PUBLIC HEALTH SERVICES

Notifiable Diseases 2014 Annual Report

This Notifiable Diseases 2014 Annual Report from Public Health Services includes commentaries on diseases and a table (Table 2) of all diseases reported for this period.

Notification of cases of diseases of public health significance provides a way to monitor trends, inform prevention, and respond to notable cases, clusters, outbreaks, and even epidemics. Data on notifiable communicable diseases in Tasmania are collected by the Communicable Diseases Prevention Unit (CDPU) under the powers vested in the Director of Public Health by the *Public Health Act 1997*. This process is specified in the *Guidelines for Notification of Notifiable Diseases, Human Pathogenic Organisms and Contaminants* of February 2010. Cases of notifiable diseases are notified to CDPU by clinicians and laboratories.

Notifiable diseases in Tasmania comprise all 69 diseases included in the current national notifiable disease list, in the following categories: bloodborne diseases, gastrointestinal diseases, quarantinable diseases, sexually transmissible infections, vaccine preventable diseases, vectorborne diseases, zoonoses and other bacterial infections.

Surveillance data on notifiable diseases are collected in accordance with nationally agreed case definitions. Recent and historical data for all states and territories are available from the National Notifiable Diseases Surveillance System. Tasmanian data are published in quarterly and annual reports, available from the CDPU website.

Some additional diseases, while not nationally notifiable, are currently notifiable in Tasmania. These comprise rotavirus, chancroid, echinococcosis (hydatid disease), gastroenteritis in an institution, giardiasis, lymphogranuloma venereum, rickettsial infection (including Flinders Island spotted fever and others), suspected cases of food and waterborne illnesses, *Vibrio* infection, and yersiniosis.

Healthcare associated infections such as *Staphylococcus aureus* bacteraemia and vancomycin resistant enterococci are managed and reported quarterly by the Tasmanian Infection Prevention and Control Unit (TIPCU).

Data presented in this report are based on notifications to the Director of Public Health. They may not reflect the true incidence of some diseases in the community. Changes in surveillance practice, diagnostic techniques and reporting may also affect notification data over time. Data in this report were extracted on 29 May 2015. The date of each case was based on the available date that was closest to the illness onset date for the case. Due to ongoing data review processes, data are subject to small changes over time.

Blood-Borne Viruses

Human Immunodeficiency Virus (HIV)

Sixteen newly diagnosed cases were notified in Tasmania during 2014, which was more than the annual mean count for the previous five years (13 cases). The notification rate of HIV infection in Tasmania (3.1 per 100 000 persons) was lower than the national rate (4.7 per 100 000 persons). Cases ranged in age from 23 to 58 years of age; 81 per cent of cases were male. Of the male cases, 11 of 13 (82 per cent) reported sexual exposures as with persons of the same sex, one male reported sexual exposure with persons of the opposite sex and one male reported sexual exposure to persons of both sexes. One male case reported injecting drug use as an additional risk factor to sexual exposure. Injecting drug use was reported by one female case with their sexual exposure being unknown.

Half of all newly diagnosed HIV infections were diagnosed by screening (eight cases) and most other cases were diagnosed though clinical presentation (six cases). Five out of 16 cases (31 per cent) during 2014 related to HIV infections that were acquired within 12 months of diagnosis. One of the cases notified this year was previously diagnosed overseas prior to being notified in Tasmania. The median CD4 count for cases (all sexes) was 420; this indicates relatively late diagnosis of established HIV infection.

Hepatitis B

Four cases of newly acquired hepatitis B infection (infections acquired in the 24 months before diagnosis) were notified during 2014, which was less than the annual mean count for the previous five years (10 cases). The notification rate of newly acquired hepatitis B cases in Tasmania (0.8 per 100 000 persons) was similar to the national rate (0.8 per 100 000 persons). All cases were aged between 31-42 years of age and most cases (75 per cent) were female. Two cases had a history of recent (within the last two years) injecting drug use. The other two cases reported never injecting drugs. For these latter cases one case reported having tattoos and the other case had no identifiable other risk factors. All cases were Australian born.

Fifty five cases of unspecified hepatitis B infections (infections of unknown duration, mostly chronic) were notified during 2014, similar to the annual mean count for the previous five years (54 cases). The notification rate of unspecified hepatitis B in Tasmania (10.7 per 100 000 persons) was much lower than the national rate (28.4 per 100 000 persons). Cases were aged between 18 and 71 years of age and 56 per cent were male. Three cases reported a history of recent injecting drug use. The risk factors for most of the other cases were unknown, with a small number of cases reporting exposure to blood or tissue products overseas (one case), surgical work (two cases) or household contact with another hepatitis B case (two cases). When data on country of birth was available, 58 per cent of cases were born overseas in countries with a high prevalence of hepatitis B infection. A small proportion of cases were born in Australia (13 per cent) with the birth country recorded as unknown for the remaining 29 per cent of cases.

Hepatitis C

Fourteen cases of newly acquired hepatitis C infection (infections acquired in the 24 months before diagnosis) were notified during 2014, which was lower than the annual mean count for the previous five years (23 cases). The notification rate of newly acquired hepatitis C in Tasmania (2.7 per 100 000 persons) was higher than the national rate (1.9 per 100 000 persons). The majority of cases were male (86 per cent). All cases had a history of injecting drug use. Tasmania actively collects enhanced data on all notified hepatitis C cases, which aids classification of cases into the appropriate notification category.

There were 211 cases of unspecified hepatitis C infections (infections of unknown duration, mostly chronic) notified during 2014, slightly less than the annual mean count of the previous 5 years (231 cases). The notification rate of unspecified hepatitis C in Tasmania (41 per 100 000 persons) was slightly lower than the national rate (44.5 per 100 000 persons). The majority of cases were male (64 per cent). The risk factors most commonly associated with notification were a history of injecting drugs, imprisonment, tattoos, or contact with a sexual partner with HCV. Several cases had more than one risk factor identified.

Other blood borne diseases

There were no cases of hepatitis D or hepatitis (not elsewhere classified) notified in Tasmania during 2014.

Gastrointestinal Diseases

Campylobacteriosis

There were 934 cases of *Campylobacter* infection notified in Tasmania during 2014, which was greater than the annual mean count for the previous five years (766 cases). The notification rate of *Campylobacter* infection in Tasmania (181 cases per 100 000 persons) was the highest rate of any Australia Sate or Territory during 2014, and higher than the national rate (127 cases per 100 000 persons). The highest number of cases was reported in children aged less than 5 years (87 cases, rate 281 per 100 000 persons). The highest rate of disease was in persons aged 85 years or older, with 301 cases per 100 000 persons (33 cases).

Salmonellosis

There were 249 cases of salmonellosis notified in Tasmania during 2014, more than the annual mean count for the previous five years (224 cases). The notification rate of salmonellosis in Tasmania (48 cases per 100 000 persons) was less than the national rate (70.7 per 100 000 persons). The highest number of cases, and rate of disease, was reported in children aged less than five years (43 cases, rate 139 per 100 000 persons). In 2014, 13 per cent of all salmonellosis notifications in Tasmania were reported as acquired overseas.

Salmonella Mississippi (105 cases) was the most commonly reported *Salmonella* serovar in Tasmania in 2014, and comprised 42 per cent of all salmonellosis notifications. Within Australia this serovar is thought to have an environmental niche almost exclusively limited to Tasmania; occasional isolations from travellers to Vanuatu are also reported.

Listeriosis

There were four cases of listeriosis notified in 2014. The overall rate of disease was 0.8 cases per 100 000 persons. This was higher than national rate (0.3 cases per 100 000 persons). Listeriosis is rarely reported in Tasmania, with an average of three cases notified per year. Cases reported in 2014 were considered to be sporadic and unrelated with the exception of one case which had a typing profile indistinguishable from other case isolates reported in 2012 and 2013. The three cases linked by typing information over 23 months were investigated and were associated with one hospital.

Other Gastrointestinal Diseases

Other gastrointestinal diseases notified in Tasmania in 2014 included *Giardia* (119 cases), cryptosporidiosis (30 cases), shigellosis (two cases), *Vibrio* Infection (two cases), haemolytic uraemic syndrome (one case), hepatitis A (one case acquired in Vanuatu) and typhoid (one case acquired in Nepal). There were five *Yersinia* cases, which was more than the annual mean count for the previous five years (one case). This was partly due to the introduction of new diagnosis methods in some pathology laboratories, with the introduction of culture independent diagnostic testing (CIDT) with an enteric polymerase chain reaction (PCR) test on stool specimens screening for a range of different enteric pathogens.

There were no notified cases of botulism, shiga toxin producing *E. coli* or hepatitis E during 2014.

Foodborne Disease Outbreaks

An outbreak of gastroenteritis amongst attendees of a school camp was investigated, with 16 cases of gastroenteritis identified, four of which were confirmed as *S.* Mississippi. *S.* Mississippi was detected in water sampled from a tap which was supplied by a rainwater tank at the site. There was a permanent recommendation to boil water from this tank, while water at the camp site from other taps (supplied from a different source) was not fit for human consumption due to heavy metals and was subject to warnings not to consume. Camp attendees reportedly drank water from multiple taps at the camp and water was often not boiled as recommended.

Nine cases of gastroenteritis amongst a group of 24 persons who were visiting Tasmania were investigated. Norovirus was detected in two of three specimens that were collected and four cases were admitted to hospital. A fruit salad eaten at one dinner was possibly the vehicle of the outbreak in the cohort study that was conducted, but this result may have been a chance finding among many exposures in a relatively small cohort. No other exposure had a statistically significant positive association with illness. Environmental contamination at one or more sites to which the group was exposed early in the tour could also have been a possible source of the outbreak.

A suspected foodborne outbreak in a private residence was identified when following up a cluster of *S.* Typhimurium PT44 (*S.* Tm 44) cases. There were three confirmed *S.* Tm 44 cases that were ill following a shared lunch eaten by four people. The lunch consisted of sliced silverside, new potatoes and a 'salad' that contained hard boiled duck eggs (home-grown). The vehicle for the outbreak is unknown.

Non-Foodborne Disease Outbreaks

There were 74 non-foodborne outbreaks notified in Tasmania during 2014; 66 due to suspected person-to-person transmission, and eight with an unknown transmission route (Table 1).

Aged care facilities and childcare centres were the most common settings for outbreaks that spread from person to person.

The most commonly detected etiological agent of non-foodborne outbreaks was norovirus, which was detected in specimens from 33 outbreaks. Rotavirus was detected in samples collected during one aged care outbreak. The etiological agent was unknown in 40 non-foodborne outbreaks. This may result from limited or no testing of cases in the outbreak, or to testing being performed but no bacterial and viral pathogens being detected. Many such outbreaks have the clinical and epidemiological appearance of viral gastroenteritis.

Table 1: Non-foodborne outbreaks in Tasmania reported during 2014, by suspected mode of transmission and etiological agent.

Transmission Type	Agent	Setting					Transmission Type total
		Aged Care	Child Care	Hospital	School	Other	
Person to person transmission	Norovirus	**25**	**1**	**6**		**1**	**33**
	Rotavirus	**1**					**1**
	Unknown	**10**	**21**		**1**		**32**
Unknown transmission	Unknown	**5**	**2**	**1**			**8**
	Setting Total	**41**	**24**	**7**	**1**	**1**	**74**

Sexually Transmissible Infections

Chlamydia

Chlamydia was the most commonly notified disease during 2014 in Tasmania. There were 1 776 cases of *Chlamydia* notified in Tasmania during 2014, slightly more than the annual mean count for the previous five years (1 714 cases). The notification rate of *Chlamydia* in Tasmania (346 cases per 100 000 persons) was slightly less than the national rate (372 per 100 000 persons). Cases were most common among people in their late teens to mid-twenties and females represented 65 per cent of cases diagnosed in 2014. The rate of notification in females was greater than that in males (rate ratio=1.85, 95% CI 1.72-1.96, p=<0.0001).

The notification rate was higher in the South of the state compared to the North (rate ratio 1.47; 95% CI 1.31-1.66, p=<0.0001) and compared to the North West (rate ratio 1.35; 95% CI 1.19-1.52, p=<0.0001).

The CDPU ceased collection of enhanced data on chlamydia notifications mid-2014.

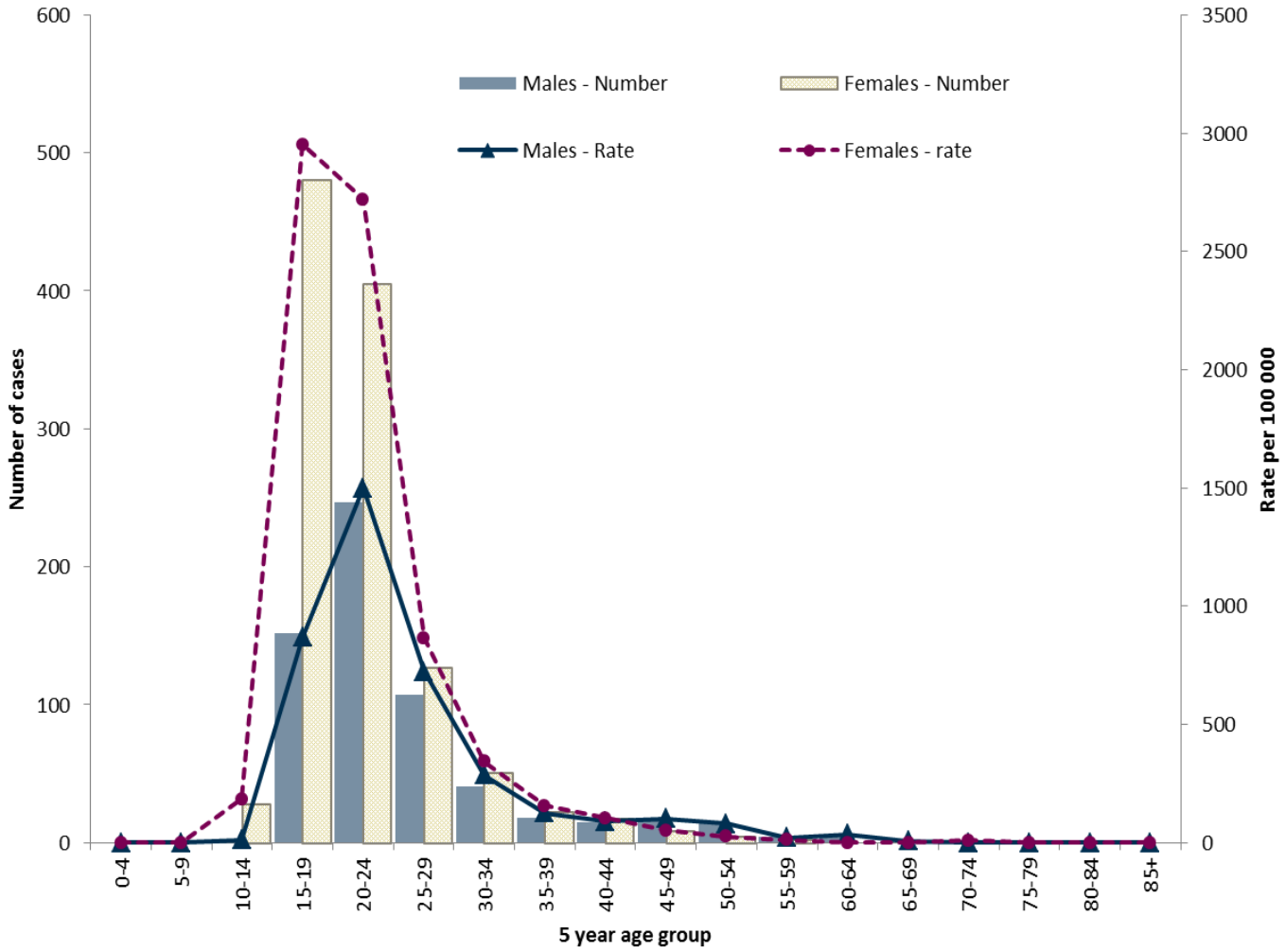

Figure 1: Chlamydia notifications in Tasmania by five year age group and sex, 2014.

Gonococcal Infection

There were 65 cases of gonococcal infection notified in Tasmania during 2014, significantly more than the annual mean count for the previous five years (33 cases). This increase in notification during 2014 was the continuation of an increase that began in the latter half of 2012. Despite this, the notification rate of gonococcal infection in Tasmania (13 per 100 000 persons) was significantly lower than the national rate (68 per 100 000 persons). Changes in testing procedures in one laboratory in 2012 have likely contributed to the increase in the number of diagnosed gonococcal infections in the last two years.

Notifications of gonococcal infection during 2014 were predominantly male (56 cases, 86 per cent of notifications) with a moderate proportion of these males reporting sexual activity with other men (68 per cent of males). Just under half of gonococcal infections in 2014 were diagnosed by the DHHS Sexual Health Service. No isolates of *Neisseria gonorrhoeae* were resistant to ceftriaxone. A large number of cases were diagnosed by PCR alone (58 per cent) and the proportion of cases diagnosed by culture only has declined over the last five years, potentially resulting in a loss of susceptibility data for *Neisseria gonorrhoeae* isolates.

Syphilis

There were 14 cases of infectious syphilis notified in Tasmania during 2014, slightly more than the annual mean count for the previous five years (11 cases), but a lower number of cases in comparison to 2013 (20 cases). The notification rate of infectious syphilis in Tasmania (2.73 per 100 000 persons) was lower than the national rate (8.7 per 100 000 persons). The majority of diagnoses were in men (86 per cent; 12 cases). Infection in males was mainly associated with sexual activity with other men (67 per cent of male cases) with a small proportion of males reporting sexual exposure as heterosexual contact only (16 per cent) or with persons of both sexes (16 per cent). Sixty four percent of infections notified during 2014 were diagnosed at the DHHS Sexual Health Services.

There were 18 cases of syphilis of unknown duration (often long-standing or past infection) notified in Tasmania during 2014, slightly more than the annual mean count for the previous five years (14 cases). The notification rate of syphilis of unknown duration in Tasmania (3.9 per 100 000 persons) was significantly lower than the national rate (8.5 per 100 000 persons).

Other Sexually Transmissible Infections

There was one case of lymphogranuloma venereum (LGV) notified in 2014, which was overseas acquired. There were no cases of chancroid notified in Tasmania in 2014.

Vaccine Preventable Diseases

Measles

In 2014 there were five cases of measles notified in Tasmania. Measles has rarely been reported in previous years due to immunisation, with the last cases notified in Tasmania in 2009, and so this number of cases was more than the annual mean count for the previous five years (less than one case case). The notification rate of measles in Tasmania (1 per 100 000 persons) was similar to the national rate (1.5 per 100 000 persons). Cases ranged in age from 9 months to 52 years.

Three cases were linked to one another in one cluster, with the index case in this cluster acquiring the infection overseas (Papua New Guinea). There was one case acquired in Taiwan and linked to a cluster in another jurisdiction. The remaining case was also linked to a cluster in another jurisdiction. There were increased measles cases elsewhere in Australia at this time, with most cases acquired overseas but also some local secondary transmission. The Tasmanian cases during 2014 resulted in extensive contact tracing and provision of post exposure prophylaxis by the CDPU in collaboration with several hospitals and general practices.

Influenza

There were 673 cases of influenza notified in Tasmania during 2014, more than the annual mean count for the previous five years (634 cases), but less than in than 2013 (1538 cases). The notification rate of influenza in Tasmania (131 per 100 000 persons) was lower than the national rate (293 per 100 000 persons).

The notification rate of influenza was higher in the South of the state compared to the North (rate ratio 2.10, 95% CI 1.91-2.31, p=<0.0001) and North West of the state (rate ratio 2.06, 95% CI 1.87-2.27, p=<0.0001). Cases were diagnosed across all age groups, with peaks in notifications reported in adults aged 30 to 65 years of age, a total of 385 cases (57 per cent of all notifications). Children less than five years of age accounted for 6 per cent of cases diagnosed (43 cases). While older people aged 65 years and over accounted for 16 per cent of cases diagnosed. Annual influenza vaccination is funded for persons aged 65 years and over.

Influenza A virus was the main cause of influenza infections in Tasmania during 2014, accounting for 88 per cent (592) of cases. The H1N1 subtype of influenza A virus that first appeared during the 2009 influenza pandemic now circulates annually as one of several seasonal strains and made up about a third (33 per cent) of influenza A notifications during 2014. However over half the influenza A cases notified were not identified further to subtype. Small numbers of cases of H3N2 were also reported during 2014. Influenza B cases made up 12 per cent (81 cases) of notifications during 2014 (Figure 2).

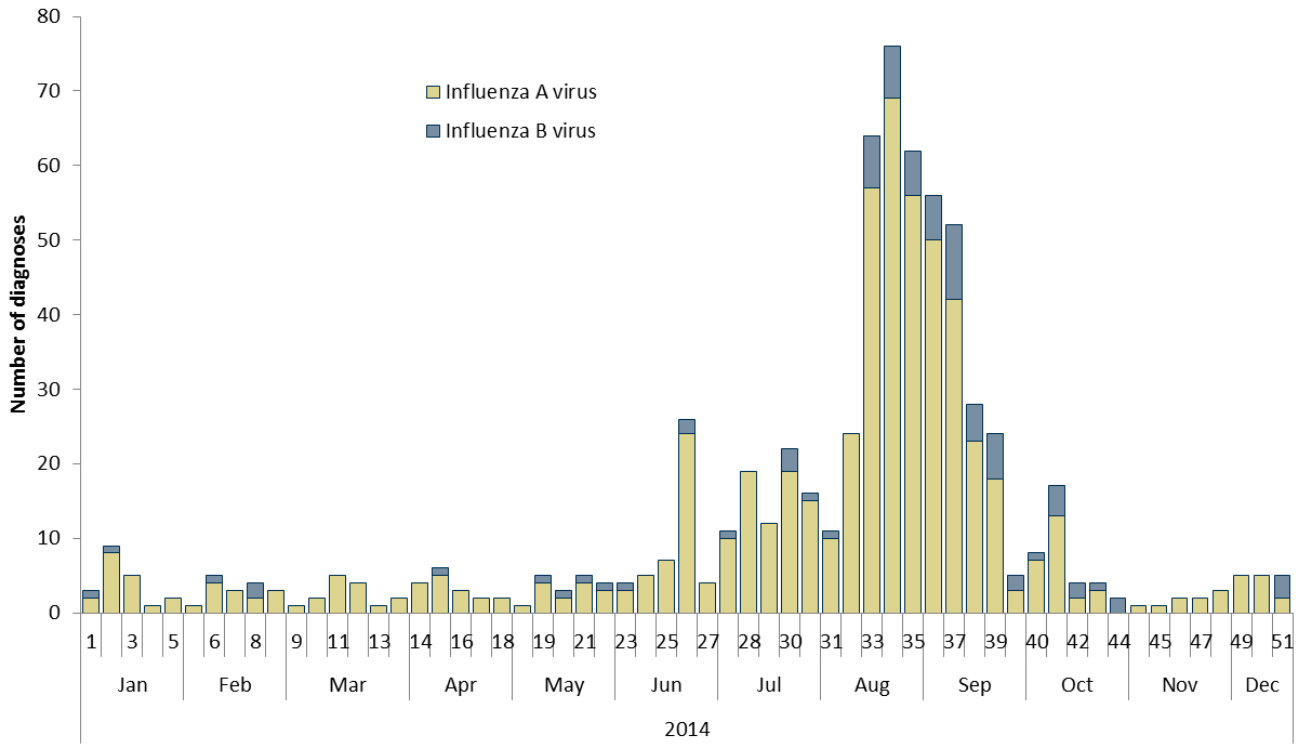

Figure 2: Weekly Influenza laboratory notifications in Tasmania, 2014.

Invasive Meningococcal Disease

Two cases of invasive meningococcal disease were notified in Tasmania during 2014, fewer than the annual mean count for the previous five years (6 cases). The notification rate of invasive meningococcal disease in Tasmania (0.4 per 100 000 persons) was similar to the national rate (0.7 cases per 100 000). One case was in an infant with infection caused by serogroup B. The other case was in an elderly female with infection caused by serogroup W135. Infant immunisation against serogroup C meningococcal disease is part of the funded National Immunisation Program. There were no cases of serogroup C infection in 2014, and only two cases in the preceding five years.

Pertussis (Whooping Cough)

There were 68 cases of pertussis notified in Tasmania during 2014, well below the annual mean count for the previous five years (610 cases), far less than during the peak of the recent epidemic cycle in 2012 (1276 cases) and the lowest number of cases notified since 2008. The notification rate of pertussis in Tasmania (13.3 per 100 000 persons) was lower than the national rate (51.3 per 100 000 persons). Cases were spread throughout different age groups; two cases were infants aged less than one year old. Sixty six per cent of cases were female (45/68 cases). Only a small number of cases were hospitalised (four cases, six per cent) though hospitalisation status was unknown for most cases (76 per cent).

The population-based rate of notification of pertussis was higher in North of Tasmania (26.2 cases per 100 000 persons) compared to the South (6.7 cases per 100 000 persons) (rate ratio 3.8; 95% CI 2.13 - 7.34, p=<0.0001) and the North-West (11.3 cases per 100 000 persons) (rate ratio 2.3, 95% CI 1.21-4.75, p=0.0062).

Invasive Pneumococcal Disease

Thirty nine cases of invasive pneumococcal disease were notified in Tasmania during 2014, slightly less than the annual mean count for the previous five years (43 cases). The notification rate of invasive pneumococcal disease in Tasmania (7.6 per 100 000 persons) was similar to the national rate (6.8 per 100 000 persons).

Infants are routinely vaccinated against invasive pneumococcal disease, previously with a 7-valent conjugated vaccine, and since 2011 with a 13-valent conjugated vaccine, as part of the funded National Immunisation Program. Only two cases in 2014 were children aged less than five years; both children were fully vaccinated with the current 13-valent conjugated vaccine, they were both infected with serotypes of *Streptococcus pneumoniae* that are included in the current infant vaccine (6A and 3).

There were 10 cases of invasive pneumococcal disease in persons aged 65 years or more. Adults aged 65 years and over are eligible for immunisation with the 23-valent polysaccharide vaccine as part of the funded National Immunisation Program. Five of the 10 cases in this age group were infected with serotypes included in the 23-valent pneumococcal vaccine. Of the 10 cases in this age bracket, three had received no vaccine (with two cases infected with a serotype in the current 23-valent vaccine). Five cases had received 23-valent polysaccharide vaccine, one case had an unknown pneumococcal vaccine recorded and for one case the immunisation status was unknown. Of the five cases vaccinated with the 23-valent polysaccharide vaccine, three cases were infected with serotypes contained in the vaccine (two cases with 7F and one case with 19A).

Mumps

There were five cases of laboratory-diagnosed mumps notified in Tasmania during 2014, more than the annual mean count for the previous five years (2 cases). The notification rate of mumps in Tasmania (1.0 per 100 000 persons) was similar to the national rate (0.8 per 100 000 persons). The age of cases ranged from 38 to 58 years; there were no links between individual cases. One case was recorded as having had no vaccine; the immunisation status for the remaining cases was unknown. Mumps was previously a common childhood infection, but is now usually rare due to immunisation.

Varicella Zoster Infection

There were 439 cases of confirmed varicella zoster infection notified in Tasmania during 2014, comprising 31 cases of chicken-pox, 272 cases of shingles and 136 cases of unspecified varicella zoster. There were an additional 17 cases of probable chicken pox notified. Probable cases are notified based on the clinical diagnosis of chicken pox and do not require laboratory confirmation. The total count of varicella zoster cases (456) was higher than the annual mean for the previous five years (315 cases). The number of cases within each category of varicella zoster notification was higher in 2014 compared to those numbers reported in previous years. The notification rate of varicella zoster in Tasmania (88 per 100 000 persons) was similar to the national rate (85 per 100 000 persons). Differences between notification rates are difficult to interpret because of variation in surveillance and follow-up processes in the various jurisdictions.

Rotavirus Infection

Seventy six cases of laboratory-diagnosed rotavirus infection were notified in Tasmania during 2014, lower than the annual mean count for the previous five years (90 cases). The notification rate of rotavirus infection in Tasmania was 15 per 100 000 persons. Rotavirus infection is not a nationally notifiable disease; no national rate is available for comparison.

Other Vaccine Preventable Diseases

There were no cases of invasive *Haemophilus influenzae* type B (HiB) infection, rubella, diphtheria, poliomyelitis or tetanus notified within Tasmania during 2014. All these infectious diseases were once either common or occasional causes of significant illness and sometimes death. All have become very rare since the advent of widespread immunisation.

Vector-Borne Diseases

Dengue

Seventeen cases of dengue virus infection were notified in Tasmania during 2014, more than double the annual mean count for the previous five years (eight cases). The notification rate of dengue virus infection in Tasmania (3.3 per 100 000 persons) was the lowest of any Australian State or Territory during 2014. The national rate was 7.4 cases per 100 000 persons. All cases had acquired their infection during recent overseas travel, with travel to South East Asia (particularly Indonesia and Thailand) accounting for most cases.

Malaria

Four cases of malaria were notified in Tasmania during 2014, slightly less that the annual mean count for the previous five years (seven cases). The notification rate of malaria in Tasmania (0.8 per 100 000 persons) was similar to the national rate (1.4 per 100 000 persons). All four cases were identified as *P. falciparum*, with cases likely acquired in Africa. Notifications included both symptomatic persons (two cases) and screened asymptotic refugees (two cases).

Ross River Virus Infection

Ross River virus infection is the only endemic mosquito-borne disease in Tasmania. Eighteen cases of Ross River virus infection were notified in Tasmania during 2014, similar to the annual mean count of the previous five years (20 cases). The notification rate of disease in Tasmania was 3.5 cases per 100 000, and was much lower than the national rate (23 cases per 100 000). Fourteen cases were classified as locally acquired infections within Tasmania. One case was acquired in Western Australia; for the remaining three cases the place of acquisition was unknown.

Other Vector-Borne Infections

Four cases of rickettsial infection were notified in Tasmania during 2014, similar compared to the annual mean count for the previous five years (four cases). Cases reported no interstate travel and were thought to be cases of Flinders Island spotted fever (FISF).

There were no cases of barmah forest virus infection, Japanese encephalitis virus infection, kunjin virus infection, Murray Valley encephalitis virus infection, chikungunya virus infection, or typhus (*Rickettsia prowazekii* infection) notified in Tasmania in 2014.

Zoonoses

Hydatid Infection

There were four cases of hydatid infection notified in Tasmania during 2014, which was higher than the annual mean count for the previous five years (two cases). Three cases were thought to have been likely acquired in Tasmania many years before Tasmania was declared provisionally hydatid-free in 1996. The remaining case was overseas born and had lived in two countries where hydatid disease was likely endemic.

Further information on hydatid disease in animals in Tasmania can be found via the Department of Primary Industries, Parks, Water and Environment (DPIPWE).

Other Zoonoses

There was one case of leptospirosis, with the disease likely acquired in Thailand.

There were no cases of anthrax, Australian bat lyssavirus, brucellosis, psittacosis (ornithosis), Q fever or tularaemia notified in Tasmania in 2014.

Quarantinable Diseases

There were no cases of the quarantinable diseases cholera, plague, rabies, smallpox, viral haemorrhagic fever or yellow fever notified in Tasmania in 2014.

Other Notifiable Diseases

Legionellosis

Eight cases of legionellosis (Legionnaire's disease) were notified in Tasmania during 2014, similar to the annual mean count for the previous five years (six cases). The notification rate of legionellosis in Tasmania (1.6 per 100 000 persons) is similar to the national rate (1.8 per 100 000 persons). The eight cases in 2014 comprised five *Legionella longbeachae* cases and two *Legionella pneumophila* cases. The remaining case was reported as *Legionella* species. Most cases appear to have been acquired within Tasmania; one cases of *L. longbeachae* was thought to have been acquired in Vietnam, and one case of *L. pneumophila* was likely acquired in the United States of America; no cases were linked and no point sources of infections were identified.

Tuberculosis

Nine cases of tuberculosis were notified in Tasmania during 2014, similar to the annual mean count for the previous five years (10 cases). The notification rate of tuberculosis in Tasmania (1.8 per 100 000 persons) was less than the national rate (5.8 per 100 000 persons).

Of the tuberculosis cases diagnosed in 2014, cases were scattered across age groups, ranging in age from three months to 68 years of age; 67 per cent were female. Most cases were diagnosed from pulmonary sites (five cases) with one case also having an additional extra pulmonary site identified. The remaining three cases were diagnosed from extra pulmonary sites only.

The majority of cases were overseas born (67 per cent) with this identified as the predominant risk factor amongst cases in 2014. Other risk factors identified in single cases were close family contact, possible old untreated tuberculosis and receiving immunosuppressive treatment. Most cases were likely acquired overseas, predominantly from countries in South East Asia, There were single cases acquired in African and Middle Eastern Countries. One case was locally acquired from close family contact with another tuberculosis case. No cases of multi drug resistant tuberculosis were identified during 2014. Co-infection with HIV was found in one case.

Other Notifiable Diseases

There were two confirmed cases of Creutzfeldt-Jacob Disease (CJD) notified in Tasmania in 2014. There were no cases of leprosy in 2014.

Healthcare associated infections

Staphylococcus aureus bacteraemia

There were 149 cases of *Staphylococcus aureus* bacteraemia (SAB) notified in Tasmania during 2014, comprising 103 community associated cases and 46 healthcare associated cases. The total number of SAB cases in 2014 was higher than the annual mean for the previous five years (113 cases). This increase is due to an increase in community associated SAB. The numbers of healthcare associated SAB have remained low and stable over the past five years.

Vancomycin resistant enterococci

There were 48 cases of vancomycin resistant enterococcus *(*VRE*)* notified in Tasmania during 2014, comprising 44 cases identified via screening and four cases identified via clinical specimens. The total number of VRE cases in 2014 was higher than the annual mean for the previous five years (36 cases). The reasons for this increase are not clear but could be related to transmission of VRE amongst hospitalised patients or an increase of people with VRE in the community or improved screening processes leading to better targeted screening or an overall increase in screening or a combination of one or more of these factors.

This report is produced by the Communicable Diseases Prevention Unit of Public Health Services.

For any queries and feedback please make contact via cdpu.surveillance@dhhs.tas.gov.au

Further information about influenza activity in Tasmania during 2014 is available in the **fluTAS Report**

Find more information about notifiable diseases in **Tasmania** from the CDPU website

Additional information on healthcare associated infections in Tasmania can be found at the TIPCU website

National communicable disease information and reports are available at Commonwealth Department of Health

Summary **national** data is available at National Notifiable Diseases Surveillance System

Acknowledgements

The conduct of notifiable disease surveillance for public health purposes is not possible without the timely and diligent notification of these diseases by pathology laboratories and medical practitioners. We wish to thank all those organisations and individuals who were involved with reporting notifications during 2014. In addition we wish to thank all those involved providing additional information of cases and responding individual events which required follow up of contacts.

Contributors: Michelle Green, David Coleman. Kelly Shaw, Laura Collie, Cameron Sault, Kate Turner. Fiona Wilson, Annie Wells

Table 2: Notifiable diseases reported in Tasmania during 2014 with comparison to previous years, by derived diagnosis date.

	2009	2010	2011	2012	2013	5y Mean*	2014	Ratio^
Blood-borne Diseases								
Hepatitis B-Newly Acquired	14	6	14	10	4	10	4	0.4
Hepatitis B-Unspecified	71	48	37	60	56	54	55	1.02
Hepatitis C-Newly Acquired	22	23	27	23	19	23	14	0.61
Hepatitis C-Unspecified	261	240	201	240	214	231	211	0.91
HIV infection - newly diagnosed	14	10	15	13	12	13	16	1.25
Gastrointestinal Diseases								
Campylobacteriosis	650	737	864	882	699	766	934	1.22
Cryptosporidiosis	67	100	42	42	74	65	30	0.46
Giardia	105	128	106	97	125	112	119	1.06
Haemolytic Uraemic Syndrome	0	0	0	1	0	0	1	0
Hepatitis A	5	4	4	2	0	3	1	0.33
Hepatitis E	0	0	0	0	0	0	0	0
Listeriosis	3	3	2	3	2	3	4	1.33
Salmonellosis	166	236	195	278	246	224	249	1.11
Shiga toxin producing *E.coli*	0	0	2	7	1	2	0	0
Shigellosis	2	5	2	7	3	4	2	0.5
Typhoid	1	1	3	1	0	1	1	1
Vibrio Infection	0	1	0	3	1	1	2	2
Yersinia	0	2	0	1	4	1	5	5
Sexually Transmissible Infections								
Chlamydia	1466	2008	1776	1781	1538	1714	1776	1.04
Gonococcal Infection	21	20	19	35	69	33	65	1.97
Lymphogranuloma venereum (LGV)	0	0	1	0	0	0	1	0
Syphilis-infectious	10	6	6	14	20	11	14	1.27
Syphilis-unknown duration	18	15	19	10	10	14	18	1.29
Vaccine-preventable Diseases								
Haemophilus influenzae Type B Infection (invasive)	0	0	0	1	0	0	0	0
Influenza	1312	107	363	1093	297	634	673	1.06
Measles	2	0	0	0	0	0	5	0
Meningococcal Disease (invasive)	3	6	10	7	3	6	2	0.33
Mumps	1	0	4	1	5	2	5	2.5
Pertussis	622	280	351	1276	522	610	68	0.11
Pneumococcal Disease (invasive)	39	46	47	45	37	43	39	0.91
Rotavirus	51	119	73	97	110	90	76	0.84
Rubella	0	0	0	1	0	0	0	0
Varicella zoster (chicken pox)	38	24	36	28	30	31	48	1.55
Varicella zoster (shingles)	133	193	217	263	250	211	272	1.29
Varicella zoster (unspecified)	64	70	62	84	85	73	136	1.86
Vector-borne Diseases								
Barmah Forest Virus	3	2	2	0	3	2	0	0
Dengue	2	7	3	8	19	8	17	2.13
Malaria	5	5	9	7	11	7	4	0.57
Rickettsial Infection	0	6	6	4	2	4	4	1
Ross River Virus	29	38	7	18	8	20	18	0.9
Typhus	0	0	1	0	0	0	0	0
Zoonoses								
Hydatids	3	0	3	1	1	2	4	2
Leptospirosis	0	1	1	0	0	0	1	0
Psittacosis(Ornithosis)	0	3	1	0	0	1	0	0
Other Notifiable Diseases								
Creutzfeldt-Jakob disease (CJD)	0	2	1	0	0	1	2	2
Legionellosis	1	6	7	12	6	6	8	1.33
Staphylococcus aureus bacteraemia	113	103	113	117	121	113	149	1.31
Tuberculosis	11	11	14	6	10	10	9	0.9
Vancomycin resistant enterococcus	33	29	19	37	61	36	48	1.33

Note:

*The five-year mean was calculated for the years 2009-2013.

^The ratio is the number of cases notified in 2014 divided by the five-year mean for the years 2009-2013.