Managing pain in children: Where to from here?

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Multiple studies show that pain is poorly managed and that children, in particular, continue to suffer unnecessarily (e.g. Twycross & Collis 2012; Twycross et al. 2013)

Several factors suggested to explain this – a literature review was undertaken
Results

• Several themes emerged:
  – Knowledge deficits
  – Incorrect or outdated beliefs
  – Decision-making strategies
  – Organisational (unit/ward) culture
Knowledge about pain

Eight studies. Gaps found in knowledge about:

• Basic pharmacological principles (Schmidt et al. 1994; Manworren 2000; Tierman 2009; Ekim et al. 2012)

• Analgesic drugs (Salantera et al. 1999; Salantera & Lauri 2000; Manworren 2000; Vincent 2005; Rieman & Gordon 2007; Tierman 2009; Ekim et al. 2012)

• Non-drug methods (Salantera et al. 1999; Manworren 2000; Twycross 2004; Vincent 2005; Tierman 2009)

• Pain assessment (Salantera & Lauri 2000; Manworren 2000; Ekim et al. 2012)

• Physiology of pain (Twycross 2004)
Knowledge v practice

- Nurses (n=67) with a better theoretical knowledge about pain were not more likely to administer analgesia (Vincent & Denyes 2004).

- No positive relationship between children’s nurses’ (n=12) level of knowledge and how well they actually managed pain found by Twycross (2007b).

- No relationship was found between adult nurses’ (n=80) knowledge and patients’ ratings of pain and the amount of analgesia administered (Watt-Watson et al. 2001).
Knowledge: Summary

• Gaps in nurses’ theoretical knowledge levels do not appear to provide the sole explanation for deficits in pain management practices.

• Lack of knowledge about pain assessment may mean nurses cannot assess pain accurately and therefore not apply their knowledge in practice.

• Knowledge deficits may mean that nurses do not understand the rationale for using specific interventions.
Priority and Beliefs

• Nurses (n=20) assumed (incorrectly) that some pain was to be expected during a hospital stay (Hamers et al. 1994).

• Nurses (n=24) concentrated on technical aspects of care and saw comforting the child as the parent’s role (Woodgate and Kristjanson’s 1996).

• Nurses (n=13) were observed to negate (ignore) children’s (n=16) (Byrne et al. 2001).
Priority and Beliefs

- Nurses (n=22) attributed a significantly lower priority to pain management than to other aspects of their role (Twycross 1999).

- The importance nurses (n=12) attributed to a pain management task did not reflect the likelihood of the task being undertaken in practice (Twycross 2008).
Perceptions of pain management

- Nurses may believe pain management is synonymous with administering analgesic drugs alone (Twycross 2004; Twycross et al. 2013a).
Priority and Beliefs: Summary

• Out-dated and incorrect beliefs about pain management, and not making pain a priority, may be contributing factors.

• They do not provide a complete explanation for sub-optimal pain management practices.
Parents’ beliefs

Parents:
• Fear the side effects of analgesic drugs
• Think pain medications are addictive
• Believe children should receive as little pain medication as possible

(Zisk et al. 2007; Zisk-Rony et al. 2010; Vincent et al. 2012; Twycross et al. 2013b)
Decision-Making

- Nurses used non-expert decision making strategies - regardless of their years of experience or level of academic attainment (Twycross and Powls 2006).

- Registered nurses were most confident and more inclined to administer analgesics than less experienced nurses - years of experience did not influence the assessment of pain intensity (Hamers et al. 1997).
Decision-Making 2

• Griffin et al (2008) used clinical scenarios to explore influences on nurses’ decision-making. Factors found not to impact on decision-making:
  – Education level
  – Education about pain
  – Race/ethnicity
  – Age
  – Year of experience
Decision-Making 3

• Pain scores are not always used to guide decision-making about which pain-relieving interventions to implement (Johnston et al. 2007; Twycross et al. 2013a).
Decision-Making: Summary

• Sub-optimal decision-making strategies might explain, at least in part, why children continue to experience unrelieved pain.

• Further research is needed about the:
  – factors affecting nurses’ decision-making
  – use of pain assessment tools to guide decision-making
Organisational Culture

• In one Canadian study, paediatric nurses described the unit’s pain management culture as giving pain medications regularly even if they are prescribed prn (Twycross et al. 2013a).

• An study exploring neonatal pain management found organisational context affected practices (Stevens et al. 2011).
Organisational Culture
(Lauzon-Clabo 2008)

• Ethnographic study on two (adult) wards in one hospital in the USA.

• Participants described a clear pattern of pain assessment on each ward; these patterns were different to each other.

• Social context influences nurses’ pain assessment practices.
Organisational Culture: Summary

• Organisational (unit/ward) culture appears to impact on how pain is managed

• This needs exploring further.
Factors impacting on practice

- Gaps in knowledge
- Unit (ward) culture
- Clinicians' decision-making strategies
- Clinicians' beliefs and attitudes about pain
- Parents' beliefs and attitudes about pain
Where do we go from here?

- Changing pain management practices requires a multi-faceted approach.

- Knowledge translation models may help – e.g.:
  - Promoting Action on Research Implementation in Health Services (PARIHS)
# The PARIHS model
(Rycroft Malone 2011)

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Using the PARIHS model to improve pain management practices

**Evidence**
- Education about pain using strategies that promote the use of evidence in practice
- Setting and auditing standards

**Context**
- Evidence-based practice and research seen as important
- Questioning culture encouraged
- Staff involved in decision-making
- Evidence-based policies and procedures kept up to date

**Facilitation**
- Pain link nurses/resource nurses
- Pain management service
- Algorithms to support decision-making
Evidence: Educational issues

- There will always be a need to educate nurses about pain management.

- A review of literature by Twycross (2002) found:
  - nurse education does not appear to be preparing nurses to manage pain in the clinical area
  - that nurses continue to have educational deficits about pain management
  - not all educational interventions result in improvements in pain management practices

- Need to use a variety of teaching methods - interactive and didactic (Foresetlund et al. 2009).
Evidence: Educational strategies

- Using students’ clinical experiences in group discussions
- Role play
- Clinical simulations
- Gaming
- Case studies
- Reflection on what individuals have learnt
- Reflection on how learning will be applied in practice
- Students sharing how they will apply learning in practice
Evidence: Auditing pain management practices

**Stage 1:** Identify pain management standards – based on current research evidence and best practice guidelines

**Stage 2:** Review/audit against pain management standards

**Stage 3:** Identify required changes in practice following the audit. Incorporate these into an action plan

**Stage 4:** Implement action plan
Context: Socialisation

- A nurse’s need to *fit in* may mean that they adopt the ward’s (poor) pain management practices, despite having (at least some) theoretical knowledge about how children’s pain should be managed and believing that pain management is important.

- If nurses acting differently to the ward culture are *picked on* this is likely to discourage them from using their own discretion, or from questioning practice.
Context: Role-modeling

• Novice (adult) nurses (n=15) commented “they just followed the [more experienced] nurse’s lead” (Taylor 1997).

• Nursing students (n=99) discussed modelling their practices on those of more experienced nurses (Fitzpatrick et al. 1996).

• Two participants indicated they had learnt about paediatric pain management by observing/working with more senior staff; another participant reported she had had no formal education “except what I picked up as I've gone along” (Twycross 2004).
Context: Leadership qualities

- Valuing research – e.g. incorporated into annual appraisal
- Knowledgeable about research
- Role-modelling evidence-based care
- Effective communicator
- Encouraging staff to question practice
- Staff involved in decision-making
- Supportive of changes in practice
- Providing feedback to staff
- Ensuring policies and procedures are evidence-based and kept up to date
Facilitation: Pain link nurses

Eleven months after the introduction of pain link nurses:

• More patients had a pain score recorded on the daily observational chart and in the nursing care plan

• There was an increase in the number of patients with a pain score documented each nursing shift

(Williams et al. 2012)
Facilitation: Pain management service

- The Royal College of Anaesthetists (2010) recommend a member of the pain service should visit children’s surgical wards every day and see all children having major surgery.

- The implementation of an acute pain service has been found to improve post-operative pain care for children (Frigon et al. 2009).

- Similar findings have been found in relation to adult’s pain (Bardiau et al. 2003; McDonnell et al. 2005).
Facilitation: Algorithms

• The effectiveness of an algorithm in conjunction with the administration of regular multi-modal analgesia was tested by Falanga et al. (2006).

• When the algorithm was used children received more analgesia and had lower pain intensity scores.
Changing pain management practices

Issues relating to individual clinicians
- Education
- Challenge poor practice
- Reflect on aims, attitudes and beliefs
- Think about unit (ward) culture
- Set pain goal with child and parents

Issues relating to the child and parents
- Address erroneous attitudes and beliefs
- Educational resources
- Information about pain assessment and pain medications

Organisational issues
- Pain management team
- Pain link nurses
- Algorithms
- Mismanaged pain seen as an adverse event