Syphilis update and changing epidemiology

Dr Charlotte Bell

Consultant sexual health Physician, Communicable Disease Control Branch, and Adelaide Sexual Health Centre SA Health

Dr Emily Kirkpatrick

Community COVID Commander, Deputy Chief Medical Officer / Executive Director, Community and Primary Care Partnerships, SA Health

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SA COVID update

Dr Emily Kirkpatrick

Community COVID Commander, Deputy Chief Medical Officer / Executive Director, Community and Primary Care Partnerships, SA Health

RAT increased access

- From August 1, increased access to RATs for concession card holders, with conversion of PCR sites to become dual pick up locations and existing RAT sites can be used for concession (non-close contact sites)
- Discussion re sensitivity of RATs gaining training
- Importance of PCR testing when symptomatic and negative RAT, especially in HCWs

Flu vaccine

Extension of the flu vaccine until 31 August 2022

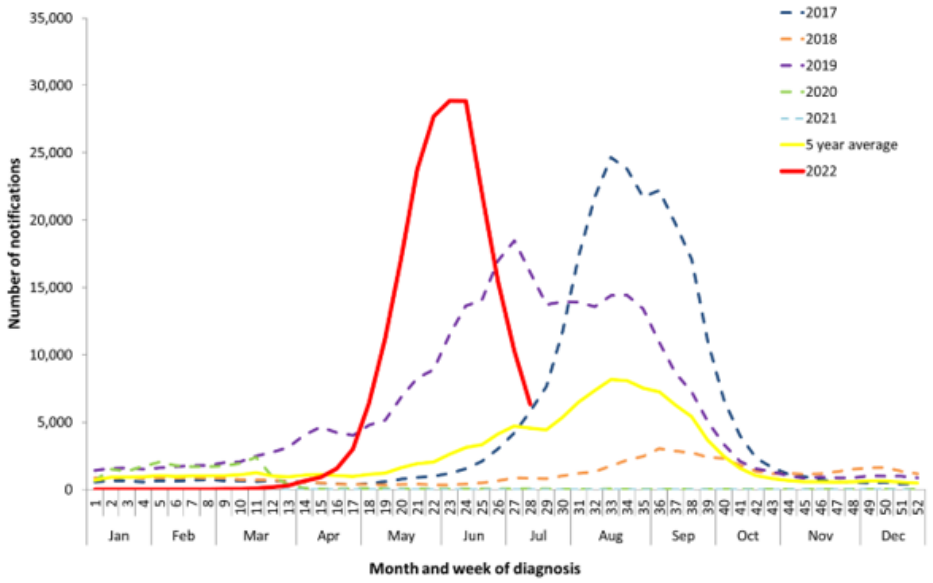
- Reminder that paediatric doses can be allocated and claimed if two doses are require

Summary by age group (private and government funded)	Total doses reported to AIR	% of population
6 months to less than 5 years	30,146	32%
5 years to less than 65 years	531,825	40%
65 years and older	289,299	82%
TOTAL	851,270	48%

As at 22/7/2022, for SA, in the Australian Immunisation Register:

Flu data – nationally

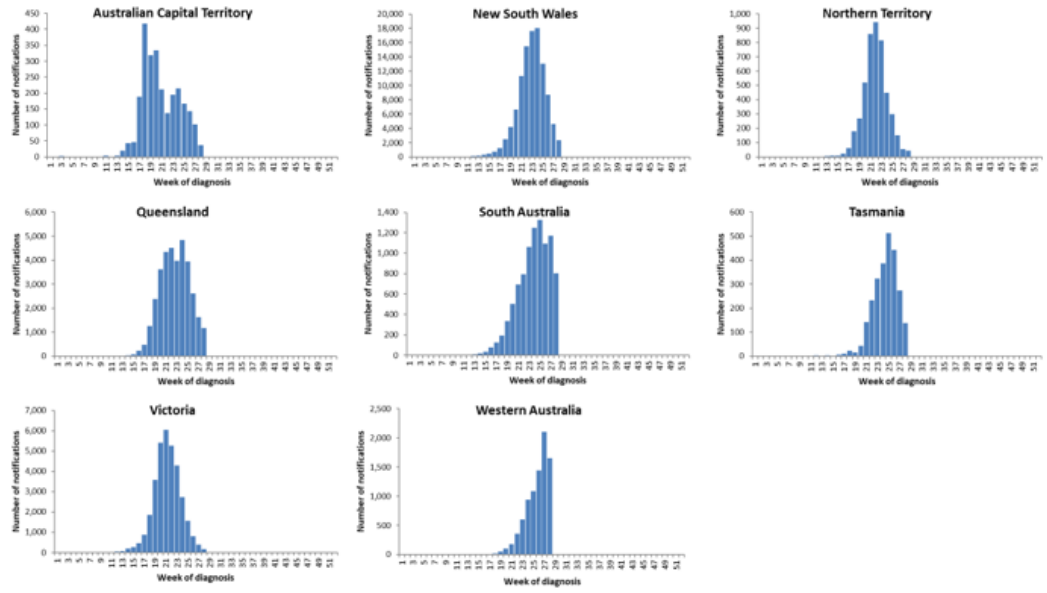
Figure 4. Notifications of laboratory-confirmed influenza, Australia, 01 January 2017 to 17 July 2022, by month and week of diagnosis*



Source: NNDSS

*NNDSS notification data provided for the current and most recent weeks may be incomplete. All data are preliminary and subject to change as updates are received, with most recent weeks considered particularly subject to revisions. Please refer to Data considerations for interpretation of the 5 year average.

Figure 6. Notifications of laboratory-confirmed influenza*, 01 January to 17 July 2022, by state or territory and week of diagnosis

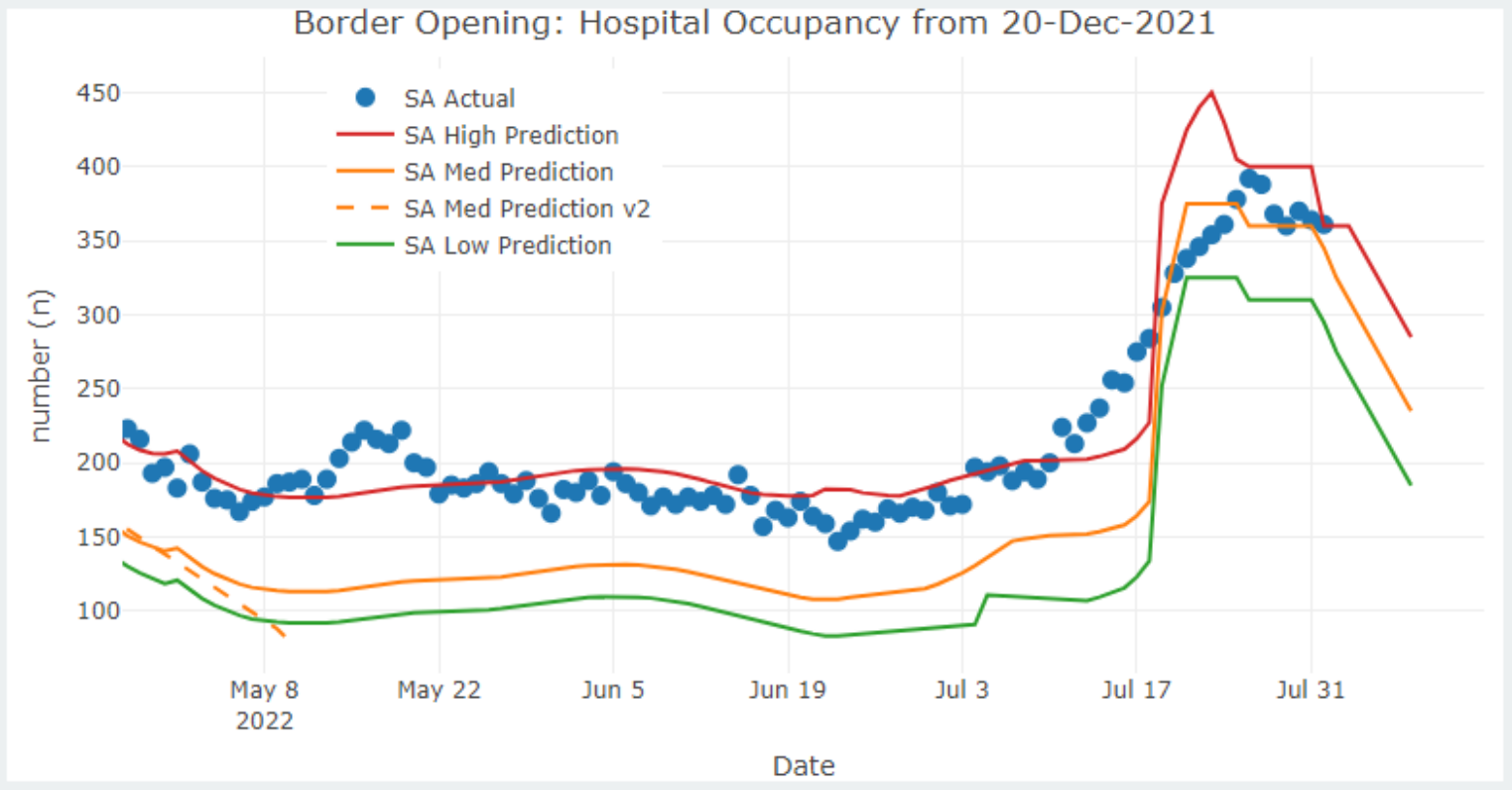


Source: NNDSS

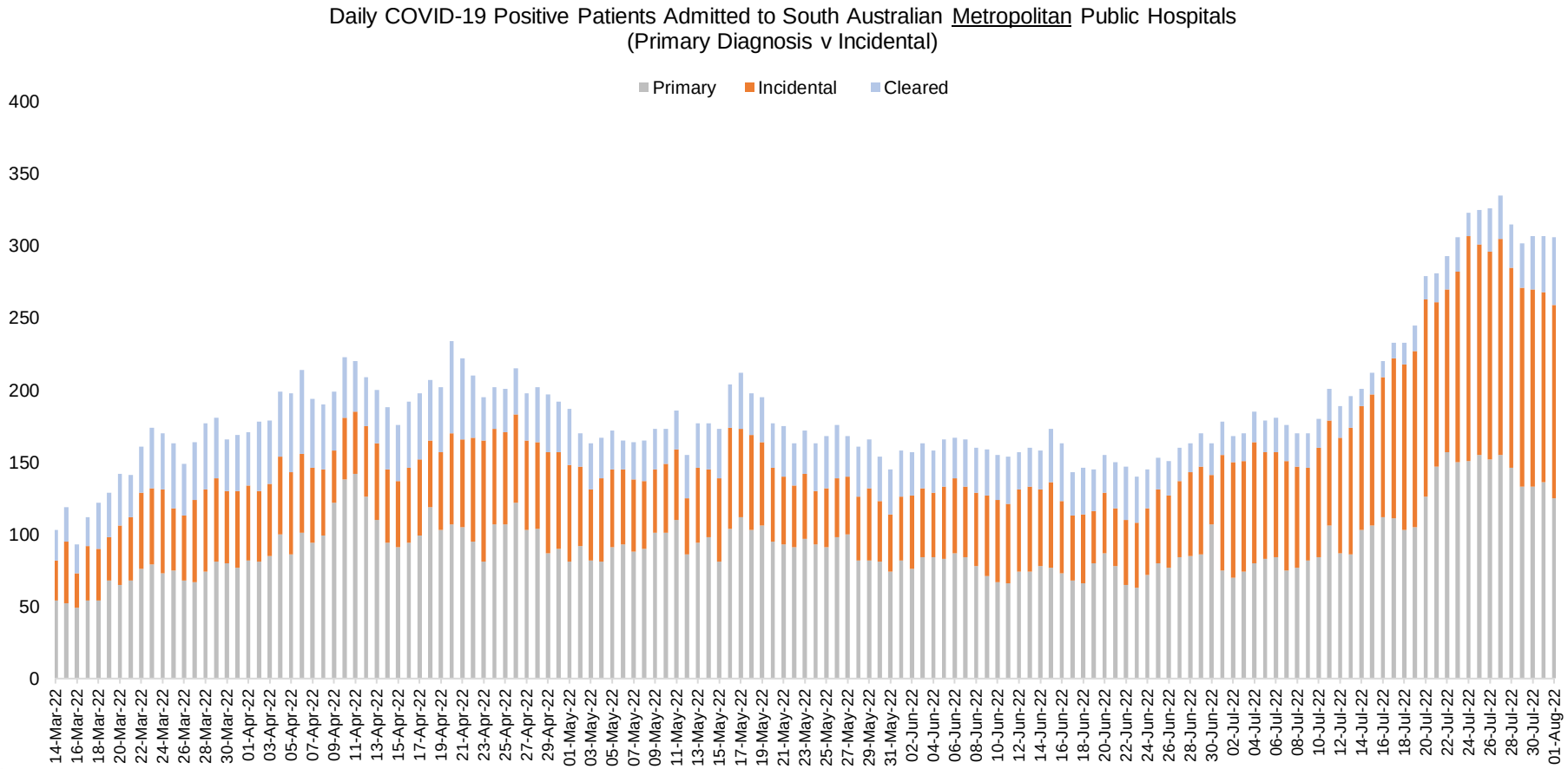
*NNDSS notification data provided for the current and most recent weeks may be incomplete. All data are preliminary and subject to change as updates are received, with most recent weeks considered particularly subject to revisions, with most recent weeks considered particularly subject to revisions.

AUSTRALIAN INFLUENZA SURVEILLANCE REPORT No. 07, 2022 - Reporting fortnight: 04 July to 17 July 2022

SA Active Cases



Metro Hospitalisation Data



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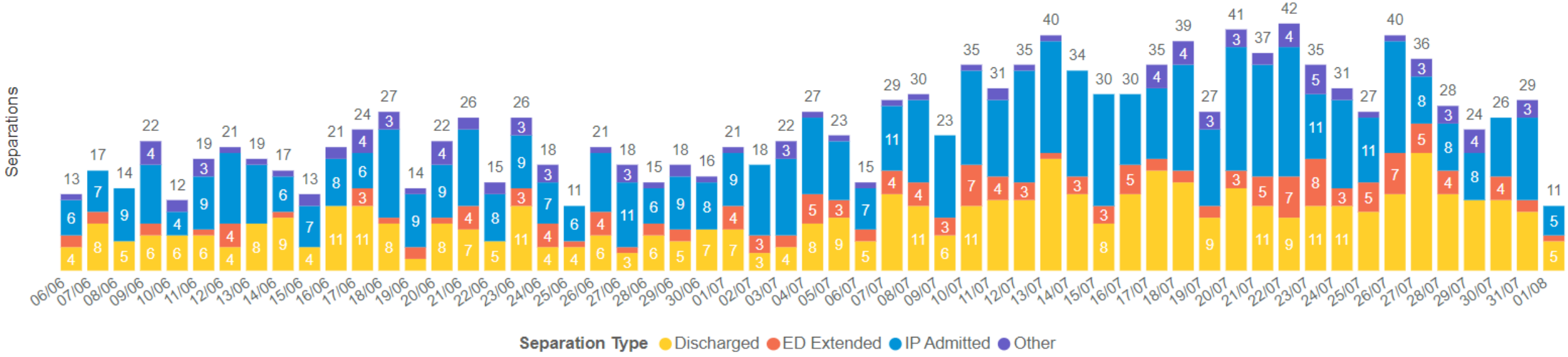
COVID ED presentations - RAH



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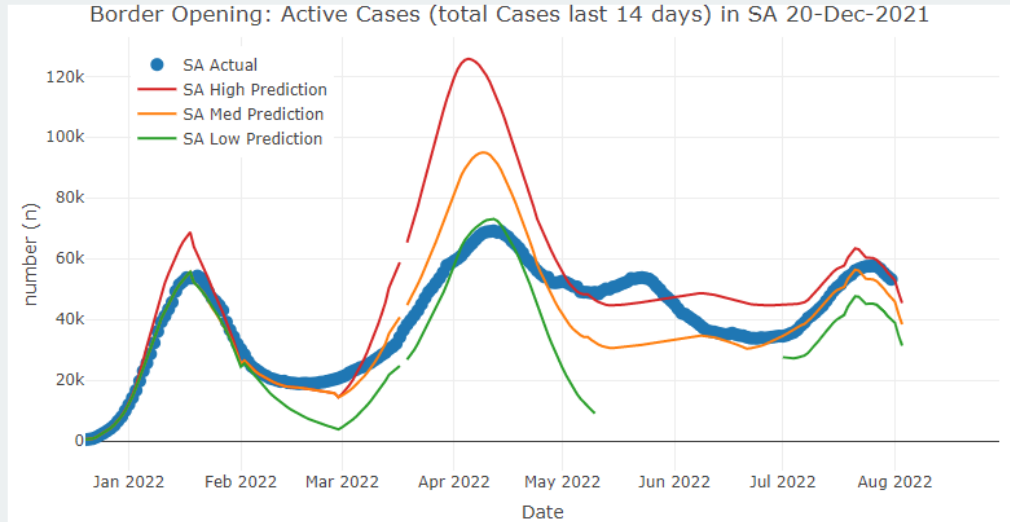
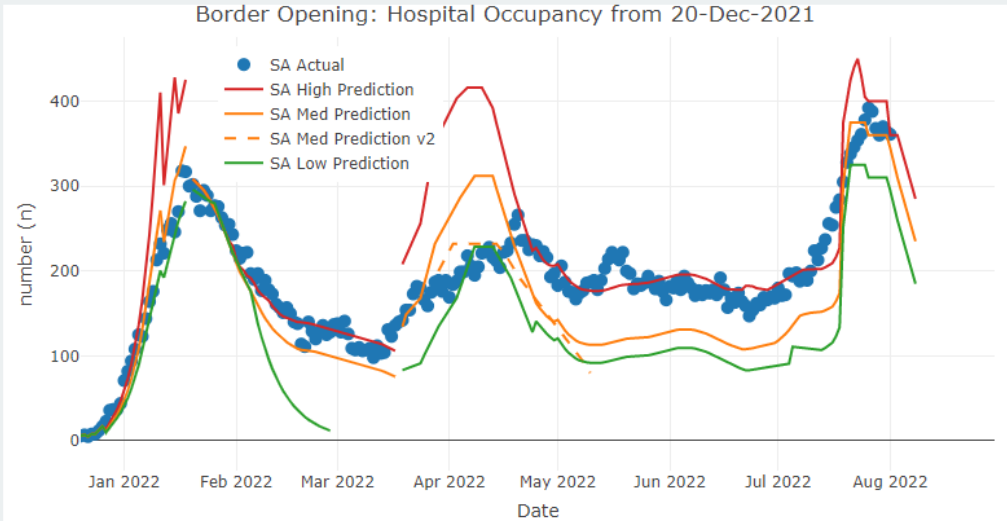

Border Opening: Active Cases (total Cases last 14 days) in SA 20-Dec-2021
SA Actual
SA High Prediction
SA Med Prediction
SA Low Prediction
120k
100k
80k
60k
40k
20k
0
number (n)
Jan 2022
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Date


Border Opening: Hospital Occupancy from 20-Dec-2021
SA Actual
SA High Prediction
SA Med Prediction
SA Med Prediction v2
SA Low Prediction
400
300
200
100
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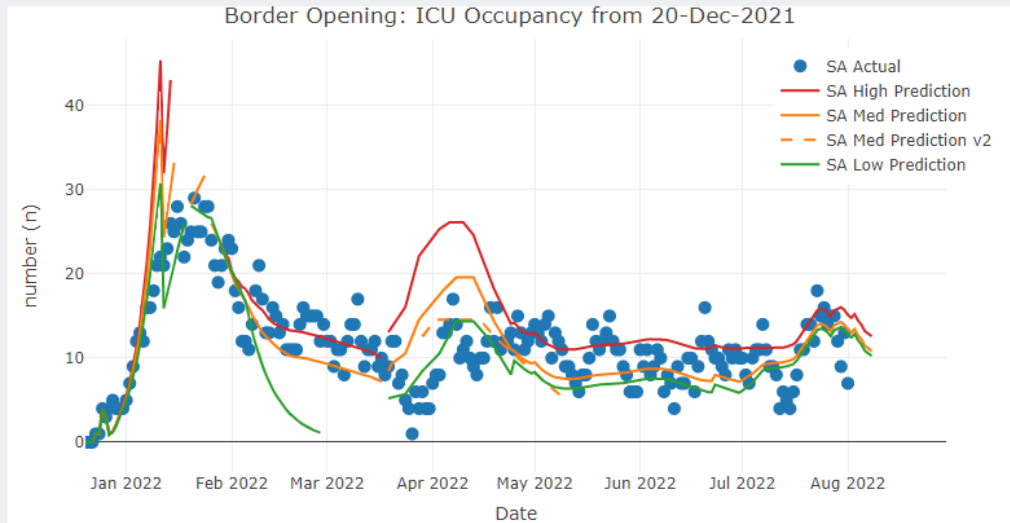
number (n)
Jan 2022
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Date


Border Opening: ICU Occupancy from 20-Dec-2021
SA Actual
SA High Prediction
SA Med Prediction
SA Med Prediction v2
SA Low Prediction
40
30
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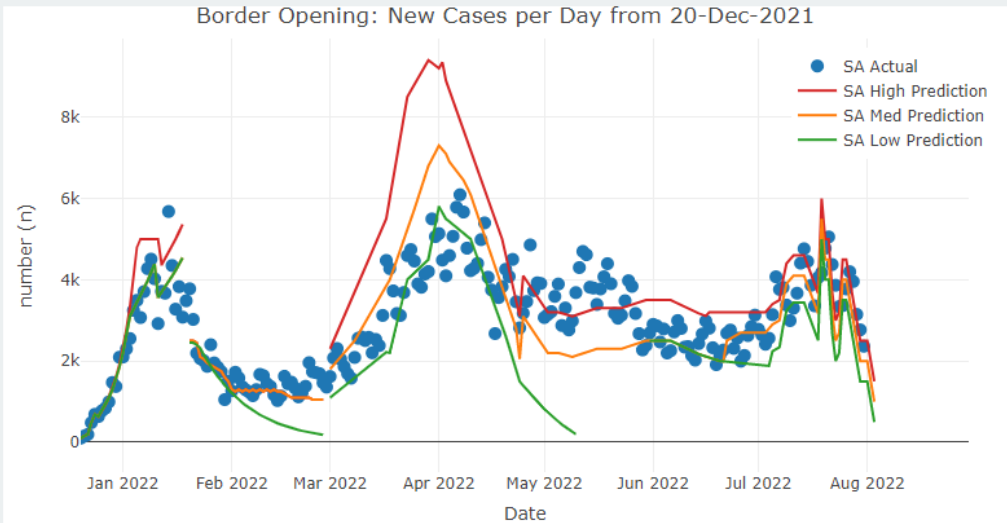
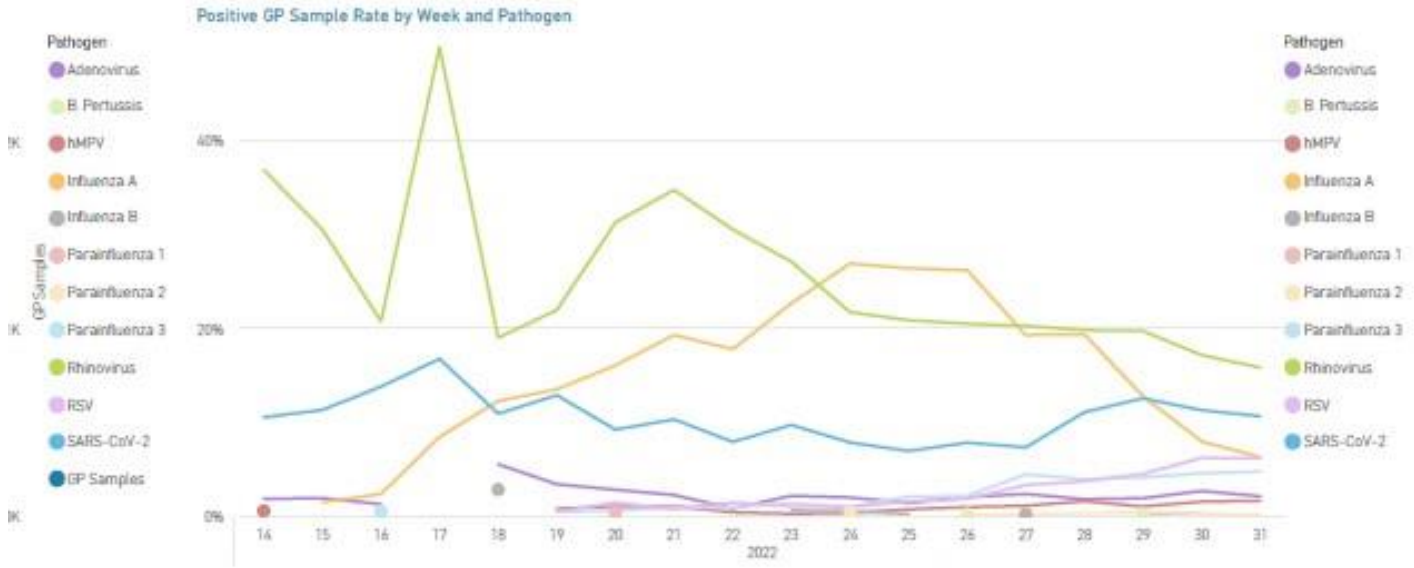
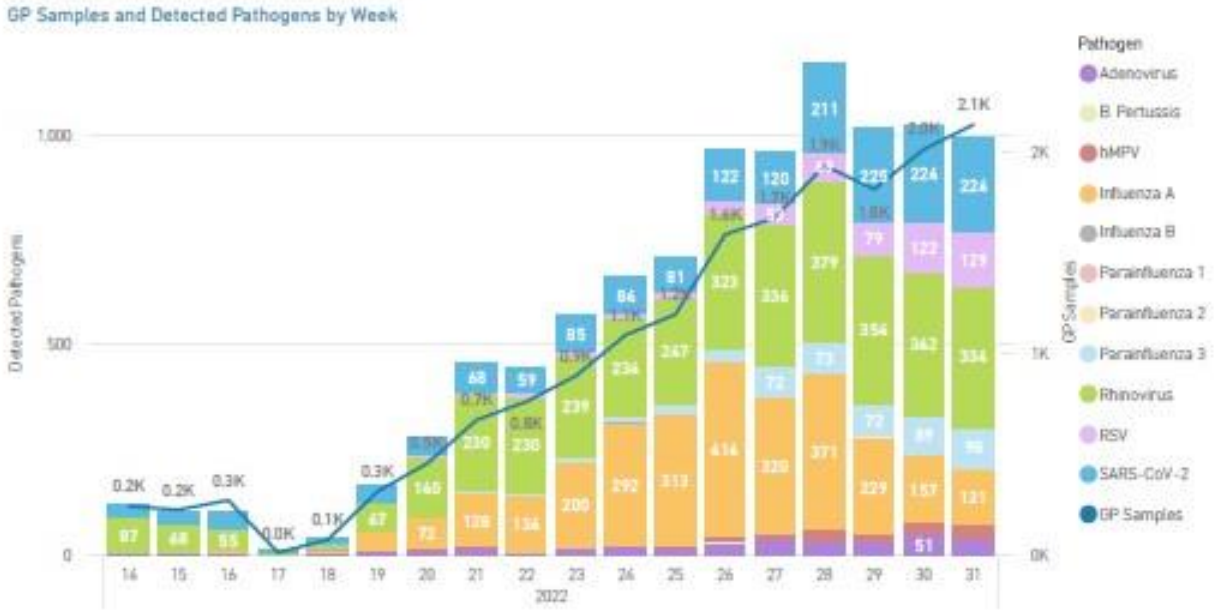
number (n)
Jan 2022
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Date


Border Opening: New Cases per Day from 20-Dec-2021
SA Actual
SA High Prediction
SA Med Prediction
SA Low Prediction
8k
6k
4k
2k
0
number (n)
Jan 2022
Feb 2022
Mar 2022
Apr 2022
May 2022
Jun 2022
Jul 2022
Aug 2022
Date

GP referred Testing SA Path





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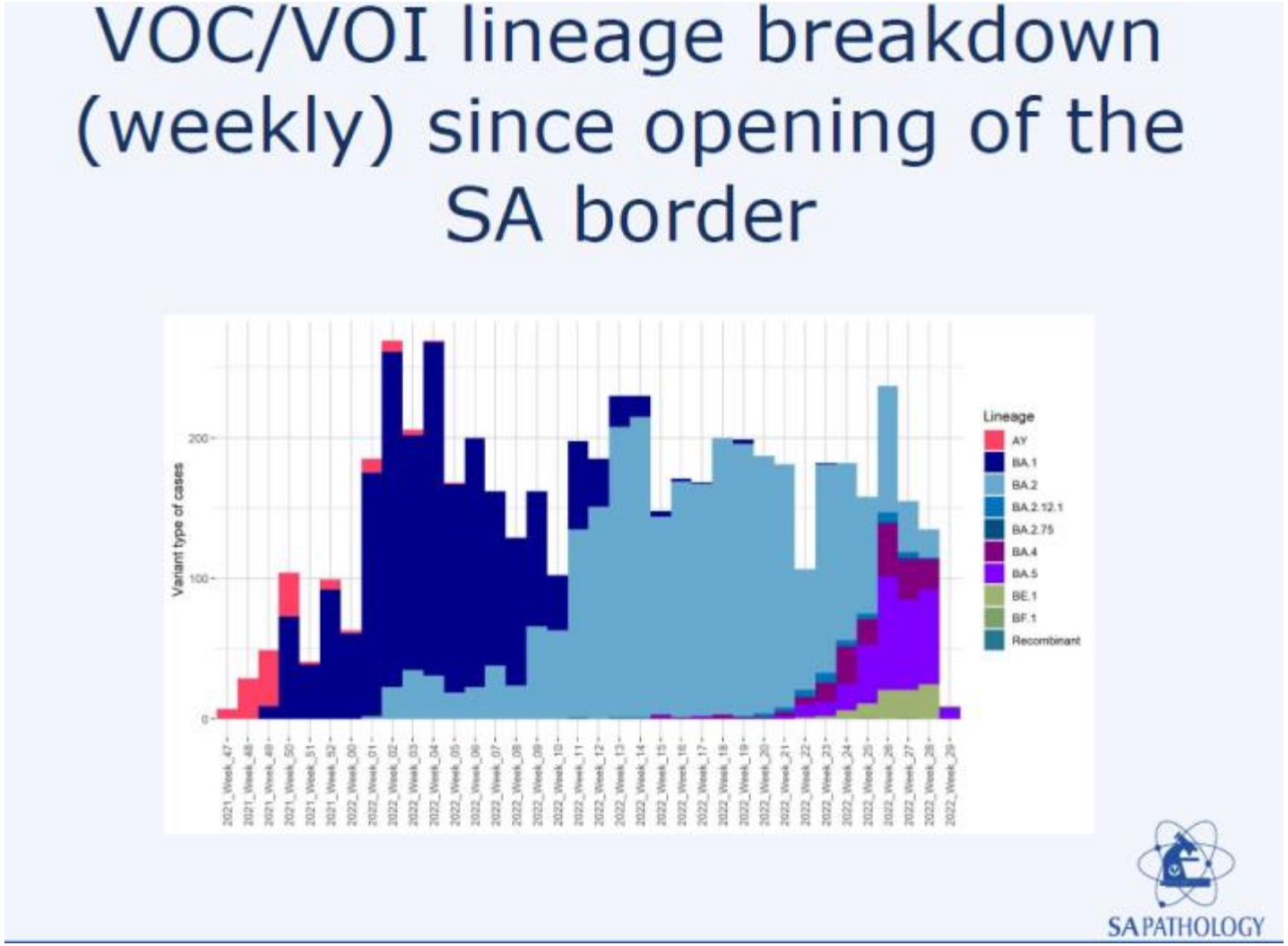
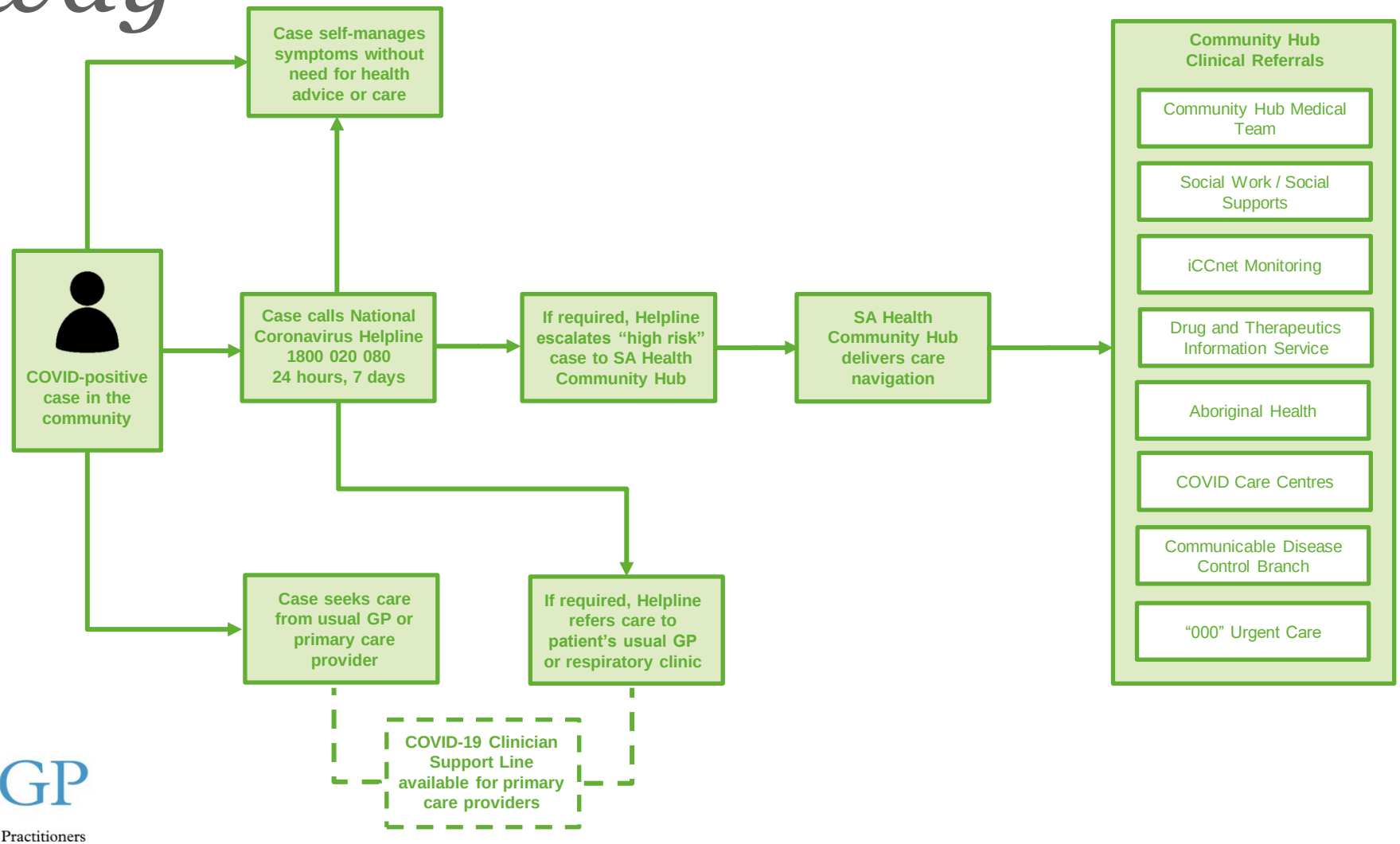
Genomics

— VOC / VOI lineage breakdown



COVID-19 Community Care Pathway



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iCCnet Monitoring

If one of your patients has been diagnosed with COVID-19 and you are concerned from any perspective in a biopsychosocial approach

Copy our automated referral form into your practice management software or fill out of PDF form and email to Health:iCCnetCOVIDNURSES@sa.gov.au
For urgent referrals please call our clincal nurse on 0421 878 779

Our dedicated clinical nurse team will call and assess your patient and place them either onto daily nursing calls or in-home monitoring and nursing call
Additionally services such as food bank or translation will be provided

Daily calls

Our team will monitor your patient everyday, coach them through home care and monitor for any sign of deterioration

Home Monitoring

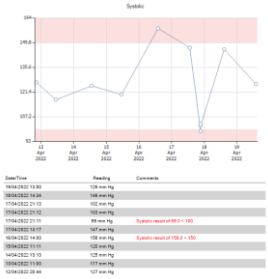
Your Patient will be provided with a kit which tracks their SpO2, BP, HR, Temperature, SOB and appearance and automatically syncs with our Database for assessment

Our clinical network scientists will walk the patient through step by step in taking their own Obs and be available 24/7 for assistance and troubleshooting

Our nursing team will call the patient everyday and assess their Obs
They will monitor, support and guide your patient through their journey with COVID
Our clinical nurse will also be on call 24/7 to provide advice and care

After 7 days the nursing team will assess whether your patient is well enough to be discharged from the program

You will receive a Discharge summary including nursing notes and daily Obs in graphed over their time with us giving you complete visibility into the service and your patients journey through it



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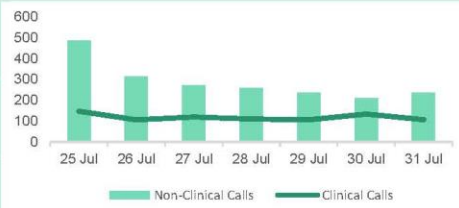
COVID Community Response Update

Report Date: 01 August 2022

COVID Community Activity: Sunday, 31 July 2022

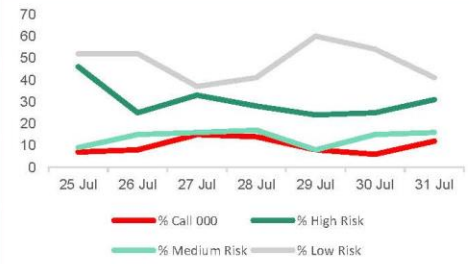
National Coronavirus Helpline (NCH) Call Activity

Total SA calls	343
Non-Clinical calls	236 (69%)
Clinical calls	107 (31%)



NCH Clinical Call Triage Classification

Call 000	13 (12%)
High Risk	33 (31%)
Medium Risk	17 (16%)
Low Risk	44 (41%)



NCH Antiviral Suitability Assessments, 28 July 2022

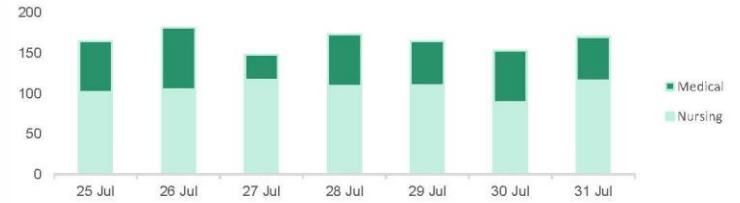
Note: Data reported latest day of NCH validation

Number of Eligible Cases	22
Referred to GP	18 (82%)
Referred to GPRC	4 (18%)
Self Directed Referral	-

Total Cases	Acute	Community
21,166	350 (1.6%)	20,816 (98.4%)

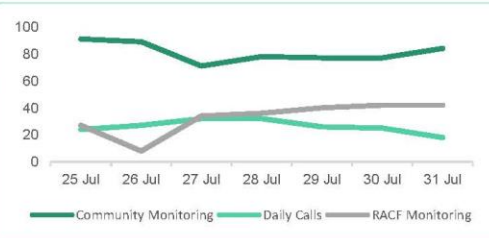
COVID Community Hub Daily Call Activity

	Total Calls	Abandon %	Avg Wait Time	Avg Call Handling Time
Nursing	116	6%	00:03:21	00:10:18
Medical	54	0%	00:00:19	00:06:11
Total Calls	170			



iCCnet Daily Admission Profile

Virtual Monitoring	84
Daily Calls	18
RACF Virtual Monitoring	42



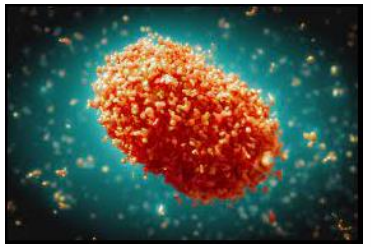
Authorised by: Emily Kirkpatrick, 1 August 2022

Monkeypox

Dr Charlotte Bell

Consultant sexual health Physician, Communicable Disease Control Branch, and Adelaide Sexual Health Centre, SA Health

Monkeypox



- Monkeypox is a viral zoonotic disease in the Orthopoxvirus genus (which includes variola virus (smallpox) and cowpox.
- First described in Denmark in 1958 in lab monkeys, first human cases in 1970's in DRC
- Since the eradication of smallpox in 1980 and subsequent cessation of smallpox vaccination, it has emerged as the most important orthopoxvirus
- There are 2 main strains, one has typically caused more severe illness (Congo clade) than the other (West African clade).
- Only the West African clade has been identified in the current multi-country outbreak
- The animal reservoir host is still unknown
- Severe complications have been reported to be more common among those unvaccinated for smallpox compared with those vaccinated (74% vs 39.5%)
- To date most deaths have occurred in young children & immunocompromised individuals such as poorly controlled HIV infection.
- In several countries community transmission is now occurring, with a high proportion of cases currently (though not exclusively) affecting gay, bisexual and men who have sex with men (GBMSM)

Global situation

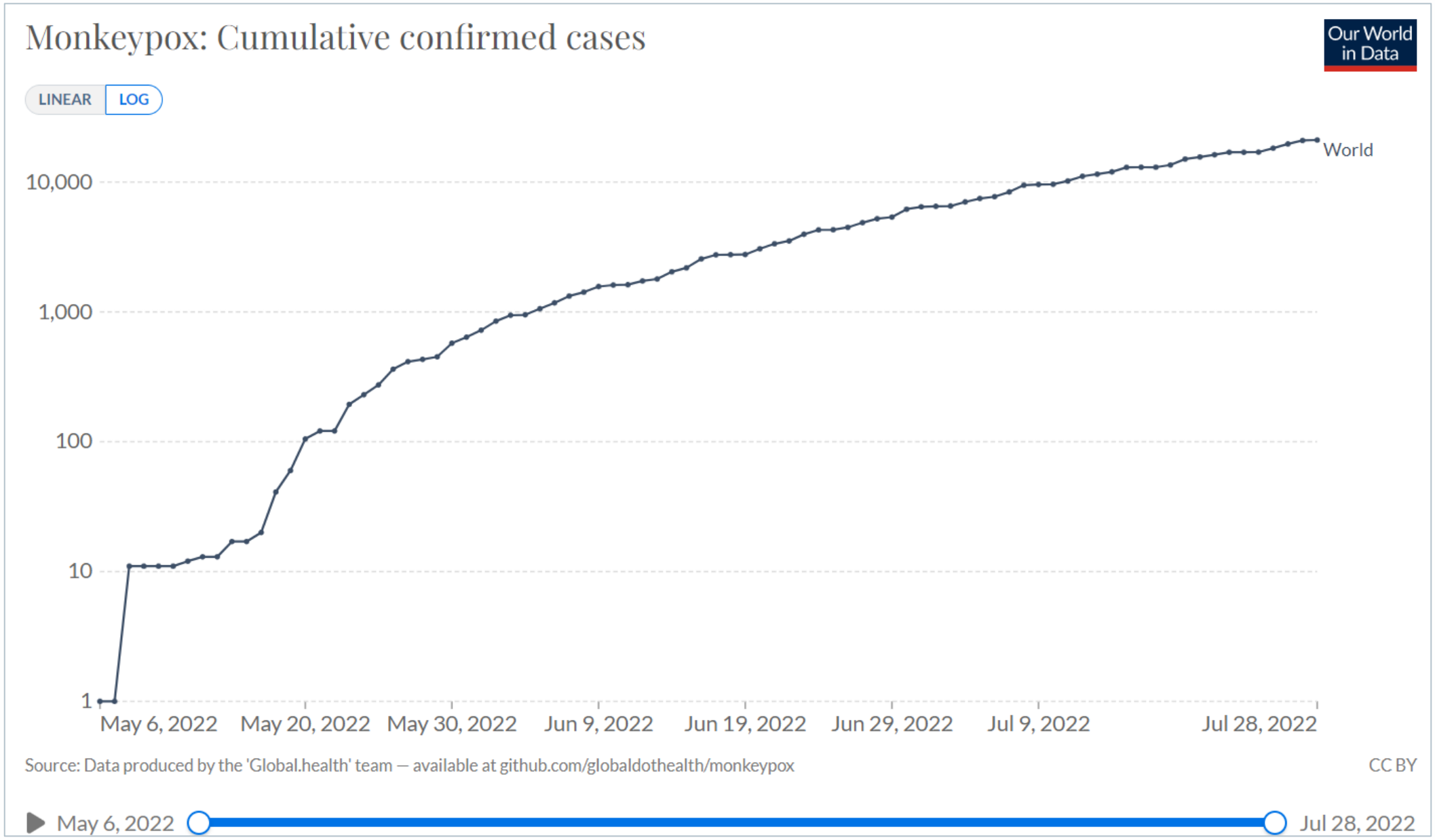
Since early May 2022, an outbreak of monkeypox has spread across multiple countries that do not normally

Confirmed Cases

22,485 Total	**22,141** In countries that have not historically reported monkeypox	**344** In countries that have historically reported monkeypox

Locations

79 Total	**72** In countries that have not historically reported monkeypox	**7** In countries that have historically reported monkeypox



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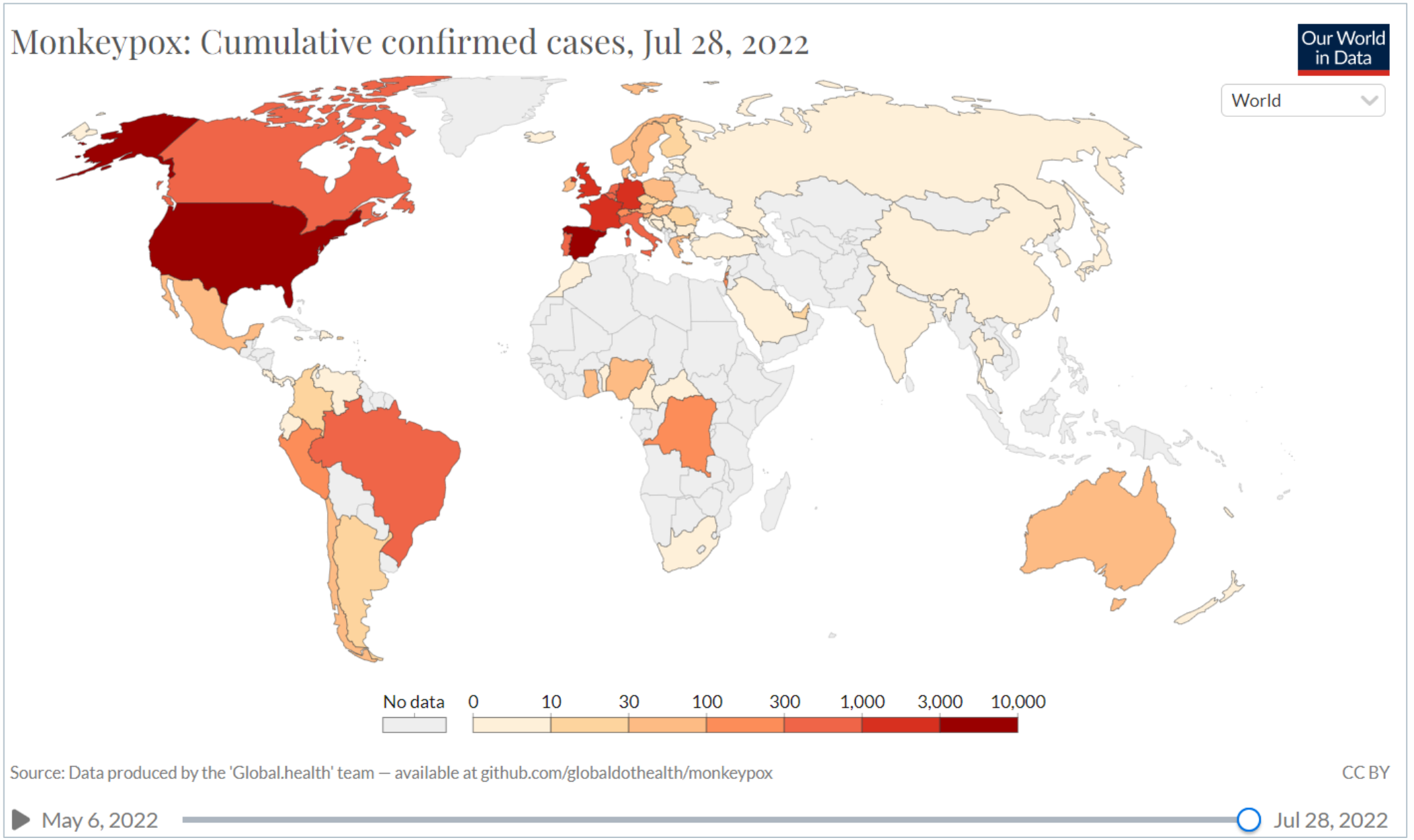

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Majority of cases have occurred in defined networks of GBMSM UK Data

Table 3. Selected epidemiological metrics from enhanced surveillance questionnaires in confirmed monkeypox cases in England as of 19 July 2022

N=576, some metrics have slightly smaller denominators due to missing values

Metric	N (%)
Gay, bisexual, or men who have sex with men*	549 (96.5%)
Travel abroad prior to symptom onset (21 days)	173 (30.3%)
Age below 30 years	98 (22.9%)
History of STI in the last year	313 (55.6%)
One or no sexual partners in last 3 months	82 (14.5%)
10+ sexual partners in last 3 months	176 (31.1%)
Living with HIV	149 (27.7%)
On HIV treatment (among living with HIV)	148 (99.3%)
Ever used PrEP (among HIV negative)	297 (79.2%)

*Includes men who self-identify as GBMSM or reported sex with a man in the 21 days prior to symptom onset. Proportion is calculated among 569 males only.

Table 4. Event attendance among confirmed monkeypox cases in England as of 19 July 2022

Event type*	% of total (n)
Festival	37% (241)
Sex-on-premise venue	25% (164)
Bar	12% (80)
Nightclub	9% (60)
Gym or swimming pools	7% (44)
Event	4% (27)
Private sex party	4% (26)
Other	2% (12)
Total	100% (654)**

*Some cases have attended the same festival or event over multiple dates; each date has been reported separately.

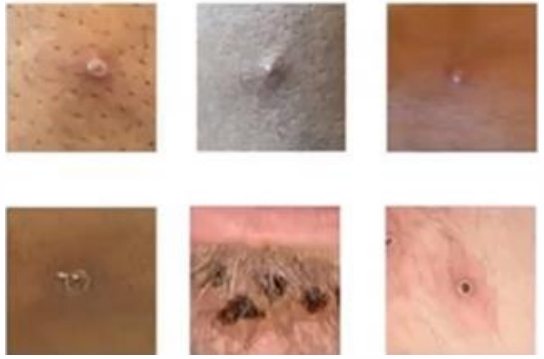
**654 event or venue attendances reported by 274 unique cases.

https://www.gov.uk/government/publications/monkeypox-outbreak-technical-briefings/investigation-into-monkeypox-outbreak-in-england-technical-briefing-4

Situation in Australia

- Monkeypox had not been identified in Australia prior to May 2022
- As of the 24th July 2022, there are 44 cases (confirmed & probable) in Australia
- This includes 25 in NSW, 16 in Vic, 2 in ACT, 1 in QLD, 1 in SA & 1 in NT.
- All cases are in adult males
- Where information is available has mainly been reported in gay, bisexual and men who have sex with men
- The majority of cases were acquired overseas, but a small number of cases have been acquired in Australia
- The overall population risk in Australia is currently low.

Clinical presentation



- Incubation period 5-21 days
- Prodrome 1-5 days fever ≥38°,malaise, headache, weakness, myalgia, arthralgia)
- Prodrome not seen in all cases
- Illness self limiting, typically lasts (2-4 weeks)
- 98% present with a rash
- 2022 outbreak lesions multiple in number & morphology. Penile & perianal involvement predominant only 20% lesions on face
- Lymph node enlargement 25%
- Proctitis 8% (maybe severe requiring admission)
- Painful oral lesions
- Systemic features in 50%
- Secondary cellulitis 11%
- Less common encephalitis, pneumonia, sepsis, keratitis (leading to visual loss)

Moneypox Rash

- The lesions go through several different stages
- Unlike chickenpox, the lesions are usually all at the same phase of development
- They heal by crusting over and scabbing
- The skin lesions resolve within 2 to 4 weeks
- An individual is contagious until all the scabs have fallen off and there is intact skin underneath
- The scabs may also contain infectious virus material

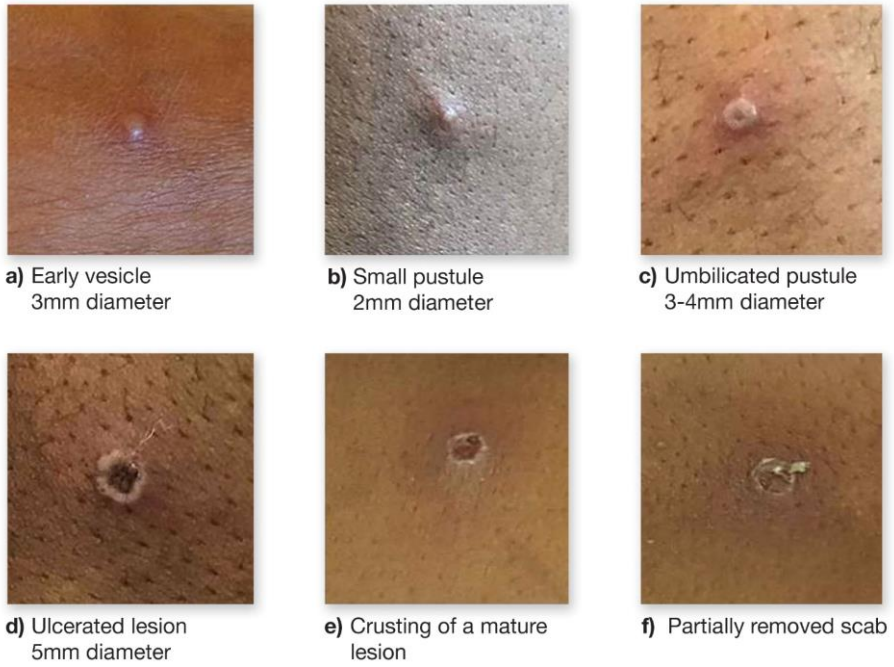


Photo credit:
UK Health Security Agency

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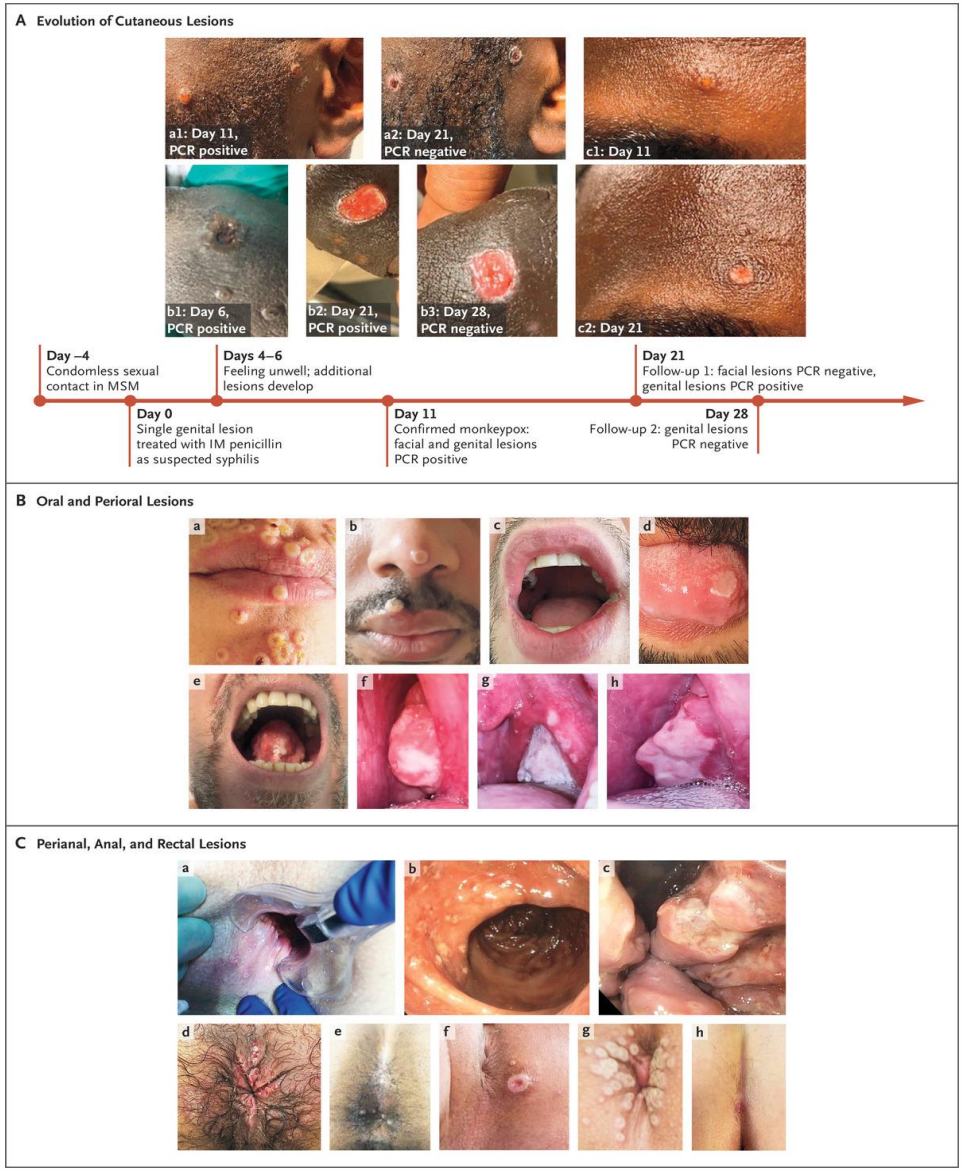
Lesions in Persons with Confirmed Human Monkeypox Virus Infection



Thornhill et al. N Engl J Med 2022. DOI: 10.1056/NEJMoa2207323

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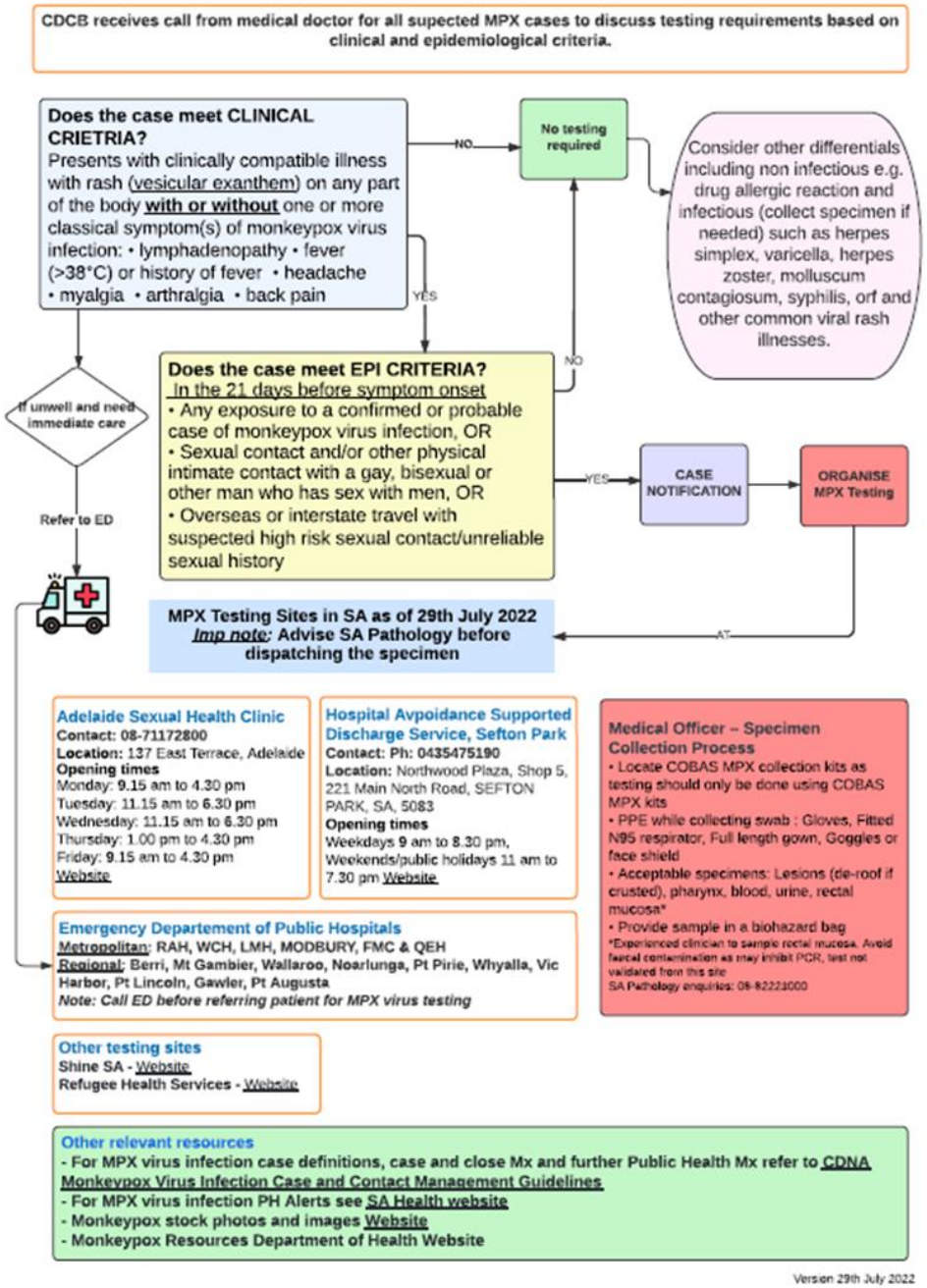
Flowchart for Monkeypox virus (MPX) infection testing and management in South Australia



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Lab testing for Monkeypox at SA Path

- Each specimen undergoes 2 in-house pcr tests at SA Path
  - Orthopox and Monkeypox specific
  - Strong positive results from lesions in cases so far (instate experience)
  - Daily testing available, 9-5, including weekends

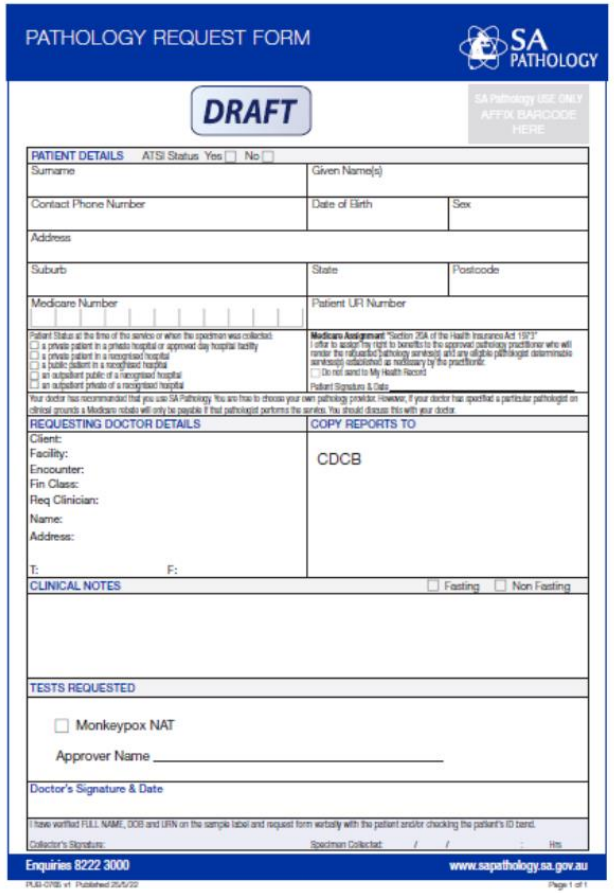
  Acceptable specimens:
  - Lesions (de-roof if crusted), pharynx, blood, urine, rectal mucosa*
- Doctor should be performing swabs
- Preferred swab types:
  - COBAS Monkeypox swab kits distributed by SA Pathology
  - Dry swab (plastic, nylon, dacron)

    When using the monkeypox collection kits (Cobas swab in a inactivating fluid) the specimen tube should be well capped, double bagged, wiped externally with disinfectant (e.g. clinell), and hand delivered to the pathology reception. This is sufficient- as the virus will be inactivated. The specimen reception should be informed that the specimens are for monkeypox testing and that they should not be opened until delivered to trained processing staff at Frome Road. The monkeypox kits come with a red warning to specimen reception staff not to open the specimen, this should be visible on the outside. A hard external container should be used if transporting longer distances (e.g., between hospital sites). The pneumatic tube system should not be used.

*experienced clinician to sample rectal mucosa. Avoid faecal contamination as may inhibit PCR, test not validated from this site

Collection Kits

The SA Pathology external on-call doctor (8222-3123) should always be notified when requesting or sending Monkeypox specimens to the lab.



PATHOLOGY REQUEST FORM

SA PATHOLOGY

DRAFT

SA Pathology USE ONLY
AFFIX BARCODE HERE

PATIENT DETAILS ATSI Status Yes ☐ No ☐

Surname | Given Name(s)

Contact Phone Number | Date of Birth | Sex

Address

Suburb | State | Postcode

Medicare Number | Patient UR Number

Patient Status at the time of the service or when the specimen was collected:
☐ a private patient in a private hospital or approved day hospital facility
☐ a private patient in a recognised hospital
☐ a public patient in a recognised hospital
☐ an outpatient public of a recognised hospital
☐ an outpatient private of a recognised hospital

Medicare Assignment: "Section 20A of the Health Insurance Act 1973"
I offer to assign my right to benefits for the approved pathology practitioner who will render the requested pathology service(s) and any eligible pathologist determined service(s) considered as necessary by the practitioner.
☐ Do not send to My Health Record
Patient Signature & Date

Your doctor has recommended that you use SA Pathology. You are free to choose your own pathology provider. However, if your doctor has specified a particular pathologist on clinical grounds a Medicare rebate will only be payable if that pathologist performs the service. You should discuss this with your doctor.

REQUESTING DOCTOR DETAILS
Client:
Facility:
Encounter:
Fin Class:
Req Clinician:
Name:
Address:
T: F:

COPY REPORTS TO
CDCB

CLINICAL NOTES ☐ Fasting ☐ Non Fasting

TESTS REQUESTED

☐ Monkeypox NAT

Approver Name _____

Doctor's Signature & Date

I have verified FULL NAME, DOB and URN on the sample label and request form verbally with the patient and/or checking the patient's ID band.

Collector's Signature: Specimen Collected: / / : Hrs

Enquiries 8222 3000 www.sapathology.sa.gov.au

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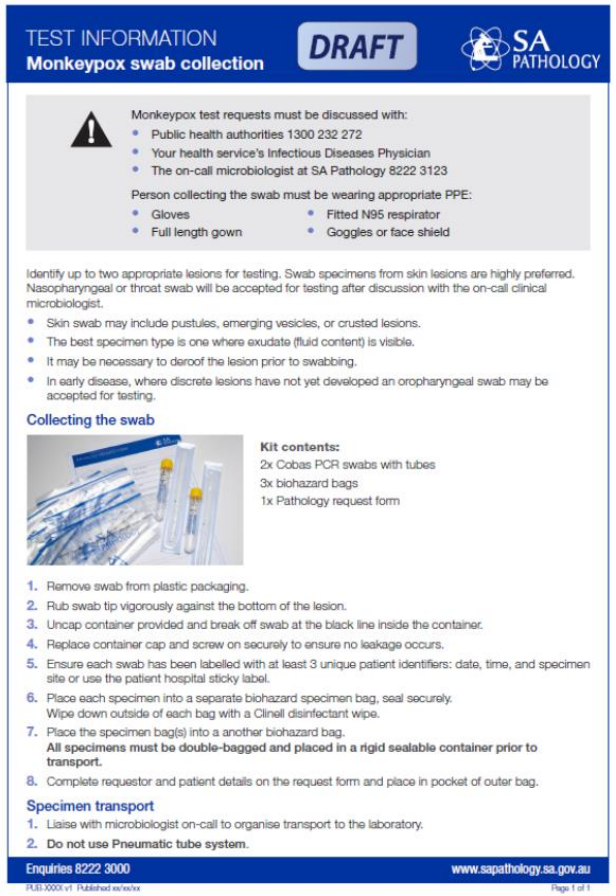

TEST INFORMATION
Monkeypox swab collection

DRAFT

SA PATHOLOGY

Monkeypox test requests must be discussed with:
- Public health authorities 1300 232 272
- Your health service's Infectious Diseases Physician
- The on-call microbiologist at SA Pathology 8222 3123

Person collecting the swab must be wearing appropriate PPE:
- Gloves
- Full length gown
- Fitted N95 respirator
- Goggles or face shield

Identify up to two appropriate lesions for testing. Swab specimens from skin lesions are highly preferred. Nasopharyngeal or throat swab will be accepted for testing after discussion with the on-call clinical microbiologist.
- Skin swab may include pustules, emerging vesicles, or crusted lesions.
- The best specimen type is one where exudate (fluid content) is visible.
- It may be necessary to deroof the lesion prior to swabbing.
- In early disease, where discrete lesions have not yet developed an oropharyngeal swab may be accepted for testing.

Collecting the swab

Kit contents:
2x Cobas PCR swabs with tubes
3x biohazard bags
1x Pathology request form

1. Remove swab from plastic packaging.
2. Rub swab tip vigorously against the bottom of the lesion.
3. Uncap container provided and break off swab at the black line inside the container.
4. Replace container cap and screw on securely to ensure no leakage occurs.
5. Ensure each swab has been labelled with at least 3 unique patient identifiers: date, time, and specimen site or use the patient hospital sticky label.
6. Place each specimen into a separate biohazard specimen bag, seal securely. Wipe down outside of each bag with a Clinell disinfectant wipe.
7. Place the specimen bag(s) into a another biohazard bag. **All specimens must be double-bagged and placed in a rigid sealable container prior to transport.**
8. Complete requestor and patient details on the request form and place in pocket of outer bag.

Specimen transport

1. Liaise with microbiologist on-call to organise transport to the laboratory.
2. **Do not use Pneumatic tube system.**

Enquiries 8222 3000 www.sapathology.sa.gov.au

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Monkeypoxvirus & VHF Kit Distribution

Site	
RAH	ED ICU
QEH	ED Lab
WCH	ED Lab
LMH	ED Lab
Modbury	ED Lab
FMC	ED Lab
Mt Gambier	Lab
Mur Bridge	Lab
Wallaroo	Lab
Noarlunga	Lab
Pt Pirie	Lab
Whyalla	Lab
Vic Harb	Lab
Pt Lincoln	Lab
Pt Aug	Lab
Gawler	Lab
Berri	Lab

Additional Monkeypoxvirus collection kits are distributed to ASHC, Shine SA and Migrant Health Centre

Medical Officer – Specimen Collection Process

External On-Call MO received phone call requesting for Monkeypoxvirus testing

Assess urgency and epidemiologic risks. Ensure requestor has notified CDCB medical officer & ID physician prior to request. Confirm contact number

Advise requestor to locate collection kits (major hospitals, ASHC, Shine, Migrant Health Centre, Hospital SAP lab)*. If not available, dry swab or swab

Send sample to Frome Road

*see Monkeypoxvirus & VHF Kit Distribution List for Location of these kits

Advise to use routine drop off and courier service (ASHC, regional, hospital ED)

Phone On-Call Scientist at 0401120723

Email: VSM Processing Supervisors & On-Call Scientist at DL.HealthSAPathologyMicro&IDVSMProcessingSupervisors@sa.gov.au

Email: Frome/RAH Specimen Reception Supervisors

DLHealthSAPathologyAutoLabsRAHSpecRcptSupervisors@sa.gov.au

Transmission

- Limited data available describing transmission and viral shedding
- **Animal to human**
  - Bites, scratches during activities such as hunting, skinning trapping etc animals such as non-human primates, terrestrial rodents, squirrels.
  - Reservoir unknown, no documented transmission human to animal
- **Human to human**
  - Direct contact with infectious skin or mucocutaneous lesions, face to face, skin to skin, mouth to mouth and respiratory droplets (and possibly short range aerosols requiring close contact)
  - In utero transmission & mother to child via direct contact documented
- **Environment to human**
  - Contaminated clothing or linen if shaken particles can disperse into the air and be inhaled or land on broken skin or mucosal membranes
- **Current outbreak transmission occurring through close physical contact, including sexual contact (oral, vaginal & anal**) -3 cases asymptomatic, cases suggesting asymptomatic transmission

A perfect storm, Pride season 2022-23

- Barcelona: 18-26 June
- Lisbon: 19-26 June
- Bristol: 25 June to 10 July
- Paris: 25 June
- San Francisco: 25-26 June
- Madrid: 1-10 July
- London: 2 July
- Montreal: 1-7 August
- World AIDS Conference, Montreal: 29 July to 2 August
- Feast Festival Adelaide 5th -23rd November
- Adelaide World Pride in Sydney 2023

Other considerations

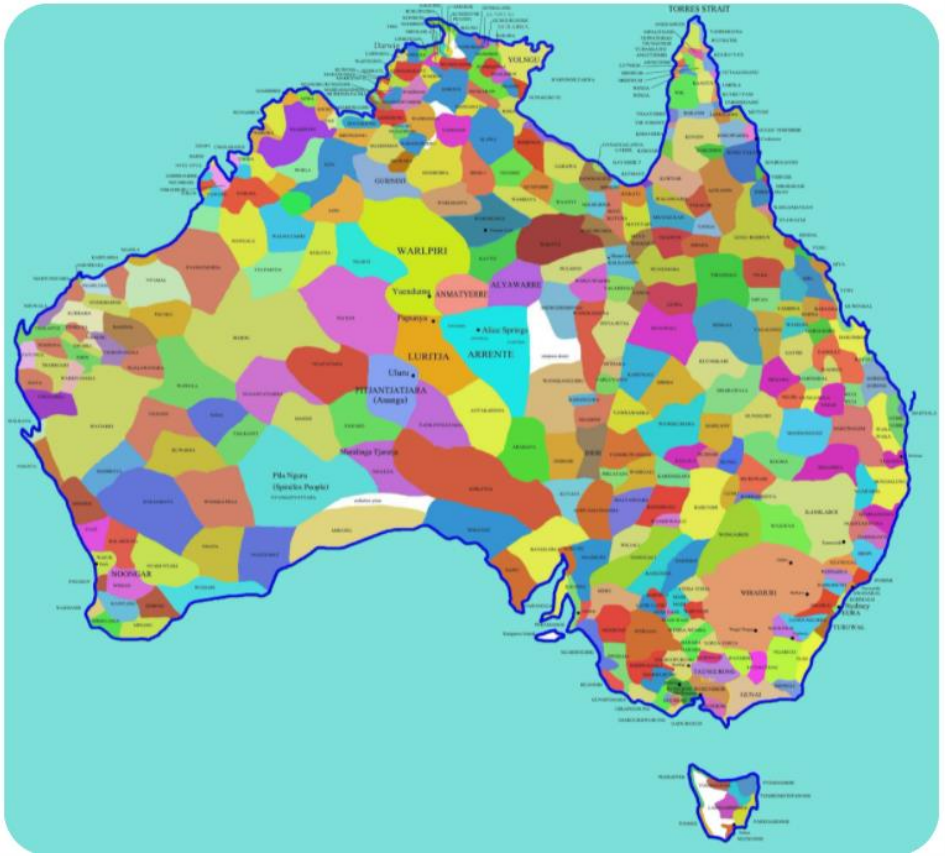
- **Potential to spread to the broader population, which would likely result in a higher mortality rate especially among**
  - Infants & young children
  - Immunocompromised
  - Communities with high rates of comorbidities (e.g., rural/remote Aboriginal communities)
  - ? Potential for spread to non-human animals (e.g., pets, wildlife & livestock) resulting in new viral reservoirs and hence endemicity
- **MPX has a high potential to become stigmatised, as for other STIs**
  - Stigma → fear of disclosure
    - → Barrier to seeking care
    - → Barrier to testing
    - → Barrier to contact tracing
  - Contact tracing protocols must balance the need for contact tracing with the need to preserve confidentiality/ privacy

Back from the brink of elimination: responding to a resurgence of syphilis in South Australia

Dr Charlotte Bell (Bsc MBBS FRCP FChSHM)
Communicable Disease Control Branch (CDCB) and Adelaide Sexual Health & Royal Adelaide Hospital

Acknowledgement of Country

We would like to acknowledge the Kaurna people as the custodians of the lands and waters of the Adelaide region, on which we meet today. We pay respect to elders both past and present.



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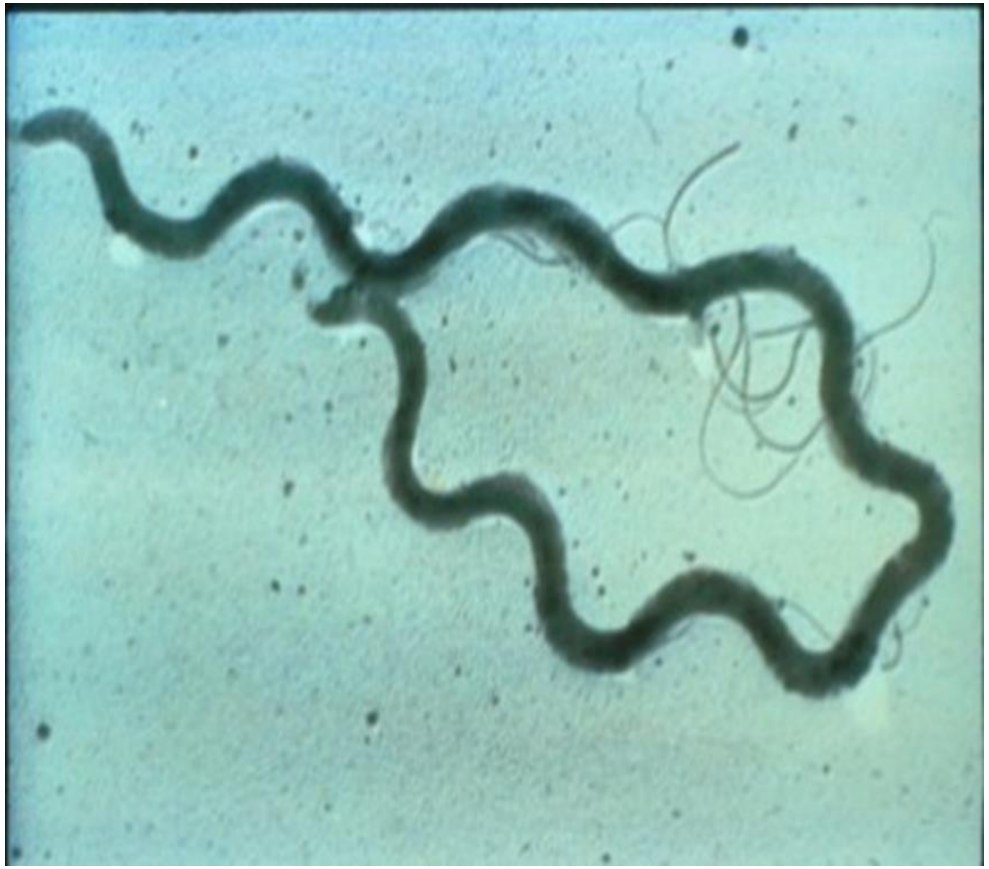
Treponema pallidum



Electron photomicrograph

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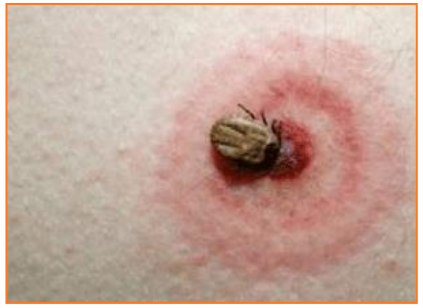
Source: CDC/NCHSTP/Division of STD Prevention, STD Clinical Slides

Pathogenic spirochetes

Genus	Species	Disease
Treponema	**pallidum pallidum** pallidum endemicum pallidum pertenue	**Syphilis** Bejel Yaws
	carateum vincentii	Pinta Vincent's angina
Borrelia	burgdorferi recurentis Many species	Lyme Disease Epidemic relapsing fever Endemic relapsing fever
Leptospira	interrogans / icterohaemorrhagiae	Leptospirosis (Weil's disease)



Syphilis:

Length: 6-15 µm

Width: ~0.2 µm

Limited stress response eg heat
Difficult to culture (rabbits testes)
Doubles every 30-50 hours

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Source: La Fond RE & Lukehart SA Clinical Microbiology Reviews 2006

Rapid spread of syphilis in Europe (1492-1493)

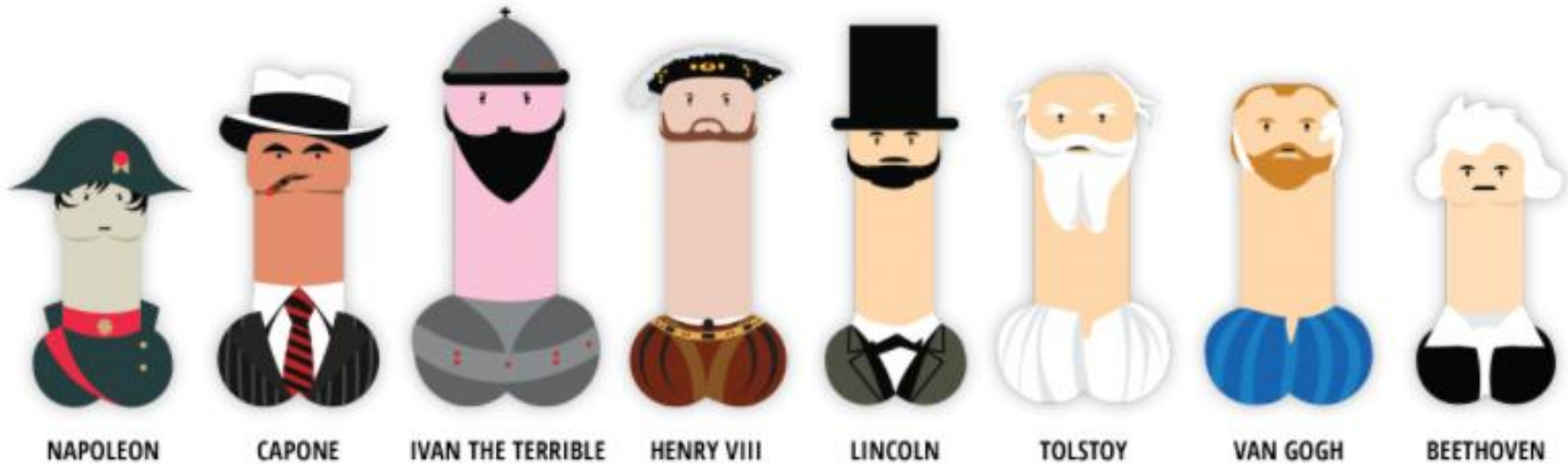
The Colombian Exchange

Diseases That Were Exchanged

Old World to New World	New World to Old World
• Smallpox	• Syphilis
• Measles	
• Typhus,	
• Cholera	
• Diphtheria	
• Scarlet Fever	

The Invasion of Naples 1494

King Charles of France invaded Naples with 50,000 European soldiers

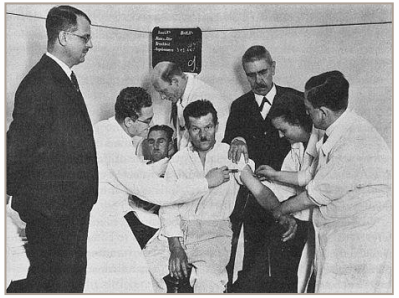

NAPOLEON
CAPONE
IVAN THE TERRIBLE
HENRY VIII
LINCOLN
TOLSTOY
VAN GOGH
BEETHOVEN

Early treatment for syphilis

‘a night in the arms of Venus leads to a lifetime on Mercury’

Francisco Delicado in 1525

Malaria therapy



Heat treatment

Mercury treatment

Salvarsan (Arsenic) treatment

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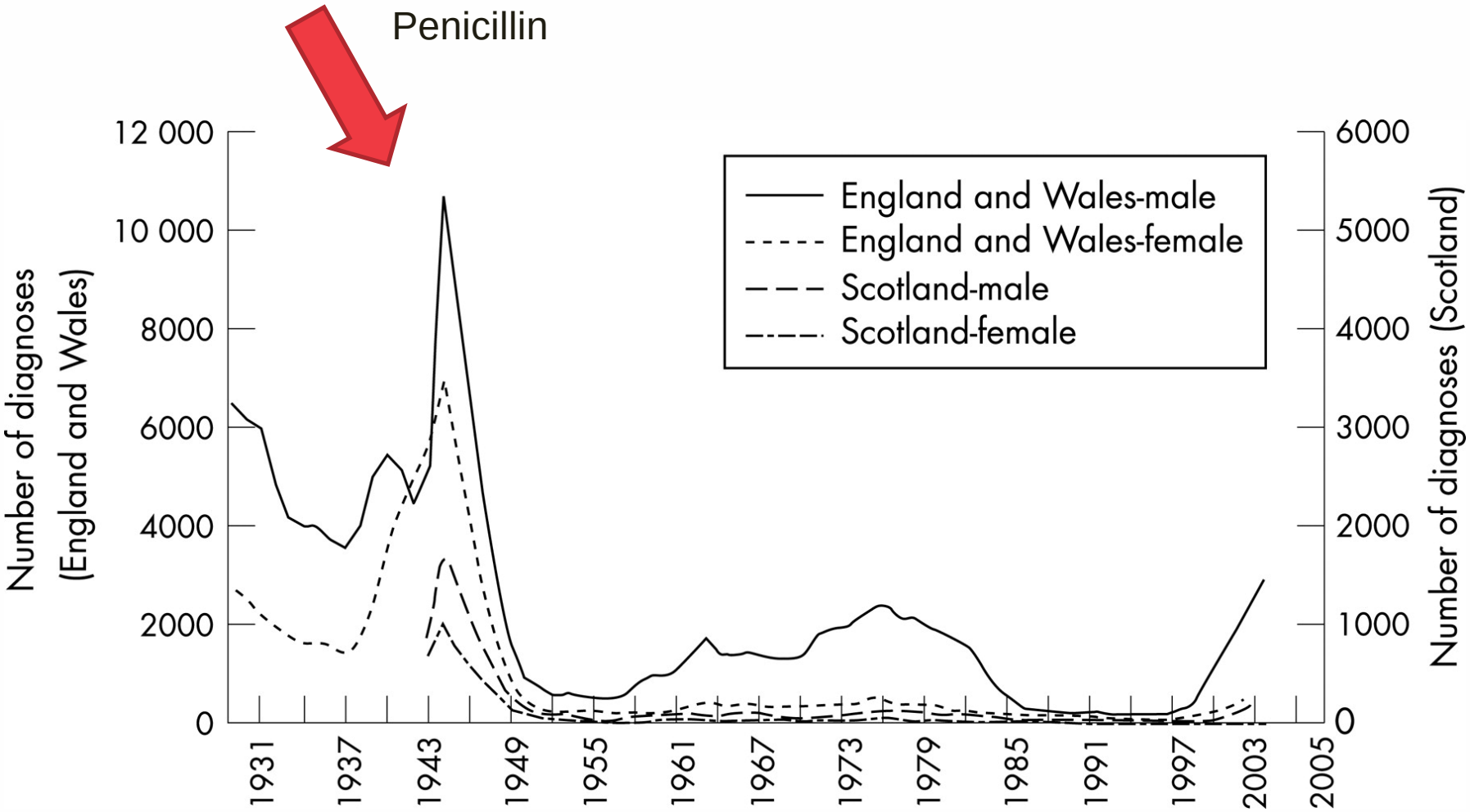
Epidemiology



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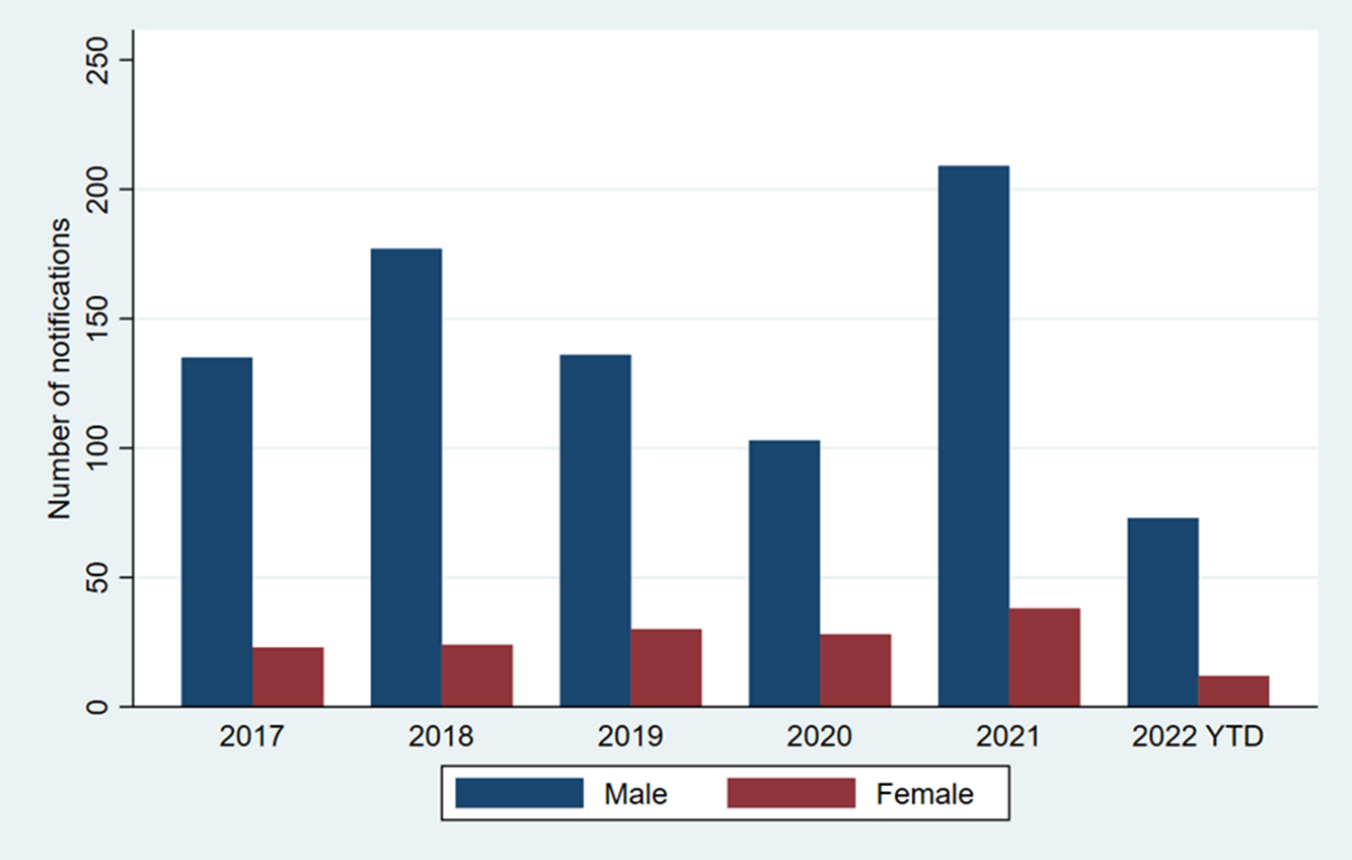
Infectious syphilis notifications in South Australia are rising despite pandemic disruptions



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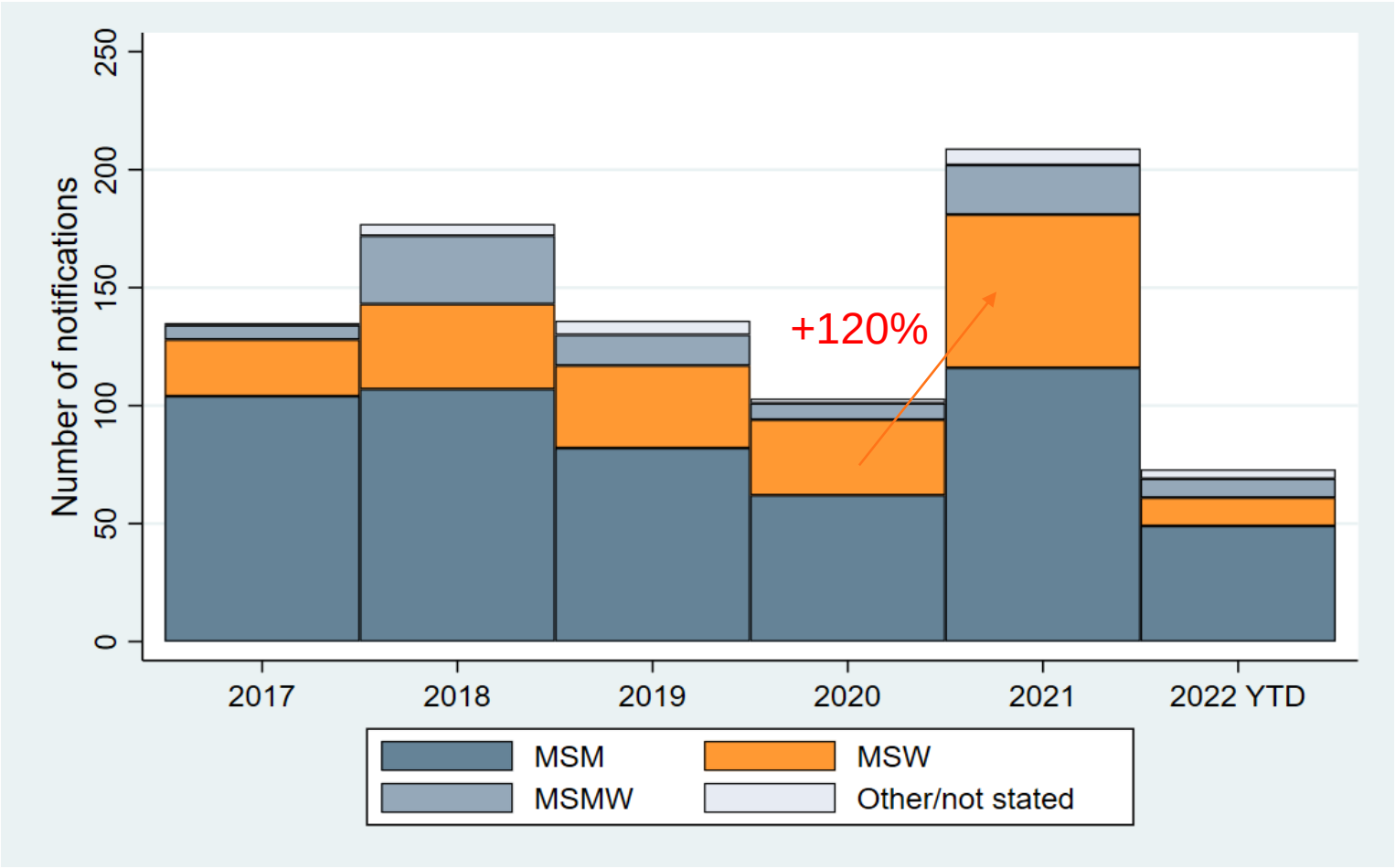
Notification trends are suggestive of increase in heterosexual transmission



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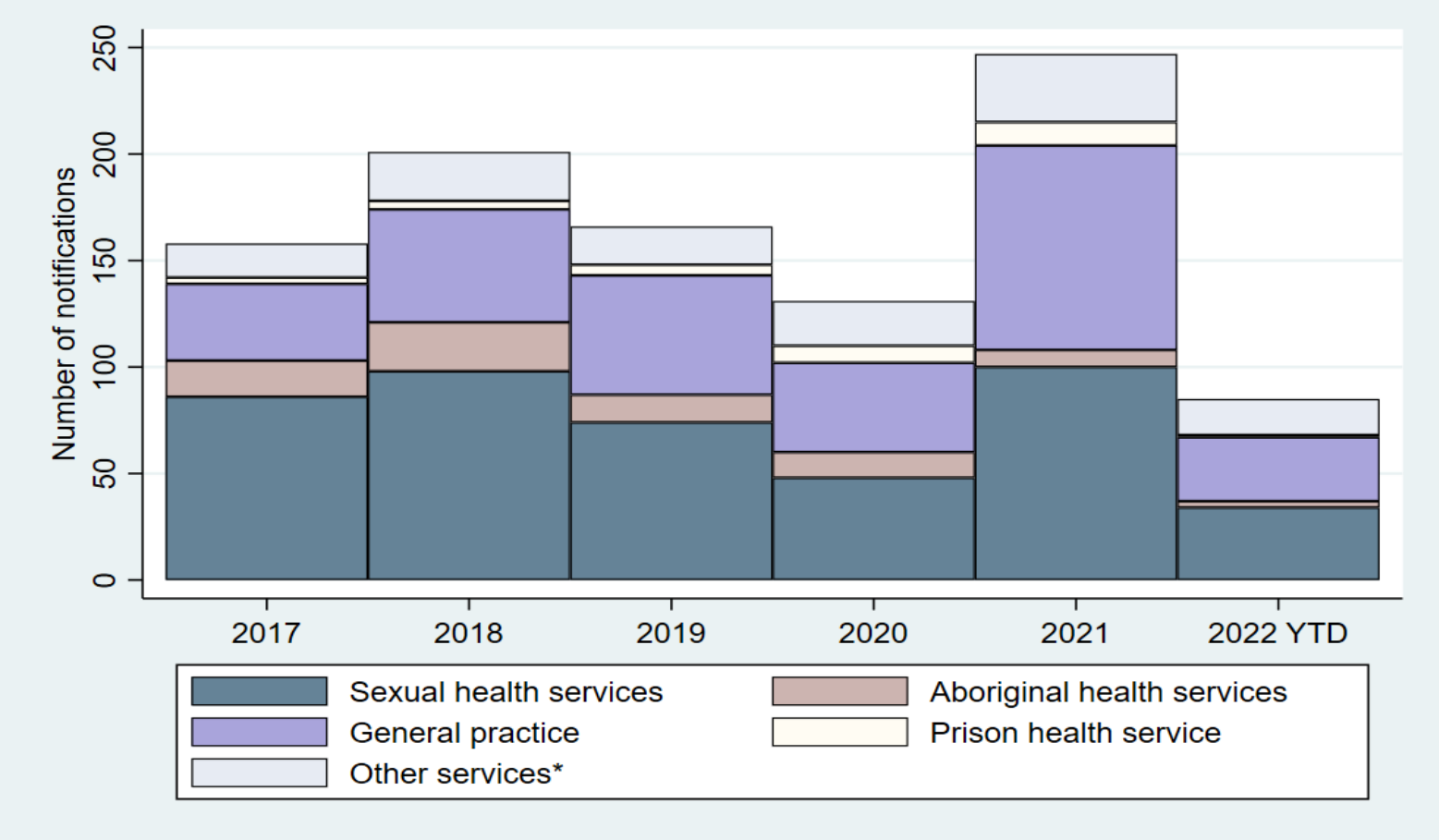
General practice diagnoses are becoming more common



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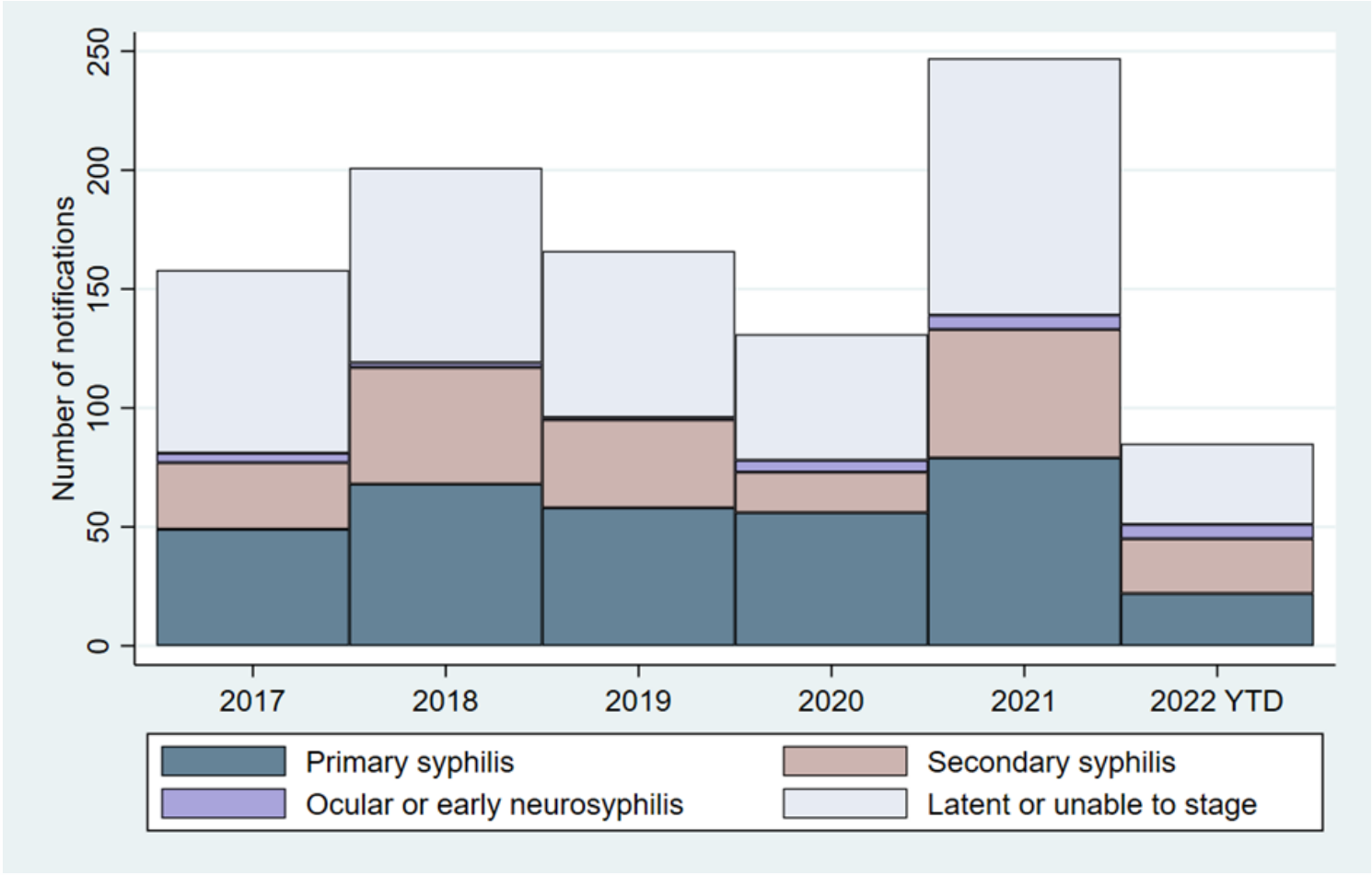
Absolute number of symptomatic presentations is on the rise



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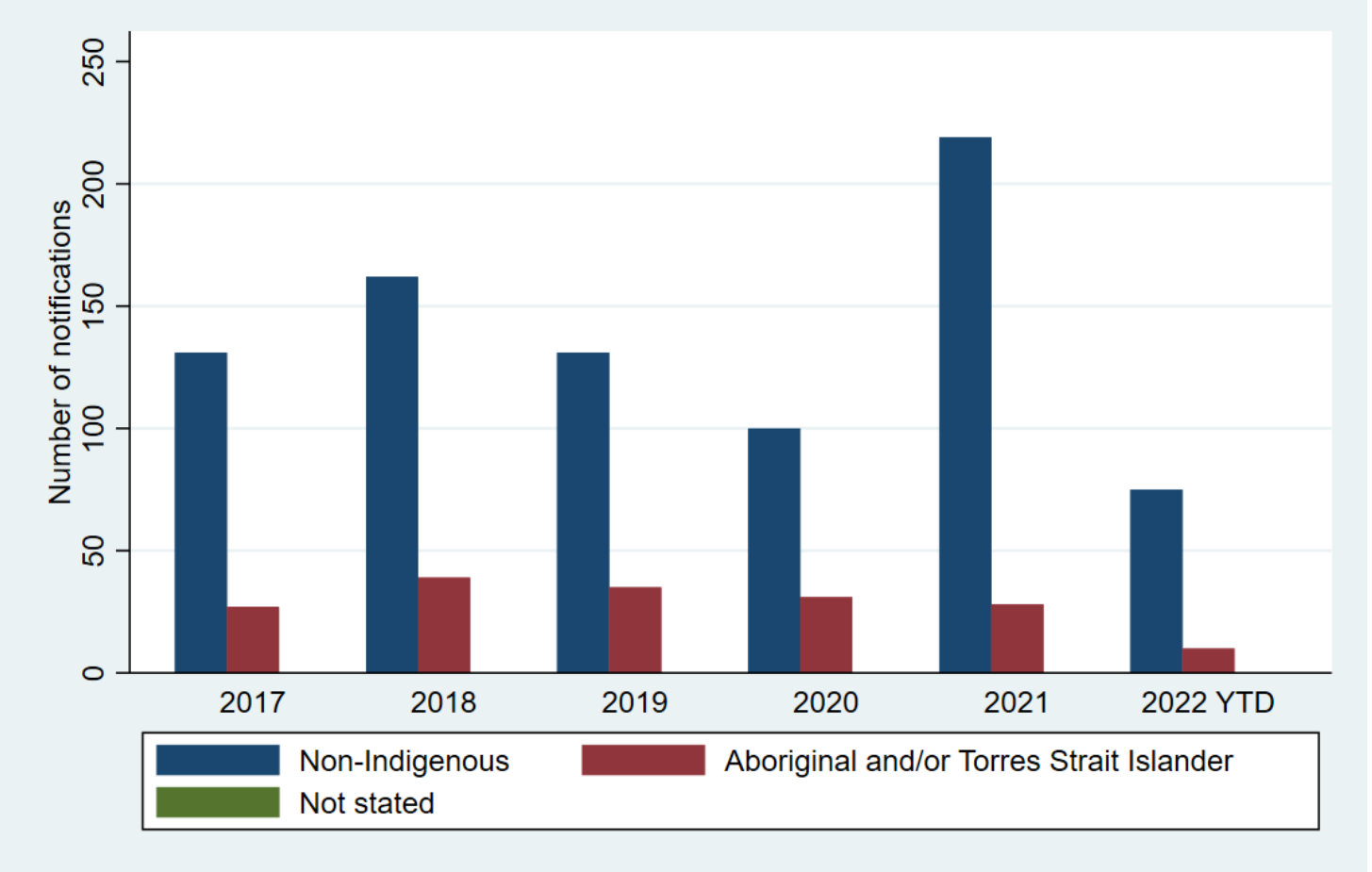
Notifications among Aboriginal and Torres Strait South Australians remain disproportionately high



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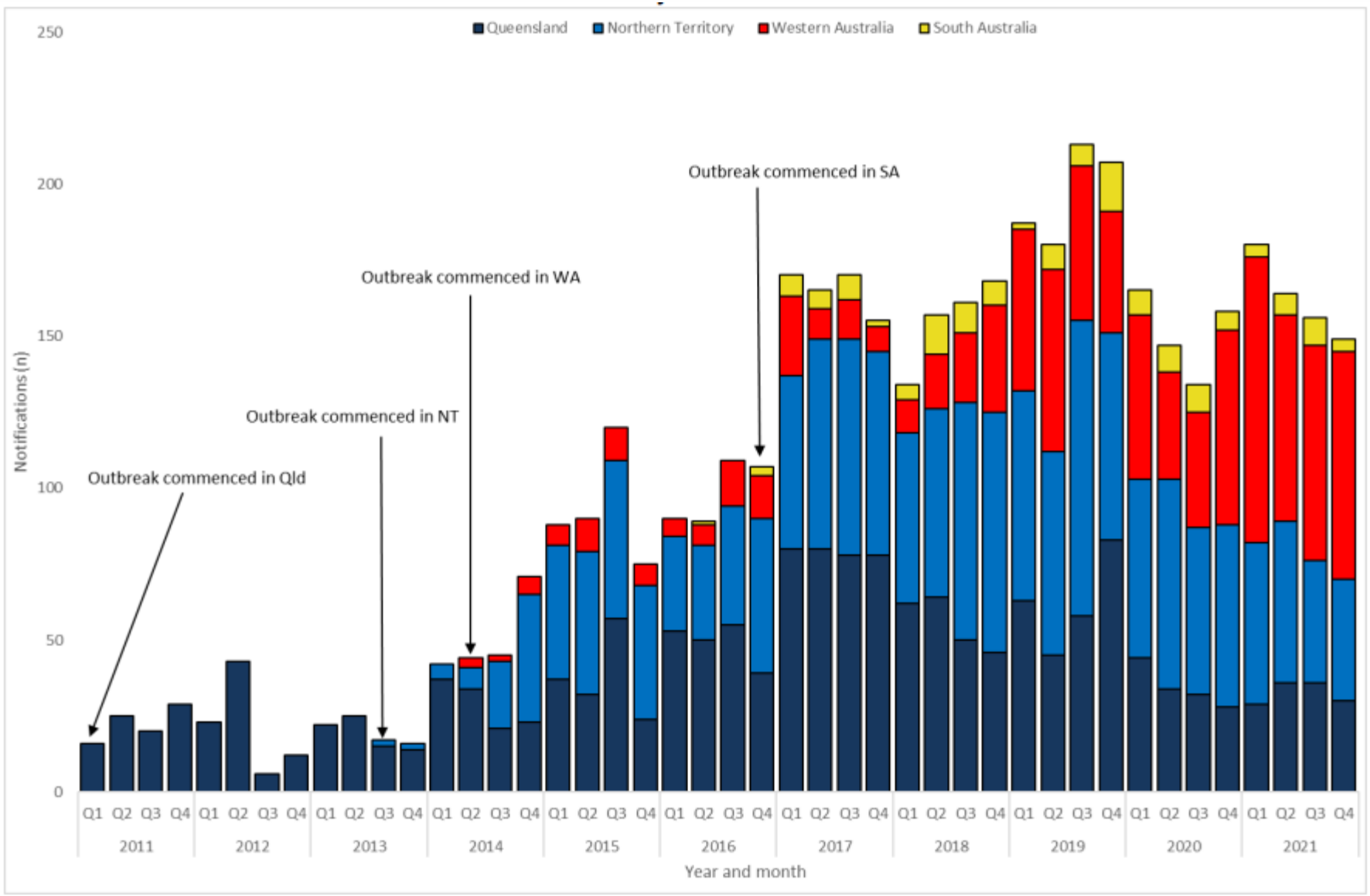

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A geographical shift is occurring within the SA outbreak

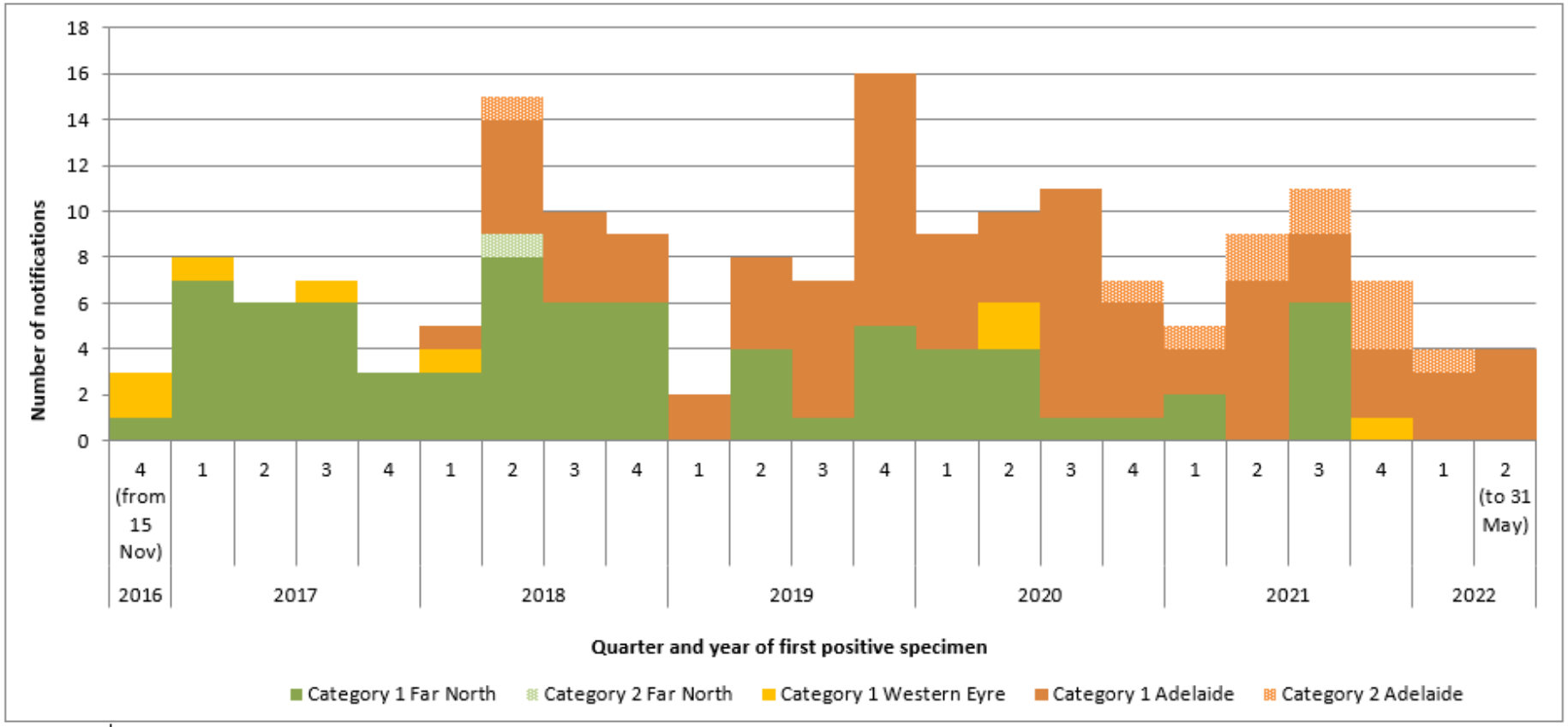
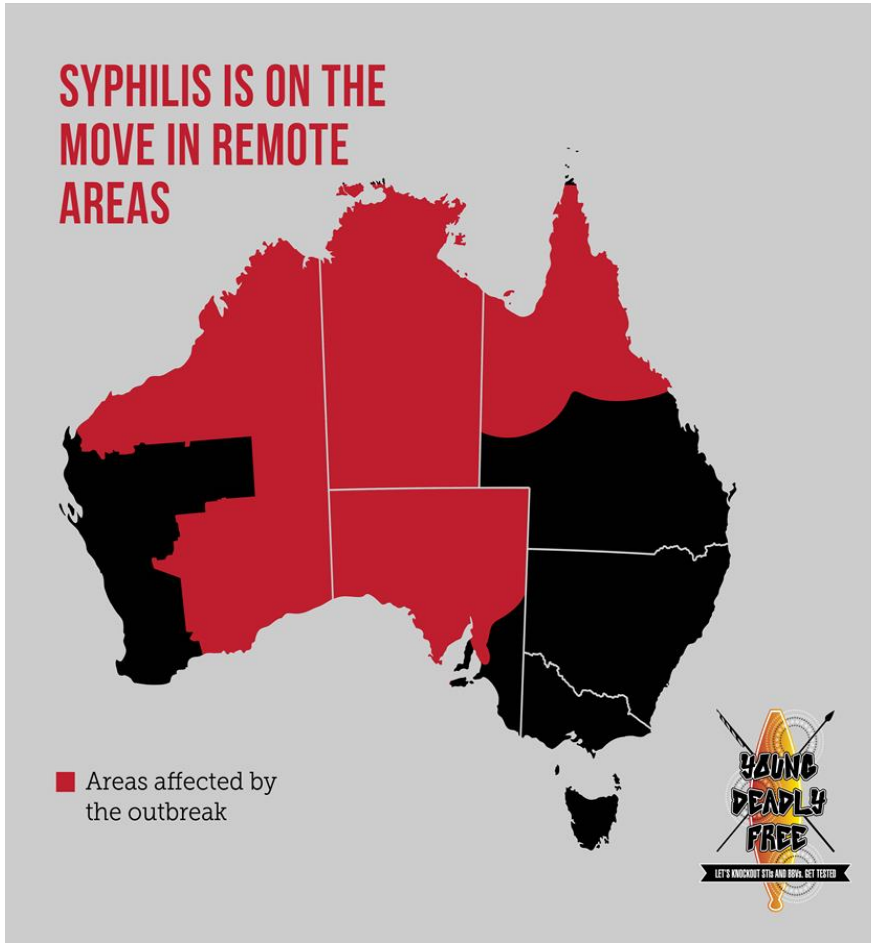
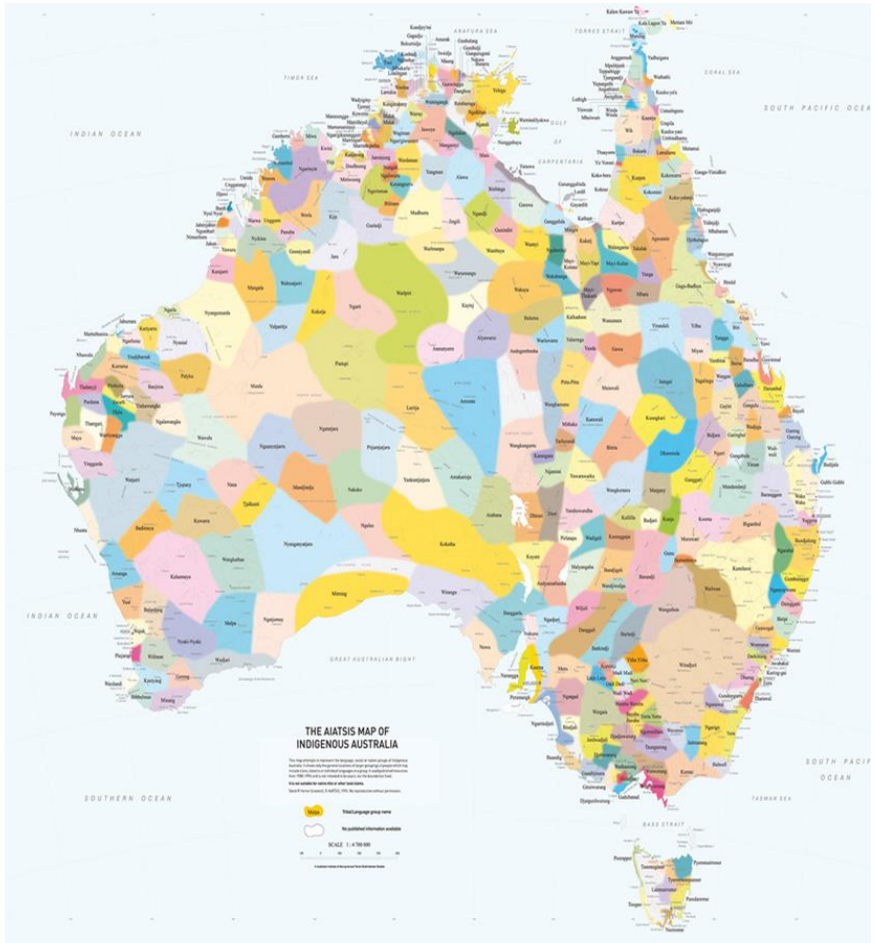
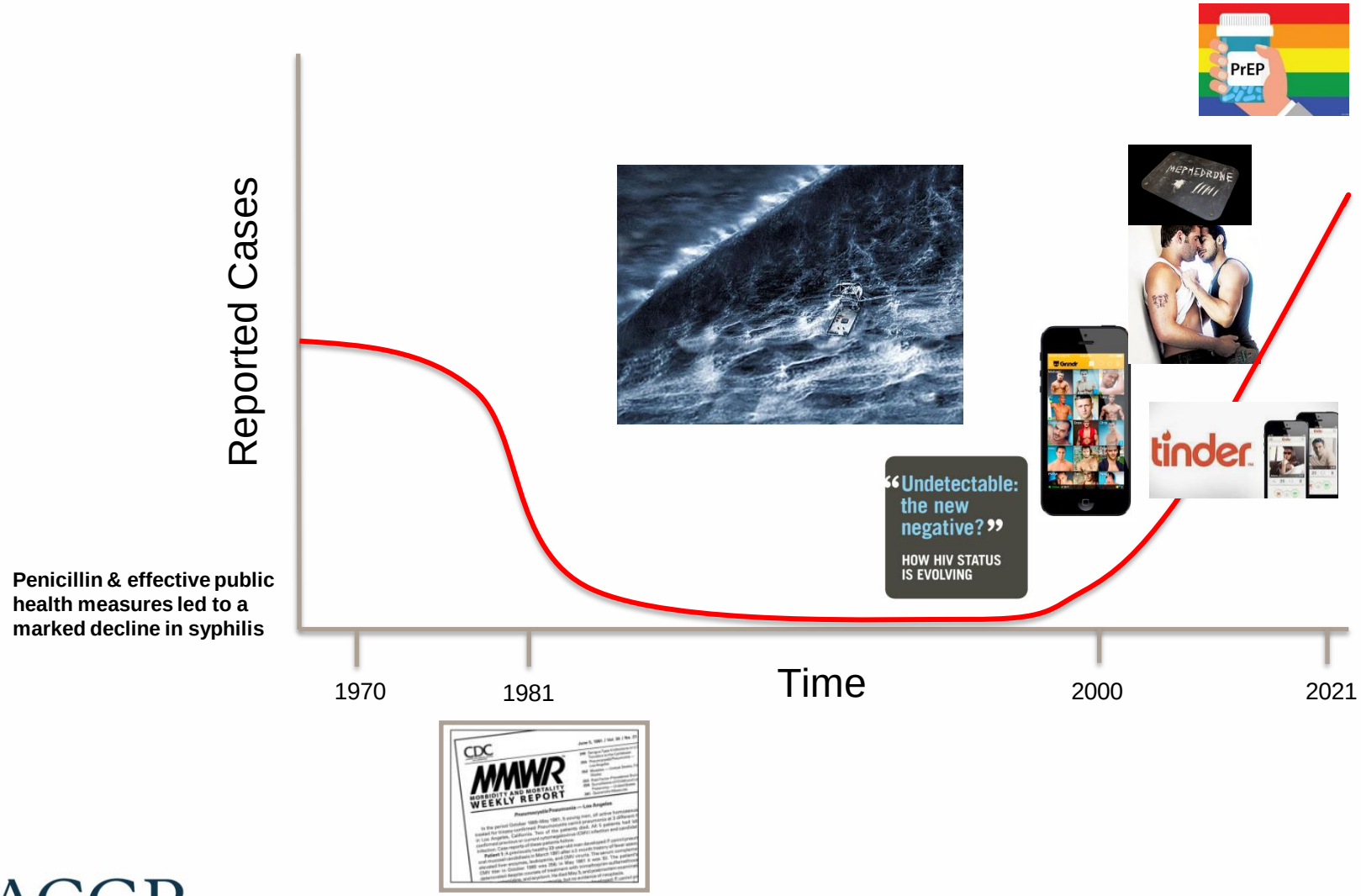


Figure 1: Epidemiological curve of MJSO cases by outbreak region of residence and category, South Australia, 15 November 2016 to 31 May 2022

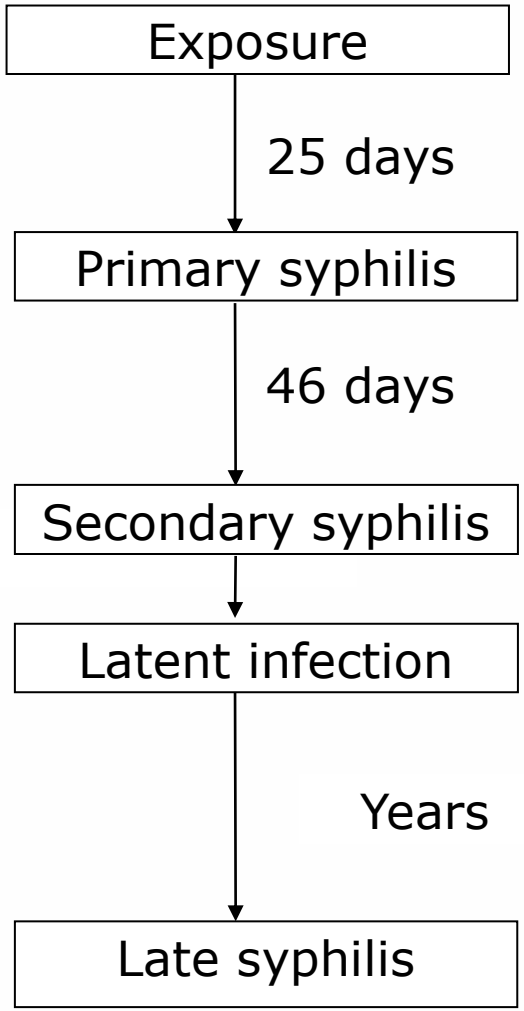

SYPHILIS IS ON THE MOVE IN REMOTE AREAS
Areas affected by the outbreak
YOUNG DEADLY FREE
LET'S KNOCKOUT STIs AND BBVs. GET TESTED

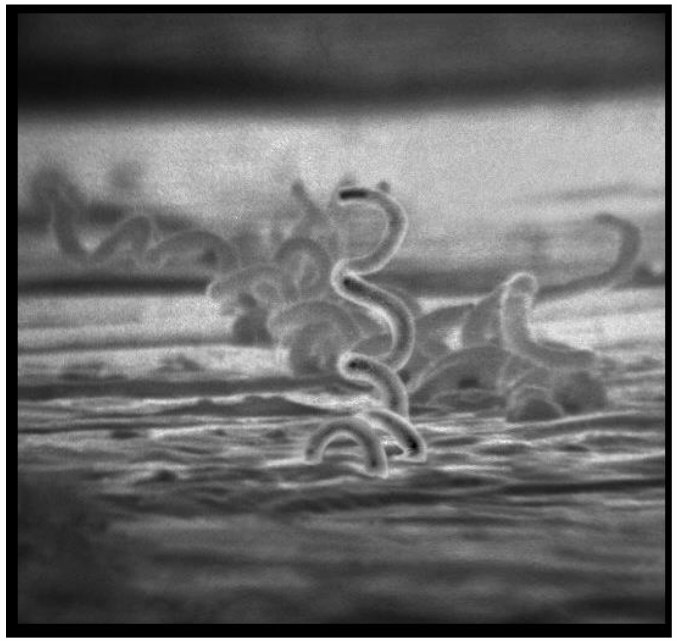

THE AIATSIS MAP OF INDIGENOUS AUSTRALIA
INDIAN OCEAN
SOUTHERN OCEAN
SOUTH PACIFIC OCEAN

A perfect storm…incident syphilis



Natural progression of untreated syphilis





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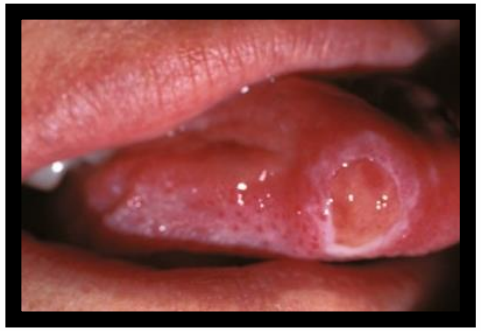
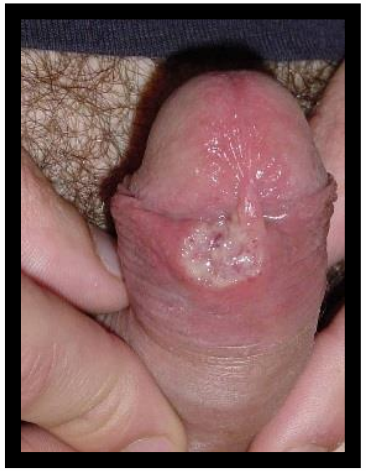
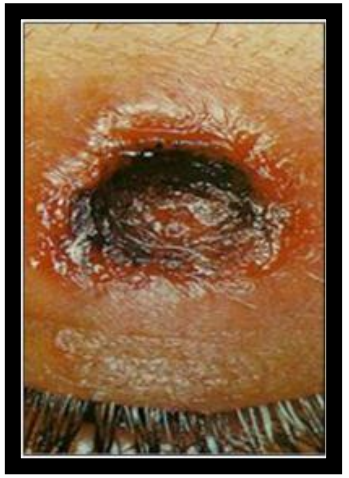
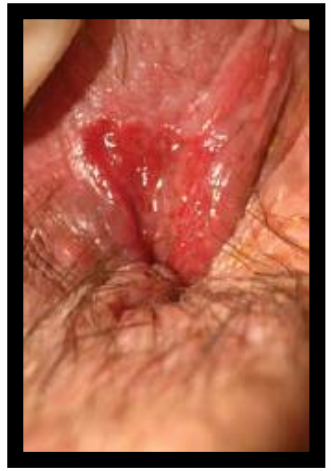
Numerous medical images of:

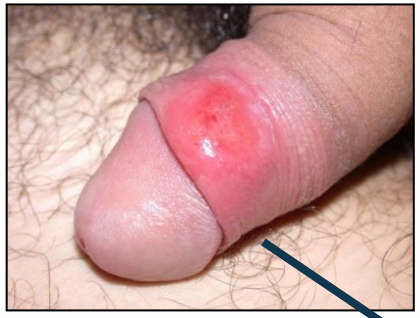
- **Male and female genitalia showing syphilitic lesions**
- **Babies affected by congenital syphilis**

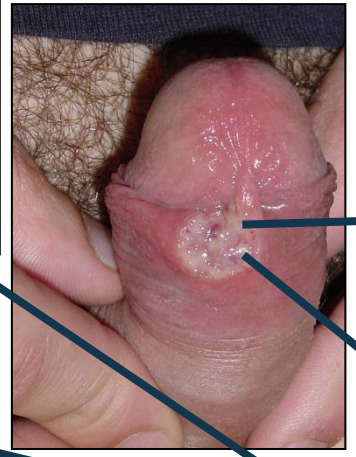
Primary Syphilis

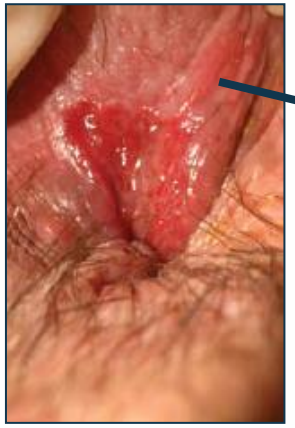
- Primary lesion or "chancre" develops at the site of inoculation.
- Incubation period: 9-90 days median 21days
- Serologic tests for syphilis may not be positive during early primary syphilis

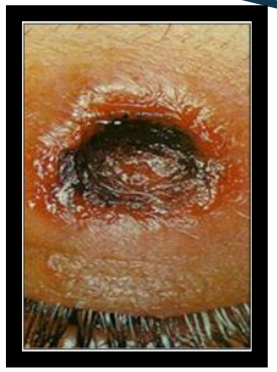





Primary Syphilis

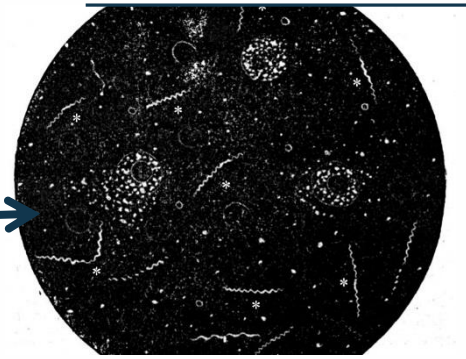








Dark Field Microscopy



Syphilis PCR testing

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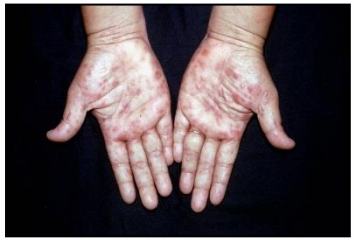
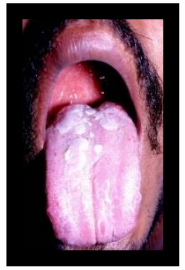
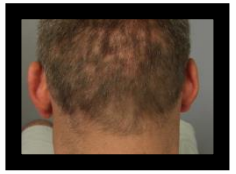
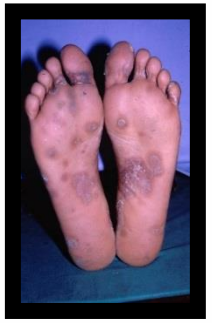
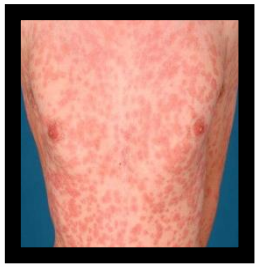
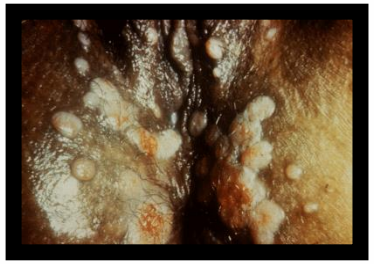
Secondary Syphilis


Up to 70% invasion of brain in early infection

CSF VDRL (specific)
CSF TPPA (above 1:640)[1]




- Secondary lesions occur several weeks after the primary chancre appears; and may persist for weeks to months.
- Primary and secondary stages may overlap
- Presents 2 to 3 months after primary syphilis appears
- Mucocutaneous lesions most common
- Clinical Manifestations: include but not limited to
  - Rash (75%–100%)
  - Lymphadenopathy (50%–86%)
  - Malaise
  - Mucous patches (6%–30%)
  - Condylomata lata (10%–20%)
  - Alopecia (5%)
  - Liver and kidney involvement can occur
  - Splenomegaly is occasionally present
- Serologic tests are usually highest in titre during this stage.

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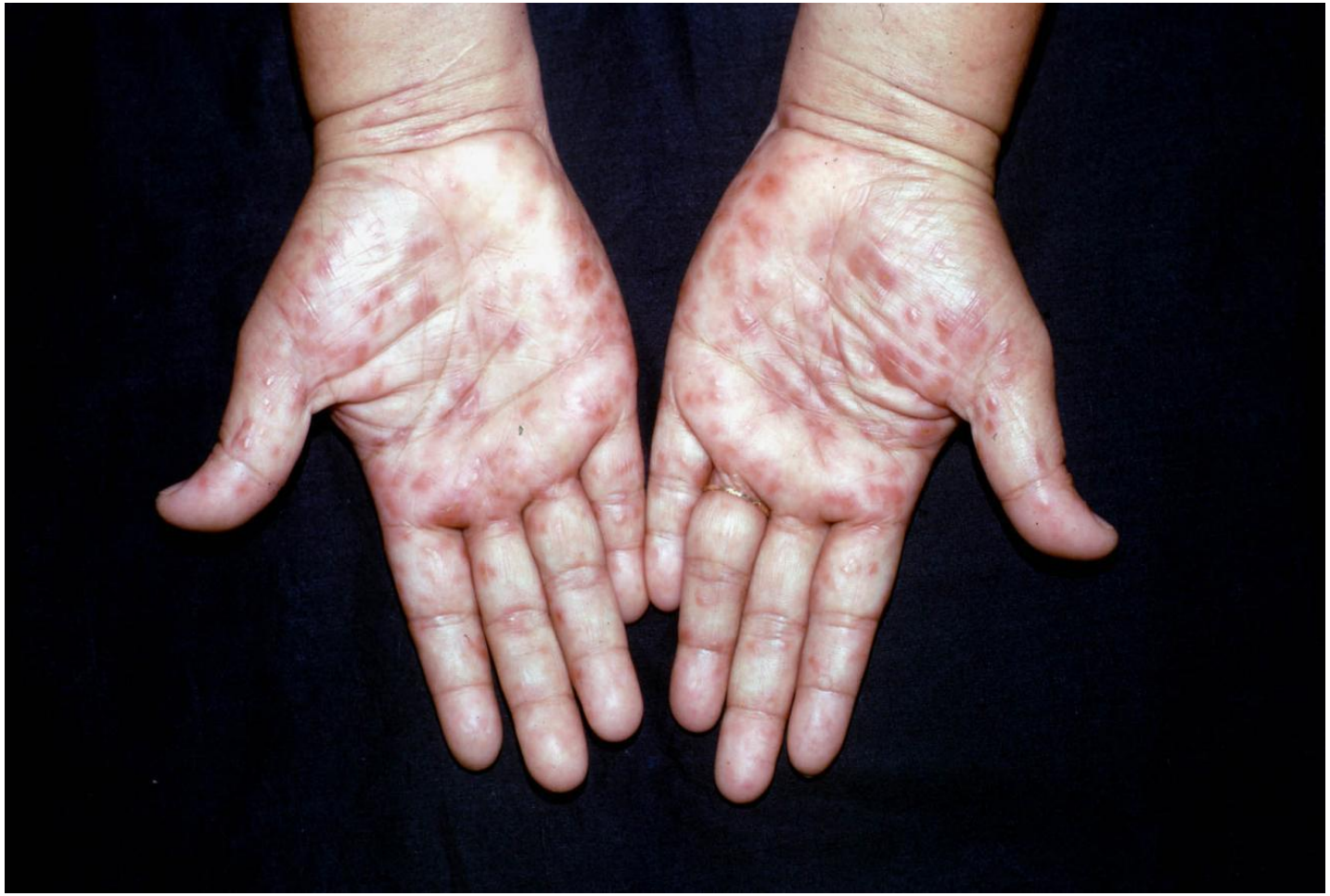
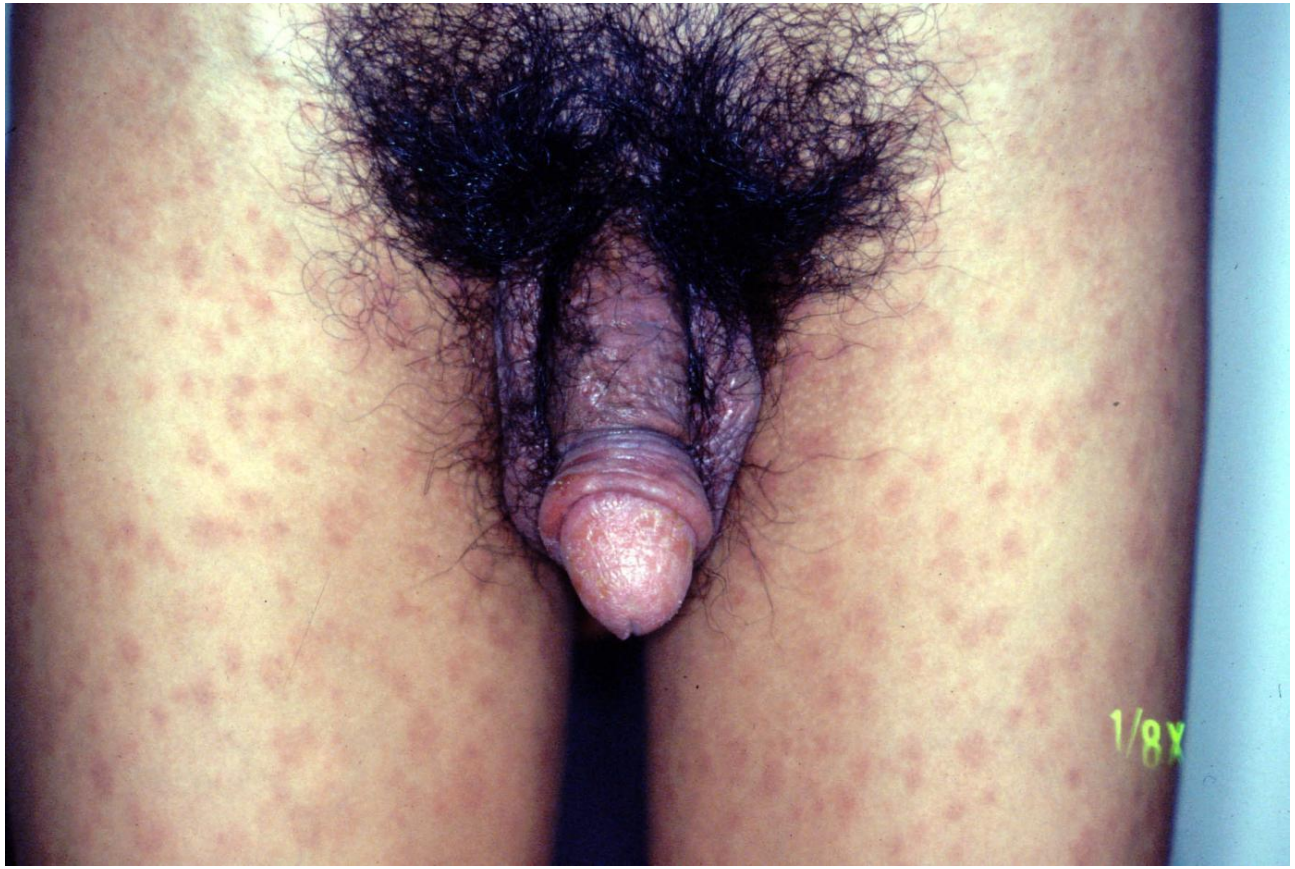
1.Marra et al *JCM* 2017; 2. *MMWR* June 2007

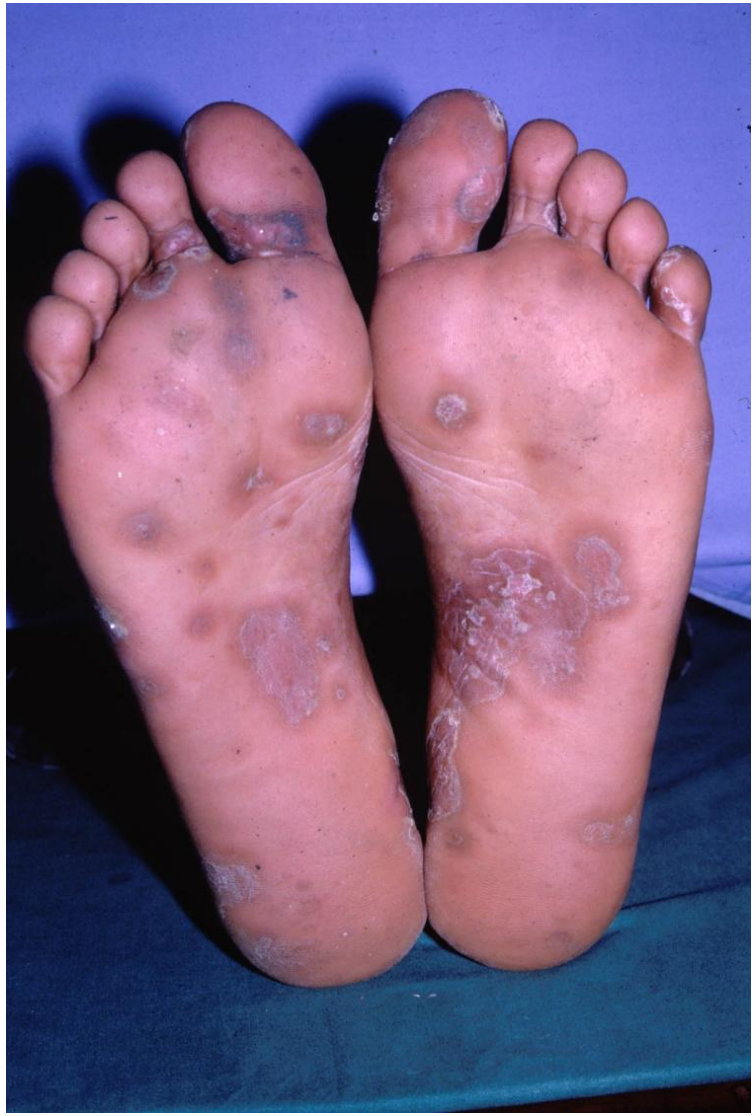
Rash on palms in secondary syphilis



Rash in secondary syphilis



Rash on soles in secondary syphilis



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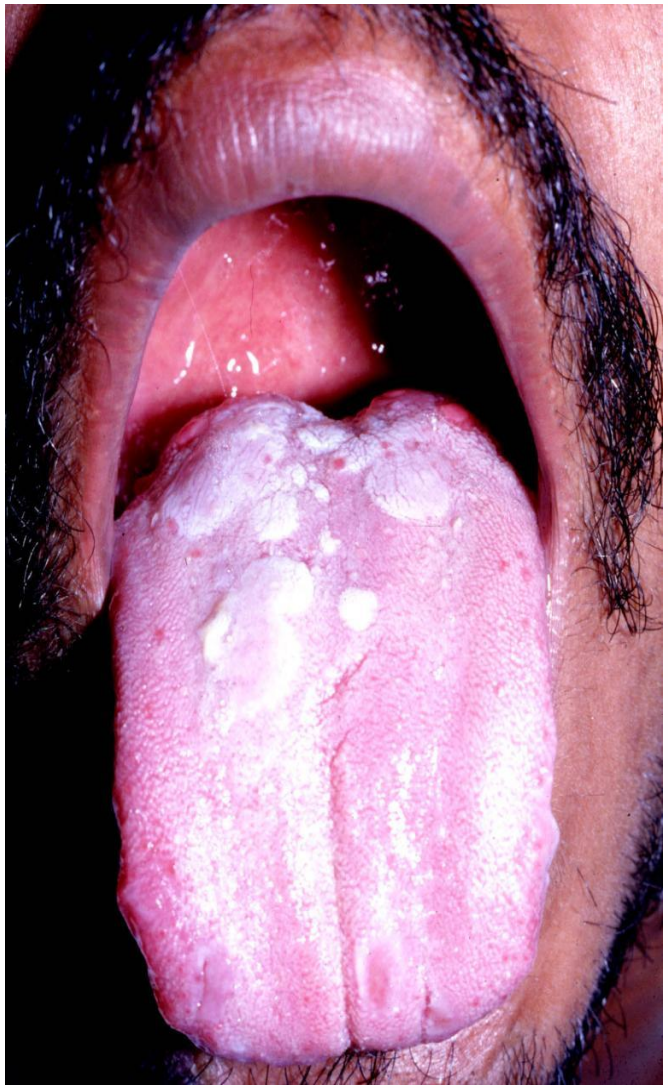
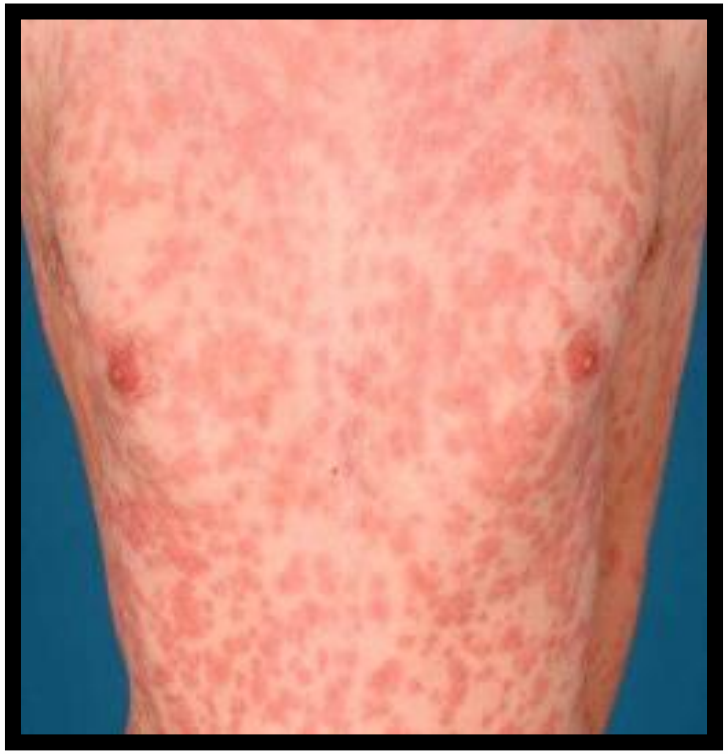
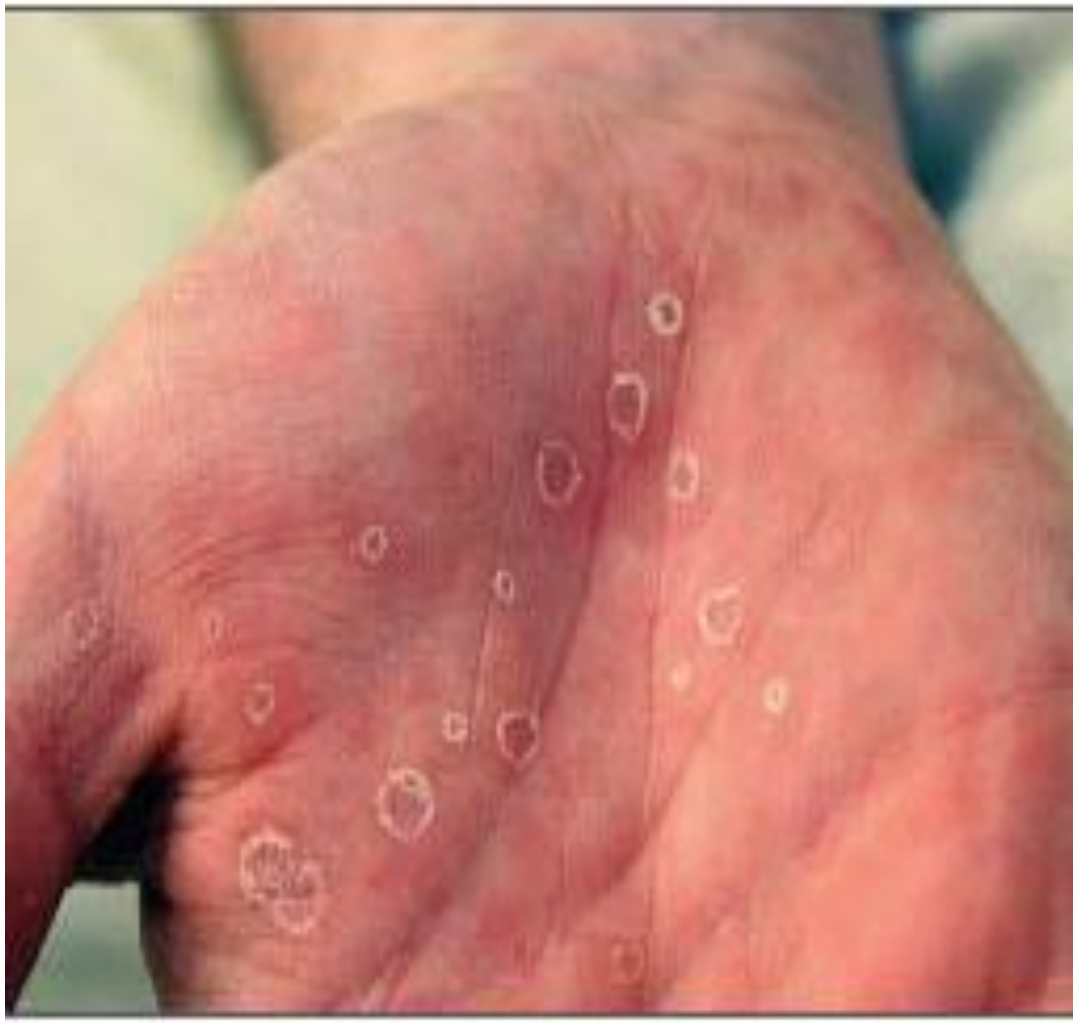
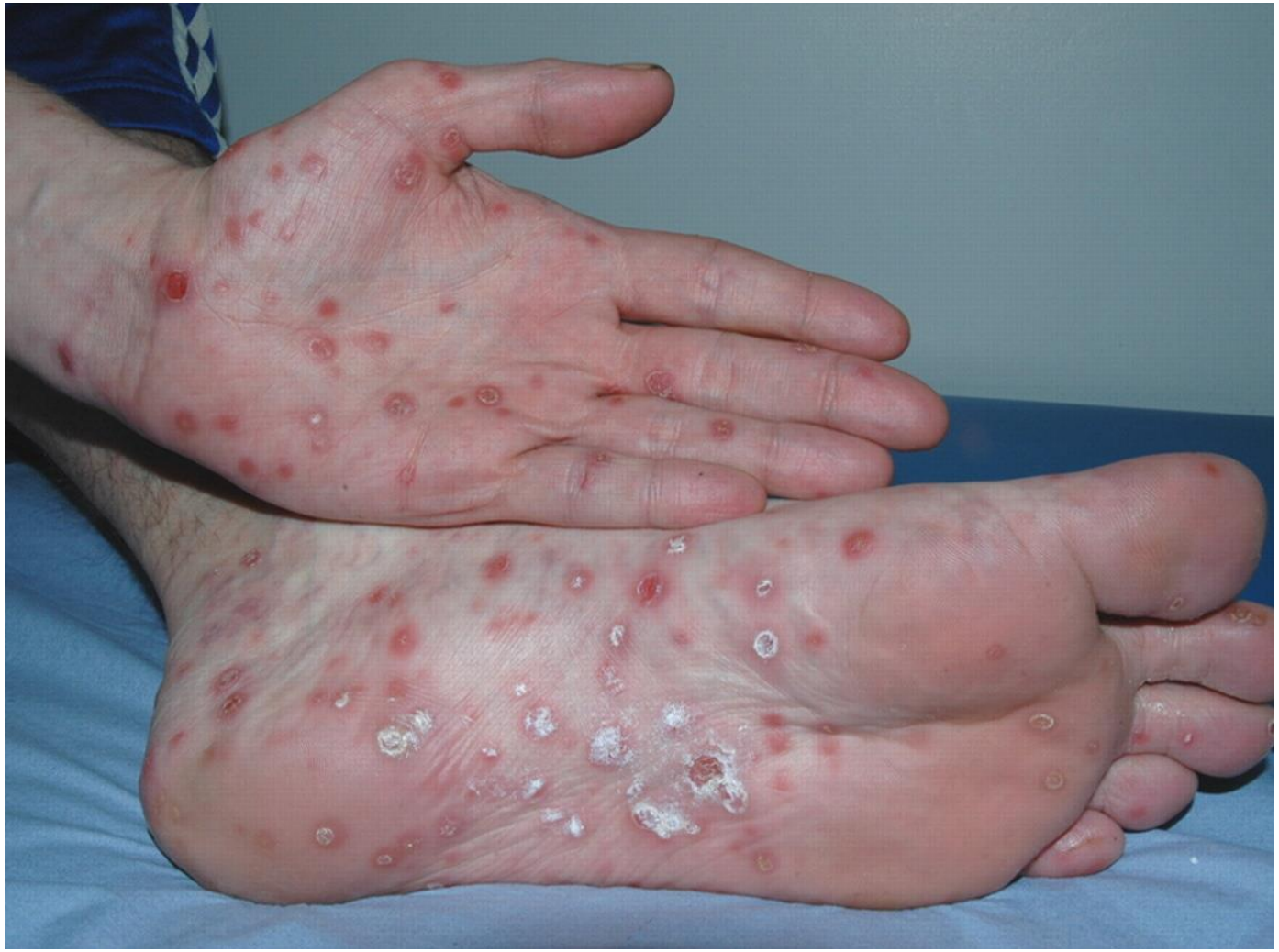
Mucous patches in secondary syphilis







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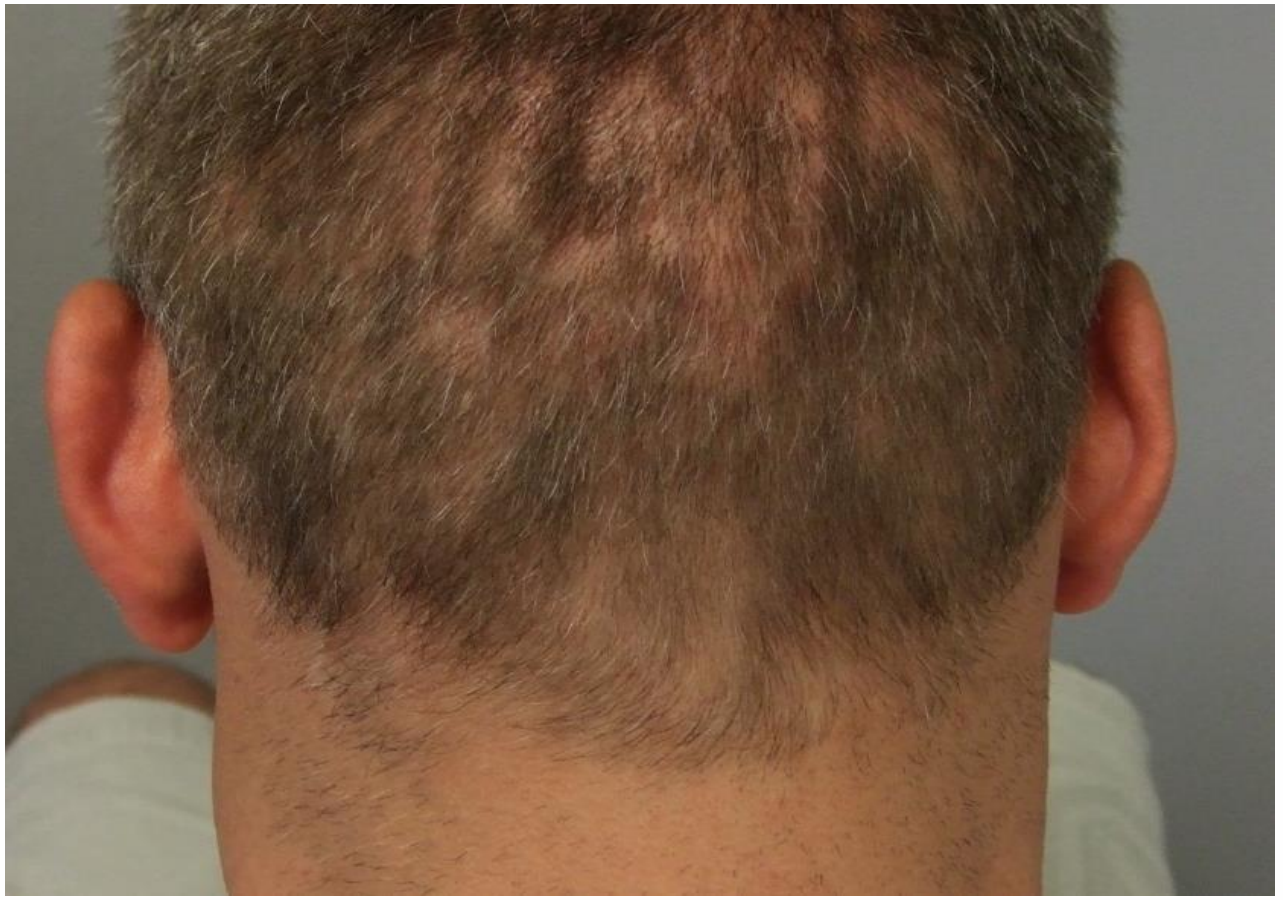
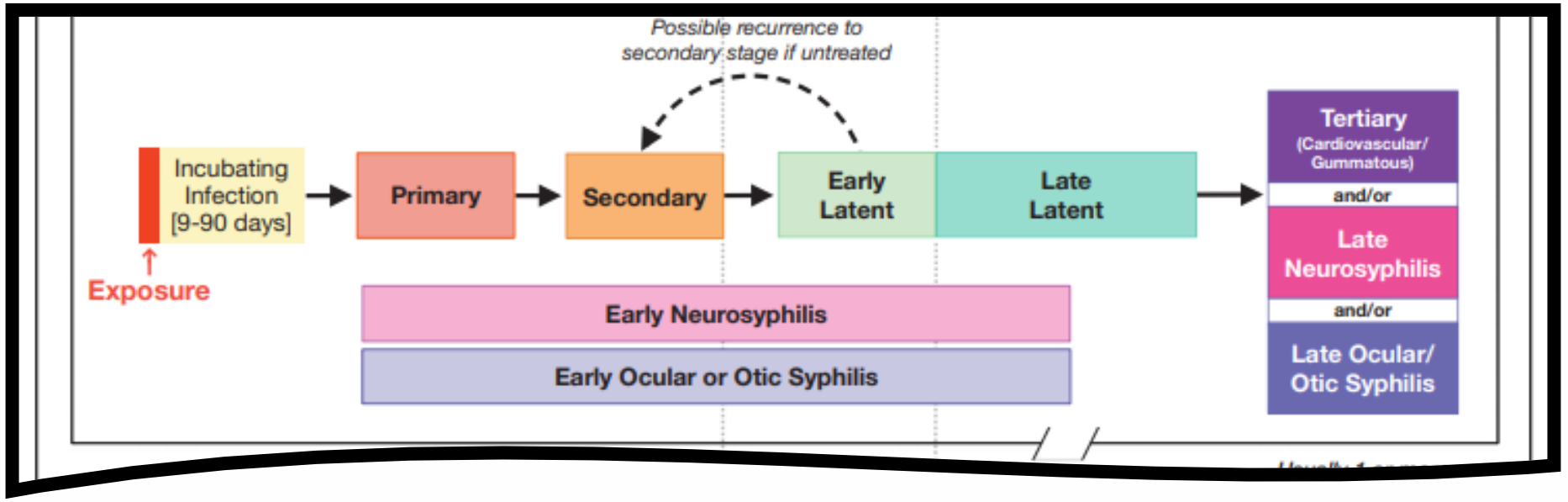
Patchy, non scarring Alopecia



Neurosyphilis



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Source: Singh AE. Ocular and neurosyphilis: epidemiology and approach to management. Curr Opin Infect Dis. 2020 Feb;33(1):66-72

Healthy Profession. Healthy Australia.

Tertiary/ late syphilis

Gummas

- Locally destructive lesions
- commonly in skin and bone
- Destroys tissue

Cardiovascular

- 15-30 years later
- Ballooning of big blood vessels (aortic aneurysm)
- Heart valve damage

Neurological

- Any neurological or psychiatric symptom
- Meningitis, seizures, stroke
- Deafness, blindness, cranial nerve abnormalities
- Ocular syphilis
- Tabes dorsalis – posterior column spinal cord damage
- Psychiatric symptoms – General Paresis of the Insane (GPI)

australian STI MANAGEMENT GUIDELINES FOR USE IN PRIMARY CARE

Monkeypox Alert

Standard Asymptomatic Check-up | STIs | Syndromes | Populations & Situations | ASRHA | ashm

Standard Asymptomatic Check-up

Standard Asymptomatic Check-up

- To determine risk take a sexual history.
- Some subpopulations (e.g. men who have sex with men, sex workers, pregnant people, Aboriginal and Torres Strait Islander people, trans and gender diverse people) have special requirements for testing due to increased risk of infection, adverse health outcomes, community prevalence or other factors.
- Perform asymptomatic sexually transmitted infection (STI) check for people who:
  - request STI testing.
  - are at increased risk of STI: new sexual partner, living or travelling to areas of higher prevalence in Australia or in other countries.
  - have a known exposure to any STI or history of an STI within the past 12 months.
  - are a partner of special subpopulation (listed above) or any of above.

Blood tests

All STI testing should include both HIV and syphilis testing.

australian STI MANAGEMENT GUIDELINES
FOR USE IN PRIMARY CARE

Standard Asymptomatic Check-up

Standard Asymptomatic Check-up

Blood tests

All STI testing should include both HIV and syphilis testing.

Test	Consideration
HIV (antigen/antibody test)	Repeat if recent exposure (6-week window period if Ag/Ab test).
Syphilis serology	If recent exposure, repeat at 12 weeks and presumptively treat.
Hepatitis B: *HBsAg – Hepatitis B surface antigen* *Anti-HBs – Hepatitis B surface antibody* *Anti-HBc – Hepatitis B core antibody*	Establish hepatitis B virus (HBV) status and immunise if not previously documented*.

*In Australia, routine adolescent Hepatitis B immunisation commenced in 1997 and universal infant Hepatitis B immunisation commenced in May 2000. Therefore people who are 34 years old or younger in 2020 and who grew up in Australia can generally be assumed to have been vaccinated and do not need testing.

Gonorrhoea and chlamydia testing

Site/Specimen	Test	Consideration
Urethral first pass urine (FPU) Self-collected vaginal swab	Nucleic Acid Amplification Test (NAAT)	Vaginal swab is more sensitive than FPU and is the specimen of choice. If speculum examination is indicated then an endocervical swab can be collected in place of a vaginal swab.

Serology testing

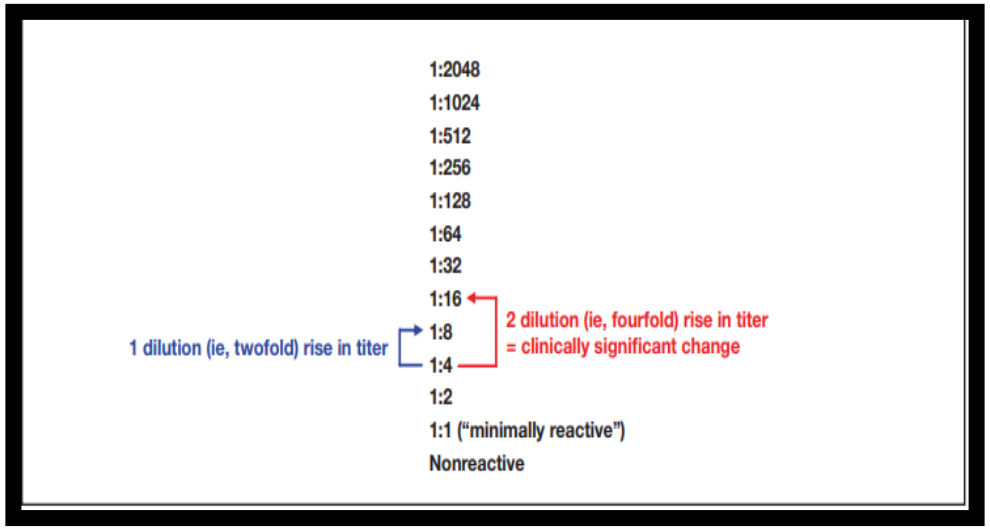
- Used for screening & testing on clinical suspicion
- Two types of assays:
  - Treponemal-specific (qualitative, i.e. reactive or non-reactive)
  - Non-treponemal (qualitative followed by quantitative, i.e. titre)

Treponemal-specific testing

- Detects antibodies to syphilis specific antigens
- Usually stays positive for life
- Assay types:
  - Treponema pallidum enzyme immunoassay (EIA)
  - Treponema pallidum particle agglutination assay (TPPA)
  - Fluorescent Treponemal Antibody Absorption assay (FTA-ABS)
- Confirmatory testing required- either another treponemal-specific assay or RPR

Non-treponemal specific testing

- Detects and quantifies antibodies to non-specific antigens associated with active syphilis infection
- Usually decline significantly or revert to negative >12 months post treatment
- Assay types:
  - Rapid plasma reagin (RPR)
  - Venereal disease research laboratory (VDRL)



PCR testing

- A minority of patients with primary syphilis are screen negative or have an unconfirmed screen positive result
- PCR can be done on lesions and rashes as well as CSF and placental specimens
- Provides evidence of active, recently acquired disease (primary or secondary)
- Research investigating use on blood
- Useful for whole genome sequencing to supplement epidemiological information

Syphilis PCR
Dry swab is ideal
Can use viral transport media

Treatment regimen is determined by stage of syphilis

- Infectious syphilis (primary, secondary, early latent) (<2yrs duration)
  - **Single dose** 1.8gm (2.4 million units) benzathine penicillin
  - **Two doses** 1.8gm (2.4 million units) benzathine penicillin one week apart if diagnosed in third trimester of pregnancy

- Late latent syphilis
  - **Three weekly doses** 1.8gm (2.4 Million Units) benzathine penicillin

- Tertiary syphilis (refer to specialist)
  - **10-14 days** iv benzyl penicillin 4 hourly or
  - **10 days** daily procaine penicillin im plus probenicid QID orally

If a person misses a dose of penicillin in a course of weekly therapy for latent syphilis, the appropriate course of action is unclear.

Clinical experience suggests that an interval of 10–14 days between doses of benzathine penicillin for latent syphilis might be acceptable before restarting the sequence of injections (i.e., if dose 1 is given on day 0, dose 2 is administered between days 10 and 14).

Pharmacologic considerations suggest that an interval of 7–9 days between doses, if feasible, might be more optimal. Missed doses are not acceptable for pregnant women receiving therapy for latent syphilis. Pregnant women who miss any dose of therapy must repeat the full course of therapy.

Syphilis Serology

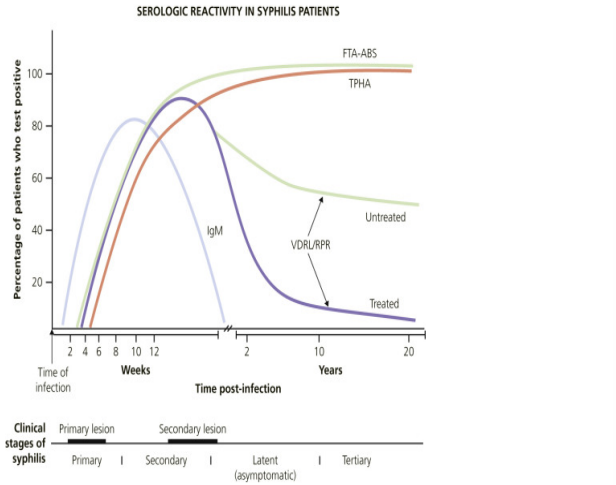


FIG 10.26

Serologic reactivity in syphilis patients. FTA-ABS, fluorescent treponemal antibody absorption; IgM, immunoglobulin M; RPR, rapid plasma reagin test; TPHA, *T. pallidum* hemagglutination assay; VDRL, Venereal Disease Research Laboratory test.

Jarisch-Herxheimer Reaction

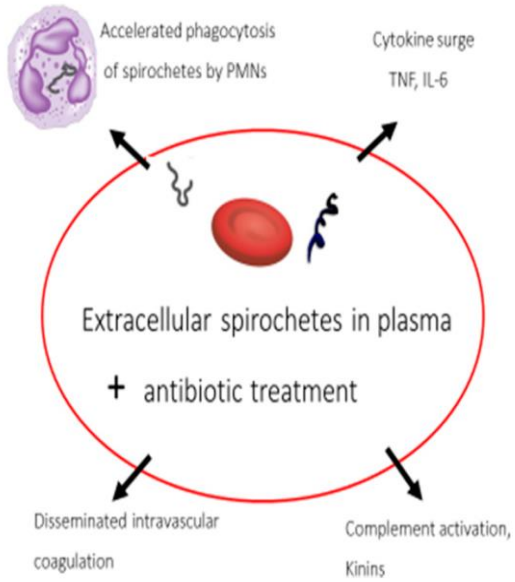
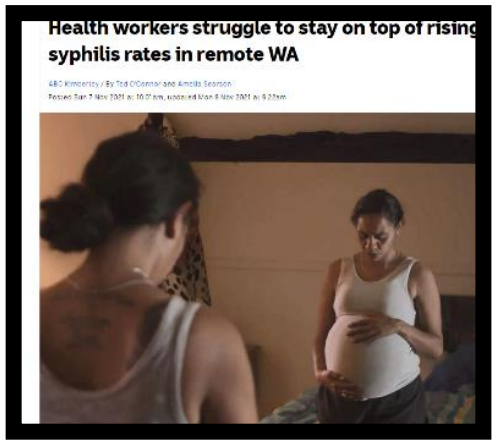


FIGURE 1. Proposed pathogenesis of Jarisch–Herxheimer reaction in relapsing fever. PMNs = polymorphonuclear leukocytes; TNF = tumor necrosis factor; IL-6 = interleukin-6.

Congenital syphilis and increased screening in pregnancy

- Untreated early syphilis in pregnancy:
  - 70-100% of infants will be infected
  - Still birth in up to one-third of cases
- Risk higher with infection later in pregnancy - after 28 weeks
- Almost 100% preventable if treated before 28 weeks



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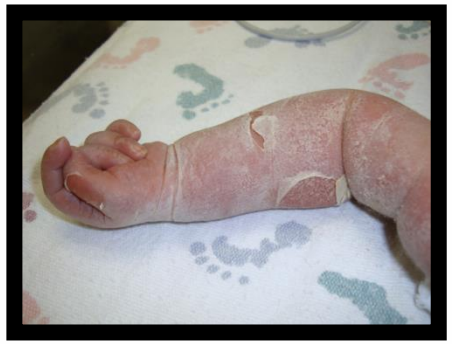
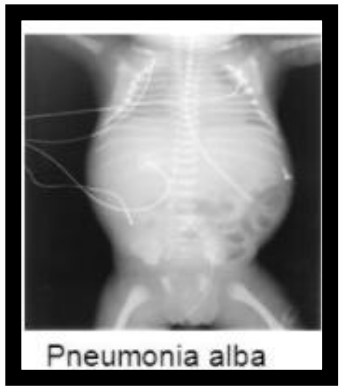
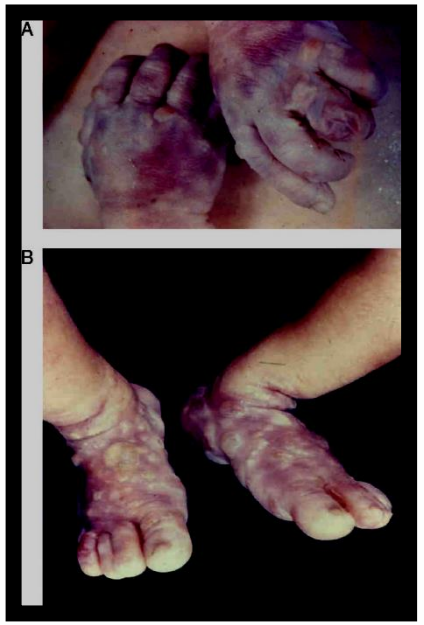
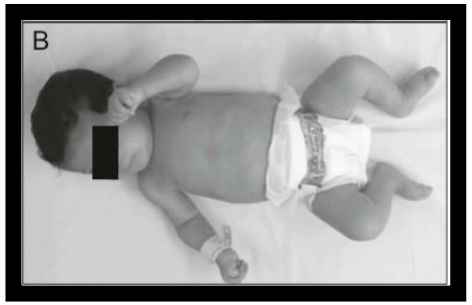
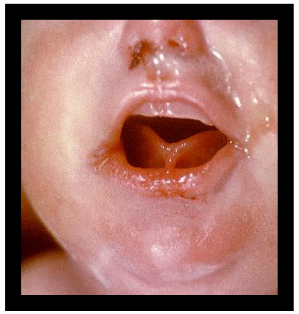
Early congenital syphilis <2 years age	
Clinical & physical examination findings	Normal; stillborn; preterm; nonimmune hysdrops fetalis; intrauterine growth retardation, small for gestational age, fever, hepatomegaly with or without jaundice, splenomegaly, rash, rhinitis (snuffles) mucus patch: conylomata lata: adenopathy; pseudo paralysis of Parrot; chorioretinitis; cataract; irritability, cranial nerve palsies; seizures; pancreatitis; myocarditis; gastrointestinal malabsorption
Laboratory findings	Anaemia; thrombocytopenia; hypoglycaemia; liver transaminitis and direct hyperbilirubinemia; CSG pleocytosis; elevated protein content, reactive VDRL/ RPR, proteinuria (nephrotic syndrome); hypopituitarism (diabetes insipidus)
Radiographic findings	Periostitis; osteochondritis; pneumonia alba









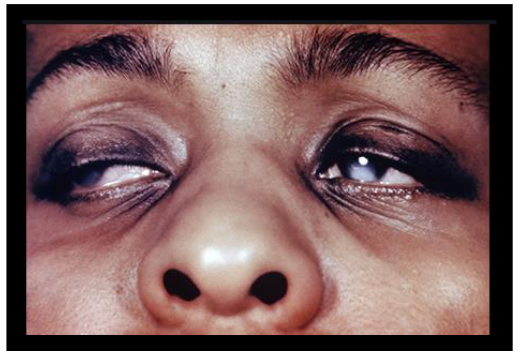


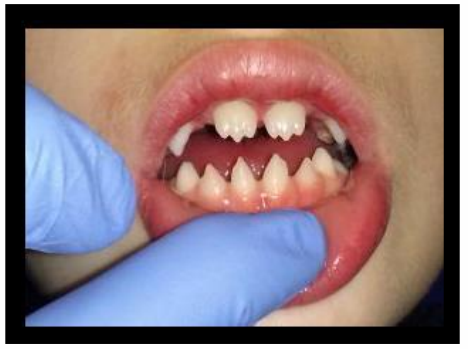
Late congenital syphilis > 2 years age

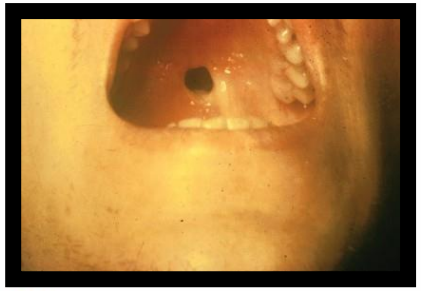
Hutchinson's teeth: Mulberry molars; interstitial keratitis; optic nerve atrophy; healed chorioretinitis; rhagades; gummas; cranial nerve VIII deafness

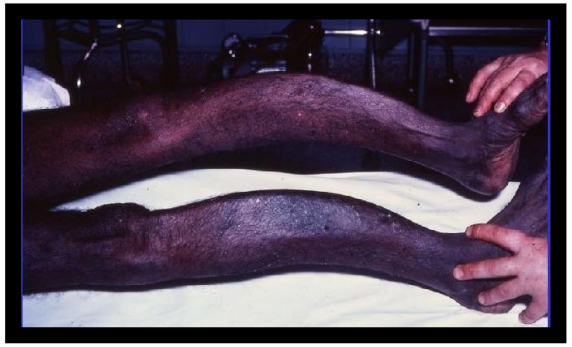
Intellectual disability: hydrocephalus; seizures; juvenile general paresis; cranial nerve palsies.

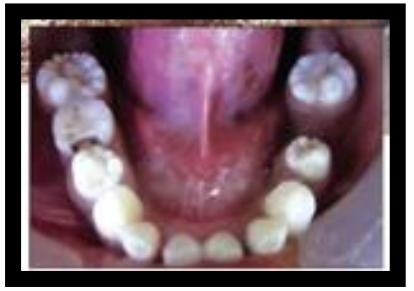
Frontal bossing; saddle nose deformity; protuberant mandible; short maxillae; high palatal arch; perforatin of the hard palate; Saber shins; sternoclavicular joint thickening; Clutton's joints



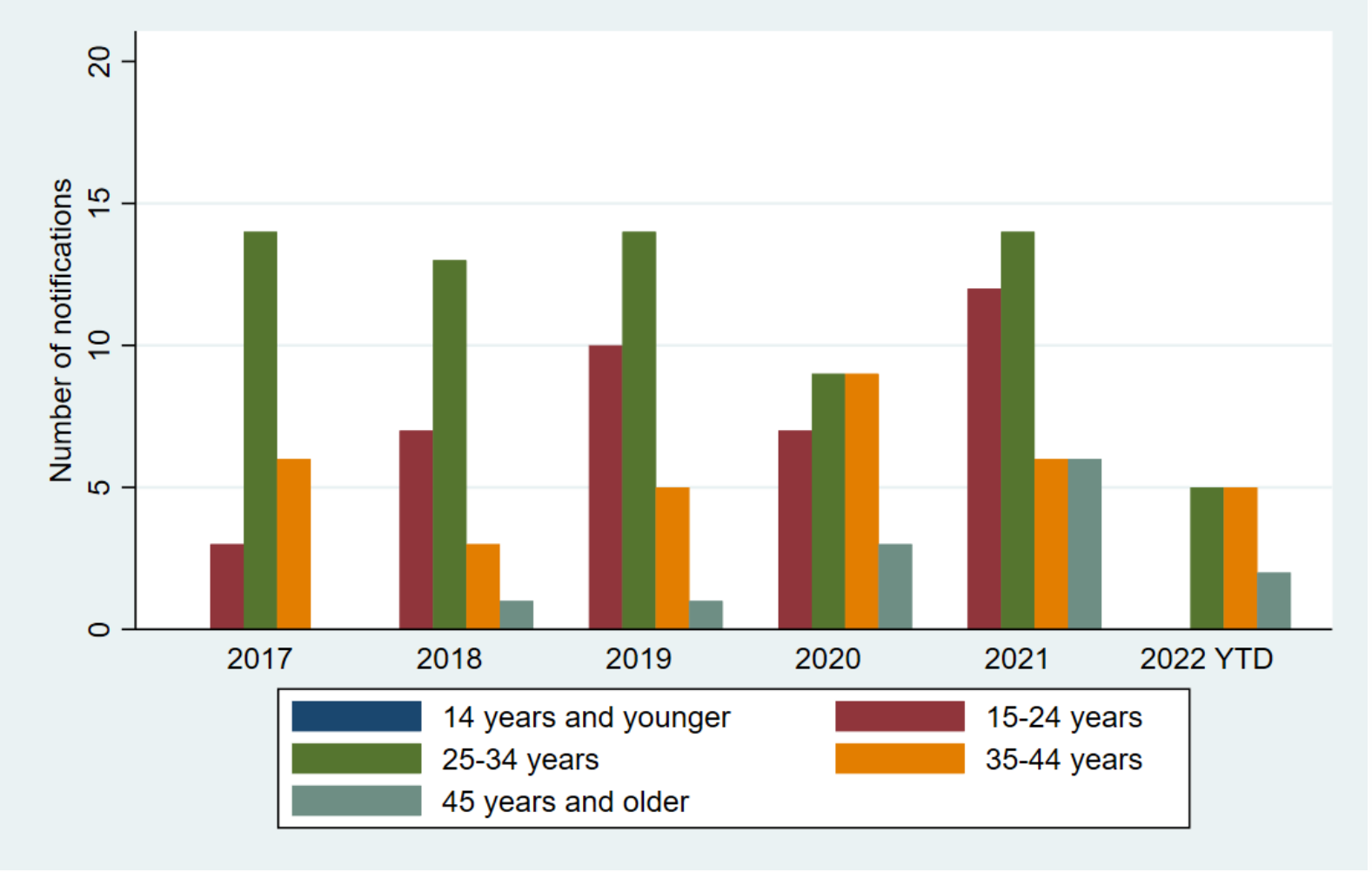








Most female cases are of reproductive age



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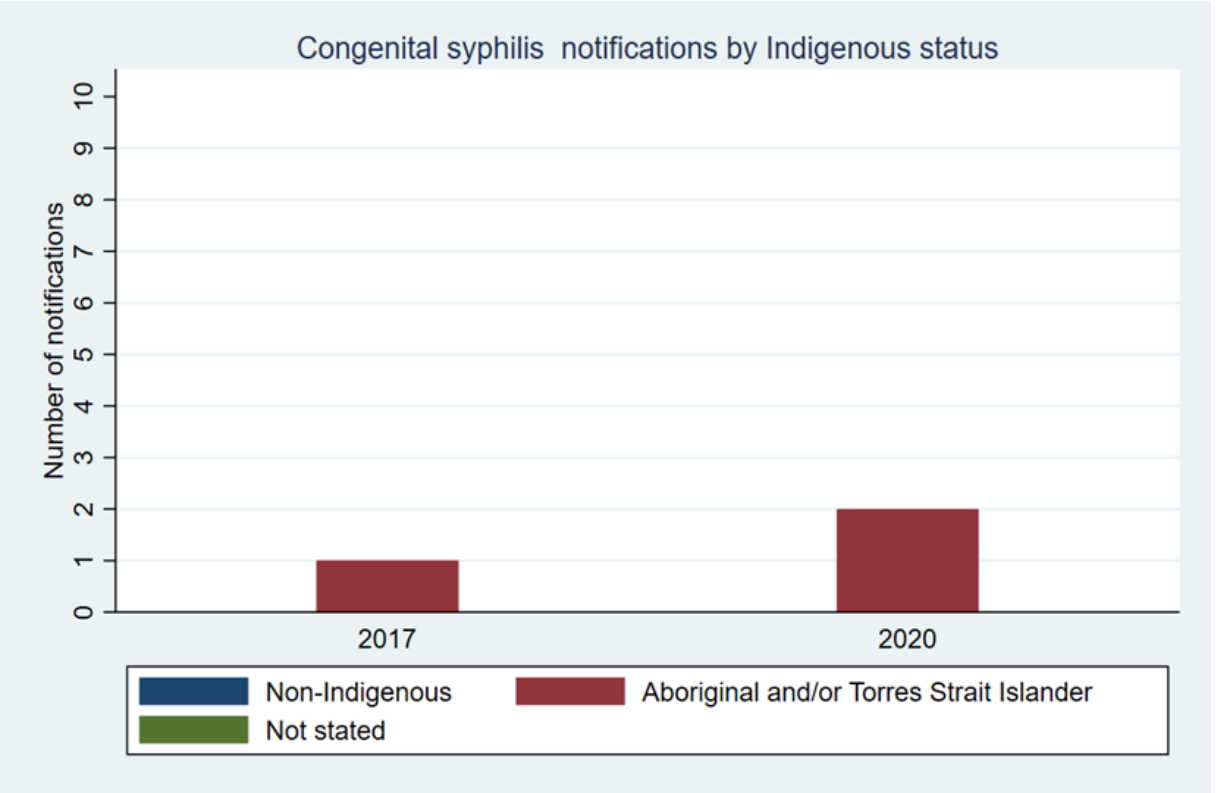
Healthy Australia.

Three cases of congenital syphilis reported in South Australia since the 1990s

- All women identified as Aboriginal at delivery
- Presented late to antenatal care
- Complex histories
- Previously had other children removed
- Vital to provide culturally appropriate care



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Healthy Profession.
Healthy Australia.

Syphilis is a notifiable disease

- Nationally and at the state level
- Legal obligation on laboratories and medical practitioners under the South Australian Public Health Act 2011

64—Notification

(1) If—

(a) a medical practitioner; or

(b) a pathology service; or

(c) a person of a class prescribed by regulation,

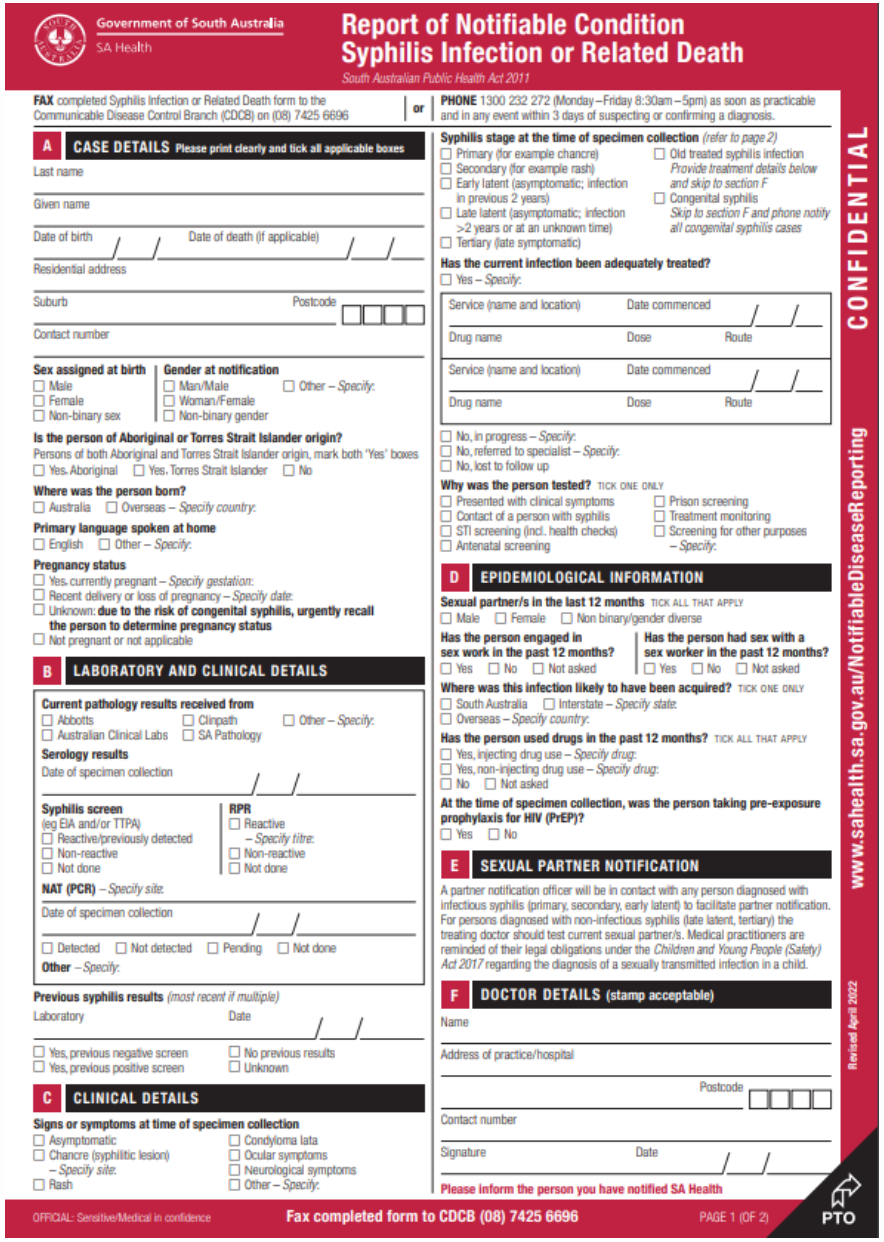
suspects that a person has, or has died from, a notifiable condition, the responsible person must as soon as practicable and, in any event, within 3 days of that suspicion being formed, report the case to the Chief Public Health Officer.

Maximum penalty: $10 000.

(2) A report under subsection (1) must be—

(a) made in a manner and form determined by the Chief Public Health Officer; and

(b) accompanied by the information required by the Chief Public Health Officer to be furnished in connection with the provision of the report.



Government of South Australia
SA Health

Report of Notifiable Condition
Syphilis Infection or Related Death

South Australian Public Health Act 2011

FAX completed Syphilis Infection or Related Death form to the Communicable Disease Control Branch (CDCB) on (08) 7425 6696 | or | **PHONE** 1300 232 272 (Monday–Friday 8:30am–5pm) as soon as practicable and in any event within 3 days of suspecting or confirming a diagnosis.

A CASE DETAILS Please print clearly and tick all applicable boxes

Last name

Given name

Date of birth / / Date of death (if applicable) / /

Residential address

Suburb Postcode

Contact number

Sex assigned at birth
☐ Male ☐ Female ☐ Non-binary sex

Gender at notification
☐ Man/Male ☐ Woman/Female ☐ Non-binary gender ☐ Other – *Specify:*

Is the person of Aboriginal or Torres Strait Islander origin?
Persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes
☐ Yes, Aboriginal ☐ Yes, Torres Strait Islander ☐ No

Where was the person born?
☐ Australia ☐ Overseas – *Specify country:*

Primary language spoken at home
☐ English ☐ Other – *Specify:*

Pregnancy status
☐ Yes, currently pregnant – *Specify gestation:*
☐ Recent delivery or loss of pregnancy – *Specify date:*
☐ Unknown: **due to the risk of congenital syphilis, urgently recall the person to determine pregnancy status**
☐ Not pregnant or not applicable

B LABORATORY AND CLINICAL DETAILS

Current pathology results received from
☐ Abbotts ☐ Clinpath ☐ Other – *Specify:*
☐ Australian Clinical Labs ☐ SA Pathology

Serology results
Date of specimen collection / /

Syphilis screen (eg EIA and/or TPPA)
☐ Reactive/previously detected
☐ Non-reactive
☐ Not done

RPR
☐ Reactive – *Specify titre:*
☐ Non-reactive
☐ Not done

NAT (PCR) – *Specify site:*
Date of specimen collection / /
☐ Detected ☐ Not detected ☐ Pending ☐ Not done

Other – *Specify:*

Previous syphilis results *(most recent if multiple)*
Laboratory Date / /
☐ Yes, previous negative screen ☐ No previous results
☐ Yes, previous positive screen ☐ Unknown

C CLINICAL DETAILS

Signs or symptoms at time of specimen collection
☐ Asymptomatic
☐ Chancre (syphilitic lesion) – *Specify site:*
☐ Rash
☐ Condyloma lata
☐ Ocular symptoms
☐ Neurological symptoms
☐ Other – *Specify:*

Syphilis stage at the time of specimen collection *(refer to page 2)*
☐ Primary (for example chancre)
☐ Secondary (for example rash)
☐ Early latent (asymptomatic; infection in previous 2 years)
☐ Late latent (asymptomatic; infection >2 years or at an unknown time)
☐ Tertiary (late symptomatic)
☐ Old treated syphilis infection *Provide treatment details below and skip to section F*
☐ Congenital syphilis *Skip to section F and phone notify all congenital syphilis cases*

Has the current infection been adequately treated?
☐ Yes – *Specify:*

Service (name and location) Date commenced / /
Drug name Dose Route

Service (name and location) Date commenced / /
Drug name Dose Route

☐ No, in progress – *Specify:*
☐ No, referred to specialist – *Specify:*
☐ No, lost to follow up

Why was the person tested? TICK ONE ONLY
☐ Presented with clinical symptoms
☐ Contact of a person with syphilis
☐ STI screening (incl. health checks)
☐ Antenatal screening
☐ Prison screening
☐ Treatment monitoring
☐ Screening for other purposes – *Specify:*

D EPIDEMIOLOGICAL INFORMATION

Sexual partner/s in the last 12 months TICK ALL THAT APPLY
☐ Male ☐ Female ☐ Non binary/gender diverse

Has the person engaged in sex work in the past 12 months?
☐ Yes ☐ No ☐ Not asked

Has the person had sex with a sex worker in the past 12 months?
☐ Yes ☐ No ☐ Not asked

Where was this infection likely to have been acquired? TICK ONE ONLY
☐ South Australia ☐ Interstate – *Specify state:*
☐ Overseas – *Specify country:*

Has the person used drugs in the past 12 months? TICK ALL THAT APPLY
☐ Yes, injecting drug use – *Specify drug:*
☐ Yes, non-injecting drug use – *Specify drug:*
☐ No ☐ Not asked

At the time of specimen collection, was the person taking pre-exposure prophylaxis for HIV (PrEP)?
☐ Yes ☐ No

E SEXUAL PARTNER NOTIFICATION

A partner notification officer will be in contact with any person diagnosed with infectious syphilis (primary, secondary, early latent) to facilitate partner notification. For persons diagnosed with non-infectious syphilis (late latent, tertiary) the treating doctor should test current sexual partner/s. Medical practitioners are reminded of their legal obligations under the *Children and Young People (Safety) Act 2017* regarding the diagnosis of a sexually transmitted infection in a child.

F DOCTOR DETAILS (stamp acceptable)

Name

Address of practice/hospital

Postcode

Contact number

Signature Date / /

Please inform the person you have notified SA Health

CONFIDENTIAL

www.sahealth.sa.gov.au/NotifiableDiseaseReporting

Revised April 2022

OFFICIAL: Sensitive/Medical in confidence

Fax completed form to CDCB (08) 7425 6696

PAGE 1 (OF 2)

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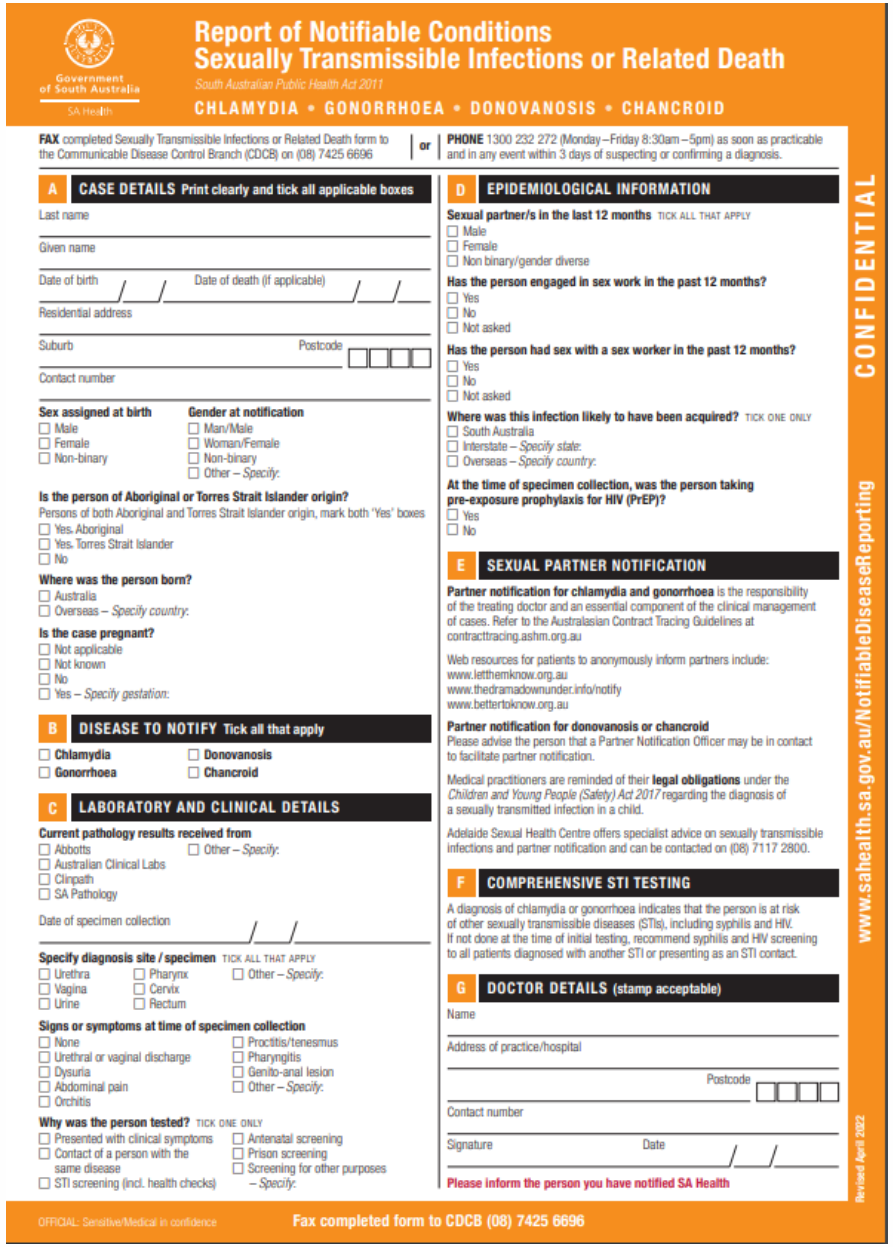

Government of South Australia
SA Health

Report of Notifiable Conditions
Sexually Transmissible Infections or Related Death

South Australian Public Health Act 2011

CHLAMYDIA • GONORRHOEA • DONOVANOSIS • CHANCROID

FAX completed Sexually Transmissible Infections or Related Death form to the Communicable Disease Control Branch (CDCB) on (08) 7425 6696 | or | **PHONE** 1300 232 272 (Monday–Friday 8:30am–5pm) as soon as practicable and in any event within 3 days of suspecting or confirming a diagnosis.

A CASE DETAILS Print clearly and tick all applicable boxes

Last name

Given name

Date of birth / / Date of death (if applicable) / /

Residential address

Suburb Postcode

Contact number

Sex assigned at birth
☐ Male ☐ Female ☐ Non-binary

Gender at notification
☐ Man/Male ☐ Woman/Female ☐ Non-binary ☐ Other – *Specify:*

Is the person of Aboriginal or Torres Strait Islander origin?
Persons of both Aboriginal and Torres Strait Islander origin, mark both 'Yes' boxes
☐ Yes, Aboriginal
☐ Yes, Torres Strait Islander
☐ No

Where was the person born?
☐ Australia
☐ Overseas – *Specify country:*

Is the case pregnant?
☐ Not applicable
☐ Not known
☐ No
☐ Yes – *Specify gestation:*

B DISEASE TO NOTIFY Tick all that apply

☐ **Chlamydia** ☐ **Donovanosis**
☐ **Gonorrhoea** ☐ **Chancroid**

C LABORATORY AND CLINICAL DETAILS

Current pathology results received from
☐ Abbotts ☐ Other – *Specify:*
☐ Australian Clinical Labs
☐ Clinpath
☐ SA Pathology

Date of specimen collection / /

Specify diagnosis site / specimen TICK ALL THAT APPLY
☐ Urethra ☐ Pharynx ☐ Other – *Specify:*
☐ Vagina ☐ Cervix
☐ Urine ☐ Rectum

Signs or symptoms at time of specimen collection
☐ None
☐ Urethral or vaginal discharge
☐ Dysuria
☐ Abdominal pain
☐ Orchitis
☐ Proctitis/tenesmus
☐ Pharyngitis
☐ Genito-anal lesion
☐ Other – *Specify:*

Why was the person tested? TICK ONE ONLY
☐ Presented with clinical symptoms
☐ Contact of a person with the same disease
☐ STI screening (incl. health checks)
☐ Antenatal screening
☐ Prison screening
☐ Screening for other purposes – *Specify:*

D EPIDEMIOLOGICAL INFORMATION

Sexual partner/s in the last 12 months TICK ALL THAT APPLY
☐ Male
☐ Female
☐ Non binary/gender diverse

Has the person engaged in sex work in the past 12 months?
☐ Yes
☐ No
☐ Not asked

Has the person had sex with a sex worker in the past 12 months?
☐ Yes
☐ No
☐ Not asked

Where was this infection likely to have been acquired? TICK ONE ONLY
☐ South Australia
☐ Interstate – *Specify state:*
☐ Overseas – *Specify country:*

At the time of specimen collection, was the person taking pre-exposure prophylaxis for HIV (PrEP)?
☐ Yes
☐ No

E SEXUAL PARTNER NOTIFICATION

Partner notification for chlamydia and gonorrhoea is the responsibility of the treating doctor and an essential component of the clinical management of cases. Refer to the Australasian Contract Tracing Guidelines at contracttracing.ashm.org.au

Web resources for patients to anonymously inform partners include:
www.letthemknow.org.au
www.thedramadownunder.info/notify
www.bettertoknow.org.au

Partner notification for donovanosis or chancroid
Please advise the person that a Partner Notification Officer may be in contact to facilitate partner notification.

Medical practitioners are reminded of their **legal obligations** under the *Children and Young People (Safety) Act 2017* regarding the diagnosis of a sexually transmitted infection in a child.

Adelaide Sexual Health Centre offers specialist advice on sexually transmissible infections and partner notification and can be contacted on (08) 7117 2800.

F COMPREHENSIVE STI TESTING

A diagnosis of chlamydia or gonorrhoea indicates that the person is at risk of other sexually transmissible diseases (STIs), including syphilis and HIV. If not done at the time of initial testing, recommend syphilis and HIV screening to all patients diagnosed with another STI or presenting as an STI contact.

G DOCTOR DETAILS (stamp acceptable)

Name

Address of practice/hospital

Postcode

Contact number

Signature Date / /

Please inform the person you have notified SA Health

CONFIDENTIAL

www.sahealth.sa.gov.au/NotifiableDiseaseReporting

Revised April 2022

OFFICIAL: Sensitive/Medical in confidence

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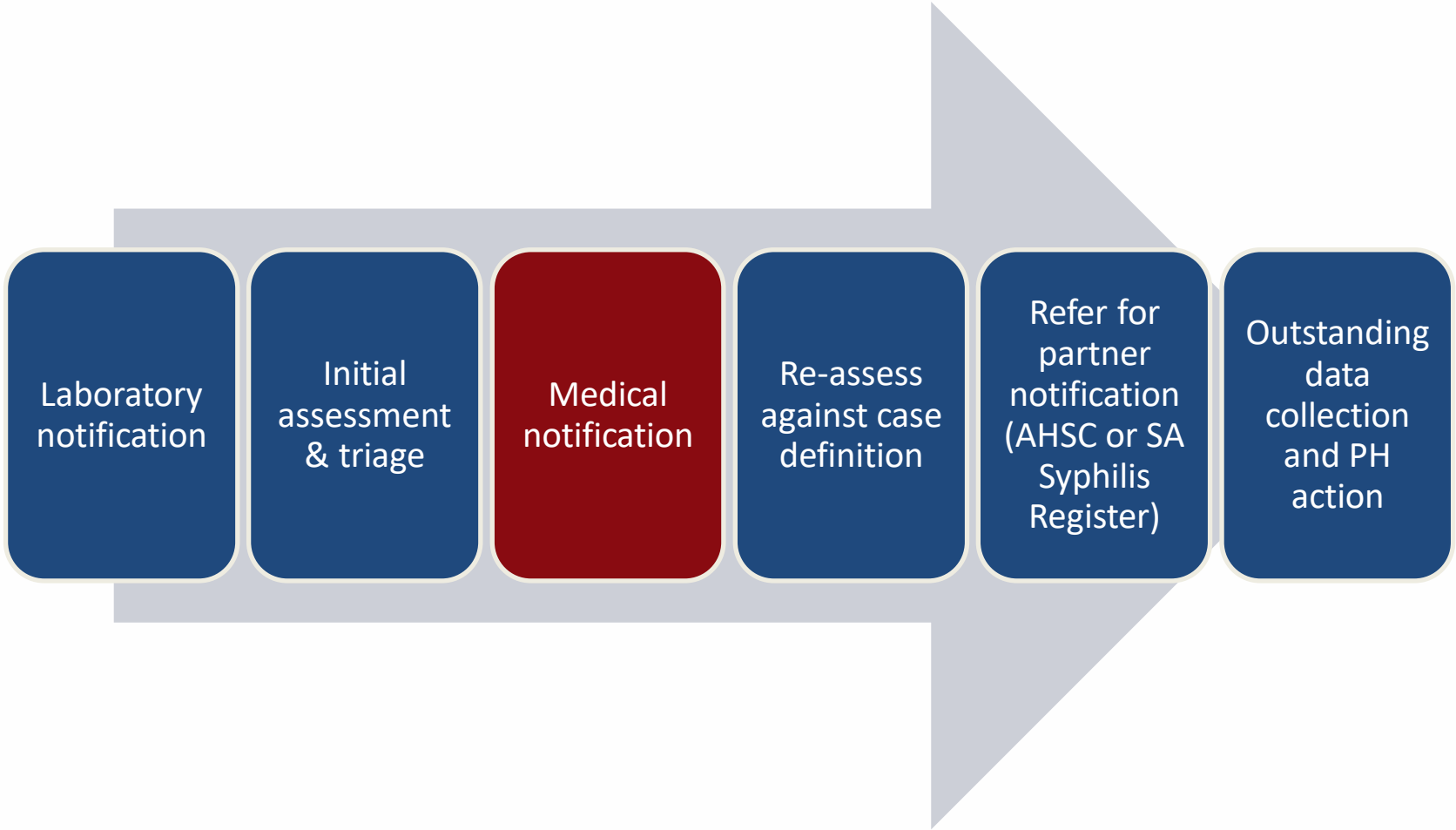
Healthy Australia.

SA CDCB notification process



National surveillance case definition

Notification profile	Syphilis <2 years duration (infectious)
Specific symptoms of primary or secondary syphilis	Yes, confirmed
Seroconversion <2 years	Yes, confirmed
Fourfold rise in RPR titre <2 years	Yes, confirmed
RPR ≥16 (asymptomatic, no baseline)	Yes, probable
Contact of confirmed case **AND** a) No previous serology but now at least confirmed screen positive **OR** b) Fourfold rise in RPR titre >2 years	Yes, probable
RPR <16 (asymptomatic, no baseline)	No

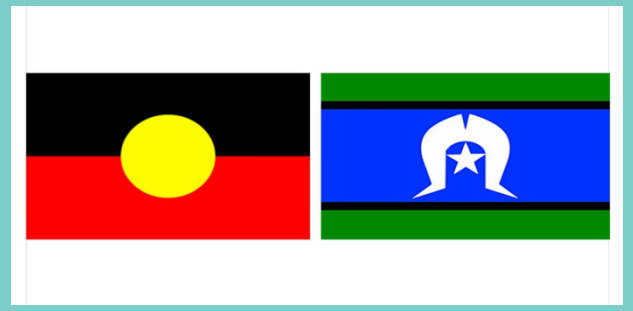
Contact tracing (partner notification)

- Referral to ASHC or SA Syphilis Register for infectious syphilis
- Responsibility of diagnosing Dr for non-infectious syphilis (current sexual partner/s only)
- Correct staging is essential; determines the lookback period for partner notification (3-12 months)

Source: Australasian Contact Tracing Guidelines

Syphilis Register

For all Aboriginal and Torres Strait Islander People



Morbidity and Mortality Weekly Report (*MMWR*)

CDC

Increased Methamphetamine, Injection Drug, and Heroin Use Among Women and Heterosexual Men with Primary and Secondary Syphilis — United States, 2013–2017

Weekly / February 15, 2019 / 68(6);144–148

Sarah E. Kidd, MD[1]; Jeremy A. Grey, PhD[1]; Elizabeth A. Torrone, PhD

Sex Transm Dis. 2021 Aug; 48(8 Suppl): S40–S43. PMCID: PMC8284349
Published online 2021 May 7. doi: 10.1097/OLQ.0000000000001459 PMID: 33967232

Evaluation of Drug-Related Risk Behaviors Among Females Diagnosed With Early Syphilis in New York State (Excluding New York City), 2013 to 2018

Fanta Drame, BSPH,* Srikanth Bomma, MS,† Wilson Miranda, MPH,† Kitty Gelberg, PhD, MPH,‡ and Rachel Hart-Malloy, PhD, MPH†§¶

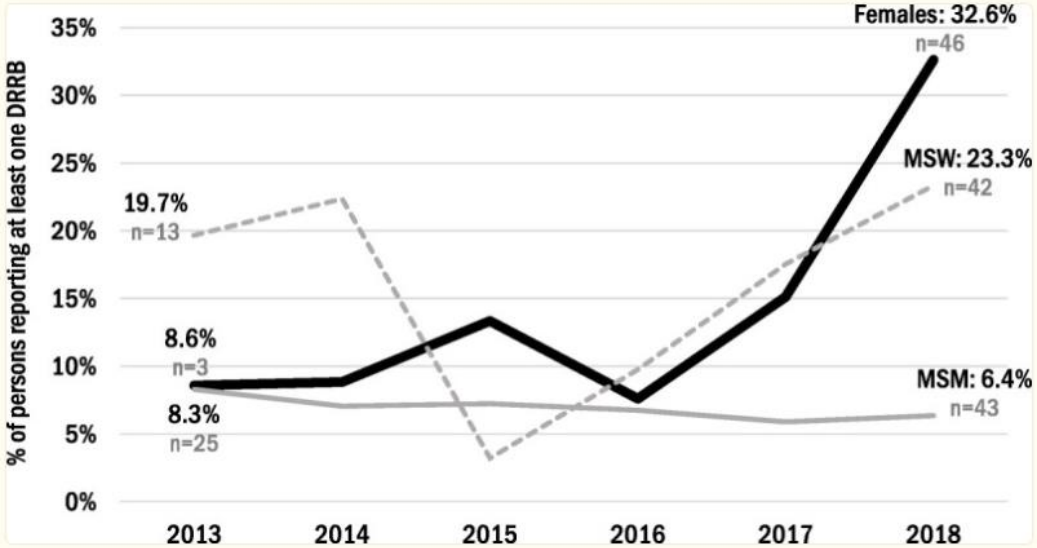
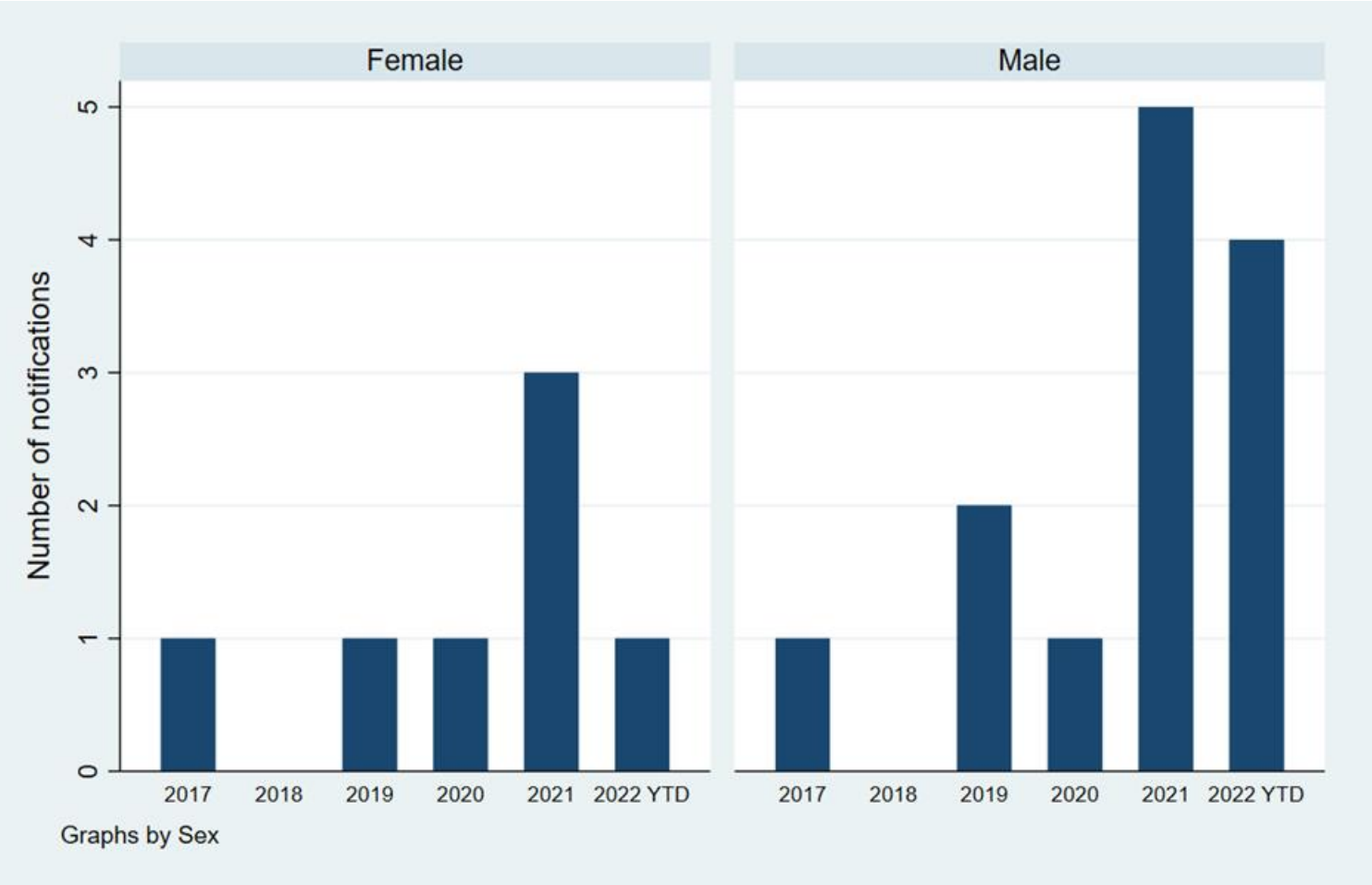


Figure 1

Percentage of those with early syphilis who were female, men who have sex with men (MSM), and men who have sex with females only (MSW) who reported at least one drug-related risk behavior in the 12 months before diagnosis from 2013 to 2018—New York State, excluding New York City.

Notifications are rising among persons reporting sex work



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Challenges associated with changing epidemiology

- Lack of repeat antenatal screening for women not identified as ‘high risk’
- Testing and management outside specialised services:
  - Lack of recognition of syphilis symptoms
  - Missed opportunities for screening
  - Incomplete sexual histories/risk assessment
  - Patient loss to follow-up
- Surveillance and partner notification:
  - Increased volume
  - Increased complexity
  - Re-infections/re-exposures
  - Collection of meaningful surveillance information

Public health response

- Continued surveillance and data review
  - Define emerging at-risk populations/areas
  - Disseminate information to stakeholders and public
  - Revision of syphilis notification form
- Enhanced public health management
  - Follow-up of treatment completion
  - Syphilis in pregnancy monitoring
  - Exploration of options for more systematic case management
- Workforce engagement and education
  - SA Syphilis Register & ASHC/CDCB outreach and education
  - CDCB public health alerts
- Contribution to national and state guidelines
  - Advocacy for additional syphilis universal screening in pregnancy, including in SA Perinatal Practice Guidelines

Case One

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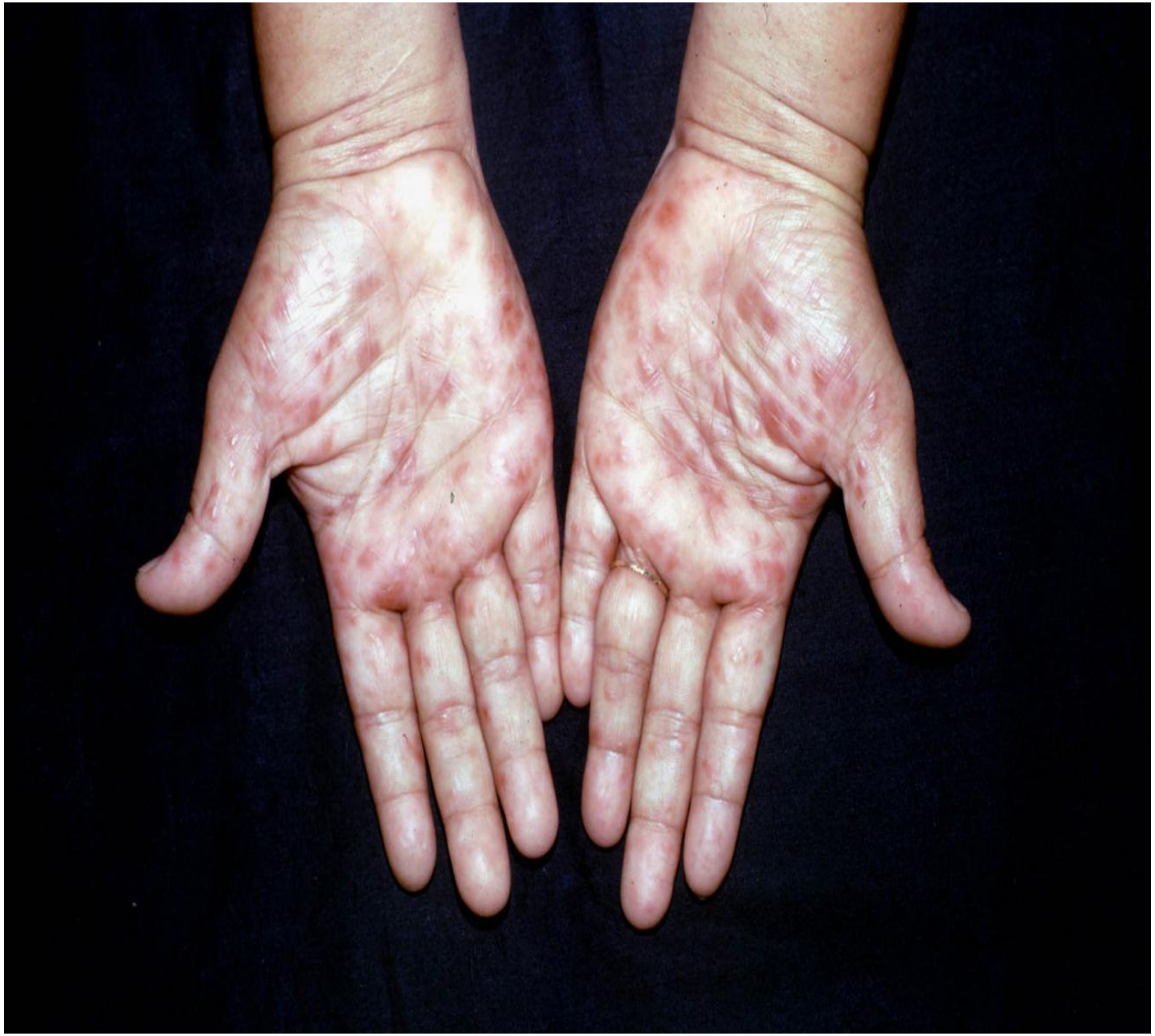
- 38 year old woman woke one morning with a painful, red watering right eye.
- She had been to her GP the month before & was given antibiotic cream with no improvement.
- However now the vision in her right eye is blurry, with floaters and flashing lights & the vision in her left eye is also deteriorating.
- 2 day history of a rash across trunk, headache and generalised body aches.

OE/



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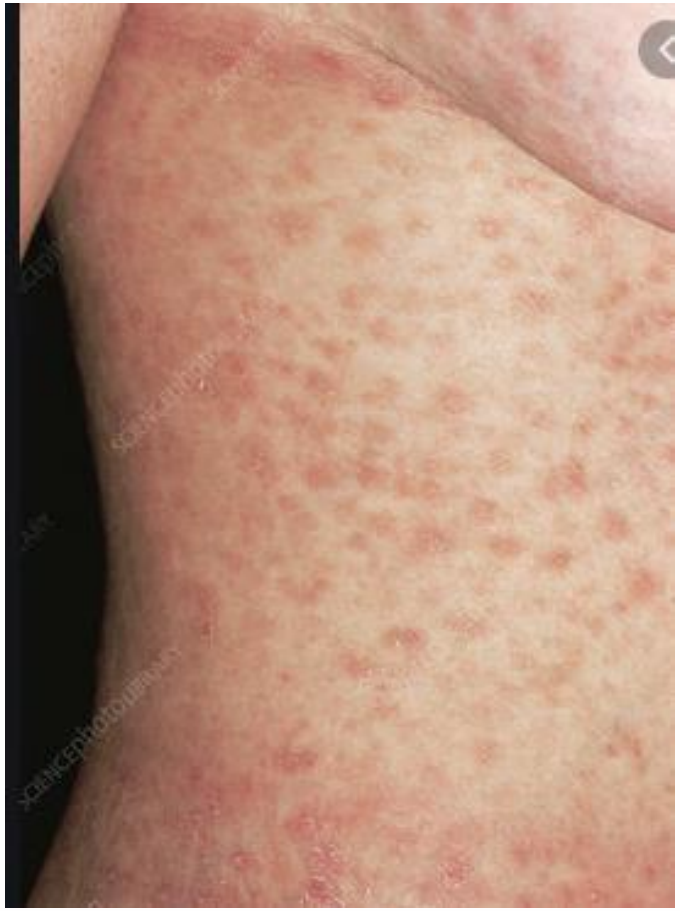
Discussed with on call ophthalmologist & booked to be seen the next day.



Ophthalmology Review following morning

- OE/ Right eye -Injected conjunctiva
- **Slit lamp examination:-**
- RE Cornea no ulcers
- 2+ cells (WC)
- 2+ flare (protein accumulation in aqueous humour)
- Fundus LE normal

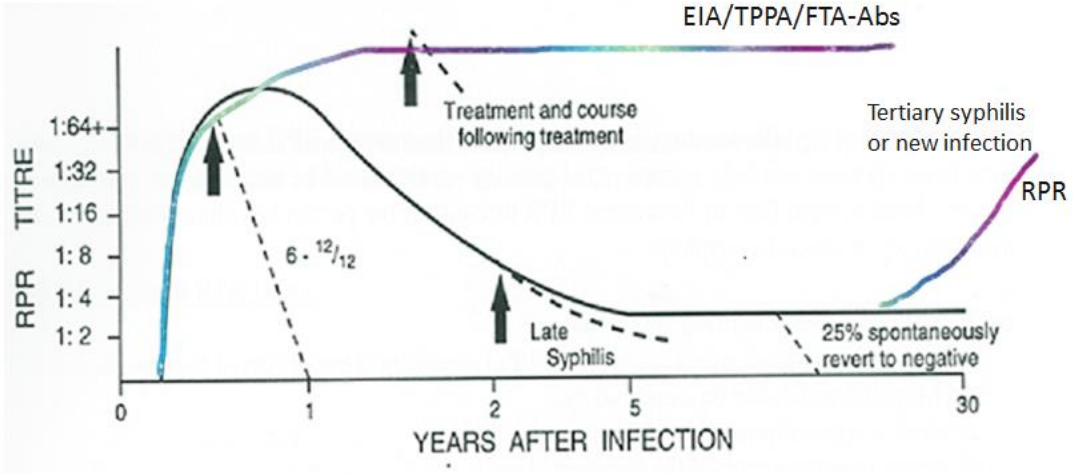
- Diagnosis anterior uveitis & systemic viral illness.
- Discharged with topical prednisolone & atropine drops, a blood form
- See her GP re systemic viral illness.

Ophthalmological review 3 weeks later

- Hadn’t had blood tests (because of extended wait) or filled script for atropine.
- Vision deteriorating & left eye now involved.
- Not seen GP for systemic symptoms.
- So blood tests in clinic
- Other reasons for not testing

Blood test 3/52 later

- Syphilis ELISA screen reactive
- RPR 1:128
- TPPA positive
- Previously negative syphilis serology 2018
- Diagnosis Ocular & secondary syphilis



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Management

- Ophthalmology review
- Admission to hospital for 2 weeks
- LP=CSF normal
- MRI brain no features of neurosyphilis
- PICC insertion
- IV Benzylpenicillin 1.8 G 4hourly IV 14 days.
- PO 50 MG OD prednisolone to prevent Jarisch Herxheimer reaction.
- Steroid & atropine eye drops

Partner Notification

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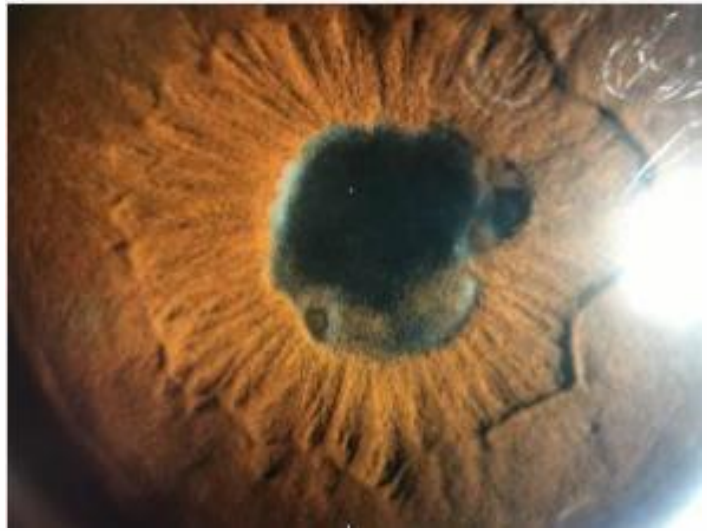
Discharged from hospital with OPD follow up

- **Impression recovering right eye severe uveitis.**
- Posterior uveitis
- Right anterior chamber occasional cells
- Posterior synechiae
- Right eye vitreous haze
- Steroid eye drops x6 a day and reducing dose of prednisolone from 50MG OD.
- 6/45 Right eye left eye 6/30
- Improved now 6/12 both eyes



Ophthalmology Aug 2021

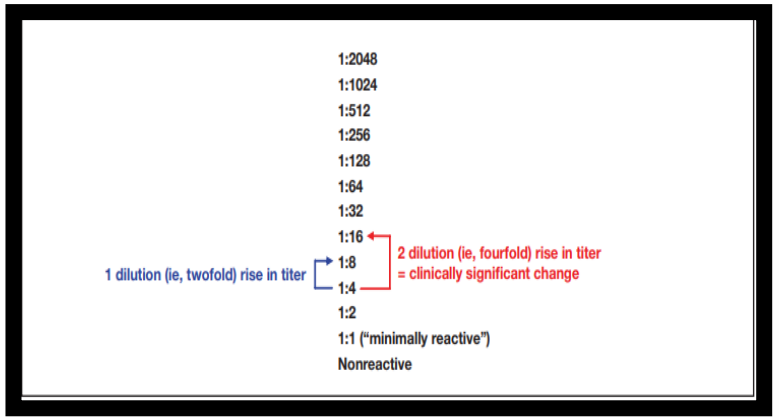
VAR 6/12	VAL 6/12
RE white clear	330 deg synechiae, no bombe, healthy disc
LE white, clear	no synechiae, dilated, healthy disc and mac.
RPR 1:8	

Cease Maxidex

Discharged from the eye clinic

Follow up

- 1, 3, 6 & 12 months
- Four fold drop within 12 months
- HIV testing
- Treatment failure or re-infection is likely if:
  - titres increase four fold
  - an initial titre above 1:32 fails to decline four fold within 12 to 24 months of therapy
  - signs or symptoms consistent with syphilis develop.
- CSF examination should be considered and the patient retreated.
- If a non-penicillin regimen was used, penicillin desensitisation and treatment with penicillin should be attempted.



Case Two

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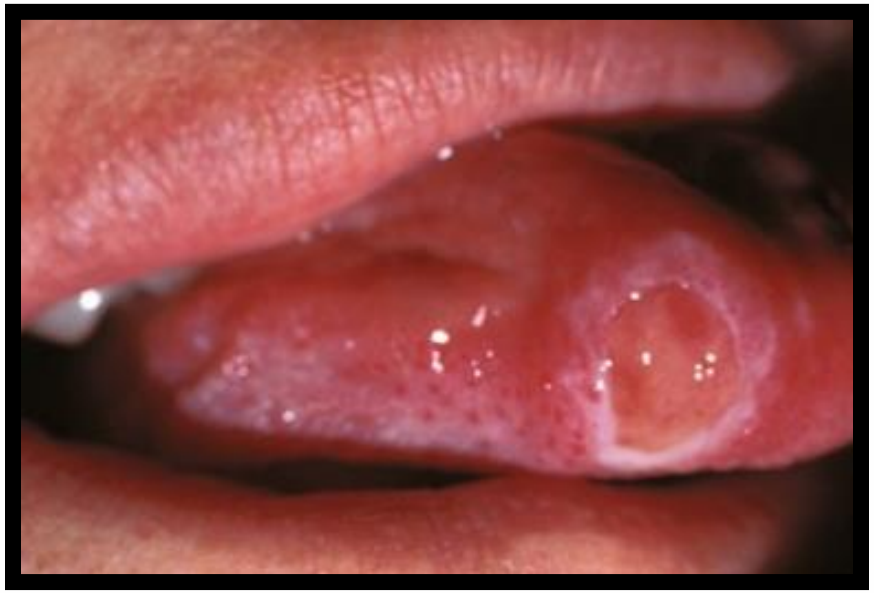
- 36 year old male
- 2 week history of a mouth ulcer and swollen cervical lymph node & swollen face
- Presented to ED
- Reassured unlikely to be a CA & likely viral infection
- See GP in 1/12 if persists

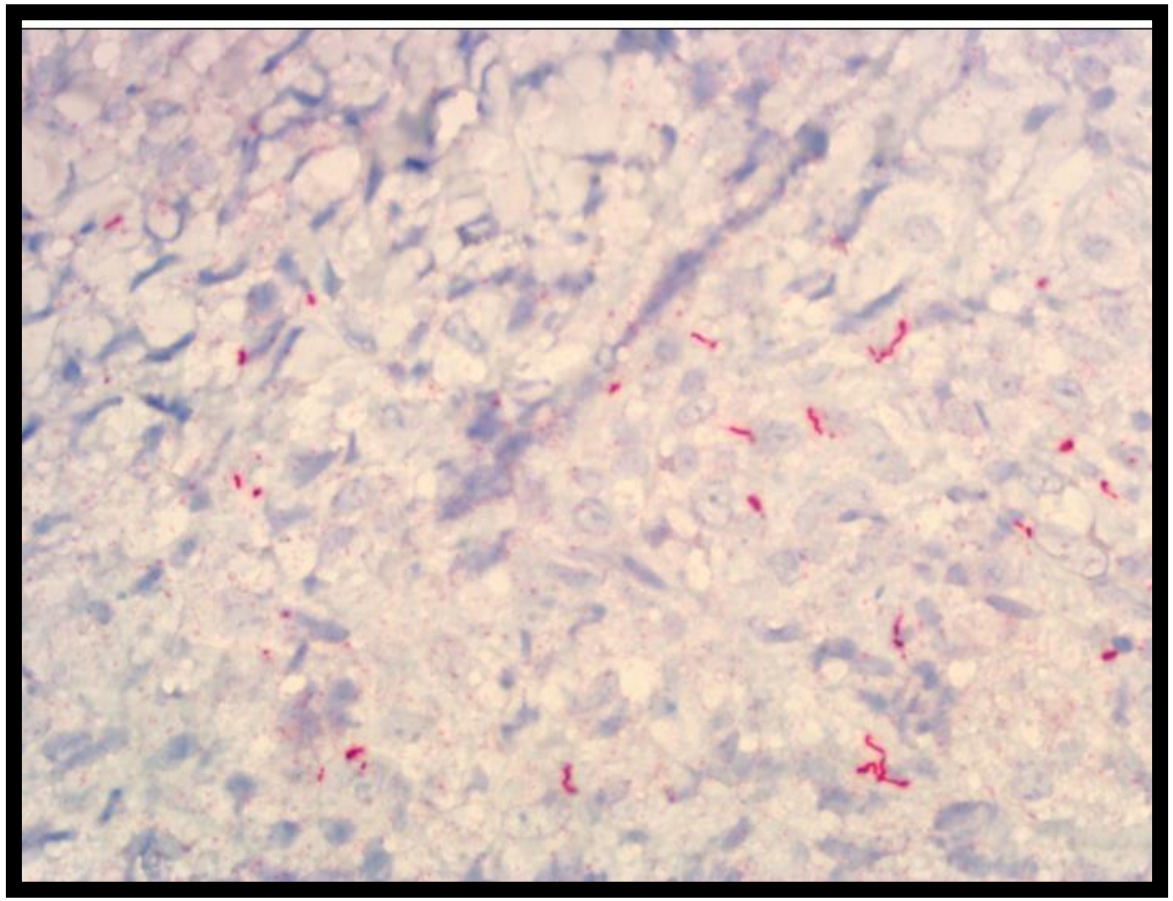


- Differential diagnosis?
- What tests do you do?
- How can you tell what stage this is?
- How do you manage this patient?
- Why is diagnosis and treatment so important?

- Lesion persisted
  - 2 months later developed
  - Rash
  - headache
  - 10KG weight loss
  - lethargy
  - Bilateral hearing loss & tinnitus

Referred to ENT biopsy of tongue:- demonstrated no evidence of malignancy & an acute lymphohistocytic inflammation and later immunohistochemical staining revealed spirochaetes.

- Diagnosis secondary syphilis and otosyphilis/ neurosyphilis
- MRI brain normal CSF heavily blood stained
- Deafness & now trialling a hearing aid.



Date	EIA (Syphilis screen)	RPR	TPPA	Treatment history
20/01/2022	Reactive	1:256	Reactive	IV Benzylpenicillin 1.8 G 4hourly IV 14 days PO 50 MG OD prednisolone
02/02/2022	Non-reactive	1:2		

Contact details

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- Clara Baker, Aboriginal STI Community Education Coordinator/ Partner Notification Officer: clara.baker@sa.gov.au
- Jana Sisnowski, Epidemiologist: jana.sisnowski@sa.gov.au

Government of South Australia

SA Health

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Q
&
A

Thank you for your participation.

An evaluation survey will be emailed to you.

Your feedback is very important to us to develop future education sessions.

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