BUREAU DE SANTÉ DE MIDDLESEX-LONDON HEALTH UNIT

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# Healthcare Provider Webinar

Middlesex and London Region

July 12, 2022

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# Welcome

Presenter:

**Dr. Alex Summers**

Medical Officer of Health

Middlesex-London Health Unit

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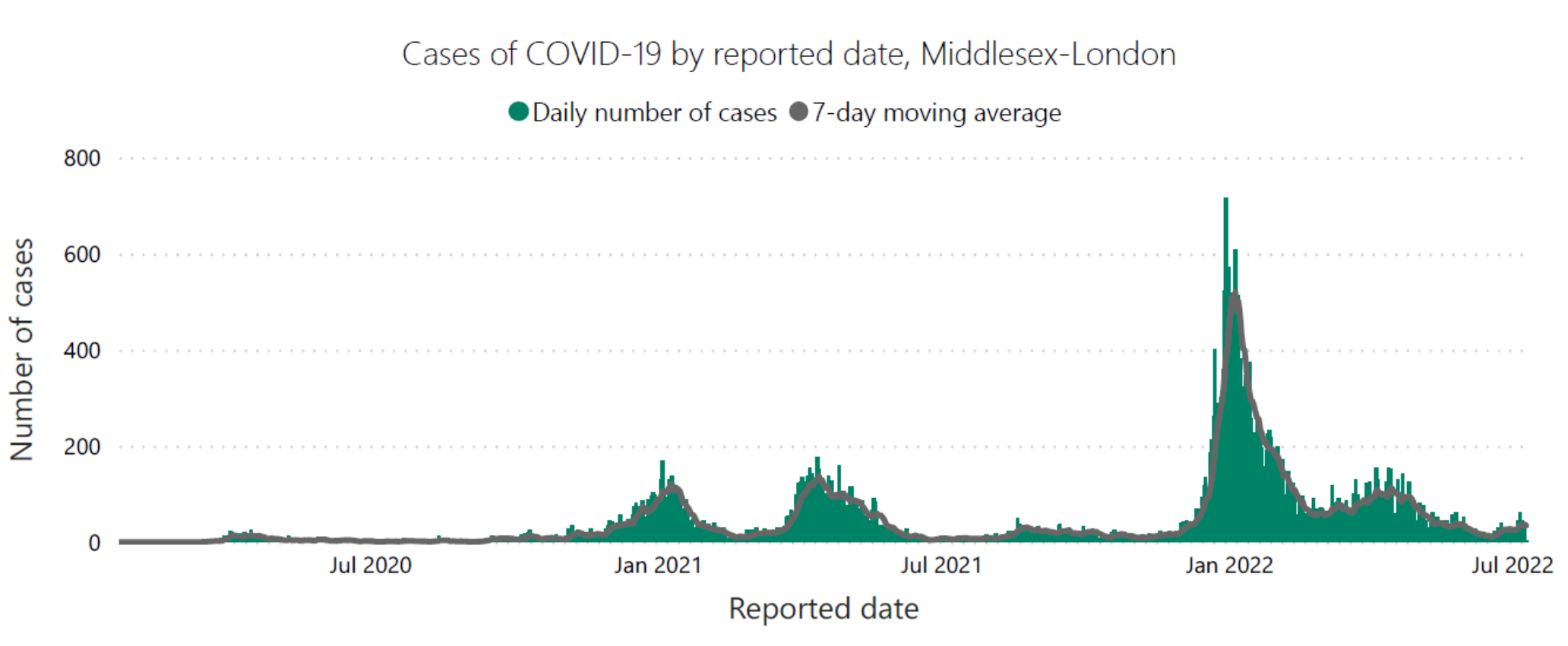
# Cases by Reported Date




**Data source**: Ontario Ministry of Health (Ministry) *Public Health Case and Contact Management Solution* (CCM), extracted 2022-07-11 Data current as of the end of day 2022-07-10.

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# Updated Publicly Funded Vaccine Schedule

- An updated version of the Ontario Publicly Funded Immunization Schedules are now available online at: https://health.gov.on.ca/en/pro/programs/immunization/schedule.aspx
- Key updates include:
  - Addition of maternal Tdap dose
  - Hepatitis B eligibility expansion to Grade 12
  - Rotavirus change: added Rotarix 2-dose series (removed Rotateq 3-dose series)
  - Simplified catch up schedules as a result of:
    - Hep B eligibility to Grade 12, and;
    - All students are now eligible for HPV until the end of Gr. 12 (no longer the need to differentiate between male and female cohorts for HPV since the initial cohort of boys have completed Grade 12)
  - Addition of more detailed information in Table 1: Vaccine Administration

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# Monkeypox Resources

- The Ministry has released guidance on the use of Tpoxx® (Tecovirmat- antiviral treatment) and a Tpoxx® information sheet
- Both available through this week's newsletter under *New / Updated Resources*

Ministry of Health

## Monkeypox Antiviral Guidance for Health Care Providers

Version 1.0 - June 30, 2022

This guidance document provides basic information only. This document is not intended to provide or take the place of medical advice, diagnosis, treatment, or legal advice.

Ontario continues to monitor for cases of monkeypox and is working collaboratively with health care providers, Public Health Ontario (PHO), and the Public Health Agency of Canada (PHAC) to address health risk(s). New guidance will continue to emerge as new information becomes available and the epidemiology of this situation evolves.

Ministry of Health

## TPoxx® Information Sheet

Version 1.0 – June 30, 2022

This guidance provides basic information only. This document is not intended to provide or take the place of medical advice, diagnosis or treatment, or legal advice.

### Is there a treatment for monkeypox?

Yes. Tecovirmat (TPoxx®) is an antiviral medication that prevents the virus' ability to multiply and therefore slows down its spread throughout the body. This allows your body to build up its defences to fight off the infection.

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# Syphilis

Dr. Rochelle Johnstone

# Objectives

- Review etiology, epidemiology, manifestations and complications
- Treatment – preferred and alternative regimens
- Review diagnosis – especially test interpretation
- General myth-busting and advice on when to seek assistance
- Resources

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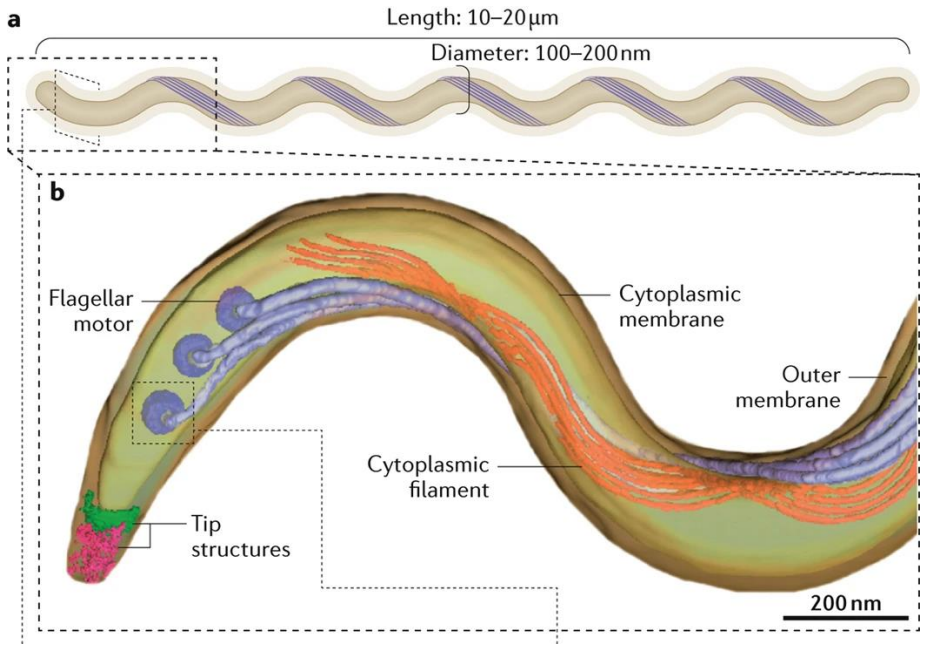
# What is Syphilis?

- Sexually transmitted infection caused by *Treponema pallidum* ssp pallidum
- Fastidious, fragile, *tiny* spirochete, cannot be grown in culture
- Spreads readily from contact with mucous membranes or open lesions



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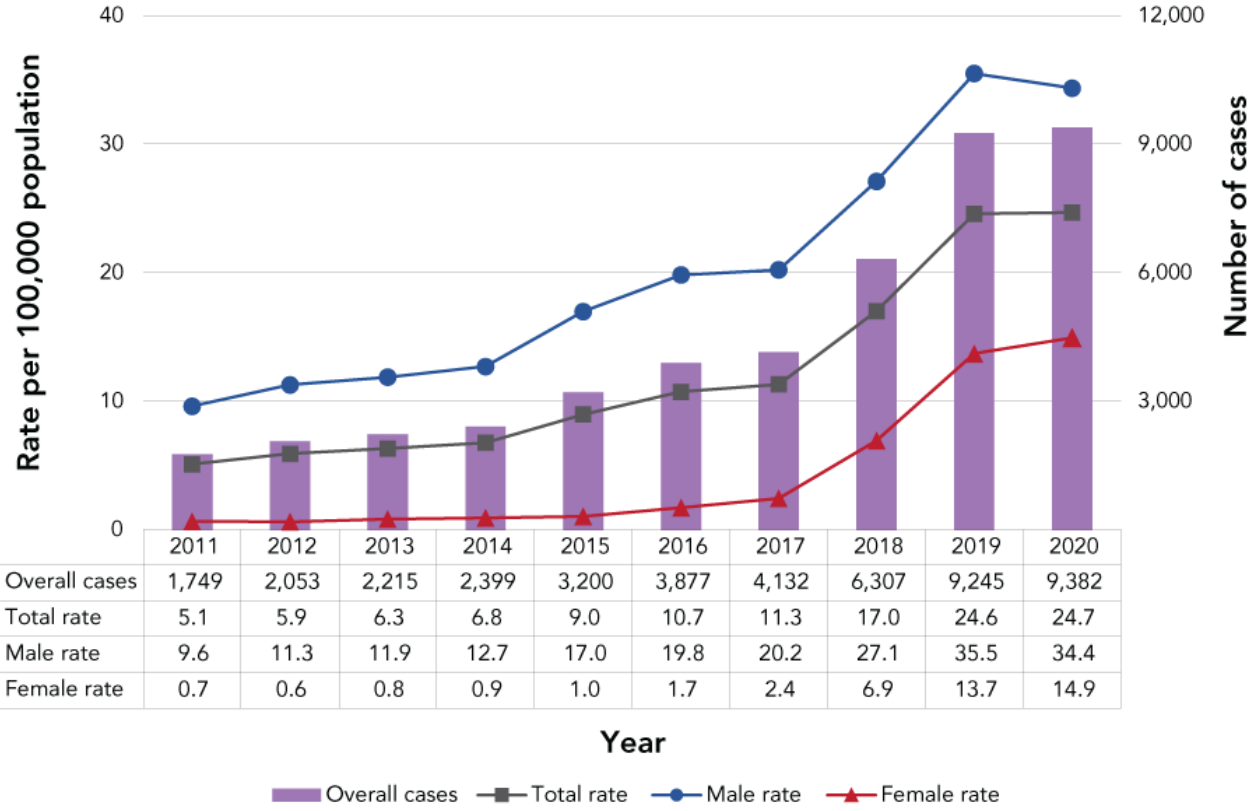
# Epidemiology

- Steady rise in cases since 2000
- Previously concentrated in me who have sex with men (MSM
- Now crossing all demographic boundaries




| | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|---|
| Overall cases | 1,749 | 2,053 | 2,215 | 2,399 | 3,200 | 3,877 | 4,132 | 6,307 | 9,245 | 9,382 |
| Total rate | 5.1 | 5.9 | 6.3 | 6.8 | 9.0 | 10.7 | 11.3 | 17.0 | 24.6 | 24.7 |
| Male rate | 9.6 | 11.3 | 11.9 | 12.7 | 17.0 | 19.8 | 20.2 | 27.1 | 35.5 | 34.4 |
| Female rate | 0.7 | 0.6 | 0.8 | 0.9 | 1.0 | 1.7 | 2.4 | 6.9 | 13.7 | 14.9 |

Aho J, Lybeck C, Tetteh A, Issa C, Kouyoumdjian F, Wong J, Anderson A, Popovic N. Rising syphilis rates in Canada, 2011–2020. Can Comm Dis Rep 2022;48(2/3):52–60. https://doi.org/10.14745/ccdr.v48i23a01

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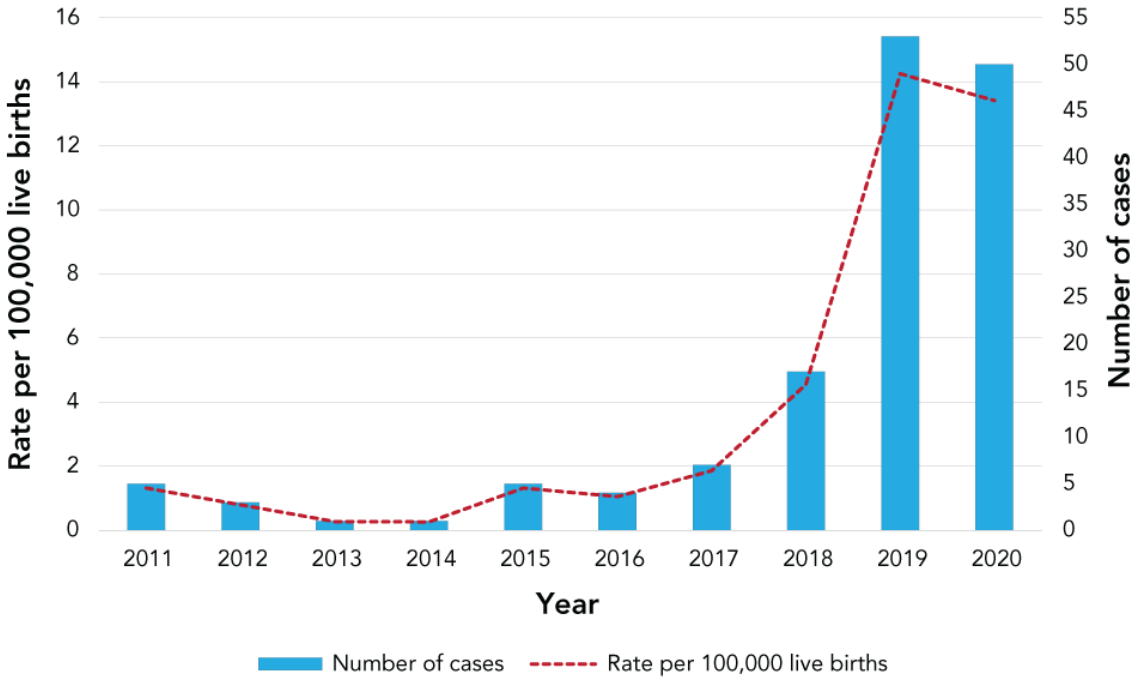
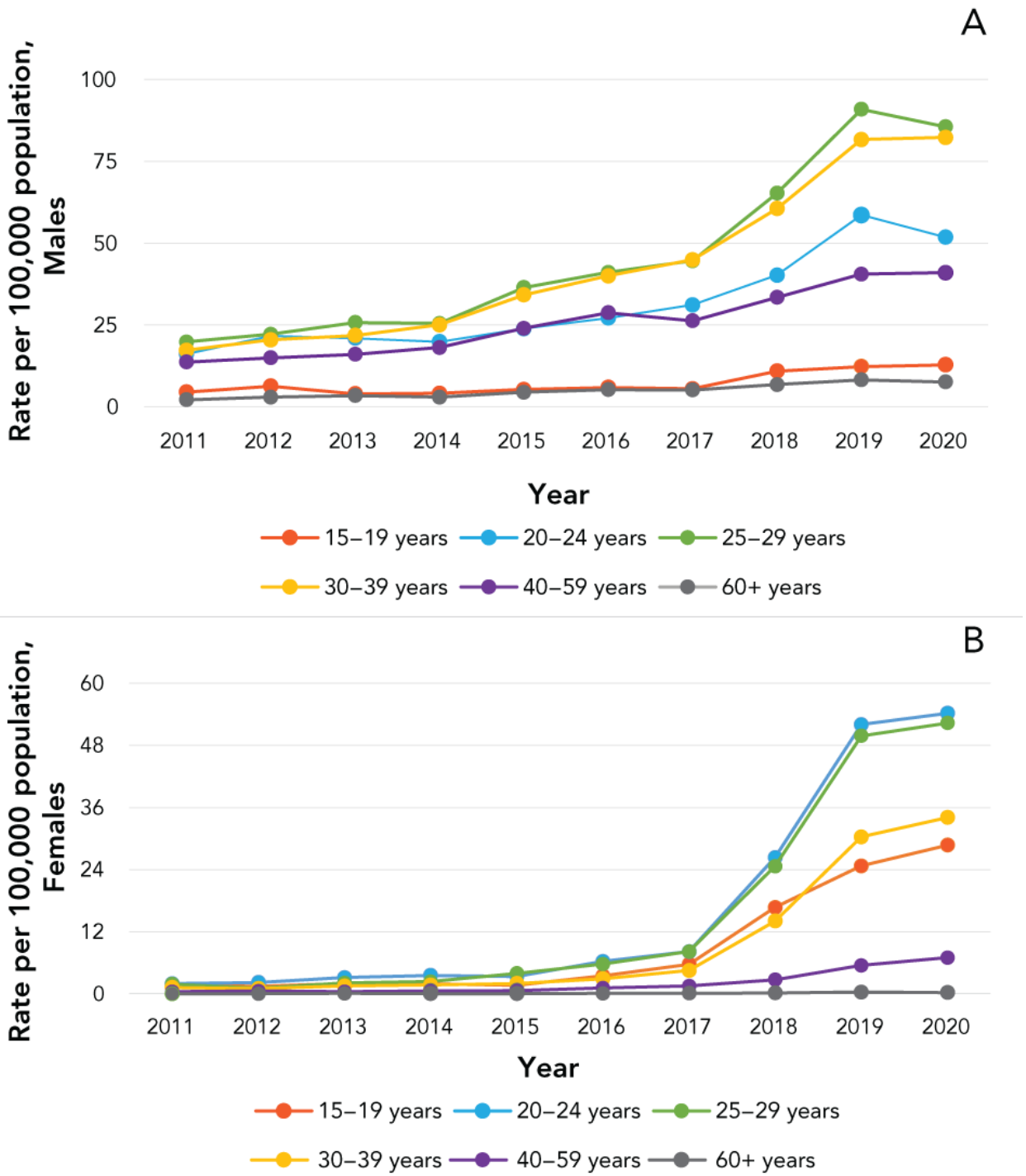
- Highest rate of rise in women ages 20-30
- Resulting steep rise in cases of congenital syphilis

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# Primary Syphilis

- Primary syphilis – **chancre**
  - Usually painless clean-based ulcer with raised rubbery edges
    - Rectal lesions can be painful, clinically mimic fissures
    - Some lesions can be heaped-up “tumoral”
  - Form wherever spirochetes were inoculated
    - Penis •Vulva •Vagina •Cervix •Rectum • Tongue •Throat
    - Note many possible *internal* lesions, esp in women – lead to failure to present to care, missed diagnoses
  - Can have bulky associated lymphadenopathy
- All will self-resolve without treatment in 3 to 6 weeks

# Secondary Syphilis

- 25% of infected experience symptomatic secondary dz
- Presents as **Rash** in 95+% of those – but there are exceptions!
  - Caused by florid spirochetemia
  - Can look like almost anything
    - Usually maculopapular, can progress to pustules
  - Usually painless and non-pruritic – but some patients do have itch.
  - Can affect palms and soles – but many have **no** palmar or plantar disease
  - May have ‘mucous patches’
    - Moist, oval, shallow ulcers with overlying membrane, teeming with spirochetes
    - Can coalesce to form ‘condyloma lata,’ flat wet wart-like lesions of genitals
- Generalized lymphadenopathy (common), Constitutional symptoms
- End organ disease of most any system
  - Hepatitis most common, also GI symptoms, periostitis, nephrotic syndrome, etc.
- Self resolving without therapy

# Tertiary Syphilis

- 25–40% of untreated patients
- Need not have had symptomatic primary or secondary dz
- Mercifully rare in era of penicillin
- Prominently includes aortitis, gumma formation (granulomatous lesions, can mimic sarcoidosis or TB), general paresis (dementing illness of syphilis), and tabes dorsalis (locomotor ataxia)
- Occurs 1 to 30 years after infection
- In between = **latent** syphilis, early or late (divide at 1 year from contracting infection)

# Neurosyphilis

- Spirochetes in the CSF
- Can manifest as meningitis, **ocular syphilis** and **oto**syphilis – but can also be asymptomatic
- Can occur at **any stage** of the disease – most common in secondary stage
  - Can be primary presentation, *with* or *without* visible chancre
  - As secondary stage, can be *with* or *without* rash
- Meningitis – symptoms same as any viral meningitis, but can invade vascular system and cause stroke in the young or old
- Ocular – may cause any loss or alteration in vision
- Otosyphilis – hearing loss with or without tinnitus

# Congenital Syphilis

- Highest risk if primary or secondary syphilis in pregnancy
  - 60–100% risk in secondary syphilis
  - ~40% early latent (1 year or less since infection)
  - ~8% late latent
- Can be devastating
  - “Snuffles” most obvious sign at birth
  - Global developmental delay, seizures, vision and hearing loss, etc etc
- Generally beyond scope of this quick review

# Diagnosis

- No culture available, no microscopy available outside of specialized labs
- Rely on **serology** – admittedly complex to interpret
- Who to screen?
  - Anyone sexually active with new partners
  - Anyone who is sexually active in a non-monogamous relationship
  - Anyone with high-risk sexual activity generally (q. 3 months reasonable)
  - New rash without other clear etiology, especially if on palms/soles (but recall can be trunk-only, or more limited)
  - Vision loss, hearing loss, or stroke in the young

# Serology

## Treponemal Tests

- Includes CMIA, EIA, TPPA
- Specific to syphilis
- Usually stay positive for life
- No titre available

## Non-treponemal Tests

- Includes RPR and VDRL
- Non-specific – based on serum reaction to a cardiolipin-cholesterol-lecithin antigen
- Give a **titre** (e.g. 1:2, 1:8)
  - Rise with infection
  - Fall with treatment **or** more slowly with immune control of disease

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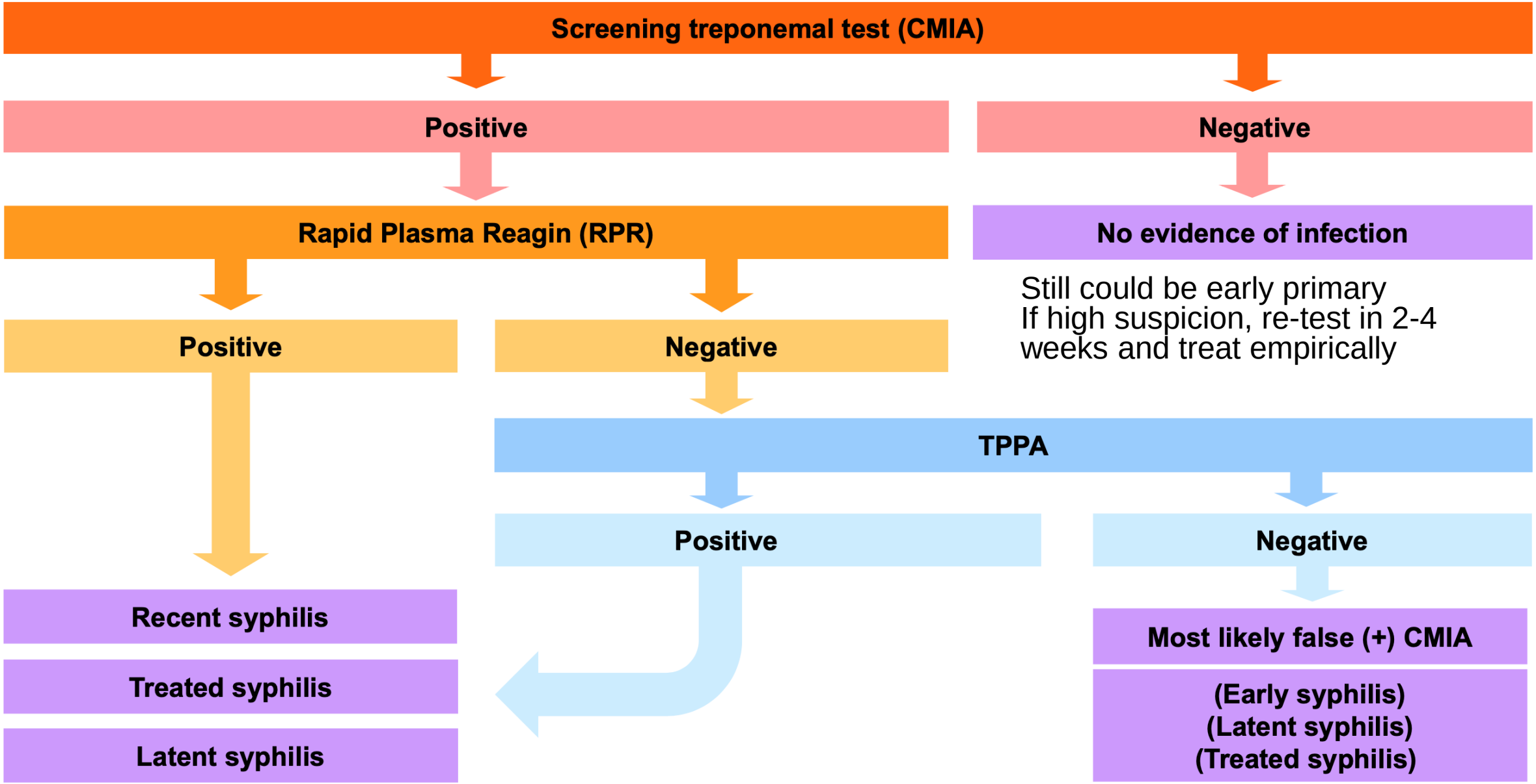

# Treatment

- Penicillin mainstay of treatment
  - Benzathine Penicillin 2.4 million units IM
    2 shots of 1.2m U (1.2 mL), one in each gluteus
- Primary, secondary, or early latent disease
  2.4 million U once
- Late latent disease (more than 1 year from infection, or infection of unknown duration)
  2.4 million U weekly x3 times

# Alternative treatment

- Note that alternatives are second best!
- Penicillin allergy more than 10 years ago? "Family history" of allergy"?
  - Consider test oral dose.
- If pregnant and allergic? **Admit** for penicillin desensitization
- Primary, secondary, early latent:
  - Doxycycline 100 mg PO BID for 14 days
  - Maybe ceftriaxone 1 g IM or IV daily for 10 days
- Late latent:
  - Doxycycline 100 mg PO BID for 28 days

# Treatment – The Complicated

- Neurosyphilis including Ocular or Otic
  - Penicillin G 4 million units IV q. 4 hours for 10-14 days
  - Recommend referral to Infectious Diseases
  - Consider involving Neuro, Ophtho or ENT depending on case
- Syphilis in Pregnancy
  - Benzathine Penicillin 2.4 million U IM at least once
  - Most experts recommend second dose of same one week later due to different pharmacodynamics in pregnancy
  - Recommend referral to Paeds Infectious Diseases
  - May need Maternal-Fetal Medicine, Neonatology

# Jarisch-Herxheimer Reaction

- Occurs after initial treatment with antibiotics
  - Most marked with penicillin, occurs about 6-8 hours post dose
  - Likely due to cytokine storm as immune system encounters products of lysed spirochetes
- Presents with abrupt onset of fever, chills, myalgias, headache, tachycardia, hyperventilation, vasodilation with flushing, mild hypotension – varying degrees depending on patient
- Lasts from 12 to 24 hours and self-resolves
- Most important intervention is reassurance – **not** a medication allergy
- Can treat with NSAID or ASA

# Serology post Treatment

- Primary, secondary, early latent
  - Retest at 3, 6, and 12 months
- Late latent and tertiary syphilis
  - Retest at 12 and 24 months
- Patients living with HIV
  - Retest at 3, 6, 12, and 24 months and test annually

# Serology post Treatment

- RPR fall by 4x (e.g. 1:128 to 1:32, or 1:32 to 1:8) generally evidence of successful treatment
  - By 6 months for primary or secondary
    - Primary 4x drop by 6 months, 8x drop by 1 year
    - Secondary expect **8x** drop by 6 months, 16x drop by 1 year
  - By 1 year for early latent
  - By 1 to 2 years for late latent

- Can also occur gradually over decades w/out treatment
- If fails to fall
  - Non-penicillin treatment? Consider re-treatment with penicillin
  - Penicillin treatment? May be due to undertreatment (late latent versus asymptomatic undiagnosed neurosyphilis)
    - Consider treating as late latent, or consulting ID

# Serology Nuances

- RPR rises by 4x (e.g. 1:2 to 1:8, or 1:1 to 1:4)
  - Only way to diagnose re-infection
  - In patients with high-risk behaviours, consider following serology q. 3 months
- First syphilis test with low RPR (e.g. 1:1)
  - Consistent with either remote treated syphilis OR late latent syphilis
- “Serofast”
  - Patients with very high initial titres may never see RPR normalize, can be ‘stuck’ at e.g. 1:8, 1:4.
  - No reason for clinical concern so long as can document initial appropriate fall

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# Resources

- Public Health Agency of Canada Syphilis Guide
  - https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/syphilis.html
- CDC Syphilis Treatment Guideline
  - https://www.cdc.gov/std/treatment-guidelines/syphilis.htm
- Public Health Ontario – Syphilis Information
  - https://www.publichealthontario.ca/en/diseases-and-conditions/infectious-diseases/sexually-transmitted-infections/syphilis
- MLHU Sexually Transmitted Infection Clinic
  - https://www.healthunit.com/sexually-transmitted-infection-clinic
  - Appointments available without referral if you are unable to screen or treat patients for STIs. 519-663-5317

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# Questions?

- Ask using chat function now, or after the webinar at: healthcareproviders@mlhu.on.ca
- For urgent matters please call the Health Unit's main line at **519-663-5317**
- Questions regarding STI screening and treatment, call the Health Unit and ask for STI clinic.
- For more information www.healthunit.com/healthcare-providers