

Study examines interventions for extremely preterm infants

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When compared with infants born between 1993 and 1995, more infants born at 22 to 24 weeks' gestation at one academic medical center in 2001 to 2003 received life-sustaining interventions but were no more likely to survive, according to a report in the October issue of *Archives of Pediatrics & Adolescent Medicine*.

"For more than a decade, it has been debated whether scientific advances can continue to lower the border of viability [the gestational age at which an infant can survive] or whether this goal should even be attempted. Evidence suggests that, despite this clinical and ethical debate, extremely preterm infants are regularly resuscitated," the authors write as background information in the article. "Although recent studies report that most infants die within days after birth at the border of viability, many remain concerned that aggressive resuscitation results in prolonging death and suffering in some."

Pamela K. Donohue, Sc.D., and colleagues at Johns Hopkins Children's Center, Johns Hopkins University School of Medicine and Johns Hopkins Bloomberg School of Public Health, Baltimore, compared prenatal management and outcome of infants born at 22 to 24 weeks' gestation in two time periods: 1993 to 1995 (early epoch) and 2001 to 2003 (late epoch). Medical records were reviewed for resuscitation efforts, interventions in the neonatal intensive care unit (NICU), time of death and illnesses or disabilities in survivors.

During the two study periods, 160 women delivered 179 infants,

including 90 women who delivered 104 infants during the late epoch and 70 women who delivered 75 infants during the early epoch. Compared with the early time period, women in the later period were twice as likely to be transported to a higher level of care, 48 percent more likely to be monitored by sonogram, 60 percent more likely to receive antibiotics and 61 percent more likely to receive antenatal steroids.

In addition, infants admitted to the NICU between 2001 and 2003 were more frequently provided with life-sustaining interventions—including high-frequency ventilation, chest tubes and administration of dopamine and steroids—than were those admitted between 1993 and 1995.

However, the rate of death based on gestational age remained the same for infants born in both time periods. "Mortality has not changed in our hospital over the past 10 years despite escalation in care at each [gestational age](#) studied. What has changed is the length of time until death," the authors write. "Applying all available medical technology to the perinatal care of extremely premature [infants](#) prolongs but does not prevent their death."

Clinicians discussed viability (the chances for the fetus' survival) with 82 percent of parents in the late epoch and 72 percent in the early epoch. "It is evident that perinatologists worked to keep parents fully informed during both epochs," the authors write. "The gold standard for decision making is a collaborative one that balances physician, parent and fetal/infant concerns. Better understanding of the process of this decision making, and its long-term impact on families, is critical to designing further studies with the most clinically relevant outcomes."

More information: Arch Pediatr Adolesc Med. 2009;163[10]:902-906.

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