

<http://links.lww.com/PCC/B920>). In a mixed medical-surgical PICU population, the CAPD performed well, sensitivity (94%) and specificity (79%), compared with psychiatry assessment. Reliability or consistency of scoring between nurse assessors was high with a kappa of 0.94 (214), although this was lower in a recent follow-up nurse assessor reliability study (kappa of 0.6) particularly in patients less than 2 years old (243).

Question: Should critically ill pediatric patients undergo routine delirium screening?

Answer: “We recommend” routine screening for ICU delirium using a validated tool in critically ill pediatric patients upon admission through ICU discharge or transfer (*strong, high-level evidence*).

Rationale: The care of critically ill pediatric patients is complicated and requires the collaboration and effectiveness of an interdisciplinary team. Routine monitoring in the ICU incorporates multiple organ/system surveillance supporting the acute management of ongoing organ dysfunction. Therefore, the recommendation for the implementation of routine monitoring for acute brain dysfunction considers the availability of valid and efficient bedside tools and the ability to identify and modify risk factors by which an opportunity is created to reduce prevalence, morbidity, and mortality associated with delirium. With the availability of validated screening tools (see above), delirium monitoring in the PICU is feasible (152, 224–227, 229, 242). We now recognize that ICU delirium is highly prevalent among critically ill children, with predominance of the hypoactive subtype which is most easily missed without routine screening. The goal of delirium monitoring is ultimately to implement patient care strategies to diminish its occurrence rate and effect on clinical outcomes such as mortality and further understand the role of acute brain dysfunction on the quality of life for pediatric survivors of critical illness.

Delirium Prevention and Management in the PICU.

Nonpharmacologic management of delirium

Question: Among critically ill pediatric patients, what “nonpharmacologic” strategies reduce the incidence and/or decrease duration or severity of delirium? (SDC Section E3, <http://links.lww.com/PCC/B920>).

Answer:

- 1) Given low patient risk, and possible patient benefit to reduce the occurrence rate and/or decrease duration or

severity of delirium, “we suggest” the following “nonpharmacologic strategies”: optimization of sleep hygiene, use of interdisciplinary rounds, family engagement on rounds, and family involvement with direct patient care (*conditional, low-level evidence*).

- 2) “We suggest” performing EM, when feasible, to reduce the development of delirium (*conditional, low-level evidence*) although data are insufficient to make a recommendation regarding the impact of this intervention on the duration or severity of delirium.

Rationale: Environmental impact on the prevention of delirium has yet to be studied in a robust manner in children. Despite the limited data, implementation of environmental modifications such as maintaining day/night cycles with the use of artificial light and sunlight during the day and healthy sleep conditions at night (minimizing noise, light, and stimulation) may impact the occurrence rate and severity of delirium in children (244–246). Interactive approaches such as cognitive stimulation and physical activity during the day may increase orientation during the day and quality sleep at night. Family presence and involvement, familiar care team members, and comforting objects from home can also help reassure and reorient patients. Studies in critically ill adults have shown decreased occurrence rate and duration of delirium with implementation of EM. A single-center prospective study indirectly supports potential effectiveness of this approach in children. Over a 22-month period, phased implementation of protocolized sedation followed by EM was associated with a near 40% reduction in delirium rates (224). Mitigation of delirium is often achieved by resolution of the underlying critical illness or other contributing medical conditions. Therefore, the initial steps in delirium management should focus on identification and treatment of these underlying etiologies (231, 239, 240, 247–249). Differential diagnoses should be considered using a model such as Bring oxygen, Remove/Reduce deliriogenic drugs, patient Atmosphere, Immobilization, New organ dysfunction, Metabolic disturbances, Awake, Pain, Sedation (SDC Table 19, <http://links.lww.com/PCC/B920>) (247).

Pharmacologic management of delirium

Question: What “pharmacologic” sedation strategies reduce the incidence and/or decrease the duration or severity of delirium in critically ill pediatric patients?

Answer:

- 1) “We recommend” minimizing benzodiazepine-based sedation when feasible in critically ill pediatric patients to