Effects of Antenatal Medication-Assisted Treatments on Neonatal Length of Stay

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Supplemental Video

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Background:
Neonatal abstinence syndrome (NAS) is a growing medical concern that results in a longer length of stay (LOS) for affected infants. Previous studies have examined LOS based on maternal medication-assisted treatments (MAT), however, these data come from multiple centers with disparate standards of care. We aimed to estimate the relationship of antenatal exposure to MAT and LOS among hospitalized infants with NAS.

Methods:
We conducted a retrospective study of 104 mother-infant dyads affected by NAS at a tertiary care center where all patients received care under a single provider with a standardized NAS protocol. Sociodemographic and clinical data were obtained from medical records. Newborns <35 weeks and those with alternative diagnoses prolonging LOS were excluded. Neonatal outcomes including LOS were examined between those with and without MAT exposure. Data were analyzed using the Mann-Whitney U test, and a p-value of <0.05 was considered significant.

Results:
Infants born to mothers without use of MAT during pregnancy had shorter median LOS (5 days, interquartile range [IQR] 4-7) compared to those exposed to MAT (6 days, IQR 5-9, p=0.0028). Of 66 infants with MAT exposure, 44 were exposed to methadone, 22 were exposed to buprenorphine, and 2 were exposed to other. Infants exposed to methadone had a longer LOS (6.5 days, IQR 5-11) than those exposed to buprenorphine (5 days, IQR 5-7, p=0.0022).

Conclusion:
While MAT is associated with longer infant LOS, our results favor the use of buprenorphine for maternal MAT from a healthcare utilization perspective.

Learning Objectives
Upon completion of this poster, learners should be better prepared to recognize that different maternal antenatal medication-assisted treatments can contribute to varying neonatal length of stay in hospitals.