Trends in STI Diagnoses in New Zealand

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Disclosure: No conflicts of interest relevant to this work to disclose
Chlamydia

82% of chlamydia cases reported 2013 – 2017 were aged 15-29 years.
Gonorrhoea

Auckland region
Males: 204 cases per 100,000 population
Females: 105 cases per 100,000 population

Wellington region
Males: 185 cases per 100,000 population
Females: 45 cases per 100,000 population

Regions where male gonorrhoea rates are > than female gonorrhoea rates

Data for 2017 provisional
Data Source: Laboratory - based STI Surveillance, ESR

Gonorrhoea rates by sex and ethnicity, 2015 - 2017

Data for 2017 provisional
Data Source: Laboratory - based STI Surveillance, ESR
Syphilis

Infectious syphilis cases by sexual behaviour, 2013-2017*

<table>
<thead>
<tr>
<th>Year</th>
<th>Outcome</th>
<th>Case classification</th>
<th>Gestation</th>
<th>Mother’s age (yrs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011-2012</td>
<td>Stillbirth</td>
<td>Confirmed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>Stillbirth</td>
<td>Confirmed</td>
<td>22/40</td>
<td>23</td>
</tr>
<tr>
<td>2017</td>
<td>Stillbirth</td>
<td>Confirmed</td>
<td>29/40</td>
<td>22</td>
</tr>
<tr>
<td>2017</td>
<td>Stillbirth</td>
<td>Confirmed</td>
<td>27/40</td>
<td>16</td>
</tr>
<tr>
<td>2017</td>
<td>Live birth</td>
<td>Confirmed</td>
<td>37/40</td>
<td>35</td>
</tr>
<tr>
<td>2017</td>
<td>Live birth</td>
<td>Probable</td>
<td>28/40</td>
<td>34</td>
</tr>
<tr>
<td>2018</td>
<td>Live birth</td>
<td>Confirmed</td>
<td>37/40</td>
<td>19</td>
</tr>
<tr>
<td>2018</td>
<td>Stillbirth</td>
<td>Suspected</td>
<td>24+2/40</td>
<td>23</td>
</tr>
<tr>
<td>2018</td>
<td>Stillbirth</td>
<td>Confirmed</td>
<td>32/40</td>
<td>27</td>
</tr>
<tr>
<td>2018</td>
<td>Live birth</td>
<td>Confirmed</td>
<td>34+4/40</td>
<td>32</td>
</tr>
</tbody>
</table>

* Data for 2017 provisional.

Data source: Enhanced surveillance of infectious syphilis, ESR

Congenital syphilis cases reported to ESR 2008 – 2018* (updated 30/10/2018)
HPV infection

Genital Warts (first presentation) case numbers for Sexual Health Clinics

<table>
<thead>
<tr>
<th>Total Number of cases 2008</th>
<th>Total number of cases 2017</th>
<th>% change since 2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>3749</td>
<td>1009</td>
<td>-73.1%</td>
</tr>
</tbody>
</table>

*During the same period there was a non-significant increase in clinic visits by 17.7% (average increase of 1.97% per year over nine years)

<table>
<thead>
<tr>
<th>Age Group</th>
<th>% change since 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males 15-19 years</td>
<td>-90.0%</td>
</tr>
<tr>
<td>Females 15-19 years</td>
<td>-94.5%</td>
</tr>
<tr>
<td>Males 20-24 years</td>
<td>-73.6%</td>
</tr>
<tr>
<td>Females 20-24 years</td>
<td>-79.2%</td>
</tr>
</tbody>
</table>

Data Source: Clinic-based STI Surveillance, ESR
Trends in other STIs

- Non-specific urethritis (NSU)
  - Case numbers increased from 2011 to 2015 (725 cases) but then decreased to 649 in 2016 and a further decrease in 2017 to 602 cases
  - Majority of cases reported European ethnicity, followed by Māori ethnicity
- Lymphogranuloma venereum (LGV)
  - No cases reported in 2017, following the 6 cases reported from 2013 – 2016
  - All cases were male, and all reported European or Other ethnicity.

Data source: NSU and LGV cases are reported by Sexual Health and Family Planning Clinics in New Zealand to ESR as part of clinic-based sentinel surveillance.
Increasing syphilis cases in New Zealand: why we are worried

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November 2018

Disclosure: No conflicts of interest relevant to this work to disclose
Background

• Infectious syphilis incidence has been on the rise in New Zealand since 2012.

• Initially the increase appeared to be confined to men who have sex with men (MSM) but the age groups and sexual behaviour of those affected have been changing in recent years.

• Data reported by Sexual Health Clinics to ESR’s enhanced surveillance for infectious syphilis for 2013-2017 were analysed with a focus on the risk factors for MSM and heterosexuals. (Heterosexual data will be presented separately in the Symposium: Rises in gonorrhoea and syphilis among heterosexual populations)

• Data has been collected for congenital syphilis cases since 2017, including retrospectively.

• Ministry of Health and sector stakeholders developing an Action Plan
MSM cases by ethnicity and age group

Infectious syphilis cases for MSM by ethnicity, 2013-2017*

Data source: Enhanced surveillance of infectious syphilis, ESR

* Data for 2017 provisional.

Infectious syphilis cases for MSM by age group, 2013-2017*

Data source: Enhanced surveillance of infectious syphilis, ESR

* Data for 2017 provisional.
MSM cases – HIV positivity, primary reason for testing

Percentage of MSM infectious syphilis cases reported as HIV positive, 2013-2017*

Primary reason for testing, MSM 2013-2017*

* Data for 2017 provisional.

Data source: Enhanced surveillance of infectious syphilis, ESR
Summary

• Increasing cases reported in recent years
• Age groups and sexual behaviour of those affected have been changing
• MSM remain the group most affected but steady increase in cases diagnosed in heterosexual males and females and increasing cases of congenital syphilis
• For MSM, increase in cases seen across most ethnic groups, with NZ European having proportionately, a greater increase
• Shift to younger age groups among MSM cases, especially to those aged between 20 and 39 years
• Decreasing proportion of MSM cases that are reported as HIV positive over past 5 years
• Highest proportion of cases were tested because of clinical symptoms, followed by asymptomatic screening.
Acknowledgements

• Sexual Health Clinics
• ESR colleagues – Giles Graham, Maritza Marull, Tim Wood
• Communicable Diseases Team, Ministry of Health

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Data requests:
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Gonorrhoea and syphilis among heterosexuals in New Zealand

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Disclosure: No conflicts of interest relevant to this work to disclose
Syphilis among heterosexuals

Infectious syphilis cases by sexual behaviour, 2013-2017*

Data source: Enhanced surveillance of infectious syphilis, ESR

* Data for 2017 provisional.

Infectious syphilis cases for heterosexual males by ethnicity, 2013-2017*

Data source: Enhanced surveillance of infectious syphilis, ESR

* Data for 2017 provisional.

Infectious syphilis cases for heterosexual females by ethnicity, 2013-2017*

Data source: Enhanced surveillance of infectious syphilis, ESR

* Data for 2017 provisional.

Congenital syphilis
Cases increasing
2016 1 stillbirth
2017 2 stillbirths, 2 live births
2018 ytd, 2 stillbirths, 2 live births
Infectious syphilis in heterosexuals by age group

Males

Infectious syphilis cases for heterosexual males by age group, 2013-2017*

* Data for 2017 provisional.
Data source: Enhanced surveillance of infectious syphilis, ESR

Females

Infectious syphilis cases for heterosexual females by age group, 2013-2017*

* Data for 2017 provisional.
Data source: Enhanced surveillance of infectious syphilis, ESR
Primary reason for testing, infectious syphilis, heterosexuals

Primary reason for testing, heterosexual males, 2013-2017*

- Syphilis Contact
- Other
- Immigration purposes
- Clinical Symptoms of suspicion
- Asymptomatic STI Screening

Primary reason for testing, heterosexual females, 2013-2017*

- Antenatal Screening
- Syphilis Contact
- Other
- Immigration purposes
- Clinical Symptoms of suspicion
- Asymptomatic STI Screening

* Data for 2017 provisional.
Data source: Enhanced surveillance of infectious syphilis, ESR
Gonorrhoea

Regions where male gonorrhoea rates are greater than female gonorrhoea rates

Auckland region
Males: 204 cases per 100,000 population
Females: 105 cases per 100,000 population

Wellington region
Males: 185 cases per 100,000 population
Females: 45 cases per 100,000 population

2017 rates
Male: 125 per 100,000
Female: 74 per 100,000
Total: 99 per 100,000

Data for 2017 provisional
Data Source: Laboratory - based STI Surveillance, ESR
Gonorrhoea

Gonorrhoea rates by ethnicity and sex, 2015 - 2017*

Gonorrhoea rates by age group and sex 2015-2017*

Specimen site as a percentage of all positive gonorrhoea tests 2013 - 2016

Data Source: Laboratory-based STI Surveillance, ESR
Summary

• Syphilis
  • Steady increase in infectious syphilis cases diagnosed in heterosexual males and females past 4 years
  • Increase is most apparent in the “reproductive” age groups, especially for females
  • Increase in the number of cases of congenital syphilis reported past 2 years
  • For males increases seen in Māori, Asian and NZ European ethnic groups; for females greatest increase is in Māori ethnic group
  • “Reasons for testing” data suggests under-screening of some populations at risk

• Gonorrhoea
  • Increased incidence, driven by increased diagnoses in males in regions with large urban centres
  • Increased rates across all ethnic groups for males. Increased rates for females most notable for Māori, Pacific peoples and MELAA ethnic groups.
  • For males, recent increases in rates seen in the 20-39 years age group; for females increases in the 20-35 years age groups
  • There is a trend of an increasing proportion of positive tests where site of infection is anorectal or throat, especially for males
  • It seems likely that the increase in males in the large urban centres may be driven by transmission among MSM, whereas the increase in other regions is due to transmission occurring among heterosexuals
Acknowledgements

- Sexual Health Clinics
- Diagnostic Laboratories
- ESR colleagues – Giles Graham, Rebekah Gray, Maritza Marull, Tim Wood, Ian Tompson
- Communicable Diseases Team, Ministry of Health

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