A brief picture of gonorrhoea in New Zealand

Kerry Sexton, Public Health Physician, ESR

NZSHS conference 2012, gonorrhoea workshop, 30 August 2012
Outline

• National burden of gonorrhoea
  ▪ Historical
  ▪ Recent trends

• Demographic distribution of cases

• Other risk factors for gonorrhoea

• Testing for gonorrhoea
  ▪ Testing rates and test positivity

• Not going to discuss:
  ▪ NAAT testing for gonorrhoea
  ▪ Antimicrobial resistance
National burden of gonorrhoea


1976 (lab data)
208 per 100,000
6482 cases
National burden of gonorrhoea cont...

Figure 3  Total clinic male and female cases of gonorrhoea NZ STD clinics.

M/F ratio = 4.5/1

M/F ratio = 1.2/1

Gonorrhoea rates in selected DHBs, 1998-2011

![Graph showing gonorrhoea rates in Auckland Region, Bay of Plenty & Lakes, and Waikato from 1998 to 2011. The rates increased from 1998 to 2005, peaked in 2005, and then decreased from 2005 to 2011.](image)

© ESR 2012
Estimated national gonorrhoea rate, 2008-2011

M:F ratio 2011: 1.4

67 = NZ rate 2011
44 = Australia 2010
30 = UK 2010
101 = US 2010
Gonorrhoea rates by age group and sex, 2008-2011

Females

Males

<table>
<thead>
<tr>
<th>Year</th>
<th>Cases per 100 000 female population</th>
<th>Year</th>
<th>Cases per 100 000 male population</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>&lt;15 years</td>
<td>2008</td>
<td>&lt;15 years</td>
</tr>
<tr>
<td>2009</td>
<td>15-19 years</td>
<td>2009</td>
<td>15-19 years</td>
</tr>
<tr>
<td>2010</td>
<td>20-24 years</td>
<td>2010</td>
<td>20-24 years</td>
</tr>
<tr>
<td>2011</td>
<td>25-29 years</td>
<td>2011</td>
<td>25-29 years</td>
</tr>
</tbody>
</table>

© ESR 2012
Gonorrhoea rates by ethnicity
Age standardised gonorrhoea incidence rates by ethnicity and sex, Bay of Plenty, 2003 to 2007
Gonorrhoea rates by DHB, 2011

Rate per 100,000 population:
- ≤ 50
- 51 - 100
- > 100
- Data not available
Other risk/protective factors

• **Greater number of sexual contacts**
  - Auckland SHS case-control study\(^1\)
    - Cases of gonorrhoea reported more sexual contacts in the preceding 3 months than did controls (p=0.05)

• **MSM**
  - Gay Auckland Periodic Sex Survey\(^2\)
    - 3.3% reported gonorrhoea in last 12 months
    - 17.3% reported a diagnosis of gonorrhoea in their lifetime

• **Condom use**
  - Auckland SHS case-control study\(^1\)
    - Consistent condom use was found to lower the risk of gonorrhoea (p=0.009)

---


Site of infection, non-urogenital gonorrhoea cases in SHCs, males, 2006-2011

80-90% urogenital
Relative gonorrhoea testing volumes, selected DHBs, 2002-2011
Gonorrhoea incidence & testing rates by age group, females, BOP, 2003-2007

**Incidence**

**Testing rates**
Summary

• National gonorrhoea burden peaked in the 1970s, smaller peak 2006
• Estimated national rate stable over last 4 years, 67 per 100,000 in 2011
• Highest risk groups: 15-24y olds and Māori and Pacific, MSM
• Tairawhiti DHB rate 5x national rate
• Increasing anorectal and pharyngeal positives
• Testing mismatch versus incidence
Gonorrhoea testing rates/test positivity by TA, Bay of Plenty, 2003 to 2007

Gonorrhoea testing rate per 100,000 population
- 1900 - 3000
- 3100 - 4100
- 4200 - 5100
- 5200 - 6200

Gonorrhoea test positivity (%)
- 1 - 2
- 3 - 4
- 5 - 6

© ESR 2012
Gonorrhoea Prevalence

- MSM, phone survey, 1996
- Any gonorrhoea 16.8% (penile 13.6%, anal 4.4%, oral 3.0%; signif higher in those HIV positive)

Dunedin cohort
- Gonorrhoea 1 (2.6) 5 (5.6) 1 (1.4) 0 (0)
- Gonorrhoea up to 21 Male 1 (2.6) Female 5 (5.6) 21 to 26 Male 1 (1.4) Female 0 (0.0) 26 to 32 Male 0 (0.0) Female 0 (0.0)

Gonorrhoea rates by DHB, 2007 to 2011

Note: Additional labs began reporting in 2010 in Northland and 2011 in Taranaki