Improving Aboriginal & Remote STI rates in WA: Worth the Effort

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2003-2013
Background

- Aboriginal STI rates are high and above non-Aboriginal STI rates.
- Intensive Policy and Investment directed at Aboriginal people to reduce STIs.

Research Questions:
- Aboriginal vs non-Aboriginal STI Rates?
- Young vs Old or Male vs Female STI Rates?
- Regional STI Rates?
Methods

• Notification data from Department of Health

• Growth or Decay in Notification rates modelled using Poisson Regression (using Stata v12.0)
  • Numerator: Notification Data.
  • Denominator: Rates Calculator (DoHWA)
Chlamydia

- Youth vs Older Adults stable in both groups.
- Sharp decline in Aboriginal vs non-Aboriginal.

*Figure 1: Incidence Rate Ratios between Aboriginals and non-Aboriginals aged 15-24 and aged 25-54.*
# Chlamydia Growth Rates

## Table 1: Chlamydia growth rates between 2003-2014

<table>
<thead>
<tr>
<th>Chlamydia</th>
<th>Yearly Growth</th>
<th>P Value</th>
<th>L95%CI</th>
<th>U95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Aboriginal youth 15-24y</td>
<td>1.0474</td>
<td>P&lt;0.001</td>
<td>1.045</td>
<td>1.050</td>
</tr>
<tr>
<td>Male Aboriginal youth 15-24y</td>
<td>1.0397</td>
<td>P&lt;0.001</td>
<td>1.036</td>
<td>1.043</td>
</tr>
<tr>
<td>Female Aboriginal 25-54y</td>
<td>0.9727</td>
<td>P&lt;0.001</td>
<td>0.966</td>
<td>0.979</td>
</tr>
<tr>
<td>Male Aboriginal 25-54y</td>
<td>0.9971</td>
<td>P=0.329</td>
<td>0.991</td>
<td>1.003</td>
</tr>
<tr>
<td>Female non-Aboriginal youth 15-24y</td>
<td>1.1687</td>
<td>P&lt;0.001</td>
<td>1.162</td>
<td>1.176</td>
</tr>
<tr>
<td>Male non-Aboriginal youth 15-24y</td>
<td>1.1764</td>
<td>P&lt;0.001</td>
<td>1.166</td>
<td>1.187</td>
</tr>
<tr>
<td>Female non-Aboriginal 25-54y</td>
<td>1.1928</td>
<td>P&lt;0.001</td>
<td>1.172</td>
<td>1.214</td>
</tr>
<tr>
<td>Male non-Aboriginal 25-54y</td>
<td>1.1825</td>
<td>P&lt;0.001</td>
<td>1.164</td>
<td>1.201</td>
</tr>
</tbody>
</table>
Gonorrhoea - Aborginal People - Steady

Gonorrhoea Notification Rates (per 100,000) in Aboriginal people

Figure 3: Aboriginal Male and Female Gonorrhoea notification rates for ages 15-24 and 25-54
Gonorrhoea - non-Aboriginal people - Rise post 2010

Figure 4: Non-Aboriginal Male and Female Gonorrhoea notification rates for ages 15-24 and 25-54
Gonorrhoea Growth Rates

Table 2: Gonorrhoea growth rates between 2003-2014

<table>
<thead>
<tr>
<th>Gonorrhoea</th>
<th>Yearly Growth</th>
<th>Rate</th>
<th>P Value</th>
<th>L95CI%</th>
<th>U95CI%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Aboriginal youth 15-24y</td>
<td></td>
<td>0.983</td>
<td>P&lt;0.001</td>
<td>0.980</td>
<td>0.986</td>
</tr>
<tr>
<td>Male Aboriginal youth 15-24y</td>
<td></td>
<td>0.967</td>
<td>P&lt;0.001</td>
<td>0.964</td>
<td>0.971</td>
</tr>
<tr>
<td>Female Aboriginal 25-54y</td>
<td></td>
<td>0.938</td>
<td>P&lt;0.001</td>
<td>0.933</td>
<td>0.944</td>
</tr>
<tr>
<td>Male Aboriginal 25-54y</td>
<td></td>
<td>0.932</td>
<td>P&lt;0.001</td>
<td>0.927</td>
<td>0.937</td>
</tr>
<tr>
<td>Female non-Aboriginal youth 15-24y</td>
<td></td>
<td>1.043</td>
<td>P=0.007</td>
<td>1.012</td>
<td>1.076</td>
</tr>
<tr>
<td>Male non-Aboriginal youth 15-24y</td>
<td></td>
<td>1.072</td>
<td>P&lt;0.001</td>
<td>1.045</td>
<td>1.099</td>
</tr>
<tr>
<td>Female non-Aboriginal 25-54y</td>
<td></td>
<td>1.119</td>
<td>P=0.001</td>
<td>1.050</td>
<td>1.193</td>
</tr>
<tr>
<td>Male non-Aboriginal 25-54y</td>
<td></td>
<td>1.070</td>
<td>P&lt;0.001</td>
<td>1.038</td>
<td>1.103</td>
</tr>
</tbody>
</table>
Chlamydia Growth Rates by Region and Aboriginality

- High growth rates for non-Aboriginals in metro areas.
- Low growth rates in remotes areas: (Kimberley, Pilbara & Goldfields), where regional STI teams have been implemented.
Gonorrhoea Growth Rates by Region and Aboriginality

- Aboriginal STI rates for Gonorrhoea on decline in most areas.
- Non-aboriginal rates of Gonorrhoea are low or in decline in Kimberley and Pilbara.
- Other non-Aboriginal areas have high growth rates of Gonorrhoea of up to 10%.
- Highest growth rates in Metro areas and for Wheatfields for non-aboriginal people.
Policy Implementation in WA from Evaluation Studies

- Remote STI Teams and increased testing and treating in Kimberley, Pilbara and Goldfields.
- Training of Aboriginal Health Workers
- Increased Community Awareness and Health Promotion
- Nurse initiated ZAP Packs.
- Increased Testing in Improved Primary Health Care response
- Online training of health workers (ECU funded by SHBBVP: 113 GPs, 423 Nurses, 137 Health Professionals, 66% from WA)
Limitations

- Policies discussed were implemented with results seen in Evaluation Studies.
- An increase in testing numbers were recorded along with outcomes.
- But difficult to know which policy changed the outcome the most.
- Did Sub-studies by Aboriginality, age, gender and region.
- But other confounders exist that are not recorded in mandatory reporting notification data.
Conclusion

- Focussed Policy and intensive intervention does help and is responsible for negative growth rates in the Kimberley, Pilbara and Goldfields.
- Still a long way to go.
- Aboriginal vs Non-Aboriginal (Chlamydia IRR 4, Gonorrhoea IRR 22)
- Problematic increasing burden of STIs in non-aboriginals.
- DOUBLE BURDEN
- RECOMMENDATION:

Controlling STIs requires continual effort, policy and resources in both Rural and Remote areas and metro areas for Aboriginal and non-Aboriginal people.