MANAGING SYPHILIS AND OTHER STIS: NEW CHALLENGES AND BEST PRACTICES

Dec 5, 2023 | 1830–2000 PT

NOTE: The webinar (and audio) will start at 6:30PM

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Continuing Professional Development
Faculty of Medicine

Ask your questions: **slido.com | #syphilis**

DISCLOSURES

Planning Team

- **Dr. Simon Moore, MD CCFP FCFP:** No conflicts of interest
- **Dr. Bob Bluman (UBC CPD):** No conflicts of interest
- **Nicole Esligar (UBC CPD):** No conflicts of interest
- **Caldon Saunders (UBC CPD):** No conflicts of interest

DISCLOSURES

Panelists

- **Dr. Troy Grennan**
  - I am/have been an investigator on studies funded by Merck and MedMira (funds paid to institution)
  - I have salary support from Michael Smith Health Research BC
  - I am vice-chair of the Public Health Agency of Canada's National Advisory Committee on STBBI
- **Dr. Laura Sauve**
  - Vice President of the Canadian Pediatric Society
- **Dr. Jason Wong** – No Conflict of Interest
- **Dr. Rochelle Stimpson** – No Conflict of Interest
- **Jessy Dame** – No Conflict of Interest

Epidemiology of Sexually Transmitted Infections in BC

Dr. Jason Wong– Chief Medical Officer, BCCDC

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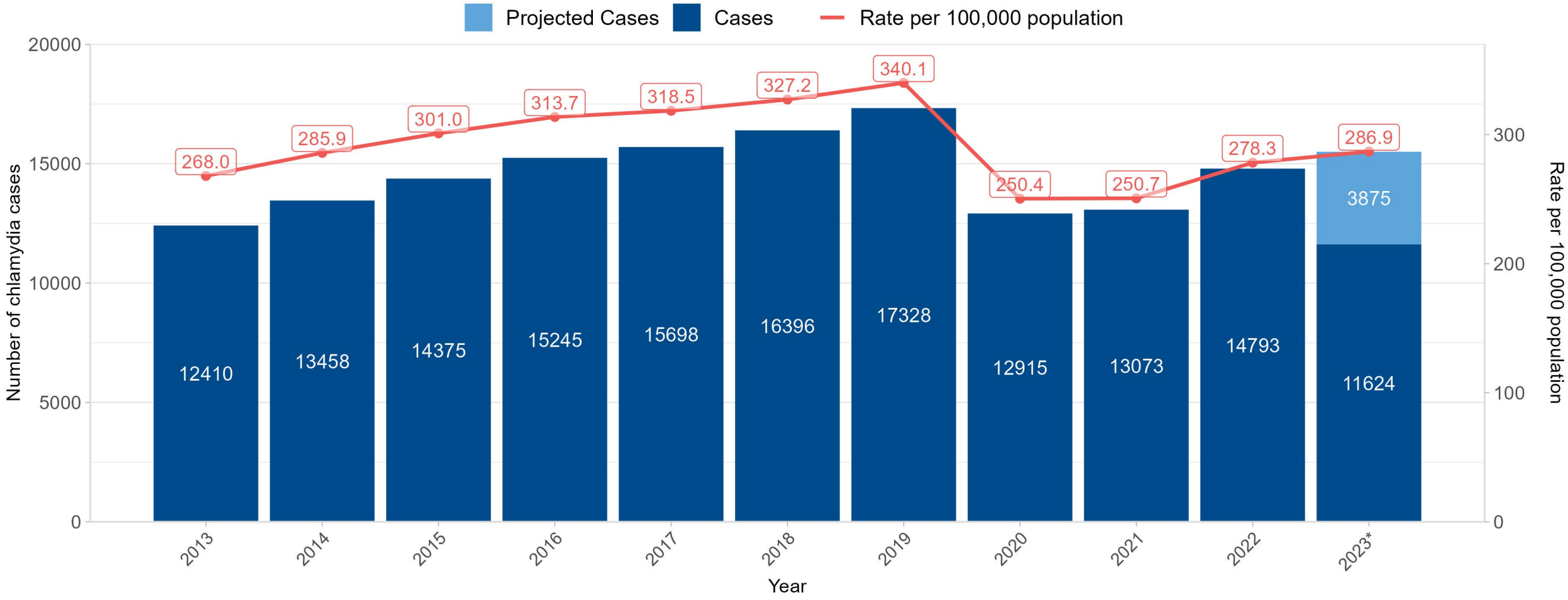
Chlamydia

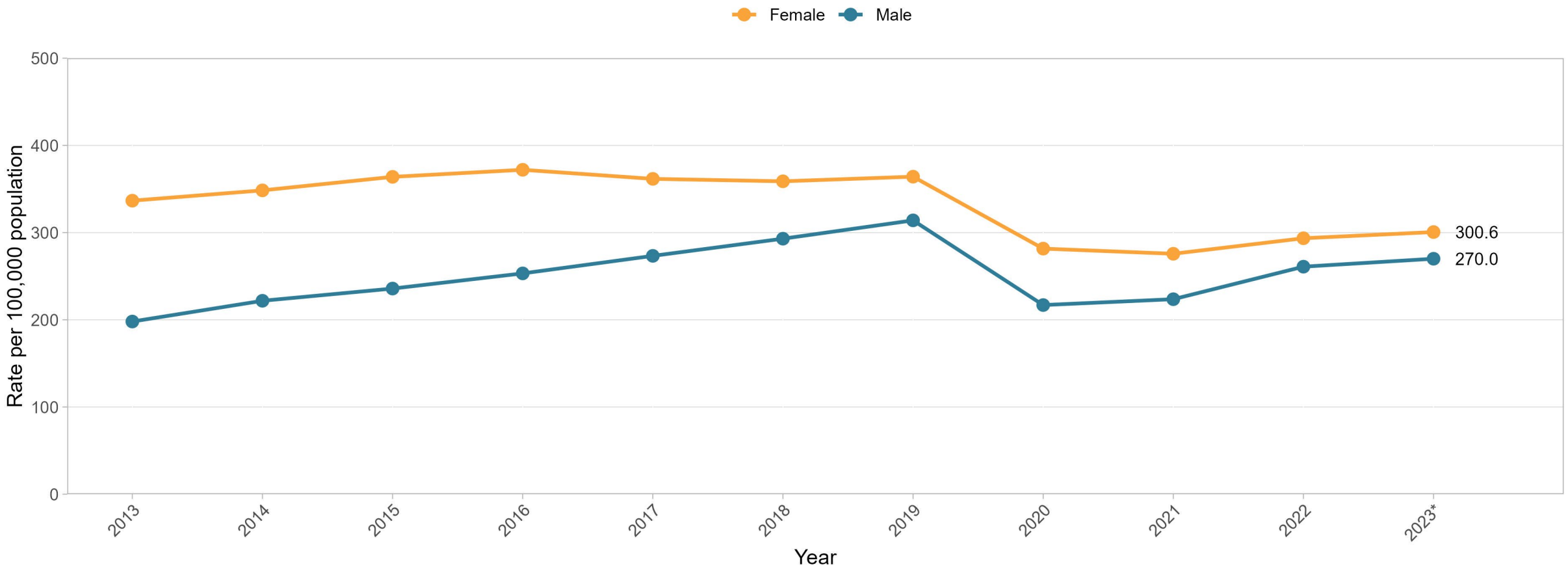
Number and Rate of Chlamydia Infections, BC



*Rate projected based on current year's case counts up to and including 2023Q3.
Includes genital and extra-genital chlamydia cases.

Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

Rate of Chlamydia Infections by Sex



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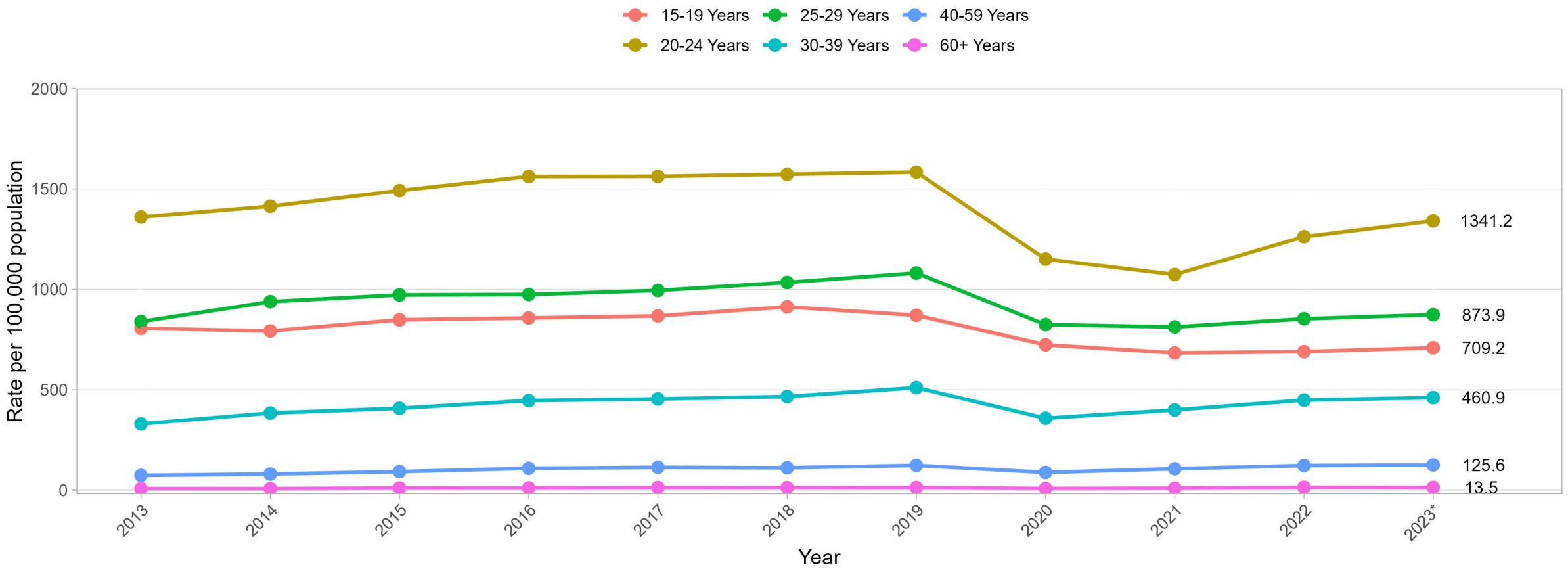
Rate of Chlamydia Infections by Age Group

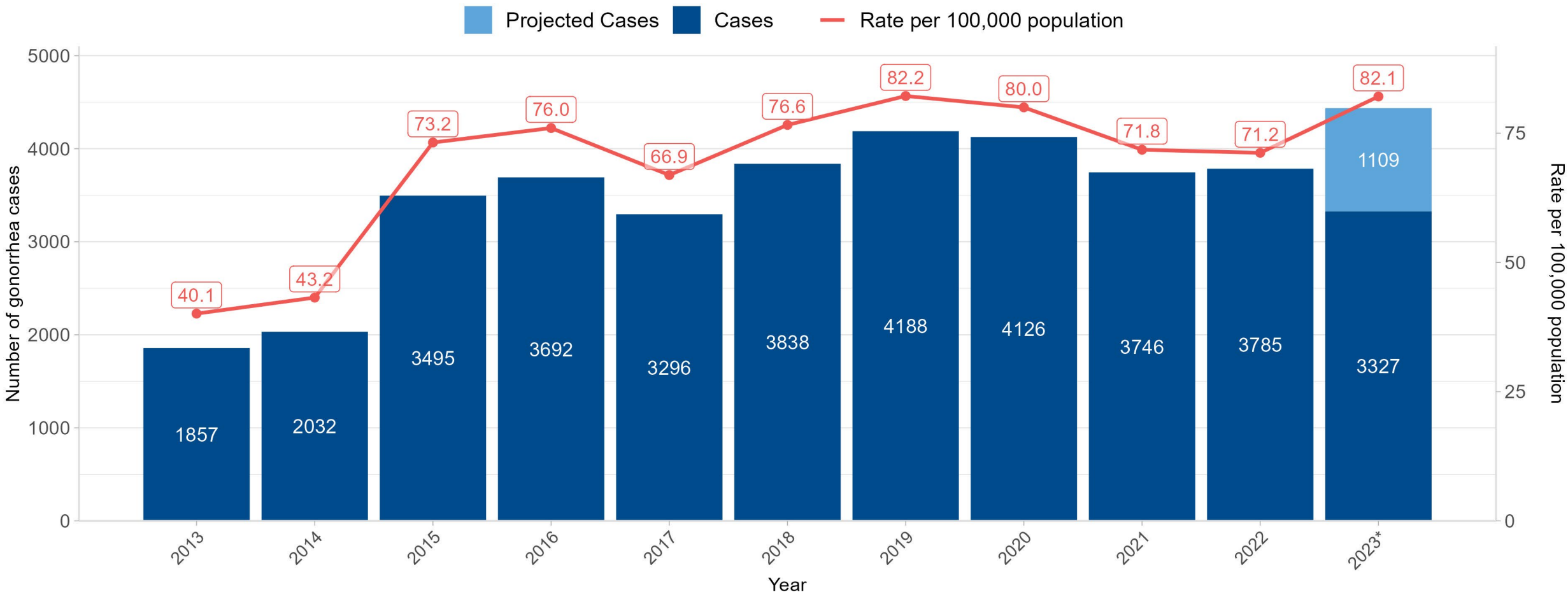


*Rates projected based on current year's case counts up to and including 2023Q3.
Includes genital and extra-genital chlamydia cases aged 15 years and above.

Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

Gonorrhea

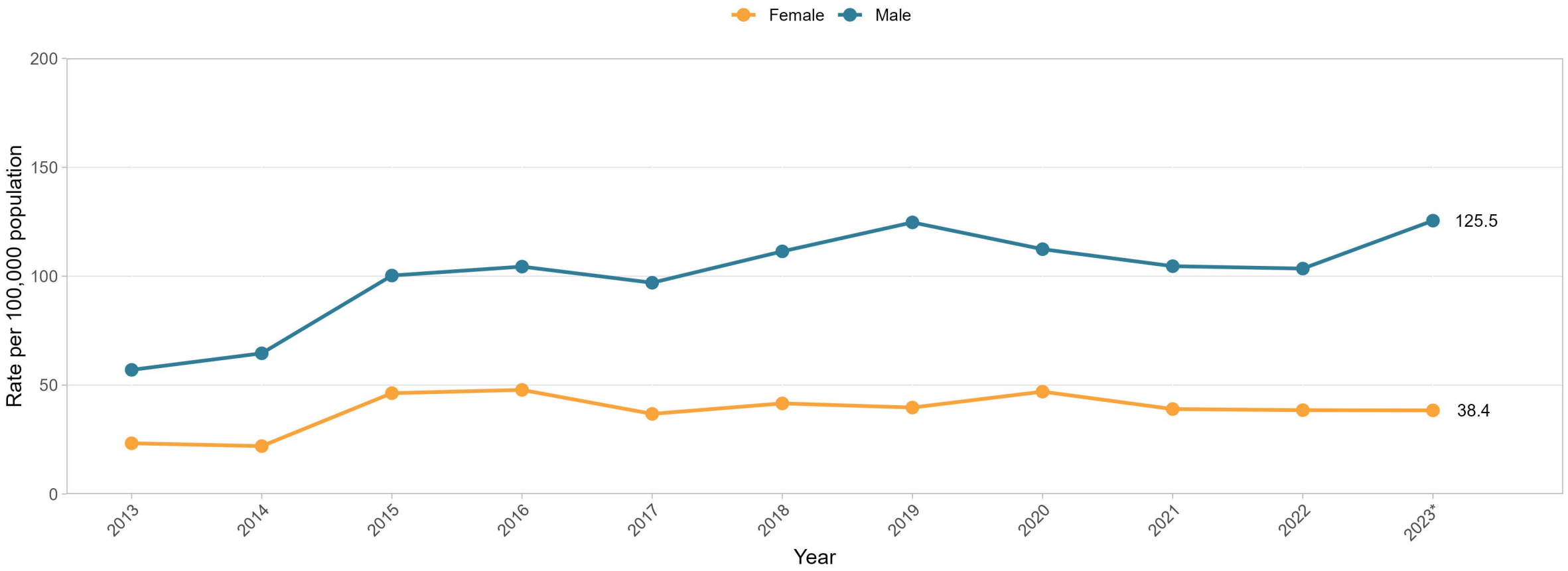
Number and Rate of Gonorrhea Infections, BC



*Rate projected based on current year's case counts up to and including 2023Q3.
Includes genital and extra-genital gonorrhea cases.

Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

Rate of Gonorrhea Infections by Sex



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Includes genital and extra-genital gonorrhea cases.

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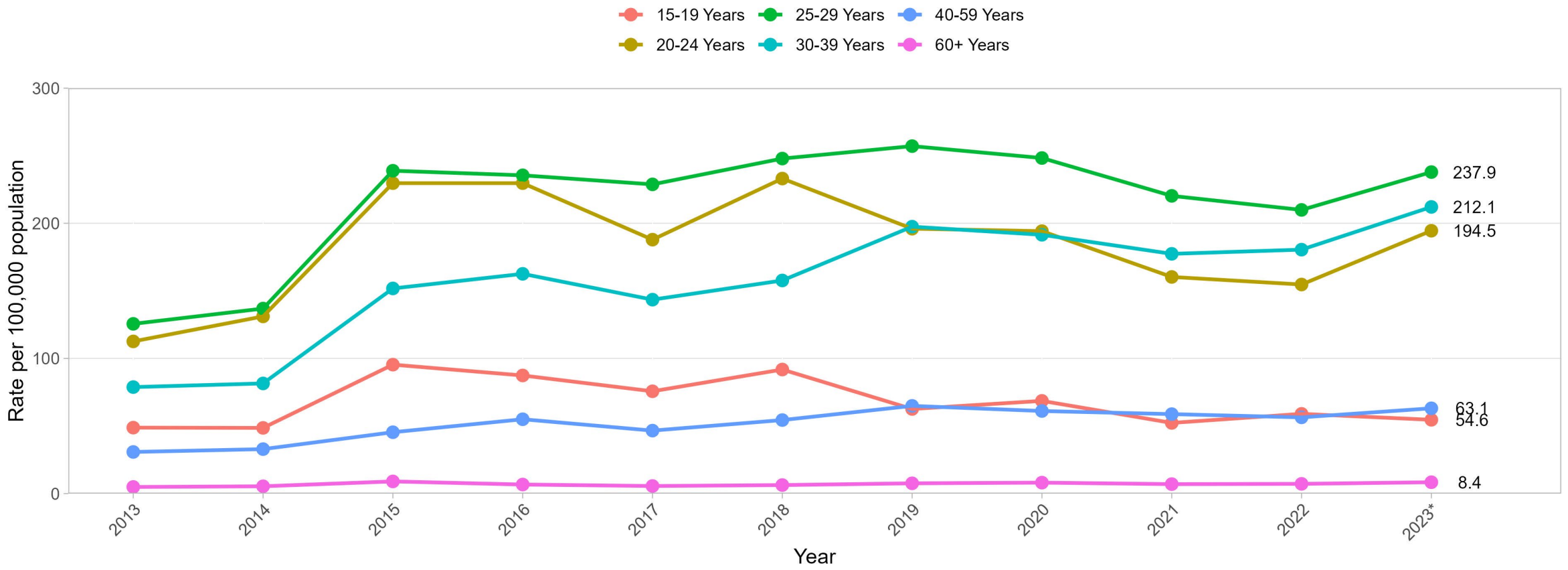
Preliminary data. Subject to change.

Rate of Gonorrhea Infections by Age Group



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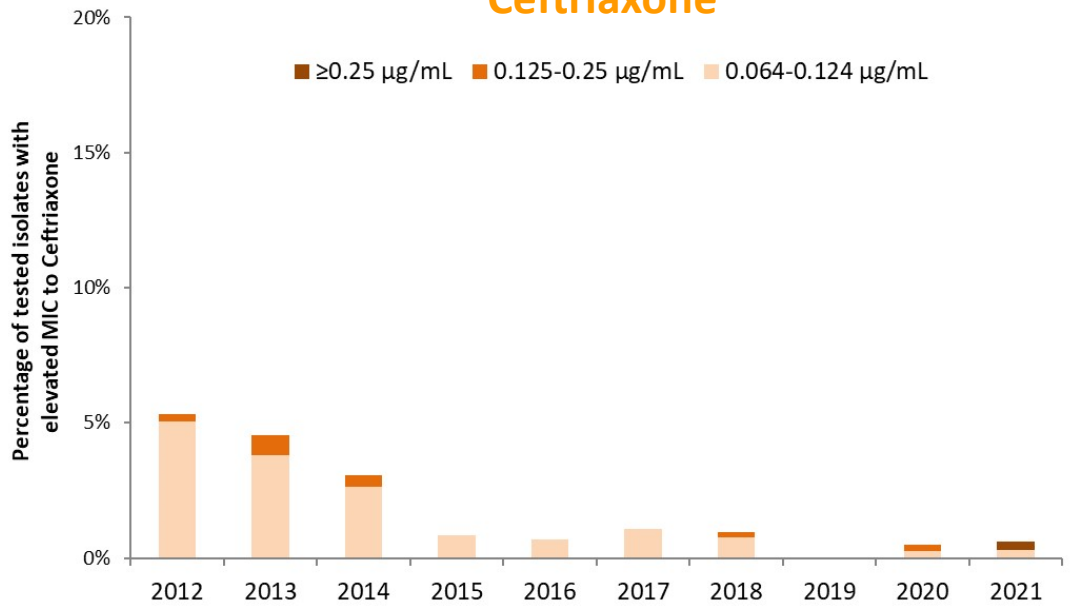
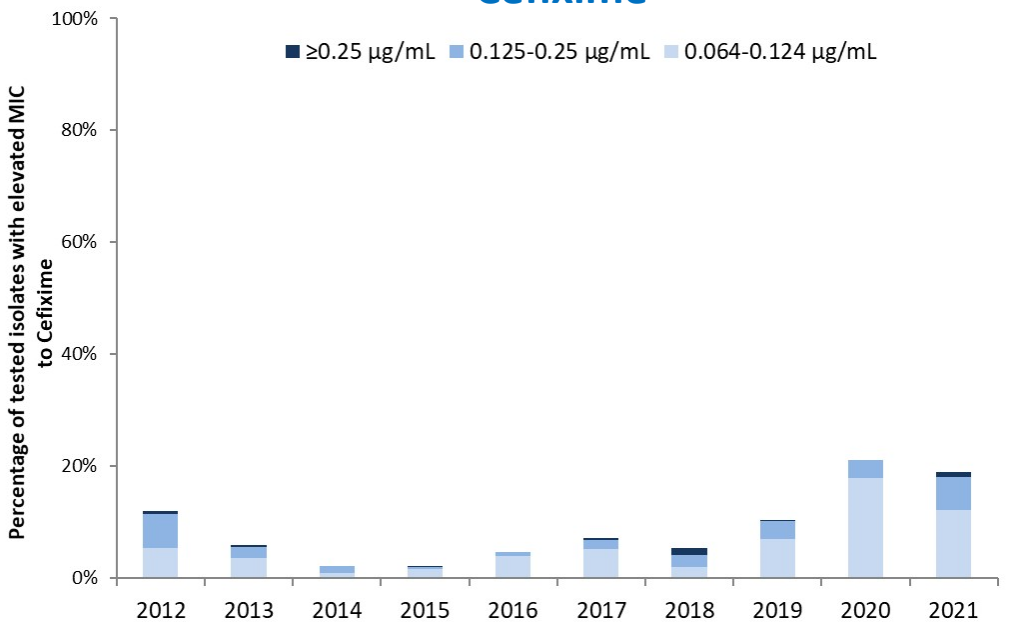
Preliminary data. Subject to change.

Antimicrobial Resistant Gonorrhea

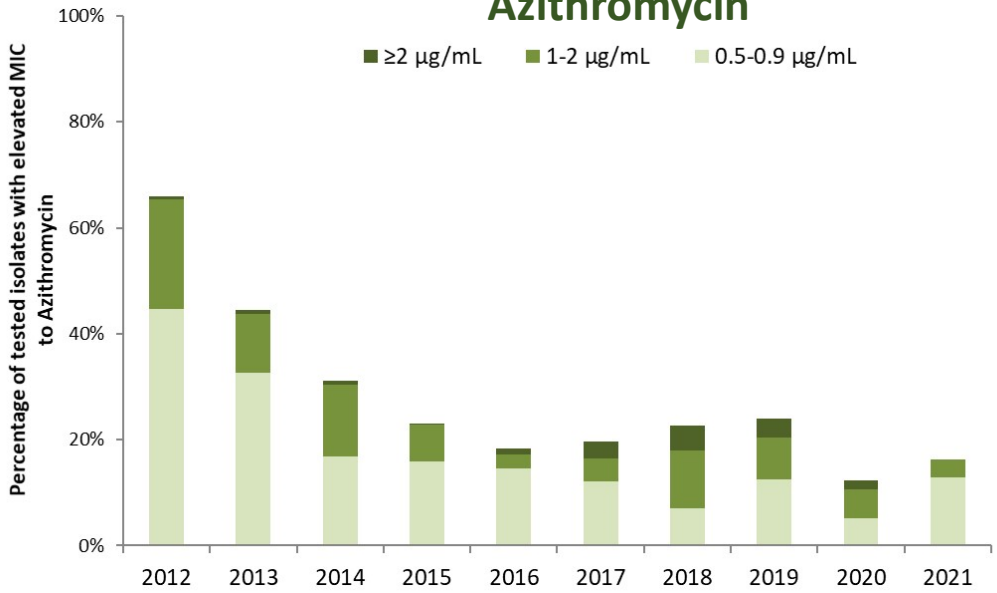
Ceftriaxone



Cefixime



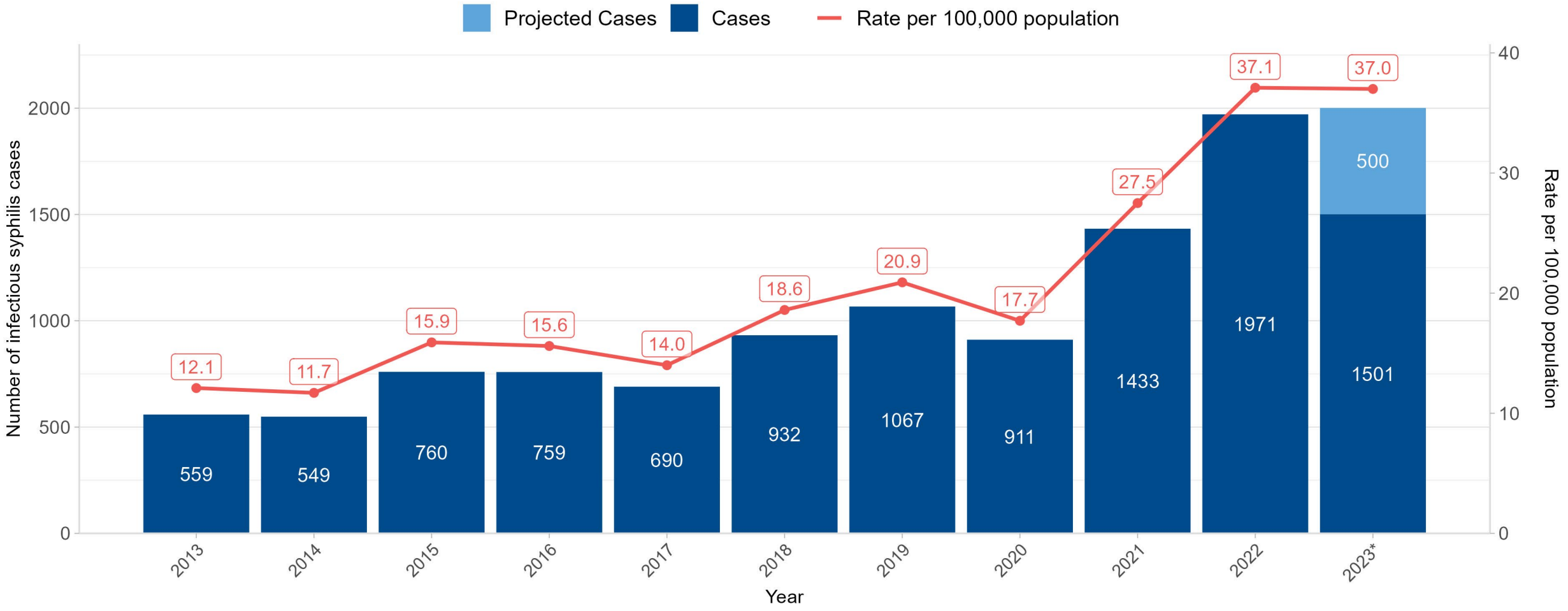
Azithromycin



BCCDC, Antimicrobial Resistant Gonorrhea in BC, Aug 2022

Infectious Syphilis

Number and Rate of Infectious Syphilis, BC



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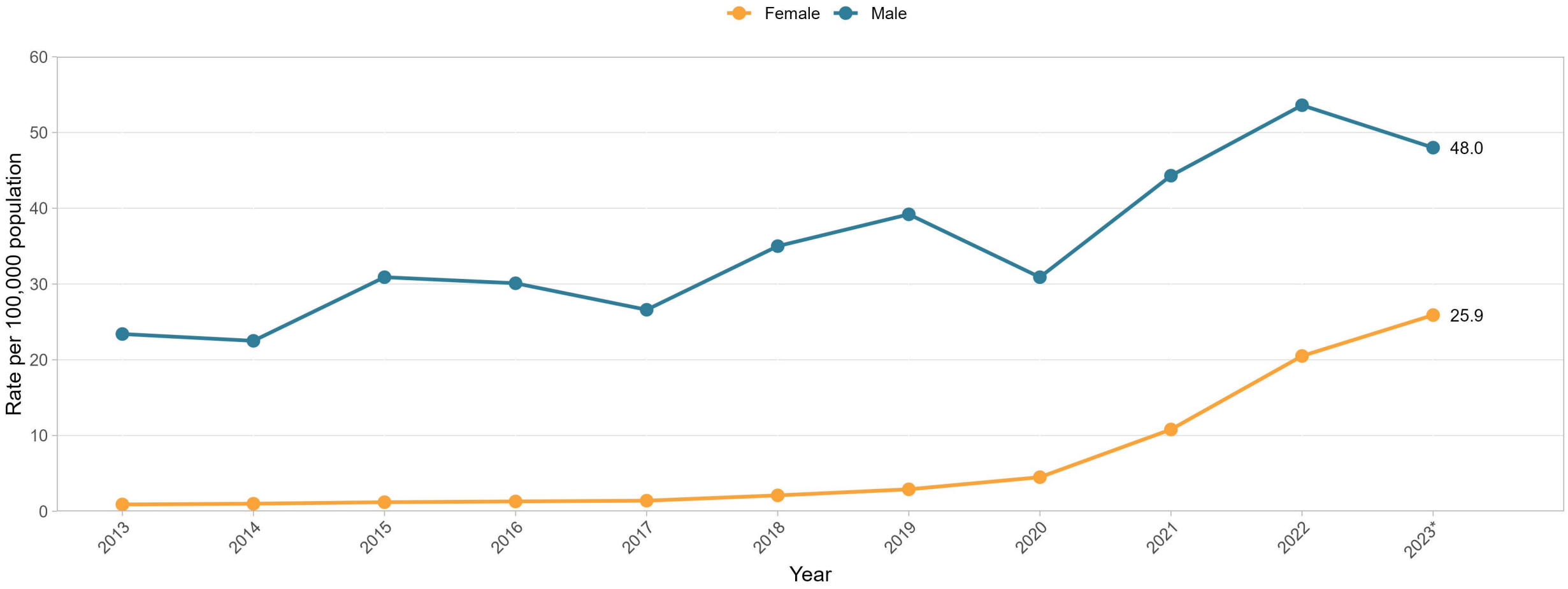
Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

Rate of Infectious Syphilis by Sex



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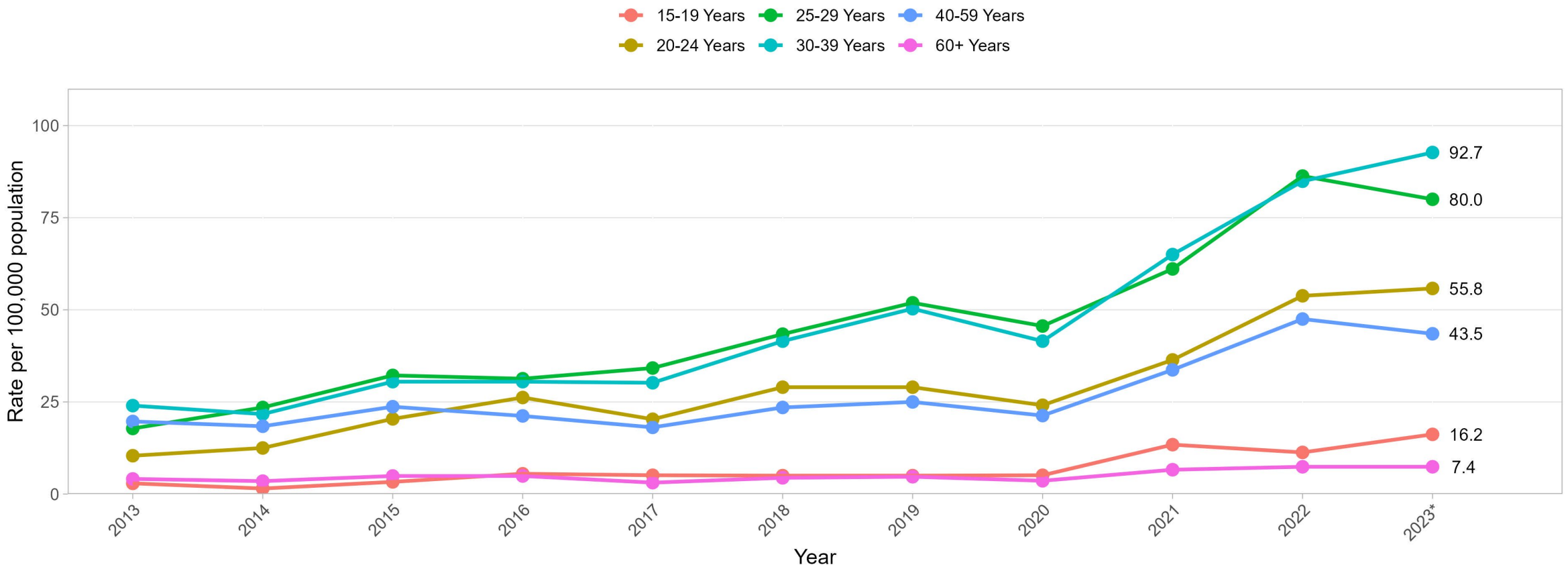
Preliminary data. Subject to change.

Rate of Infectious Syphilis by Age Group



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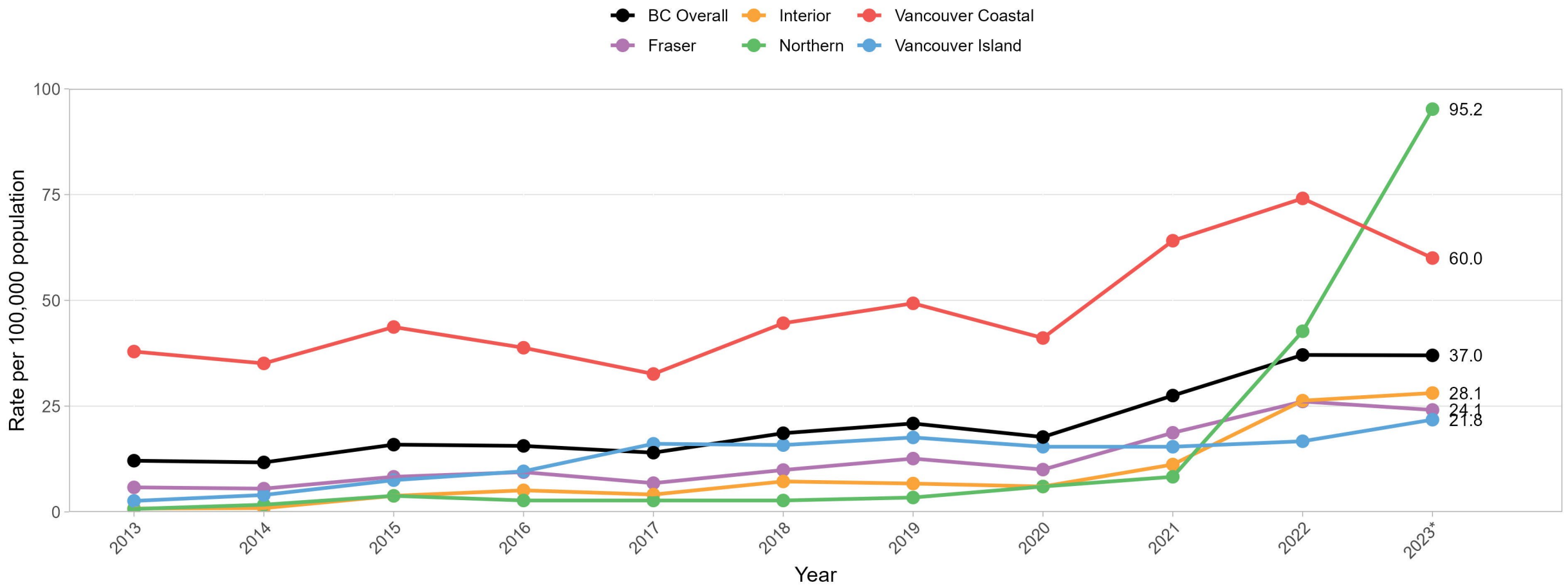
Includes infectious syphilis cases aged 15 years and above.

Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

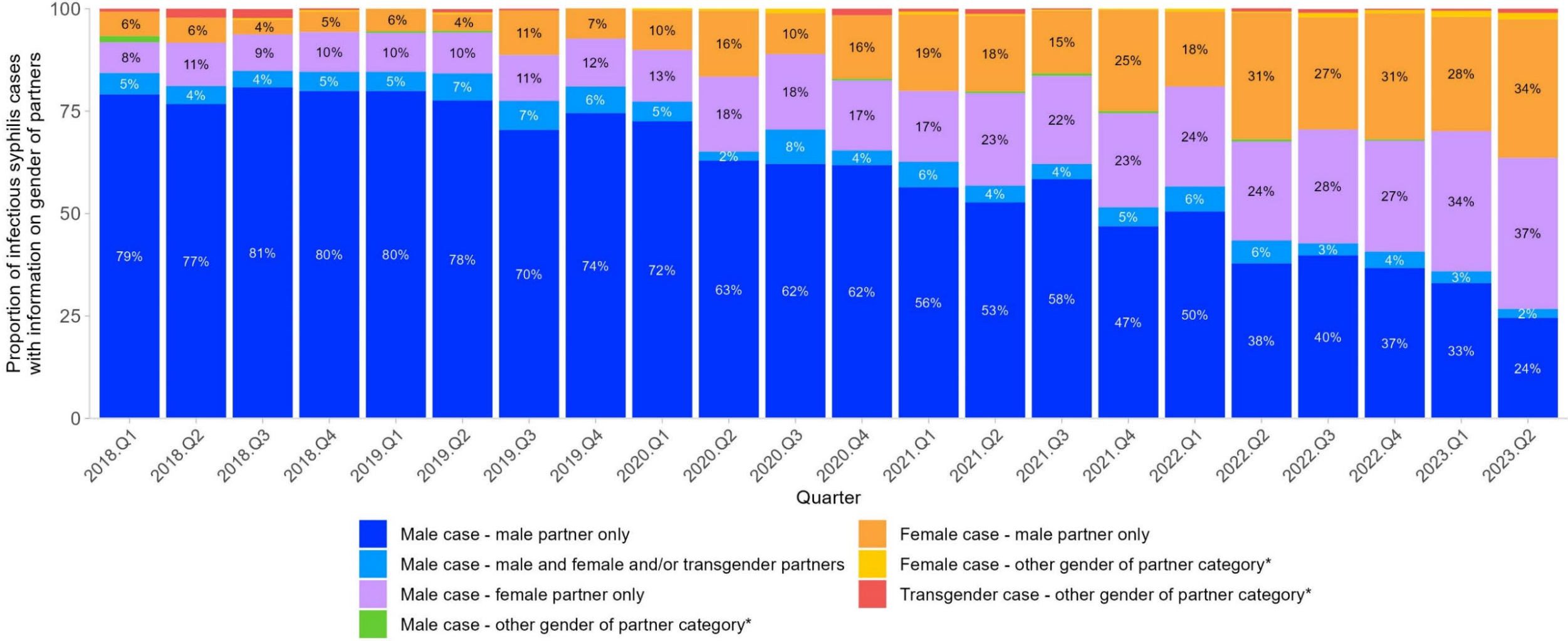
Rate of Infectious Syphilis by RHA



*Rates projected based on current year's case counts up to and including 2023Q3.

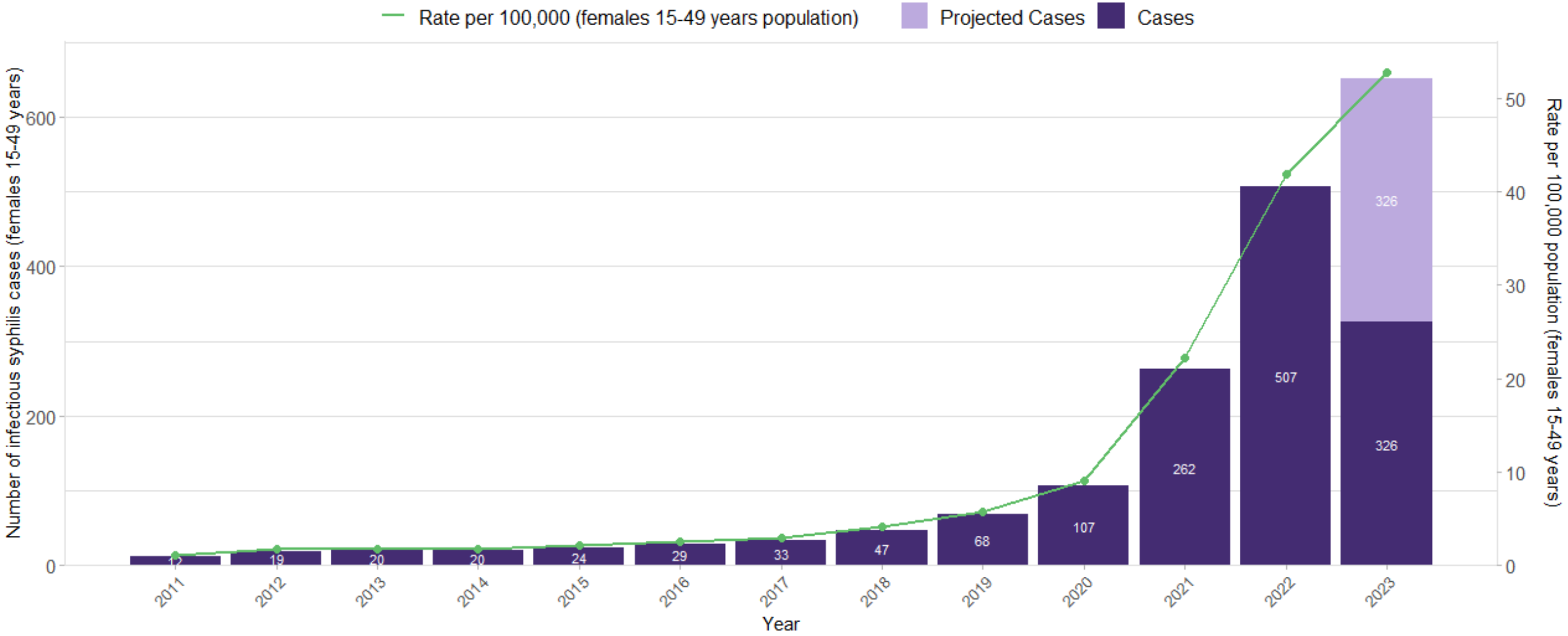
Cases up to Sept 30, 2023. Data extracted Nov 10, 2023.
Preliminary data. Subject to change.

Proportion of Infectious Syphilis Cases by Gender and Gender of Sexual Partner(s)



Cases up to June 30, 2023. Data extracted Aug 10, 2023.
Preliminary data. Subject to change.

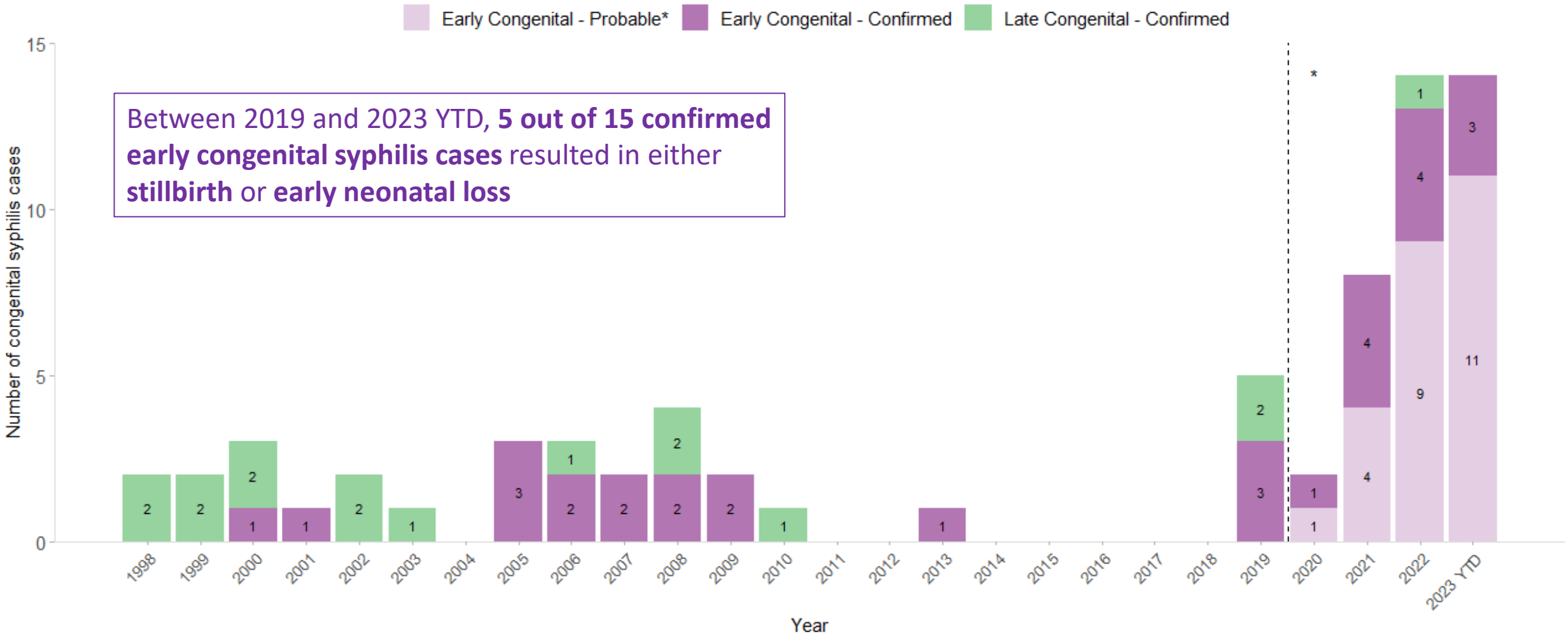
Infectious Syphilis Case Reports among Females of Child-Bearing Age (15-49 years old)



*Projected case counts.

Cases up to June 30, 2023. Data extracted Aug 10, 2023.
Preliminary data. Subject to change.

Congenital Syphilis Case Reports by Stage



Between 2019 and 2023 YTD, **5 out of 15 confirmed early congenital syphilis cases** resulted in either **stillbirth** or **early neonatal loss**

Cases up to June 30, 2023. Data extracted Aug 10, 2023.
Preliminary data. Subject to change.

Summary

- **Bacterial STIs are common in BC and are rising.**
  - Bacterial STIs dipped temporarily during the COVID-19 pandemic
- **Anti-microbial resistant gonorrhea continues to be a threat in BC**
- **Infectious syphilis is spreading in the heterosexual population and in more rural/remote areas**
  - Congenital syphilis continue to be reported in BC
- **Surveillance data updated quarterly at BCCDC STI Reports webpage** (http://www.bccdc.ca/health-professionals/data-reports/sti-reports)

Dr. Troy Grennan– Physician Lead, BCCDC Provincial HIV/STI Program

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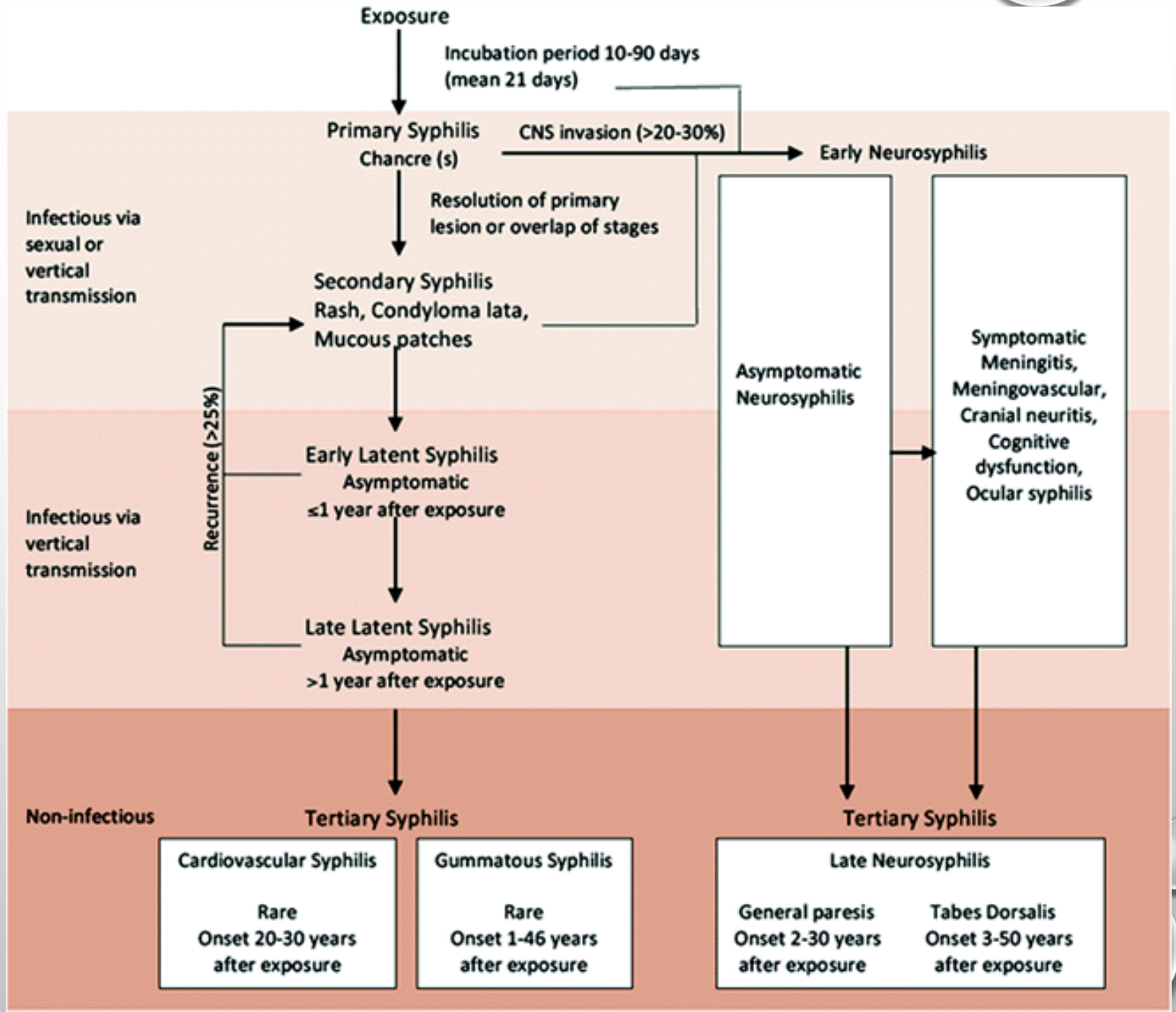
Syphilis Natural History



Emerging Paradigm: Doxycycline for Bacterial STI Prevention

SCIENCE | HEALTH CARE | PUBLIC HEALTH

There's a morning-after pill to prevent sexually transmitted infections

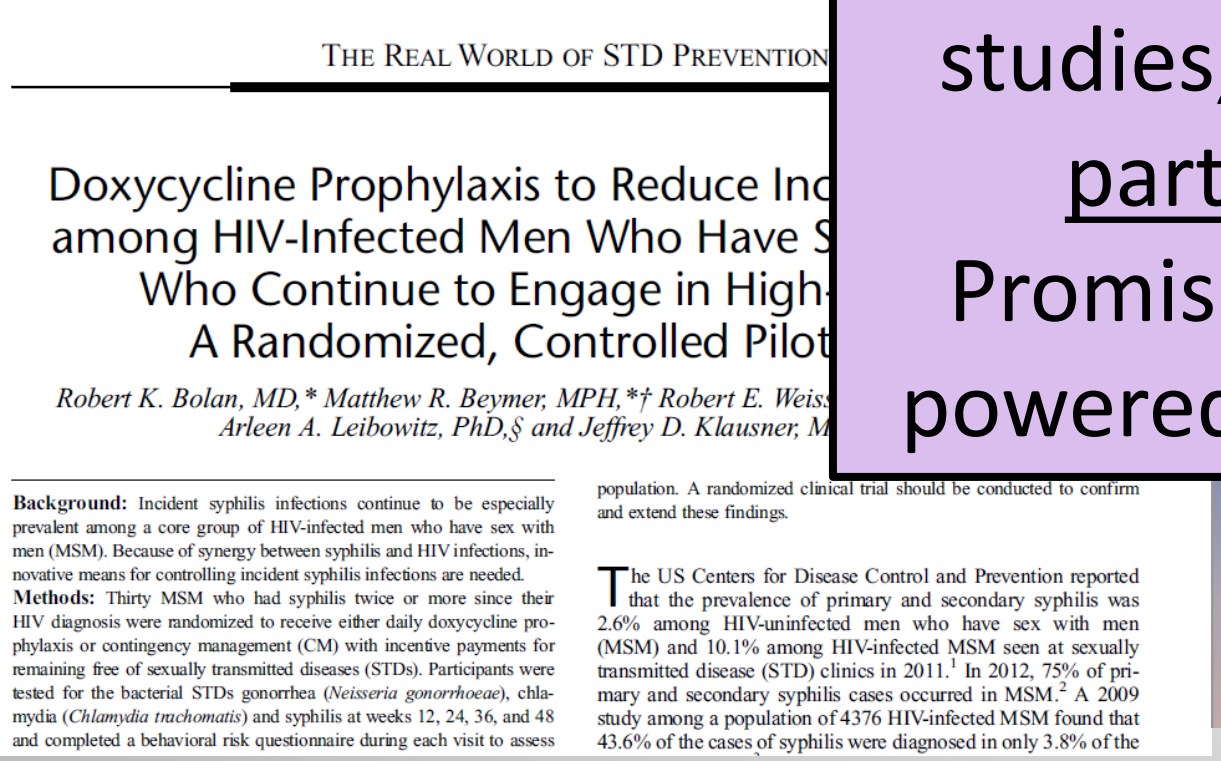
The CDC is getting close to recommending it to prevent STIs like chlamydia and syphilis.

By Keren Landman | @landmanspeaking | Updated Oct 13, 2023, 8:53am EDT

SHARE

DoxyPrEP: doxycycline 100mg PO daily

Data from 2 pilot studies, totaling 82 participants. Promising, but not powered for efficacy.



THE REAL WORLD OF STD PREVENTION

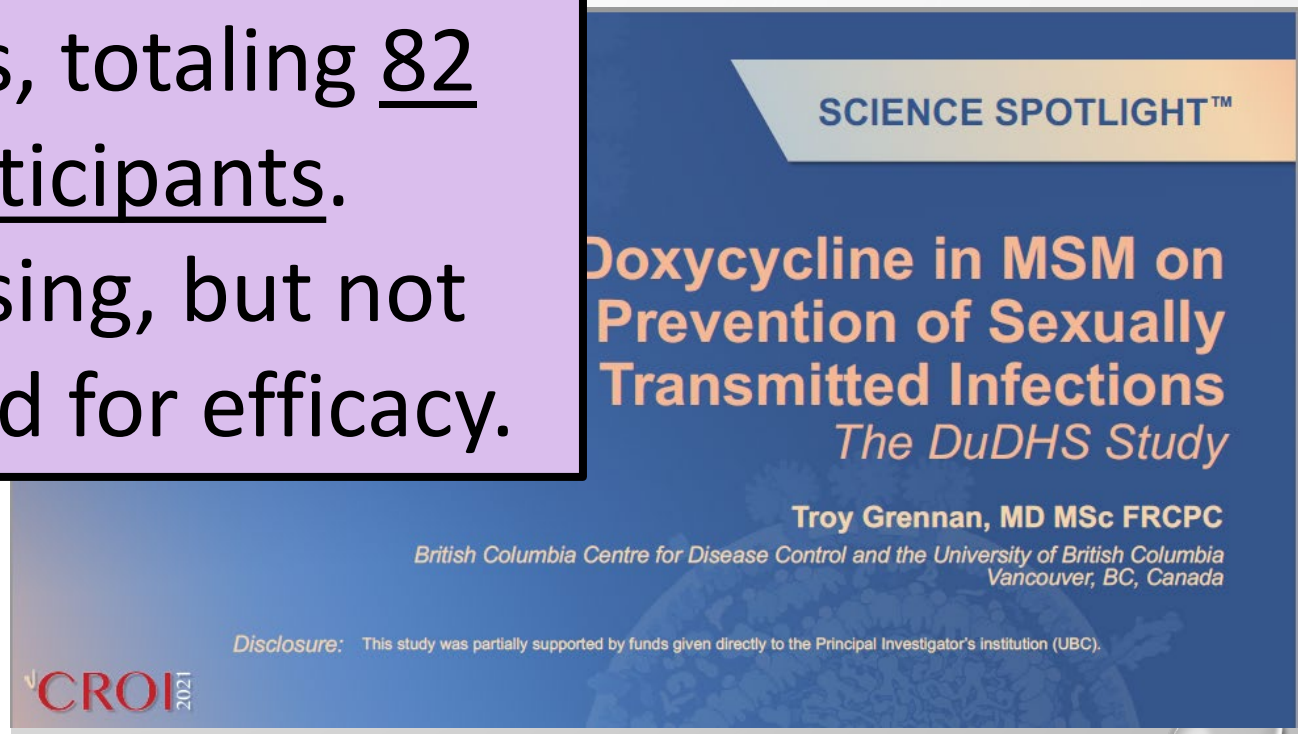
Doxycycline Prophylaxis to Reduce Inc
among HIV-Infected Men Who Have S
Who Continue to Engage in High-
A Randomized, Controlled Pilot

Robert K. Bolan, MD, Matthew R. Beymer, MPH,*† Robert E. Weiss*
Arleen A. Leibowitz, PhD,§ and Jeffrey D. Klausner, M

Background: Incident syphilis infections continue to be especially prevalent among a core group of HIV-infected men who have sex with men (MSM). Because of synergy between syphilis and HIV infections, innovative means for controlling incident syphilis infections are needed.
Methods: Thirty MSM who had syphilis twice or more since their HIV diagnosis were randomized to receive either daily doxycycline prophylaxis or contingency management (CM) with incentive payments for remaining free of sexually transmitted diseases (STDs). Participants were tested for the bacterial STDs gonorrhea (*Neisseria gonorrhoeae*), chlamydia (*Chlamydia trachomatis*) and syphilis at weeks 12, 24, 36, and 48 and completed a behavioral risk questionnaire during each visit to assess

population. A randomized clinical trial should be conducted to confirm and extend these findings.

The US Centers for Disease Control and Prevention reported that the prevalence of primary and secondary syphilis was 2.6% among HIV-uninfected men who have sex with men (MSM) and 10.1% among HIV-infected MSM seen at sexually transmitted disease (STD) clinics in 2011.[1] In 2012, 75% of primary and secondary syphilis cases occurred in MSM.[2] A 2009 study among a population of 4376 HIV-infected MSM found that 43.6% of the cases of syphilis were diagnosed in only 3.8% of the



SCIENCE SPOTLIGHT™

Doxycycline in MSM on Prevention of Sexually Transmitted Infections
The DuDHS Study

Troy Grennan, MD MSc FRCPC
British Columbia Centre for Disease Control and the University of British Columbia
Vancouver, BC, Canada

Disclosure: This study was partially supported by funds given directly to the Principal Investigator's institution (UBC).

CROI 2021

Sex Transm Dis 2015 Feb; 42(2):98-103

DoxyPEP: doxycycline 200mg within 72h of sex

Data from 3 large studies, totaling 1279 participants, demonstrating significant reductions in all STI in MSM and transgender women.

Lancet Infect Dis 2018; 18: 308-31

Articles

Post-exposure prophylaxis v
sexually transmitted infecti
men: an open-label random
IPERGAY trial

Jean-Michel Molina, Isabelle Charreau, Christian Chidiac, Gilles Pial
Julien Fonsart, Béatrice Bercot, Cécile Bébéar, Laurent Cotte, Olivier
Laurence Niedbalski, Bruno Spire, Luis Sagaon-Teyssier, Diane Care
Study Group*

Lancet Infect Dis 2018; 18: 308–17
Published Online December 8, 2017
http://dx.doi.org/10.1016/S1473-3099(17)30725-9
See Comment page 233
*Members of the ANRS IPERGAY Study Group are listed in the appendix

Summary

Background Increased rates of sexually transmitted inf
men. We aimed to assess whether post-exposure prophylaxis (PEP) with doxycycline could reduce the incidence of STIs.

Methods All participants attending their scheduled visit in the open-label extension of the ANRS IPERGAY trial in France (men aged 18 years or older having condomless sex with men and using pre-exposure prophylaxis for HIV with tenofovir disoproxil fumarate plus emtricitabine) were eligible for inclusion in this open-label randomised study. Participants were randomly assigned (1:1) at a central site to take a single oral dose of 200 mg doxycycline PEP within 24 h after sex or no prophylaxis. The primary endpoint was the occurrence of a first STI (gonorrhoea, chlamydia, or syphilis) during the 10-month follow-up. The cumulative probability of occurrence of the primary endpoint was

NGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

re Doxycycline to Prevent
ally Transmitted Infections

meyer, M.D., Deborah Donnell, Ph.D.,
M.D., M.P.H., Stephanie Cohen, M.D., M.P.H.,
, Clare E. Brown, Ph.D., Cheryl Malinski, B.S.,
P.H., Melody Nasser, B.A., Carolina Lopez, B.A.,
n P. Buchbinder, M.D., Hyman Scott, M.D., M.P.H.,
P.H., Diane V. Havlir, M.D., Olusegun O. Soge, Ph.D.,
and Connie Celum, M.D., M.P.H., for the DoxyPEP Study Team*

New Engl J Med 2023; 388: 1296-1306.

Key issues in STI

1. Antimicrobial resistance (AMR) in STIs e.g. gonorrhea
2. Emerging pathogens e.g. Mpox, *Mycoplasma genitalium*
3. New key populations being affected = New challenges e.g. congenital syphilis
4. Novel prevention strategies e.g. doxyPEP, opt-out testing, vaccines

Dr. Rochelle Stimpson – Family Physician, BCCDC

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Who do I Test?

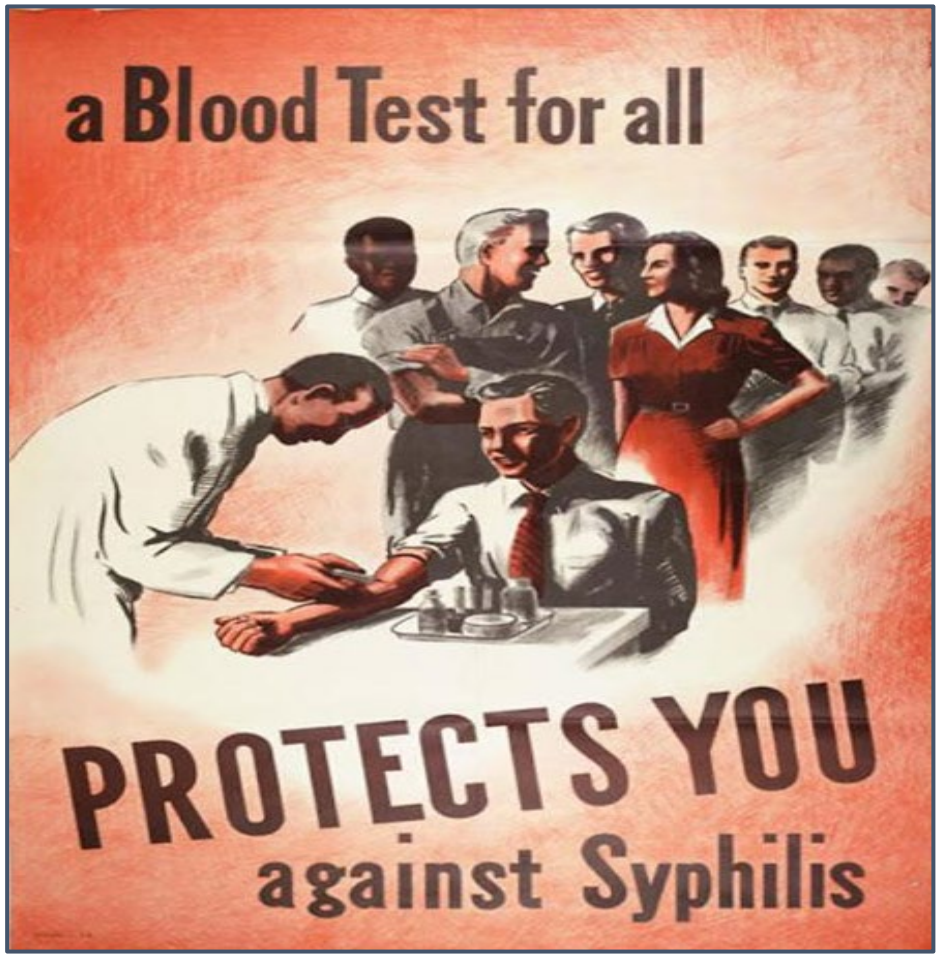
- Sexually active persons
- Pregnant persons
- Consider targeted “opt-out” testing in populations with high prevalence of syphilis
- Persons presenting with symptoms

https://www.canada.ca/en/public-health/services/infectious-diseases/sexual-health-sexually-transmitted-infections/canadian-guidelines/syphilis.html

http://www.perinatalservicesbc.ca/about/news-stories/stories/new-recommendations-for-syphilis-screening

Syphilis Serology

- *Treponema pallidum* enzyme immunoassay (TP EIA)
- Rapid Plasma Reagin (RPR)
- *Treponema pallidum* Particle Agglutination (TPPA)



ZEP

BC Centre for Disease Control

Public Health Laboratory

655 West 12th Avenue, Vancouver, BC V5Z 4R4
www.bccdc.ca/publichealthlab

Zoonotics Diseases & Emerging Pathogens Requisition

ZEP LM LABS

Section 1 - Patient/Provider Information *(Two matching unique patient identifiers on sample container and requisition are required for sample processing)*

PERSONAL HEALTH NUMBER (or out-of province Health Number and province)

PATIENT SURNAME

PATIENT FIRST AND MIDDLE NAME

DOB (DD/MMM/YYYY)

SEX M F X U (Unk)

PATIENT ADDRESS

CITY

PROVINCE

POSTAL CODE

ORDERING PRACTITIONER
Name and MSC#

Address of report delivery

I do not require a copy of the report I am a Locum*
*If Locum, include name of Practitioner you are covering for

ADDITIONAL COPIES TO PRACTITIONER / CLINIC:
(Name, Address / MSC# / PHSA Client#) (Limit of 3 copies available)
1.
2.
3.

DATE RECEIVED

LABORATORY USE ONLY

OUTBREAK ID

SAMPLE REF. NO.

DATE COLLECTED (DD/MMM/YYYY)

TIME COLLECTED (HHMM)

TRAVEL/CLINICAL HISTORY:

Section 2 - Test(s) Requested

VIRUSES

- Chikungunya Virus Antibody
- Dengue Virus Antibody
- Hanta Virus Antibody* *for hemorrhagic cases consultation required
- West Nile Virus Antibody
- Zika Virus Antibody and PCR Submit 1 gold top and 1 EDTA blood tube
- Other, specify:

Travel / Clinical History Required for Above Tests (indicate prenatal status for Zika virus)

Signs / Symptoms

- Asymptomatic
- Insect bite: Skin rash:
  Type/Location:
- Neurological
- Other, specify:

SYPHILIS

- VDRL (CSF sample only) Submit 1 mL CSF in sterile leak-proof tube
- *Treponema pallidum* Nucleic Acid Testing* Submit exudate, tissue or body fluid
- Darkfield (DF) Microscopy
  Source of sample:
- Direct Fluorescent Assay (DFA) Microscopy
  Source of sample:

Signs / Symptoms Asymptomatic Rash

- Other, specify:

BACTERIA

- Anaplasma Antibody
- Anti-Streptolysin O (ASO)
- *Bartonella henselae* Antibody PCR*
- *Borrelia burgdorferi* (Lyme disease) Antibody PCR*
- *Borrelia hermsii* Antibody
- *Brucella abortus* Antibody
- *Coxiella burnetii* (Q-fever) Antibody
- *Francisella tularensis* Antibody
- *Helicobacter pylori* Antigen (Feces)
- *Legionella* sp. Urine Antigen
- *Leptospira* spp. Antibody PCR*
- *Rickettsia rickettsii* Antibody (Rocky Mountain Spotted Fever)
- Other, specify:

FUNGI

- *Blastomyces dermatidis* Antibody
- *Coccidioides* sp. Antibody
- *Cryptococcus neoformans* Antigen
- *Histoplasma* sp. Antibody
- Other, specify:

Travel History Required for Above Tests

PARASITES

- *Echinococcus* spp. Antibody
- *Entamoeba histolytica* (Amoebiasis) Antibody
- *Schistosoma* spp. Antibody
- *Strongyloides* spp. Antibody

Travel History Required for Above Tests

- *Leishmania* spp. Antibody
- *Trichinella* spp. Antibody
- *Trypanosoma cruzi* (American trypanosomiasis) Antibody
- Other, specify:

DIPTHERIA/TETANUS

Antitoxin** Diphtheria Tetanus

**LIMITED TO (please indicate):

- <17 years old
- Organ transplant patient
- Immune deficiency work-up

*** CONSULTATION REQUIRED**

Please telephone Program Head (Clinical Microbiologist) at (604) 707-2622

For other available tests and additional information, consult the Public Health Laboratory's *eLab Handbook* at www.elabhandbook.info/PHSA/Default.aspx

The personal information collected on this form is collected under the authority of the Personal Information Protection Act. The personal information is used to provide medical services requested on this requisition. The information collected is used for quality assurance management and disclosed to healthcare practitioners involved in providing care or when required by law. Personal information is protected from unauthorized use and disclosure in accordance with the Personal Information Protection Act and when applicable the Freedom of Information and Protection of Privacy Act and may be used and disclosed only as provided by those Acts.

Form DCZP_100_0001F Version 4.1 10/2021

ZEP ZEP

TP PCR & LGV

HSV

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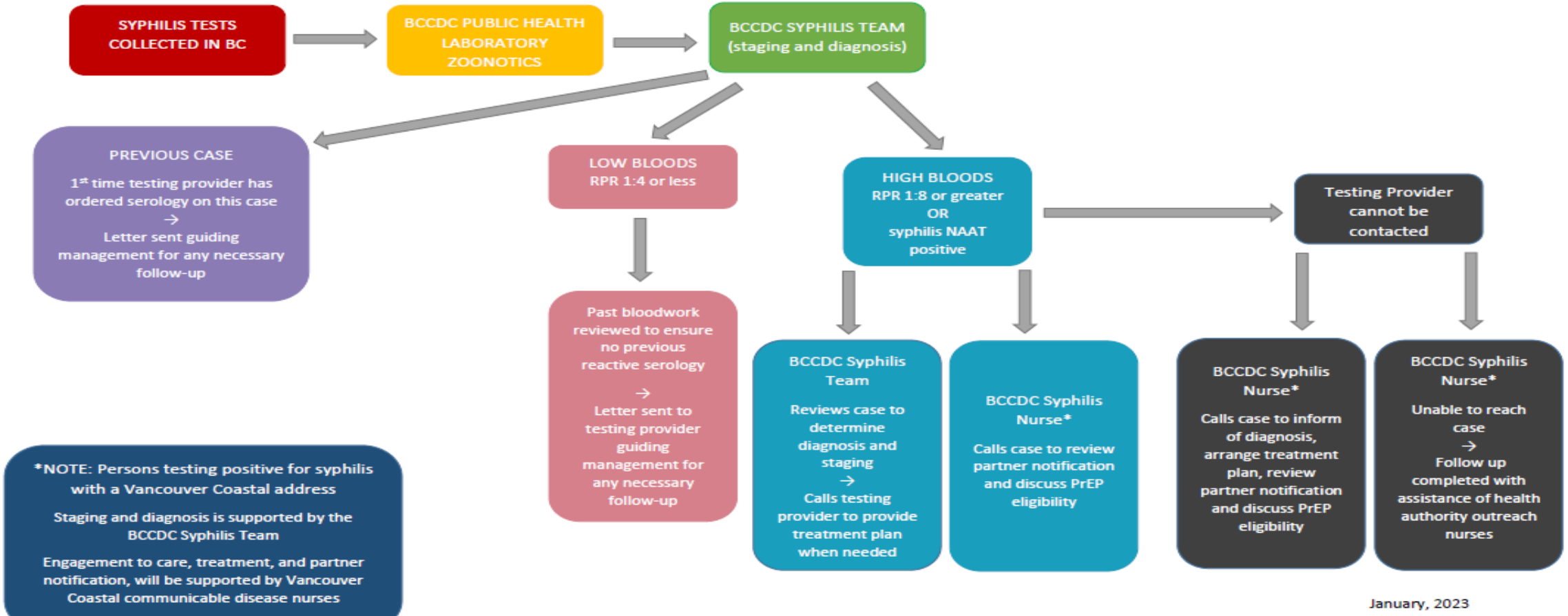
ACCREDITED ABRÉÉ CCHSA CCASS

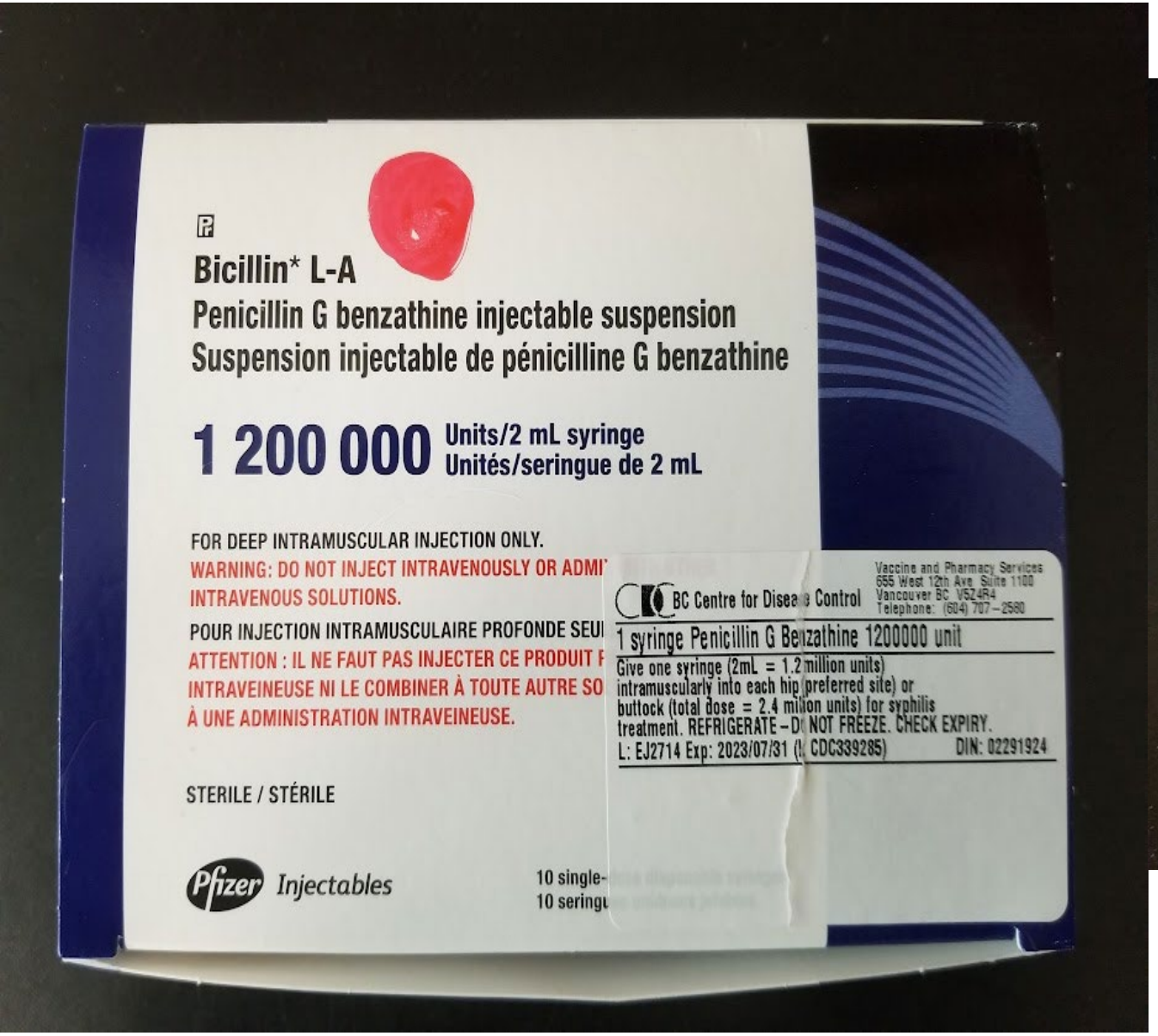
SYPHILIS CASE MANAGEMENT PROCESS



January, 2023

What can you do as providers if you suspect syphilis?

- Questions? Please call:
  - *RACE line (Sexually Transmitted Infection Service)*
  - *BCCDC Syphilis Physician- 604-707-5610 (M-F)*
- Syphilis PCR for genital and/or oral lesions
- Add pregnancy test for women between ages of 15-49
- Consider treating presumptively



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Resources

- Syphilis Online Course
  - https://learninghub.phsa.ca/Courses/31222/phsa-bccdc-overview-of-syphilis-for-healthcare-providers-in-bc
- Bicillin quick tips
  - http://www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%205%20-%20STI/Bicillin%20Quick%20Tips.pdf
- BCCDC Syphilis Physicians
  - Access through RACE line or directly at 604-707-5610

Dr. Laura Sauve – Pediatric Infectious Disease Specialist, Oak Tree Clinic BCW & BCCH

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Faculty of Medicine

BC Children's Hospital and

BC Women's Hospital + Health Centre

Congenital Syphilis-Its back!

Presented by: Dr Laura Sauvé

Clinical Assistant Professor, Division of Pediatric Infectious Diseases, Department of Pediatrics, UBC. lsauve@cw.bc.ca

Dec 5, 2023

BC Children's Hospital
Provincial Health Services Authority

BC WOMEN'S HOSPITAL+ HEALTH CENTRE
Provincial Health Services Authority

Land Acknowledgement

I respectfully acknowledge that the land I work and live on is the unceded territory of the Coast Salish peoples, including the territories of the Səl̓ílwətaʔ/Selilwitulh (Tsleil-Waututh), the xʷməθkwəy̓əm (Musqueam) and Skwxwú7mesh (Squamish) Nations.

Those nations have cared for and nurtured the lands and waters around us for all time.

BC Children's Hospital
Provincial Health Services Authority

BC WOMEN'S HOSPITAL+ HEALTH CENTRE
Provincial Health Services Authority

Disclosure

- I have no conflict of interest to disclose.
- I have research funding from PHAC, CIHR
- I am currently the Vice President of the Canadian Pediatric Society

BC Children's Hospital
Provincial Health Services Authority

BC WOMEN'S HOSPITAL+ HEALTH CENTRE
Provincial Health Services Authority

Routine syphilis testing in pregnancy by trimester

First

Serology for **all**

Second

Serology for any with risk factors

Serology + PCR where appropriate for symptomatic

Third

Serology for **all**

Serology + PCR where appropriate for symptomatic

If loss to follow up a concern, ensure that 3rd trimester test results are available prior to discharge of the baby.

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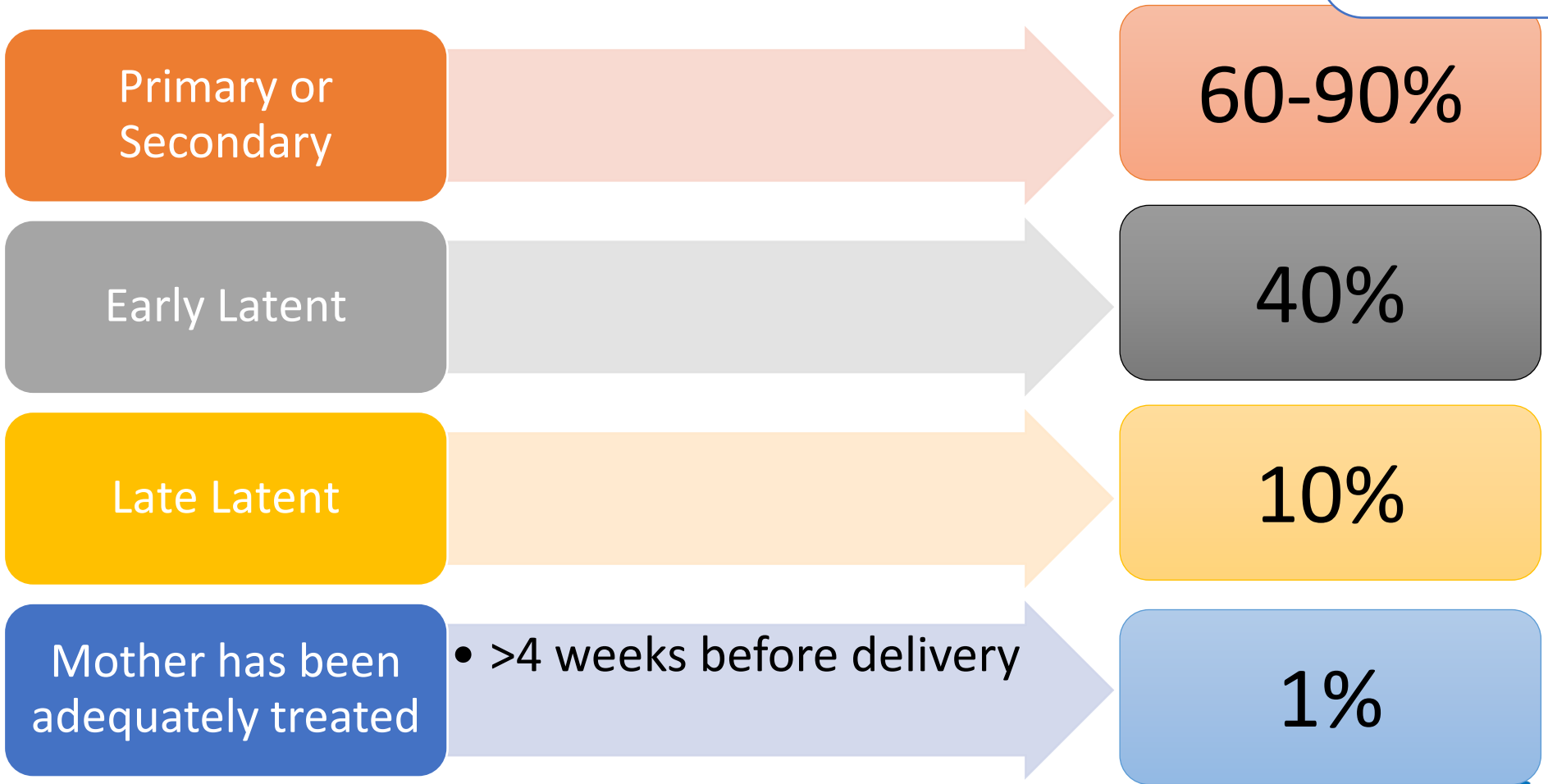
Likelihood of congenital infection with syphilis in pregnancy….

Most babies with congenital syphilis are asymptomatic at birth – so a lack of symptoms at birth is not reassuring



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Manifestations of congenital syphilis

Before / At birth

- stillbirth, hydrops fetalis, IUGR, preterm birth (or may be asymptomatic at birth).

Neonatal

- hepatosplenomegaly; snuffles (copious nasal secretions); lymphadenopathy; mucocutaneous lesions; pneumonia; osteochondritis, periostitis, and pseudoparalysis; edema; rash (maculopapular consisting of small dark red-copper spots that is most severe on the hands and feet); hemolytic anemia; or thrombocytopenia at birth or within the first 4 to 8 weeks of age.

Late (infancy / childhood)

- Involve the central nervous system (CNS), bones and joints, teeth, eyes, and skin.
- Includes… interstitial keratitis, eighth cranial nerve deafness, Hutchinson teeth (peg-shaped, notched central incisors), anterior bowing of the shins, frontal bossing, mulberry molars, saddle nose, rhagades (perioral fissures), and Clutton joints (symmetric, painless swelling of the knees).

https://www.cps.ca/en/documents/position/congenital-syphilis
Red Book, Syphilis chapter

Red Book® 2018, 2018

A newborn with congenital syphilis. Marked generalized desquamation.

Work up for infants at moderate – high risk

- Recommended for all:
  - Serology in mom (if possible) & baby
  - Complete Blood Count (CBC) with differential and platelets
  - Liver function tests (e.g ALT, AST; others as clinically indicated)
  - CSF for cell count, differential, glucose, protein, and syphilis NTT serology
  - Long-bone radiographs (e.g., bilateral femur and tibia/fibula)
  - Audiology (auditory brain stem response)
  - Ophthalmologic Assessment* Ocular syphilis can occur at any stage - more common in infants with neurosyphilis.
- Additional Investigations (Based on Clinical Indication and Availability):
  - Neuroimaging / ultrasound for organomegaly
  - Nasopharyngeal swab and swabs of any mucosal or skin lesions for T. pallidum PCR
  - Pathologic examination (+/- T. pallidum PCR) of the placenta for women with concerns for active infection at birth
- Don't forget - There is a window period, so if baby appears to have congenital syphilis even if 1st trimester screening negative, do the full work up.

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Treatment

- **IV Aqueous crystalline penicillin G 50,000 U/kg/dose IV x 10 days**
  - Under 1 week - Q12h
  - 8-28 days - Q8h
  - Above 28 days - Q6h
- While some sources recommend routinely restarting the course of therapy if >24 hours is missed, evidence behind this is not clear
- Rather than missing doses while awaiting IV replacement, daily IM procaine penicillin 50,000 units/kg/dose for each of the days that intravenous access is not available may be considered

https://www.cps.ca/en/documents/position/congenital-syphilis
Red Book, Syphilis chapter

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Teams in caring for syphilis in pregnancy & exposed / infected infants

- Primary care / midwife / general pediatricians → lead the care locally.
  - No newborn should be discharged without the delivery syphilis testing!
  - Recognize the intersectionalities / barriers to care – trauma aware & antiracist care are critical.
  - All infants with CS should have some form of well child care & developmental surveillance with a healthcare provider following their course of treatment.
- Pregnant people with syphilis → In addition to BCCDC Case Management support, Oak Tree Clinic / BCW Reproductive ID happy to see in consultation to advise on monitoring etc.
- In hospital / acute settings → BCW Reproductive ID & BCCH Pediatric infectious diseases on call available 7 days / week to answer questions
- Post discharge → BCW Oak Tree Clinic – provides shared care with community providers (available Monday – Friday to discuss cases as needed)
- BCCDC Syphilis program – tracks all syphilis exposed infants and available Monday – Friday to discuss cases as needed – especially assessment of maternal testing and treatment.
- Regional public health – can support connections to care when there are multiple barriers to care

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Additional slides for details

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Assessment of infant born to person with syphilis in pregnancy

- Key questions - If **no** to any of these questions – consider the infant at **high risk**
  - Mother treated with penicillin
  - Treatment was ≥ 4 weeks prior to delivery
  - Treatment was adequate for stage of infection
  - Adequate response - ≥ 4 fold decline in RPR
- Also high risk if:
  - Maternal reinfection or reexposure without adequate treatment
  - Ultrasound consistent with congenital syphilis
  - Clinical concerns / features at delivery

Most babies with congenital syphilis are asymptomatic at birth – so a lack of symptoms at birth is not reassuring

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Post-discharge care

- There is a risk of failure of cure, therefore close clinical follow up needed
- CPS / AAP recommend:
  - Monthly clinical exams x3 months
  - Syphilis serology repeat at 3, 6 and 18 months
    - Note: batch bloodwork with other follow up labs (e.g. Hep B at 7mo if primary immunization series)
    - RPR should be declining by 3 months and substantially improved/resolved by 6 months
    - Maternal transplacental EIA/TPPA should resolve by 18 months but if endogenous, may persist

https://www.cps.ca/en/documents/position/congenital-syphilis
Red Book, Syphilis chapter

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Resources

- BC Children's Hospital Pediatric Infectious Diseases – via locating 604-875-2212
- BC Women's Hospital Reproductive Infectious Diseases – via locating 604-875-2212
- Oak Tree Clinic – http://www.bcwomens.ca/our-services/specialized-services/oak-tree-clinic
- Canadian Pediatric Society Infectious Diseases and Immunization Committee
    - https://cps.ca/en/documents/authors-auteurs/infectious-diseases-and-immunization-committee
    - Reducing perinatal infection risk in newborns of mothers who received inadequate prenatal care
        - https://cps.ca/en/documents/position/reducing-perinatal-infection-risk-in-newborns-of-mothers-who-received-inadequate-prenatal-care
    - The management of infants, children, and youth at risk for hepatitis C virus (HCV) infection
        - https://cps.ca/en/documents/position/the-management-of-hepatitis-c-virus
    - Congenital syphilis: No longer just of historical interest - *(update underway)*
        - https://cps.ca/en/documents/position/congenital-syphilis
- American Academy of Pediatrics Red Book
    - Syphilis Chapter - https://publications.aap.org/redbook/book/347/chapter/5756873/Syphilis
- Perinatal Services BC
    - Guidance
        - http://www.perinatalservicesbc.ca/Documents/Resources/Alerts/FAQs-for-OB-care-providers-Syphilis-screening-in-pregnancy.pdf
    - Congenital syphilis handout for families
        - http://www.perinatalservicesbc.ca/Documents/Resources/Alerts/patient-resource-syphilis-in-pregnancy.pdf?_gl=1*t2luj5*_ga*MTQ1NDAxMTUxMy4xNjczMzk5ODA5*_ga_ZKY1XG50LJ*MTcwMTY1MjQ1Mi4zNS4wLjE3MDE2NTI0NTMuMC4wLjA.
- BCCDC
    - Communicable Disease Manual
        - http://www.bccdc.ca/resource-gallery/Documents/Communicable-Disease-Manual/Chapter%205%20-%20STI/Non-certified%20Syphilis%20DST.pdf

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Jessy Dame – Registered Nurse, Director of Two-Spirit Health, Community-Based Research Centre

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