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The Growing Epidemic of Maternal Substance Use

by Alison Chu MD, FAAP, NeoReviews Early Career Physician

Last year, I was receiving sign out for a low-acuity Los Angeles County NICU, when I realized that more than half of the neonates hospitalized there had been admitted for neonatal abstinence syndrome (NAS) monitoring and/or treatment. Moreover, I found two additional things to be striking: (1) the broad range of substances, licit to illicit, that the mothers had been taking during pregnancy, and (2) the prolonged hospital stay for these infants, with some having been in the unit for more than a month.

While it's an unfortunate fact of clinical practice that the number of newborns affected by NAS is growing, it also has truly become a more complex issue. The October 2017 NeoReviews article "Addictive Disorders in Women: The Impact of Maternal Substance Use on the Fetus and Newborn," by Drs. Oji-Mmuo, Corr and Doheny, highlights several of the trends I had observed clinically, starting with this one: In the last decade, the NAS diagnosis in the United States has increased approximately 5-fold.

The number of women of child-bearing age who are becoming addicted to various medications, both licit and illicit, is of epidemic proportions and is becoming a major health care concern. The cost of hospital admissions from NAS in the US from 2003 to 2012 was nearly $316 million, and the authors note that the majority of this burden fell upon state Medicaid systems. Not only is there significant health care cost from the short-term implications of NAS hospitalization and treatment, but these exposed neonates demonstrate long-term growth delays and neurodevelopmental consequences.

Drs. Oji-Mmuo, Corr and Doheny also provide a comprehensive review of common maternal licit and illicit substances that can result in NAS. In my own experience, the majority of the neonates hospitalized at our county unit had been exposed to licit substances - either from mothers who were in methadone programs or who were on prescribed antidepressants; a minority of infants had been exposed in utero to illicit drugs. As the authors explain, neonates exposed to methadone in utero require longer duration of treatment, which explains the long hospital stay for many of our neonates.

Lastly, this informative article helps to clarify some of the stickier points in treatment of these infants. For example, the authors note that breastfeeding of NAS infants is encouraged. They also note the limitations of diagnosis, management and treatment-which must be addressed urgently with further research. There remains wide variability in practice, due to the subjectivity of scoring systems used to diagnose and monitor NAS, as well as in the nonpharmacologic and pharmacologic treatment of NAS. Lastly, prevention, as always, is key, and we

must remain closely partnered with our obstetrical colleagues to optimize outcomes for both the mother and the baby.