

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

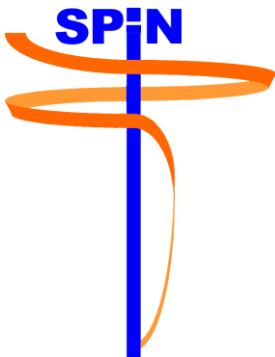
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Kiev May 2010



acute pain services ...UK  
how did it all begin?

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# acute pain services ...UK

## how did it all begin?

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- severe post-op pain common (40%) in 1990

# acute pain services ...UK

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- no improvement 1952 - 1990

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# acute pain services ...UK

## how did it all begin?

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- no improvement 1952 - 1990
- Working Party formed
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- 'Pain after Surgery' document published 1990

**THE ROYAL COLLEGE OF SURGEONS OF ENGLAND  
THE COLLEGE OF ANAESTHETISTS**



**COMMISSION ON THE PROVISION  
OF SURGICAL SERVICES**

**Report of the Working Party  
on**

**PAIN AFTER SURGERY**

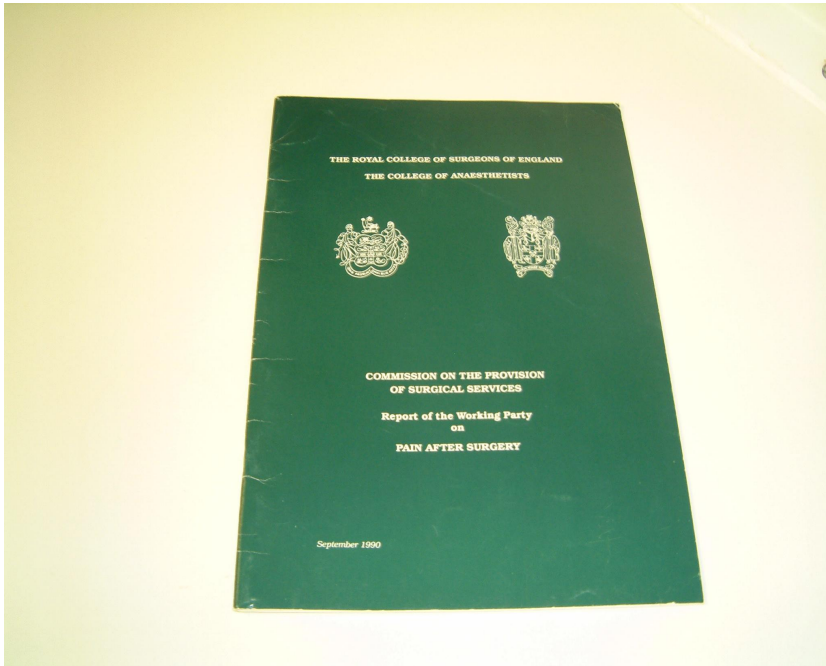
*September 1990*



# ‘Pain after Surgery’ ... main recommendations

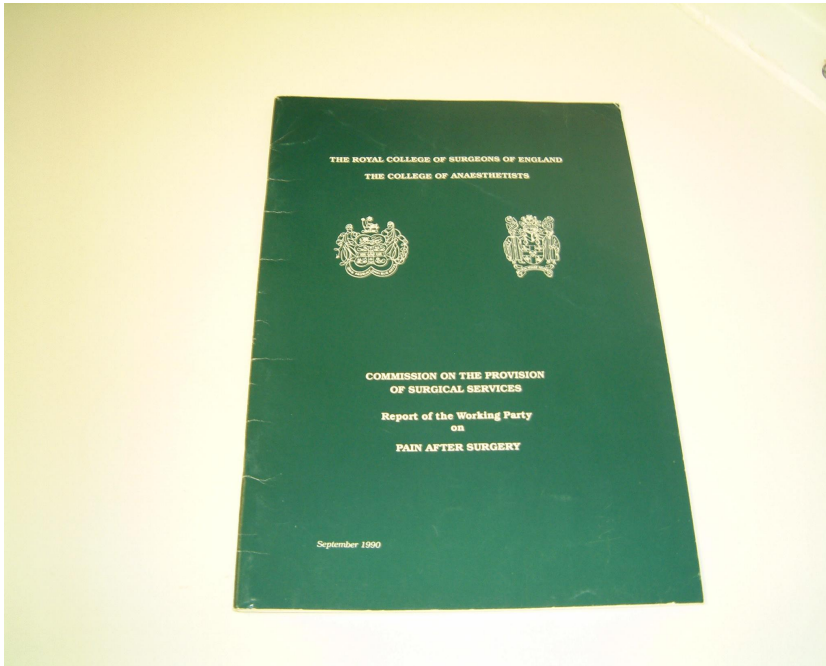
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- ‘Acute Pain Teams’



# ‘Pain after Surgery’ ... main recommendations

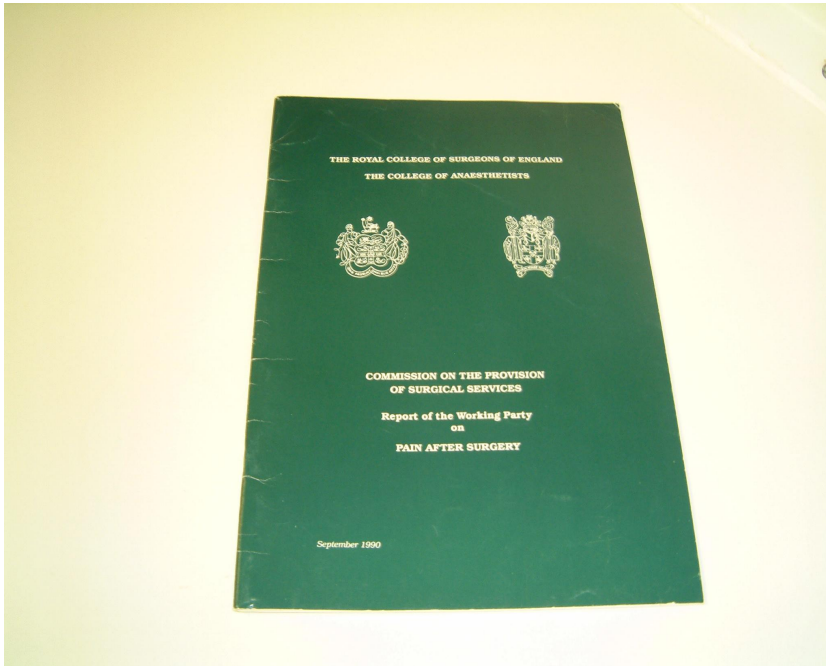
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- ‘Acute Pain Teams’
- staff education

# ‘Pain after Surgery’ ... main recommendations

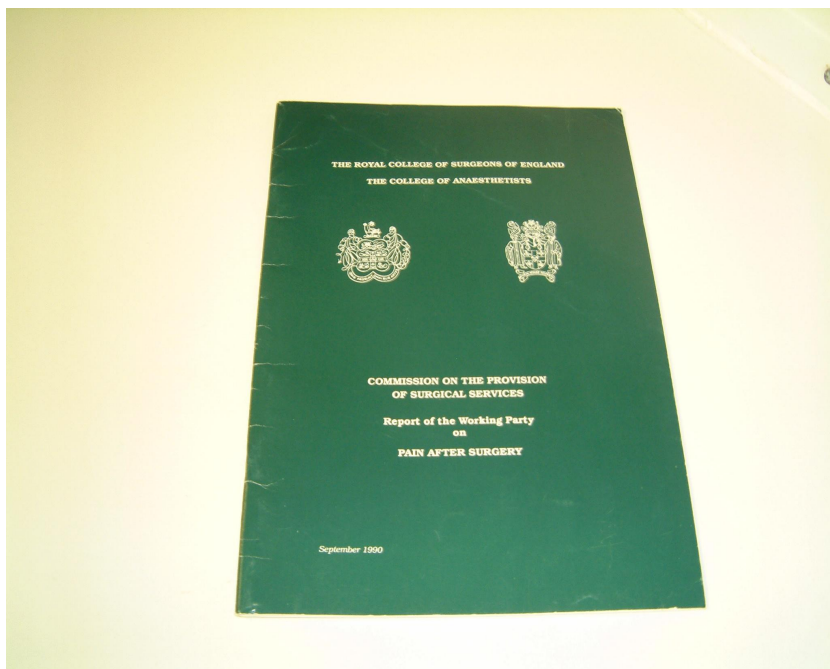
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- ‘Acute Pain Teams’
- staff education
- assess / record pain

# ‘Pain after Surgery’ ... main recommendations

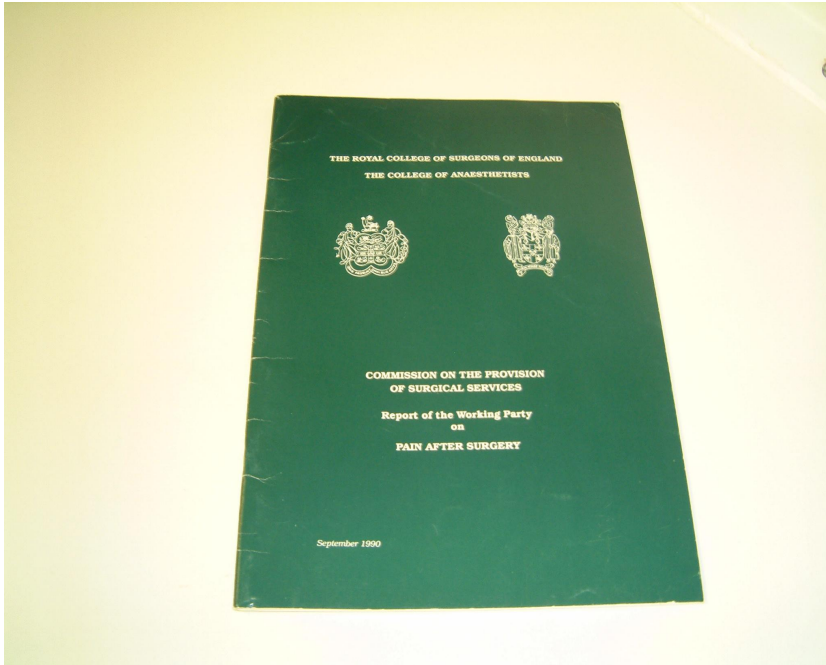
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- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member

# ‘Pain after Surgery’ ... main recommendations

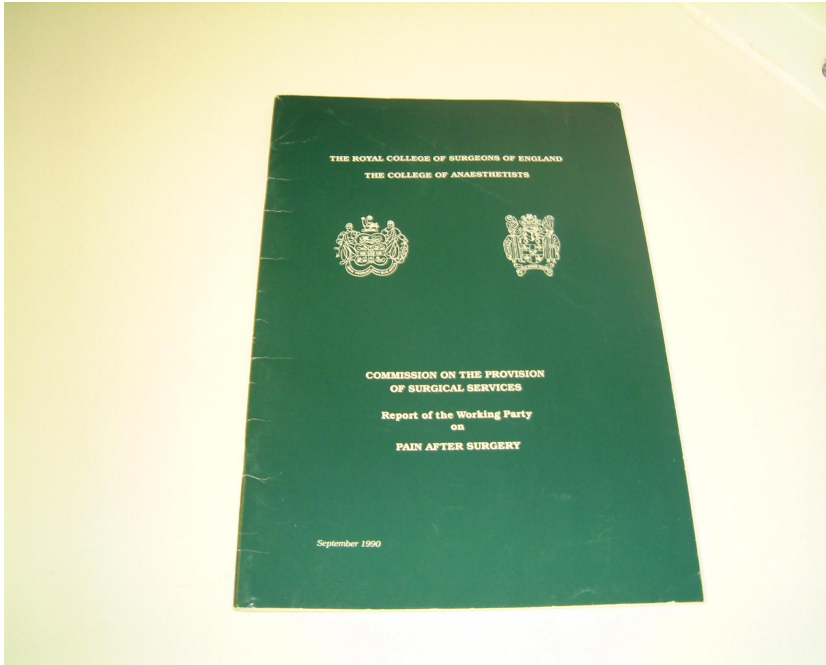
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- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member
- use existing methods

# ‘Pain after Surgery’ ... main recommendations

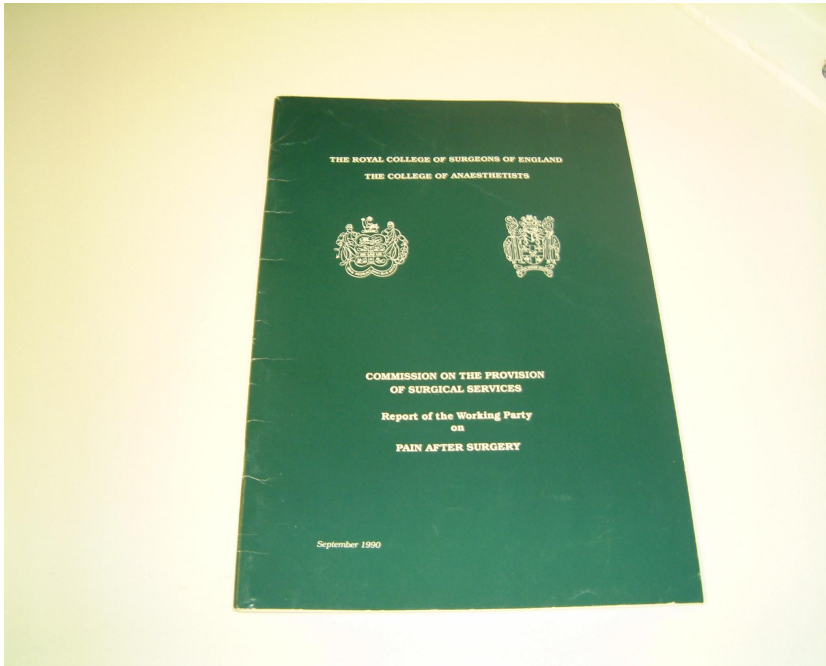
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- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member
- use existing methods
- new methods

# ‘Pain after Surgery’ ... main recommendations

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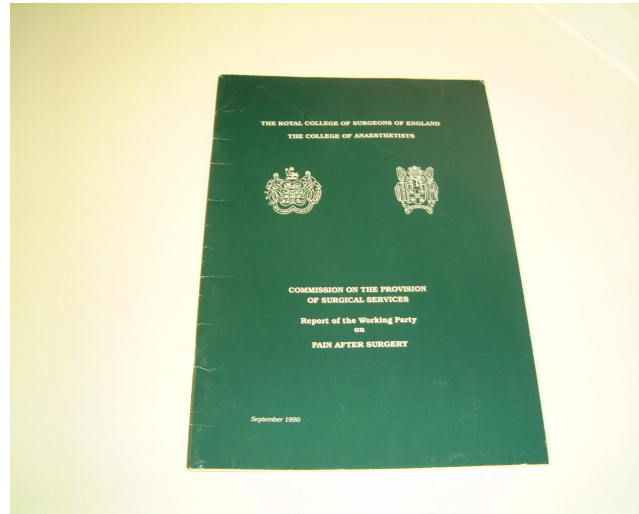


- ‘Acute Pain Teams’
- staff education
- assess / record pain
- named staff member
- use existing methods
- new methods
- audit/ research



# acute pain services ...

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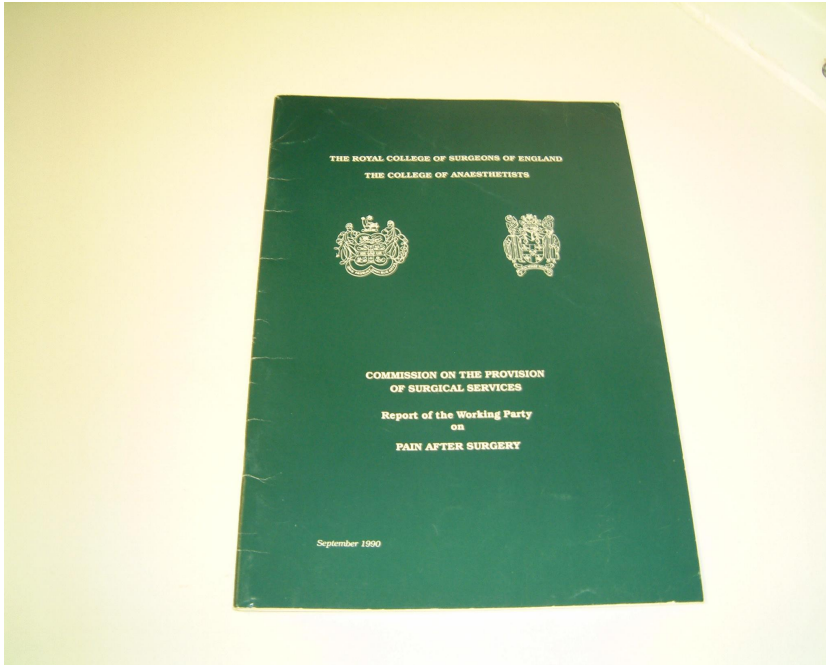


- main aim;  
‘is to provide effective post-operative pain relief for all patients in all clinical settings’



# ‘Pain after Surgery’

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- did the recommendations help?

# acute pain services ...

## effect of introducing acute pain service

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- University of Wales, Cardiff



# acute pain services ...

## effect of introducing acute pain service

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





# acute pain services ...

## effect of introducing acute pain service

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



# acute pain services ...

## effect of introducing acute pain service

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- 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

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- 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



acute pain services ...

effect of introducing acute pain service

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- Stage 1 - current practice



acute pain services ...

## effect of introducing acute pain service

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- Stage 1 - current practice

major surgery

pain on movement

median pain score

VAS - 78

- Stage 1 - current practice
- Stage 2 - pain assessment chart

[illegible]

- Stage 1 - current practice  
VAS - 78
- Stage 2 - pain assessment chart  
VAS - 65\*  
\*P < 0.05

[illegible]

# acute pain services ...

## effect of introducing acute pain service

- Stage 1 - current practice
- Stage 2 - pain assessment charts
- Stage 3 - analgesia algorithm

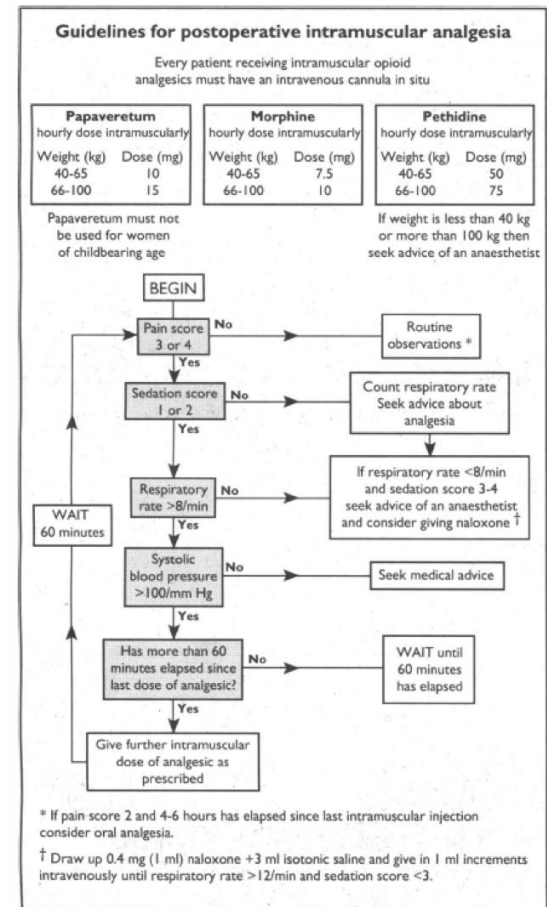


FIG 2—Algorithm for one hourly administration of intramuscular analgesic

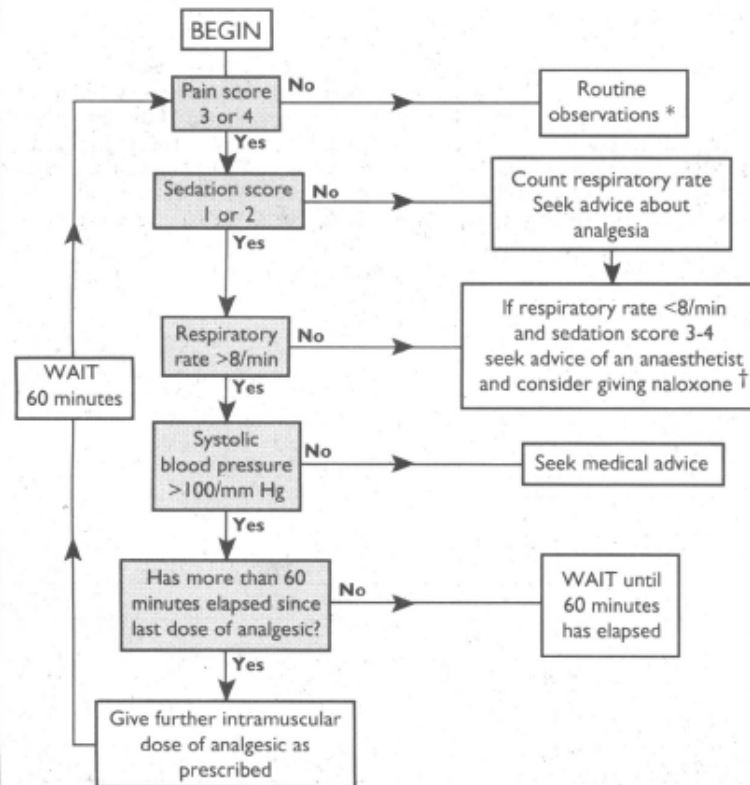
## Guidelines for postoperative intramuscular analgesia

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

| Papaveretum<br>hourly dose intramuscularly |           | Morphine<br>hourly dose intramuscularly |           | Pethidine<br>hourly dose intramuscularly |           |
|--|-----------|---|-----------|--|-----------|
| Weight (kg)                                | Dose (mg) | Weight (kg)                             | Dose (mg) | Weight (kg)                              | Dose (mg) |
| 40-65                                      | 10        | 40-65                                   | 7.5       | 40-65                                    | 50        |
| 66-100                                     | 15        | 66-100                                  | 10        | 66-100                                   | 75        |

Papaveretum must not be used for women of childbearing age

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



\* 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.

FIG 2—Algorithm for one hourly administration of intramuscular analgesic

acute pain services ...

## effect of introducing acute pain service

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- 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

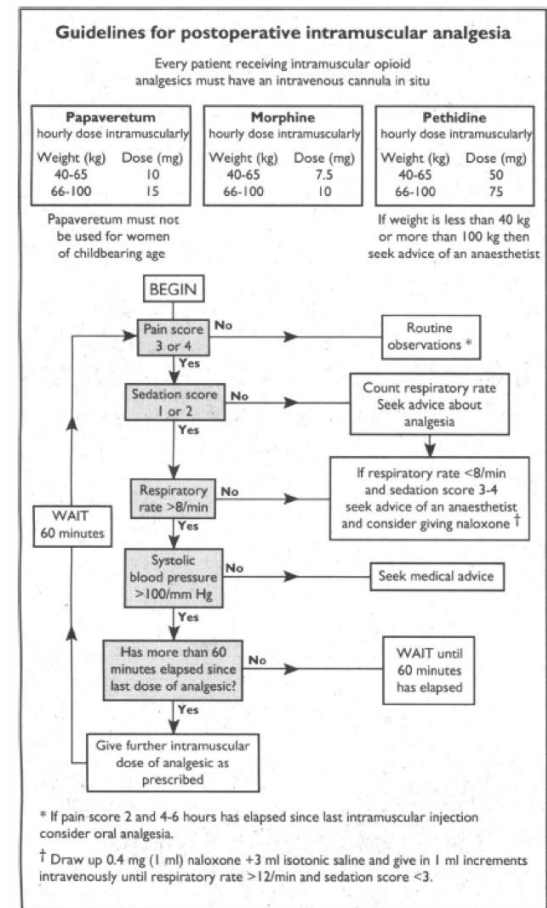


FIG 2—Algorithm for one hourly administration of intramuscular analgesic

# acute pain services ...

## effect of introducing acute pain service

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



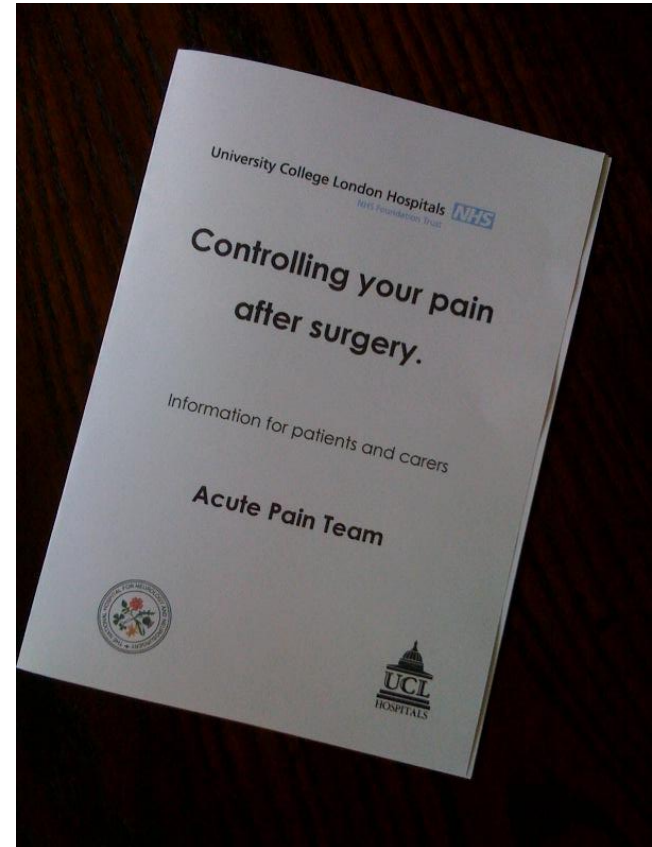


# acute pain services ...

## effect of introducing acute pain service

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- 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

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- 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)

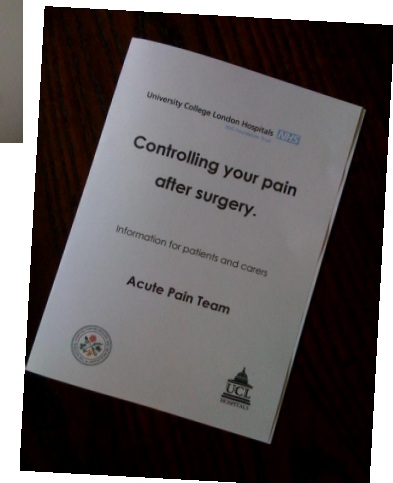
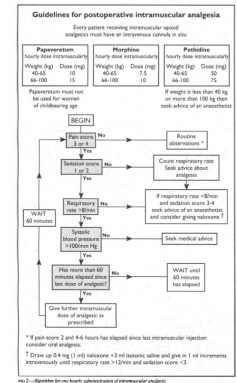


- Stage 1 - current practice (VAS 78)
- Stage 2 - pain assessment charts
- Stage 3 - algorithm
- Stage 4 - nerve blocks/infiltration
- Stage 5 - patient information sheet
- Stage 6 - patient-controlled analgesia (PCA)
- Stage 7 - re-audit (VAS 46\*)

A photograph of a medical device, likely a pulse oximeter, consisting of a main unit and a separate sensor. The main unit is a rectangular box with a small LCD screen, several buttons, and a red emergency stop button. It has a label with text in English and Chinese. A black cable connects the main unit to a small, handheld sensor unit. The sensor unit has a small display and a button. The entire setup is placed on a blue, textured surface.



| Pain Score - 5 points for assessment |     | Pain Score - 5 points for assessment |     |
|--------------------------------------|-----|--------------------------------------|-----|
| Head/face/jaw pain                   | 1   | Head/face/jaw pain                   | 1   |
| Neck pain                            | 2   | Neck pain                            | 2   |
| Shoulder pain                        | 3   | Shoulder pain                        | 3   |
| Arm pain                             | 4   | Arm pain                             | 4   |
| Hand pain                            | 5   | Hand pain                            | 5   |
| Trunk pain                           | 6   | Trunk pain                           | 6   |
| Leg pain                             | 7   | Leg pain                             | 7   |
| Foot pain                            | 8   | Foot pain                            | 8   |
| Other pain                           | 9   | Other pain                           | 9   |
| Overall pain                         | 10  | Overall pain                         | 10  |
| Other                                | 11  | Other                                | 11  |
| Other                                | 12  | Other                                | 12  |
| Other                                | 13  | Other                                | 13  |
| Other                                | 14  | Other                                | 14  |
| Other                                | 15  | Other                                | 15  |
| Other                                | 16  | Other                                | 16  |
| Other                                | 17  | Other                                | 17  |
| Other                                | 18  | Other                                | 18  |
| Other                                | 19  | Other                                | 19  |
| Other                                | 20  | Other                                | 20  |
| Other                                | 21  | Other                                | 21  |
| Other                                | 22  | Other                                | 22  |
| Other                                | 23  | Other                                | 23  |
| Other                                | 24  | Other                                | 24  |
| Other                                | 25  | Other                                | 25  |
| Other                                | 26  | Other                                | 26  |
| Other                                | 27  | Other                                | 27  |
| Other                                | 28  | Other                                | 28  |
| Other                                | 29  | Other                                | 29  |
| Other                                | 30  | Other                                | 30  |
| Other                                | 31  | Other                                | 31  |
| Other                                | 32  | Other                                | 32  |
| Other                                | 33  | Other                                | 33  |
| Other                                | 34  | Other                                | 34  |
| Other                                | 35  | Other                                | 35  |
| Other                                | 36  | Other                                | 36  |
| Other                                | 37  | Other                                | 37  |
| Other                                | 38  | Other                                | 38  |
| Other                                | 39  | Other                                | 39  |
| Other                                | 40  | Other                                | 40  |
| Other                                | 41  | Other                                | 41  |
| Other                                | 42  | Other                                | 42  |
| Other                                | 43  | Other                                | 43  |
| Other                                | 44  | Other                                | 44  |
| Other                                | 45  | Other                                | 45  |
| Other                                | 46  | Other                                | 46  |
| Other                                | 47  | Other                                | 47  |
| Other                                | 48  | Other                                | 48  |
| Other                                | 49  | Other                                | 49  |
| Other                                | 50  | Other                                | 50  |
| Other                                | 51  | Other                                | 51  |
| Other                                | 52  | Other                                | 52  |
| Other                                | 53  | Other                                | 53  |
| Other                                | 54  | Other                                | 54  |
| Other                                | 55  | Other                                | 55  |
| Other                                | 56  | Other                                | 56  |
| Other                                | 57  | Other                                | 57  |
| Other                                | 58  | Other                                | 58  |
| Other                                | 59  | Other                                | 59  |
| Other                                | 60  | Other                                | 60  |
| Other                                | 61  | Other                                | 61  |
| Other                                | 62  | Other                                | 62  |
| Other                                | 63  | Other                                | 63  |
| Other                                | 64  | Other                                | 64  |
| Other                                | 65  | Other                                | 65  |
| Other                                | 66  | Other                                | 66  |
| Other                                | 67  | Other                                | 67  |
| Other                                | 68  | Other                                | 68  |
| Other                                | 69  | Other                                | 69  |
| Other                                | 70  | Other                                | 70  |
| Other                                | 71  | Other                                | 71  |
| Other                                | 72  | Other                                | 72  |
| Other                                | 73  | Other                                | 73  |
| Other                                | 74  | Other                                | 74  |
| Other                                | 75  | Other                                | 75  |
| Other                                | 76  | Other                                | 76  |
| Other                                | 77  | Other                                | 77  |
| Other                                | 78  | Other                                | 78  |
| Other                                | 79  | Other                                | 79  |
| Other                                | 80  | Other                                | 80  |
| Other                                | 81  | Other                                | 81  |
| Other                                | 82  | Other                                | 82  |
| Other                                | 83  | Other                                | 83  |
| Other                                | 84  | Other                                | 84  |
| Other                                | 85  | Other                                | 85  |
| Other                                | 86  | Other                                | 86  |
| Other                                | 87  | Other                                | 87  |
| Other                                | 88  | Other                                | 88  |
| Other                                | 89  | Other                                | 89  |
| Other                                | 90  | Other                                | 90  |
| Other                                | 91  | Other                                | 91  |
| Other                                | 92  | Other                                | 92  |
| Other                                | 93  | Other                                | 93  |
| Other                                | 94  | Other                                | 94  |
| Other                                | 95  | Other                                | 95  |
| Other                                | 96  | Other                                | 96  |
| Other                                | 97  | Other                                | 97  |
| Other                                | 98  | Other                                | 98  |
| Other                                | 99  | Other                                | 99  |
| Other                                | 100 | Other                                | 100 |







acute pain services ...

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- what was the effect at my hospital?





## acute pain services ...

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- 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

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Stage 1

- started acute pain team 1997



acute pain services ...

NHNN

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### Stage 1

- started acute pain team 1997
- 3 nurses (total 15 hours /week)
- doctor (8 hours /week)

acute pain services ...

NHNN

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### 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

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Stage 2

- education nurses and doctors  
ward rounds, tutorials ...

acute pain services ...

NHNN

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Stage 3

- introduced pain score to main observation chart

WARD/DEPT

Date:

Operation Date

Time:

hrs

mins

Level of Consciousness

Eye Spontaneous  
Opening To speech  
To pain  
None

Verbal Response  
Oriented  
Confused  
Inappropriate  
Incomprehensible  
None

Best Motor Response  
Obeying  
Localizing  
Flexing  
Extending  
None

Power Left Upper Left  
Right  
Lower Left  
Right

M.R.C. MUSCLE POWER GRADING KEY: (0) Nil, (1) Flicker, (2) Movement, (3) Movement against gravity, (4) Movement against resistance, (5) Full

PUPILS Left Size (mm)  
Reaction  
Right Size (mm)  
Reaction

Pupil Scale 1, 2, 3, 4, 5, 6, 7, 8

Blood Pressure  
240  
230  
220  
210  
200  
190  
180  
170  
160  
150  
140  
130  
120  
110  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10

Pulse  
100  
90  
80  
70  
60  
50  
40  
30  
20  
10

Temperature  
37.5  
37  
36.5  
36  
35.5  
35

RESPIRATION  
SATURATION  
BOWELS  
WEIGHT

Pain Score  
R (nil) M (movement)  
Worst possible pain  
Severe pain  
Moderate pain  
Mild pain  
No pain

Sedation Score  
Awake  
Drowsy  
Asleep - Resuscitate  
Unconscious

Nausea Score  
No Nausea  
Nausea  
Vomiting

Patient Controlled Analgesia (PCA)  
Number of Demands  
Number of Good Demands  
Total amount of Drug

Level of Block  
Applies only to patients with an epidural

1  
2  
3  
4  
5  
6  
7  
8  
non  
Pupil  
Diameter  
Grade

[illegible]

acute pain services ...

NHNN

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Stage 4

- audit



acute pain services ...

NHNN

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## Stage 4 - audit

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

acute pain services ...

NHNN

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## Stage 5

- introduced acute pain guidelines

‘to provide effective post-operative pain relief for all patients in all settings’

NHNN Acute Pain Management Guidelines



# NHNN Acute Pain Management Guidelines

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

do not remove this copy

# acute pain services ...

## NHNN

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### Stage 5 - acute pain guidelines

- categorized patients → expected pain post-op

# acute pain services ...

## NHNN

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### Stage 5 - acute pain guidelines

- categorized patients → expected pain post-op
- minor, intermediate, major, complex major

# acute pain services ...

## NHNN

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### Stage 5 - acute pain guidelines

- categorized patients → expected pain post-op
- minor, intermediate, major, complex major
- encouraged analgesia ‘by-the-clock’

# acute pain services ...

## NHNN

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### 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

# acute pain services ...

## NHNN

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### 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

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- 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

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### Stage 6

- re-audit

# acute pain services ...

## acute pain guidelines

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### Stage 6 - re-audit

- first 24 hours post-operation
- *severe* pain common 1997 - 40% total
- *severe* pain 2002 - 7%

acute pain services ... disadvantages

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# acute pain services ... disadvantages

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- de-skilling doctors in pain management



# acute pain services ... disadvantages

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- de-skilling doctors in pain management
- *solution* ...

# acute pain services ... disadvantages

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- de-skilling doctors in pain management
- *solution* ...
- surgical + anaesthetic trainees → ward round

# acute pain services ... disadvantages

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- de-skilling doctors in pain management
- *solution* ...
- surgical + anaesthetic trainees → ward round
- very effective

# acute pain services ... disadvantages

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- de-skilling doctors in pain management
- *solution* ...
- surgical + anaesthetic trainees → ward round
- very effective
- ↓ referrals to Acute Pain Team

# acute pain services ...

## summary

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- acute pain team must be readily available

# acute pain services ...

## summary

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- acute pain team must be readily available
- introduce one change at a time



# acute pain services ...

## summary

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

# acute pain services ...

## summary

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- 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

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- 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

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- 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!

