

Communicable diseases surveillance

Tables

National Notifiable Diseases Surveillance System

A summary of diseases currently being reported by each jurisdiction is provided in Table 1. There were 55,105 notifications to the National Notifiable Diseases Surveillance System (NNDSS) with a notification received date between 1 October and 31 December 2011 (Table 2). The notification rate of diseases per 100,000 population for each state or territory is presented in Table 3.

Table 1: Reporting of notifiable diseases by jurisdiction

Disease	Data received from:
Bloodborne diseases	
Hepatitis (NEC)	All jurisdictions
Hepatitis B (newly acquired)	All jurisdictions
Hepatitis B (unspecified)	All jurisdictions
Hepatitis C (newly acquired)	All jurisdictions except Queensland
Hepatitis C (unspecified)	All jurisdictions
Hepatitis D	All jurisdictions
Gastrointestinal diseases	
Botulism	All jurisdictions
Campylobacteriosis	All jurisdictions except New South Wales
Cryptosporidiosis	All jurisdictions
Haemolytic uraemic syndrome	All jurisdictions
Hepatitis A	All jurisdictions
Hepatitis E	All jurisdictions
Listeriosis	All jurisdictions
STEC, VTEC*	All jurisdictions
Salmonellosis	All jurisdictions
Shigellosis	All jurisdictions
Typhoid	All jurisdictions
Quarantinable diseases	
Cholera	All jurisdictions
Highly pathogenic avian influenza in humans	All jurisdictions
Plague	All jurisdictions
Rabies	All jurisdictions
Severe acute respiratory syndrome	All jurisdictions
Smallpox	All jurisdictions
Viral haemorrhagic fever	All jurisdictions
Yellow fever	All jurisdictions
Sexually transmissible infections	
Chlamydial infection	All jurisdictions
Donovanosis	All jurisdictions
Gonococcal infection	All jurisdictions
Syphilis - congenital	All jurisdictions
Syphilis <2 years duration	All jurisdictions
Syphilis >2 years or unspecified duration	All jurisdictions except South Australia

Table 1 continued: Reporting of notifiable diseases by jurisdiction

Disease	Data received from:
Vaccine preventable diseases	
Diphtheria	All jurisdictions
<i>Haemophilus influenzae</i> type b	All jurisdictions
Influenza (laboratory confirmed)	All jurisdictions
Measles	All jurisdictions
Mumps	All jurisdictions
Pertussis	All jurisdictions
Pneumococcal disease (invasive)	All jurisdictions
Poliomyelitis	All jurisdictions
Rubella	All jurisdictions
Rubella - congenital	All jurisdictions
Tetanus	All jurisdictions
Varicella zoster (chickenpox)	All jurisdictions except New South Wales
Varicella zoster (shingles)	All jurisdictions except New South Wales
Varicella zoster (unspecified)	All jurisdictions except New South Wales
Vectorborne diseases	
Arbovirus infection (NEC)	All jurisdictions
Barmah Forest virus infection	All jurisdictions
Dengue virus infection	All jurisdictions
Japanese encephalitis virus infection	All jurisdictions
Kunjin virus infection	All jurisdictions
Malaria	All jurisdictions
Murray Valley encephalitis virus infection	All jurisdictions
Ross River virus infection	All jurisdictions
Zoonoses	
Anthrax	All jurisdictions
Australian bat lyssavirus	All jurisdictions
Brucellosis	All jurisdictions
Leptospirosis	All jurisdictions
Lyssavirus (NEC)	All jurisdictions
Ornithosis	All jurisdictions
Q fever	All jurisdictions
Tularaemia	All jurisdictions
Other bacterial infections	
Legionellosis	All jurisdictions
Leprosy	All jurisdictions
Meningococcal infection	All jurisdictions
Tuberculosis	All jurisdictions

* Infections with Shiga-like toxin (verotoxin) producing *Escherichia coli* (STEC/VTEC).

NEC Not elsewhere classified.

Table 2: Notifications of diseases received by state and territory health authorities, 1 October to 31 December 2011, by date of diagnosis

Disease	State or territory										Total 4th quarter 2011	Total 3rd quarter 2011	Total 4th quarter 2010	Last 5 years mean 4th quarter	Ratio	Year to date 2011	Last 5 years YTD mean
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA									
Bloodborne diseases																	
Hepatitis (NEC)	0	0	0	0	0	0	0	0	0	0	0	0	0	0.2	0.0	0	0.4
Hepatitis B (newly acquired)*	0	4	1	14	4	1	25	3						62.0	0.8	189	263.0
Hepatitis B (unspecified)†	23	602	38	182	98	6	463	174						1,645.2	1.0	6,662	6,708.2
Hepatitis C (newly acquired)*:‡	3	8	2	NN	5	4	0	22						95.6	0.5	280	385.8
Hepatitis C (unspecified)†	41	759	61	584	102	41	554	222						2,740.0	0.9	9,986	11,301.6
Hepatitis D	0	1	0	2	0	0	1	0						7.0	0.6	35	34.8
Gastrointestinal diseases																	
Botulism	0	0	0	0	0	0	0	0						0.2	0.0	2	0.6
Campylobacteriosis§	126	NN	24	1,187	550	282	1,664	536						4,568.0	1.0	17,725	16,201.6
Cryptosporidiosis	3	83	43	158	8	8	63	45						471.8	0.9	1,807	2,823.4
Haemolytic uraemic syndrome	0	0	0	0	1	0	3	0						6.4	0.6	13	17.4
Hepatitis A	2	14	0	5	2	2	9	6						86.4	0.5	144	311.0
Hepatitis E	0	2	0	2	0	0	2	3						5.0	1.8	40	31.2
Listeriosis	0	6	0	4	1	1	8	2						15.4	1.4	70	68.4
STEC, VTEC	5	4	0	6	18	1	2	0						31.8	1.1	98	98.6
Salmonellosis	65	720	113	726	271	54	638	332						2,348.6	1.2	12,286	9,502.4
Shigellosis	4	42	36	11	13	0	21	14						145.4	1.0	496	627.6
Typhoid	1	6	1	6	2	1	10	4						21.8	1.4	134	96.4
Quarantinable diseases																	
Cholera	0	0	0	0	0	0	0	0						1.8	0.0	6	3.8
Highly pathogenic avian influenza in humans	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Plague	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Rabies	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Severe acute respiratory syndrome	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Smallpox	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Viral haemorrhagic fever	0	0	0	0	0	0	0	0						0.0	0.0	0	0.0
Yellow fever	0	0	0	0	0	0	0	0						0.0	0.0	2	0.0

Table 2 continued: Notifications of diseases received by state and territory health authorities, 1 October to 31 December 2011, by date of diagnosis

Disease	State or territory							Total 4th quarter 2011	Total 3rd quarter 2011	Total 4th quarter 2010	Last 5 years mean 4th quarter	Ratio	Year to date 2011	Last 5 years YTD mean	
	ACT	NSW	NT	Qld	SA	Tas	Vic								WA
Sexually transmissible infections															
Chlamydia infection**	297	5,002	636	4,521	1,205	453	4,837	2,651	19,602	20,254	17,963	14,425.0	1.4	80,827	59,012.0
Donovanosis	0	0	0	0	0	0	0	0	0	0	0	0.2	0.0	0	2.6
Gonococcal infection**	20	890	482	751	115	6	444	504	3,212	2,867	2,565	2,002.2	1.6	12,124	8,390.6
Syphilis – congenital**	0	0	0	1	0	0	0	0	1	2	0	1.4	0.7	7	6.0
Syphilis <2 years duration**	2	101	3	70	12	1	71	29	289	301	275	291.4	1.0	1,259	1,218.6
Syphilis >2 years or unspecified duration**	5	83	16	58	NDP	9	111	31	313	317	268	319.4	1.0	1,252	1,338.6
Vaccine preventable diseases															
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	4	0.0
<i>Haemophilus influenzae</i> type b	0	0	0	1	0	0	0	1	2	3	8	5.4	0.4	13	21.4
Influenza (laboratory confirmed)	34	583	59	640	510	28	594	451	2,899	17,375	4,048	1,514.8	1.9	27,018	19,119.6
Measles	19	11	2	1	1	0	8	8	50	34	10	6.4	7.8	193	75.2
Mumps	0	21	0	12	0	1	5	2	41	35	30	87.0	0.5	153	280.6
Pertussis	105	3,270	140	2,473	292	204	1,829	1,999	10,312	9,572	14,568	6,322.8	1.6	38,579	18,698.0
Pneumococcal disease (invasive)	6	121	27	62	24	17	83	43	383	724	391	330.2	1.2	1,879	1,547.4
Poliomyelitis	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.3
Rubella	1	3	0	1	1	0	2	0	8	14	4	6.6	1.2	58	40.0
Rubella – congenital	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.4
Tetanus	0	0	0	0	0	0	0	0	0	0	0	0.6	0.0	3	3.0
Varicella zoster (chickenpox) ^{††}	3	NN	44	89	164	5	218	128	651	658	564	608.6	1.1	2,092	1,717.6
Varicella zoster (shingles) ^{††}	10	NN	48	20	396	64	265	261	1,064	1,008	831	618.0	1.7	3,986	2,153.6
Varicella zoster (unspecified) ^{††}	30	NN	1	1,075	65	28	723	257	2,179	2,004	1,893	1,457.4	1.5	7,732	5,278.0
Vectorborne diseases															
Arbovirus infection (NEC)	0	0	1	4	0	0	3	0	8	6	15	4.4	1.8	24	18.2
Barmah Forest virus infection	0	68	12	208	16	0	4	38	346	289	409	374.0	0.9	1,867	1,773.0
Dengue virus infection	3	46	7	38	7	1	27	84	213	118	467	181.2	1.2	820	738.4
Japanese encephalitis virus infection	0	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.2
Kunjin virus infection ^{††}	0	1	0	0	0	0	0	0	1	0	0	0.2	5.0	2	1.8
Malaria	0	18	11	36	3	3	22	17	110	95	103	121.0	0.9	413	552.0
Murray Valley encephalitis virus infection ^{††}	0	1	0	0	0	0	0	0	1	0	0	0.0	0.0	16	1.4
Ross River virus infection	0	68	46	273	41	2	44	274	748	378	1,051	895.6	0.8	5,161	5,058.6

Table 2 continued: Notifications of diseases received by state and territory health authorities, 1 October to 31 December 2011, by date of diagnosis

Disease	State or territory							Total 4th quarter 2011	Total 3rd quarter 2011	Total 4th quarter 2010	Last 5 years mean 4th quarter	Ratio	Year to date 2011	Last 5 years YTD mean
	ACT	NSW	NT	Qld	SA	Tas	Vic							
Zoonoses														
Anthrax	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.6
Australian bat lyssavirus	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.0
Brucellosis	0	1	0	8	0	0	0	0	7	5	9.0	1.0	39	37.0
Leptospirosis	0	6	1	10	0	1	2	1	19	36	22.2	0.9	217	127.6
Lyssavirus (NEC)	0	0	0	0	0	0	0	0	0	0	0.0	0.0	0	0.0
Ornithosis	0	6	0	1	0	0	14	4	20	30	25.6	1.0	85	96.8
Q fever	0	35	0	43	1	0	6	6	80	78	92.4	1.0	328	374.8
Tularaemia	0	0	0	0	0	1	0	0	0	0	0.0	0.0	2	0.0
Other bacterial infections														
Legionellosis	0	21	1	12	8	2	26	31	60	83	82.2	1.2	343	305.4
Leprosy	0	1	0	0	1	0	1	0	2	4	2.6	1.2	7	9.4
Meningococcal infection ^{§§}	0	16	1	7	6	0	11	8	77	56	65.2	0.8	241	279.2
Tuberculosis	9	93	8	59	22	6	108	35	340	382	368.0	0.9	1,263	1,236.4
Total	817	12,717	1,865	13,361	3,965	1,233	12,921	8,226	68,053	59,398			237,982	

* Newly acquired hepatitis includes cases where the infection was determined to be acquired within 24 months prior to diagnosis.

† Unspecified hepatitis and syphilis includes cases where the duration of infection could not be determined.

‡ In Queensland, includes incident hepatitis cases.

§ Not reported for New South Wales where it is only notifiable as 'foodborne disease' or 'gastroenteritis in an institution'.

|| Infections with Shiga-like toxin (verotoxin) producing *Escherichia coli* (STEC/VTEC).

¶ Includes *Chlamydia trachomatis* identified from cervical, rectal, urine, urethral, throat and eye samples, except for South Australia, which reports only genital tract specimens. The Northern Territory and Western Australia, exclude ocular infections.

** In the national case definitions for chlamydia, gonococcal and syphilis infections the mode of transmission cannot be inferred from the site of infection. Transmission (especially in children) may be by a non-sexual mode (e.g. perinatal infections, epidemic gonococcal conjunctivitis).

†† Ratio of current quarter total to the mean of last 5 years for the same quarter. Ratios for varicella zoster (chickenpox), varicella zoster (shingles) and varicella zoster (unspecified) are based on 4 years of data.

‡‡ In the Australian Capital Territory, Murray Valley encephalitis virus infection and Kunjin virus infection are combined under Murray Valley encephalitis virus infection.

§§ Only invasive meningococcal disease is nationally notifiable. However, New South Wales, the Australian Capital Territory and South Australia also report conjunctival cases.

NN Not notifiable.

NEC Not elsewhere classified.

NDP No data provided.

Table 3: Notification rates of diseases, 1 October to 31 December 2011, by state or territory. (Annualised rate per 100,000 population)

Disease	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
Bloodborne diseases									
Hepatitis (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Hepatitis B (newly acquired)*	0.0	0.2	1.7	1.2	1.0	0.8	1.8	0.5	0.9
Hepatitis B (unspecified)†	25.6	33.3	66.2	16.1	23.8	4.7	33.4	30.3	28.4
Hepatitis C (newly acquired)*	3.3	0.4	3.5	NN	1.2	3.2	0.0	3.8	1.0
Hepatitis C (unspecified)†‡	45.7	41.9	106.2	51.7	24.8	32.3	39.9	38.7	42.3
Hepatitis D	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.0	0.1
Gastrointestinal diseases									
Botulism	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Campylobacteriosis§	140.4	NN	41.8	105.1	133.8	222.2	120.0	93.4	115.7
Cryptosporidiosis	3.3	4.6	74.9	14.0	1.9	6.3	4.5	7.8	7.4
Haemolytic uraemic syndrome	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.1
Hepatitis A	2.2	0.8	0.0	0.4	0.5	1.6	0.6	1.0	0.7
Hepatitis E	0.0	0.1	0.0	0.2	0.0	0.0	0.1	0.5	0.2
Listeriosis	0.0	0.3	0.0	0.4	0.2	0.8	0.6	0.3	0.4
STEC, VTEC¶	5.6	0.2	0.0	0.5	4.4	0.8	0.1	0.0	0.6
Salmonellosis	72.4	39.8	196.8	64.3	65.9	42.6	46.0	57.8	52.3
Shigellosis	4.5	2.3	62.7	1.0	3.2	0.0	1.5	2.4	2.5
Typhoid fever	1.1	0.3	1.7	0.5	0.5	0.8	0.7	0.7	0.6
Quarantinable diseases									
Cholera	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Human pathogenic avian influenza in humans	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Plague	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rabies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Severe acute respiratory syndrome	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Smallpox	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Viral haemorrhagic fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow fever	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sexually transmitted infections									
Chlamydial infection¶.***	331.0	276.4	1,107.7	400.4	293.1	357.0	348.8	461.8	350.9
Donovanosis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Gonococcal infection**	22.3	49.2	839.4	66.5	28.0	4.7	32.0	87.8	57.5
Syphilis – congenital**	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Syphilis <2 years duration**	2.2	5.6	5.2	6.2	2.9	0.8	5.1	5.1	5.2
Syphilis >2 years or unspecified duration†.***	5.6	4.6	27.9	5.1	-	7.1	8.0	5.4	6.0
Vaccine preventable diseases									
Diphtheria	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<i>Haemophilus influenzae</i> type b	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.2	0.0
Influenza (laboratory confirmed)	37.9	32.2	102.8	56.7	124.0	22.1	42.8	78.6	51.9
Measles	21.2	0.6	3.5	0.1	0.2	0.0	0.6	1.4	0.9
Mumps	0.0	1.2	0.0	1.1	0.0	0.8	0.4	0.3	0.7
Pertussis	117.0	180.7	243.8	219.0	71.0	160.7	131.9	348.2	184.6
Pneumococcal disease (invasive)	6.7	6.7	47.0	5.5	5.8	13.4	6.0	7.5	6.9
Poliomyelitis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Rubella	1.1	0.2	0.0	0.1	0.2	0.0	0.1	0.0	0.1
Rubella – congenital	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tetanus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 3 continued: Notification rates of diseases, 1 October to 31 December 2011, by state or territory. (Annualised rate per 100,000 population)

Disease	State or territory								
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Aust
Vaccine preventable diseases, cont'd									
Varicella zoster (chickenpox)	3.3	NN	76.6	7.9	39.9	3.9	15.7	22.3	17.2
Varicella zoster (shingles)	11.1	NN	83.6	1.8	96.3	50.4	19.1	45.5	28.2
Varicella zoster (unspecified)	33.4	NN	1.7	95.2	15.8	22.1	52.1	44.8	57.7
Vectorborne diseases									
Arbovirus infection (NEC)	0.0	0.0	1.7	0.4	0.0	0.0	0.2	0.0	0.1
Barmah Forest virus infection	0.0	3.8	20.9	18.4	3.9	0.0	0.3	6.6	6.2
Dengue virus infection	3.3	2.5	12.2	3.4	1.7	0.8	1.9	14.6	3.8
Japanese encephalitis virus infection	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Kunjin virus infection††	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Malaria	0.0	1.0	19.2	3.2	0.7	2.4	1.6	3.0	2.0
Murray Valley encephalitis virus infection††	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ross River virus infection	0.0	3.8	80.1	24.2	10.0	1.6	3.2	47.7	13.4
Zoonoses									
Anthrax	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Australia bat lyssavirus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Brucellosis	0.0	0.1	0.0	0.7	0.0	0.0	0.0	0.0	0.2
Leptospirosis	0.0	0.3	1.7	0.9	0.0	0.8	0.1	0.2	0.4
Lyssavirus (NEC)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Ornithosis	0.0	0.3	0.0	0.1	0.0	0.0	1.0	0.7	0.4
Q fever	0.0	1.9	0.0	3.8	0.2	0.0	0.4	1.0	1.6
Tularaemia	0.0	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0
Other bacterial diseases									
Legionellosis	0.0	1.2	1.7	1.1	1.9	1.6	1.9	5.4	1.8
Leprosy	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.0	0.1
Meningococcal infection‡‡	0.0	0.9	1.7	0.6	1.5	0.0	0.8	1.4	0.9
Tuberculosis	10.0	5.1	13.9	5.2	5.4	4.7	7.8	6.1	6.1

* Newly acquired hepatitis includes cases where the infection was determined to be acquired within 24 months prior to diagnosis.

† Unspecified hepatitis and syphilis includes cases where the duration of infection could not be determined.

‡ In Queensland, includes incident hepatitis C cases.

§ Notified as 'foodborne disease' or 'gastroenteritis in an institution' in New South Wales.

|| Infection with Shiga toxin/verotoxin-producing *Escherichia coli* (STEC/VTEC).

¶ Includes *Chlamydia trachomatis* identified from cervical, rectal, urine, urethral, throat and eye samples, except for South Australia, which reports only genital tract specimens; the Northern Territory and Western Australia exclude ocular infections.

** In the national case definitions for chlamydial, gonococcal and syphilis infections the mode of transmission cannot be inferred from the site of infection. Transmission (especially in children) may be by a non-sexual mode (e.g. perinatal infections, epidemic gonococcal conjunctivitis).

†† In the Australian Capital Territory, Murray Valley encephalitis virus infection and Kunjin virus infection are combined under Murray Valley encephalitis virus infection.

‡‡ Only invasive meningococcal disease is nationally notifiable. However, New South Wales, the Australian Capital Territory and South Australia also report conjunctival cases.

NEC Not elsewhere classified.

NN Not notifiable.

NDP No data provided.

Additional reports

Australian childhood immunisation coverage

Tables 1, 2 and 3 provide the latest quarterly report on childhood immunisation coverage from the Australian Childhood Immunisation Register (ACIR).

The data show the percentage of children 'fully immunised' at 12 months, 24 months and 60 months of age, for 3-month birth cohorts of children at the stated ages between 1 July and 30 September 2011. 'Fully immunised' refers to vaccines on the National Immunisation Program Schedule, but excludes rotavirus, pneumococcal conjugate, varicella, or meningococcal C conjugate vaccines, and is outlined in more detail below.

A full description of the basic methodology used can be found in *Commun Dis Intell* 1998;22:36–37.

'Fully immunised' at 12 months of age is defined as a child having a record on the ACIR of 3 doses of a diphtheria (D), tetanus (T) and pertussis-containing (P) vaccine, 3 doses of polio vaccine, 2 or 3 doses of PRP-OMP containing *Haemophilus influenzae type b* (Hib) vaccine or 3 doses of any other Hib vaccine, and 2 or 3 doses of Comvax hepatitis B vaccine or 3 doses of all other hepatitis B vaccines. 'Fully immunised' at 24 months of age is defined as a child having a record on the ACIR of 3 or 4 doses of a DTP-containing vaccine, 3 doses of polio vaccine, 3 or 4 doses of PRP-OMP containing Hib vaccine or 4 doses of any other Hib vaccine, 3 or 4 doses of Comvax hepatitis B vaccine or 4 doses of all other hepatitis B vaccines, and 1 dose of a measles, mumps and rubella (MMR)-containing vaccine. 'Fully immunised' at 60 months of age is defined as a child having a record on the ACIR of 4 or 5 doses of a DTP-containing vaccine, 4 doses of polio vaccine, and 2 doses of an MMR-containing vaccine.

The National Centre for Immunisation Research and Surveillance of Vaccine Preventable Diseases (NCIRS) provides commentary on the trends in ACIR data. For further information please contact NCIRS at: telephone +61 2 9845 1435, E-mail: brynleyh@chw.edu.au

The percentage of children 'fully immunised' by 12 months of age for Australia decreased marginally from the previous quarter by 0.3 of a percentage point to 91.8% (Table 1). Important changes in coverage were seen only in the Northern Territory with coverage for 'fully immunised', DTP, polio, Hib and Hep B vaccines decreasing by almost 6 percentage points. However, this apparent decrease in coverage was due to an administrative delay in data reported to the ACIR from the Northern Territory.

The percentage of children 'fully immunised' by 24 months of age for Australia decreased marginally from the previous quarter by 0.3 of a percentage point to 92.6% (Table 2). There were no important changes in coverage for any individual vaccines due at 24 months of age or by jurisdiction.

The percentage of children 'fully immunised' by 60 months of age for Australia increased from the previous quarter by 0.6 of a percentage point to 89.9% (Table 3). This is the highest coverage has been for this milestone since coverage was first calculated at the 72-month age milestone in March 2002. There were no important changes in coverage for any individual vaccines due at 60 months of age or by jurisdiction.

The Figure shows the trends in vaccination coverage from the first ACIR-derived published coverage estimates in 1997 to the current estimates. There is a clear trend of increasing vaccination coverage over time for children aged 12 months, 24 months and 60 months (from December 2007). Coverage at 5 years of age is close to the coverage levels attained at 12 and 24 months.

Table 1. Percentage of children immunised at 1 year of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2010; assessment date 31 December 2011

Vaccine	State or territory								Aust
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,284	24,804	964	15,655	4,905	1,534	18,354	7,935	75,435
Diphtheria, tetanus, pertussis (%)	94.2	92.1	87.7	92.0	92.1	93.0	93.5	91.3	92.3
Poliomyelitis (%)	94.1	92.0	87.7	91.9	92.0	93.0	93.5	91.2	92.3
<i>Haemophilus influenzae</i> type b (%)	93.7	91.9	87.7	91.9	91.9	92.9	93.3	91.1	92.1
Hepatitis B (%)	93.5	91.7	87.6	91.6	91.9	92.8	93.1	90.7	91.9
Fully immunised (%)	93.3	91.6	87.5	91.6	91.7	92.8	92.9	90.6	91.8
Change in fully immunised since last quarter (%)	-0.3	-0.3	-5.9	-0.3	-1.3	+1.5	+0.2	-0.2	-0.3

Table 2. Percentage of children immunised at 2 years of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2009; assessment date 31 December 2011*

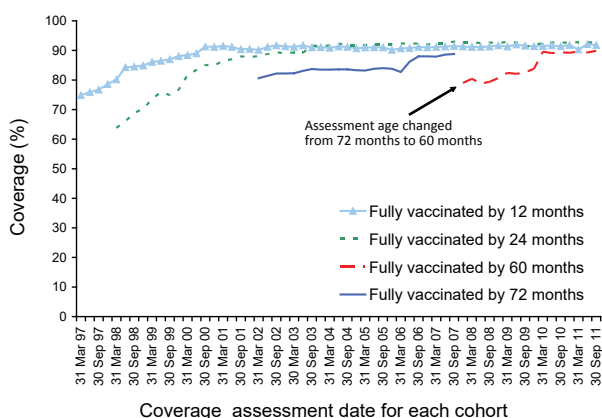
Vaccine	State or territory								Aust
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,325	25,138	908	15,694	4,999	1,625	18,463	7,983	76,135
Diphtheria, tetanus, pertussis (%)	96.2	94.7	95.5	94.4	94.7	95.2	95.2	93.4	94.7
Poliomyelitis (%)	96.1	94.7	95.6	94.4	94.7	95.2	95.2	93.4	94.7
<i>Haemophilus influenzae</i> type b (%)	96.5	95.2	96.0	94.5	94.8	95.5	95.4	93.7	95.0
Measles, mumps, rubella (%)	95.2	93.9	95.6	93.8	93.8	94.4	94.5	92.4	93.9
Hepatitis B (%)	95.2	94.4	95.5	94.0	94.3	94.8	94.7	92.9	94.3
Fully immunised (%)	93.7	92.6	94.6	92.5	92.6	93.4	93.1	90.9	92.6
Change in fully immunised since last quarter (%)	-0.9	+0.3	+0.9	-0.5	-0.6	-0.9	-0.5	-0.8	-0.3

* The 12 months age data for this cohort were published in *Commun Dis Intell* 2011;35(1):48.

Table 3. Percentage of children immunised at 5 years of age, preliminary results by disease and state or territory for the birth cohort 1 July to 30 September 2006; assessment date 31 December 2011

Vaccine	State or territory								Aust
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
Total number of children	1,281	25,166	851	15,791	5,080	1,758	18,844	8,276	77,047
Diphtheria, tetanus, pertussis (%)	93.3	90.2	88.0	91.0	88.7	91.8	92.1	87.5	90.5
Poliomyelitis (%)	93.3	90.1	88.0	90.9	88.6	91.6	92.1	87.4	90.4
Measles, mumps, rubella (%)	92.7	90.1	87.7	90.6	88.4	91.5	91.8	87.4	90.3
Fully immunised (%)	92.5	89.7	87.5	90.3	88.1	91.1	91.6	86.8	89.9
Change in fully immunised since last quarter (%)	+1.2	+0.1	-0.9	+1.2	+1.5	+0.9	+0.4	+1.2	+0.6

Figure: Trends in vaccination coverage, Australia, 1997 to 30 September 2011, by age cohorts



Australian Sentinel Practices Research Network

The Australian Sentinel Practices Research Network (ASPREN) is a national surveillance system that is funded by the Australian Government Department of Health and Ageing, owned and operated by the Royal Australian College of General Practitioners and directed through the Discipline of General Practice at the University of Adelaide.

The network consists of general practitioners who report presentations on a number of defined medical conditions each week. ASPREN was established in 1991 to provide a rapid monitoring scheme for infectious diseases that can alert public health officials of epidemics in their early stages as well as play a role in the evaluation of public health campaigns and research of conditions commonly seen in general practice. Electronic, web-based data collection was established in 2006.

In June 2010, ASPREN's laboratory influenza-like illness (ILI) testing was implemented, allowing for viral testing of 25% of ILI patients for a range of respiratory viruses including influenza A, influenza B and influenza A H1N1(2009).

The list of conditions is reviewed annually by the ASPREN management committee. In 2012, 4 conditions are being monitored. They include ILI, gastroenteritis and varicella infections (chickenpox and shingles). Definitions of these conditions are described in Surveillance systems reported in CDI, published in Commun Dis Intell 2012;36(1):122.

Reporting period 1 October to 31 December 2011

Sentinel practices contributing to ASPREN were located in all 8 jurisdictions in Australia. A total of 125 general practitioners contributed data to ASPREN in the fourth quarter of 2011. Each week an average of 106 general practitioners provided information to ASPREN at an average of 9,177 (range 6,006–10,209) consultations per week and an average of 138 (range 113–198) notifications per week.

ILI rates reported from 1 October to 31 December 2011 averaged 8 cases per 1,000 consultations (range 6–13 cases per 1,000 consultations). The reported rates in October, November and December 2011 (7–13 cases per 1,000 consultations, 6–8 cases per 1,000 consultations and 6–8 cases per 1,000 consul-

tations respectively) were lower compared with rates in the same reporting period in 2010 (13–22 cases per 1,000 consultations, 13–17 cases per 1,000 consultations and 13–15 cases per 1,000 consultations respectively) (Figure 1).

ILI swab testing has continued through 2011. The most commonly reported virus during this reporting period was rhinovirus (17% of all swabs performed), with the second most common virus being influenza B (13% of all swabs performed).

Figure 1: Consultation rates for influenza-like illness, ASPREN, 1 January 2010 to 31 December 2011, by week of report

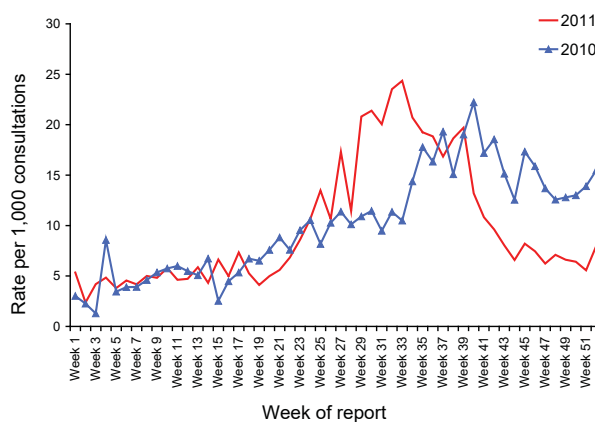
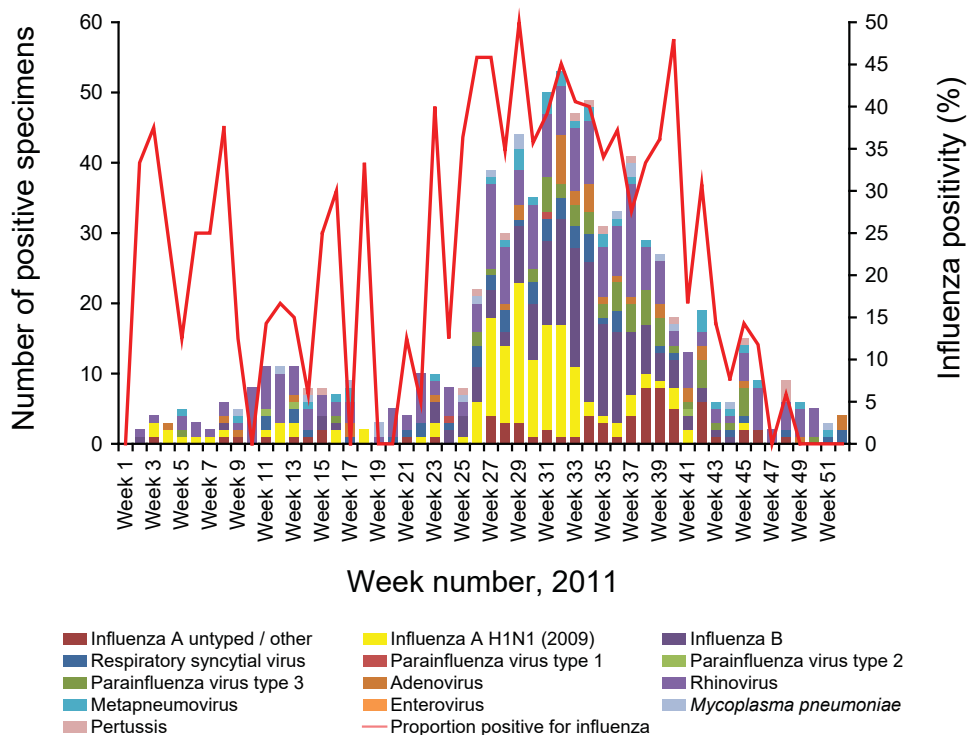


Figure 2: Influenza-like illness swab testing results, ASPREN, 1 January 2010 to 31 December 2011, by week of report



From the beginning of 2011 to the end of week 52, 372 cases of influenza were detected, the majority of these being influenza B (13% of all swabs performed), H1N1(2009) (11% of all swabs performed) and the remainder influenza A untyped or other (6% of all swabs performed) (Figure 2).

During this reporting period, consultation rates for gastroenteritis averaged 6 cases per 1,000 consultations (range 3–12 cases per 1,000, Figure 3), which corresponds with rates in the same reporting period in 2010 where the average was 6 cases per 1,000 consultations (range 4–7 cases per 1,000).

Varicella infections were reported at a slightly higher rate for the fourth quarter of 2011 compared with the same period in 2010. From 1 October to 31 December 2011, recorded rates for chickenpox averaged 0.33 cases per 1,000 consultations (range 0.1–0.83 cases per 1,000 consultations) (Figure 4).

Figure 3: Consultation rates for gastroenteritis, ASPREN, 1 January 2010 to 31 December 2011, by week of report

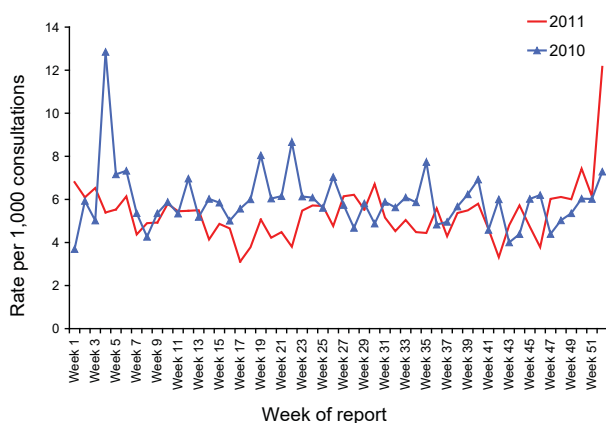
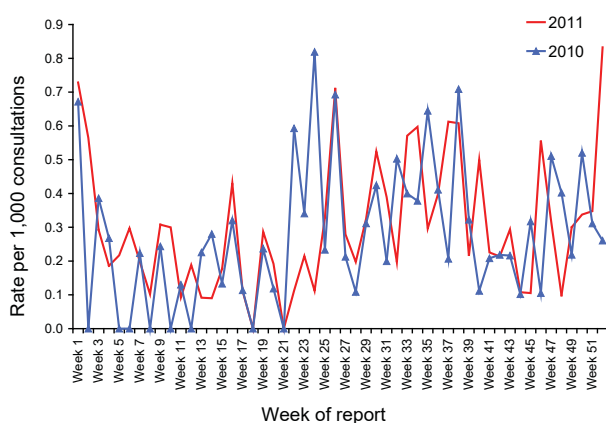
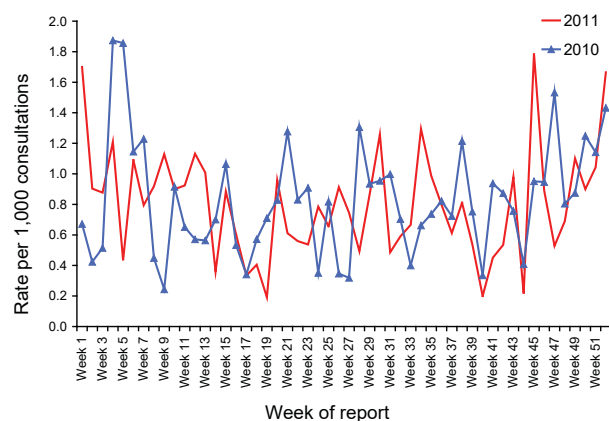


Figure 4: Consultation rates for chickenpox, ASPREN, 1 January 2010 to 31 December 2011, by week of report



In the fourth quarter of 2011, reported rates for shingles averaged 0.85 cases per 1,000 consultations (range 0.2–1.79 cases per 1,000 consultations, Figure 5), which was lower compared with the same reporting period in 2010 where the average shingles rate was 0.94 cases per 1,000 consultations (0.34–1.53 cases per 1,000 consultations).

Figure 5: Consultation rates for shingles, ASPREN, 1 January 2010 to 31 December 2011, by week of report



Gonococcal surveillance

(Dr Monica M Lahra, The Prince of Wales Hospital, Randwick, NSW, 2031 for the Australian Gonococcal Surveillance Programme)

The Australian Gonococcal Surveillance Programme (AGSP) reference laboratories in the various states and territories report data on sensitivity to an agreed 'core' group of antimicrobial agents quarterly. The antibiotics currently routinely surveyed are penicillin, ceftriaxone, ciprofloxacin and spectinomycin, all of which are administered as single dose regimens and currently used in Australia to treat gonorrhoea. When in vitro resistance to a recommended agent is demonstrated in 5 per cent or more of isolates from a general population, it is usual to remove that agent from the list of recommended treatment.¹ Additional data are also provided on other antibiotics from time to time. At present all laboratories also test isolates for the presence of high level (plasmid-mediated) resistance to the tetracyclines, known as TRNG. Tetracyclines are however, not a recommended therapy for gonorrhoea in Australia. Comparability of data is achieved by means of a standardised system of testing and a program-specific quality assurance process. Because of the substantial geographic differences in susceptibility patterns in Australia, regional as well as aggregated data are presented. For more information see *Commun Dis Intell* 2012;36(1):121.

Reporting period 1 July to 30 September 2011

The AGSP laboratories received a total of 985 gonococcal isolates and 963 (98%) remained viable for susceptibility testing. This represented a 3% decrease from the 1,014 gonococci referred in this same quarter in 2010. Of the total gonococci referred, 34% were from New South Wales; 21% from Victoria; 19% from Queensland, 12% from the Northern Territory; 11% from Western Australia 3% from South Australia; 1% from the Australian Capital Territory and 1 isolate (0.1%) from Tasmania.

Penicillins

Two hundred and sixty-five (28%) of the 963 isolates examined were penicillin resistant by one or more mechanisms: 126 (13%) were penicillinase producing *Neisseria gonorrhoeae* (PPNG) and 139 (14%) had chromosomally mediated resistance to penicillin (CMRP). Compared with the same quarter in 2010, this represents a small increase in the proportion of PPNG isolates (to 10% in 2010) and a decrease in CMRP (from 16% in 2010). The proportion of all strains resistant to the penicillins by any mechanism ranged from 5% (6/113 isolates) in the Northern Territory to 47% in Victoria. The penicillin resistance rate in South Australia was 36%; in New South Wales 32%, in Queensland 18%, and in Western Australia 17%. There were no penicillin resistant gonococci reported from the Australian Capital Territory or from Tasmania. Whilst the national proportion of PPNG has remained stable at 11%–13% over the period 2007–2011, the proportion of gonococci with CMRP has decreased in the same quarter from 22% in 2009 to 16% in 2010 to 14% in this quarter of 2011.

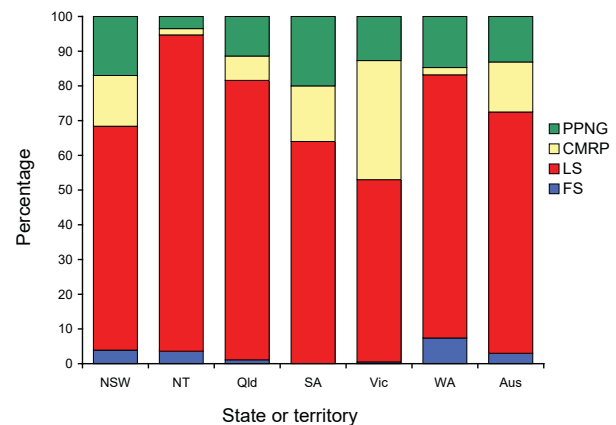
In Figure 1 the proportion of gonococci fully sensitive (FS) [minimum inhibitory concentration (MIC) ≤ 0.03 mg/L]; less sensitive (LS) (MIC 0.06–0.5 mg/L); CMRP (MIC ≤ 1 mg/L) and PPNG are shown by state and territory and as aggregated for Australia. A high proportion of strains classified as PPNG or CMRP fail to respond to treatment with penicillins (penicillin, amoxicillin, ampicillin) and early generation cephalosporin antibiotics.

Penicillin resistance by CMRP predominated over PPNG only in Victoria (34% CMRP: 13% PPNG). In the remaining laboratories, PPNG predominated: New South Wales (17% PPNG: 15% CMRP); Western Australia (15% PPNG: 2% CMRP); Queensland (11% PPNG: 7% CMRP); South Australia (20% PPNG: 16% CMRP).

In the Northern Territory where 6 of 113 isolates were resistant to penicillin, 4 (3.5%) were PPNG and 2 (1.8%) were CMRP. Information on the geo-

graphic acquisition was available for 1 PPNG isolate, acquired overseas from Papua New Guinea. For the remaining 5 penicillin resistant isolates, information on geographic acquisition was not available.

Figure 1: Categorisation of gonococci isolated in Australia, 1 July to 30 September 2011, by penicillin susceptibility and state or territory



- FS Fully sensitive to penicillin, MIC ≤ 0.03 mg/L.
 LS Less sensitive to penicillin, MIC 0.06–0.5 mg/L.
 CMRP Chromosomally mediated resistant to penicillin, MIC ≥ 1 mg/L.
 PPNG Penicillinase producing *Neisseria gonorrhoeae*.

Ceftriaxone

From 2001 onwards, gonococcal isolates with raised ceftriaxone MIC values have been increasingly reported in Australia. Decreased susceptibility to ceftriaxone has been defined as the MIC range 0.06–0.12 mg/L. In 2010 the proportion of gonococci with an MIC value in the range 0.03–0.12 mg/L was reported from the second quarter AGSP. The rationale for this was to improve the detection of gonococci with decreased susceptibility to ceftriaxone by documenting the right shift in MIC range to ceftriaxone in this organism.

In this quarter, data for decreased susceptibility to ceftriaxone (MIC ≥ 0.06 mg/L) were contributed by all jurisdictions, with 963 isolates examined. Nationally, 36 of the 963 isolates (3.7%) were reported as having decreased susceptibility to ceftriaxone. There were 16 of 204 (7.8%) reported from Victoria; 12 of 330 (3.6%) from New South Wales; 5 of 185 (2.7%) from Queensland; 2 of 95 (2.1%) from Western Australia and there was 1 isolate (0.9%) in the Northern Territory. There were no gonococci with decreased susceptibility to ceftriaxone reported from South Australia, the Australian Capital Territory or Tasmania.

Data for ceftriaxone MIC ≥ 0.03 mg/L were contributed by all jurisdictions (963 isolates). There were 150 isolates (16%) reported with ceftriaxone MIC ≥ 0.03 mg/L: 63 of 204 (31%) isolates reported from Victoria; 5 of 25 (20%) in South Australia; 57 of 330 (17%) in New South Wales; 20 of 185 (11%) in Queensland; 3 of 95 (3.2%) in Western Australia and 2 of 112 (1.8%) in the Northern Territory. There were none in the Australian Capital Territory or Tasmania. In 2011 the overall proportion of isolates in this MIC range was similar to the 15% reported in this same quarter in 2010. By state and territory in 2011, there was an increase from 21% in 2010 to 30% in Victoria in 2011, and from 11% in 2010 to 20% in South Australia; and from none reported in 2010 to 1.8% in the Northern Territory. The proportion was similar in New South Wales (18% in 2010) and Queensland (11% in 2010) and decreased from 17% in 2010 to 3.2% in Western Australia and from one to none in the Australian Capital Territory. Again none were reported from Tasmania.

Spectinomycin

All isolates were susceptible to this injectable agent.

Quinolone antibiotics

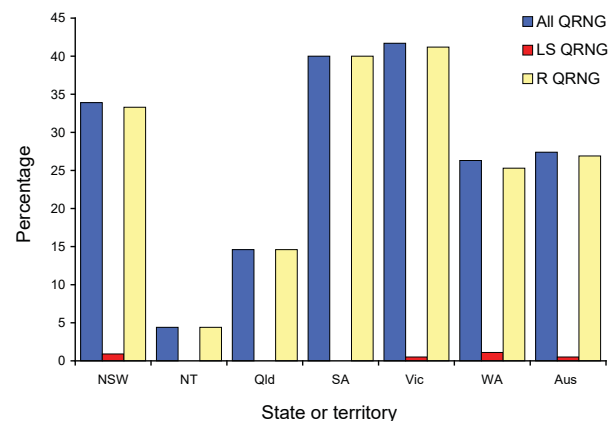
Nationally, the 264 quinolone resistant *N. gonorrhoeae* (QRNG) detected in this quarter represented 27% of all isolates tested. This shows a continuing decrease in the proportion of QRNG from 33% from the same quarter in 2010; 41.3% from the same quarter in 2009; 50.6% QRNG recorded in the third quarter of 2008 and 50.5% in 2007. QRNG are defined as those isolates with an MIC to ciprofloxacin equal to or greater than 0.06 mg/L. QRNG are further subdivided into less sensitive (ciprofloxacin MICs 0.06–0.5 mg/L) or resistant (MIC ≥ 1 mg/L) groups. The majority of QRNG (209/264, 79%) had higher-level resistance to ciprofloxacin: MIC 4 mg/L or more.

QRNG were detected in high proportions in Victoria 85 of 204 (42%); South Australia 10 of 25 (40%); New South Wales 112 of 330 (34%); Western Australia 25 of 95 (26%); and in Queensland 27 of 185 (15%) (Figure 2). There were 5 QRNG detected in the Northern Territory (4%), and none in Tasmania or the Australian Capital Territory.

High level tetracycline resistant *Neisseria gonorrhoeae*

The number (169) and proportion (18%) of high level tetracycline resistant *N. gonorrhoeae* (TRNG) detected, was less than that recorded in this quarter in 2010 (21%) and 2009 (21%). TRNG were found in all states and territories except for Tasmania and the Australian Capital Territory and represented

Figure 2: The distribution of quinolone resistant isolates of *Neisseria gonorrhoeae* in Australia, 1 July to 30 September 2011, by state or territory



LS QRNG Ciprofloxacin MICs 0.06–0.5 mg/L.

R QRNG Ciprofloxacin MICs ≥ 1 mg/L.

between 16% (in both New South Wales and Western Australia) and 25% (Queensland) of all isolates tested.

Reference

1. Management of sexually transmitted diseases. World Health Organization 1997; Document WHO/GPA/TEM94.1 Rev.1 p 37.

HIV and AIDS surveillance

National surveillance for HIV disease is coordinated by the Kirby Institute, in collaboration with state and territory health authorities and the Australian Government Department of Health and Ageing. Cases of HIV infection are notified to the National HIV Registry on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (Australian Capital Territory, New South Wales, Tasmania, Victoria) or by a combination of laboratory and doctor sources (Northern Territory, Queensland, South Australia, Western Australia). Cases of AIDS are notified through the state and territory health authorities to the National AIDS Registry. Diagnoses of both HIV infection and AIDS are notified with the person's date of birth and name code, to minimise duplicate notifications while maintaining confidentiality.

Tabulations of diagnoses of HIV infection and AIDS are based on data available 3 months after the end of the reporting interval indicated, to allow for reporting delay and to incorporate newly available information. More detailed information on diagnoses of HIV infection and AIDS is published in the quarterly Australian HIV Surveillance Report, and annually in 'HIV/AIDS,

viral hepatitis and sexually transmissible infections in Australia, annual surveillance report'. The reports are available from the Kirby Institute, CFI Building, Cnr Boundary and West Streets, Darlinghurst NSW 2010. Internet: <http://hiv.cms.med.unsw.edu.au/> Telephone: +61 2 9385 0900. Facsimile: +61 2 9385 0920. For more information see Commun Dis Intell 2012;36(1):123.

HIV and AIDS diagnoses and deaths following AIDS reported for 1 January to 31 March 2011, are included in this issue of Communicable Diseases Intelligence (Tables 1, 2, 3 and 4).

Table 1: Number of new diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 January to 31 March 2011, by sex and state or territory of diagnosis

	Sex	State or territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2011	This period 2010	YTD 2011	YTD 2010
HIV diagnoses	Female	0	3	0	7	1	1	7	3	22	42	22	42
	Male	1	86	2	60	9	1	72	14	245	236	245	236
	Not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	1	89	2	67	10	2	79	17	267	282	267	282
AIDS diagnoses	Female	0	4	0	0	0	0	0	0	4	5	4	5
	Male	0	11	1	1	0	0	12	0	25	29	25	29
	Total*	0	15	1	1	0	0	12	0	29	34	29	34
AIDS deaths	Female	0	1	0	0	0	0	0	0	1	0	1	0
	Male	0	0	0	0	0	0	4	0	4	7	4	7
	Total*	0	1	0	0	0	0	4	0	5	7	5	7

* Totals include people whose sex was reported as transgender.

Table 2: Number of new diagnoses of HIV infection since the introduction of HIV antibody testing 1985, and number of new diagnoses of AIDS and deaths following AIDS since 1981, cumulative to 31 March 2011, by sex and state or territory

	Sex	State or territory								Aust
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	39	1,047	31	405	131	23	509	305	2,490
	Male	295	14,915	165	3,508	1,111	142	6,329	1,493	27,958
	Not reported	0	227	0	0	0	0	22	0	249
	Total*	334	16,224	196	3,922	1,243	165	6,884	1,805	30,773
AIDS diagnoses	Female	10	286	6	80	32	4	128	49	595
	Male	95	5,647	52	1,114	427	55	2,218	469	10,077
	Total*	105	5,952	58	1,196	460	59	2,359	520	10,709
AIDS deaths	Female	7	143	1	44	20	2	66	30	313
	Male	73	3,612	33	687	281	34	1,467	301	6,488
	Total*	80	3,766	34	733	301	36	1,542	332	6,824

* Totals include people whose sex was reported as transgender.

Table 3: Number of new diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 April to 30 June 2011, by sex and state or territory of diagnosis

	Sex	State or territory								Totals for Australia			
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 2011	This period 2010	YTD 2011	YTD 2010
HIV diagnoses	Female	1	3	0	10	9	1	9	8	41	36	63	78
	Male	3	76	1	48	18	5	77	19	247	277	492	486
	Not reported	0	0	0	0	0	0	0	0	0	0	0	0
	Total*	4	79	1	58	27	6	86	27	288	277	555	559
AIDS diagnoses	Female	0	2	0	0	0	0	2	0	4	3	8	8
	Male	0	13	0	1	0	0	9	0	23	26	48	55
	Total*	0	15	0	1	0	0	11	0	27	29	56	63
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	1	1	1
	Male	0	2	0	0	0	0	1	0	3	4	7	11
	Total*	0	2	0	0	0	0	1	0	3	5	8	12

* Totals include people whose sex was reported as transgender.

Table 4: Number of new diagnoses of HIV infection since the introduction of HIV antibody testing 1985, and number of new diagnoses of AIDS and deaths following AIDS since 1981, cumulative to 30 June 2011, by sex and state or territory

	Sex	State or territory								Aust
		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	
HIV diagnoses	Female	40	1,050	31	415	140	24	518	313	2,531
	Male	298	14,991	166	3,556	1,129	147	6,406	1,512	28,205
	Not reported	0	227	0	0	0	0	22	0	249
	Total*	338	16,303	197	3,980	1,270	171	6,970	1,832	31,061
AIDS diagnoses	Female	10	288	6	80	33	4	130	49	600
	Male	95	5,660	52	1,115	428	55	2,227	469	10,101
	Total*	105	5,967	58	1,197	462	59	2,370	520	10,738
AIDS deaths	Female	7	143	1	44	20	2	66	30	313
	Male	73	3,614	33	687	281	34	1,468	301	6,491
	Total*	80	3,768	34	733	301	36	1,543	332	6,827

* Totals include people whose sex was reported as transgender.