NSW Health

Appendix D: Standard Operating Procedure

Antimicrobial resistant gonococcal infections of public health significance

27 March 2025

NSW GOVERNMENT

Contents

1. Scope of Standard Operating Procedure

This Standard Operating Procedure (SOP) is an appendix to the NSW Health Gonorrhoea Control Guideline for Public Health Units. The SOP defines the public health response procedure for antimicrobial resistant gonococcal infections of public health significance identified in New South Wales. The purpose of the SOP is to ensure a standardised response to these notifications, with the aim to prevent further spread of these strains through appropriate clinical management, and timely and comprehensive contact tracing.

2. Public health priority

	Priority classification	Public health response timeline	Data entry timeline
Extensively drug resistant (XDR) gonococcal infection	High	Respond within one working day of notification **Detection of one or more cases will trigger an XDR case investigation response*	Within 3 working days
Gonococcal infection with critical antibiotic resistance	High	Respond within one working day of notification	Within 3 working days

3. Case definitions

These surveillance case definitions are specific to NSW. Case definitions may differ in other jurisdictions.

A case is considered to be **extensively drug resistant (XDR)** if:

- The case meets the CDNA national surveillance case definition for gonococcal infection;

  AND

- The isolate is found on culture-based susceptibility testing from NSW Health Pathology-Randwick to have high-level resistance to azithromycin (MICs ≥256mg/L) AND decreased susceptibility to ceftriaxone (MICs ≥0.125 mg/L).

A case is considered to have **critical antibiotic resistance** if:

- The case meets the CDNA national surveillance case definition for gonococcal infection;

  AND

- The isolate is found on culture-based susceptibility testing from NSW Health Pathology-Randwick to have high-level resistance to azithromycin (MICs ≥256mg/L) OR decreased susceptibility to ceftriaxone (MICs ≥0.125 mg/L).

4. Notification process

Notification of antimicrobial resistant gonococcal infections of public health significance will be reported to Communicable Diseases Branch (CDB) by NSW Health Pathology – Randwick (NSWHP-Randwick). Only antimicrobial resistant gonococcal infections of public health significance with antibiotic susceptibility testing results performed by NSWHP– Randwick require follow up.

1. Cases of XDR gonococcal infection and gonococcal infection with critical antibiotic resistance are notified to CDB by NSWHP-Randwick. NSWHP-Randwick will also contact the ordering/referring clinician.
2. CDB will then notify the relevant public health unit (PHU) by email.

If a PHU identify any antimicrobial resistant gonococcal infections of public health significance, notify CDB on-call via email within one working day.

PHUs are not expected to routinely monitor notifications of gonococcal infection. If a PHU becomes aware of a case where a primary laboratory has undertaken AMR testing and has determined that a case is resistant, the PHU should confirm that the culture has been sent to NSWHP-Randwick for antibiotic susceptibility testing (AST).

5. Data management

PHUs are to manually enter 'Resistant' or 'Susceptible' for ceftriaxone and azithromycin and the minimum inhibitory concentrations (MICs) into the NSWHP-Randwick laboratory result in the 'Laboratory' section in NCIMS. Both high-level resistance and decreased susceptibility should be entered as 'Resistant' in the laboratory result.

Enhanced surveillance data collected from the 'Gonococcal notification form for antimicrobial infections of public health significance' should be entered in the question packages in NCIMS. Any details relevant to the public health management that are not captured in current question packages should be documented in appropriate free text sections or as attachments.

The AMR gonorrhoea report (available in SharePoint) can be used for data monitoring and cleaning.

6. Response procedure

6.1 Roles and responsibilities

Public health response to notifications of antimicrobial resistant gonococcal infections of public health significance is a joint responsibility of PHUs, Health Protection NSW (HPNSW), the managing medical practitioner, and the specialist sexual health/infectious diseases services. Noting that practices and processes may vary within each local health district, the general responsibility of each service/unit is outlined below:

- NSW Health Pathology-Randwick: perform AST for all *Neisseria gonorrhoeae* isolates, notify HPNSW of any antimicrobial resistant gonococcal infections of public health significance, and provide expert advice.
- HPNSW: notify PHUs of antimicrobial resistant gonococcal infections of public health significance, provide support to PHUs for public health follow up, epidemiology and surveillance, public health communications, and convene Incident Management Team.
- PHU: notify and follow up with the managing medical practitioner, facilitate referral to specialist sexual health/infectious disease services (if required), ensure AST and enhanced surveillance data is entered into NCIMS.
- Managing medical practitioners: case and contact management.

- Specialist sexual health/infectious diseases services: provide expert advice on case management to managing medical practitioners when needed. Provide support for contact tracing/partner notification.

6.2 Response times

- Follow up of XDR gonococcal infections should commence within one working day of notification.
- Follow up of gonococcal infections with critical antibiotic resistance should commence within one working day of notification.

6.3 Case investigation

Upon receipt of notification, PHU staff should call* the diagnosing medical practitioner (i.e., the doctor who ordered the initial laboratory test confirming gonorrhoea) and/or the current treating medical practitioner to:

- Notify them of the antibiotic resistance profile.
- Establish whether the case is aware of the diagnosis and the antibiotic resistance profile and the potential need for additional testing and treatment and contact tracing.
- Establish that the recommended and appropriate treatment has been provided to the case.
- Facilitate referral to the local specialist sexual health clinic/infectious diseases or to the NSW Sexual Health Infolink (SHIL) during the phone call if the managing medical practitioner does not have experience in managing STIs or antimicrobial gonococcal infections or requests clinical management support.
- Establish that contact tracing is in progress.
- Confirm that a test of cure (ToC) has been booked for the patient two weeks after treatment is completed.
- Confirm that appropriate advice and education has been given to the case regarding transmission and to avoid sexual contact until ToC results are negative and contacts have been tested and treated.
- Obtain permission to contact the case directly for interview (if required).
- Notify the local specialist sexual health service of any XDR gonococcal infection, as appropriate for awareness.

** Note that some PHUs may have other local arrangements and systems in place to contact their local specialist sexual health/infectious diseases services.*

Send the 'Gonococcal notification form for antimicrobial infections of public health significance' (Appendix C) to the managing clinician for completion.

Case summaries using the CD on-call report should be sent to the CDB on-call officer within one working day of notification for the following cases:

- For all XDR cases
- For all cases with critical antibiotic resistance where the case reports attending brothels/parlours or sex on premises venues (SOPVs) or reports interstate contacts.

The CDB on-call officer will circulate the summary to the NSW Public Health Network.

6.4 Case management and treatment

The Australian STI Management Guidelines for Use in Primary Care is a recommended resource for clinicians and public health staff as it contains information about management, contact tracing and follow up of gonorrhoea.

If ToC is positive, refer the managing medical practitioner to the local specialist sexual health service. Notify CDB of the positive ToC within one working day.

CDNA, Australasian Sexual Health Alliance (ASHA) and Australasian Society for HIV, Viral Hepatitis and Sexual Health Medicine (ASHM) have published 'Recommendations for treatment of gonococcal infections in the era of MDR/XDR gonorrhoea'.

6.5 Contact management

The managing clinician or specialist sexual health service and the relevant PHU may determine arrangements for contact tracing collaboratively, recognising that the primary responsibility for contact tracing lies with the clinician managing the case.

Where the case was referred and the primary diagnosing practitioner had already initiated contact tracing prior to the finding of antibiotic resistance, the primary diagnosing practitioner should be consulted about the likely value and risks of re-interviewing the case for contact tracing.

NSW Sexual Health Infolink (SHIL) Partner Notification Service can support contact tracing. SHIL should also be notified where the case reports contacts that require contact tracing (including dating apps) and they are unable to perform this themselves.

For strains with critical antibiotic resistance i.e. decreased susceptibility to ceftriaxone (MICs ≥0.125 mg/L - <0.5mg/L) OR high-level resistance to azithromycin (MICs ≥256mg/L), cases can elect to notify their partners directly themselves or anonymously through the following websites (this is called patient initiated referral):

- https://www.letthemknow.org.au/,
- https://www.thedramadownunder.info/ (for MSM),
- https://www.bettertoknow.org.au/ (for Aboriginal and/or Torres Strait Islander people)

6.6 Active case finding and enhanced contact tracing

To ensure early identification and treatment of additional cases, active case finding and enhanced contact tracing is strongly recommended for an XDR gonococcal infection and/or an infection with critical antibiotic resistance where the strain has decreased susceptibility to ceftriaxone (MIC ≥ 0.5mg/L). For these cases, it is recommended that enhanced contact tracing is undertaken via a provider initiated referral. Consent must be obtained from the case as the provider (or clinician) will then notify contacts directly or seek assistance from SHIL and other specialist sexual health/infectious diseases services.

Active case finding and enhanced contact tracing via provider referral is the provider ensuring:

- Notification and clinic appointment booking for testing and treatment of named contact(s), with ToC followed up for those that test positive.
- Referral to SHIL for contacts that require online contact tracing (including dating apps).
- Reporting of contacts from SOPVs or brothels to PHUs for outreach and communications.

Active case finding and enhanced contact tracing for other critically resistant antibiotic strains (i.e. decreased susceptibility to ceftriaxone (MICs ≥0.125 mg/L - <0.5 mg/L) OR high-level resistance to azithromycin (MICs ≥256mg/L) can be undertaken at the discretion of the managing clinician.

7. XDR case investigation response procedure

An urgent, multidisciplinary response is required to one or more cases of XDR gonococcal infection to coordinate clinical and public health response. This response may include (but is not limited to):

- Director of CDB or representative
- Representative(s) of Health Protection NSW
- Representative(s) of the Centre for Population Health
- Representative(s) of the investigating PHU(s)
- Sexual health and infectious diseases clinicians, including from the treating specialist service
- Representative(s) of the NSW Health Pathology, including NSW Health Pathology-Randwick, or relevant testing laboratory (e.g. interstate laboratory)
- Representative(s) of SHIL
- Representative(s) of NSW Health media & communications
- Representative(s) of the Centre for Aboriginal Health (as appropriate)
- Representative(s) of third sector organisations as appropriate, e.g. Aboriginal and Torres Strait Islander, CALD, LGBTIQ+, sex worker health services, youth services, and community organisations.

A response plan will likely include:

1. Clinical management of XDR gonorrhoea
2. Alerting clinicians and the public
3. Public health response
4. Further characterisation of isolates that are extensively or critically antibiotic resistant, including by whole genome sequencing.

The response can be stood down if:

- All known cases and their sexual partner(s) have been treated appropriately and have returned negative ToC.
- There is no evidence of further transmission within NSW.

This may be difficult to ascertain if the case reports anonymous or uncontactable sexual partners. Ongoing risk to the public will need to be considered prior to the conclusion of the incident response.

7.1 Additional epidemiological and laboratory investigations

The response team will determine if additional epidemiological and laboratory investigations are required and will liaise with relevant stakeholders. This may include further characterisation of isolates, including by whole genome sequencing.

7.2 Communications

Communications are overseen by the XDR case investigation response team and may include the following:

- Alert to the National Incident Centre

- Liaison with key stakeholders relevant to the case investigation, including interstate and international stakeholders (via National Incident Centre as appropriate)
- Information to CDNA
- Information to the NSW Public Health Network
- Information to Sexual Health Directors
- Alert to clinicians
- Media release(s)
- Information to peer networks and community groups as appropriate
- Health promotion messaging as appropriate
- Dissemination of key information to professional audiences (e.g., letter to editor, short communication etc.)

Communications and alerts to general practitioners, laboratories, sexual health services, community organisations and the public will be considered. Communications will include messages around the need to collect and request specimens for culture, ToC, recommended management of gonorrhoea, STI screening and safe sex behaviours.

NSW Health

NSW GOVERNMENT

SHPN (CDB) 250308