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Authors' response to Nunez-Rodriguez letter

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Dear Drs. Rodriguez-Nunez and Lopez-Herce,

Thank you for the kind comments¹ about our report on the incidence and outcomes of cardiopulmonary resuscitation in the large academic PICUs from the Collaborative Pediatric Critical Care Research Network.² We fully agree with your assumption that the incidence and outcomes may vary in other PICUs in the United States and throughout the world. Nevertheless, we are encouraged by the similar outcomes that you and others have reported from South European and Latin American PICUs, and from the American Heart Association's large multi-center Get With The Guidelines-Resuscitation registry.^{3–7}

We are encouraged that most children in these studies had initially successful resuscitations resulting in return of circulation and that most of the children who survived to hospital discharge had favorable neurologic outcomes. However, there is still more information to be gained. In particular, the burden of poor outcomes following PICU CPR remains a large problem: many of the children with initial return of circulation either die or have poor neurologic outcomes. In addition, the children reported as having relatively "favorable" neurologic outcomes include children with substantial deficits in functional outcomes and quality of life. As recently emphasized by the Institute of Medicine, we need to develop effective and innovative approaches to prevent in-hospital cardiac arrests and to improve

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outcomes with more effective, patient-centric, hemodynamic-directed CPR and better post-cardiac arrest care.⁸

Drs. Rodriguez-Nunez and Lopez-Herce note that there are quite limited data about the incidences and outcomes of pediatric CPR throughout much of the world. We share their concerns about the scarcity of PICU beds in many parts of the world, and the inherent consequence that in-hospital pediatric CPR is commonly provided in a non-PICU environment. Optimal outcomes depend on systems of care that limit the “no flow” period by prompt recognition and immediate treatment with chest compressions, provision of high quality CPR, and implementation of excellent post-cardiac arrest care.⁸ We believe that an ICU is the best setting for such prompt recognition, immediate CPR and excellent coordinated interdisciplinary care.^{2,7,9}

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