

Syndemic Approaches Are Needed to Address Maternal Substance Use and Syphilis in North Carolina

Ingrid L. Tablazon, Avinash K. Shetty, Candice J. McNeil

To the Editor—A particularly challenging aspect of the opioid use disorder (OUD) epidemic is its impact on pregnant persons: 11.4% of the 11,782 pregnancy-associated deaths in the United States between 2010 and 2019 were related to substance use [1].

In “Pregnant Mothers With Substance Use Problems and Their Treatment in North Carolina,” Mannelli and colleagues highlight the strategic efforts of North Carolina providers to address the serious public health challenge of OUD in pregnant persons by amending the diagnosis-referral-treatment pathways [2]. Interventions include embedding validated screening questions in electronic health records, increasing access to medications for OUD, and increasing access to behavioral counseling [2]. These admirable interventions have potential for broader public health impact through partnerships with sexual health clinics and those that care for pregnant people to address the congenital syphilis (CS) crisis. This syndemic approach would address syphilis, CS, and OUD by acknowledging the common drivers.

Nationally, we have observed alarming rates of CS [3]. Substance use is linked to trends in female syphilis and subsequently CS. In North Carolina between 2012 and 2022, syphilis cases among women have increased by 547%, concurrent with a rise in CS infections by 5600% [4]. In 2022, over half (53%) of women who delivered a newborn with CS did not have documented prenatal care [5]. Unpublished data from the North Carolina Department of Health and Human Services indicate that in 2021, pregnant people with syphilis reported exposures to alcohol, marijuana, cocaine, methamphetamine, narcotics/opioids, and heroin (in order of frequency), highlighting potential opportunities for intervention. Recent data from Arizona and Georgia reviewing CS pregnancy outcomes from 2018 to 2021 found that nearly half of persons with CS pregnancy outcomes had substance use exposure including tobacco, alcohol, cannabis, illicit opioids, or other nonprescription substances [6]. In this study, persons with CS pregnancy outcomes were more likely to report illicit use of opioids and use of other “illicit, nonprescription substances” during pregnancy [6]. The authors acknowledge the importance of social determinants of health (e.g., incarceration and housing insecurity) associated with a CS pregnancy and concurrent OUD and the need to engage these vulnerable populations [6].

As lack of prenatal care is one of the key factors of this public health concern, it is imperative to find new ways to increase health care access for all persons of reproductive age. Achieving health equity is a feat requiring multisector, multidisciplinary, community-based approaches to addressing complex challenges, including increasing access to trans-

portation, housing, employment, education, medication, and key staff (e.g., social workers and community care coordinators). Providers should be familiar with OUD resources in the community and consider more of a “no wrong door” approach to syphilis screening, prenatal care, and OUD treatment and referral.

Finally, exposure to the intersecting public health challenges of OUD in pregnant persons, CS, and the associated diagnosis-referral-treatment pathway should begin earlier, with education starting as early as medical school training. NCMJ

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In the letter of correspondence by Ingrid L. Tablazon, MD; Avinash K. Shetty, MD; and Candice J. McNeil, MD, MPH titled “Syndemic Approaches Are Needed to Address Maternal Substance Use and Syphilis in North Carolina” (85(2):159), which appeared in the March/April 2024 issue of the *North Carolina Medical Journal*, in the third paragraph in the first column:

Nationally, we have observed alarming rates of CS [3]. Substance use is linked to trends in female syphilis and subsequently CS. In North Carolina between 2012 and 2022, syphilis cases among women have increased by 795%, concurrent with a rise in CS infections by 5700% [4]. In 2022, over half (53%) of women who delivered a newborn with CS did not have documented prenatal care. Unpublished data from the North Carolina Department of Health and Human Services indicate that in 2021, pregnant people with syphilis reported exposures to alcohol, marijuana, cocaine, methamphetamine, narcotics/opioids, and heroin (in order of frequency), highlighting potential opportunities for intervention. Recent data from Arizona and Georgia reviewing CS pregnancy outcomes from 2018 to 2021 found that nearly half of persons with CS pregnancy outcomes had substance use exposure including tobacco, alcohol, cannabis, opioids, or other nonprescription substances [4]. In this study, persons with CS pregnancy outcomes were more likely to report illicit use of opioids and use of other “illicit, nonprescription substances” during pregnancy [4]. The authors acknowledge the importance of social determinants of health (e.g., incarceration and housing insecurity) associated with a CS pregnancy and concurrent OUD and the need to engage these vulnerable populations [4].

Citations were lost during copy editing and were included here, replacing the previous text as follows:

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The reference list was updated to reflect this change. This letter was accepted prior to the availability of both the 2022 North Carolina STD Surveillance Report <https://epi.dph.ncdhhs.gov/cd/lhds/manuals/cd/memos/ContinuedRiseInFemaleAndCongenitalSyphilisInfections2023.pdf> and the CDC’s 2022 STI surveillance report [Sexually Transmitted Infections Surveillance, 2022 \(cdc.gov\)](https://www.cdc.gov/std/statistics/2021/default.htm#print).

1. Margerison CE, Roberts MH, Gemmill A, Goldman-Mellor S. Pregnancy-associated deaths due to drugs, suicide, and homicide in the United States, 2010–2019. *Obstet Gynecol.* 2022;139(2):172–180. doi:10.1097/aog.0000000000004649
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6. Carlson JM, Tannis A, Woodworth KR, et al. Substance use among persons with syphilis during pregnancy - Arizona and Georgia, 2018–2021. *MMWR Morb Mortal Wkly Rep.* 2023;72(3):63–67. doi: 10.15585/mmwr.mm7203a3

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