LEPTOSPIRAL SURVEILLANCE REPORT
JULY – SEPTEMBER 1998

INTRODUCTION

This report briefly outlines the demographics of the leptospiral cases notified within Queensland for the period July – September 1998. A full annual report is anticipated in January 1999. The collection of data for the report is progressing well with the response rate for the surveillance questionnaires being 94.5% for the year to date.

WEBSITE

The WHO/FAO Collaborating Centre for Reference and Research on Leptospirosis now has a Website. This Website contains details about the laboratory, its staff and our functions, along with copies of the most recent quarterly and annual surveillance reports. If this data or information is to be used however, it must be acknowledged as the WHO/FAO Collaborating Centre for Reference and Research on Leptospirosis Queensland Surveillance Report Number, with the authors as per the cover page of the report.

For employees of Queensland Health, the homepage is available through the QHIN Intranet (Queensland Health Information Network at http://qhin.health.qld.gov.au/qpssb/sciensrv/home.htm)

- Organisational Structure
- Queensland Health Pathology & Scientific Services
- WHO/FAO Collaborating Centre for Reference and Research on Leptospirosis, for the Western Pacific Region

For those persons external to Queensland Health, the address of the leptospirosis website is: http://www.health.qld.gov.au/sciencesrv/who/home.htm.

Alternatively, the International Leptospirosis Society homepage hyperlinks to our site. The address for this site is: http://www.med.monash.edu.au/micro/department/ilspage.htm
This site also contains information on the International Leptospirosis Society Conference to be held in Melbourne, August 1999. This is available directly on http://www.med.monash.edu.au/micro/department/leptconf/ils99.htm
Case Numbers – Figure 1

Figure 1 demonstrates the relative proportions of the leptospiral serovars notified to Queensland Health for the 1998. In the period July – September 1998, 26 cases (92.3% male) were notified with two of these initially being diagnosed by blood culture.

Total notifications for leptospirosis in Queensland to the end of September now total 73. These figures represent an increase of approximately 38% on average figures calculated using data from the last 5 years.

The Queensland figures represent approximately 63% of all Australian cases notified for 1998 (Communicable Diseases Network – Australia New Zealand – National Notifiable Diseases Surveillance System, personal communication). Based on these total figures, the Australia-wide response rate is currently 88% (67% for non-Queensland cases).

Number of Leptospirosis Notifications Queensland
1997, 1998 and Averages
Figure 1
Postcode Regions

The majority of the notifications for the previous quarter were from the north Queensland (4800) postcode region with 19 cases diagnosed. Three notifications were also received from the 4300 region, two from the 4400 region and one each from the 4700 and 4500 regions.

Serovars Notified – Figure 2

Figure 2 shows the cumulative proportions of leptospiral serovars notified for Queensland this year. In the last quarter, 13 cases of zanoni, 5 pomona, 4 hardjo and one each of australis and tarassovi were notified. The large proportion of zanoni cases reflects the high number of cases from the north Queensland region (19 cases). The classification of two recent clinical isolates is continuing.

![Figure 2 - Leptospiral Serovars Notified, Queensland, 1998](image-url)
The criteria for notification of Leptospirosis cases in Queensland is defined as:

(a) *Isolation of a pathogenic Leptospiral isolate*

(b) *A fourfold or greater change in Leptospiral M.A.T. titre between acute and convalescent phase sera. This should be confirmed by a reference laboratory*

(c) *A single raised MAT titre (greater than or equal to 400) and an elevated IgM ELISA result*

**NB** These case definitions were approved by Dr John Scott, Manager, Public Health Services, Queensland Health, August 1996.
Occupational Data – Table 1 & Figure 3

Figure 3 gives an historical account of the occupational data for Queensland from 1983 to 1998. These data have been obtained from both the annual reports (hence the financial year reporting) and our current database. Of interest is the high proportion of unknown occupations in the later 1980’s to the early 1990’s. The latter half of the 1991/92-year represented the initial pilot surveillance questionnaire for leptospirosis within Queensland, with the relative proportions of unknowns decreasing over subsequent years. The success of the initial pilot study lead to the evolution of the current surveillance scheme now implemented Australia wide.

Figure 3

Reported Occupations for Notified Leptospiral Cases, Queensland

1983-1998

Figure 3
Table 1
Occupations of Leptospiral Notifications 1998

<table>
<thead>
<tr>
<th>Occupation</th>
<th>No. of Cases July – September</th>
<th>No. of Cases Jan - Sept</th>
<th>Proportion of Total Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meatworker/Inspector</td>
<td>3</td>
<td>15</td>
<td>20.5%</td>
</tr>
<tr>
<td>Banana Farmer</td>
<td>2</td>
<td>11</td>
<td>15.1%</td>
</tr>
<tr>
<td>Dairy Farmer</td>
<td>6</td>
<td>11</td>
<td>15.1%</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>8</td>
<td>11.0%</td>
</tr>
<tr>
<td>Child</td>
<td>1</td>
<td>4</td>
<td>5.5%</td>
</tr>
<tr>
<td>Cane Farmer</td>
<td>1</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Nursery Worker/Lscapeur</td>
<td>0</td>
<td>2</td>
<td>2.7%</td>
</tr>
<tr>
<td>Student</td>
<td>1</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Farmer/ Station Hand</td>
<td>1</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Labourer</td>
<td>1</td>
<td>2</td>
<td>2.7%</td>
</tr>
<tr>
<td>Grazier</td>
<td>2</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Transport Workers</td>
<td>3</td>
<td>3</td>
<td>4.1%</td>
</tr>
<tr>
<td>Clerical</td>
<td>0</td>
<td>1</td>
<td>1.4%</td>
</tr>
<tr>
<td>Unknown</td>
<td>2</td>
<td>4</td>
<td>5.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>26</strong></td>
<td><strong>73</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

UPDATE ON OTHER DEVELOPMENTS
JULY – SEPTEMBER 1998

- **Atherton Tableland Cases**

In the period from late May to August, 15 cases of leptospirosis were notified from the Atherton Tableland region. This sharp increase in cases during these months has been noted to be characteristic of this area for the past several years. An increase in rodents had also been reported concurrently in the area.
In response, Queensland Health Scientific Services and the WHO/FAO Collaborating Centre for Reference and Research on Leptospirosis sent a team of scientists to the region to trap domestic rats and mice in the Cairns and Malanda regions. Animals were trapped and specimens collected for leptospiral culture and serology.

It is hoped that this exercise will serve as a pilot for a larger scale investigation earlier in the season next year.

- **Urine Culture Media**

The new urine culture media and isolation procedure discussed in the previous surveillance report has been well received within Queensland. Approximately 14 laboratories and hospitals within Queensland now have supplies of both the blood and urine culture media.