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Impact of the COVID-19 Pandemic on Prenatal Care Utilization and Delivery among Tennessee Women with a Recent Live Birth

Introduction: Adequate prenatal care (PNC) is essential for the health of a pregnant individual and their developing baby. This analysis seeks to understand how the COVID-19 pandemic has affected adequacy of PNC by comparing the Kotelchuk Index in 2019 and 2020. Additional aims include describing delivery of PNC in 2020, and whether barriers differed across years for those with late or no PNC.

Methods: Data for this study was collected from the Tennessee Pregnancy Risk Assessment Monitoring System (PRAMS) 2019-2020 Core Questions. PRAMS is a bi-modal survey of women with a recent live birth. The data were analyzed using SAS 9.4 weighted survey procedures. PNC utilization was assessed by using an indicator variable for the Kotelchuck Index.

Results: Analysis included 649 unweighted respondents in 2019 (weighted n=76,189) and 620 unweighted responses in 2020 (weighted n=76,117). From 2019 to 2020, there was a 28% increase in inadequate care (p=.3307) (13.3% v.17%). There was also no statistically significant change in intermediate (15.7% vs 13%), or adequate/adequate plus care (71% vs 70%). Groups that typically have high PNC utilization, such as White Non-Hispanic (87%; 6.4% vs 12%), married (80%; 7.8% vs. 14.1%), and educated women (> high school degree) (87%; 7.7% vs 14.4%) had the highest percent increases in inadequate care from 2019 to 2020. For the COVID-19 supplement, 253 unweighted responses (weighted n=30,227), representing births from October-December 2020 were analyzed. In 2020, PNC was delivered through in-person appointments (82%), virtual appointments (0.7%), and both (16%). 86% of women reported they had no virtual appointments due to preference. There were 113 unweighted responses (weighted n=11,572) from women who reported receiving late/no PNC in 2019 and 109 responses (weighted n=11,232) in 2020. Among these women, the most prominent barrier increases were women reporting their doctor/health plan did not start PNC as early as they wanted (14.6% vs 33.8%), not having childcare (7% vs 14.4%), and they could not get an appointment (34% vs 48%). Top barrier decreases in receiving PNC across years include women keeping their pregnancy a secret (28.5% vs 10.8%; P=.042), not wanting PNC (14.5% vs 3.2%; P=.045), and not having a Medicaid card (24.2% vs 14%; P=.212).

Conclusions: Overall changes in PNC utilization were not statistically significant in 2019 vs 2020. There were potentially clinically significant changes in subpopulations (e.g., those who typically have high PNC use). Most women utilized (and preferred) in-person PNC appointments during COVID-19. Barriers among those who received late or no PNC did differ between 2019 and 2020. This analysis highlights the importance of ensuring that all groups maintain access to care amidst the COVID-19 pandemic.

Further research is needed to explore the impact of changes to delivery on PNC access.