# MINI- COURSE

# on

# PAIN in the NEWBORN

Instructions:

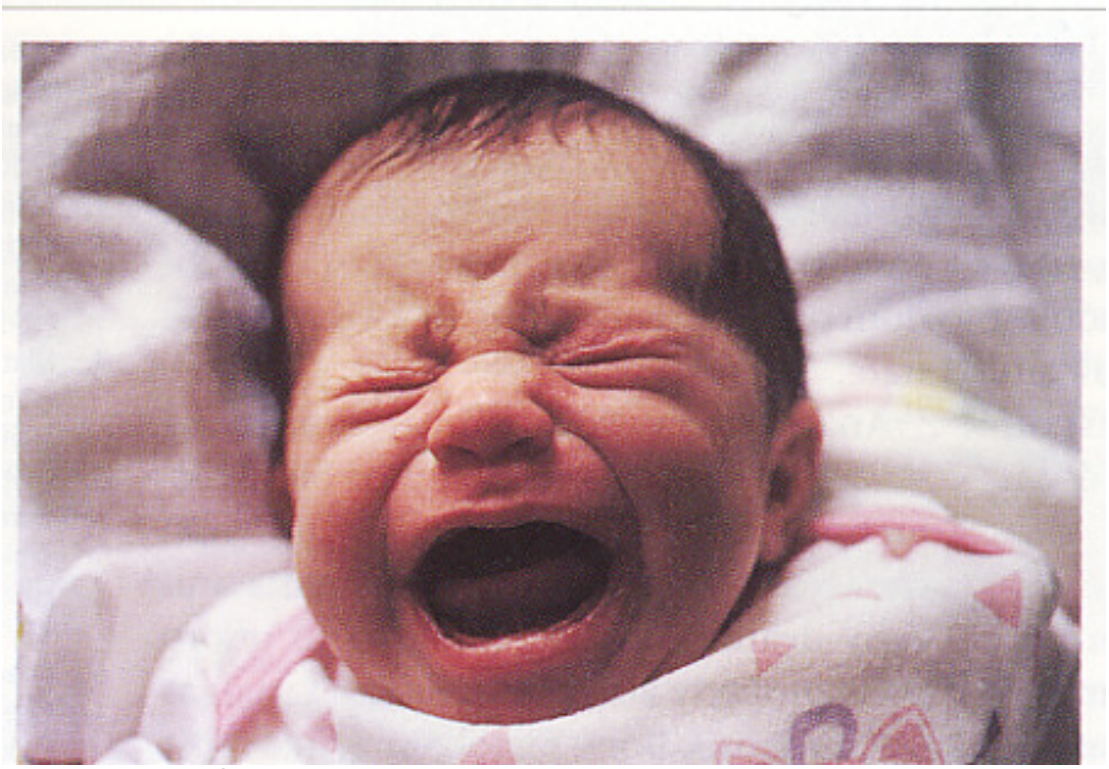
*Read each sheet and answer any questions as honestly as possible*

*The first sheets have five questions to allow you to give your feelings about pain in newborn babies*

*The next sheets you some information about pain in the newborn*

- *What causes pain*
- *Why pain is important and how to detect pain*
- *How pain might be prevented*
- *How pain might be treated*

*The five questions are then repeated. We will not be giving marks for "right" answers but do ask you to answer all the questions to achieve a certificate showing you have completed this* ***Mini-Course***



From: Anand KJS. Nature Medicine 2000; 6: 971-3

Is this infant in pain?

If you think “yes” – why?

What other signs of pain might there be?

What things might be painful for babies?

How can you tell if a baby is in pain?

How can pain be avoided?

## Common false beliefs

- "Preterm infants don't feel pain"

- "Preterm infants don't remember pain and it has no long term effects"

- "It is too dangerous to give anaesthesia or analgesia"

## Guiding Principle

*Neonates, term and preterm, do experience pain and have the right to receive effective and safe pain relief*

# What things might be painful for babies?

*Some common painful procedures include:*

Heel prick
Arterial or venous line insertion
Inserting naso-gastric tube
Intubation
Chest drain insertion
Pulling off tape!

*Can you think of others?*

# How can you tell if a baby is in pain?

*We all react to pain with behavioural, physiological and biochemical and hormonal changes.*

*A behavioural response might be a withdrawal reflex.*

*A physiological response might be an increase in blood pressure.*

*Infant pain scales combine a number of measures to give an objective assessment of pain.*

# How can pain be avoided?

*Avoid unnecessary procedures*

*Anticipate episodes that might be painful*

*Act to prevent or minimise pain*

- *Non-pharmacological*
- *Pharmacological*

# PAIN SCALES

Use of pain scales:

- heightens awareness of pain in babies
- encourages anticipation of painful episodes – and ways of avoiding or minimising these
- allows babies to have appropriate analgesia

# SUN SCALE (Modified) for Assessing Neonatal Pain

*Compared with two other scores (NIPS and Comfort), the Scale for Use in Newborns (SUN)[*] was preferable because of its ease of use, scale symmetry and scoring consistency.*

[*]Adapted from Blauer T. Clin J Pain 1998; 14: 39-47

The SUN Scale has 5 parameters, each scored 0 - 2

There are 3 behavioural categories:

1. Facial expression

2. CNS state

3. Movement

And 2 physiological parameters:

4. Breathing

5. Heart rate

The baby's baseline heart rate should be recorded

## *1. Facial expression*

| | |
|---|---|
| *Normal, relaxed* | *0* |
| *Increased tension, furrowed brow* | *1* |
| *Furrowed brow, tightly closed eyes, grimace, vigorous cry* | *2* |

## *2. Central Nervous System State*

| | |
|---|---|
| *Asleep or awake, quiet, calm* | *0* |
| *Anxious, fussy* | *1* |
| *Hyper-alert, panicked* | *2* |

# 3. Movement

| | |
|---|---|
| *Relaxed, normal tone* | 0 |
| *Intermittent increased activity, flexion and extension of extremities* | 1 |
| *Frequent flexion and extension or flaccid, minimal movements* | 2 |

## 4. Breathing

| | |
|---|---|
| *Quiet resps, relaxed normal pattern.*<br>*If intubated, synchronised* | 0 |
| *Intermittent increased rate >60.*<br>*If intubated frequent non-synchrony* | 1 |
| *Frequent increased rate >60.*<br>*If intubated, fighting ventilator* | 2 |

## 5. Heart rate

| | |
|---|---|
| *Baseline (record)* | 0 |
| *Elevation 10% - 15%* | 1 |
| *Elevation >15%* | 2 |

## Record Total Score

*Usually treat with score of 4 or more*

## Record intervention

*Containment, touch*

*Non-nutritive sucking*

*Oral sucrose*

*Other - record*

# PAIN RELIEF or PREVENTION

1. Non-pharmacological

   - Reduce noise / light

   - Positioning / swaddling
     *Kangaroo care is very good – even for babies on nCPAP (good for mothers and fathers too)*

   - Sucking / pacifier

   *(Attach pulse oximeter before anticipated painful episodes)*

## 2. Sucrose (Glucose or expressed breast milk)

- RCTs support effectiveness prior to a range of painful procedures, including in preterm infants
- *Wide range of strengths used; 24% to 67%*
- *Wide range of doses; 0.05ml to 2ml*

- In term babies we use 0.5ml aliquots
- <30 weeks, we use 0.05ml aliquots

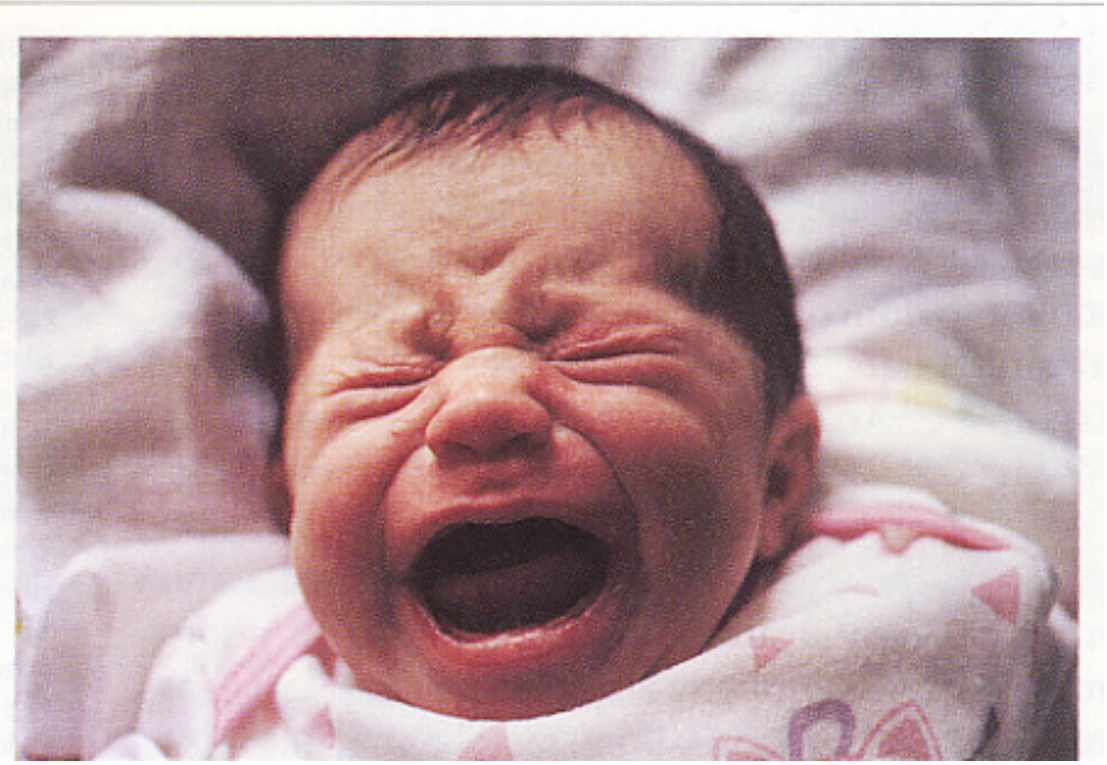
3. Other

Paracetamol (acetominophen)

*Rectal*
*20 mg/kg/dose, 6 -12hrly up to max 80 mg/kg*

*Oral*
*10 -15 mg/kg/dose, 4 –12hrly up to max 60 mg/kg*

Consider morphine



Is this infant in pain?

If you think “yes” – why?

What other signs of pain might there be?

What things might be painful for babies?

How can you tell if a baby is in pain?

How can pain be avoided?

*Are there 3 or 4 practical things you could suggest which may help how newborn pain is managed in your nursery?*
*(Please list these)*

(These suggestions will go into a book for all the staff to consider)

THE END – THANK YOU