The Australian Chlamydia Control Effectiveness Pilot – preliminary findings

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Why the need for ACCEPt?

- Jury is out about whether chlamydia screening is effective and value for money [1-3]
- Australia already does over 1 million chlamydia tests annually through Medicare
- ACCEPt represents the last opportunity to answer the question of whether annual chlamydia testing can reduce the burden of chlamydia and whether it is cost-effective

3. BMJ. 2010 Apr 8;340:c1642.
Aim

- To assess the feasibility, acceptability, efficacy and cost-effectiveness of chlamydia testing in the general practice setting

- *Does annual chlamydia testing reduce the burden of infection in the population and if so, what is the best program for Australia?***
Study design

- Cluster randomised controlled trial
- Unit of randomisation = geographical area (rural town)
- All general practice clinics and Aboriginal Medical Services in each area invited to participate in the trial
- Up to 4 year intervention period
- A subset of metro GP clinics included
Premise of ACCEPt

- If we can increase annual chlamydia testing rates among 16 to 29 year olds up as high as possible, we should see a reduction in chlamydia prevalence in the population.
Inclusion/exclusion criteria

- Rural postcode with >500 15 to 29 year olds
- Excluded if:
  - Army town
  - Tourist town
  - Mining town/transient population
  - 7+ clinics in town
52 postcodes

Recruit clinics, GPs & practice nurses

Baseline chlamydia prevalence survey in each postcode

RANDOMISATION

Control group

Intervention group

Repeat chlamydia prevalence survey in each postcode; PID incidence

Intervention implemented

Till Oct 2014

Intervention: testing algorithm

- Offer annual chlamydia testing to all sexually active men and women under 30 years
- Self collected specimens where possible – urines or self collected vaginal swabs
**Intervention**

- Multifaceted intervention to facilitate increased chlamydia testing in clinics – each element is evidence based:
  - Building a relationship with a ‘practice champion’
  - Computer alerts reminding GPs to offer testing
  - Incentive payments for each test to GP
    - 5 per test up to 20% coverage
    - $7 per test 20-<40% coverage
    - $8 per test 40%+ coverage
  - Practice nurse incentive payments
    - $10 per test ordered
Intervention

- Recall register for follow up
- Quarterly updates on testing rates
- Educational package
- Partner notification support
- Regular communication and support

- Intervention is tailored to the needs and resources at each clinic
Monthly emails

How’s your chlamydia testing going?

With cold and flu season upon us, lots of young people see their doctor. Why not order a urine PCR for chlamydia while they’re in?

ACCEPt recommends testing all young people aged 16–29 years annually.

Testing for chlamydia only when a patient asks misses most cases of infection.

Three quarters (76%) of patients who tested positive for chlamydia in the ACCEPt prevalence survey were asymptomatic.

If you only test patients who ask for a test or who have symptoms, you will miss most cases. Test all patients aged 16-29 years once a year.

Antenatal check-ups - an ideal time to test for chlamydia.

Chlamydia infection during pregnancy can lead to conjunctivitis, pneumonitis, low birth weight and prematurity for newborns.

Testing for chlamydia at the first antenatal check-up or during a preconception health check is a great way to ensure that chlamydia does not go undetected in pregnant women.
Control

- Usual practice based on the “Red Book Guidelines”¹
  - annual testing for all sexually active men and women 15-29 yrs
- Provided with the educational package at the conclusion of the trial

¹ Harris et al. (2009) Guidelines for preventive activities in general practice (“The Red Book”). RACGP
Outcomes of the RCT

- **Primary outcome - chlamydia prevalence**
  - Measured during a prevalence survey conducted in each town:
    - **pre-randomisation**
    - at **conclusion** of trial

- **Secondary outcomes – pelvic inflammatory disease (PID) & epididymitis**
  - Multiple sources including:
    - GP records
    - Hospital admissions
    - Patient questionnaire
    - Measured at conclusion of trial
Prevalence survey - methods

- Research assistant placed in each clinic
  - Consecutive patients
  - Eligible if ever sexually active
  - Self completed questionnaire using PDA (sexual behaviour, symptoms, reason for attendance)
  - Chlamydia test
- 60-100 patients aged 16 to 29 years per postcode
- ~4000 each time period
Recruitment

- Completed December 2011
- 54 towns and 52 areas:
  - 18 Vic (5 towns in northern Victoria)
  - 20 NSW
  - 10 QLD
  - 4 SA
- Over 90% of clinics approached agreed to participate
Participants

- 143 GP clinics
  - Clinics serve about 70,000 15 to 29 year olds
    - Some towns have >30% ATSI
    - 15 clinics in northern Victoria
- 7 Aboriginal medical services
- Over 800 GPs have signed up
- Over 130 practice nurses/Aboriginal health care workers
  - Recruit an average of 15 new GPs per month (~240 GPs have left participating clinics)
  - 6 clinics have closed down
  - 7 new clinics opened in ACCEPt towns
  - 1 clinic withdrawn
## GP profile by location

<table>
<thead>
<tr>
<th></th>
<th>Rural GPs</th>
<th>Metro GPs</th>
<th>VIC GPs (excl metro)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>40%</td>
<td>49%</td>
<td>43%</td>
</tr>
<tr>
<td>Aged &lt;45 years</td>
<td>49%</td>
<td>42%</td>
<td>51%</td>
</tr>
<tr>
<td>Aged 60+ years</td>
<td>9%</td>
<td>16%</td>
<td>9%</td>
</tr>
<tr>
<td>Overseas trained**</td>
<td>43%</td>
<td>21%</td>
<td>42%</td>
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</table>

** Compared with 27% for all Australian GPs (Australia wide - Australian Medical Workforce Advisory Committee (2005), The General Practice Workforce in Australia: Supply and Requirements to 2013, AMWAC Report 2005.2, Sydney)
Prevalence survey results – demographics (1)

- 4,284 participants - 70% participation
  - 29% male; 71% female
  - 6.0% Aboriginal and/or Torres Strait Islander
  - 94% Australian born
  - 3.4 % men report past MSM
  - 431 from northern Victoria
  - 82% of men and women in rural areas were attending a clinic in their local area vs 56% in metro areas

- Prevalence – 4.6% (95%CI: 3.9%, 5.3%)
Prevalence

Men and women

VIC

4.6%
Prevalence

Men - 3.2% [95%CI: 0.9, 7.9]
Women - 4.9% [95%CI: 2.8, 8.0]
Chlamydia prevalence by age
Chlamydia prevalence by sexual behaviour

Graph showing prevalence of Chlamydia by sexual behaviour:
- 1 partner: 2.7% (Men) 3.5% (Women)
- 2 partners: 4.2% (Men) 6.2% (Women)
- 3+ partners: 14.3% (Men) 17.1% (Women)
- MSM last 12 months: 11.4% (Men) 11.6% (Women)
Reason for attendance

- STI symptoms/contact
- Other sexual health
- Non-sexual health

Proportion %

- Men
- Women
75% of infections diagnosed among those attending for a non-sexual health reason.
Prevalence - summary

- About 4.6% prevalence
- Prevalence as high in men as women
- Prevalence very high in <20 year old women and <25 year old men
- A 70% participation and the fact that over 80% attending a GP clinic in this local area suggests that young men and women WILL be tested at their local GP
- 75% of infections diagnosed were among those attending for a non-sexual health reason
Testing rates

- A total of 38,017 tests in intervention and 22,017 in control clinics were conducted between Jan 2011 to June 2013.
- Total tests in rural Victoria = 20,684
- Total tests in northern Victoria = 5096
Testing coverage (1)
Testing coverage (2)

Among clinics with 18+ months intervention time (n=21), testing coverage has increased by:

- 60% (from 17% to 27%) in women
- 121% (from 7% to 15%) in men
- 64% (from 13% to 23%) overall

Control testing results have remained low: 10%

Relative risk for testing (intervention vs control): 2.2 (95%CI: 2.1, 2.3)
Testing coverage - Northern Victoria

- From July 2012-June 2013

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th>Men</th>
<th>Total</th>
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<tbody>
<tr>
<td>Intervention</td>
<td>28.2%</td>
<td>16.2%</td>
<td>23.5%</td>
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<tr>
<td>Control</td>
<td>16.8%</td>
<td>5.7%</td>
<td>12.1%</td>
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- RR=1.94 (95%CI: 1.76, 2.13)
## Chlamydia re-testing after a negative test

<table>
<thead>
<tr>
<th>Time since negative test</th>
<th>Proportion of patients re-tested</th>
<th>P value</th>
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<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
</tr>
<tr>
<td>9 months</td>
<td>17.1%</td>
<td>16.5%</td>
</tr>
<tr>
<td>12 months</td>
<td>22.0%</td>
<td>20.7%</td>
</tr>
<tr>
<td>15 months</td>
<td>26.2%</td>
<td>23.8%</td>
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# Chlamydia re-testing after a positive test

<table>
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<tbody>
<tr>
<td></td>
<td>Intervention</td>
<td>Control</td>
</tr>
<tr>
<td>3 months</td>
<td>37.7%</td>
<td>36.6%</td>
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<tr>
<td>4 months</td>
<td>42.0%</td>
<td>39.3%</td>
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<tr>
<td>6 months</td>
<td>48.7%</td>
<td>44.6%</td>
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Challenges (1)

- Being a “city slicker” working in rural health
  - Importance of building relationships and working closely with rural based organisations – eg: CERSH
- Pathology labs sometimes charging
  - 1 lab charged over $110 for a chlamydia test
- Pathology collection not on site
- General practice is very dynamic
  - Changing staff – GPs, nurses, receptionists, practice managers
  - Registrars
Challenges (2)

- Difficulty in contacting clinics
  - Appointments being cancelled when we arrive
- Floods, fires
  - QLD and VIC
- Variability in how well clinics use their medical records software
- Travel and cost
Discussion and conclusion (1)

- Big burden of chlamydia among women and men
- Young people will agree to be tested, even in their local area — *they just need to be asked*
- Over 90% participation among clinics suggests that they are interested in chlamydia testing
- Our intervention has led to an increase in testing
  - More than twice as many young people are tested at intervention clinics compared with control.
Discussion and conclusion (2)

- Testing coverage increases as the length of the intervention period increases.
- Further effort is needed to increase re-testing rates after a negative test, but early signs suggest re-testing is higher at intervention clinics.
- Nearly half of those testing positive are re-tested within 6 months, but further effort is needed to improve this.
- General practice is ideally suited to annual chlamydia testing……..but we must be cognisant of the workload and challenges for GPs
Acknowledgements (1)

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