



Benefits and barriers to integration of chlamydia and gonorrhoea point-of-care testing into remote communities.

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Background

- High prevalence of chlamydia (9%) and gonorrhoea (7%) in remote communities
- Patients with symptoms treated presumptively ('syndromic management')
- Asymptomatic patients have specimens sent to laboratory
- Treatment delays common (3 weeks- asymptomatic) and up to 25% remain untreated

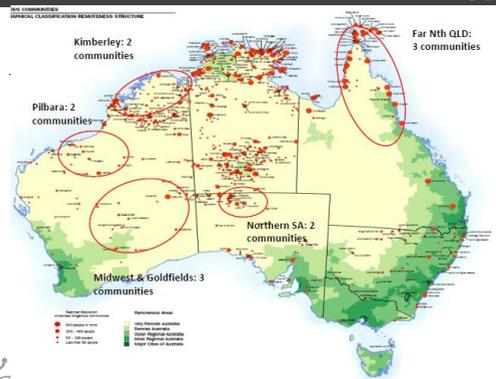


Remote communities may be 1000's kms from laboratory services



Background (ii)

- Rapid portable diagnostics - such as the GeneXpert (Cepheid)- are now available; suited to use at the point-of-care; could improve STI control (Peeling, STI, 2011)
- Until now, POCT for chlamydia/gonorrhoea not implemented in Australia
- TTANGO (Test, Treat ANd GO): randomised controlled trial of the GeneXpert in remote Australian communities 2013-15
 - impact
 - acceptability (patients, nurses/health workers, stakeholders)
 - cost (Guy, BMC Inf. Dis, 2013)
- We assessed barriers and benefits to STI POC testing among **stakeholders**, to inform trial implementation and future scale up



Methods

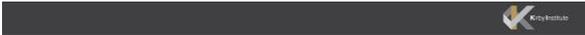
- In depth interviews
- Purposive sampling to point of data saturation
- Professional backgrounds: nurse; doctor; microbiologist; academic; policy; public health practitioner
- Participants from 5 or the 8 states and territories
- Current or previous experience in remote communities
- Telephone/ Skype/ Face to face; 30 – 75 mins duration
- 8 females / 10 males, average age 49 yrs
- Content/thematic analysis



Potential benefits

Individual	<ul style="list-style-type: none"> • ↓ time to Rx, ↓ risk complications • ↑ targeted prescribing • ↑ satisfaction, ↓ anxiety, ↓ stigma • potential for health education
Health service	<ul style="list-style-type: none"> • ↑ efficiencies, potential savings • ↑ profile STIs, ↑ testing • strengthening of local data • ↓ hospital admissions
Public health	<ul style="list-style-type: none"> • ↓ period of infectiousness • ↓ prevalence pool • ↓ over-prescribing & antibiotic resistance • ↑ acceptability, ↑ testing coverage





- Individual benefits**
- ↓ time to Rx, ↓ risk complications
 - ↑ targeted prescribing
 - ↑ satisfaction, ↓ anxiety, ↓ stigma
 - potential for health education

[I]f you're talking about getting the result back in a week or two ...often people would have moved elsewhere and then trying to do the contact tracing, their partner may have moved elsewhere...it [POC testing] would be a huge benefit- reducing your time to treating both (#15).

[I]t allows you to move from a syndromic approach... treating someone just because they're a contact or because they've got symptoms, to treating them based on whether they have been diagnosed formally or not (#17).



- Health Service benefits**
- ↑ efficiencies, potential savings
 - ↓ hospital admissions
 - ↑ profile STIs, ↑ testing
 - strengthening of local data

[C]ommunicating results to patients... If you can do it on the same day ... there's less work to be done in either ringing people, chasing people, bringing people back for review... it would reduce that work quite substantially (# 6).

[I]n a place where... screening isn't happening consistently then I think it would be ... great value ... particularly in remote settings ... I think a test like that would actually increase their [nurses] confidence around some management issues ... increase their interest if you like (# 15).



- Public Health benefits**
- ↓ period of infectiousness
 - ↓ prevalence pool
 - ↓ over-prescribing & antibiotic resistance
 - ↑ acceptability, ↑ testing coverage

It's always been the challenge-breaking the cycle of infection... you need to be able to test and treat people in a short time period ... and contact tracing...[I]f you waited for people's results for 2 weeks ... people can be a long way away from where they have the test, and if someone has an infection, this is a huge challenge (#9).

[I]n remote areas, if you do the test and it's just chlamydia, then you can spare anything that might be driving gonococcal resistance... You don't have to treat them with the penicillin or ceftriaxone... that's actually very useful - rather than having to give everybody everything for everything (# 2).



Potential barriers



Availability of a suitable test

So how big is that machine? Are you able to transport that machine in my car? ... [O]ften I'm driving in very hot weather... I might drive four hours in the sun to get somewhere to test some people...[I]s the machine able to come with me? ... And if it is, does driving on rough roads have an effect on the machine? ... And then I just need to be somewhere where I can get power presumably (#10).



Regulatory approval and accreditation

RCPA is the College of Pathologists, they are the clinical experts in pathology- give out the 'gold stars'. NATA [National Assoc. of testing Authorities Australia] is the one that goes and applies the standard and the standard is set by NPAAC [National Pathology Accreditation Advisory Council] and the standard needs to be met in order to get Medicare reimbursement (#5).





Financing

So, how its costed and...who's going to pay for this? And it you really want to ramp up testing, age appropriate testing...within a...population level approach to chlamydia and gonorrhoea...that could unfold into a lot of cost onto states and territories, and we have to then ask ourselves, well what do we stop doing? (#3)



Community and health service acceptability

I think some young people may actually feel a bit worried about getting an immediate diagnosis...we know that young people can sort of feel a bit concerned and in some ways, they don't want to know just yet' (#7).

Well you have to sell it to them. And that's not going to be ... easy. I mean even selling screening to staff is not that easy when they have a million other things to do... Let alone the acute stuff that comes to them... and then we're saying to them 'and now you need to go and run this through a machine' (#2).



Adapting clinical practice

[I]f we're not using a POC test, then we go, "Your test is positive ... here's what you've got to do, let's help you ..." and sometimes that decision to tell the partner takes a long time. How is that going to work if you've got a positive test, you and me behind closed doors and your partner's sitting outside?... There could be violence that comes from partners being told right there and then (#10).

Natoli L, et al. (2014) **Point-of-Care Testing for Chlamydia and Gonorrhoea: Implications for Clinical Practice.** PLoS ONE



Training

People may or may not have participated in health worker training at a Cert 3/Cert 4 level, and there are some health workers who've got degrees...so its immensely diverse. And how you train to that and train appropriately and keep that current is important and vital (Participant #3).



Quality management

I'd want to know that there's something in place to make sure that the devices are well looked after, well maintained and able to perform properly (#5).

If it's a PCR based machine, that's a serious issue. You end up with a community where everyone's getting positive results when it's only one person... that message would get around quickly and that would be a disaster (#9).



Ensuring completeness of surveillance information

At the moment we have automatic laboratory notification that goes to the Health Department, so it doesn't rely on the clinician filling out a notifiable disease form... If you run a [point-of-care test] system in a clinic and they're not very good at following up on their notifications then you're going to lose that data and I think the Health Department would not be very happy (#17).





Conclusions

- Participants acknowledged that suitable tests could have great individual, health service & public health benefits
- Identified barriers could be overcome by:
 - Quality management frameworks
 - Clinical protocols
 - Appropriate training and support
 - Enhanced surveillance strategies



Collaborator acknowledgement

- Participating health services
- Departments of Health WA, QLD, SA
- West Australian Country Health Service
- PathWest
- Western Diagnostics Pathology
- Clinipath
- Pathology Queensland
- Aboriginal Health Council of Western Australia
- Queensland Aboriginal and Islander Health Council
- Aboriginal Health Council of South Australia
- Kirby Institute, UNSW
- Baker IDI
- Apunipima Cape York Health Council
- Ngaanyatjarra Health Service
- Burnet Institute
- Royal Women's Hospital, Melbourne
- QLD Paediatric Infectious Disease Laboratory
- Flinders University
- University of Melbourne
- National Reference Laboratory
- Cepheid



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Thank you

