# SignaVitae

Journal of Anesthesia, Intensive Care, Emergency and Pain Medicine

## **Pediatric Critical Care**

Since the polio pandemic in 1950s which counts as the origin of intensive care units, many decades have elapsed in the field of Pediatric Critical Care. Great advances happened on the fields of prenatal control, neonatal intensive care, pediatric anesthesia and many pediatric surgical specialties. As a result, a huge increase in survival has happened in the pediatric population, however with a negative impact sometimes, on the functional outcome and the quality of life. Indeed, in a large multicenter USA study, it is reported that the majority of pediatric intensive care admissions suffered chronic complex conditions.

Special

Issue

In this special Issue of Signa Vitae devoted to Pediatric Critical Care, we will examine the general aspects of Pediatric Critical illness. Taking into account the orientation of the journal, we will start with the A in pediatric critical illness, the airway management in the critically ill child. Then, we will move on the postoperative pediatric patient, both in routine and emergency situations, and examine whether they are predictable and/or avoidable. Survival after pediatric critical illness always was and still remains the main goal after admission in the Pediatric Intensive Care Unit (PICU). But is a PICU with higher mortality rate always worse? What about the severity of critical illness? Could different national settings and resources play a role on the outcome? We will report the major PICU scoring systems, starting form outcome prediction models such as PRISMIII and PIM III following by the organ failure model of PELOD 2 and the Functional Status Scale. Recently, in 2020, WHO released different fluid guidelines for the critically ill child depending on the location of the critical insult, and a question arises: Should Pediatric Critical Care be different in developed and developing countries? We will then move on what's new on acute respiratory failure focusing on the implementation of High Flow Nasal Cannula therapy, following by a review in the interesting field of Ventilatory Associated Conditions (VAC), Ventilatory Associated Events (VAE) and Ventilatory Associated Pneumonia (VAP), conditions that are intertwined with mechanical ventilation, a modality which is almost a necessity for the critically ill pediatric patient.

Nosocomial Infections is a major issue in PICUs as they increase the length of stay and cost as well, while their impact on mortality is controversial. Bacteremias in general, and Central Line Associated Blood Stream Infections (CLABSI) are the commonest and many efforts have been in the last decade to reduce their rate through the implementation of bundles of care. We will present in a prospective study the efforts of a single centre to control them. Safety and quality in the PICU will be our next topic, exploring the ISO 9001-2015 performance in our PICU, and afterwards we will examine Ethical Issues exploring the view of PICU doctors and nurses on the decisions about the end of life in the critically ill child in a national level study.

Last but not least we will develop a hot issue in the COVID-19 pandemic: Do children need the COVID-19 vaccine?

Hope that this issue on PEDIATRIC CRITICAL CARE will be able to introduce THE audience of the journal in the aroma and the essentials of PEDIATRIC CRITICAL ILNESS!

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## **Guest Editors** Pediatric Critical Care



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