

**Yumna Furqan, Class 2025**

**Campus:** Baylor University Medical Center, Dallas, TX

**Research Area:** Characteristics of Meconium-Stained Newborn Deliveries and Respiratory Admissions to Neonatal Intensive Care Unit

**Mentor:** Arpitha Chiruvolu MD FAAP (Neonatology)

Yumna Furqan is a Class of 2025 medical student at Texas A&M School of Medicine who is conducting a retrospective cohort study under [Arpitha Chiruvolu MD FAAP](#) a neonatologist at Baylor University Medical Center, Dallas TX. They are investigating the characteristics of meconium-stained newborn respiratory admissions to the NICU before and after the NRP 7<sup>th</sup> edition guideline change. In 2016, The Neonatal Resuscitation Program (NRP) 7<sup>th</sup> edition recommended less aggressive interventions for the non-vigorous newborns born through Meconium-Stained Amniotic Fluid (MSAF). However, the data from Baylor Scott & White Health showed that these changes led to a significant increase in neonatal intensive care unit (NICU) respiratory admissions and an increase in the need for mechanical ventilation, oxygen, and surfactant therapy among these infants.<sup>1</sup> The purpose of our MSE study is to compare the characteristics of meconium-stained newborn respiratory admissions to the NICU, such as need for respiratory support and prevalence of Meconium Aspiration Syndrome, before and after the NRP 7<sup>th</sup> edition guideline change spanning from 2013 to 2020 and to study the resuscitative interventions and outcomes of meconium-stained newborns in the delivery room after NRP 7<sup>th</sup> edition change. Our retrospective cohort study will utilize chart review (EPIC & AllScripts) of infants born  $\geq 35$  weeks' gestation through MSAF at Baylor University Medical Center and Baylor Scott & White Medical Center – McKinney. The results of our MSE study will determine the efficacy of the 7<sup>th</sup> edition change and whether new guidelines should be written for delivery room management of non-vigorous MSAF neonates.

Reference

Chiruvolu A, Miklis KK, Chen E, Petrey B, Desai S. Delivery room management of meconium-stained newborns and respiratory support. *Pediatrics* 2018;142(6):e20181485