Impact of a pain management education intervention for prehospital care providers
Pain

- Pain is the most common reason for patients to seek medical attention.

- Under-treatment of pain in the prehospital setting is a common occurrence.

- Non-pharmacological therapies must also be taught and reinforced.
Rationale

- Routine clinical audit identified an inadequate level of analgesia administration to medical and trauma patients reporting pain on a Numeric Rating Scale (NRS; 0-10 scale).

- Anecdotal evidence from informal discussion with clinical staff revealed this was primarily due to an education gap existing.

- We sought to address this clinical deficiency through a proven method of a targeted educational intervention (EI).
Methods

• Thirty-five clinical staff participated in eight-hour pain management courses facilitated by two experienced Clinical Educators.

• Pre- and post-course surveys were provided to participants. Participation was anonymous and voluntary.

• Ethical approval was granted by the Office of the Chief Medical Advisor
Educational intervention

The EI addressed:

- Accurate assessment of pain
- the physiological response to pain
- pharmacological and non-pharmacological analgesia options
- PHECC Pain Relief Ladder documentation of analgesia
- scenario-based simulated clinical cases requiring application of clinical knowledge to patient care.
Results

• Mean length of qualification was 3.54 years

• All 35 staff were Emergency Medical Technicians

• All participants indicated previous experience with pain-relief medication administration.

• Post-EI, participants reported their understanding of the physiological process of pain as having improved, an improvement in their understanding of the pain relief ladder and medication administration safety
I am confident of my knowledge of pharmacological methods of pain relief
I am confident of my knowledge of non-pharmacological methods of pain relief.
I am confident using a pain assessment score on adult patients

- Strongly Agree
- Agree
- Neutral

Pre-EI, Post-EI

I am confident calculating medication dosages for pain relief

- Strongly Agree
- Agree
- Neutral
- Disagree

Pre-El vs Post-El
Impact on patient care

- Subsequent clinical audit displayed an improved level of appropriate analgesia administration to patients reporting pain as per NRS in the two-month period following the EI

- Staff also have access to medical oversight and support for medication administration
Pain Medication Usage Pre and Post EI

<table>
<thead>
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<th>Pre-intervention</th>
<th>Post-Intervention</th>
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<tr>
<td>February</td>
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</tbody>
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- **Ibuprofen**
- **Paracetamol**

Conclusion

• A targeted EI addressing deficiencies identified by a rigorous clinical audit process resulted in improved baseline knowledge and improved psychomotor skills as reported by participants.

• Ongoing clinical audit subsequently demonstrated improved clinical management of pain as evidenced by appropriate medication administration as per Joint Commission International standards.

• These results suggest both initial and ongoing continuing education addressing pain management is of benefit to prehospital care providers.
Future research

• A further study is planned which will objectively assess participant’s abilities to administer medications safely pre- and post-EI. This will investigate dose calculations, pain scale ratings, and documentation standards.
References