

Introduction

Syphilis (*Treponema pallidum*) is a spiral shaped bacteria that enters the body via vaginal, anal, and oral routes.

Total Early Syphilis

- **Early (non-primary/non-secondary):** Diagnosed within first 12 months. Absence of clinical signs and symptoms exhibited in primary and secondary diagnosis.
- **Primary:** Single or multiple sores (chancres) at site of entrance.
- **Secondary:** Rash (especially on palms and/or soles)
 - Additional Symptoms: Fever, swollen lymph glands sore throat, patchy hair loss, headaches, weight loss, muscle aches, and fatigue.

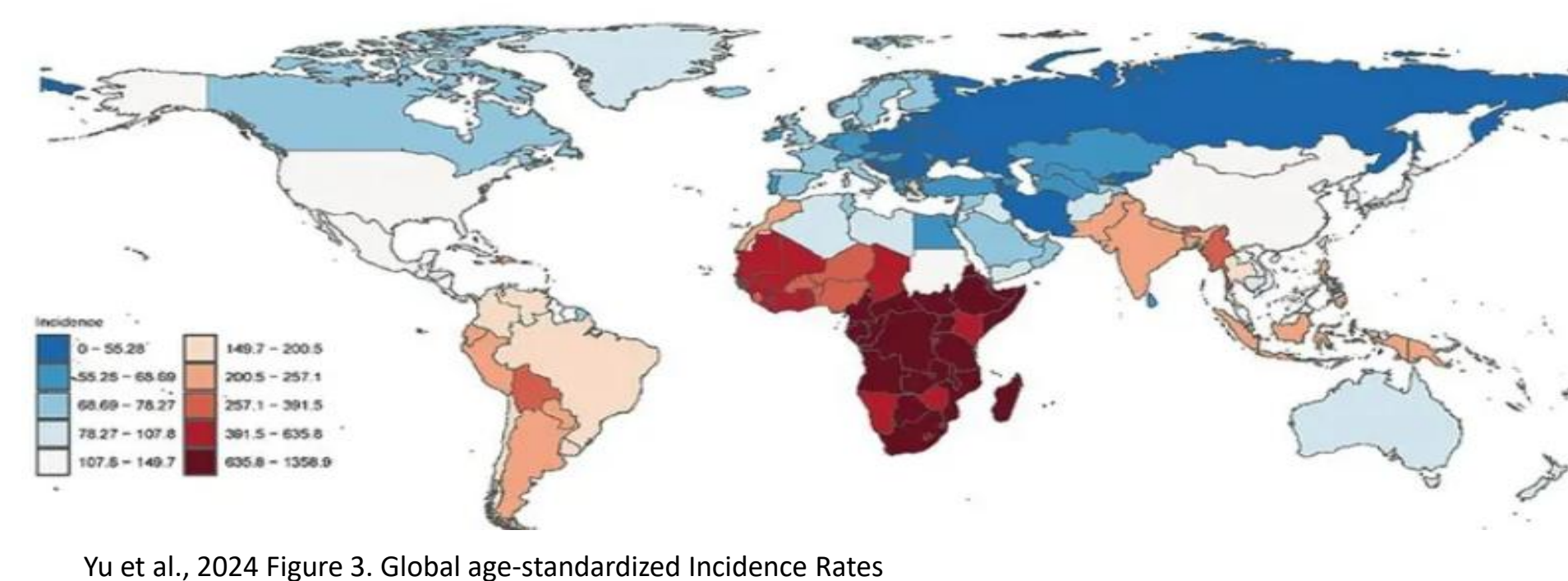
Late Latent/ Unknown Duration: Asymptomatic stage of syphilis which occurs more than one year after initial infection.

Tertiary: Untreated infection greater than 12 months. Damages to your internal organs and can cause death.

- Many infections don't progress to this stage.

Neurosyphilis, Ocular Syphilis, and Ootosyphilis: Damages to your brain/ nervous system, eyes, and ears.

Can happen at any of the stages described above.



Yu et al., 2024 Figure 3. Global age-standardized incidence rates

In 2022, global burden estimates show more than 8 million cases worldwide among adults ages 15–49 (WHO, 2024).

In the United States, **207,000** cases were reported, resulting in an **estimated \$44 million** in long-term care costs due to complications in 2019 (Chesson & Peterman, 2021)

VDH 2024 STI Surveillance: Syphilis (All Stage) Report

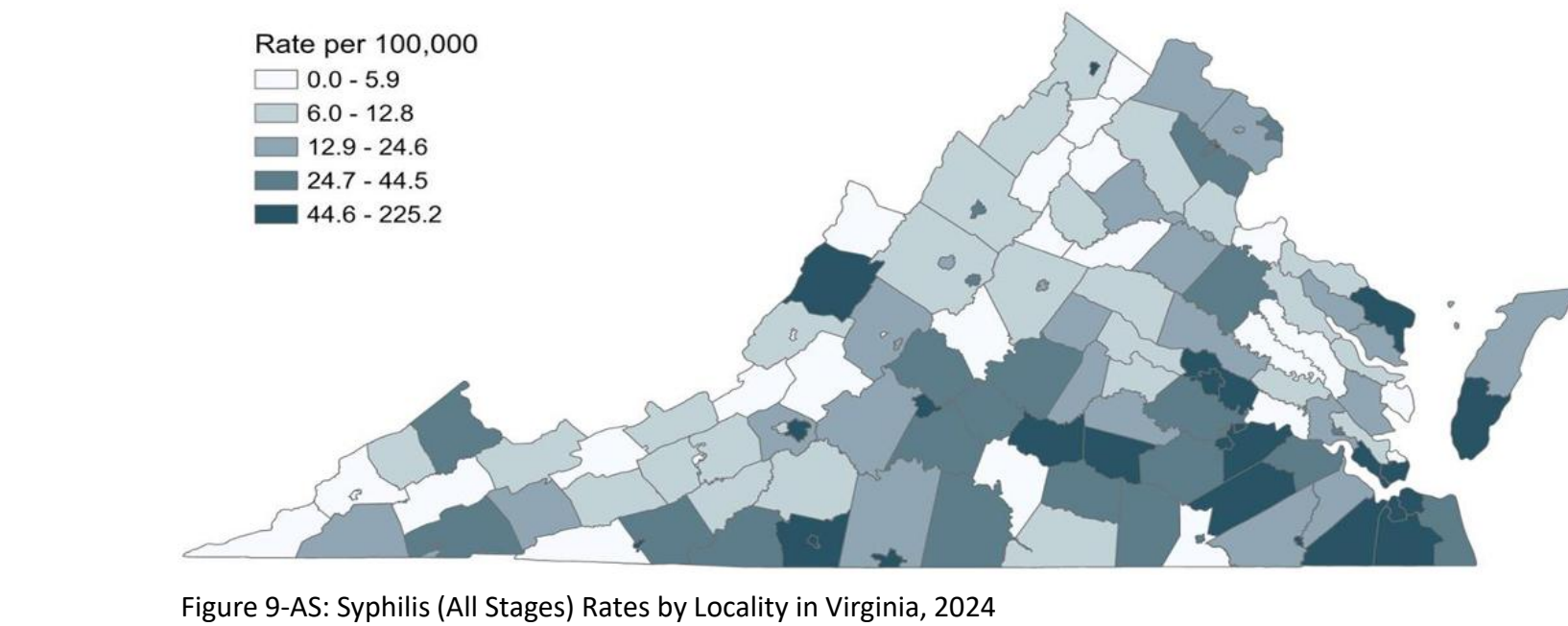
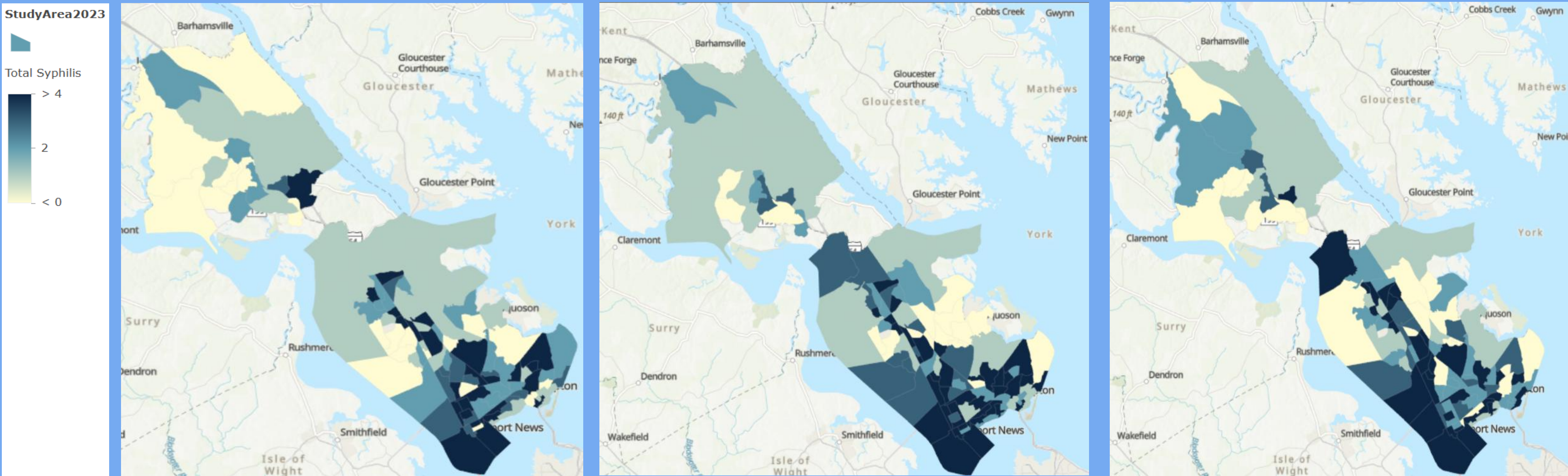


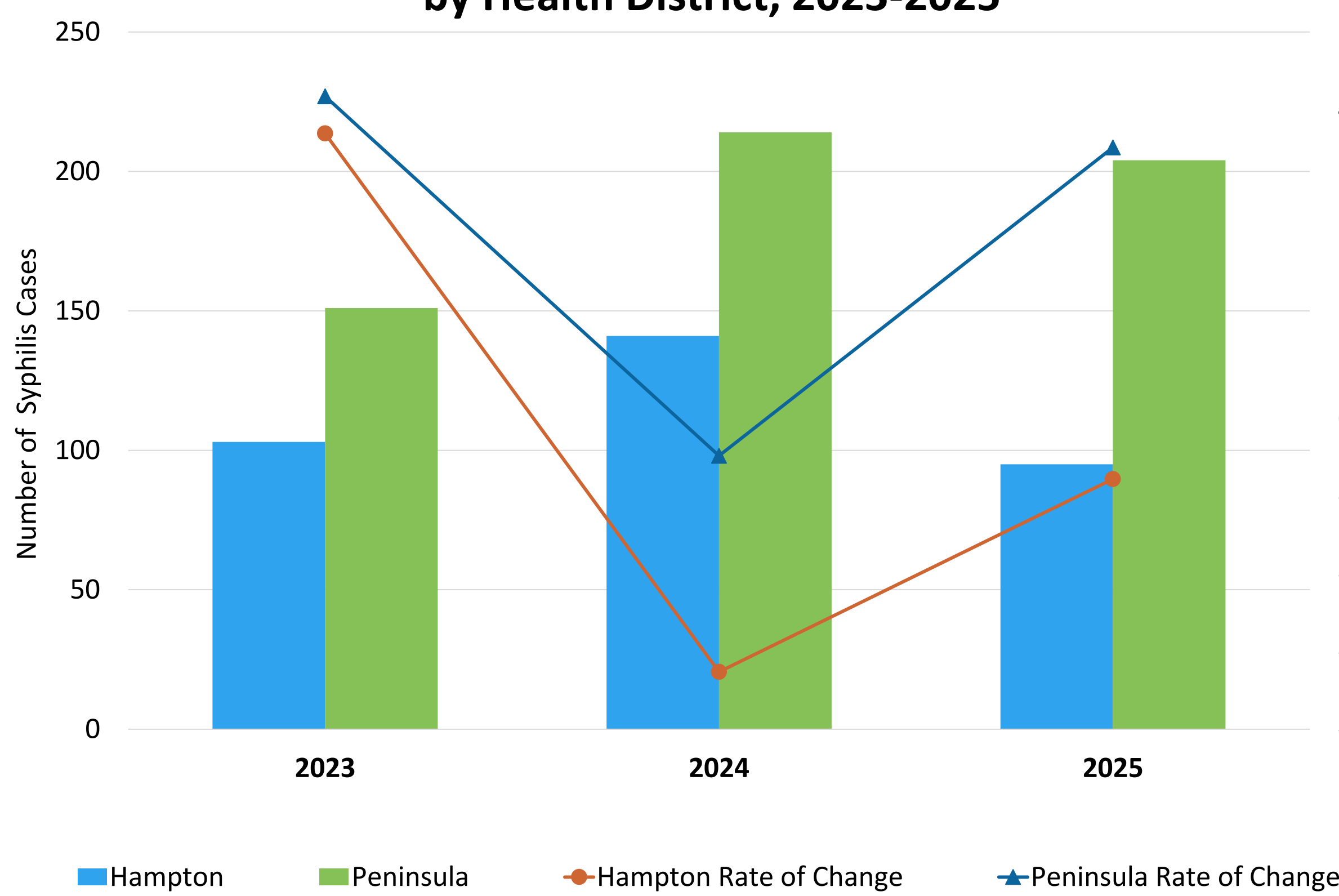
Figure 9-A5: Syphilis (All Stages) Rates by Locality in Virginia, 2024

Over 3,300 Syphilis Cases in Virginia Each Year

- All stages syphilis diagnosis rate increased 3.7% from 2023 to 2024 and has increased to 74.8% since 2020.
- In 2024, the incidence of all stages syphilis diagnosis in women rate increased 144% from 2020.
- Total early syphilis cases has increased 3.5% from 2023 to 2024 and 42.5% from 2020 to 2024.
- Latent/unknown duration case increased 3.9% from 2023-2024 and 146% in 2024 from 2020.
- Continued heavy burden on men (appx. 70% of cases).

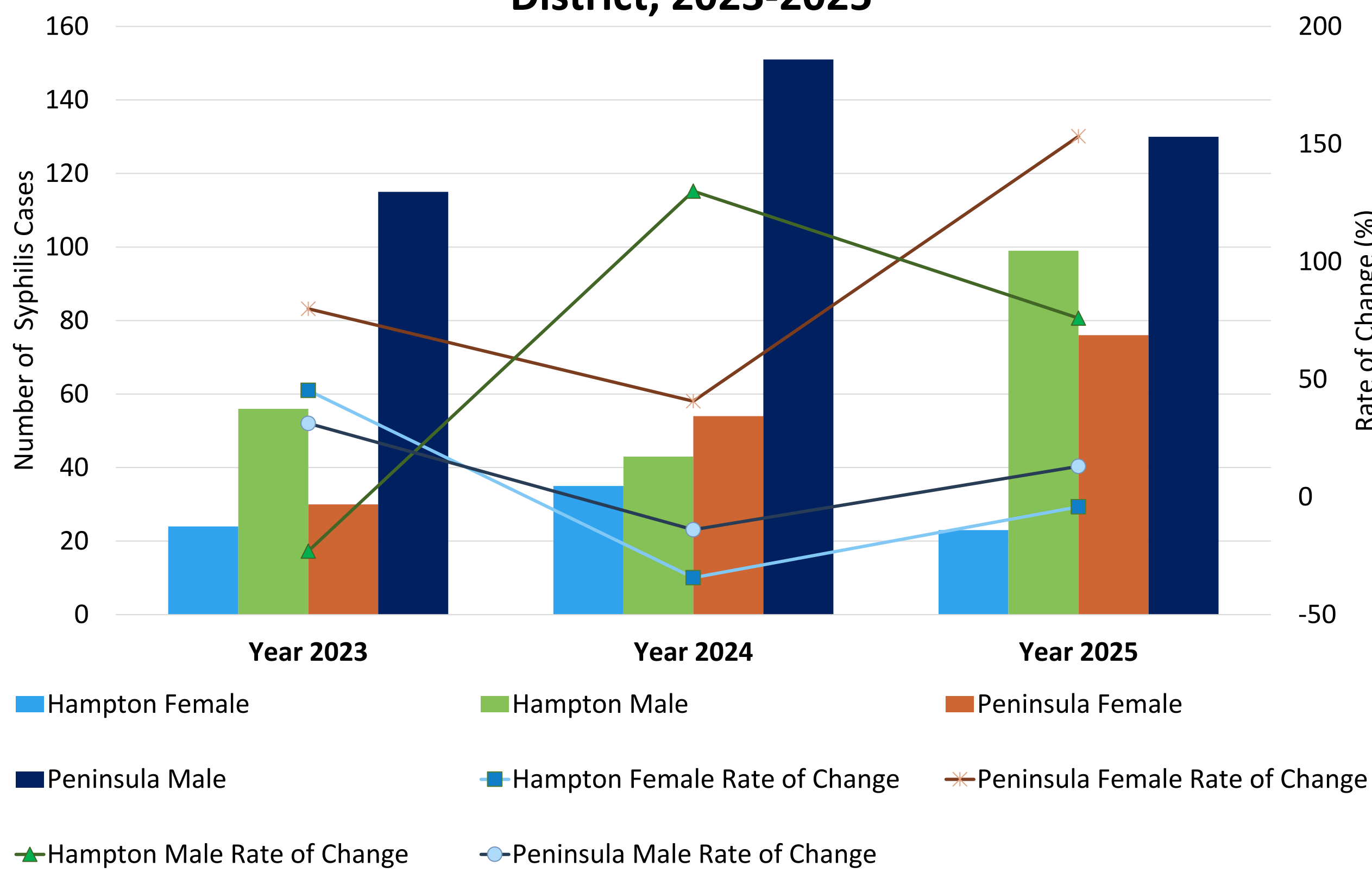


Syphilis Burden and Rate of Change by Health District, 2023-2025



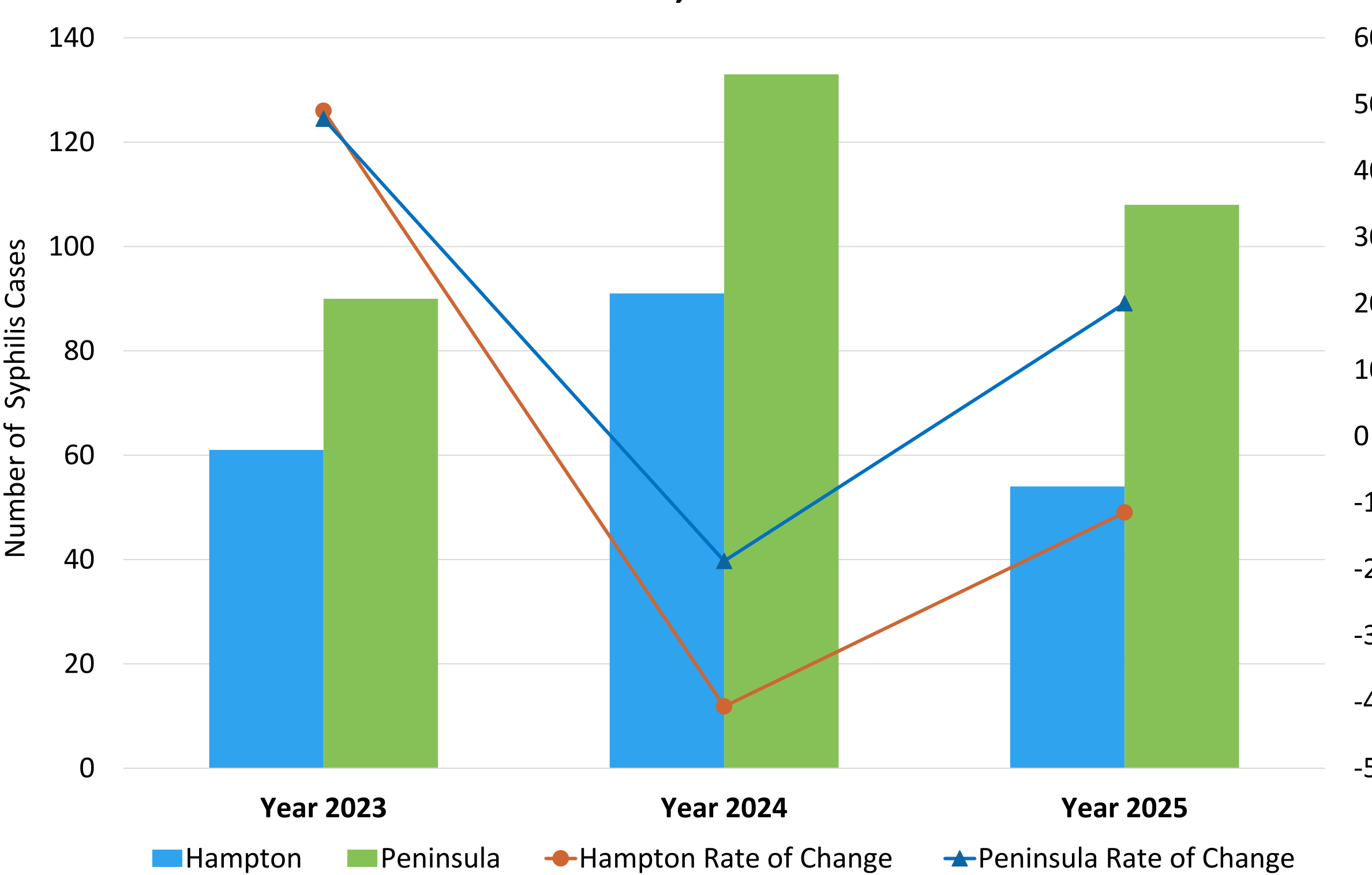
Graph 2. Between 2023 and 2024, Hampton and Peninsula showed similar rates of change around 40%. From 2024 to 2025, Peninsula experienced a 5% decrease, while Hampton had a 33% decrease. Overall, Hampton showed an 8% reduction in cases, whereas Peninsula had an overall increase of 35%.

Syphilis Burden and Rate of Change in Gender by Health District, 2023-2025



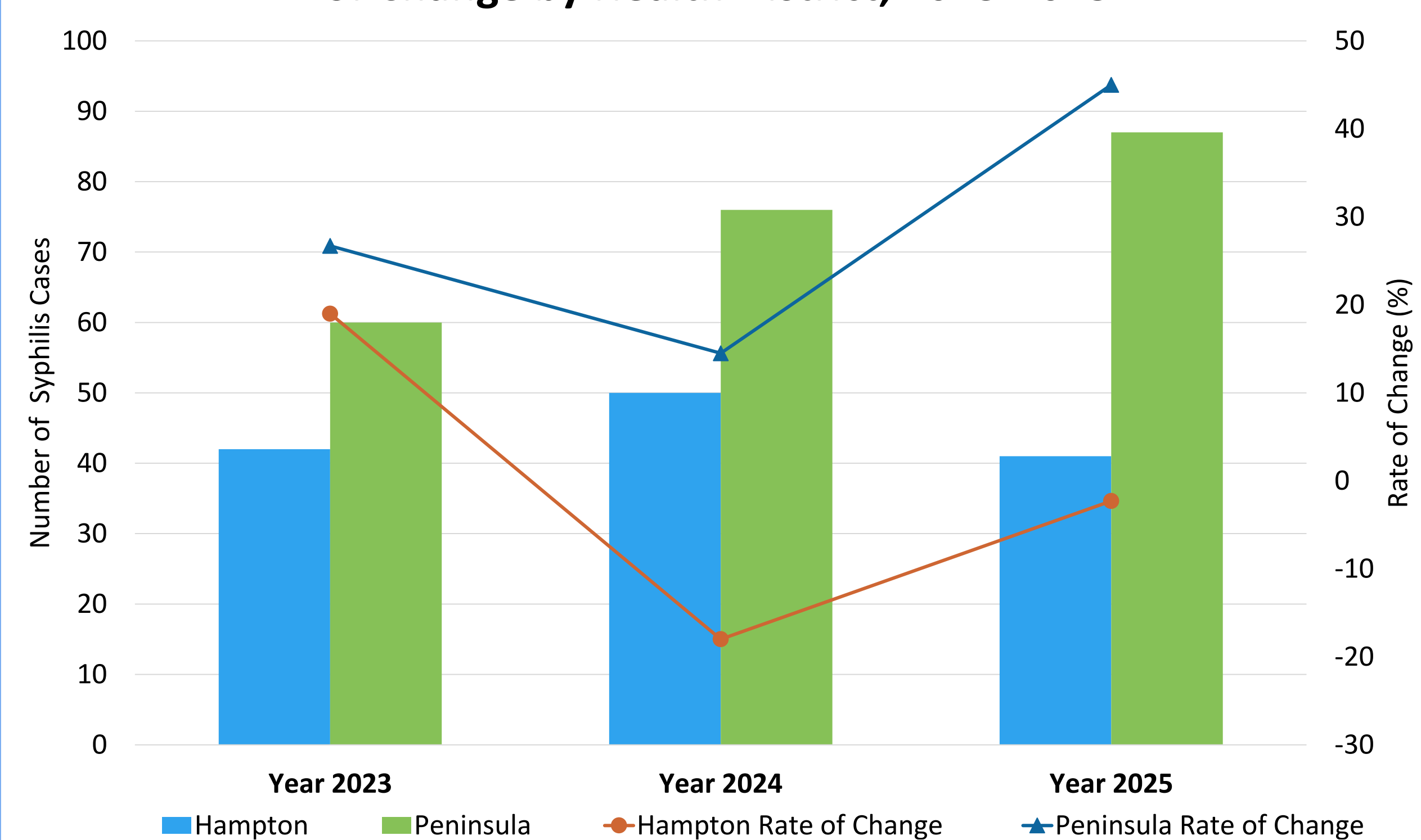
Graph 3. Hampton female residents showed an overall 4% decrease in cases. Hampton male residents experienced a slight decline in 2024, followed by a sharp rise in 2025, resulting in a 76% overall increase. Peninsula female residents demonstrated a steady upward trend with a 153% increase. Peninsula male residents consistently had the highest case counts throughout the study period, with an overall rate increase 13%.

Total Early Syphilis Cases and Rate of Change by Health District, 2023-2025



Graph 4. Depicts a sharp rise and a fall in cases for both health districts. Between 2023 and 2024, Hampton and Peninsula showed similar rates of change at 19% and 27%, respectively. From 2024 to 2025, Peninsula experienced a 15% increase, while Hampton had a 18% decrease. Hampton had an overall decrease in cases of 2% while Peninsula had a 45% increase from 2023-2025.

Late Latent/ Unknown Duration Syphilis Cases and Rate of Change by Health District, 2023-2025



Graph 5. Between 2023 and 2024, Hampton and Peninsula showed similar rates of change around 49%. From 2024 to 2025, both and Hampton experienced a decrease, 19% in Peninsula and 41%. Overall, Hampton had a decrease in cases of 12% while Peninsula had a 20% increase.

Graph 1. Total Syphilis Cases in the Hampton and Peninsula Health Districts

Graph 1. Displays geospatial distributions of total syphilis cases across both health districts. **Left map (2023):** Baseline case distribution for the initial year of the study. **Middle map (2024):** Increased concentrations of darker blue areas (case counts >4) and a rise in green areas (case count = 1), indicating higher case density in several census tracts. **Right map (2025):** Expansion of yellow areas (case count = 0) alongside growth in mid-blue areas (case count = 2), suggesting shifting patterns in where cases are occurring.

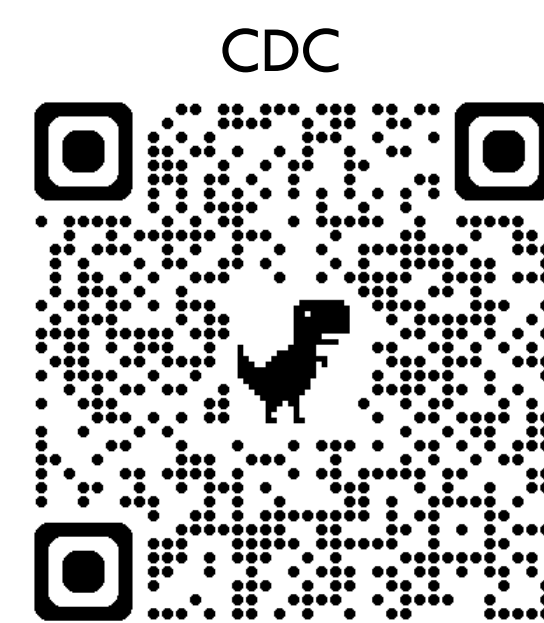
Summary

- Syphilis cases in the Hampton and Peninsula Health Districts continue to rise, with the Peninsula showing the highest overall burden across all three study years.
- GIS mapping reveals shifting concentrations of disease, with several census tracts experiencing increasing case counts over time.
- Female residents in the Peninsula region showed a steady rise in reported cases over the study period.
- Total early syphilis cases have grown in the Peninsula while declining in Hampton, indicating differing district-level trends.
- Late latent syphilis cases have risen substantially in the Peninsula, Syphilis cases in the Hampton and Peninsula Health Districts continue to rise, with the Peninsula showing the highest overall burden across all three study years.
- These combined trends highlight the need for targeted prevention, expanded testing, and improved treatment access.

Challenges and Recommendations

- Connect residence to resources.
- Patient adherence to treatment when diagnosed with later stage syphilis.
- Increase testing in expecting mothers and in sexually active adults.
- Decrease social stigma in STI testing.
- Continued targeted intervention for MSM.

More Information on Syphilis Testing & Treatment



Sources

- Centers For Disease Control. (2022). Syphilis - STI Treatment Guidelines.
- Chesson HW, Peterman TA. (2021). The Estimated Lifetime Medical Cost of Syphilis in the United States. Sexually Transmitted Diseases.
- Virginia Department of Health. (2025). Data in Virginia - Syphilis.
- Virginia Department of Health. (2024). Syphilis (All Stages) STI Annual Reports 2024.
- World Health Organization. (2024). Global Health Observatory: Data on syphilis. The Global Health Observatory

Acknowledgements

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