

Boo, Syphilis is Really Back!

So what is going on and what are we missing?

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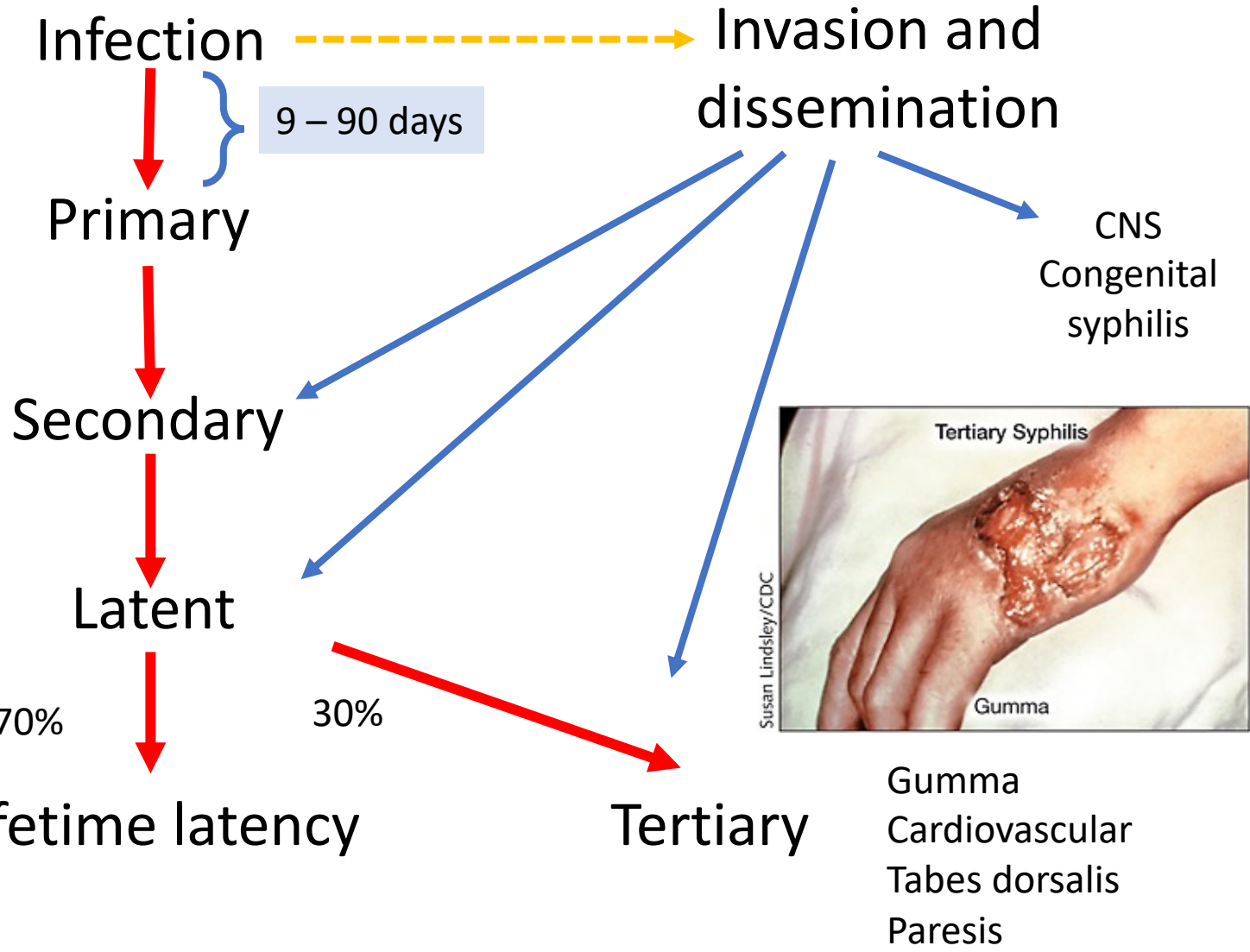
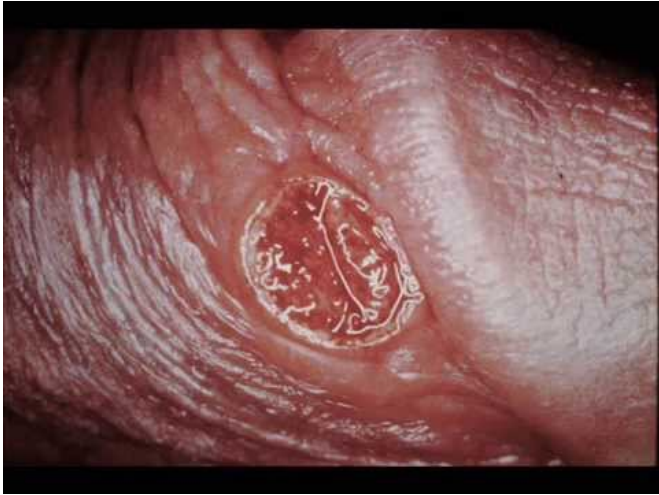
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National Network of
STD Clinical Prevention
Training Centers



Natural History of Untreated Syphilis



Susan Lindsley/CDC

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Natural History of Syphilis

Sexual transmission (only occurs in early stages)

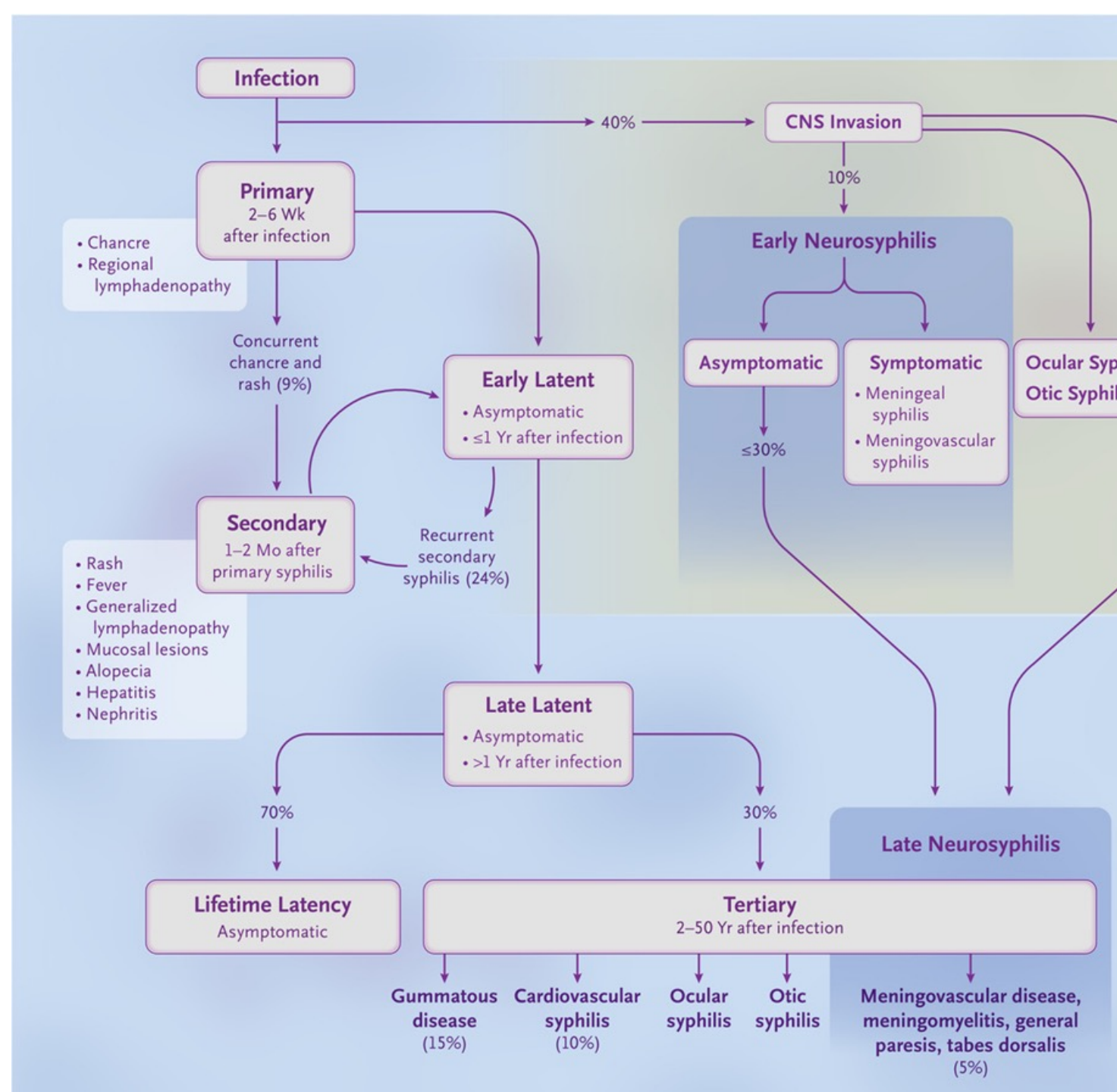
- Risk of infection after 1 exposure: 40%
- Index patient is most contagious during 1^o and 2^o stage, less so in early latent stage

Vertical transmission (may occur during any stage)

- ~80% transmission in the early stages
- ~10% transmission in the late stages

Rarely, transmission may occur through **blood transfusions** and **organ transplantations**

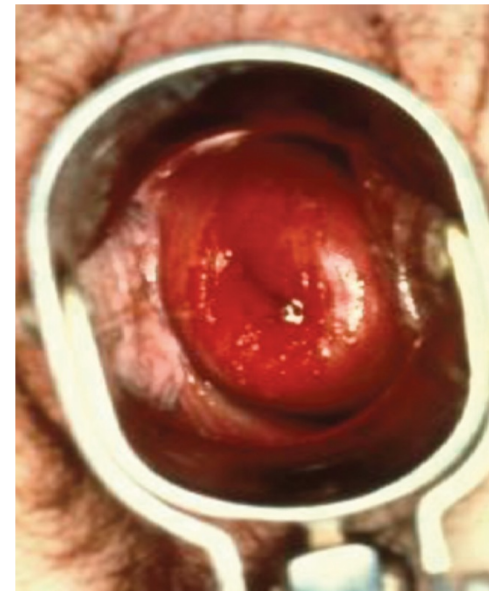
Ghanem K. N Engl J Med 2020;382:845-854.



Primary Syphilis



- Chancre: appears 2-3 wks after exposure(range 3-90 days)
 - local lesion at site of inoculation
 - typically painless, indurated, clean base
 - **Up to 40% have multiple and/or painful lesions*****
 - Regional adenopathy: classically rubbery, painless, and bilateral



Extragenital Primary Syphilis



Clinical Spectrum of Secondary Syphilis

Secondary Syphilis

Skin,
mucosa,
lymph
nodes

Lymphadenopathy 50-80%
Rashes ~75%
Mucus patches 6-30%
Condyloma lata 10-20%
Alopecia 5%

Eye

Conjunctiva
Scleritis
Episcleritis
Interstitial keratitis
Uveitis
Iritis
Vitritis
Chorioretinitis
Retinitis
Retinal Vasculitis
Optic Neuritis
Pupillary abnormalities

Nervous system

Meningitis
Asymptomatic/symptomatic
Meningo-encephalitis
Cerebral infarction
Spinal cord infarction
Cranial neuropathy

Lungs

Pneumonitis
Sub-pleural nodules
Pleural effusion

Musculo-
skeletal

Arthralgias
Arthritis
Periostitis
Bursitis

Kidney

Glomerulonephritis
Nephrotic syndrome

Digestive tract

Parotitis
Gastritis
Gastric Ulceration
Hepatitis (Clinical Subclinical)
Hepatomegaly
Splénomegaly
Proctitis

Early Secondary Syphilis Rashes

- **Macular rash:** the first, most common, short-lived (2-3 days), and does not involve the face; usually, nonpruritic. Treponemes are not present in macular lesions by dark-field examination
- A few days later, a symmetric **papular eruption** appears, involving the entire trunk and the extremities (including the palms and soles); usually scaly, but may be smooth, follicular, or pustular



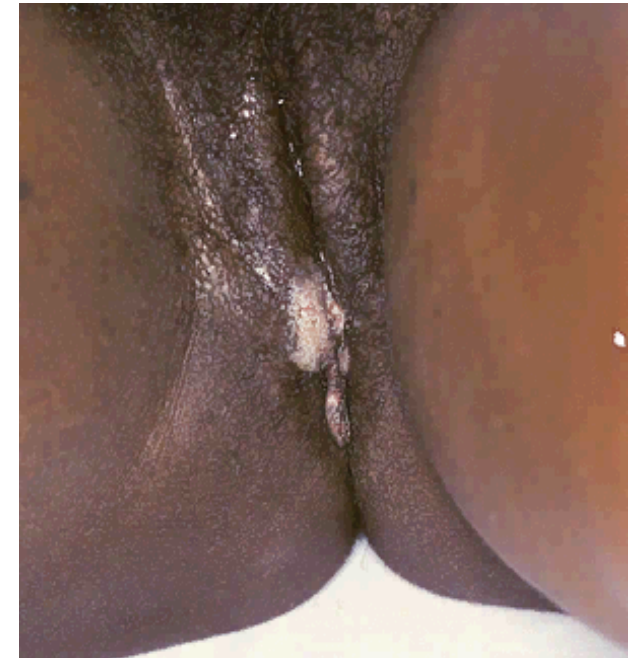
CLINICAL MICROBIOLOGY REVIEWS, Jan. 2005, p. 205-216

Early Secondary Syphilis Rashes: Palms and Soles



Late Secondary Syphilis: Mucus Patches

- Mucus patches (5-30%)
 - flat patches in mouth, pharynx, genitals



Late Secondary Syphilis Manifestations

- Condylomata lata (5-25%)
 - heaped, moist wart-like papules
 - in warm intertriginous areas
 - teeming with spirochetes
- Patchy alopecia



www.cdc.gov



International Journal of Dermatology 2014, **53**, 1434–1441

Where we were in 1999...



**SYPHILIS
ELIMINATION**
History in the Making

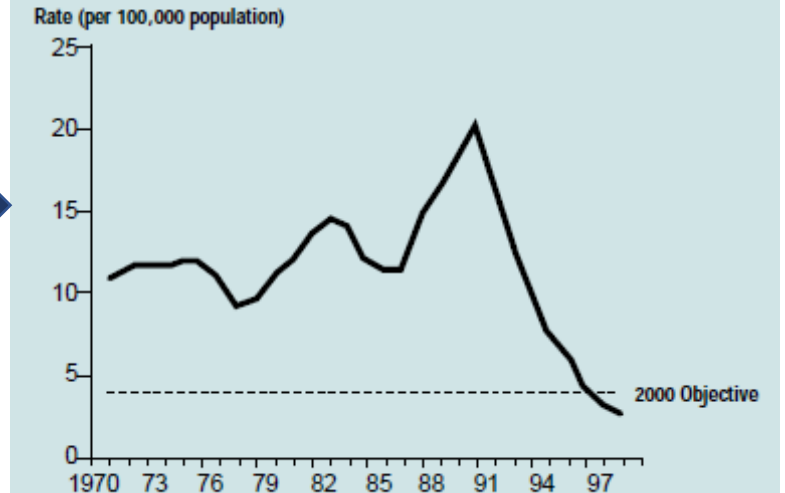
The National Plan to Eliminate Syphilis from the United States

October 1999
Division of STD Prevention
National Center for HIV, STD, and TB Prevention
Centers for Disease Control and Prevention



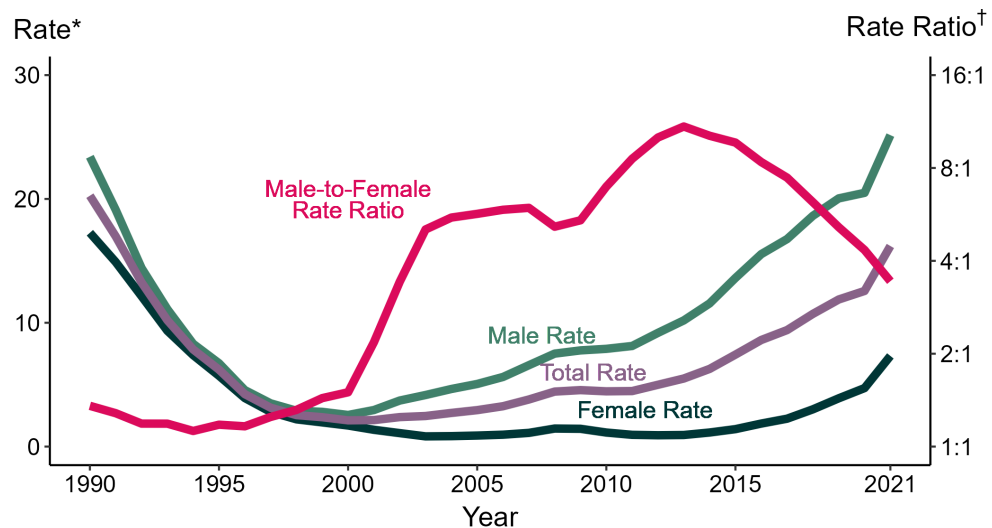
Figure 1.

Primary and secondary syphilis—Reported rates:
United States, 1970-1998 and the Healthy People year
2000 objective.

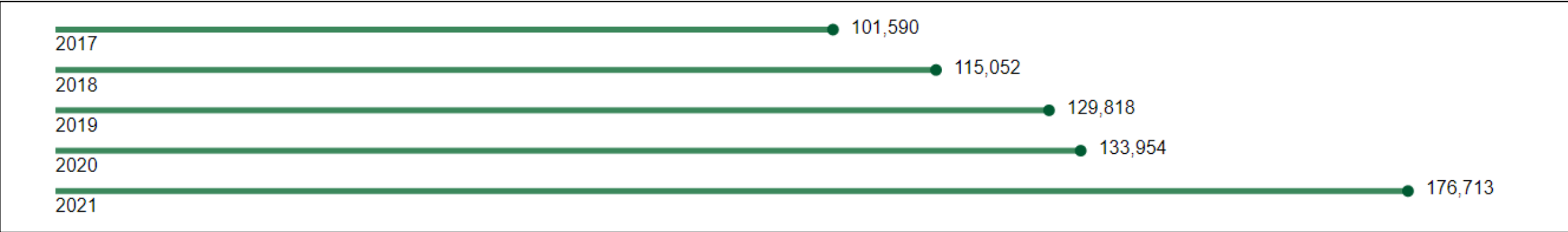


Where we are now...

Primary and Secondary Syphilis — Rates of Reported Cases by Sex and Male-to-Female Rate Ratios, United States, 1990–2021



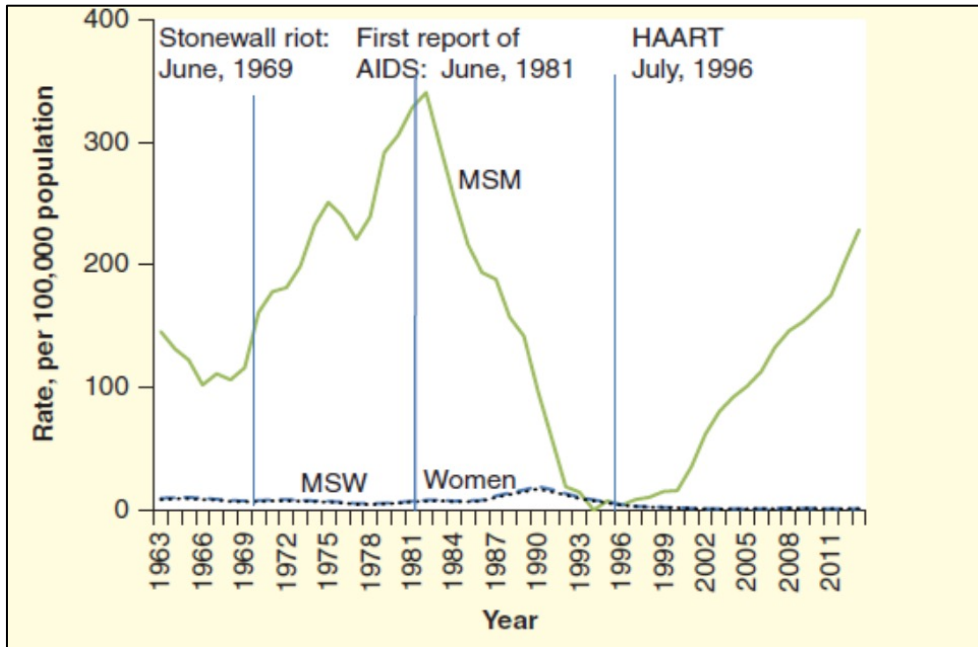
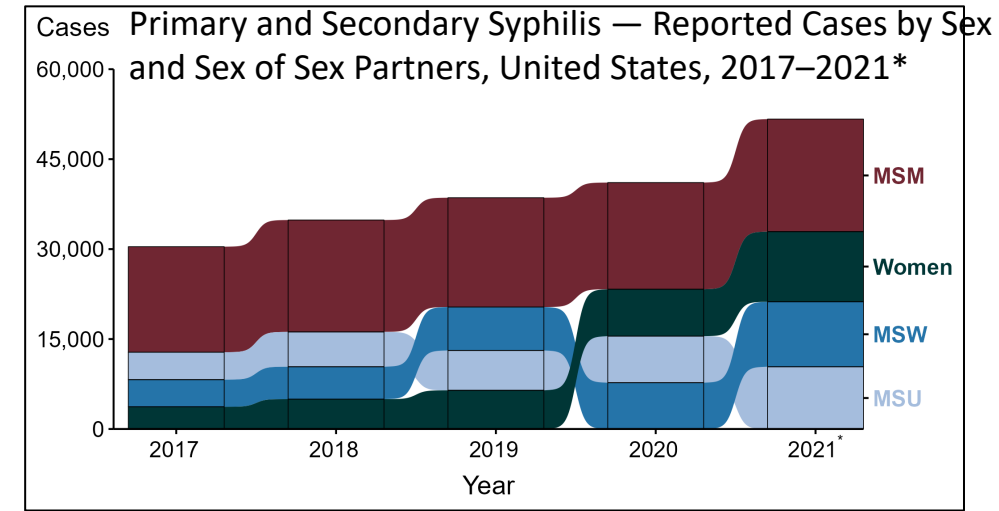
There are 2 distinct epidemics that are ongoing in the United States at this time



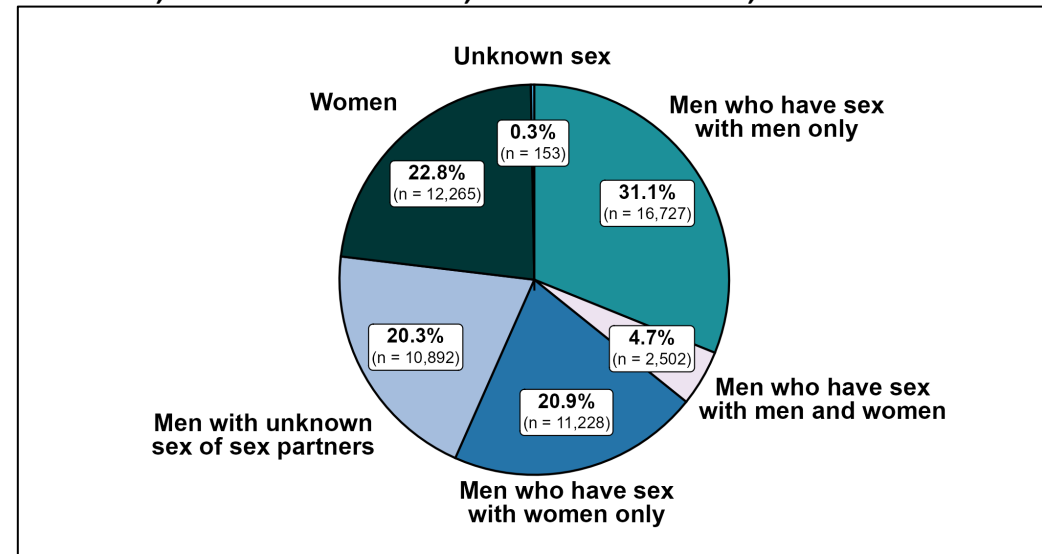
During 2020 to 2021, the rate of reported total syphilis increased 31.7%

Syphilis: The MSM epidemic

- Increasing rates since 2001
 - 74% increase between 2017 and 2021
 - 45% are living with HIV**
 - Nearly 30% are re-infected 3-6 months after treatment

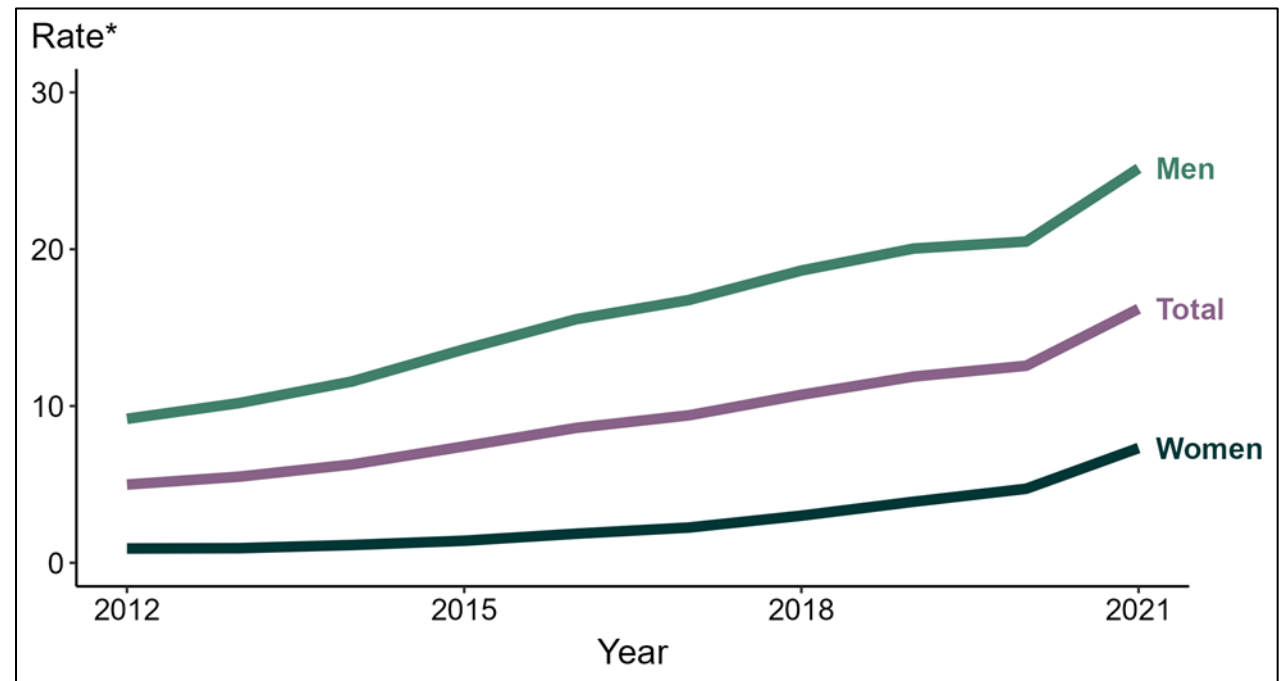


Primary and Secondary Syphilis — Reported Cases by Sex, Sex of Sex Partners, and HIV Status, United States, 2021



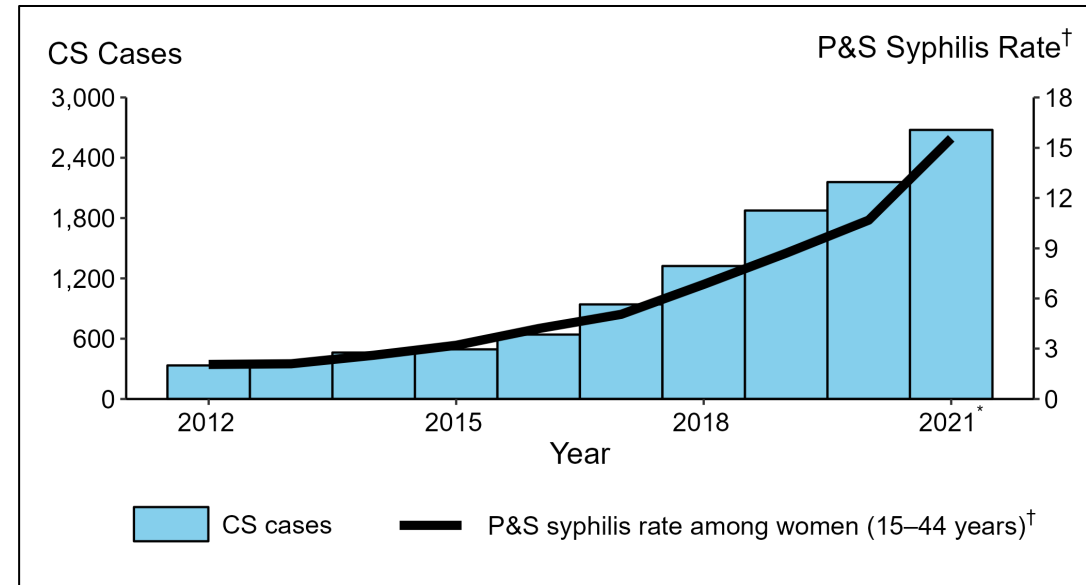
Syphilis: The heterosexual epidemic

- During 2020 to 2021, the primary and secondary syphilis rate among women increased 55% and the rate among men increased 23%
- Over the last 5 years, the primary and secondary syphilis rate among women increased 217.4% and the rate among men increased 50%

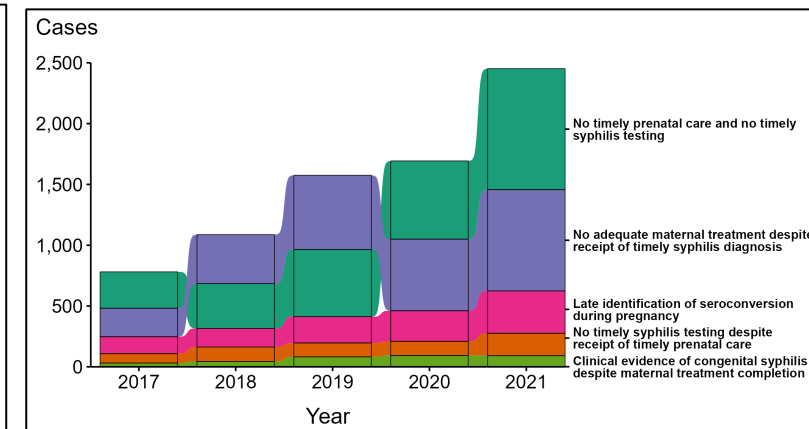
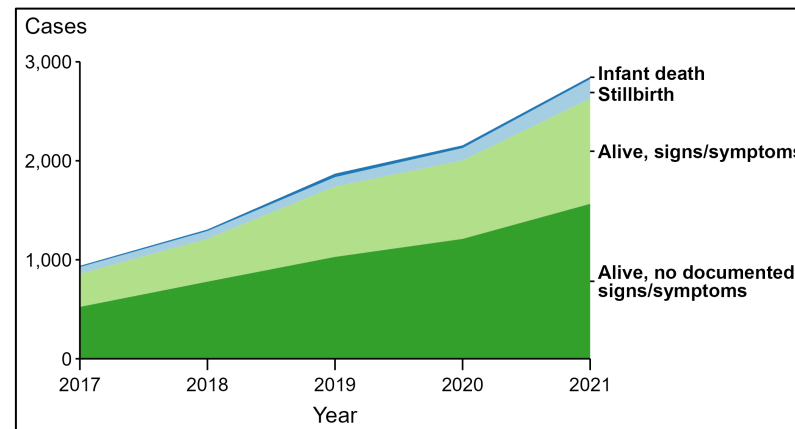


Congenital syphilis: A failure of public health

- During 2020 to 2021, the number of cases of congenital syphilis increased 32% (2,157 to 2,855 cases), concurrent with a 52% increase (10.7 to 15.6 per 100,000) in the rate of primary and secondary syphilis among women aged 15 to 44 years.



- **During 2012 to 2021, the number of cases of congenital syphilis increased 755% (334 to 2,855 cases), concurrent with a 676% increase (2.1 to 16.3 per 100,000) in the rate of primary and secondary syphilis among women aged 15 to 44 years.**



Call to Action!!!

- ASK
- Screen / test
- Treat
- Intervene