Policy Paper

2019 WACEM - Academic College of Emergency Experts Consensus Recommendations on Admission Criteria to Pediatric Intensive Care Unit from the Emergency Departments in India

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Abstract

There is a global variation in policies that define clear indications for pediatric intensive care unit (PICU) admissions. In resource-limited countries where PICU service availability is limited, the admission criteria to PICU are urgently needed to optimize the utilization of available intensive care services and to maximize patient benefit. The objective of these consensus recommendations on PICU admission criteria is to provide a framework and reference for future policy development by professional societies and governments. **Design:** The consensus recommendations were developed by a multidisciplinary consensus task force comprised of international experts in pediatric critical care, emergency medicine, trauma, critical care, and health policy stakeholders during the 2016 annual INDUSEM WORLD CONGRESS in Bengaluru, India. **Measurements and Main Results:** A task force steering committee completed a global literature search about PICU admission criteria development, reviewed PICU admission guidelines published by a variety of professional organizations worldwide, and performed a literature review of relevant publications. The objectives of this task force is to provide a framework for validated approach to determine appropriateness of intensive care unit (ICU) admission in India (resource-limited setting) based on (a) prioritization modeling; (b) general clinical criteria; (c) clinical and objective parameters; and (d) other criteria. The expert consensus panel then discussed and ranked proposed criteria according to scientific evidence, the current standard of care, and expert opinion in the context of the Indian health system. The general subject was addressed in sections: admission criteria and benefits of different levels of care. Following the appraisal of the literature, discussion, and consensus, recommendations were written. **Conclusion:** Although these are consensus recommendations, the subjects addressed encompass complex ethical and medicolegal aspects of patient care that affect daily clinical practice. The scarcity of high-quality evidence made it difficult to answer all the questions asked related to ICU admission. Despite these limitations, the members of the task force believe that these recommendations provide a comprehensive framework to guide practitioners in making informed decisions during the admission process. This publication is designed to assist in future development of health policies to ensure effective resource allocation, maximize healthcare benefits, and improve access to quality care for children.

Keywords: Admission criteria, consensus recommendations, pediatric intensive care, pediatric intensive care unit

Introduction

The pediatric intensive care unit (PICU) concept was initially developed about 40 years ago with the first consensus conference on critical care admission held in 1983 by the National Institute of Health in the US.[1,2] The principle that

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emerged from this group continues to be relevant even today as it identifies patients who should be admitted to the PICU as those who have "reversible medical conditions with a reasonable prospect of substantial recovery."[3,4] As with any treatment, the decision to admit a patient to the PICU should be based on potential benefit.[5] Pediatric intensive care admission criteria should select those patients who are the most likely to benefit from this level of care. Such patients are generally those who are severely ill and unstable, with a high likelihood of functional recovery after treatment of the acute illness.[6,7] Identification of patients who are "too well" or "too severely ill" for PICU admission is a complicated task and may be difficult if decisions are solely based on diagnosis. Similarly, severity of illness scores such as the Pediatric Risk of Mortality Score, Acute Physiology and Chronic Health Evaluation, and Simplified Acute Physiology Scoring are inadequate and not validated to predict which patients are likely to benefit from intensive care.[8-11] Various pediatric triage system has been evaluated and analyzed its association with the following surrogate clinical outcome measures of severity: hospitalization rate, intensive care unit (ICU) admission, length of ED stay, predictive value for admission, and length of hospitalization.[12-16]

The most common being Pediatric Assessment Triangle (PAT) which is a rapid evaluation tool that establishes a child's clinical status and his or her category of illness to direct initial management priorities.[17] PAT can be relied as only objective early warning of children in or at high risk for clinical deterioration but does not define PICU admission. All these triage systems require modifications targeted to young children and children with a comorbid conditions and sometimes misclassify a substantial number of children who require ICU admission.[18]

In addition to physiologic parameters and diagnoses, interpretation of the context of illness (acute vs. exacerbation of chronic vs. worsening of terminal illness), social implications, and religious beliefs may also be taken into consideration when determining admission to the PICU. Finally, local socioeconomic context and limitation of healthcare resources must be considered as the application of PICU admission criteria.

Pediatric critical care units in India face many challenges. In the government sector of the health system, there are few critical care units that are well equipped and that have the expertise to use sophisticated life-sustaining technology. Furthermore, pediatric intensive care is poor or nonexistent at district hospitals in rural India, where 80% of the nation's population resides and overcrowding of PICUs in urban settings is common.[18-20] Currently, there is a lack of universally accepted, peerreviewed recommendations for PICU admission criteria in resourcelimited settings. In many developing countries, national standards for pediatric critical care admission, practice, and quality of care measures has not yet established. Efficient use of intensive care services from a health resource standpoint is critical for several reasons. First, because intensive care is a precious commodity, especially in resource-limited settings, clarity about criteria for PICU admission assists local governments with resource allocation and service provision planning. Second, accurate categorization of patients in the emergency department setting shortens the time it takes to admit critically ill children to the proper care environment and also reduces unnecessary admissions for those who could be cared for safely and appropriately in a lower intensity setting. Finally, standardized PICU admission criteria may be adopted and integrated by clinical personnel, hospitals, and health administrators to create local, regional, and national PICU care standards in context of location, environment, and available resources. The current lack of recommendations is associated with significant provider variation in identifying pediatric intensive care needs and inconsistent use of PICU resources.[21] Once standard protocols and standardized indications of PICU admission are developed, India will move toward a more cost-effective use of its limited PICU resources.[20] Standardization of PICU admission criteria has been accomplished in developed countries through reviewed publications by professional societies,[22] but it is lacking in India. The purpose of this manuscript is to provide India-specific recommendations which can be adapted to the local context and integrated into routine medical practices through a designated clinical and administrative body.

Purpose and intended application

The purpose of these recommendations is to provide a framework and reference for future policy development by professional societies and governments in India. These recommendations are intended as a consensus outline but should be adapted to meet the operational needs of each institution they are applied in, depending on the scope of illnesses encountered and the resources available. The definition of medical necessity for PICU admission reaches beyond India and general concepts outlined here may be utilized across resource-limited environments in different meetings. Application of these recommendations beyond the Indian context is feasible, and suggestions for a process of implementation, monitoring, and evaluation are also included. Once health policies have been created, policy compliance along with clinical and administrative outcomes should be monitored by health administrators designated to oversee PICU care in institutions. Pediatric intensive care policies should be reviewed on a regular basis and revised as needed based on available evidence to support change.

Consensus Recommendations Development Process

Consensus panel task force

The consensus process applied is based on a previous approach by the Society of Critical Care Medicine,[21] defining PICU admission criteria in high-resource environments. These consensus recommendations were developed by a consensus panel task force team comprised of Indian and international

experts in pediatric critical care, emergency medicine, trauma, and health policy stakeholders. Members were identified during the Indo-US Emergency and Trauma Collaborative conference 2015 (INDUSEM-Delhi) as leaders in intensive care policies from a variety of backgrounds in India and internationally.

These individuals were invited to participate in a discussion and consensus meeting during the 2016 annual INDUSEM WORLD CONGRESS at Bengaluru, India. In preparation for the 2016 consensus meeting, a consensus panel task force steering committee completed a global literature search about PICU admission criteria development, reviewed PICU recommendations published by a variety of professional organizations worldwide, and performed a literature review of relevant publications. The task force core group performed a PubMed literature search using Mesh Terms (intensive care) (pediatrics) (admission criteria) and identified relevant peerreviewed publications. In addition, the group reviewed previously published statements from professional societies in India and other low- and middle-income countries and compiled relevant publications in a literature resource list consisting of 400+ publications. The literature resource list was shared with the remaining consensus team members while the core group developed an initial draft of an evidence-based list of conditions potentially relevant for PICU admissions in the resource-limited context of India.[9,22-27] Furthermore, based on previous approaches, the steering committee developed a framework for discussion and review of potential PICU parameters and defined the target outputs for the consensus meeting.[18,28]

Consensus process

The entire consensus panel task force team was assembled for an in-person round table discussion at the Indo-US Emergency and Trauma Collaborative conference during the 2016 INDUSEM WORLD CONGRESS in Bengaluru, India. Team members reviewed and discussed the various PICU admission criteria that were identified during the previous literature review and presented by members of the core group at the consensus meeting. The expert consensus panel then discussed and ranked proposed criteria according to scientific evidence, current standard of care, and expert opinion. Review to recommendation process: based on field of practice, scientific expertise, and location of practice, we assemble subgroup teams (consensus panel core group members) who can provide content, specialty, research, and methodological expertise in the review process and who were the primary drivers in drafting evidence-based reviews and recommendations which were then further discussed by the full task force team until final consensus was obtained.

Rating and decision-making models

The decision about the necessity and appropriateness of PICU care was based on a variety or a combination of factors. Our consensus team followed a previously utilized approach to determine need of ICU admission based on (a) prioritization modeling; (b) general clinical criteria; (c) clinical and objective parameters; and (d) other criteria.[9,23]

Levels of recommendation: During the consensus process, meeting members applied following previously validated recommendation rating system.[21]

- Level 1: PICU admission justifiable on scientific evidence alone
- Level 2: PICU admission reasonably justifiable on scientific evidence and strongly supported by consensus expert opinion
- Level 3: Scientific evidence generally lacking but supported by available data and critical care expert opinion.

Table 1: Pediatric intensive care provision in high dependency units

	Level of recommendation
Pediatric intensive care can be provided at various locations within a healthcare facility. In addition to a designated PICU, many hospitals within India operate an HDU where intensive care can be provided, however staffing ratios and available equipment standards may differ from a standard PICU setup. The consensus task force panel identifies conditions which may be eligible to be cared for in an HDU setting if medical care for a specific condition can be delivered with equal quality when compared to the PICU setting. Conditions identified as eligible for HDU care are marked with an asterisk*	2
The minimum care standard for the HDU includes	
Minimal staffing requirements: 1:3 nurse to patient ratio; 1 resident level provider is available 24/7 to provide optimal medical supervision. The resident should be trained in pediatric advanced life support skills. The nurse should have substantial pediatric expertise	
Minimum services available to all patients: Continuous cardiorespiratory monitoring; oxygen, suction, continuous monitoring, noninvasive ventilation modality, crash cart, defibrillator, lab 24/7, arterial blood gas, portable X-ray	3
HDU must have immediate access to a dedicated PICU within their facility or have a relationship with an institution that has an PICU which can readily accept transfers if a patient can no longer be safely be managed in an HDU setting	3
The minimum care standard for the PICU includes	
Unit design, equipment, organization and staffing and ancillary support services as recommended by ISCCM and IAP (25)	3

HDU: High Dependency Unit, PICU: Pediatric intensive care unit

Table 2: Risk prioritization modelbased PICU admission

Risk prioritization model-based PICU admission	Level
Priority 1	1
Critically ill, unstable patients	
Patients who require monitoring, life-saving, or life-sustaining treatment that cannot be provided outside the PICU	
Extent and duration of therapy are not limited by preexisting conditions or patient/family wishes	
Examples	
Respiratory failure requiring ventilator support	
Continuous vasoactive drug infusions (pressors, milrinone,…)	
Acute decompensated shock with signs of end-organ failure	
Intentional or unintentional drug overdose, poisoning with end organ failure	
Priority 2	1
Patients who require intensive monitoring and may need life-saving or life-sustaining treatment in near future	
Examples	
Severe respiratory distress with impending respiratory failure requiring possibly ventilator support	
Shock responded to fluid boluses and may require monitoring for need of pressors	
Priority 3	1
Critically ill patients with underlying life-limiting illness	
Limits in place as to extent of therapy (i.e., patients with comorbid conditions whose parents or guardians have decided against receiving resuscitation and/or life-saving interventions)	
Examples	
Metastatic malignancy complicated by infections	
Priority 4	1
PICU admission is not indicated	
Monitoring and care can be provided outside PICU setting	
Examples	
Respiratory illnesses without evidence of active or impending respiratory failure	

HDU: High Dependency Unit, PICU: Pediatric intensive care unit

Consensus Panel Task Force Recommendations on Criteria for PICU Admission

1. Recommendations on the location of pediatric intensive care provision – High Dependency Units (HDUs) [Table 1].
2. Recommendations on prioritization criteria for patients considered for PICU admission [Table 2].

Assigning appropriateness for PICU admission based on a rating system, which defines the patient populations who will benefit most = Priority 1, to those who will benefit the least = Priority 4.

3. General clinical conditions that warrant PICU admission.

Ideally, a patient should be admitted to the PICU setting before the condition reaches a point from where recovery is not possible. The minimum standards of PICU regarding the unit design, equipment, and organization and staffing as described by ISCCM and IAP.[27] Early identification of clinical warning signs is important and requires health personnel who are trained and equipped to perform cardiorespiratory and neurologic assessments/interventions and to have decision-making skills. If a patient is diagnosed with a critical illness at a healthcare facility which does not have the capacity to provide the appropriate level of care, transfer to a higher level facility should be initiated immediately after the patient has been stabilized to the greatest extent possible.

General clinical conditions and indications warranting PICU admission are as follows:

- All respiratory or cardiac arrest
- Unstable airway
- Inability to oxygenate (O2 Sat <90% on >50% oxygen requirement)
- Inability to ventilate with rising PCO2 levels with respiratory insufficiency
- Glasgow Coma Scale (GCS) score <8 or sudden fall in score by >2 points
- Status epilepticus
- Critical values of age-specific vital signs parameters.

Clinical diagnosis and objective parameters that warrant PICU admission are shown in Table 3.

This model uses specific well-defined clinical conditions which warrant PICU admissions.

Numeric labels 1–3 designate level of recommendations (as discussed earlier).

Asterisk indicates that such conditions can potentially be managed in an HDU.

Administrative Recommendations to Facilitate Appropriate Pediatric Intensive Care Unit Admission

This document is designed to serve as a resource for hospitals and policymakers in resource-limited settings to determine the appropriateness of PICU admissions for optimal utilization of available scarce resources within their own care environment.

Local stakeholders must take steps to achieve the integration of PICU admission criteria into hospital care standards and health. Recommendations must be interpreted and applied in the local context of care, resources, and health policy and should be adapted to meet the local needs. For successful integration into clinical practice, a hospital or region must appoint a physician director on the basis of qualification and leadership skill. This individual must be able to provide clinical, administrative, and educational direction to local staff to integrate these recommendations into standard medical practice. Quality improvement processes need to be implemented to assure patient safety, to monitor compliance, and to appropriate steps for continuous refinement of local policies.

Collaboration and integration of nursing staff, ancillary staff, and directors of other units within the hospital are essential to

Table 3: Clinical diagnosis model-based pediatric intensive care unit admission criteria

	Level of recommendation
Cardiac conditions	
Cardiogenic shock, myocardial dysfunction: Infectious and other	1
Complex dysrhythmias requiring close monitoring and intervention, including new-onset complete heart block and after cardioversion	1
Acute congestive heart failure requiring hemodynamic support	1
Hypertensive emergencies	1
After cardiac arrest and postresuscitation	1
Aortic dissection	1
Congenital heart disease with cardiopulmonary instability	1
Patients presenting to the emergency department with cardiorespiratory or neurologic compromise after high risk intrathoracic or cardiac procedures	1
Need for invasive cardiac monitoring	1
Need for cardiac pacing	1
Pericardial effusion requiring drainage, signs of tamponade	1
Hypertensive urgency	3*
Pulmonary conditions	
Acute respiratory insufficiency or failure requiring invasive mechanical ventilation	1
Hemoptysis with shock or airway compromise	1
Newborns with signs of severe respiratory distress	1
Rapidly progressive upper or lower respiratory disease with risk of progression to respiratory failure	1
High supplemental oxygen need>6L pm or nonrebreather mask or FiO2>50% on CPAP/ BiPAP to keep oxygen>94%	1*
Acute barotraumas (i.e., decompression illness)	1*
Asthma - need for continuous administration of inhaled or nebulized medications to prevent respiratory failure	1*
Risk of complete airway obstruction	1
BRUE (brief resolved unexplained event) - recurrent	2*
Neurologic conditions	
Status epilepticus which cannot be controlled well with>2 antiepileptic medications (different class)	1*
Progressive neuromuscular dysfunction with altered mental status (GCS<8 or<10 and deteriorating), respiratory or cardiovascular compromise	1
Nontraumatic intracranial hemorrhage with evidence of increased ICP	1
Acute nontraumatic intracranial hemorrhage (epidural, subdural, subarachnoid, parenchymal)	1
Chronic progressive CNS disorders with deteriorating neurologic or respiratory function	1
Spinal cord compression or acute spinal lesions	1
Stroke with acute presentation	1*
Neurosurgical procedures requiring invasive monitoring of ICP	1
Hypertensive encephalopathy with PRES changes on imaging	1
Glasgow coma scale: GCS<8 →ICU; 9-13→ICU or HDU	1, 1*
Toxicologic conditions	
Ingestions leading to severe neurologic compromise (GCS<8 or<10 and deteriorating) or respiratory compromise	1
Ingestions known to be associated with a high risk or cardiorespiratory events (e.g., recent organophosphate poisoning)	1*
Ingestions leading to hemodynamic instability, bleeding, or organ failure	1
Seizures following drug ingestion	1
Envenomation (snake/scorpion/bee stings)	1
Gastrointestinal disorders	
GI bleeding leading to hemodynamic instability, altered mental status, or acidosis	1
Esophageal perforation	1
After emergency removal of foreign bodies	1*
Hepatic encephalopathy grade>2	1
Corrosive ingestion	1
Endocrinologic conditions	
Diabetic ketoacidosis with hemodynamic instability, altered mental status, respiratory insufficiency, or severe acidosis (pH<7.1)	1
Diabetic ketoacidosis with severe acidosis (pH<7.1) but without hemodynamic instability, altered mental status, or respiratory insufficiency	1
Hyperosmolar state with altered mental status and/or hemodynamic instability	1
Adrenal crisis with hemodynamic instability	1
Inborn errors of metabolism with risk of respiratory, cardiovascular, or neurologic decompensation	1*
Thyroid storm with hemodynamic instability	1
Surgical or postsurgical conditions presenting in the emergency department setting	
Patients after recent surgery presenting with hemodynamic, neurologic, or respiratory compromise	1
Patient with a recent history of congenital heart disease repair presenting with hemodynamic, neurologic, or respiratory compromise	1
Patients with recent open intrathoracic surgeries presenting with hemodynamic, neurologic, or respiratory compromise	1
Patients with recent organ transplantation presenting with hemodynamic, neurologic, or respiratory compromise	1
Radiologic findings	
Cerebral vascular hemorrhage of any type with mental status change or focal neurologic signs	1

Contd...

Contd...

Table 3: Contd...

	Level of recommendation
Ruptured viscera, bladder, uterus, liver esophagus	1
Bleeding of any type with hemodynamic instability	1
Dissecting aortic aneurysms	1
Foreign body before extraction with risk of perforation: batteries, sharp	2*
Tension pneumothorax	1*
Pleural effusion with cardiovascular or respiratory compromise	1*
Mediastinal mass with risk of obstruction	1*
Pulmonary embolism on computed tomography<5 day	1
Children with special conditions - malignancies and hematologic conditions	
Exchange transfusions	1
Plasmapheresis or leukopheresis	1*
Severe coagulopathy with active or high risk of bleeding	1
Severe complications of sickle cell diseases such as acute chest syndrome, aplastic anemia, or hemodynamic instability	1
Tumor lysis syndrome	1*
Tumors or masses threatening airway, vital vessels, or organs	1*
Febrile neutropenia with airway and hemodynamic compromise	1
Conditions associated with trauma	
Multiple trauma injury	1
Head trauma with acutely increased ICP, ANY evidence of cerebral edema on imaging	1
Severe head injury with altered mental status, respiratory compromise	1
Traumatic brain injury with GCS<8 or<10 and deteriorating	1
Traumatic brain injury in patient with bleeding disorder or receiving anticoagulation therapy	1
Cardiac contusion, pulmonary contusion	1
Patients requiring placement of an EVD	1
Acute spinal cord injury	1
Trauma with intra-abdominal organ injury	1*
Flail chest	1
Pelvic fracture with retroperitoneal hematoma	1
Crush injury	1
Grade 3 or 4 solid organ injury	1
BURNS (regardless of underlying etiology)	Per ATLS Recommendations
Trauma+1 of the following	1
Requires massive blood transfusion base deficit>5	
Seizures Pregnancy Hypothermia	
Comorbid conditions	
Placement recommendation	
Patients with severe traumatic injuries, intra-abdominal injuries, TBI	

Contd...

Table 3: Contd...

	Level of recommendation
GCS<8, crush injuries, or those likely requiring urgent surgical interventions should preferentially be admitted to ICU with	
availability of pediatric surgery and neurosurgery	
Intensive pain care needed: PCA, initiation of continuous infusion of opiates	1*
Objective parameters, laboratory parameters	
Potassium>6 + clinical symptoms (with arrhythmias or weakness) potassium>6 without clinical symptoms with or without EKG changes	1 2*
Potassium<2.5+clinical symptoms (with arrhythmias or weakness)	1
Ca>14 or iCa>10 +/- clinical symptoms (hemodynamic instability or altered mental status [GCS<8 or<10 and deteriorating])	1
Ca 12-14 or iCa 8-10+clinical symptoms	2*
Ca<8 with or without symptoms (e.g., seizures)	1*
Hyponatremia with Serum Na<125 mmol/l or hypernatremia>160 mmol/l with clinical symptoms (e.g., altered mental status or seizures)	1*
Hyponatremia with Na<125 mmol/l without symptoms	3*
HgB<5 + symptoms	1*
HgB<7 with active bleeding	1
Other conditions	
Shock of any etiology	1
Invasive hemodynamic monitoring	1
Services not available at lower level care center: staffing shortages, drug shortages, equipment shortages	1*
Renal failure and need for acute hemodialysis	1*
Crush injury with acute renal insufficiency	1
Documented or suspected malignant hyperthermia	1
Snakebites and insect bites associated with cardiopulmonary or neurologic compromise as defined in respective sections	2*

Conditions identified as eligible for HDU care are marked with an asterisk*. CPAP: Continuous positive airway pressure, BIPAP: Bilevel-positive airway pressure, HDU: High Dependency Unit, PICU: Pediatric intensive care unit, GCS:Glascow coma scale, EKG: electrocardiogram, PCA: Patient controlled analgesia, TBI: Traumatic brain injury, EVD: Extraventricular drainage device, ICP: Intracranial pressure, ATLS: Adult trauma life support, GI:Gastro intestinal

ensure transparency of the quality improvement process. The ultimate decision responsibility for acceptance and refusal of PICU admission is in the hands of the transferring and accepting physician, who may deviate from the recommendation if this deviation is in the best interest of the patient. Ideally, a multidisciplinary team should conduct nonthreatening reviews of protocol deviations, adverse patient events, and hospitalization outcomes to further refine applicability of these recommendations. By establishing a culture that focuses on system issues and reeducation as opposed to blame and punishment, institutions will find it more feasible to be in

compliance with best practice standards, where care is safe, effective, and efficient.

Limitations of applicability of these recommendations

Even though every effort was made to identify all relevant literature, it is possible that important publications may have been missed in the search. Some references used date back to the 1980s indicating the paucity of available literature in this topic especially with application on low-resource settings such as India. Due to the complexity of medical conditions under review, high variability in the quantity and quality of literature covering the spectrum of medicine and ICU indications, our team decided to utilize the level 1–3 rating system[19] over more traditional evidence level A-E rating system.

Even though every effort was made to have reputable experts in emergency medicine, pediatrics and intensive care with a variety of medical and working backgrounds participate in the consensus process; it may be possible that some practitioners may have been overrepresented and some underrepresented. Even though literature review and drafting evidence-based recommendations for final review and inputs was accomplished by team members with topic-specific clinical, research, and methodological research, we did not include subspecialists in the consensus process. Due to the complexity of health care systems within India between the public and private sector, variation in staffing, staff competency, availability of equipment between hospitals, urban–rural healthcare delivery discrepancies, state- and institution-specific variable definitions of HDU, staffing standards, and considering a variety of other factors, the authors realize that a uniform application of these recommendations is not possible and is also not intended. The authors see this publication as a reference and starting point for institutions who are interested in engaging in the process of defining PICU admission criteria. These recommendations are also not designed or intended to serve as ethical or medicolegal criteria to be applied to decide about "appropriateness" of care, placement of patients, and transfer of patients and are not meant to replace clinical judgment and the local definition of appropriate care. Overcrowding, high caseloads exceeding hospital capacity, and limited bed availability in HDU and PICU units are commonly encountered in India; however, these recommendations are not designed to address eligibility of transfer-in and transfer-out policies in these units and provide a universally applicable recommendation on overflow scenarios.

Summary

This publication is designed to provide recommendation of clinical criteria for PICU admissions for children from the emergency department. The authors see this publication as a reference and starting point for institutions who are interested in engaging in the process of defining PICU admission criteria. It is intended to assist key stakeholders in the development of hospital operational standards, to define appropriateness of PICU admission .These consensus guidelines will assist in effective resource allocation, maximize healthcare benefits for the population, reduce healthcare resource waste, and improve access to quality care for children. This publication discusses clinical conditions and scenarios that warrant PICU or HDU admission but is not intended to be utilized as an ethical or medicolegal document but as a resource for clinicians, hospitals, and system administrators to standardize care processes and reduce variation in care. Recommendations are provided based on prioritization modeling as well as on clinical conditions.

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Conflicts of interest

There are no conflicts of interest.

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