Monitoring Public Health Efforts to Reduce Congenital Syphilis, King County, WA

1248

Tim W Menza, MD, PhD,[1,2] Anna Berzkalns, MPH,[2] Katie Heidere, MSW,[2] Chase Cannon, MD, MPH,[1,2] Jen Balkus, PhD, MPH,[1,2] Roxanne Kerani, PhD, MPH,[1,2]
Julia C Dombrowski, MD, MPH,[1,2] Matthew Golden, MD, MPH[1,2]
[1]University of Washington School of Medicine, Seattle, WA, USA, [2]Public Health—Seattle & King County, Seattle, WA, USA

BACKGROUND

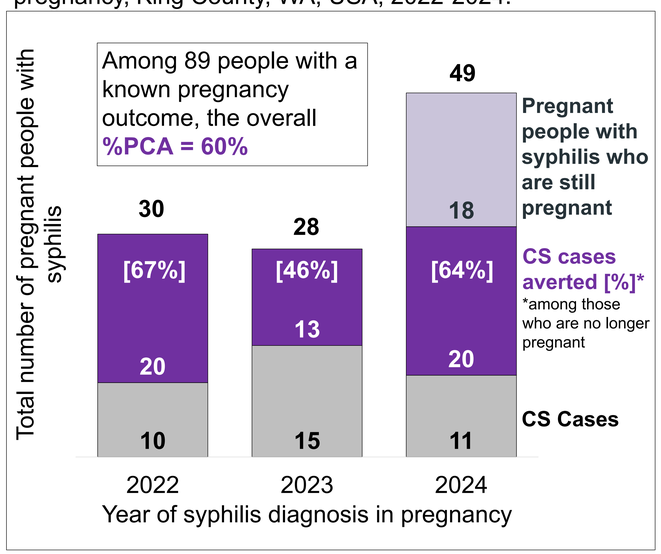
- In King County, WA, the incidence of early syphilis among women has been increasing exponentially since 2017.[1]
- Concurrently, syphilis diagnosed during pregnancy and congenital syphilis (CS) have risen dramatically.
- We sought to monitor public health efforts to prevent CS using the metric of **percentage of potential CS cases averted (%PCA)**.[2]

METHODS

- We assessed the CS outcomes of pregnant people diagnosed with syphilis from 1/1/2022 through 12/31/2024 (n=114) by year of diagnosis.
- We calculated the %PCA among people with a known pregnancy outcome as of 1/31/2025 (n=89), excluding those who were still pregnant (n=18), had a spontaneous (n=1) or elective abortion (n=4), were lost to follow-up (n=2), or had a missing outcome (n=2).
- $\%PCA = 1 - \frac{(number\ of\ CS\ cases)}{(number\ of\ pregnant\ people\ with\ syphilis)} \times 100\%$
- We examined %PCA by demographic, social, clinical, and facility characteristics, and by partner services outcomes

RESULTS

Figure 1. Congenital syphilis outcomes among pregnant people with syphilis by year of syphilis diagnosis in pregnancy, King County, WA, USA, 2022-2024.



Between 2022-2024, 60% of potential congenital syphilis (CS) cases were averted. The percentage of potential CS cases averted is a useful metric to monitor public health efforts to prevent CS.

Figure 2. Congenital syphilis outcomes and percentage of potential CS cases averted by demographic, social, and clinical characteristics, King County, WA, USA, 2022-2024.

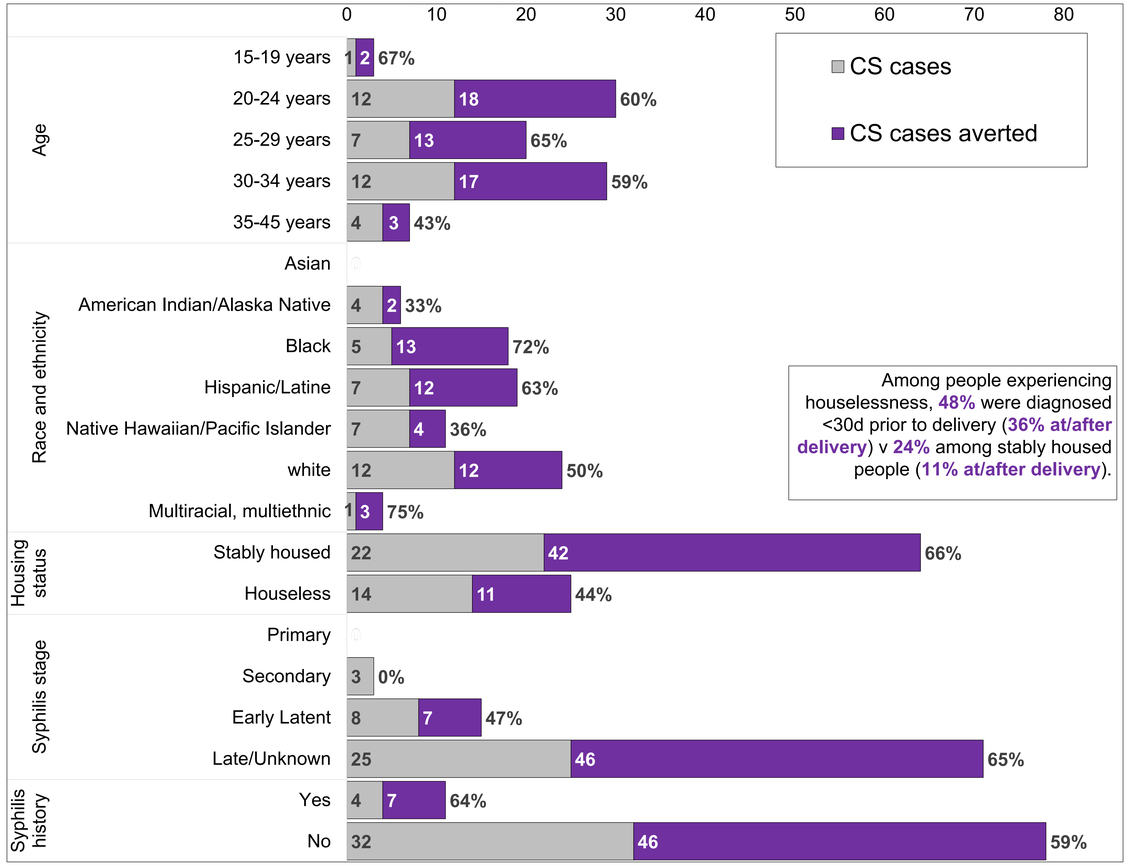
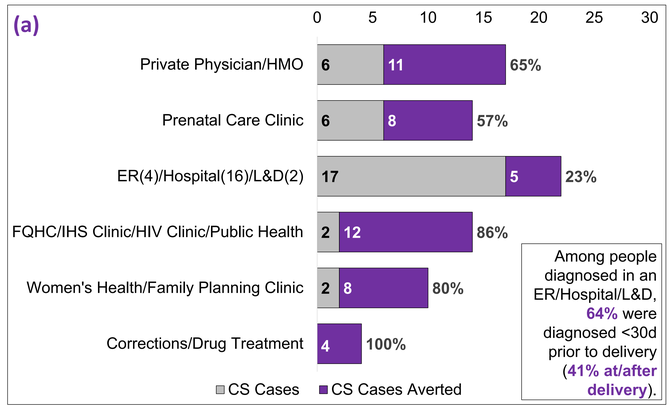


Figure 3. Congenital syphilis outcomes and percentage of potential CS cases averted by **(a)** facility of syphilis diagnosis and **(b)** partner services outcomes, King County, WA, USA, 2022-2024.



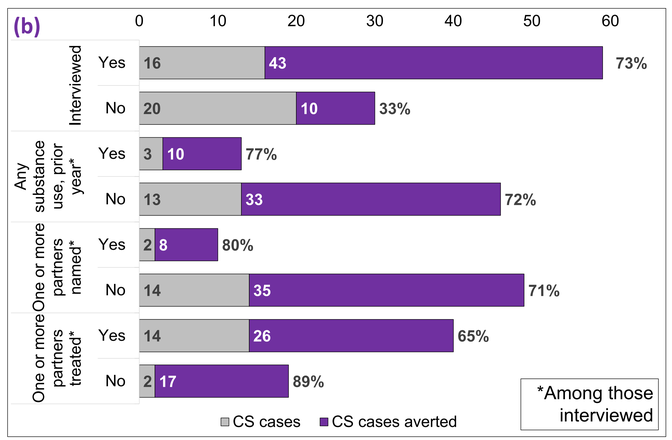


Table. Statistically significant predictors of averted CS cases, King County, WA, USA, 2022-2024.	Adjusted Prevalence Ratio (95% Confidence Interval)
Houseless (v. stably housed)	0.53 (0.29, 0.94)
ER/Hospital/L&D (v. private physician/HMO)	0.34 (0.16, 0.73)

Poisson regression with robust standard errors including year of diagnosis, all demographic, social, clinical and facility variables, and whether a client was interviewed for partner services.

CONCLUSIONS

- %PCA is a useful metric to identify gaps in CS prevention
- Decreasing houselessness, improving care for pregnant people who are houseless, and increasing access to routine prenatal care may lead to more averted CS cases.

menza@uw.edu

[1]Berzkalns *et al*. OFID, 2023.
[2]Kidd *et al*. STD, 2018.