

Appendix 4. 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, timelines are suggested as a guide only and may not be applicable to all situation:

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

Considerations on the [role of Syphilis Point of Care Testing \(POCT\)](#) in outbreak response

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 increase testing in the “at risk” population:

Target: 100% of pregnant women are tested at first antenatal visit and thereafter according to regional clinical guidelines

Target: 100% of people diagnosed with chlamydia, gonorrhoea or HIV have a test for syphilis as part of the management of their infection

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

Target: At least 80% of cases are treated and undergo public health investigation within two weeks of diagnosis

Target: At least 80% symptomatic cases are 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

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

Target: 80% of named contacts are examined, tested and treated for syphilis at their first presentation to a health service

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

*The targets are based on discussion with stakeholders and clinical experience.

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.^{2,3} 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.

Phase Two: 0 - 1 month	Timeframe	Issues to consider
1. Public Health Medical Officer briefs their Manager, the Director of the Public Health Unit and their jurisdiction's Senior Director of Communicable Disease		
2. Form an outbreak response team (or ORT) to lead the response	2 weeks	Governance of outbreak response (Refer issue A below)
3. Complete an epidemiological and social assessment of the initial cases	2 weeks	Baseline community, health service and outbreak needs assessment report (Refer issue B below)
4. Communicate with the affected population and other relevant organisations in the region	2 weeks	Communication with the affected population (Refer issue C below)
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	4 weeks	Communication between public health and clinical staff and services (Refer issue D below)
6. Liaise with relevant public health and primary health care staff across regions and jurisdictions		Cross-jurisdictional communications (Refer issue E below)
7. Manage media interest		Community communications and Media Management (Refer issue F below)
8. Identify additional resources (human, financial)		Additional resources – Staffing (Refer issue G below)
9. Review sexual health service delivery in health centres in affected locations to ensure: <ul style="list-style-type: none"> a. A confidential service delivered by informed health care providers b. Prompt treatment of cases c. Comprehensive contact tracing and timely contact evaluation and treatment d. Increased syphilis screening in the at-risk population presenting to the health service e. Adherence to syphilis screening guidelines in pregnancy and when another STI is diagnosed. 		Ensuring best practice sexual health services for the at-risk population in health centres in affected locations (Refer issue H below)

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.³ 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 needed⁴: 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 population²

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. Alternatively for large scale outbreaks a dedicated multi-jurisdictional team may be set up to share data and coordinate the response.

The ORT or multi-jurisdictional team 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.
 - o What clinical decision support is available?
 - o Are data systems in place to support STI clinical management and contact tracing?
 - o 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	Issues to consider
Communications	
1. Continue periodic minuted ORT meetings	refer issue A above
2. Establish on-going communication with community leaders of affected population/s	refer issue C above
3. Establish periodic communication with local and regional health care providers and stakeholders – syphilis factsheet and quarterly outbreak update	
4. Establish periodic cross-jurisdictional PHU teleconference (if other jurisdictions are likely to be affected)	refer issue E above
5. Seek additional expert advice: <ul style="list-style-type: none"> • Convene a meeting with national Aboriginal and Torres Strait Islander sexual health experts • Liaise with state-based peak Indigenous community-controlled health organisations re engaging community and utilizing their public health physician capacity and expertise 	Expert advice for the ORT (refer issue I below)
Build clinical sexual health service capacity	
6. Implement on-going sexual health skills workforce development (face-to-face and/or video-conference) for primary care staff in affected regions	Refer issue H above
7. Ensure adequate STI data systems that facilitate clinical management and contact tracing, are in place in each primary care location	
8. Establish at least one point of reliable condom access 24/7 in each remote location	
Additional strategies to Increase syphilis testing in at-risk population/s	
9. To increase testing in the at-risk population, implement complementary STI (including syphilis) testing strategies that: <ol style="list-style-type: none"> a. Have community support b. Include an evaluation plan c. Are based on an understanding of the epidemiology of the outbreak and d. Where possible, co-ordinate strategy implementation for related communities within and across jurisdictions 	Additional strategies to increase syphilis serology screening in at-risk populations (Refer issue J below)
Sexual health promotion	
10. Develop sexual health communications to support the outbreak response. Main messages: Communicate the Risk, Get Tested, Keep Safe (fewer partners, use condoms)	Sexual Health Promotion (Refer issue K below)
11. Develop strategies to disseminate these messages widely in affected populations, possibly in schools and among at-risk groups	

Data	
<p>12. Report the following data for each ORT meeting:</p> <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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.^{2,4,5,6} 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 outreach 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.⁷ 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

Phase Four: reporting and evaluation	Issues to consider
<p>16. Decide when the outbreak is over:</p> <ul style="list-style-type: none"> 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 Unfortunately, it may be that notifications reduce but only to a level that is higher than before the outbreak (indicating low level endemicity) For the outbreak to be declared over, the caseload must be within a range that can be managed within permanently available sexual health resources. 	
<p>17. Develop a report that describes the epidemiology of the syphilis outbreak and the outbreak response</p>	
<p>18. Evaluate the outbreak response</p> <ul style="list-style-type: none"> Both process and outcome measures should be used in the evaluation An outbreak evaluation report should be produced and disseminated so that lessons can be learned and these guidelines refined. 	<p>Outbreak evaluation(refer issue L below)</p>

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

Considerations on the role of Syphilis Point of Care Testing (POCT) in outbreak response¹

The use of POC testing in outbreak contexts needs to be carefully considered by the ORT (refer to Issue A: Outbreak Governance) and, if utilised, integrated within the broader outbreak response as an additional tool and not a substitute for best-practice serology-based testing (please check [limitation to the use of syphilis POCT](#)). The World Health Organization⁸ recommends that existing serology testing should be maintained and improved. Any increase in use of syphilis POCT should only be in specific contexts where it can be implemented with appropriate training and quality assurance and where the value compared with serology has been fully considered.

There is currently only one syphilis point of care test registered by the Therapeutic Goods Administration in Australia, the Determine Syphilis TP™ manufactured by Alere, now Abbott. The Determine Syphilis TP™ is a treponemal specific immunochromatographic test. Based on an independent laboratory based evaluation of 4 Syphilis POCTs the Determine Syphilis TP™ was the most sensitive at 97%, other tests ranged from 86-92%. Specificity was lower for Determine Syphilis TP™ (96.4%) than 2 other options tested but was similar for all tests (92-98%)⁹. Based on this, expert analysis has recommended that Determine Syphilis TP™ has a sensitivity deemed sufficient to be useful in community screening.

Generally, it is preferable not to use syphilis POCTs as stand-alone tests because of:

- their inability to differentiate new infection from previously treated infections;
- marginally inferior sensitivity and specificity compared with serology;
- no recognition of POCT in infectious syphilis national case definition (refer to Issue M);
- lack of a centralised mechanism to record POCT results; these are only recorded in individual patient records.

However, in an outbreak affected area, a positive POCT result can be used to reduce time to initiating treatment and contact tracing, minimise lost to follow-up, reduce follow-up burdens placed on primary care services and provide access to testing for those unwilling or unable to have venepuncture performed.

Syphilis POCT should be considered in an outbreak affected areas, for:

- Individuals for whom POCTs would facilitate greater access to testing in the community (e.g. people who do not engage with the health service regularly, etc.)
- Community-based screening and outreach settings
- Individuals for whom there is a high likelihood of being lost to follow-up on return of positive serology result (e.g. prison screening with early release, highly mobile people attending health services).
- Individuals attending health services where:
 1. There is a long wait for pathology results or
 2. People are unable or reluctant to have a venous blood sample for syphilis serology at the time of consult.

Immediate treatment and contact tracing should be performed after reactive POCT where a patient:

- has a known previous negative syphilis result OR
- has no known history of past syphilis infection AND
- belongs to a predefined at-risk group, if so indicated by local seroprevalence data (e.g. age-range, geographic location, etc.)

¹ These recommendations were developed in 2018 based on the work of the Syphilis POCT Working Group established by the Syphilis Enhanced Response Governance Group of the Australian Health Protection Principal Committee (AHPPC). The full set of recommendations, reported as 6 core areas, can be obtained directly from AHPPC.

Issues to consider

M. Reactive POCT results do not meet the laboratory or public health case definition

The current Communicable Diseases Network Australia (CDNA) and Public Health Laboratory network (PHLN) case definitions for syphilis classification do not include the use of syphilis POCT outside laboratories. Under the current CDNA surveillance case definition, serological confirmation is required, therefore a reactive POCT is not nationally notifiable.

Where it is not possible to confirm with serology in some settings, under the current conditions, reactive syphilis POCTs might not be notified unless additional arrangements are developed. Cross-reference with local jurisdictional guidelines on notification of results is recommended. This is a similar situation to HIV POCTs, where a reactive HIV POCT test is considered preliminary until confirmed by reference laboratory tests. Health services conducting syphilis POC testing should ensure any reactive syphilis test have parallel laboratory serology (see below), and HIV testing is recommended according to guidelines in this situation.

N. Importance of other STI testing, including serology

If an individual has had a previously treated syphilis infection, a positive POCT merely indicates the presence of treponemal antibodies, which usually persist for life; hence a POCT cannot distinguish between a reinfection and a past infection.

- It is recommended to perform parallel laboratory serology for all POCT tests where this does not impact on syphilis test uptake.
- Parallel testing should occur for all reactive syphilis POCTs.
- Consideration should be given to including chlamydia and gonorrhoea NAAT testing where the local health service is able to manage follow-up and facilities to collect urine or swabs are available.
- It is recommended to offer a full STI screening, including HIV serology, where venepuncture is being performed, and should also be performed for reactive POCT results.

O. POCT during pregnancy

Ideally pregnant women should receive comprehensive health care, which includes syphilis serology, however if the woman meets criteria for syphilis POCT as outlined above (concern about loss to follow-up post diagnosis, or engagement with care) then performance of syphilis POCT is better than not being tested at all.

P. Staffing models, training and quality assurance of sites using syphilis POCT

In addition to the considerations outlined previously on this Appendix (refer to Issue G – Additional Resources: Staffing), in the context of the implementation of syphilis POCT tailor staffing models to local context. It is recommended to use cultural brokers, health promotion and clinical staff familiar with local community, ideally peer-led. There is likely to be greater success where staff with a specialty portfolio is responsible for performing tests and responding to results. Consideration also needs to be given to staffing of syphilis surveillance services and/or registers if there is an expected significant increase in notifications from a 'surge' response. Regular engagement, training and feedback to staff and services is essential.¹⁰

POCT for syphilis should only be performed by health professionals who have undergone initial training and competency certification, and who participate in regular recertification. Quality management (Quality Control and/or External Quality Assurance) should be mandatory components of a quality system. All sites participating in POCT should be provided with a simple training resource package including a step-by-step guide for testing, troubleshooting support and risk management strategies. Consistent with routine procurement and stock management processes at the health services, the expiry dates of kits should be monitored, and regular stocktake of kit levels performed to ensure that stock outages do not lead to testing failures¹¹. There should be flexible options for delivery of training (but with at least one operator from each site undergoing face-to-face training).

Q. Recording and reporting of POCT results

It is essential to document syphilis POCT results within clinical record systems, including reactive, non-reactive, or invalid. Development of standardised and consistent surveillance and monitoring systems within the outbreak region is also recommended. Issues such as integration in existing syphilis registries, the need for parallel laboratory serology for reactive POCT results (since they do not meet case definition, see Issue M above), and reporting non-reactive results to a centralised repository, need all to be carefully considered by the ORT and jurisdictional surveillance units.

R. Monitoring and evaluation of the use of syphilis POCT in outbreak contexts

In addition to the general recommendations on outbreak evaluation (see Issue L. – Outbreak evaluation) in areas where community-based syphilis POCT is undertaken, it is recommended that additional monitoring systems are developed. It is important to balance monitoring needs with on-the-ground clinical capacity if new systems need to be introduced.

References

1. **Annan T, Hughes G, Evans B, Simms I, Ison C, Bracebridge S et al.** Guidance for managing STI outbreaks and Incidents. Health Protection Agency. 2010. Available at: [last checked Feb 3, 2015] www.gov.uk/government/publications/sexually-transmitted-infections-stis-managing-outbreaks
2. **Finelli L, Levine WC, Valentine J, St Louis ME.** Syphilis Outbreak Assessment. *Sexually Transmitted Diseases* 2001; 28:131-35.
3. **Simms I, Bell G and Hughes G.** Infectious syphilis in young heterosexuals: responding to an evolving epidemic (editorial) *Int J STD AIDS* 2011; 22: 487-82.
4. **Patrick DM, Rekart ML, Jolly A, Mak S, Tyndall M, Maginley J, Wong E, Wong T, Jones H, Montgomery C and Brunham RC.** Heterosexual outbreak of infectious syphilis: epidemiological and ethnographic analysis and implications for control. *Sex. Transm. Infect.* 2002; 78 (Suppl 1):164-69.
5. Centers for Disease Control and Prevention. Syphilis outbreak among American Indians – Arizona, 2007-2009. *MMWR* 2010; 59:158-61.
6. **Chen JL, Kodagoda D, Lawrence AM and Kerndt PR.** Rapid public health interventions in response to an outbreak of syphilis in Los Angeles. *Sexually Transmitted Diseases* 2002; 29: 277-84.
7. The [Ottawa Charter](#) for health promotion. The first international conference on health promotion, November 1986. Available at: [checked Feb 3, 2015]. www.who.int/healthpromotion/conferences/previous/ottawa/en/index1.html
8. World Health Organization 2006, The use of [rapid syphilis tests](#). apps.who.int/iris/bitstream/10665/43590/1/TDR_SDI_06.1_eng.pdf
9. **Causer LM, Kaldor JM, Conway DP, Leslie DE, Denham I, Karapanagiotidis T, et al.** (2015). An evaluation of a novel dual treponemal/nontreponemal point-of-care test for syphilis as a tool to distinguish active from past treated infection. *Clin Infect Dis*, 61(2), 184-191.
10. **Swartzendruber A, Steiner RJ, Adler MR, Kamb ML, Newman LM.** 2015. Introduction of rapid syphilis testing in antenatal care: a systematic review of the impact on HIV and syphilis testing uptake and coverage. *Int J Gynaecol Obstet* 130 Suppl 1: S15-S21. doi: 10.1016/j.ijgo.2015.04.008
11. **Smith A, Sabido M, Camey E, Batres A, Casabona J.** 2015. Lessons learned from integrating simultaneous triple point-of-care screening for syphilis, hepatitis B, and HIV in prenatal services through rural outreach teams in Guatemala. *Int J Gynaecol Obstet.* Jun;130 Suppl 1:S70-2. doi: 10.1016/j.ijgo.2015.04.009.