Categorization of cerebral palsy cases: a different perspective

We thank Drs Evans and Britt for their Letter to the Editors’ regarding our original paper in the American Journal of Obstetrics & Gynecology.

They expressed concerns about the potential underestimation of the preventability of cerebral palsy. We agree with their opinion that fetal heart rate (FHR) monitoring has limitations from a preventability point of view. Our conclusion that 16% of cases with R-Hon pattern could be preventable was solely based on intrapartum FHR monitoring. Another assumption was that acute FHR evolution, that is, R-PD, might not be preventable. Of course, there might be many possible ways to reduce cerebral palsy cases.

For antenatal causes (bradycardia and NR-NR), we should emphasize more intensive detection of risk factors for cerebral palsy. Prenatal ultrasound screening for umbilical cord abnormalities and fetal growth restriction or early warning in the outpatient setting for symptoms suggesting hypoxia-ischemia (ie, decreased fetal movement or abdominal pain) might be beneficial for cases with an antenatal onset. These include maternal, fetal, and obstetrical risk factors, as specified in Drs Evans and Britt’s Fetal Reserve Index (FRI).1,3,13

For intrapartum causes (R-RD), simulation training of an immediate delivery and prompt neonatal resuscitation should be performed. Rapid tocolysis with nitroglycerin could be useful for controlling uterine hypercontraction, which is also included in the FRI. We presumed the 20% R-R class to be preventable. Our cerebral palsy cases, almost half the cases were because of postpartum origins. Despite the challenges, we believe our approach was motivational, as cerebral palsy cases are at least potentially within the control of healthcare providers to maximize the likelihood of good outcomes. What happens after patients arrive and before mothers and babies leave are critical issues amenable to provider influence.

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M.I.E. has patents on the Fetal Reserve Index.

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Prioritize implementation research to effectively address the maternal health crisis

TO THE EDITORS: We read with great interest Chinn et al’s report on the Eunice Kennedy Shriver National Institute of Child Health and Human Development’s (NICHD) workshops to identify priorities for maternal health research. We strongly agree with their recommendation for investments in research to identify policies and practices that address unacceptably high rates of maternal morbidity and mortality in the United States and racial disparities in these outcomes. However, we note a major omission in the stated research priorities: implementation research—the scientific study of strategies to promote the effective, equitable uptake of evidence-based practices into routine care. Implementation research seeks to shorten the large lag—estimated at 17 years—between a clinical advance and its incorporation into routine care. Given this lag, research investments that identify effective practices will not yield population-level improvements without complementary investments in implementation research.

The need for implementation research in maternal healthcare is demonstrated by strikingly unwarranted variation. For example, a recent study reported large differences in cesarean delivery rates after induction of labor between hospitals and physicians. State perinatal quality improvement collaboratives are working to minimize such outcome variation by standardizing the use of evidence-based practices, but the success of such collaboratives is inconsistent. In California’s collaborative to reduce severe maternal morbidity from hemorrhage, one-third of participating hospitals did not succeed in reducing morbidity. Variability in both clinical outcomes and quality improvement success suggests that maternal health initiatives could be greatly enhanced by research identifying barriers, facilitators, and effective strategies for implementing evidence-based practices in routine care delivery in maternity settings.

The conditions are right for rapid advances in implementation research for maternal health. In such diverse fields as mental health, oncology, and surgery, research incorporating rigorous implementation frameworks and outcome measures has demonstrated success in accelerating the use of evidence-based practices in routine care. Among maternal health researchers, there is growing interest and expertise in implementation science. At the 2020 Annual Conference on...