



## Continuing Professional Development Questions – How often do we perform painful and stressful procedures in the paediatric intensive care unit? A prospective observational study

### Multiple choice questions

1. Which of the following statements most accurately reflects the consensus guidelines on sedation and analgesia (analgo-sedation) in critically ill children?
  - a) a benzodiazepine infusion should be used to relieve pain and stress
  - b) a benzodiazepine infusion should be used to relieve pain
  - c) an opioid infusion should be used alone to relieve stress
  - d) a continuous infusion of both sedation (primarily benzodiazepines) and an analgesic (mainly opioids) should be used to relieve pain and stress
  - e) an intermittent infusion of primarily benzodiazepines and opioids should be used to relieve pain and stress.
2. The overall aims of the study reported in this paper were to:
  - I. Determine the number of daily painful and stressful procedures performed on children in the ICU.
  - II. Determine the number of attempts of daily painful and stressful procedures performed on children in the ICU.
  - III. Determine whether there is a relationship between the number of painful and stressful procedures performed on children in the ICU with age, mechanical ventilation, and surgery.
  - IV. Calculate the number of daily painful and stressful procedures performed on neonates in the NICU.
  - V. Map PICU nurses' perception of the painfulness of the procedures and to evaluate procedural pharmacological analgesic and/or sedative treatment for the most frequent painful procedures.
  - VI. Map PICU clinicians' perception of whether nurses or doctors undertake the most painful and stressful procedures performed on children in the ICU.
    - a) I.; II.; III.;IV.
    - b) I.; II.;III; V.
    - c) I; II.; III.; VI.
    - d) II.; III.; V.; VI.
    - e) III.; IV; V.; VI.
3. The design of this study was described by the researchers as a:
  - a) randomised control trial
  - b) retrospective observational cohort study
  - c) prospective point prevalence cohort study
  - d) quasi-experimental design
  - e) prospective observational cohort study
4. In this study painful procedures and stressful procedures were classified together as painful procedures are likely to be stressful.
  - a) True
  - b) False.
5. Which of the following patients were excluded from the study?
  - a) those admitted to the PICU more than once
  - b) those admitted for observation only during polysomnography
  - c) those receiving extracorporeal life support
  - d) neonates with major congenital anomalies
  - e) all of the above.
6. Demographics in this study were presented with descriptive statistics as medians with interquartile ranges. The median is best defined as the:
  - a) data value that appears most often
  - b) average value
  - c) value separating the higher half from the lower half of a data sample
  - d) the difference between the lowest and highest values
  - e) measure used to quantify the amount of variation or dispersion of a set of data values.
7. How many patients were excluded from this study because no record forms were available?
  - a) 22
  - b) 28
  - c) 46
  - d) 121
  - e) 229
8. Nurses surveyed in this study identified which of the following as the most painful procedures?
  - a) endotracheal suctioning
  - b) nasal suctioning
  - c) wound dressings
  - d) skin breaking procedures
  - e) removing adhesive dressings.

9. What percentage of painful procedures undertaken on patients in this study were identified as performed without analgesic cover?
- a) 2.8%
  - b) 8.7%
  - c) 9.9%
  - d) 17.1%
  - e) 22%
10. What was a key recommendation from this study?
- a) Measures to reduce the number of painful procedures in the PICU could include revision of indications for ET suctioning and improving clinicians' technical skills through further education and/or the use of devices such as ultrasound guidance techniques.
  - b) Intensivists in the PICU should consider the administration of a eutectic mixture of local anaesthetic before performing all painful procedures in children and neonates in the PICU.
  - c) Further research is needed to measure what are painful and stressful procedures performed on critically ill children in the PICU.
  - d) Utilise ultrasound guidance techniques when performing IV cannula insertion or venepuncture in the PICU to reduce the number of failed attempts.
  - e) Avoid ET, nasal and oral suctioning in children receiving mechanical ventilation.

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