Supporting primary health care services to address endemic rates of STIs: findings from the STRIVE trial
A/Prof James Ward

Chlamydia by remoteness

Gonorrhoea by remoteness

STRIVE

RCT of CQI in remote primary care (68 remote communities)

5 year project
NHMRC Funded
Step wedge cluster design

STRIVE Primary Outcomes

STRIVE – Cluster randomised trial to determine if a CQI program can have an impact on prevalence of STIs - 68 remote communities

- Testing coverage
- Time to treatment
- 3 month testing for re-infection
- Contact tracing
1. Development & measurement of relevant indicators
2. Modifications to PMS
3. Extraction of laboratory data
4. Data analysis & feedback
5. SAT & qualitative interviews with clinical teams
6. Action Plan

STRIVE field coordinators

- Employed to keep sexual health on the agenda
- Conduct systems assessments with clinics
- Assist with development of action plans
- Provide regular data reports on progress

STRIVE field activity

- 264 site visits completed
- Another 66 site visits in the coming 3-4 months
- 238 follow up calls (3 month and 9 month)
- Many ad hoc calls and emails
- 900 clinical staff encounters
- 55 qualitative interviews

Methods: prevalence study

- Defined period each year 2010, 2012, 2013
- Aimed to offer testing to all clients attending in the age group 16-34
- Quotas for each service according to cluster size
- Broken down by sex and age group
- Relyed on PHC staff to conduct prevalence study

Number of prevalence study tests per year

<table>
<thead>
<tr>
<th>Prevalence year</th>
<th>All attendees</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>YR 1 sites</td>
<td>25.0yrs</td>
<td>24.9yrs</td>
<td>25.1yrs</td>
</tr>
<tr>
<td>YR 2 sites</td>
<td>24.5yrs</td>
<td>24.4yrs</td>
<td>24.7yrs</td>
</tr>
<tr>
<td>YR 3 sites</td>
<td>24.8yrs</td>
<td>24.7yrs</td>
<td>25.0yrs</td>
</tr>
</tbody>
</table>

Average age of clients aged 16-34 yrs of age
Analysis

• Total testing increase
  Two time points for comparison:
  • Year 1 – a comparison of first 8 clusters undertaking SH CQI program with the remaining 16 clusters as controls
  • Year 2 – is a comparison of 16 clusters undertaking SH CQI program with remaining 8 controls
  • Testing coverage
  • Prevalence
  • Age 16-25 vs 25-35
CT & NG testing coverage, by year, females

CT & NG testing coverage, by year, males

TV testing coverage, by year and sex

Relative proportion tested by intervention year

CT prevalence by year, females

CT prevalence by year, males
NG prevalence by year females

<table>
<thead>
<tr>
<th>Year</th>
<th>YR 1 sites</th>
<th>YR 2 sites</th>
<th>YR 3 sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>5%</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>2012</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>2013</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

NG prevalence by year males

<table>
<thead>
<tr>
<th>Year</th>
<th>YR 1 sites</th>
<th>YR 2 sites</th>
<th>YR 3 sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>2012</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>2013</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

TV prevalence by sex and year

<table>
<thead>
<tr>
<th>Year</th>
<th>YR 1 sites</th>
<th>YR 2 sites</th>
<th>YR 3 sites</th>
</tr>
</thead>
<tbody>
<tr>
<td>Females</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
<tr>
<td>Male</td>
<td>0%</td>
<td>5%</td>
<td>10%</td>
</tr>
</tbody>
</table>

Relative prevalence by intervention year

<table>
<thead>
<tr>
<th>Disease</th>
<th>Yr1</th>
<th>95%CI</th>
<th>Yr2</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall</td>
<td>Chlamydia</td>
<td>0.97</td>
<td>0.70-1.32</td>
<td>1.76</td>
</tr>
<tr>
<td></td>
<td>Gono</td>
<td>0.84</td>
<td>0.59-1.20</td>
<td>0.94</td>
</tr>
<tr>
<td></td>
<td>Trich</td>
<td>0.95</td>
<td>0.72-1.25</td>
<td>0.95</td>
</tr>
<tr>
<td>Females</td>
<td>Chlamydia</td>
<td>0.98</td>
<td>0.65-1.50</td>
<td>2.106</td>
</tr>
<tr>
<td></td>
<td>Gono</td>
<td>0.8</td>
<td>0.48-1.33</td>
<td>0.99</td>
</tr>
<tr>
<td></td>
<td>Trich</td>
<td>0.81</td>
<td>0.59-1.11</td>
<td>0.91</td>
</tr>
<tr>
<td>Males</td>
<td>Chlamydia</td>
<td>0.91</td>
<td>0.55-1.50</td>
<td>1.48</td>
</tr>
<tr>
<td></td>
<td>Gono</td>
<td>0.84</td>
<td>0.50-1.41</td>
<td>0.83</td>
</tr>
<tr>
<td></td>
<td>Trich</td>
<td>1.91</td>
<td>0.83-4.41</td>
<td>0.93</td>
</tr>
</tbody>
</table>

Discussion

- Enormous effort; CQI shows some promising results especially if driven internally
- Significant increases in testing relative to control sites however marginal reduction in prevalence
- Combined STI prevalence highlights significant burden of disease in remote communities
- Prevalence methodology difficult in this setting
- Effects for a fully integrated CQI program will take multiple years for effect
- Integration of CQI to a PHC responsibility is underway
- There remain many questions?? Younger aged strategies, increased frequency testing prevalence study vs positivity, the appropriate mix of strategies

Acknowledgements

STRIKE PARTNERS
- Menzies School of Health Research
- Northern Territory Department of Health
- Aboriginal Medical Services Alliance NT (AMSANT)
- Central Australian Aboriginal Congress
- University of Melbourne
- APY Lands
- Queensland Health
- Kimberley Aboriginal Medical Services Council (KAMSIC)
- Western Australian Department of Health (WAHSE)

ACKNOWLEDGEMENTS
- Amalie Dyda
- Harshitha Mahendran
- Hamdan Ward

INVESTIGATORS
- Donna AhChee
- Robyn McDermott
- Christopher Fairley
- Matthew Lau
- David Glance

STRIKE EXECUTIVE COMMITTEE:
- Nathan Ryder
- Liz Moore
- Stephanie Trust
- Amanda Stoszko
- Jackie Men
- Amanda Lingesford
- Katy Crawford

Amalie Dyda