Communicable Diseases Branch

NSW VACCINE PREVENTABLE DISEASE ANNUAL REPORT 2016

NSW GOVERNMENT Health Communicable Diseases

Produced by:

COMMUNICABLE DISEASES BRANCH
Health Protection NSW
Locked Mail Bag 961
North Sydney NSW 2059
Email: hprot@doh.health.nsw.gov.au
www.health.nsw.gov.au/infectious/pages/default.aspx

Suggested citation:
Communicable Diseases Branch, NSW vaccine preventable disease annual report 2016.

June, 2018

Contents

Glossary

LHD	Local health district	NS	Northern Sydney LHD
CC	Central Coast LHD	PHU	Public health unit
FW	Far West LHD	SES	South Eastern Sydney LHD
HNE	Hunter New England LHD	SNSW	Southern NSW LHD
IS	Illawarra Shoalhaven LHD	SWS	South Western Sydney LHD
M	Murrumbidgee LHD	SYD	Sydney LHD
MNC	Mid North Coast LHD	WNSW	Western NSW LHD
NBM	Nepean Blue Mountains LHD	WS	Western Sydney LHD
NIP	National Immunisation Program	NSW	New South Wales
NNSW	Northern NSW LHD	VPD	Vaccine preventable diseases

Summary

This annual report aims to describe the epidemiology of selected vaccine preventable diseases in New South Wales, Australia for the year 2016. Publishing regular epidemiological updates enables the identification of trends both nationally and internationally, informing ongoing disease surveillance and control efforts.

Conditions included in the report are: diphtheria, invasive *Haemophilus influenzae* type b disease, measles, mumps, invasive meningococcal disease, pertussis, invasive pneumococcal disease, rubella and tetanus.

Most vaccine preventable diseases in NSW remain well controlled with a low and stable level of notifications occurring each year. However control of pertussis remains a persistent challenge.

2016 vaccine preventable disease trends

- Pertussis cases decreased in 2016 following an outbreak in 2015.
- Measles notifications doubled in 2016 compared to 2015, due to several small outbreaks associated with importations from overseas. D8 continued to be the predominant genotype in 2016.
- Meningococcal disease notifications continued to increase in 2016, largely due to increases in cases caused by serogroups W and Y. This situation has been observed elsewhere in Australia and will be monitored into 2017.
- Mumps, rubella, tetanus, diphtheria, and *Haemophilus influenzae* type b disease remain well controlled in NSW.

Introduction

Under the New South Wales (NSW) Public Health Act 2010, certain conditions are required to be notified to public health authorities in NSW. Notification of conditions allows for a coordinated public health response to minimise the risk to the community and to limit onward spread of the disease. Furthermore, disease surveillance allows for epidemiological analysis of notification data, facilitating the identification of patterns and trends which can inform public health policy. Monitoring of vaccine preventable disease allows an assessment of the effectiveness of vaccine programs and can inform subsequent public health action.

This report is part of a yearly series examining NSW epidemiology. Description of the NSW health system and Australian vaccination schedule has been published previously (1). In NSW there are 15 local health districts (LHD) with 12 public health units (PHU). Public health management is conducted at a local level and coordinated centrally by the Communicable Disease Branch, Health Protection NSW.

Australia's National Immunisation Program (NIP) is funded by the Australian Government and administered by states and territories (2) who are also responsible for public health follow up of notifiable conditions (3). In 2016 the Australian government funded a booster dose of diphtheria, tetanus, pertussis (dTpa) vaccine for children at 18 months of age. Immunisation campaigns can also be initiated and funded at a state level, in response to local conditions. In 2016, continued a maternal pertussis vaccination program in response to increasing notifications first observed in 2014 and new evidence on the effectiveness of vaccination during pregnancy in protecting infants during the early months of life (4).

Conditions included in the report are: diphtheria, invasive *Haemophilus influenzae* type b disease, measles, mumps, invasive meningococcal disease, pertussis, invasive pneumococcal disease, rubella and tetanus.

Some other vaccine preventable conditions are also notifiable in NSW including cholera, typhoid, hepatitis A and rotavirus; Q fever; hepatitis B; and influenza infections. Reports on these conditions can be found in the OzFoodNet, Zoonoses, Sexually Transmitted Infections and Influenza Reports. Polio is also notifiable, however, Australia was officially declared polio free on October 29, 2000, with not a single locally acquired case reported since 1972. Chicken pox and shingles are vaccine preventable, but not notifiable in NSW, however emergency department presentations of these conditions are reported (http://www.health.nsw.gov.au/Infectious/Pages/data.aspx)

Methods are presented in appendix 1, rates by year appendix 2

Diphtheria

Diphtheria is a contagious and potentially life-threatening bacterial infection caused by toxin-producing strains of *Corynebacterium diphtheriae*. Diphtheria was a common cause of death in children up until the 1940s but now has almost disappeared in Australia as a result of immunisation, with fewer than four cases notified nationally each year since 1991.

Diphtheria occurs when toxigenic *Corynebacterium diphtheriae* infect the back of the throat. The toxin formed by the diphtheria bacteria can cause inflammation of heart muscle and nerves that can be fatal, with death occurring in 5-10% of cases.

Corynebacterium diphtheriae bacteria can also cause skin infections resulting in a poorly healing ulcer. Not all strains of *Corynebacterium diphtheriae* produce the toxin, and public health units receive notifications of skin infections caused by non-toxigenic *Corynebacterium diphtheriae* from time to time. Skin infections caused by toxin-producing strains are potentially serious in unvaccinated people because of the effects of the toxin on the heart and nervous system. Cutaneous diphtheria is more common in the tropics than in areas where the climate is more temperate.

Diphtheria vaccine is provided as part of the NIP and in 2016 was provided as a part of a combination vaccine at 6 weeks, 4 and 6 months of age, with booster doses at 18 months, and 4 and 12 years of age. The vaccine protects against the toxin produced by the bacterium, so vaccinated people can have infection with *Corynebacterium diphtheriae* but are unlikely to suffer the effects of the toxin.

Summary 2016

- Case count: 0

Haemophilus influenzae type b

Haemophilus influenzae type b disease (Hib) is caused by infection with *Haemophilus influenzae* type b bacteria. Humans are the only known reservoir, and the organism can be carried asymptomatically in the naso- and oro-pharynx. Hib is predominantly transmitted from asymptomatic carriers by direct contact with respiratory droplets or discharges from the nose and throat. It can also rarely be transmitted from infected persons. Hib does not survive in the environment on inanimate surfaces.

Infection can lead to serious illness including meningitis and epiglottitis (inflammation of the throat). Since Hib vaccines were included in the routine childhood immunisation schedule in 1993, there has been a reduction of more than 95% in notified cases of Hib. In 2016, four doses of Hib vaccine were recommended in NSW for all infants at 6 weeks, 4, 6 and 12 months of age and provided as part of free routine immunisation in combination vaccines due at those ages.

Summary 2016

- Case count: 5
- Reported deaths: 0
- Notification rate 0.06 per 100,000

Overall trend:

- Rare in NSW
- Remains at a stable rate

Seasonality:

- Sporadic

Age distribution:

- Two infants
- Three adults (25-44 yrs, 45-64 yrs and 85+ years)

Vaccination status of cases

- Three cases (adults) were not vaccinated
- Two infants were vaccinated for age

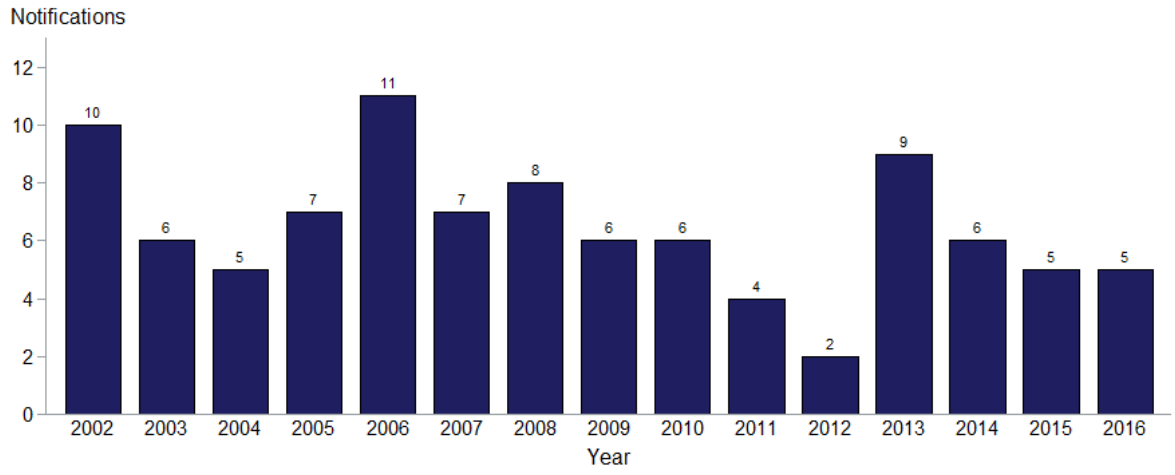

Figure 1. Notifications of Hib 2002 to 2016.

Invasive meningococcal disease

Invasive meningococcal disease (IMD) is caused by infection with one of several serogroups of *Neisseria meningitidis* bacteria. The bacteria are spread through direct contact of mucous membranes with the organism, such as exposure to respiratory droplets from the nose and throat of a person carrying the organism. Close contact may result in the bacteria colonising the throat of the exposed person but in most people this does not cause any disease. In only a very small proportion of people the bacteria may invade from the throat to other parts of the body, causing IMD.

IMD typically involves meningitis (infection of the lining of the brain), septicaemia (infection of the blood) or both. Up to 10 per cent of IMD infections are fatal even with appropriate antibiotic treatment, and survivors may be left with long-term complications.

There are several serogroups of *Neisseria meningitidis* which can cause invasive disease. The common serogroups in Australia are B, C, W and Y.

Prior to 2015, meningococcal notifications had been decreasing in NSW following the introduction of a serogroup C vaccine in 2003 which is provided free of charge at 12 months of age, reaching a low of 37 notifications in 2014. This reduction was observed in both serogroup B and C, despite the NIP only including vaccination against serogroup C.

Notifications of meningococcal disease continued to increase in 2016 with 71 cases reported compared to 44 in 2015. This was partially due to an ongoing increase in meningococcal serogroup W notifications – a pattern which has also been observed across Australia, and internationally (5, 6). This situation continues to be monitored closely.

Meningococcal serogroup B remained the predominant strain in NSW (n=26), with similar numbers seen in serogroup W notifications (n=25). This was the highest number of cases caused by serogroup W ever observed in NSW. A smaller increase in cases caused by serogroup Y (n=15) was also observed in 2016, while cases caused by serogroup C remained low (n=2).

Summary 2016

- Case count: 71
- Reported deaths: 4
    - Serogroups B (1) and W (3)
- Notification rate 0.9 per 100,000

Overall trend:

- Uncommon, but increasing

Seasonality:

- Most notifications late winter/early spring

Age distribution:

- Ten cases in infants
- Nine cases 1-14 yrs old
- 15 cases 15-24 yrs old
- 37 cases in 25 years and older

Vaccination status of cases

- 15 cases vaccinated (but not against infecting strain)
- 56 cases not vaccinated, or could not recall vaccination status

Invasive meningococcal disease (continued)

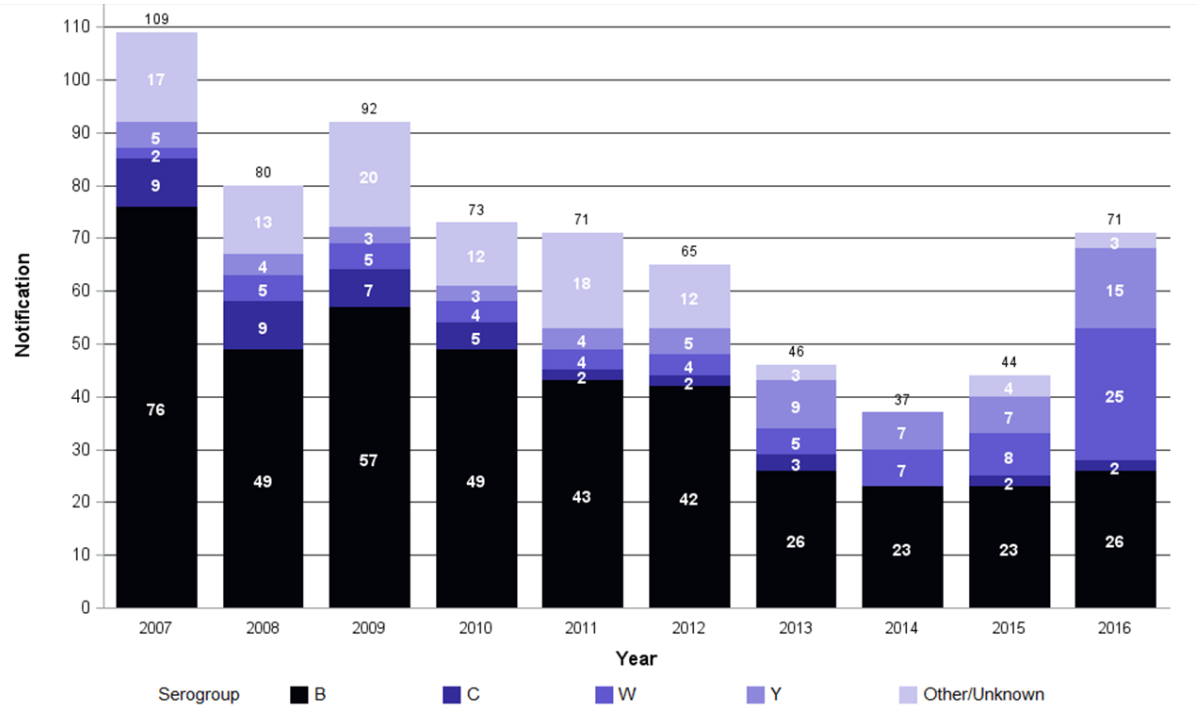

Figure 2. Invasive meningoccal disease notifications by serogroup 2007 to 2016

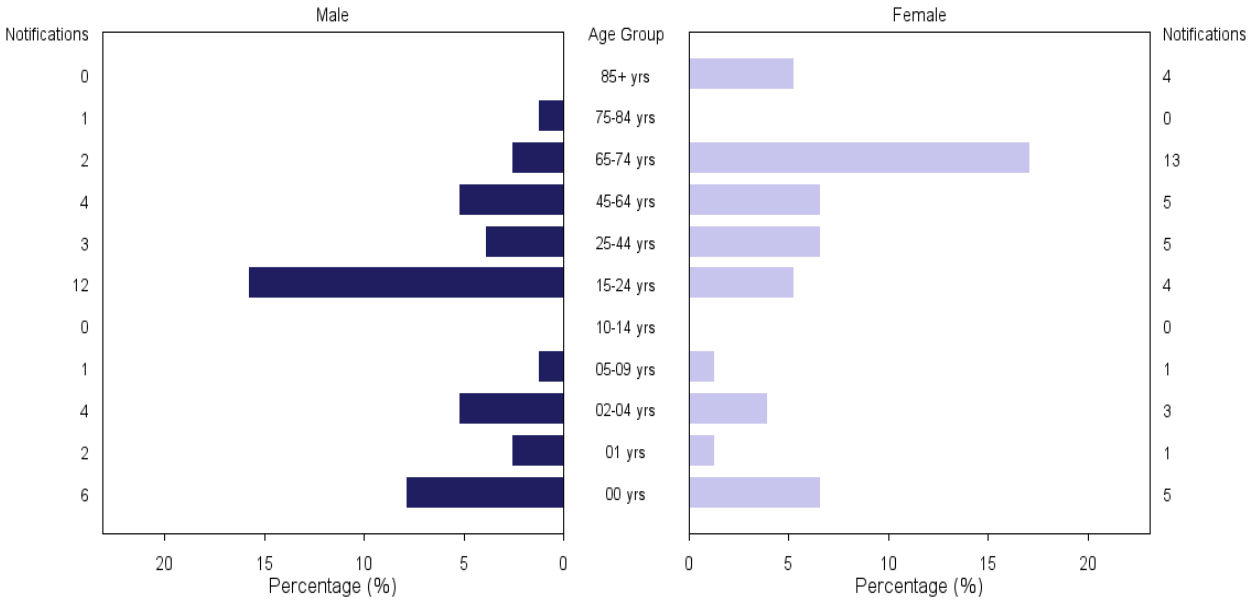

Figure 3. Age and sex distribution for invasive meningococcal disease notifications, 2016

Invasive pneumococcal disease

Invasive pneumococcal disease (IPD) is caused by the bacterium *Streptococcus pneumoniae*. It can cause a variety of presentations including pneumonia, septicaemia (blood infection), otitis media and meningitis. Symptoms depend on the site of infection and the age of the person. People with pneumococcal pneumonia tend to experience shortness of breath, fever, lack of energy, loss of appetite, headache, chest pain and cough.

People most at risk of the infection include children under two years of age, older adults, Aboriginal people, people with lung disease, heart disease, cancer, kidney disease, or HIV infection, people whose spleen has been removed or is impaired, and people who smoke.

There are over 90 serotypes of pneumococcal bacteria. Different pneumococcal serotypes vary in their propensity to cause disease. The current pneumococcal vaccine used for children under the NIP - Prevenar 13® - covers the 13 serotypes most commonly associated with invasive disease, and in 2016 was given in NSW at 6 weeks, 4 and 6 months of age. Adults with risk factors for IPD, Aboriginal people 50 years and over, and other adults 65 years of age and older are eligible for vaccination with Pneumovax 23®, a vaccine which covers 23 serotypes. Under the NIP people in these groups are eligible for one dose, with a second due 5 years later for Aboriginal people and those that have an underlying medical condition.

Summary 2016

- Case count: 541
- Reported deaths: 39
- Notification rate 7 per 100,000

Overall trend:

- Gradually increasing

Seasonality:

- Increase during winter flu season

Age distribution:

- 12% of cases under 5 years of age
- 64% of cases 50 years or over

Vaccination status of cases

- 81% of cases under 5 years old were vaccinated, of these 50% were infected with a serotype not covered by the vaccine
- 38% of cases aged >50 years had received at least one dose of the 23 valent pneumococcal vaccine, of these 56% were infected with a serotype not included in the vaccine

Invasive pneumococcal disease (continued)

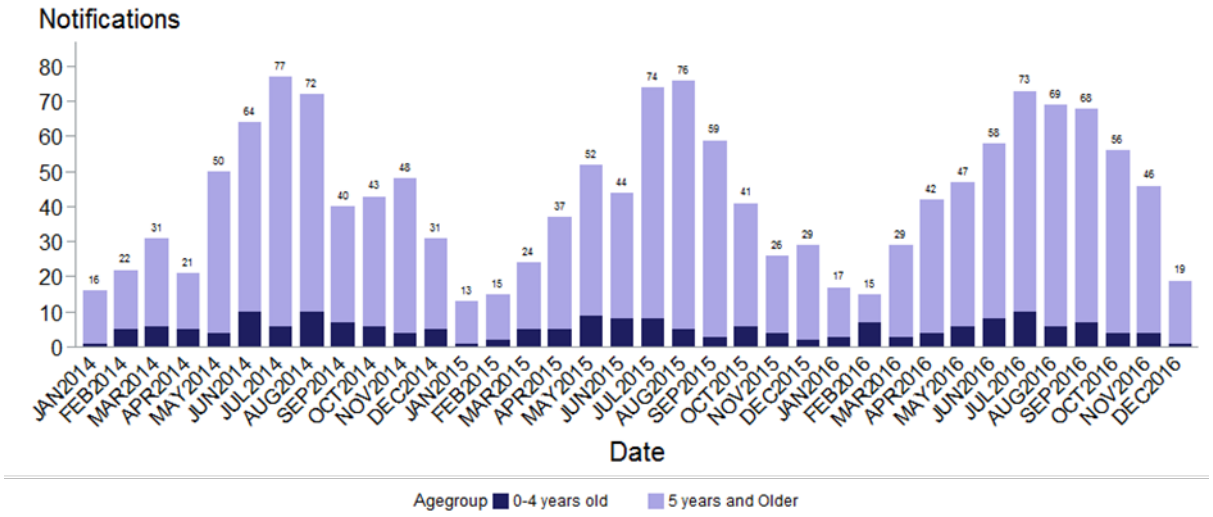

Figure 4. Notifications of IPD by age group, 2002 to 2016.

Five hundred and forty one cases of IPD were notified in 2016, a 10% increase compared to the 490 cases notified in 2015 (Table 1). Forty six deaths were identified; four deaths were in children aged under five years. Of these four deaths all were fully vaccinated, only one death was caused by a serotype (3) contained in the vaccine. Of the remaining deaths, three were in people aged less than 50 years, seven in the 50 to 64 year age group and 32 deaths in people aged 65 years or older.

Of the 409 cases that occurred in the age groups which are followed up by PHUs (0 to 4 year age group, and 50 years or over), 15 (4%) were notified in Aboriginal people, amongst whom case notification rates were higher than in non-Aboriginal people (23.1 and 12.3 per 100,000, respectively).

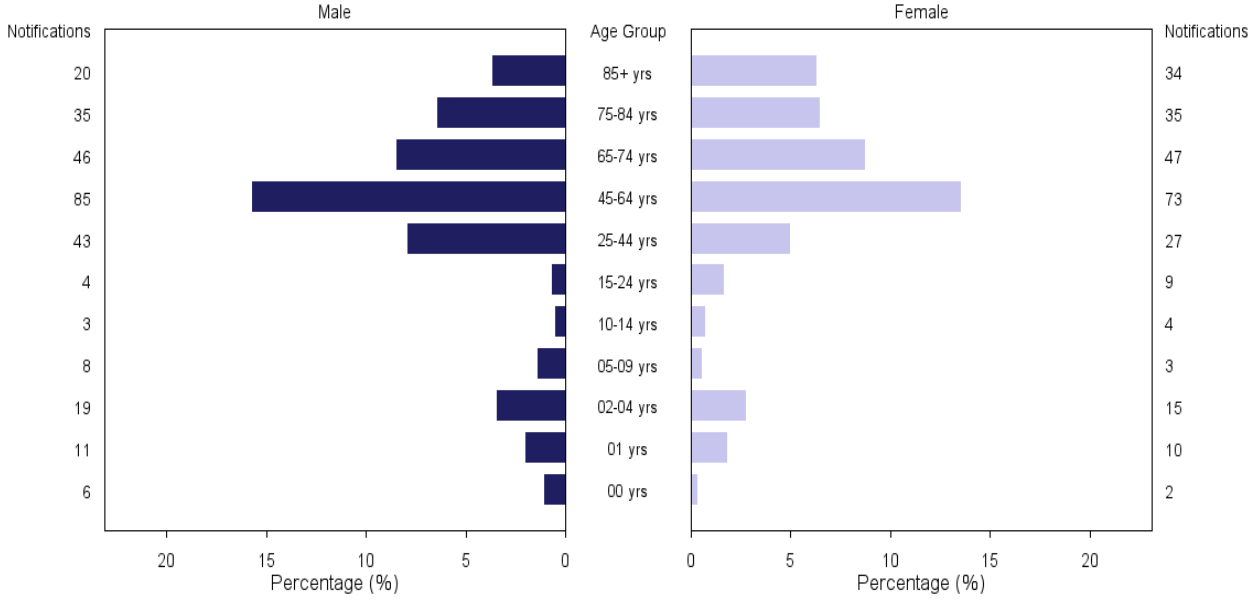

Figure 5. Age and sex distribution of IPD notifications in 2016.

Invasive pneumococcal disease (continued)

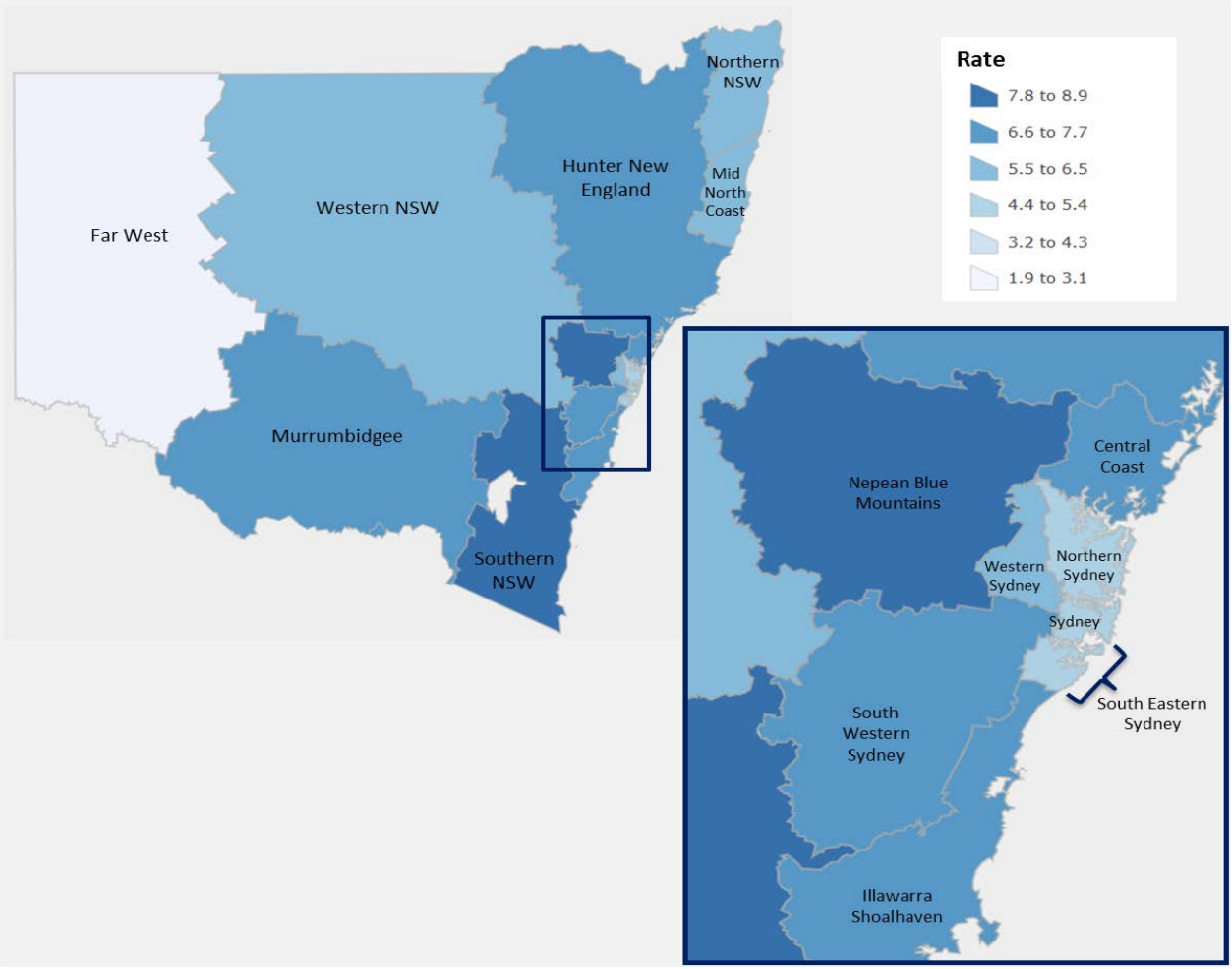

Figure 6. Age and Sex Standardised rate of IPD notifications (per 100,000) by LHD in 2016.

Rates of disease by LHD varied from 2 cases per 100,000 population in Far West NSW LHD to 8.8 cases per 100,000 population in Southern NSW LHD (Figure 4).

The rate of disease in children under five years of age was 12.5 cases per 100,000 population, up from the previous year (11.8 cases per 100,000). Most of the notifications were in adults (Figure 5). Serotype 3 (N=9), 19A (N=6), and 15C (N=6) were the leading cause of all disease in children (42%) of which only serotypes 3 and 19A are included in the current 13-valent vaccine. In children under five years of age, 58% of disease was caused by non-vaccine serotypes and this proportion continues to increase. Of notifications in persons under the age of five years, vaccination data was available for all but one case (98%, 62 cases). Of these, 50 (81%) cases were fully vaccinated, 11 (17%) cases were either partially vaccinated or too young to have received their first dose and one case was not vaccinated. There were 15 (30%) cases of vaccine serotype disease in fully vaccinated children (i.e. vaccine failure), including 10 cases in children aged 2 years and over. Serotype 3 accounted for 47% of vaccine failures, serotypes 19A (27%), 19F (20%) and 14 (6%) were responsible for the remainder of cases. Vaccine failures in children less than five years reported in 2016 is similar to 2015 (17) but with an increased proportion due to serotype 3.

Measles

The measles virus is highly infectious and it is readily transmitted from person to person via respiratory secretions in the air following coughing and sneezing. Symptoms of measles include fever, runny nose, sore red eyes and cough. This is followed three to four days later by a red blotchy rash spreading from the head and neck to the rest of the body.

Infection with measles can cause more serious complications such as middle ear infection, or pneumonia affecting the small airways of the lungs and more rarely, encephalitis (swelling of the brain). Subacute sclerosing panencephalitis is a very rare, chronic, fatal, brain inflammation, which occurs years after infection in one per 100,000 cases.

Measles containing vaccine is routinely offered to all children at 12 months (as measles-mumps-rubella) and 18 months of age (as measles-mumps-rubella-varicella) through the NIP.

Measles cases, doubled in 2016 compared to 2015 (figure 7), due to a number of small outbreaks associated with importations from overseas. Despite this increase, numbers continue to remain low. Of the 18 cases notified with onset in 2016 nine acquired their infection overseas, six acquired their infection in NSW and the remaining three acquired their infection in Queensland.

Sixty one per cent of cases in 2016 were unvaccinated, or unable to recall their vaccination status. Two of the three infant cases occurred in children with recent travel to Southern Asia. While they were too young to have received their first dose of MMR as part of the NIP schedule, travel to a country or region with endemic measles in considered a 'special circumstance' under which the first dose can be administered at nine months of age.

Summary 2016

- Case count: 18
- Reported deaths: 0
- Notification rate 0.23 per 100,000

Overall trend:

- Rare in NSW(eliminated)
- Low numbers of sporadic cases – mainly imported or related to importations from overseas
- Genotype: D8

Seasonality:

- Sporadic

Age distribution:

- 15 adults
- Three infants

Vaccination status of cases

- 11 unvaccinated or unable to recall their vaccination status
- Three too young to be vaccinated
- Two vaccinated, but number of doses unknown
- One partially vaccinated
- One fully vaccinated

Measles (continued)

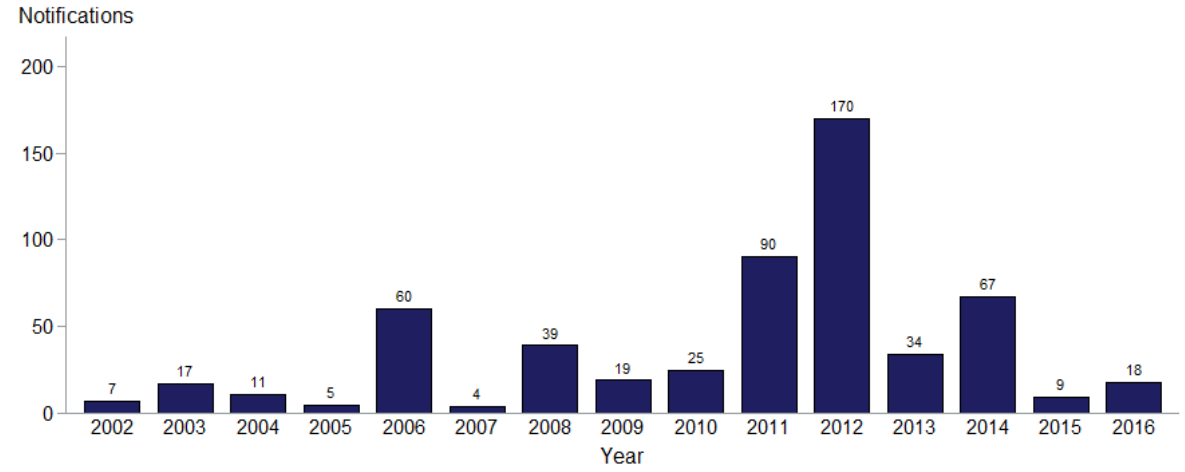

Figure 7. Measles notifications 2002 to 2016

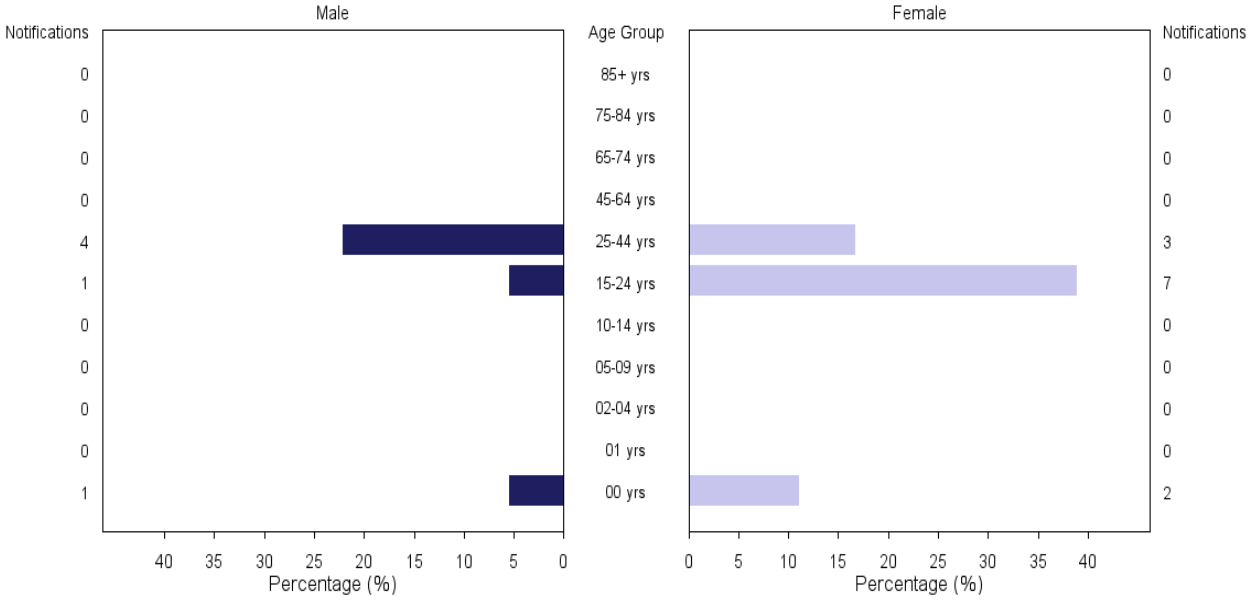

Figure 8. Age and sex distribution of measles notifications 2002 to 2016

Mumps

Mumps is an acute viral disease. Common symptoms include fever, loss of appetite, tiredness and headaches followed by swelling and tenderness of the salivary glands. Complications are rare but can be serious including encephalitis and meningitis, orchitis (infection of the testes), spontaneous abortion and hearing loss.

The mumps virus is transmitted through contact with respiratory secretions; usually from respiratory droplets through the airborne route but also through direct contact with the saliva of an infected person.

Mumps is a vaccine preventable disease, and notifiable in NSW. Vaccination against mumps is with the measles-mumps-rubella (MMR) and measles-mumps-rubella-varicella (MMRV) vaccine, given as part of the NIP and scheduled at 12 and 18 months of age respectively.

Summary 2016

- Case count: 67
- Reported deaths: 0
- Notification rate 0.87 per 100,000

Overall trend:

- Uncommon in NSW

Seasonality:

- Sporadic

Age distribution:

- 55 cases aged 15 years and over
- 12 cases under the age of 15

Vaccination status of cases

- 34 not vaccinated, or unable to recall vaccination status
- 19 confirmed to be vaccinated fully for age
- One too young to be vaccinated

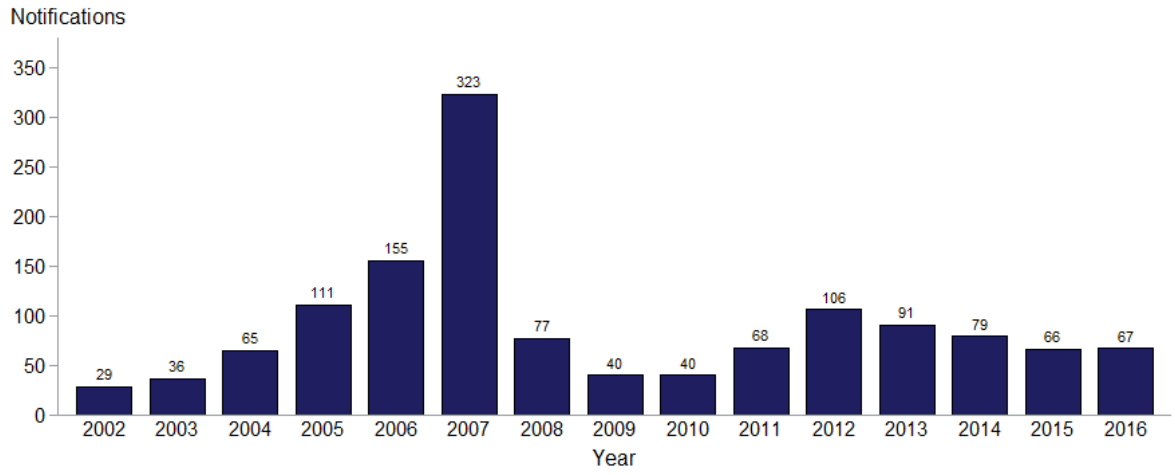

Figure 9. Mumps notifications 2002 to 2016

Pertussis

Pertussis, also known as 'whooping cough', is a highly contagious bacterial infection affecting the respiratory system caused by the bacterium *Bordetella pertussis*. It affects individuals of all ages, but is more severe (and can be fatal) in small babies, particularly those too young to be vaccinated or those who are unvaccinated. Elderly people are also at increased risk of developing complications from pertussis.

Pertussis notifications in NSW saw a sharp decrease compared to 2015 in the first half of 2016, with a slight increase in late winter through to early summer. Although pertussis is a vaccine preventable disease, epidemics can occur every 3 or 4 years despite high vaccination rates due to incomplete protection from the vaccine and waning immunity from both infection and vaccination. Waning immunity refers to a person's progressive loss of protective antibodies against a disease over time, requiring administration of another dose of vaccine (booster). In 2016 vaccination against pertussis was provided under the NIP Schedule with a combination vaccine given at 6 weeks, 4 and 6 months, with booster doses at 18 months, 4 years of age, and in the first year of high school.

To protect infants too young to be vaccinated, the NSW Antenatal Pertussis Vaccination Program continued in 2016, offering free diphtheria, tetanus and pertussis (dTpa – Boostrix®) vaccine to all pregnant women in the third trimester of pregnancy, preferably at 28 weeks gestation. As there is placental transfer of maternal pertussis antibody to the fetus, infants acquire immunity that protects them during the period before they are old enough to be vaccinated at six weeks of age.

Summary 2016

- Case count: 10,836
- Reported deaths: 0
- Notification rate 140 per 100,000

Overall trend:

- Common in NSW
- Periodic epidemics every three to four years

Seasonality:

- Highest notifications from late winter to early summer

Age distribution:

- 392 cases less than one year old
- 1573 cases 1-4 years old
- 8871 cases 5 years old and over
- Adult numbers may be underreported compared to children because adults are not routinely followed up by PHUs to allow case confirmation.

Vaccination status of cases

- In the 0 to 4 age group – for which routine follow up occurs – 91 % were recorded as having received a vaccine for this condition. Of those, 93% were fully vaccinated for age

Pertussis (continued)

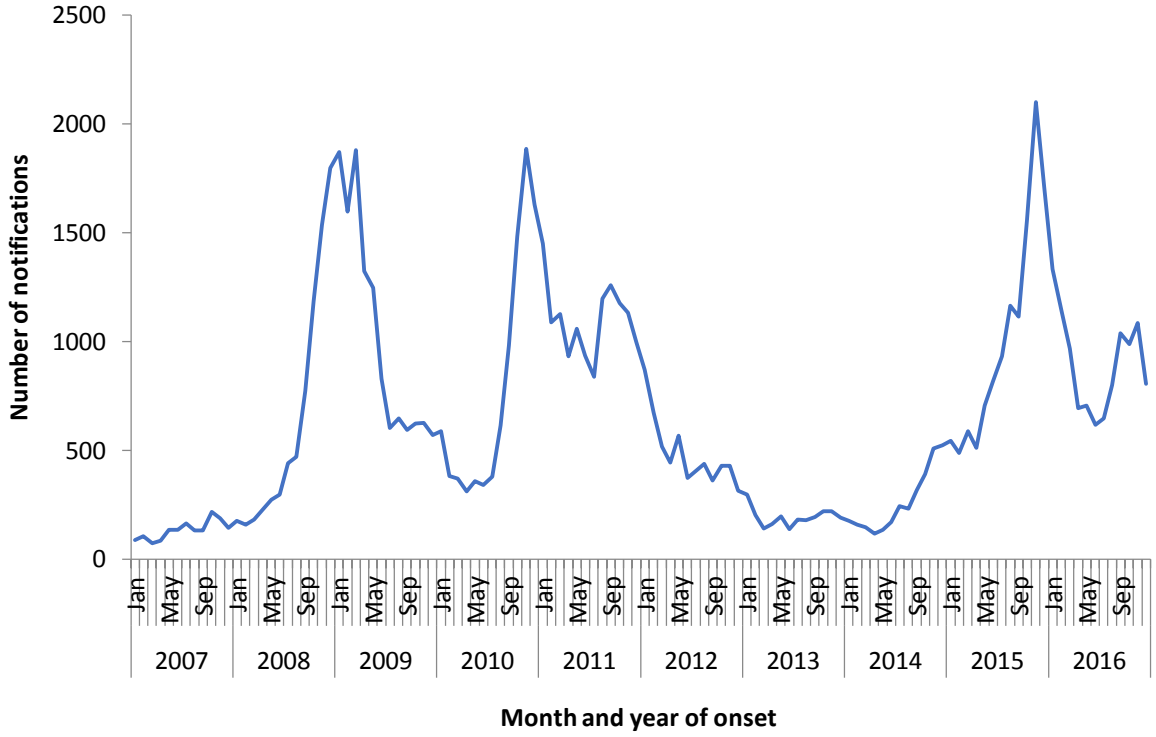

Figure 9. Pertussis notifications 2007 to 2016 by month of onset

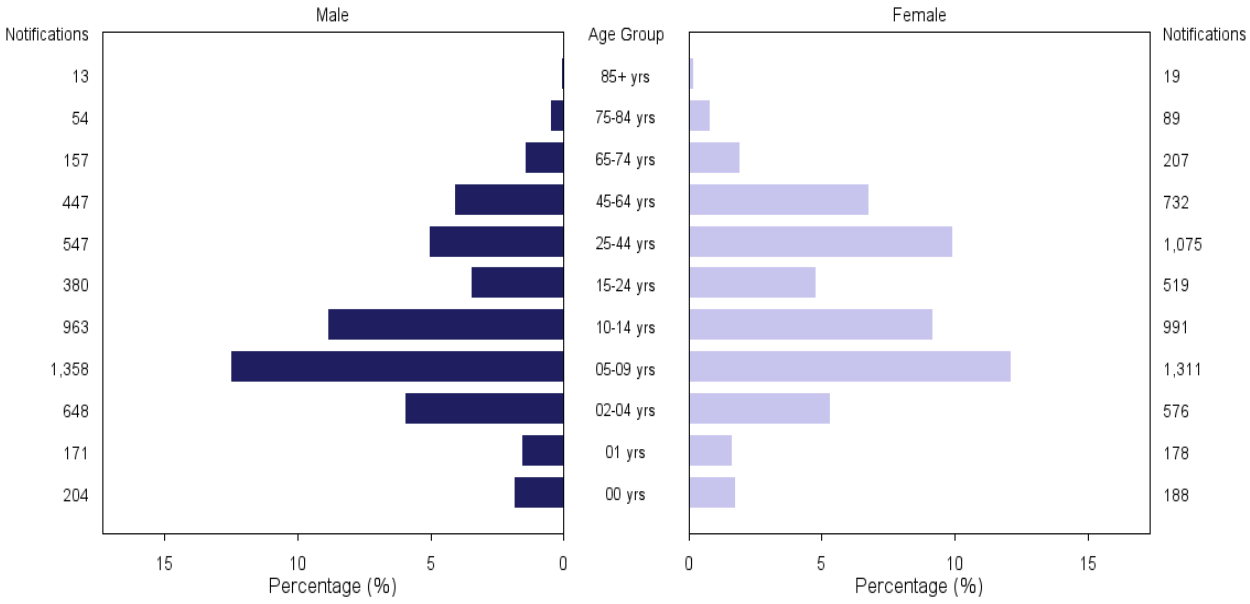

Figure 10. Age and sex distribution of pertussis notifications 2016

Rubella

Rubella is a viral infection causing mild symptoms including fever and a transient rash. Rubella infection of the mother during pregnancy can result in the fetus also becoming infected, causing congenital rubella syndrome. Abnormalities occur in up to 90% of infants born to women who had rubella during the first trimester of pregnancy. Abnormalities include intellectual disabilities, cataracts, deafness, heart abnormalities, intrauterine growth retardation, and inflammatory lesions of the brain, liver, lungs, and bone marrow.

Vaccination against rubella is with the measles-mumps-rubella (MMR) and measles-mumps-rubella-varicella (MMRV) vaccine, given as part of the National Immunisation Program and scheduled at 12 and 18 months of age respectively.

Summary 2016

- Case count: 9
- Reported deaths: 0
- Notification rate 0.12 per 100,000

Overall trend:

- Rare in NSW

Seasonality:

- Sporadic

Age distribution:

- All cases in adults
    - Six cases in females of child bearing age

Vaccination status of cases

- Five vaccinated
    - Two females of child bearing age
- Four unvaccinated or unable to recall their vaccination status

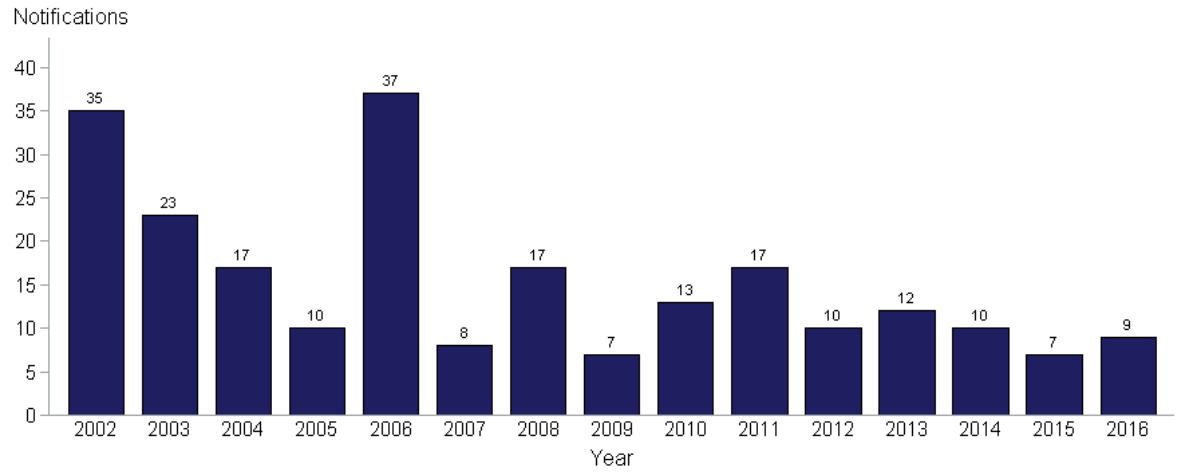

Figure 11. Rubella notifications 2002 to 2016

Tetanus

Tetanus is caused by the bacterium *Clostridium tetani*, an organism which is commonly found in soil, dust and animal faeces. Disease occurs when the organism enters the body through a break in the skin (such as a puncture wound). When the bacterium grows it produces a neurotoxin which causes involuntary muscle contraction; the disease can be life threatening. Tetanus is not transmitted between people.

Infection may occur after minor injury to the skin that is contaminated with soil, dust or manure or after major injuries and burns. Symptoms of the disease usually develop 3 to 21 days after exposure but the onset can sometimes be delayed for several months. Toxin produced by the bacteria attack the central nervous system causing muscle rigidity with painful spasms, including the characteristic muscle spasms of the jaw ("lock jaw").

In 2016, tetanus vaccine was given in combination vaccines at 6 weeks, 4 and 6 months of age, with boosting doses at 18 months, 4 and 12 years of age. Adults who haven't had a booster in the last ten years should also get a dose.

Summary 2016

- Case count: 0
- Reported deaths: 0
- Notification rate 0 per 100,000

Overall trend:

- Rare in NSW
- Remains at a stable rate

Seasonality:

- Sporadic

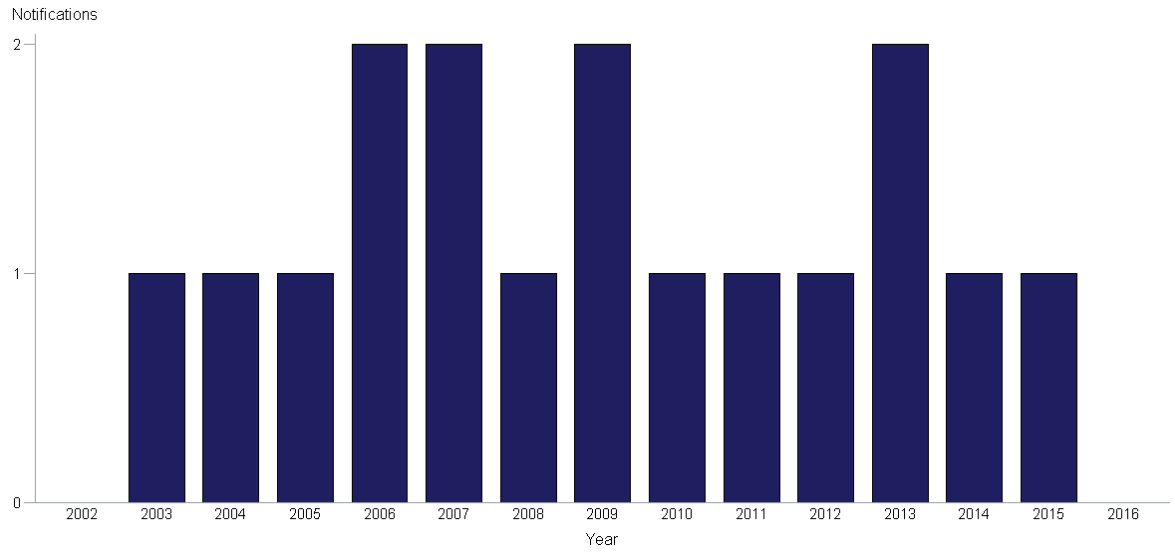

Figure 12. Tetanus notification 2000 to 2016.

References

1. Saul N, Gilmore R, Rose N, Sheppeard V. NSW Annual vaccine-preventable disease report, 2014. in preperation.
2. Australian Technical Advisory Group on Immunisation (ATAGI). The Australian Immunisation Handbook. 10th ed (2015 update) ed. Canberra: Australian Government Department of Health,; 2015.
3. Communicable Diseases Network Australia. Australian national notifiable diseases and case definitions Canberra, Department of Health, 20142014 [Available from: http://www.health.gov.au/casedefinitions,.
4. Saul N, Wang K, Bag S, Baldwin H, Alexander K, Chandra M, et al. Effectiveness of maternal pertussis vaccination in preventing infection and disease in infants: The NSW Public Health Network case-control study. Vaccine. 2018;36(14):1887-92.
5. Bond K, Stevens K, Bulach D, Carville K, Ong K, Howden B. Rising incidence of invasive meningococcal disease caused by Neisseria meningitidis serogroup W in Victoria. The Medical journal of Australia. 2016;204(7):265.
6. Veitch M, Owen R. Rise in invasive serogroup W meningococcal disease in Australia 2013-2015. Commun Dis Intell Q Rep. 2016;40(4):E451.
7. Centre for Epidemiology and Evidence. HealthStats NSW Sydney: NSW Ministry of Health; 2015 [Available from: www.healthstats.nsw.gov.au.

Appendix 1

Methods

Disease notifications for: diphtheria, invasive *Haemophilus influenzae* serotype b disease, measles, mumps, invasive meningococcal disease, pertussis, invasive pneumococcal disease, rubella and tetanus were included if they had a recorded onset in 2016 and met the national case definition (3).

Crude notification rates per 100,000 population were calculated for year of notification (1991 to 2016) age group and LHD. Population estimates used were from Health Stats NSW (7).

Notifications were analysed by age, sex, vaccination status and geographic residence where information was available.

Notifications are counted as NSW cases where the address of residence:

- is in NSW or
- is overseas, and the diagnosis was made in NSW

Appendix 2

Notification and rate per 100,000 population by year onset for selected conditions

Year of onset	Haemophilus influenzae type b		Measles		Meningococcal Disease		Mumps		Pertussis		Pneumococcal Disease (Invasive)		Rubella		Tetanus	
	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate	N	Rate
2016	5	0.06	18	0.23	70	0.90	67	0.87	10836	140.1	541	6.96	9	0.12	0	0
2015	5	0.07	9	0.12	44	0.58	63	0.83	12243	160.7	490	6.43	7	0.09	1	0.01
2014	6	0.08	67	0.89	37	0.49	79	1.05	3134	41.71	515	6.85	10	0.13	1	0.01
2013	9	0.12	34	0.46	46	0.62	91	1.23	2341	31.61	472	6.37	12	0.16	2	0.03
2012	2	0.03	170	2.33	65	0.89	106	1.45	5841	79.94	581	7.95	10	0.14	1	0.01
2011	4	0.06	90	1.25	71	0.98	68	0.94	13195	182.8	530	7.34	17	0.24	1	0.01
2010	6	0.08	25	0.35	73	1.02	40	0.56	9339	130.7	497	6.96	13	0.18	1	0.01
2009	6	0.09	19	0.27	92	1.3	40	0.57	12419	176.1	476	6.75	7	0.1	2	0.03
2008	8	0.12	39	0.56	80	1.15	77	1.11	7527	108.4	546	7.86	17	0.24	1	0.01
2007	7	0.1	4	0.06	109	1.59	323	4.73	1612	23.59	519	7.59	8	0.12	2	0.03
2006	11	0.16	60	0.89	101	1.5	155	2.3	3677	54.53	562	8.33	37	0.55	2	0.03
2005	7	0.1	5	0.07	137	2.05	111	1.66	5757	86.01	642	9.59	10	0.15	1	0.01
2004	5	0.08	11	0.17	146	2.2	65	0.98	3563	53.57	903	13.58	17	0.26	1	0.02
2003	6	0.09	17	0.26	197	2.98	36	0.54	2769	41.82	801	12.1	23	0.35	1	0.02
2002	10	0.15	7	0.11	211	3.21	29	0.44	2014	30.6	881	13.39	35	0.53	0	0