10.10 have teaching / tutorial training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	2	1.9	2.1	2.1
	3	2	1.9	2.1	4.2
	4	2	1.9	2.1	6.3
	5	10	9.6	10.5	16.8
	6	8	7.7	8.4	25.3
	7	14	13.5	14.7	40.0
	8	24	23.1	25.3	65.3
	9	14	13.5	14.7	80.0
	strongly agree	19	18.3	20.0	100.0
	Total	95	91.3	100.0	
Missing	System	9	8.7		
Total		104	100.0		

Q10.11 have international paramedic experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	25	24.0	26.0	26.0
	2	6	5.8	6.3	32.3
	3	9	8.7	9.4	41.7
	4	9	8.7	9.4	51.0
	5	17	16.3	17.7	68.8
	6	11	10.6	11.5	80.2
	7	6	5.8	6.3	86.5
	8	8	7.7	8.3	94.8
	9	2	1.9	2.1	96.9
	strongly agree	3	2.9	3.1	100.0
	Total	96	92.3	100.0	
Missing	System	8	7.7		
Total		104	100.0		

Q10.12 have local (Perth/WA) experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	5.8	6.2	6.2
	2	2	1.9	2.1	8.2
	3	5	4.8	5.2	13.4
	4	2	1.9	2.1	15.5
	5	12	11.5	12.4	27.8
	6	9	8.7	9.3	37.1
	7	12	11.5	12.4	49.5
	8	16	15.4	16.5	66.0
	9	5	4.8	5.2	71.1
	strongly agree	28	26.9	28.9	100.0
	Total	97	93.3	100.0	
Missing	System	7	6.7		
Total		104	100.0		

Q10.13 have research training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	5.8	6.1	6.1
	2	5	4.8	5.1	11.2
	3	6	5.8	6.1	17.3
	4	3	2.9	3.1	20.4
	5	11	10.6	11.2	31.6
	6	14	13.5	14.3	45.9
	7	17	16.3	17.3	63.3
	8	19	18.3	19.4	82.7
	9	8	7.7	8.2	90.8
	strongly agree	9	8.7	9.2	100.0
	Total	98	94.2	100.0	
Missing	System	6	5.8		
Total		104	100.0		

Q10.14 have research experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	7	6.7	7.1	7.1
	2	4	3.8	4.1	11.2
	3	8	7.7	8.2	19.4
	4	3	2.9	3.1	22.4
	5	11	10.6	11.2	33.7
	6	13	12.5	13.3	46.9
	7	16	15.4	16.3	63.3
	8	18	17.3	18.4	81.6
	9	8	7.7	8.2	89.8
	strongly agree	10	9.6	10.2	100.0
	Total	98	94.2	100.0	
Missing	System	6	5.8		
Total		104	100.0		

Q10.15 holds an undergraduate qualification

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly disagree	6	5.8	6.2	6.2
	2	3	2.9	3.1	9.3
	3	7	6.7	7.2	16.5
	4	4	3.8	4.1	20.6
	5	15	14.4	15.5	36.1
	6	13	12.5	13.4	49.5
	7	15	14.4	15.5	64.9
	8	12	11.5	12.4	77.3
	9	4	3.8	4.1	81.4
	strongly agree	17	16.3	17.5	99.0
	999	1	1.0	1.0	100.0
	Total	97	93.3	100.0	
Missing	System	7	6.7		
Total		104	100.0		

Descriptive Statistics

Question 12	N	Minimum	Maximum	Mean	Std. Deviation
q12 Number of years as a paramedic	87	.00	30.00	6.9761	7.70557
Valid N (listwise)	87				

Statistics

Question 13 – 17	N	
	Valid	Missing
Q13 Any formal education in relation to leadership?	96	8
Q14 Any formal education in relation to management?	96	8
Q15 Gender	92	12
Q16 Age group	97	7
Q17 Work location	95	9

Q13 Any formal education in relation to leadership?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	39	37.5	40.6	40.6
	No	57	54.8	59.4	100.0
	Total	96	92.3	100.0	
Missing	System	8	7.7		
Total		104	100.0		

Q14 Any formal education in relation to management?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	25	24.0	26.0	26.0
	No	71	68.3	74.0	100.0
	Total	96	92.3	100.0	

Missing	System	8	7.7		
Total		104	100.0		

Q15 Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	59	56.7	64.1	64.1
	Female	33	31.7	35.9	100.0
	Total	92	88.5	100.0	
Missing	System	12	11.5		
Total		104	100.0		

Q16 Age group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	below 20	2	1.9	2.1	2.1
	21-30	24	23.1	24.7	26.8
	31-40	40	38.5	41.2	68.0
	41-50	22	21.2	22.7	90.7
	51-60	8	7.7	8.2	99.0
	above 60	1	1.0	1.0	100.0
	Total	97	93.3	100.0	
Missing	System	7	6.7		
Total		104	100.0		

Q17 Work location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Metropolitan	88	84.6	92.6	92.6
	Regional	7	6.7	7.4	100.0
	Total	95	91.3	100.0	
Missing	System	9	8.7		
Total		104	100.0		