Guidelines for the public health management of syphilis outbreaks in remote populations in Australia

Outbreak responses will be dictated by the constraints and opportunities within each jurisdiction. These recommendations aim to cover principles to ensure a comprehensive response. Experience has demonstrated that, unlike food-borne or respiratory disease outbreaks, a syphilis outbreak in remote Australia will require a community-wide approach and a sustained response lasting two or more years.¹

A significant syphilis outbreak is a complex social challenge. The ideal response will be multi-strategic, informed by local knowledge, and attentive to detail in its execution. It will be enhanced where positive relationships already exist between the stakeholders.

Syphilis Outbreak Response Framework

A Syphilis Outbreak Response is divided into 4 phases:

**Phase One:** Outbreak identification

**Phase Two:** Early Response (0 – 1 month)

**Phase Three:** On-going Response: Part 1: (1- 12 months); Part 2: (12+ months)

**Phase Four:** Outbreak reporting and response evaluation

Public health objectives and targets* for the outbreak response:

The aim of the response is to interrupt the further transmission of infectious syphilis and to prevent congenital syphilis.

The public health objectives are:

a) To achieve best practice management outcomes for cases of infectious syphilis:

Target: At least 80% of cases are investigated and treated within two weeks of diagnosis

Target: At least 80% symptomatic cases are examined, tested and treated for syphilis on first presentation

Target: At least 80% cases of infectious syphilis cases have repeat syphilis serology at 3-6 months post-treatment

b) To achieve best practice management outcomes for contacts of infectious syphilis:

Target: 80% of contacts of infectious syphilis cases are examined, tested and treated for syphilis on first presentation

Target: 80% of infectious syphilis cases have at least one named contact examined, tested and treated within two weeks of case treatment

Target: 80% of named contacts are examined, tested and treated for syphilis within one month of being named

c) To increase testing in the “at risk” population:

Target: 100% of antenatal women are tested at first antenatal visit and according to regional clinical guidelines throughout the pregnancy

*The targets are based on discussion with stakeholders and clinical experience
Target: 100% of those diagnosed with another STI (chlamydia, gonorrhoea) have a test for syphilis as part of the management of their infection

Approximately 80% of recent infectious syphilis outbreak cases in remote Aboriginal and Torres Strait Islander settings have been in young people under 25 years. Consideration should be given to testing the youth in the affected population for syphilis and the other common STI within 3 months of the start of the outbreak response.
Phase One: Outbreak Identification: Is There a Problem?

It is not possible to provide a specific definition of a syphilis outbreak that can be universally applied. A working definition is: a greater than expected number of infectious syphilis cases diagnosed over a short period within a defined region or sexual network. The cases may arise independent of each other or from a single contact tracing effort.

The relevant public health staff should alert their public health medical officer (PH MO) in the event of such an increase over the preceding 3 (up to 6) months.

The PH MO should investigate to determine whether the increase is real and whether there are increases in contiguous regions / jurisdictions. Please note that an increase in testing locally cannot explain away the finding of a cluster of cases of infectious syphilis given that syphilis is no longer an endemic condition in rural / remote populations in Australia.

The initial response requires an immediate re-prioritising of routine work and the allocation of existing staff and resources to address treatment and contact tracing. This situation occurs sporadically across remote Australia, and local services, working collaboratively with regional public health support and expertise, have been able to satisfactorily interrupt further transmission.

If this initial response fails to contain the incident, that is:

- new, un-linked cases continue to be diagnosed, the list of contacts who have not been evaluated increases
- a case of inadequately treated syphilis in pregnancy or congenital syphilis occurs, or
- existing resources are stretched

then a more comprehensive response is called for.

- The relevant PH MO should alert their manager, the Director of the Public Health Unit and their jurisdiction’s Director of Communicable Disease Control. A briefing should be prepared for the attention of the jurisdiction’s Executive Director of Public Health and/or Director General of Health, and the Communicable Diseases Network of Australia (CDNA).
- Each jurisdiction will decide when a briefing to the Minister for Health is appropriate. A briefing should be considered when there are many cases, the outbreak crosses jurisdictional boundaries or involves cases with HIV infection; if an intrauterine fetal death (IUFD) from syphilis occurs, or the outbreak has other features that would attract media attention.

In summary, outbreak identification is a process. Early identification requires:

- A vigilant public health surveillance system including enhanced surveillance for all infectious syphilis cases
- Familiarity with the usual regional epidemiology of syphilis
- Communication between relevant public health staff across jurisdictions
- Clear protocols within public health units for clinical and public health management of infectious syphilis cases.
## Phase Two: Early Response

Ideally, these tasks should be completed within the first month.

<table>
<thead>
<tr>
<th>Phase Two: 0 - 1 month</th>
<th>Timeframe</th>
<th>Issues to consider</th>
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</thead>
<tbody>
<tr>
<td>1. Public Health Medical Officer briefs their Manager, the Director of the Public Health Unit and their jurisdiction’s Senior Director of Communicable Disease</td>
<td></td>
<td>Governance of outbreak response (Refer issue A below)</td>
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<tr>
<td>2. Form an outbreak response team (or ORT) to lead the response</td>
<td>2 weeks</td>
<td>Baseline community, health service and outbreak needs assessment report (Refer issue B below)</td>
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<tr>
<td>3. Complete an epidemiological and social assessment of the initial cases</td>
<td>2 weeks</td>
<td>Communication with the affected population (Refer issue C below)</td>
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<tr>
<td>4. Communicate with the affected population and other relevant organisations in the region</td>
<td>2 weeks</td>
<td>Communication between public health and clinical staff and services (Refer issue D below)</td>
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<tr>
<td>5. Alert local health service providers (government and community-controlled) (by 2 weeks) and other regional health providers (by 4 weeks): general practitioners, hospital staff, visiting health services, health services in related regions where the affected population/s may travel</td>
<td>4 weeks</td>
<td>Cross-jurisdictional communications (Refer issue E below)</td>
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<tr>
<td>6. Liaise with relevant public health and primary health care staff across regions and jurisdictions</td>
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<td>Community communications and Media Management (Refer issue F below)</td>
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<tr>
<td>7. Manage media interest</td>
<td></td>
<td>Additional resources – Staffing (Refer issue G below)</td>
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<tr>
<td>8. Identify additional resources (human, financial)</td>
<td></td>
<td>Ensuring best practice sexual health services for the at-risk population in health centres in affected locations (Refer issue H below)</td>
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<tr>
<td>9. Review sexual health service delivery in health centres in affected locations to ensure:</td>
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<tr>
<td>a. A confidential service delivered by informed health care providers</td>
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<td>b. Prompt treatment of cases</td>
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<tr>
<td>c. Comprehensive contact tracing and timely contact evaluation and treatment</td>
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<tr>
<td>d. Increased syphilis screening in the at-risk population presenting to the health service</td>
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<tr>
<td>e. Adherence to syphilis screening guidelines in pregnancy and when another STI is diagnosed.</td>
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Issues to consider

A. Governance of outbreak response

It is essential that an executive position is given explicit responsibility for meeting strategy implementation targets. This responsibility should be accompanied by a set of accountabilities – with consequences for not progressing strategies in a timely manner. At the same time, the accountable party must have the authority to re-prioritize routine service activities in the region. Access to specialist public health and sexual health advice, and the ability to marshal resources to achieve outbreak response targets, are also required.

An outbreak response team (ORT) can improve control efforts by providing leadership, facilitating a co-ordinated, multiagency, partnership approach and giving a central focus to response activities. The partners would include the affected community, local / district health service/s (both government and community-controlled), and population health and sexual health experts. Ideally, each of these groups should be represented on the ORT.

The ORT should be appropriately skilled, authoritative and outcome oriented. It should be responsible for:

- Developing, implementing and evaluating strategies to control the outbreak
- Monitoring and reporting of the outbreak
- Communication with stakeholders and the media
- Attracting additional resources as needed

The agenda for the first ORT meeting should cover the items in the Phase Two: Early Response table. A standard agenda for subsequent ORT meetings should include:

- Updates on cases, contacts and their management, including feedback from other jurisdictions when appropriate
- A surveillance report on the outbreak and on syphilis serology testing in the affected population
- Report from senior public health officer (or other suitable officer) on progress in strategy implementation (including condom access) and problems arising
- Individual site reports (where relevant) including community liaison reporting - feedback from community
- Resource requirements: additional staff, funding for community screens

B. Baseline community, health service and outbreak needs assessment report

An informed epidemiological and social assessment of the initial cases is needed: the context within which the cases live, the sub-populations most at-risk, the services they can access including local sexual health service capacity and the initial additional resources likely to be required. The report of this assessment should be provided to the first ORT meeting in order to inform intervention development.

C. Communication with the affected population

Early face-to-face meetings with local community (and health service leaders) to begin a dialogue, are required. These meetings have the following objectives: to inform and educate community (and health staff); to establish a trusting basis for on-going dialogue; and to seek advice and support for proposed control strategies. A one-on-one relationship between a community representative who supports outbreak control and a suitable person nominated by the ORT, would facilitate on-going communication.

Communication with Aboriginal and Torres Strait Islander people about STI in their communities is always sensitive. Communities care about their health and about the health of unborn children, but the “shame” attached to this issue can overwhelm these sentiments and elicit a negative response.
Community leaders are necessary partners in addressing a syphilis outbreak. Their co-operation and support is critical to effective intervention. This situation calls for frank explanation and discussion. If the issue is ignored and allowed to fester, the impacts on those affected, and on babies infected in utero, will be felt for years to come. Addressing the situation involves discussion about how to achieve “best practice” in this setting. Sometimes, the most significant barriers to implementing appropriate interventions come not from affected communities but from health staff who, for a variety of reasons, feel challenged by the outbreak, and obstruct “best practice” with arguments about “community” or “cultural” acceptability. These arguments must be overcome.

Engaging early with the state-based peak Aboriginal and Torres Strait Islander community-controlled health organisations should also be considered, as their Board members are usually representative of a broad cross-section of the Indigenous communities in their jurisdiction. This may be particularly useful in opening up communication with difficult-to-reach communities without a community-controlled health service.

D. Communication between public health and clinical staff and services

Periodic communication between neighbouring clinical and public health services (both within and across jurisdictions) is important to quell rumours and enable remote staff to maintain clinical vigilance for their service populations. In addition to clinical communications about the follow up of individuals affected by the outbreak, neighbouring or related health services need updates about the size of the outbreak and where the majority of cases have arisen and/or been diagnosed.

E. Cross-jurisdictional communications

Cross-jurisdictional communication should occur at a number of levels where the affected population spans more than one jurisdiction:

At Public Health Unit level

Cross-jurisdictional communication at this level is a permanent feature of effective syphilis surveillance across Australia. Usually, it occurs by telephone and email as needed. In an outbreak, more frequent communications should be scheduled between the PHNs and PH MOs responsible for syphilis outbreak control. Minutes of these meetings should be tabled at the ORT meeting.

At ORT level

A representative from the affected jurisdictions should sit on (or regularly attend and be briefed by) the ORT of the other jurisdictions involved, so that up-to-date outbreak status information can be readily shared and strategy co-ordination across jurisdictions is made possible.

The ORT should provide timely updates to CDNA.

F. Community communications and media management

The occurrence of a syphilis outbreak is distressing for the individuals affected and for their communities. As noted above, the burden of STIs is in itself a sensitive issue for remote populations who frequently feel judged and at the same time powerless to change the situation.

In the event of a significant syphilis outbreak, both on-going dialogue with community leaders and a community level information campaign is needed to facilitate community co-operation and engagement in the necessary interventions. Communication should focus on the risk of syphilis to individuals and communities, the importance of getting tested, how to keep safe; and the effectiveness of treatment, especially to prevent pregnancy loss and damaged babies.

On the other hand, mainstream publicity about the syphilis outbreak occurring in identifiable Aboriginal and/or Torres Strait Islander communities e.g. regional town newspaper article, is another matter. It carries a significant risk for negative discrimination and will elicit a defensive, counterproductive response from the affected communities.

Hence, responses to mainstream media inquiries must be approached with great care. The language used should be matter-of-fact and the characterisation of the outbreak should not identify locations or particular
populations (e.g. Indigenous) but should be framed in terms of risky behaviours, the importance of safe sex, the value of testing and the curable nature of the condition. Positive pre-existing relationships with a local journalist are always helpful.

Jurisdiction level approval processes for mainstream media messages and press releases should be followed.

G. Additional resources - Staffing

In large outbreaks, a number of locations and regions would be involved and the response will be on-going. In this case, additional staff are likely to be needed for an extended period.

- Skilled sexual health nursing and Indigenous health worker staff
- A senior sexual health promotion officer
- A senior public health officer to lead the on-going implementation of strategies and support outbreak staff. This position would be the link between the ORT and operational staff.

H. Ensuring best practice sexual health services for the at-risk population in health centres in affected locations

Effective, timely case management and contact tracing lie at the heart of controlling an outbreak of syphilis, and these, in turn, rest on sexual health service quality.

- Immediately offer sexual health/public health outreach assistance to the affected health service/s to assist in a review of work practices and information systems supporting sexual health care.
  - What clinical decision support is available?
  - Are data systems in place to support STI clinical management and contact tracing?
  - What STI testing takes place?
- If appropriate on the basis of the findings, offer early assistance to help manage the clinical caseload and address gaps in the service based systems that support sexual health care.
- Support local health service management to organise the delivery (as soon as possible) of a mandatory sexual health skills development package for local staff with review embedded in performance management plans for health workers, nurses and medical officers. The package should focus on confidentiality, respectful communication with patients, increasing testing in at-risk populations, timely treatment of cases and follow up of contacts.
- Inform and engage visiting care providers. This may include a personal letter conveying information about the outbreak, the importance of testing those at-risk and information about syphilis management. Assist these care providers with data feedback on their syphilis testing practices and engage with them to address barriers to increasing syphilis testing.
- Closely monitor testing coverage among local youth, in pregnancy and when another STI is diagnosed, and investigate, if testing fails to increase and health staff insist that young people refuse testing.
- Consider the appointment of a sexual health portfolio holder within the primary care service to oversee STI data systems and to monitor progress against targets.
- Provide feedback to staff on progress in achieving clinical targets.
## Phase Three: On-Going Response

### Part 1: 1 - 12 months

<table>
<thead>
<tr>
<th>Communications</th>
<th>Issues to consider</th>
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<tbody>
<tr>
<td>1. Continue periodic minuted ORT meetings</td>
<td>refer issue A above</td>
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<tr>
<td>2. Establish on-going communication with community leaders of affected population/s</td>
<td>refer issue C above</td>
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<tr>
<td>3. Establish periodic communication with local and regional health care providers and stakeholders – syphilis factsheet and quarterly outbreak update</td>
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<tr>
<td>4. Establish periodic cross-jurisdictional PHU teleconference (if other jurisdictions are likely to be affected)</td>
<td>refer issue E above</td>
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<tr>
<td>5. Seek additional expert advice:</td>
<td>Expert advice for the ORT (refer issue I below)</td>
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<tr>
<td>- Convene a meeting with national Aboriginal and Torres Strait Islander sexual health experts</td>
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<tr>
<td>- Liaise with state-based peak Indigenous community-controlled health organisations re engaging community and utilizing their public health physician capacity and expertise</td>
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### Build clinical sexual health service capacity

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<tr>
<td>6. Implement on-going sexual health skills workforce development (face-to-face and/or video-conference) for primary care staff in affected regions</td>
<td>Refer issue H above</td>
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<tr>
<td>7. Ensure adequate STI data systems that facilitate clinical management and contact tracing, are in place in each primary care location</td>
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<tr>
<td>8. Establish at least one point of reliable condom access 24/7 in each remote location</td>
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### Additional strategies to Increase syphilis testing in at-risk population/s

<table>
<thead>
<tr>
<th></th>
<th>Additional strategies to increase syphilis serology screening in at-risk populations (Refer issue J below)</th>
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<tbody>
<tr>
<td>9. To increase testing in the at-risk population, implement complementary STI (including syphilis) testing strategies that:</td>
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<tr>
<td>a. Have community support</td>
<td></td>
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<td>b. Include an evaluation plan</td>
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<tr>
<td>c. Are based on an understanding of the epidemiology of the outbreak and</td>
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<tr>
<td>d. Where possible, co-ordinate strategy implementation for related communities within and across jurisdictions</td>
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### Sexual health promotion

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<thead>
<tr>
<th></th>
<th>Sexual Health Promotion (Refer issue K below)</th>
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<tbody>
<tr>
<td>10. Develop sexual health communications to support the outbreak response.</td>
<td></td>
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<tr>
<td>Main messages: Communicate the Risk, Get Tested, Keep Safe (fewer partners, use condoms)</td>
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<tr>
<td>11. Develop strategies to disseminate these messages widely in affected populations, possibly in schools and among at-risk groups</td>
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### Data

12. Report the following data for each ORT meeting:

- Management outcomes for infectious syphilis cases and contacts
- Number of new syphilis cases and their connections to known cases, review “outstanding contacts” list and review evaluated contacts’ findings
- If the outbreak is of a manageable size, map cases and contacts and their connections
- Cumulative epidemiological report on outbreak numbers (cases by stage of disease) over time (and by location if multi-focal)
- Syphilis serology test numbers by age group, gender and location
- Syphilis screening guideline adherence (in pregnancy and when another STI is diagnosed) by location

### Part 2: 12+ months

13. Continue 0-12 month activities as outlined above

14. Consider the need for research: Outbreak persistence may indicate the need for new interventions informed by the findings of behavioural and social research on cases and their transmission context e.g. transactional sex among young adolescents

15. Continue to build clinical sexual health service capacity and sexual health promotion capacity including:

- Embedded school based age-appropriate, continuous, curriculum-based sexuality and reproductive health education from year 5 to 10
- Sexual health promotion including community engagement strategies, sexual health communications initiatives, events-based sexual health promotion and consistent condom access.

### Issues to Consider

**I. Expert advice for the ORT**

With respect to the health issue: expertise in population health and sexual health communications, STI epidemiology, remote Aboriginal and Torres Strait Islander primary health care and local health systems, are required.

With respect to the social and demographic context, local knowledge will be critical: an understanding of local sensitivities, local history and the relationships between the Aboriginal and Torres Strait Islander community and the health service.

Access to key individuals from community who are prepared to work with the ORT to negotiate with community how to achieve the outcomes required for an effective response, is needed.

**J. Additional strategies to increase syphilis serology screening in at-risk populations**

In addition to high quality case management and contact tracing, syphilis screening in at-risk populations is a core intervention in the event of an outbreak. Syphilis screening strategies should focus on:
• Adherence to existing guidelines for syphilis screening (in pregnancy and when another STI is diagnosed)

• Increasing syphilis screening in the at-risk population (likely to be youth <30 years) – both opportunistically when they visit the health service and in-community, through out-reach programs to achieve high coverage

• If the outbreak continues with on-going transmission evident in particular locations or networks, then social and behavioural research of cases and the context of transmission may be necessary in order to develop specific interventions to encourage screening for these core-transmitting groups.

In smaller more remote locations, additional syphilis screening strategies may take the form of age group targeted whole of community screening. If this community screening achieves satisfactory participation but the outbreak continues, consider repeating the screen. At-risk individuals in the affected communities will benefit from syphilis testing at a frequency that reflects their risk – more often than annually. Communities are often highly mobile and the resident at-risk population may shift significantly within a six-month period. Furthermore, repeat screens that achieve 70+% participation of the target population resident at the time of the screen may provide useful epidemiological data on the status of the outbreak. It is important to note that the population targeted for STI testing (including syphilis) in a community screen is defined by membership of a high-risk group (young people living in particular locations). In order to exclude a reservoir of infection, the target population for STI screening may include children aged 12-14 years. Performing STI tests for this age group in this context does not constitute grounds for notification to child protection authorities as the tests are provided on public health grounds with no knowledge of an individual’s sexual activity. If the child returns a positive test for an STI, then jurisdiction-level child protection protocols would be followed.

In larger population centres, strategies to increase syphilis serology screening in young people attending primary care and sometimes, emergency departments of public hospitals, are utilised.

K. Sexual Health Promotion

The term sexual health promotion covers a broad range of activities that are best conceptualised using the Ottawa Health Charter Framework. This approach emphasizes working with communities to improve the conditions that determine sexual risk for youth, and it includes: reorienting health services, community engagement strategies, population-wide sexual health communications, school-based sexuality and relationships education, and improvements in condom access. Building this broad sexual health promotion capacity will be critical for sustainable and continuing improvements in sexual health outcomes.

However, in the context of a syphilis outbreak, the immediate sexual health promotion priorities will be to implement effective youth screening recruitment strategies, to develop relationships that facilitate constructive community dialogue, to establish consistent condom availability, and sexual health communications. The latter is of the highest priority with the main messages being:

• Communicate the risk

• Get tested, and keep safe
### Phase Four: Outbreak Reporting and Response Evaluation

<table>
<thead>
<tr>
<th>Phase Four: reporting and evaluation</th>
<th>Issues to consider</th>
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<tbody>
<tr>
<td>16. Decide when the outbreak is over:</td>
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<tr>
<td>- No strict criteria exist. Ideally, the number of new infectious cases reduces to pre-outbreak levels while at the same time the at-risk population testing coverage is high</td>
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<tr>
<td>- Unfortunately, it may be that notifications reduce but only to a level that is higher than before the outbreak (indicating low level endemicity)</td>
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<tr>
<td>- For the outbreak to be declared over, the caseload must be within a range that can be managed within permanently available sexual health resources.</td>
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<tr>
<td>17. Develop a report that describes the epidemiology of the syphilis outbreak and the outbreak response</td>
<td>Outbreak evaluation(refer issue L below)</td>
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<tr>
<td>18. Evaluate the outbreak response</td>
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<tr>
<td>- Both process and outcome measures should be used in the evaluation</td>
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<tr>
<td>- An outbreak evaluation report should be produced and disseminated so that lessons can be learned and these guidelines refined.</td>
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### Issues to consider

**L. Outbreak evaluation**

Process measures will depend on the interventions employed and may include:

- Timeliness of outbreak identification and response development
- Satisfaction of community and other partners
- Condom access measures
- Assessment of testing coverage of specific at-risk populations, in pregnancy, and for those diagnosed with another STI, against targets (see Public Health Objectives and Targets for the Outbreak Response)
- Assessment of management outcomes for cases and contacts against targets (see Public Health Objectives and Targets for the Outbreak Response)
- Measures arising from specific interventions e.g. coverage of target population in community screens
- Measures arising from sexual health promotion interventions

The primary outcome measure is the reduction in the number of cases of infectious syphilis diagnosed.
References


7. The Ottawa Charter for health promotion. The first international conference on health promotion, November 1986. Available at: [checked Feb 3, 2015]

   http://www.who.int/healthpromotion/conferences/previous/ottawa/en/index1.html