NATIONAL LEPTOSPIROSI S
SURVEILLANCE REPORT
NUMBER 12

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Compiled by Staff of the Leptospirosis Reference Laboratory

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This report summarises our leptospirosis surveillance data for 2003. This information has been collated from questionnaire data with the valued and appreciated assistance of public health staff, doctors and scientific staff throughout Australia.

This report and previous reports are available at:


The reference laboratory, apart from providing local, national and international tertiary level surveillance, reference and diagnostic services, also undertook a range of research and public health activities throughout 2003. Some of these are listed below.

- Participation as an issuing laboratory providing sera specimens and analysis of results in the leptospirosis component of the 2003 Royal college of Pathologists of Australasia - Quality assurance Program for Microbiology and Serology.
- Research into potential virulence genes of *Leptospira* and potential application for vaccine development.
- Finalised collaborative studies with the University of Queensland and James Cook University investigating sources of human leptospirosis in the fruit growing industry of Australia.
- Collaborative in a MLA funded project with the Queensland Department of Primary Industries (DPI) supporting transfer of real time PCR technology to the DPI.
- Collaborative in an ACIAR funded project investigating zoonotic diseases in the Pacific Region.

The reference laboratory staff would like to acknowledge all the contributors for their time and assistance in sending out questionnaires and the collection of data.
Notifications

In 2003, Queensland accounted for 55.8% of leptospirosis notifications for Australia. Both the Australian and Queensland notification rates have decreased steadily since 1999.

Table 1.

<table>
<thead>
<tr>
<th>Year</th>
<th>Australia**</th>
<th>Queensland (laboratory data)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>249</td>
<td>135 (54.2%)</td>
</tr>
<tr>
<td>2002</td>
<td>163</td>
<td>96 (58.9%)</td>
</tr>
<tr>
<td>2003</td>
<td>129</td>
<td>72 (55.8%)</td>
</tr>
</tbody>
</table>

**Australian figures for Table 1 and 2 and Figure 1 are comprised of Reference Laboratory data for Queensland and Communicable Diseases Network - Australia New Zealand - National Notifiable Diseases Surveillance System data for the remaining states. (NOTE – These calculations have changed from calculations in previous reports). These figures are higher than those collected by this laboratory and it is possible that some positive leptospirosis cases have not submitted a Leptospirosis Surveillance Questionnaire to the Reference Laboratory and are therefore not included in our data. All further graphs and tables in this report are based on the Reference Laboratory figures. There were 96 notifications for Australia in 2003 according to laboratory figures.

Figure 1.
Proportion of Notifications of Leptospirosis for Australia in 2003 by State and Territory
(Communicable Diseases Network Data)
Queensland notifications for 2003 remained below average for the majority of the year apart from April.

Figure 2. Leptospirosis Notifications for Queensland – Average, 2002, 2003

Notification Rates

Table 2 shows the notification rates per 100 000 for all States and Territories of Australia – 2001 to 2003.

Table 2.
Leptospirosis Notification Rates per 100 000 for 2001, 2002 and 2003 by State and Territory

<table>
<thead>
<tr>
<th>State</th>
<th>2001 Rate / 100 000</th>
<th>2002 Rate / 100 000</th>
<th>2003 Rate / 100 000</th>
</tr>
</thead>
<tbody>
<tr>
<td>New South Wales</td>
<td>1.11</td>
<td>0.60</td>
<td>0.55</td>
</tr>
<tr>
<td>Victoria</td>
<td>0.83</td>
<td>0.36</td>
<td>0.14</td>
</tr>
<tr>
<td>Queensland</td>
<td>3.58</td>
<td>2.52</td>
<td>1.89</td>
</tr>
<tr>
<td>South Australia</td>
<td>0.26</td>
<td>0.13</td>
<td>0.13</td>
</tr>
<tr>
<td>Western Australia</td>
<td>0.21</td>
<td>0.15</td>
<td>0.31</td>
</tr>
<tr>
<td>Tasmania</td>
<td>0.63</td>
<td>0.63</td>
<td>0</td>
</tr>
<tr>
<td>Northern Territory</td>
<td>2.65</td>
<td>1.57</td>
<td>2.02</td>
</tr>
<tr>
<td>ACT</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Australia</td>
<td>1.35</td>
<td>0.83</td>
<td>0.61</td>
</tr>
</tbody>
</table>