

## Letter to the Editor

### RE: Implementation of Delayed Cord Clamping Into Neonatal Algorithms

Recently been updated, neonatal resuscitation guidelines<sup>1</sup> continue to recommend (level 2A) delayed cord clamping (DCC) in preterm newborns not requiring resuscitation at birth. Since the publication of the last guidelines<sup>2</sup> the level of evidence has strengthened from limited data on efficacy and safety to moderate quality of evidence from randomized trials and their meta-analysis.<sup>3</sup> Preterm infants receiving DCC were less likely to receive red blood cell transfusion and medications for hypotension, and the most important DCC was associated with improved survival.

While the guidelines advocate for DCC in infants who do not require resuscitation, this is not found in the Neonatal Resuscitation Algorithm, where the recommendations are operationalized by delivery room staff. The first observation pertains to the algorithm questions that should anticipate resuscitation needs. It is our opinion that “term gestation” should no longer have been present in the 2020 algorithm because it may promote an excessive conservative attitude, leading to clamp immediately the umbilical cord of any preterm newborns (including late preterm infants) that could safely benefit from placental transfusion during routine care while staying with the mother. The algorithm also does not encourage drying and stimulation of preterm infants that would benefit for 30–60 seconds of delayed cord clamping.

The 2020 guidelines considered DCC a reasonable option for any gestational age infant that does not require resuscitation at birth.

It would be extremely helpful for providers if the indications for cord clamping to be included in the algorithm’s last version. Specifically, based on recommendations, the cord’s

clamping might be postponed until the first stabilization of warming and drying the infant.

As part of the algorithm delayed cord clamping may be better implemented by improving communication between obstetricians and neonatologists and engagement across the delivery team.<sup>4</sup> Delayed cord clamping is performed widely at all gestational ages, as recently evidenced by a US survey,<sup>5</sup> but variations about timing, method, and performance in higher risk deliveries. The inclusion of cord clamping management in the predelivery team briefing and the risk stratification assessment for advanced neonatal resuscitation would be a great service to all deliveries.

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**POTENTIAL CONFLICT OF INTEREST:** None declared.

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## Author’s Response

### Reply to Drs. Ghirardello and Katheria

Thank you. We do appreciate these insightful comments. They are correct in observing that our recommendations show a preference for deferring cord clamping in babies who do not require resuscitation and that the decision-making process for clamping and associated resuscitation steps are not indicated on the algorithm. The decision not to place new steps or branches in the algorithm in 2020 was deliberate: the algorithm views neonatal resuscitation from a high level and remains a condensed version of practice that is detailed in the text.

In addition, the science of each resuscitation step and, in this case, cord management overlaps with practical and educational principles. The “Utstein Formula for Survival” clearly delineates how science, education, and practice are inextricably intertwined and need to be addressed both in sequence and independently.<sup>1</sup> We believe that clinicians and educators who develop educational programs for neonatal resuscitation should contribute to the translation of evidence into practice. We have therefore resisted the temptation to pre-empt their recommendations. The American Heart Association and American Academy of Pediatrics recognized these steps of translating science into education and then into practice in the formation and membership of the Neonatal Life Support Writing Group as a bridge

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