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WORKING GROUPS

Activity of the Critical Patient Working Group of the Spanish Society of Pediatric Emergency Medicine

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The Critical Patient Working Group (WG) of the Spanish Society of Pediatric Emergency Medicine (SEUP) was created in 2018 following a survey aimed at describing the organization of critical patient care in pediatric emergency departments (PEDs) across Spain. The survey revealed significant variability in organization, infrastructure, material and personal resources among these departments. Additionally, it highlighted the need to improve training in procedures in the critically ill patient. This realization prompted a profound reflection and became our point of departure.

Since its creation, the goal of the WG has been to provide quality care to critically ill patients treated at the national PEDs based on 2 pillars: research and education. Our objective is to ensure that this care is consistently delivered according to quality standards.

Our first project was focused on creating an observatory in order to collect data regarding critically ill patients upon arrival at the PED, the care they received both at the prehospital level and in the different PEDs, and patient outcomes. We aimed to identify areas for improvement, to early identify critically ill patients or those at risk of deterioration, and to adapt and optimize treatment protocols at both the prehospital and hospital stages.

Thus, in February 2020, the research project entitled "Multicenter registry of pediatric critical patients in Spanish pediatric emergency departments" was initiated. Currently, 21 national PEDs are participating, and 350 episodes have been collected. The data have been analyzed and were presented at different SEUP meetings, awaiting publication.

In parallel to the creation of the WG, in 2018 the SEUP Quality WG updated the document on quality indicators that would be essential to comply with in PEDs[1]. This document comprises 93 indicators, with 13 specifically pertaining to critical patient care. Our WG selected the following two indicators, which are monitored by means of biannual surveys:

Protocols for life-threatening emergencies, including treatment of TBI, initial care of polytrauma, basic and advanced CPR, and treatment of shock, coma, respiratory failure.

Review of the material and equipment in the resuscitation room and crash cart.

The WG collaborated in the development of do-not-do recommendations, together with the other SEUP WGs[2]. Specifically, the five most important actions not recommended in the critically ill patient can be consulted at the following link: https://seup.org/pdf_public/gt/Acciones/GT_Pac_critico.pdf.

However, during the development of these recommendations following the Delphi methodology, consensus was achieved within the group on seven recommendations, and we subsequently published them in the previous issue of this journal describing the selection process[3].

The final list of the "7 do-not-do recommendations" is shown in Figure 1.

In addition to this collaboration, since 2020 we have been working with different societies, including the Spanish Society of Pediatric Intensive Care (SECIP), the Spanish Society of Neonatology (SeNeo), and the Spanish Society of Emergency Medicine (SEMES) to improve the care provided to critically ill pediatric patients across the care system.

The physiology of children differs from that of adults, and they present distinct pathologies that often require a specialized approach. Together with the regionalization of pediatric care into primary, secondary, and tertiary care cen-

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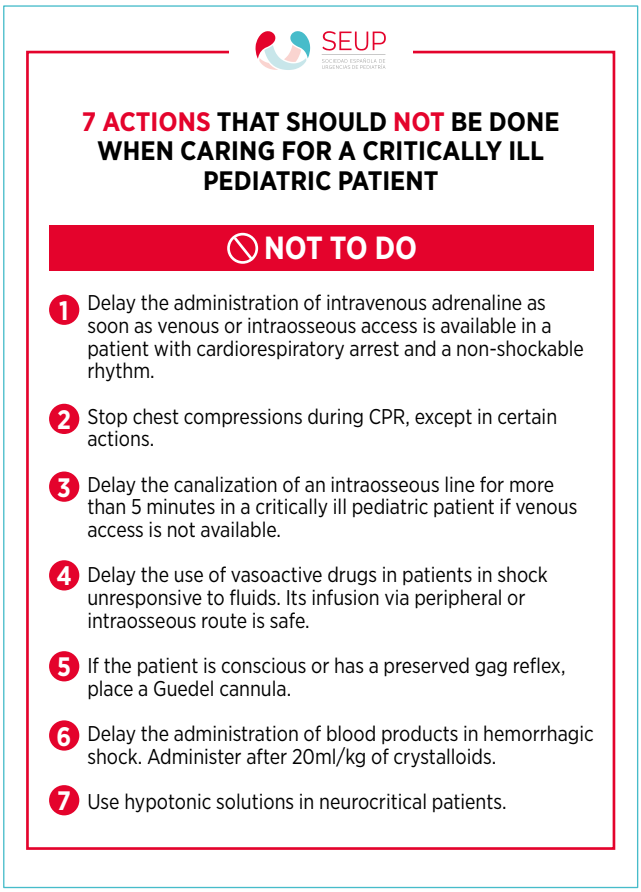

FIGURE 1. 7 actions NOT TO DO in the critically ill pediatric patient.

ters, hospitals at lower levels of care may lack the necessary material and personnel resources for managing critically ill children. Consequently, there arises a need to transfer these patients to hospitals with a higher level of complexity. Pediatric and Neonatal Transport (PNT) mobilizes the human and material resources of critical care units to hospitals lacking such resources due to the level of care required, with the objective of sustaining the early, specialized, and continuous comprehensive care essential for these patients. Numerous studies have demonstrated that specialized transport teams achieve superior outcomes with fewer complications compared to teams lacking specific training[4-7].

Thus, in 2021, we prepared a position paper on the need for the implementation of pediatric and neonatal transport units specialized in interhospital transport[8].

Similarly, we contributed to the drafting of the article entitled "Importance of specialized paediatric and neonatal transport. Current situation in Spain: Towards a more equitable and universal future"[9]. This study analyzes the situation across autonomous communities, describing the current state of pediatric transport, which lacks standardization at the national level.

The same article also emphasizes the importance of continuous training and periodic refreshers for professionals to effectively meet the quality standards in transportation. Here, the WG is supporting the training of different professionals involved in the care and transportation of pediatric and neonatal critically ill patients by offering basic and advanced courses in PNT.

Continuing with training and collaboration with other WGs, the Critical Patient WG, together with the Simulation WG, is involved in organizing the national phase of the Pediatric Simulation Games (PSG).

The PSGs are an activity in which different teams composed of MIR/EIR residents compete, with each team typically consisting of 6 to 7 residents and a "coach." As described by Abel Martinez in the previous issue of this journal, these games are more than a competition; they serve as a training activity that stimulates the development of residents and reinforces the necessity to maintain a high level of training in our PEDs[10].

The aim is for residents to demonstrate their knowledge and skills in managing critically ill children through simulation. They evaluate their individual competencies, consolidate communication and teamwork skills, and simultaneously learn about different educational contexts through exchanging experiences with colleagues from various regions. All of this occurs within a friendly and healthy competitive environment, while maintaining a high level of scientific rigor. The fourth edition, held in Guadarrama (Madrid) in March 2024, was a great success.

Another crucial aspect we are prioritizing is the development of documents and resources to assist various professionals in the care for critically ill pediatric patients. To this end, the WG has initiated the creation of medication dosage sheets calculated based on weight and age. A team of pediatricians and nurses who are members of the WG has undertaken this task. It has involved extensive efforts in creation, consensus-building, elaboration, and formatting, and the finalized sheets will be published on the SEUP website, making this tool accessible to all professionals.

Among our future projects, we plan to establish a multicenter registry for cardiorespiratory arrest and polytrauma patients. This registry will provide insights into the actual management practices, identify potential variations among different Spanish PEDs, and assess the level of compliance with quality indicators associated with these conditions.

We take this opportunity to encourage interested colleagues to join our WG.

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