

Geomapping: STI rates pre- and post- COVID-19 among teens and young adults in a Philadelphia family planning clinic

Author(s) and Affiliations: Alise Peckjian, MD; Haley Breslin-Foulkrod, MPH; Jiselly Fajardo, MPH (c); Benita Dowdell-Price, M.Ed; Kevin Mulroy; Latanya Deeb, MBA; Lydia White; Nadja G. Peter, MD; Enitan Adegite, MD, MPH

Teen and Young Adult Center (TYAC), St. Christopher's Hospital for Children, Drexel University College of Medicine, and Access Matters.

Background: The Teen and Young Adult Center (TYAC), located within the Section of Adolescent Medicine at St. Christopher's Hospital for Children in Philadelphia, provides comprehensive reproductive health services to adolescents ages 13 through 21. The COVID-19 pandemic greatly impacted access to these vital services for adolescents and limited the capacity of in-clinic visits. Although 2,736 fewer gonorrhea, chlamydia, and trichomoniasis screenings were processed in the 2 years following the pandemic than the 2 years prior, the positive STI rate of those screenings increased from 12.5% to 14.8%. Concerned with the increase of adolescents presenting with positive STIs and a decrease in patient visits, the TYAC designed a research study to analyze and map the geographic location of patients presenting with positive STIs and target outreach and STI prevention programs to areas with the most need.

Objective: The goal of this study was to analyze trends in positive STI rates pre- and post-COVID-19, and map geographic location of positive STIs to block level.

Design/Methods: A retrospective chart review was conducted to assess the pre- and post-COVID-19 pandemic STI positivity rate and geographic location of positives. The date range used in this study to classify "pre-COVID-19" rates is March 14, 2018, through March 14, 2020, and the date range used in this study to classify "post-COVID-19" is March 15, 2020, through March 15, 2022. The information has been extracted from Electronic Medical Records (EHR), cleaned to remove patient identifiers, stored in REDCap, and transported into a GIS software used to visualize data through maps to show patterns and trends.

Results: Preliminary data analysis showed that the zip codes with the highest rates of positive STIs for both pre- and post- COVID-19 data were 19124, 19134, and 19140. The proximity of these zip codes to the TYAC, which is located in zip code 19134, ranged between 1.8 to 2.8 miles. Significant changes noted to this analysis post-COVID-19, are the ranking of these zip codes with 19140 increasing from a 9.5% positive STI rate to 12.7%, and 19124 decreasing from a 17% positive STI rate to 11.5%. Additionally, zip code 19149, which has an average distance of 5 miles from the TYAC, had a pre-COVID-19 positive STI rate of 2.5% that increased to 8.9% post-COVID-19.

Conclusion: These preliminary findings show there are zip codes surrounding the TYAC that have consistently maintained high positive STI rates pre- and post- COVID -19, and a zip code with a further proximity to the TYAC that has seen a significant increase in positive STIs post-COVID-19. Additional analysis and mapping would allow for data to be dissected to block level and outreach and prevention programs to be targeted to specific populations.