

Title: Improving Tdap Vaccination Rates in Pregnancy: A Five-Year Analysis at a Regional Center

Background:

The Center for Disease Control (CDC) and American College of Obstetricians and Gynecologists (ACOG) recommend Tdap vaccination during each pregnancy to protect infants against pertussis. Despite this, national uptake remains suboptimal—approximately 56.6% in 2022–2023. This study aimed to evaluate Tdap coverage among pregnant patients at a regional health system in Southern West Virginia, a region known for unique healthcare challenges and disparities, across three pandemic phases and assess factors associated with vaccine uptake.

Methods:

We conducted a retrospective cohort analysis of pregnant patients ≥ 18 years with viable pregnancies through 36 weeks gestation from January 11, 2019, to June 30, 2024. Patients were categorized into pre-COVID, during-COVID, and post-COVID cohorts. Bivariate analyses and chi-square testing were used to examine demographic and care-related predictors of Tdap administration.

Results:

Among 2,513 patients, 67.8% received Tdap, a rate significantly higher than national averages. No significant difference in uptake was seen across pandemic phases ($p = .972$). Tdap receipt was more likely among patients who were married (70.4% vs. 65.8%, $p = .016$), White (68.9% vs. 62.5%, $p = .011$), and receiving care in private clinics (76.6% vs. 65.6%, $p < .001$). Insurance type and age ≥ 35 were not statistically significant predictors.

Conclusion:

Our institution achieved higher-than-average Tdap compliance, with consistent rates across pandemic phases. Findings highlight persistent disparities in uptake by race, marital status, and care setting, underscoring the need for targeted outreach.

Word count: 231

Learning objective (3):

1. Recognize national trends and disparities in Tdap vaccination during pregnancy.
2. Identify demographic and clinical predictors associated with higher Tdap uptake.
3. Evaluate institutional strategies to improve maternal vaccine coverage compared to national data.

Keywords: Maternal Immunization, Tdap Vaccine, Pregnancy Outcomes

Authors and Affiliations:

{Presenter} Nicole Perry Bryce, DO ^a

Maria De L. Marrero Arocho, MBA ^b

Dara Seybold, MAA ^b

Byron Calhoun, MD ^a

^a Department of Obstetrics and Gynecology, Charleston Area Medical Center – Women’s & Children’s Hospital, 800 Pennsylvania Ave North, Charleston, WV 25302

^b CAMC Institute for Academic Medicine, Charleston Area Medical Center, 3200 MacCorkle Avenue SE, Charleston, WV 2530