

Introduction

Syphilis is a systemic infection that, if left untreated, can cause a variety of clinical manifestations—including neurosyphilis, ocular syphilis, and otic syphilis. These manifestations can occur at any stage and may cause symptoms such as fever, headache, stiff neck, blurred vision, eye pain, hearing loss, and vertigo. Late clinical manifestations (also known as tertiary syphilis) generally occur after 15–30 years of untreated infection and can negatively affect internal organs such as the heart and liver, as well as the nervous system.

Surveillance

The Utah Department of Health and Human Services (DHHS) collects data on clinical manifestations which occur in patients diagnosed with syphilis. Cases of syphilis are reported according to the stage of infection (e.g., primary; secondary; early non-primary, non-secondary; and unknown duration or late syphilis) and information on clinical manifestations is detailed in the case report. The Centers for Disease Control and Prevention (CDC) defines these clinical manifestations as possible, likely, or verified. A detailed description of each of these definitions can be found in the [syphilis 2018 case definition](#).

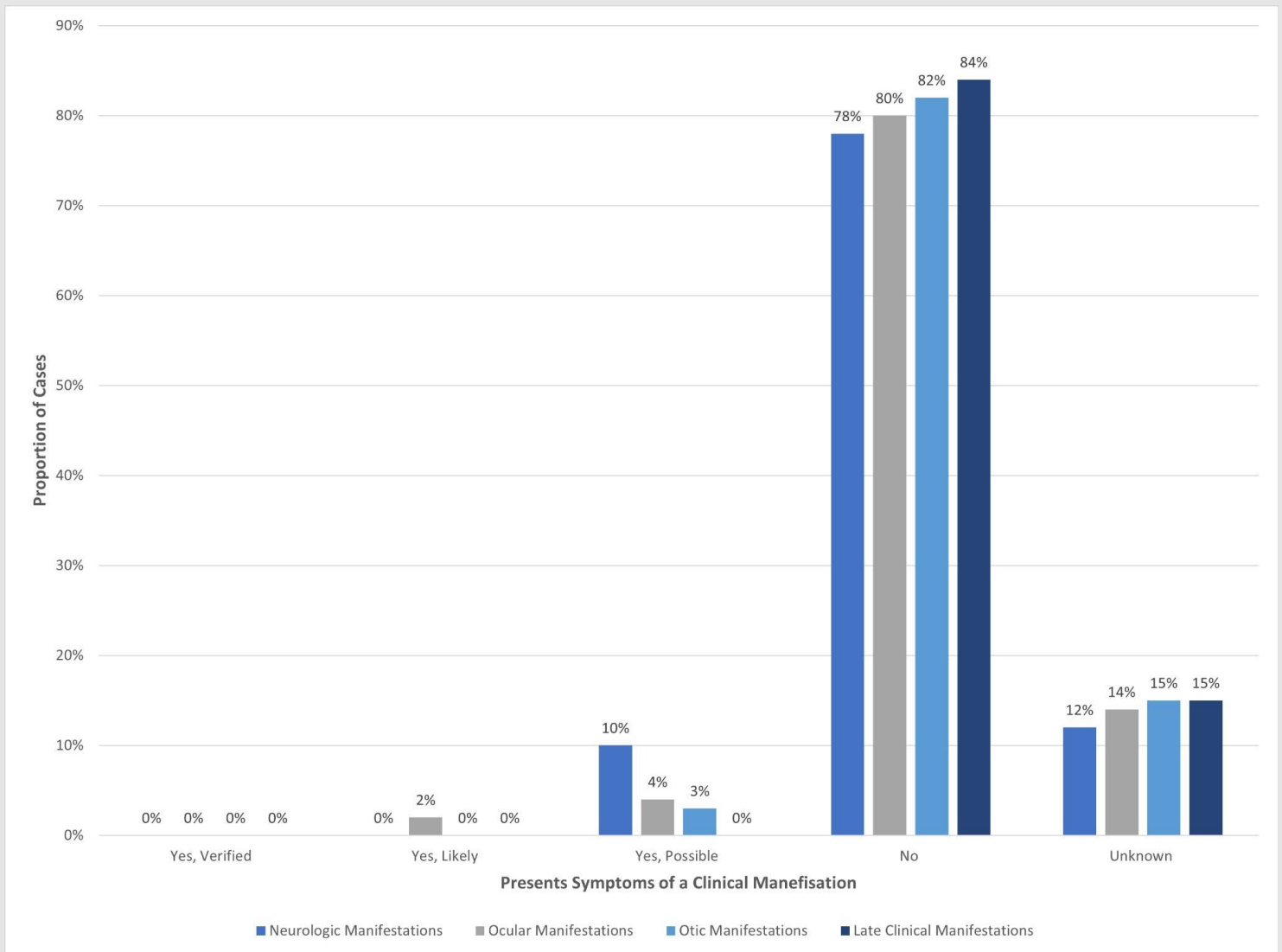
As of 2022, Utah is considered a low incidence state for clinical manifestations of syphilis. With 'likely neurosyphilis' only being reported in 0.03 cases per 100,000 persons for all stages of syphilis. 'Possible neurosyphilis' was reported in 1.29 cases per 100,000 persons. Rates for ocular and otic syphilis are similarly low with 0.21 cases of 'likely ocular syphilis,' 0.99 cases of 'possible ocular syphilis,' 0.06 cases of 'likely otic syphilis,' and 0.06 cases of 'possible otic syphilis' per 100,000 persons. Overall, a very low proportion (fewer than 1%) of all people with syphilis in Utah in 2022 presented with clinical manifestations. See Figure 1.

A note on data interpretation

The number of people with possible clinical manifestations of syphilis likely overestimates the true burden of disease. This is because any individuals diagnosed with syphilis who present with suspicious symptoms such as blurry vision, dizziness, etc. will be marked as having possible neuro, ocular, and/or otic syphilis unless further testing is completed to rule out infection or determine a likely or verified case. Local health department staff encourage patients with suspicious symptoms to follow up with a specialist, but unfortunately, many patients do not.

Figure 1

Proportion of Syphilis (Primary, Secondary, Early Non-Primary Non-Secondary, and Unknown Duration or Late) (n=592) Cases Presenting Symptoms of a Clinical Manifestation (Neurological, Ocular, Otic, Late Clinical), 2022



Follow-up

As previously mentioned, people who present with clinical manifestations of syphilis are referred to a specialist for further testing) to confirm the presence or absence of neuro, ocular, and/or otic infection. Currently, DHHS' database does not offer a variable to track specialist follow-up, making reliable data on specialist follow-up for Utah unavailable.

DHHS will soon include a specialist follow-up field within the database to track follow-up rates. Once established, it will allow for reliable data to be collected, and eventually exported and distributed.