Emergency Medication Kit in the Community Specialist Palliative Care Service: A Snapshot Audit

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Community Specialist Palliative Care Service

Interdisciplinary team
– PCMO, PCNP, RN’s and allied health

1. Out Patient Clinic (OPC)
2. Home-based (HBPC) service
3. Consultancy teams
– Acute and RACF’s
Recognition of Need for Practice Change

- Shortcomings in current practice
- Desire to improve emergent symptom management for HBPC patients
- Provide sustainable change for positive patient outcomes
- Improve staff satisfaction with ability to reduce suffering
EMERGENCY MEDICATION KIT (EMK) RESEARCH TRIAL 2013

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Dr Tracey Bullen DCP/MSc
Mr Bradley Smith RN CNC
Dr John Rosenberg RN PhD MACN
What is an EMK?

Individually labelled parenterals with standing orders

- Hydromorphone 2mg/1ml x 5 amps
- Metoclopramide 10mg/2ml x 5 amps
- Midazolam 5mg/1mg x 5 amps
- Haloperidol 5mg/1ml x 5 amps

Cost = approx. $16.00
Emergency Medication Kit
Clinically, what was the main objective?

To reduced suffering through addressing emergency symptoms with appropriate, effective timely intervention for HBPC patients.
Timeline

- Ethics approval ✔
- Grant with thanks from RCNMP
- Trial commenced November 2012
- Completed at 31 weeks
Methodology

- Cohort of 99 successive, new admissions to HBPC
- Ineligible
  - Allergy or contraindication
  - History of drug misuse in home
  - No EPoA if patient unable to consent
  - Unwilling to participate
  - Proficiency in English language
Practice Change Post Trial

- EMK adopted into normal practice
- All eligible new admissions to HBPC are offered an EMK with standing orders based on opioid naive dosing
- Education re use and storage given
So, what do the HBPC RN’s think?

• **100%** satisfied with EMK use

• **100%** surmised that EMK improved HBPC patient outcomes
“Absolutely. I have worked in rural and remote areas where there is nothing- EMK is fantastic"

"Absolutely, otherwise each of those visits would have resulted in a long time in A&E- highly distressing for patients and families“

"Given palliative care is about symptom management and QoL I think the EMK is essential"
Aim of Audit 2015

➢ To look at actual current practice

➢ Provide comparison to trial data

➢ Ensure goals are being met for best practice care
Audit Tool

- Questionnaire based on data collection tool used in original trial was developed
- Education given to HBPC RN’s re tool and use was

Questionnaire to be used every time EMK is accessed for a new drug or new symptom during time period of 13 weeks
Demographics

Trial 99 patients
• 84% (n: 86) malignant
• 57% (n: 57) males
• Average age 72yrs

Audit 39 patients
• 82% (n: 33) malignant
• 41% (n: 16) males
• Average age 73yrs
Patient Results

**Trial**
- 51 accessed EMK
- 48% (n: 24) accessed ≤ 7 days
- Median time to access 9 days

**Audit**
- 39 accessed EMK
- 30% (n: 12) accessed ≤ 7 days
- Median time to access 57 days
## Use of Each EMK Medication (≥1 times)

<table>
<thead>
<tr>
<th></th>
<th>Trial</th>
<th>Audit</th>
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</thead>
<tbody>
<tr>
<td>Hydromorphone</td>
<td>40</td>
<td>39</td>
</tr>
<tr>
<td>Metoclopramide</td>
<td>18</td>
<td>12</td>
</tr>
<tr>
<td>Midazolam</td>
<td>15</td>
<td>23</td>
</tr>
<tr>
<td>Haloperidol</td>
<td>9</td>
<td>12</td>
</tr>
</tbody>
</table>
Unwanted Outcomes Averted with Use of EMK

<table>
<thead>
<tr>
<th>Unwanted Outcome</th>
<th>Trial %</th>
<th>Audit %</th>
</tr>
</thead>
<tbody>
<tr>
<td>After Hours PCMO Review</td>
<td>94%</td>
<td>98%</td>
</tr>
<tr>
<td>Hospital Admission</td>
<td>92%</td>
<td>98%</td>
</tr>
<tr>
<td>Hospice Admission</td>
<td>94%</td>
<td>100%</td>
</tr>
</tbody>
</table>
Summary of Audit Results

- 55 episodes of care for 39 patients
- 86 EMK medications given as BT or SC infusion for 78 different episodes (mostly pain)
- Syringe drivers set up in 16 cases at time of occasion of service
- No adverse outcomes
- Deemed as 100% effective by HBPC RNs
## Comparison of Deaths

<table>
<thead>
<tr>
<th></th>
<th>Trial</th>
<th>Audit</th>
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<tbody>
<tr>
<td>Deaths at Conclusion</td>
<td>77</td>
<td>35</td>
</tr>
<tr>
<td>PPoD Achieved</td>
<td>56% (n: 43)</td>
<td>91% (n: 32)</td>
</tr>
<tr>
<td>Home Deaths</td>
<td>43% (n: 33)</td>
<td>69% (n: 24)</td>
</tr>
<tr>
<td>Home Deaths with EMK Use</td>
<td>77%</td>
<td>80%</td>
</tr>
</tbody>
</table>
Audit: Linking EMK to Place of Death

Place of Death

- Home Deaths
- Hospice
- Hospital

Total Deaths

83

Total Deaths With EMK use

Home Deaths

Hospice

Hospital
Sarah

- 62yr old female, met gynaecological Ca
- Seen in OPC initially
- 3 visits, slow deterioration, only symptom reflux, no analgesia required
- OT assessment of home done
Goals of Care

- Not wanting any acute investigations
- Comfort measures only in keeping with ACP
- PPoD home

- Non urgent referral HBPC for 2wks time at 3rd OPC appt
Sarah admitted HBPC RN EMK supplied
4hrs later rang (evening) with abdominal pain, RN attended and gave hydromorphone 0.5mg x2 in 1hr with effect from EMK
PCNP phone consult next morning: Sarah coping with oral BT ?liver capsular pain
Liaised with GP who was to do a HV, agreed to commence dexamethasone 4mg
Day 1 Review PCNP

- Deteriorating mild intermittent delirium inability to swallow in near future
- Commenced syringe driver from EMK of hydromorphone and haloperidol after BT of both
- Family educated on SCI BT
- Mild oral candida, restarted nilstat
- Remains on oral dexamethasone 4mg and esomeprazole 40mg
Day 3

- Dexamethasone down to 2mg, liver capsular pain resolved

- Slightly more generalised pain and confusion so SD increased slightly with effect

- BT’s of midazolam drawn up from EMK 2.5mgx2 for agitation
Day 5

- Midazolam added to SD to match BT amount in last 24hrs from EMK

- Hydromorphone increased by 1mg to match BT need

- Small oral intake
Day 8: Terminal Phase

- Unconscious
- Only requiring BT’s for repositioning
- Terminal phase acknowledged
- Family coping well with support

- Died day **11** at home with family present
Overview of Sarah

- OPC 76 days
- HBPC 13 days

- 3 different medications from EMK used for 2 different symptoms
- Syringe driver set up from EMK
- Patient died comfortably in PPoD 13 days after first EMK access
So in conclusion….

- EMK is cost effective
- Being use at any stage in HBPC patient admission
- Suspected link with EMK and increasingly met PoD preference including home deaths
- Continued high impact on averting outcomes of care when addressing emergent symptoms
Clinical Limitations

- Supplies of parenteral haloperidol and metoclopramide
- Response bias
- Missing data
Future Considerations/Research

- A Parkinson's appropriate EMK
- A ‘terminal’ EMK
- Supporting information in different languages
- Formalised research into correlation with EMK and PPoD
- Focus on factors that prevent achieving PPoD and not using EMK for practice change
Conclusion

The Emergency Medication Kit has proven to be a successful, sustainable change in practice for improved patient outcomes and staff satisfaction.
Clinical Methods

Establishing research in a palliative care clinical setting: Perceived barriers and implemented strategies

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Feedback? Questions?