

Embargoed until Monday, April 24th at 9:55am ET

Date: Monday, April 24, 2017 Time: 9:55 – 10:15 AM

Session A: Stephen B. Thacker Opening Session

Room: Frieden Plenary

Moderators: Anne Schuchat and Michael Iadamarco

Title: Special Education Outcomes among Children Born with Neonatal Abstinence Syndrome — Tennessee, 2008–2011

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Background: Neonatal abstinence syndrome (NAS) is a postnatal drug withdrawal syndrome that commonly occurs after intrauterine opioid exposure. Tennessee experienced a 15-fold increase in NAS incidence during 2002–2012. Adverse neurobehavioral outcomes are documented in infants born with NAS; however, educational outcomes have not been examined. We analyzed Tennessee data to more fully understand educational outcomes of infants born with NAS.

Methods: Using Tennessee Medicaid data, infants born in Tennessee during 2008–2011 with a history of NAS were matched (1:3) to infants born during 2008–2011 without a history of NAS. The groups were matched on sex, race, ethnicity, kindergarten cohort, and public health region of residence at birth. These data were linked to a Tennessee Department of Education database (1/2004–11/2016) to assess select special education outcomes during early childhood (age ≥ 3 years).

Results: A total of 1,815 children with and 5,441 children without a history of NAS were included in the study. Children with a history of NAS were significantly more likely to be referred for disability evaluation (351/1,815 [19.3%] versus 745/5,441 [13.7%]; $P < 0.0001$) and meet criteria for a disability (284/1,815 [15.6%] versus 634/5,441 [11.7%]; $P < 0.0001$). A significantly higher proportion of children with a history of NAS had special education exceptionalities of developmental delay (84/1,815 [4.6%] versus 170/5,441 [3.1%]; $P = 0.002$) and speech or language impairment (181/1,815 [10.0%] versus 434/5,441 [8.0%]; $P = 0.008$).

Conclusions: In this novel analysis linking health and education datasets, children with NAS were significantly more likely to have certain disabilities than children without NAS. Thus, efforts to reduce intrauterine opioid exposure and NAS might also reduce the risk of developmental disabilities in these children.