How to set up an acute pain team in hospitals - UK experience

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Kiev May 2010
acute pain services …UK

how did it all begin?
• severe post-op pain common (40%) in 1990
acute pain services … UK

how did it all begin?

• severe post-op pain common (40%) in 1990
• no improvement 1952 - 1990
acute pain services …UK

how did it all begin?

- severe post-op pain common (40%) in 1990
- no improvement 1952 - 1990
- Working Party formed
acute pain services …UK

how did it all begin?

• severe post-op pain common (40%) in 1990
• no improvement 1952 - 1990
• Working Party formed
• Royal College of Surgeons/College Anaesthetists
acute pain services …UK
how did it all begin?

- severe post-op pain common (40%) in 1990
- no improvement 1952 - 1990
- Working Party formed
- Royal College of Surgeons/College Anaesthetists
- ‘Pain after Surgery’ document published 1990
‘Pain after Surgery’ … main recommendations

• ‘Acute Pain Teams’
‘Pain after Surgery’ … main recommendations

- ‘Acute Pain Teams’
- staff education
‘Pain after Surgery’ … main recommendations

- ‘Acute Pain Teams’
- staff education
- assess / record pain
‘Pain after Surgery’ … main recommendations

• ‘Acute Pain Teams’
• staff education
• assess / record pain
• named staff member
‘Pain after Surgery’ … main recommendations

• ‘Acute Pain Teams’
• staff education
• assess / record pain
• named staff member
• use existing methods
‘Pain after Surgery’ … main recommendations

- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member
- use existing methods
- new methods
‘Pain after Surgery’ … main recommendations

- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member
- use existing methods
- new methods
- audit/ research
• main aim;
  ‘is to provide effective post-operative pain relief for all patients in all clinical settings’
‘Pain after Surgery’

- did the recommendations help?
acute pain services …
effect of introducing acute pain service

- University of Wales, Cardiff
acute pain services …

effect of introducing acute pain service

- University of Wales, Cardiff
- effect of acute pain service
acute pain services …

effect of introducing acute pain service

- University of Wales, Cardiff
- effect of acute pain service
- 7 stage study (1991)
acute pain services …

effect of introducing acute pain service

- University of Wales, Cardiff
- effect of acute pain service
- 7 stage study (1991)
- pain assessed at every stage
acute pain services …
effect of introducing acute pain service

- University of Wales, Cardiff
- effect of acute pain service
- 7 stage study (1991)
- pain assessed at every stage
- visual analogue score (VAS) 100 mm
acute pain services …

effect of introducing acute pain service

• University of Wales, Cardiff
• effect of acute pain service
• 7 stage study (1991)
• pain assessed at every stage
• visual analogue score (VAS)
  100 mm

\[ \text{No pain} \quad \text{worst pain imaginable} \]
acute pain services …

effect of introducing acute pain service

• Stage 1 - current practice
acute pain services …
effect of introducing acute pain service

• Stage 1 - current practice
  major surgery
  pain on movement
  median pain score
  VAS - 78
acute pain services …

effect of introducing acute pain service

- Stage 1 - current practice
- Stage 2 - pain assessment chart
acure pain services …

effect of introducing acute pain service

- **Stage 1 - current practice**
  VAS - 78

- **Stage 2 - pain assessment chart**
  VAS - 65*  
  *P < 0.05
acute pain services …
effect of introducing acute pain service

- Stage 1 - current practice
- Stage 2 - pain assessment charts
- Stage 3 - analgesia algorithm
Guidelines for postoperative intramuscular analgesia

Every patient receiving intramuscular opioid analgesics must have an intravenous cannula in situ.

**Papaveretum**
- Hourly dose intramuscularly
- Weight (kg) | Dose (mg)
  - 40-65 | 10
  - 66-100 | 15

Papaveretum must not be used for women of childbearing age.

**Morphine**
- Hourly dose intramuscularly
- Weight (kg) | Dose (mg)
  - 40-65 | 7.5
  - 66-100 | 10

**Pethidine**
- Hourly dose intramuscularly
- Weight (kg) | Dose (mg)
  - 40-65 | 50
  - 66-100 | 75

If weight is less than 40 kg or more than 100 kg then seek advice of an anaesthetist.

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**BEGIN**

1. **Pain score**
   - **3 or 4**
   - **No**
   - **Yes**

2. **Sedation score**
   - **1 or 2**
   - **No**
   - **Yes**

3. **Respiratory rate**
   - **>8/min**
   - **No**
   - **Yes**

4. **Systolic blood pressure**
   - **>100 mm Hg**
   - **No**
   - **Yes**

5. **Has more than 60 minutes elapsed since last dose of analgesic?**
   - **No**
   - **Yes**

6. **Give further intramuscular dose of analgesic as prescribed**

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*If pain score 2 and 4-6 hours has elapsed since last intramuscular injection consider oral analgesia.

†Draw up 0.4 mg (1 ml) naloxone + 3 ml isotonic saline and give in 1 ml increments intravenously until respiratory rate >12/min and sedation score <3.
acute pain services …
effect of introducing acute pain service

• i.m. morphine algorithm …

• moderate/ severe pain
• morphine 7.5 -10 mg i.m. one hourly
• sub-cutaneous (s.c.) equally effective
• indwelling s.c. cannula
• less painful
acute pain services …

effect of introducing acute pain service

- Stage 1 - current practice
  VAS - 78*

- Stage 2 - pain assessment charts
  VAS - 65*

- Stage 3 - analgesia algorithm
  VAS - 58*  
  *P < 0.05
acute pain services …
effect of introducing acute pain service

• Stage 1 - current practice
• Stage 2 - pain assessment charts
• Stage 3 - algorithm
• Stage 4 - nerve blocks/infiltration
acute pain services …

effect of introducing acute pain service

- Stage 1 - current practice
- Stage 2 - pain assessment charts
- Stage 3 - algorithm
- Stage 4 - nerve blocks/infiltration
- Stage 5 - patient information sheet
acute pain services …
effect of introducing acute pain service

• Stage 1 - current practice
• Stage 2 - pain assessment charts
• Stage 3 - algorithm
• Stage 4 - nerve blocks/infiltration
• Stage 5 - patient information sheet
• Stage 6 - patient-controlled analgesia (PCA)
acute pain services …

effect of introducing acute pain service

- Stage 1 - current practice (VAS 78)
- Stage 2 - pain assessment charts
- Stage 3 - algorithm
- Stage 4 - nerve blocks/infiltration
- Stage 5 - patient information sheet
- Stage 6 - patient-controlled analgesia (PCA)
- Stage 7 - re-audit (VAS 46*)

P<0.01
acute pain services ...

• what was the effect at my hospital?
acute pain services …

- The National Hospital for Neurology and Neurosurgery (NHNN)
- specialist hospital
- 70 surgical beds
- 3000 operations/year (mainly major)
  remember …
- effective pain relief for all patients in all clinical settings
acute pain services …

NHNN

Stage 1
  • started acute pain team 1997
acute pain services …

NHNN

Stage 1
• started acute pain team 1997
• 3 nurses (total 15 hours /week)
• doctor (8 hours /week)
acute pain services …

NHNN

Stage 1
- started acute pain team 1997
- 3 nurses (total 15 hours /week)
- doctor (8 hours /week)
- most important factor … enthusiasm!
acute pain services …

NHNN

Stage 2

• education nurses and doctors
  ward rounds, tutorials …
Stage 3

- introduced pain score to main observation chart
### Level of Consciousness

<table>
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<tr>
<th>Classification</th>
<th>Score</th>
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<tr>
<td>Spontaneous</td>
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<td>To speech</td>
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<td>To pain</td>
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<td>To touch</td>
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<td>Unresponsive</td>
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<td>Lowering</td>
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<td>Motor</td>
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<td>Fixing</td>
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### Vital Signs

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<tr>
<th>Parameter</th>
<th>Value</th>
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<tr>
<td>Blood Pressure</td>
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<td>Heart Rate</td>
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<td>Blood Pressure</td>
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<td>Temperature</td>
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<td>Respiration</td>
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<td>Saturation</td>
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### Pain Management

<table>
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<th>Need for Pain Management</th>
<th>Score</th>
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<td>Acute</td>
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<td>Mild</td>
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<tr>
<td>Moderate</td>
<td>2</td>
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<tr>
<td>Severe</td>
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### Neurological Exam

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<td>Motor</td>
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<tr>
<td>Sensory</td>
<td></td>
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<tr>
<td>Reflexes</td>
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</table>

### Other Notes

- **Patient Condition**: Healthy
- **Medical History**: None
- **Allergies**: None
- **Medications**: None
- **Physical Examination**: Normal

**Patient:**

**Age:**

**Sex:**

**Height:**

**Weight:**

---

*Note: All fields are completed as per the standardized format.*
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<th>Pain Score</th>
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<td>M (movement)</td>
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<td>Severe pain</td>
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<td>Asleep/Rouseable</td>
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<td>Unrouseable</td>
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<th>Nausea Score</th>
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<tr>
<td>Nausea</td>
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<td>Vomiting</td>
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<th>Patient Controlled Analgesia (PCA)</th>
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<tr>
<td>Number of Good Demands</td>
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<tr>
<td>Total amount of Drug</td>
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Level of Block
Applies only to patients with an epidural
acute pain services …

NHNN

Stage 4

• audit
acute pain services …

NHNN

Stage 4 - audit

• first 24 hours post-operation
• severe pain common (40% total)
• we had a problem!
Stage 5

- introduced acute pain guidelines

‘to provide effective post-operative pain relief for all patients in all settings’
NHNN
Acute Pain Management Guidelines

Copies of these guidelines may be obtained from
The Department of Neuroanaesthesia
(ext. 8711)

do not remove this copy
Stage 5 - acute pain guidelines

- categorized patients → expected pain post-op
Stage 5 - acute pain guidelines
• categorized patients → expected pain post-op
  • minor, intermediate, major, complex major
Stage 5 - acute pain guidelines
• categorized patients → expected pain post-op
• minor, intermediate, major, complex major
• encouraged analgesia ‘by-the-clock’
Stage 5 - acute pain guidelines
• categorized patients → expected pain post-op
• minor, intermediate, major, complex major
• encouraged analgesia ‘by-the-clock’
• based on WHO pain ladder
Stage 5 - acute pain guidelines

- categorized patients → expected pain post-op
- minor, intermediate, major, complex major
- encouraged analgesia ‘by-the-clock’
- based on WHO pain ladder
- paracetamol +/- NSAID / + opioid (morphine) /
  +/- adjunct (according to pain category)
acute pain services …

NHNN

• Stage 5 - acute pain guidelines continued
• opioid algorithm - oral morphine 3 hourly prn
• initially reluctance to change (nurses/ doctors)
• observed benefit
• support for acute pain team +++
acute pain services …
acute pain guidelines

Stage 6
• re-audit
Stage 6 - re-audit

- first 24 hours post-operation
- *severe* pain common 1997 - 40% total
- *severe* pain 2002 - 7%
acute pain services ... disadvantages
Acute pain services … disadvantages

- De-skilling doctors in pain management
acute pain services … disadvantages

• de-skilling doctors in pain management
• solution …
• de-skilling doctors in pain management

• *solution* ...

• surgical + anaesthetic trainees → ward round
acute pain services … disadvantages

• de-skilling doctors in pain management
• solution ...
• surgical + anaesthetic trainees → ward round
• very effective
acute pain services … disadvantages

• de-skilling doctors in pain management
• solution ...
• surgical + anaesthetic trainees → ward round
• very effective
• referrals to Acute Pain Team
acute pain services …

summary

- acute pain team must be readily available
acute pain services …

summary

• acute pain team must be readily available
• introduce one change at a time
acute pain services …

summary

• acute pain team must be readily available
• introduce one change at a time
• move on when ready
acute pain services …

summary

• acute pain team must be readily available
• introduce one change at a time
• move on when ready
• keep things simple
  - limit number of drugs
acute pain services …

summary

• acute pain team must be readily available
• introduce one change at a time
• move on when ready
• keep things simple
  - limit number of drugs
  - limit number of techniques
acute pain services …

summary

- acute pain team must be readily available
- introduce one change at a time
- move on when ready
- keep things simple
  - limit number of drugs
  - limit number of techniques
- continual education essential
DIVINUM SEDARE DOLOREM
‘It is divine to alleviate pain’
Thank you for your attention!