

Pediatric Critical Care Sedation Practices Survey

Thank you for taking the time to complete this survey! We are interested in your practices and experiences with sedation of mechanically ventilated children in the pediatric intensive care unit (PICU) as someone who cares regularly for critically ill children.

The survey should require no more than 10 minutes to complete. We will be collecting information about you from your responses to this survey. Your taking part in this survey is completely voluntary. Your information will only be seen by researchers at Johns Hopkins. We will try to make sure that the information we collect from you is kept private and used only for this research study.

Completing this questionnaire will serve as your consent to take part in this research study. This research has been approved by the Johns Hopkins Institutional Review Board (NA_00071866).

If you have any questions about the survey, please feel free to contact Sapna Kudchadkar, MD at skudcha1@jhmi.edu.

1. Do you routinely care for critically ill children (not including neonates) in your practice?

- Yes
- No

*2. Are you male or female?

- Male
- Female

*3. Which category below includes your age?

- 18-20
- 21-29
- 30-39
- 40-49
- 50-59
- 60-69
- 69 or older

*4. Please tell us the country in which your ICU is located:

Country:

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*5. Which of the following describes your clinical role?

- Attending physician
- Nurse practitioner
- Fellow or Pediatric Critical Care physician trainee
- Critical Care Nurse
- Other (please specify)

6. What is your primary practice setting?

- Academic/University
- Teaching Hospital/Non-University
- Private/Community

Other (please specify)

7. Does your practice setting have a fellowship program or advanced training for pediatric critical care ?

- Yes
- No

8. Do you take care of children AND adults?

- Yes, I take care of both children and adults in the ICU
- No, I only take care of children in the ICU

9. How many beds in your ICU can accommodate children (not including step-down/intermediate care beds)?

of beds

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***10. How many years have you been in practice caring for critically ill children?**

- 0-5
- 6-10
- 11-15
- 16-20
- >20

11. Approximately how many children were admitted to your ICU in 2011? If you don't know, please leave this blank.

***12. Approximately what percent of the children admitted to your ICU are post-operative cardiac surgery patients? If your unit does not care for post-operative cardiac surgery patients, please enter 0.**

***13. What is the layout of the ICU where you primarily care for critically ill children?**

- All private rooms
- Variable (some private, some shared rooms)
- All shared rooms

14. Does your ICU have windows in patient rooms?

- Yes, in all patient rooms
- Yes, in at least 50% of patient rooms
- Yes, in less than 50% of patient rooms
- No windows

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***15. Approximately what % of your pediatric patients are mechanically ventilated at any given time?**

- <20%
- 20-40%
- 40-70%
- >70%

16. Approximately what % of mechanically ventilated children in your ICU require sedative medications for safe maintenance of the endotracheal tube?

- <10%
- 11-25%
- 25-50%
- 50-75%
- >75%

17. Does your PICU have a WRITTEN sedation protocol that is used for all mechanically ventilated children?

- yes
- no
- don't know

18. Is this sedation protocol nurse-driven (nurses independently make changes based on the protocol) or physician driven?

- Nurse-driven
- Physician-driven
- We don't have a sedation protocol
- Other (please specify)

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19. What is the main sedation scoring system used for communicating patient sedation status between nurses and physicians?

- Ramsay
- State Behavioral Scale
- RASS (Richmond Agitation and Sedation Scale)
- COMFORT
- We don't use a sedation scoring system
- Other (please specify)

20. Is this scoring system discussed on rounds to set a sedation goal on a daily basis for each mechanically ventilated child?

- Yes, all the time
- Usually
- Sometimes
- Seldom
- Never
- We don't use a scoring system

21. Is the BIS (bispectral index) monitor used in your ICU for sedation monitoring in children?

- Yes, always
- Usually
- Sometimes
- No
- Not sure

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22. If given the choice, regardless of institutional restrictions and cost, what would be your preferred PRIMARY medication for sedation of mechanically ventilated children with acute respiratory distress syndrome (ARDS)?

- Dexmedetomidine
- Clonidine
- Opioid agonist (i.e. fentanyl, morphine, hydromorphone, etc.)
- Benzodiazepine
- Ketamine
- Barbiturates
- Opioid agonist-antagonist (i.e. nalbuphine, talwin, etc.)
- Other (please specify)

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23. Which of these medications are available for use in your ICU FOR SEDATION of children? (select all that apply)

- Fentanyl
- Remifentanyl
- Hydromorphone
- Morphine
- Methadone
- Propofol
- Dexmedetomidine
- Inhaled anesthetic
- Pentobarbital
- Phenobarbital
- Ketamine
- Midazolam
- Lorazepam
- Clonidine
- Diazepam
- Chloral Hydrate
- Nalbuphine
- Buprenorphine
- Talwin
- Butorphanol

Other (please specify)

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24. When FIRST starting a child on a sedation regimen for anticipated mechanical ventilation >24 hours, this regimen/combination MOST COMMONLY consists of (select one or all that apply):

- Opioid agonist (i.e. fentanyl, morphine, hydromorphone, etc.)
- Benzodiazepine
- Dexmedetomidine
- Propofol
- Ketamine
- Barbiturate
- Opioid agonist-antagonist (i.e. nalbuphine, talwin, etc.)

Other (please specify)

25. Of the medications available for use, are any of them "restricted", i.e., only made available for certain situations? Please check all that apply.

- No restrictions
- Morphine
- Remifentanyl
- Fentanyl
- Inhaled anesthetic
- Diazepam
- Lorazepam
- Hydromorphone
- Ketamine
- Dexmedetomidine
- Pentobarbital
- Propofol
- Methadone
- Phenobarbital
- Midazolam

Other (please specify)

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26. What is your most preferred opioid agonist for sedation in mechanically ventilated children in your PICU? (the drug that you start first in most cases)

- Morphine
- Hydromorphone
- Fentanyl
- Remifentanyl
- Sufentanyl
- I don't use opioid for sedation in mechanically ventilated children

Other (please specify)

27. When opioid is used, how do you prefer to deliver it for maintenance of sedation?

- A maintenance infusion
- Scheduled "around-the-clock" intermittent dosing
- As needed only
- I don't use opioid for maintenance of sedation

Other (please specify)

28. What is your most preferred benzodiazepine for use in sedating mechanically ventilated children?

- Diazepam
- Lorazepam
- Midazolam
- Clonazepam
- I don't routinely use benzodiazepines for sedation

Other (please specify)

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29. When you use benzodiazepine for sedation in mechanically ventilated children, do you most prefer to administer it as...

- A maintenance infusion
- Scheduled bolus dosing
- As needed only
- I don't use benzodiazepines

30. Do you have a written protocol for pediatric ICU patients that is followed for light exposure (i.e., dimming lights at night or with sleep)

- Yes
- No
- Not sure

31. Do you have a written protocol in place in your pediatric ICU for noise reduction (i.e., specific hours for "quiet time", alarm noise reduction)?

- Yes
- No
- Not sure

32. Are earplugs used for mechanically ventilated children?

- Yes, always
- Usually
- Sometimes
- Never
- Other (please specify)

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33. Are eye masks/covers used for mechanically ventilated children?

- Yes, for every patient when appropriate
- Usually
- Sometimes
- Never

Other (please specify)

34. Do the nurses in your unit have a formal educational curriculum in pediatric sedation management?

- Yes
- No
- Not sure

35. If your pediatric ICU has a fellowship or advanced training program, do these trainees have a formal education curriculum in pediatric sedation management?

- Yes
- No
- Not sure
- We don't have fellows

36. Are you satisfied overall with how intubated children are sedated in your intensive care unit?

- Very satisfied
- Satisfied
- Neutral
- Not satisfied
- Very dissatisfied

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37. Are children in your ICU screened specifically for delirium by nurses?

- Yes, all children admitted to the PICU are assessed each shift
- Yes, every child admitted to the PICU is assessed once a day
- Yes, but only mechanically ventilated children are assessed
- Yes, all children admitted to the PICU may be assessed, but only if there is clinical suspicion
- No, we do not screen for delirium

Other (please specify)

38. Is there a protocol in place for treatment of delirium for children in your ICU?

- Yes, pharmacologic only (i.e. antipsychotic medications)
- Yes, environmental treatment (i.e. light optimization and noise reduction) protocol
- Yes, pharmacologic (i.e. antipsychotic medications) and environmental treatment protocol
- No
- Not sure

39. If delirium screening is performed, what screening tool is used? Please specify. If no screening is done, please leave this blank.

40. If you have any other comments regarding any of the topics covered in this survey, please feel free to enter them below.

41. Thank you so much for taking the time to fill out this survey of sedation practices for mechanically ventilated children. If you would like to be notified of the results of this study when it is completed, please feel free to provide your email address. Your email address will NOT be linked to your survey responses.

Thank you so much for your time and participation! Have a great day!