Communicable Diseases Surveillance

The decline of Haemophilus influenzae type b

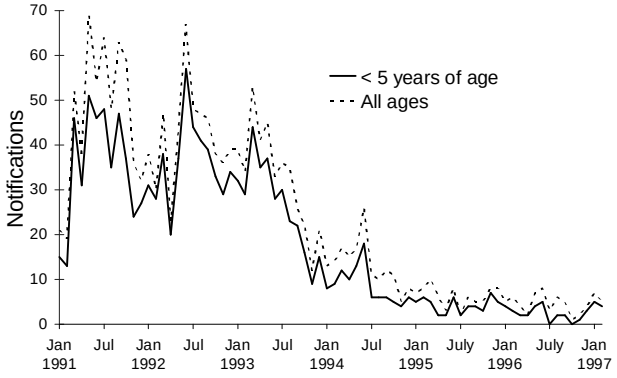
Haemophilus influenzae type b (Hib) has been a major cause of morbidity and mortality, particularly in children under the age of 5 years. Prior to the introduction of vaccination against Hib, the disease caused more than 500 cases per year in Australia.

The most common manifestation of Hib disease (around 60% of all cases) was meningitis. Most cases of Hib meningitis occurred in children under the age of 18 months, and the case fatality rate was 5%. Up to 15% of survivors had neurological sequelae such as deafness and intellectual impairment. Hib also caused virtually all cases of epiglottitis in children. Less common manifestations of Hib include cellulitis, septic arthritis and pneumonia. Around 80% of all cases were in children under the age of 5 years.

The first conjugate vaccine against Hib disease was introduced in Australia in 1992. In 1993 several other vaccines became available, and vaccination for all children under the age of 5 years was included on the National Health and Medical Research Council Standard Vaccination Schedule. Vaccines for children under the age of 5 years were funded by the Commonwealth Government.

Since 1993 there has been a dramatic decline in the number of Hib cases occurring in Australia (Figure 1). In children under the age of 5 years the number of cases decreased by 94% between 1992 and 1996, and for all ages the decrease was 89%. In 1996 the number of cases continued to decrease, with no cases in children under the age of 5 years reported for July or October, and only 28 cases reported for this age group for the whole year. Thirteen cases have been reported with onset dates in 1997, with 9 under the age of 5 years. Improved vaccination rates have the potential to eliminate Hib disease completely in Australia.

Figure 1. *Haemophilus influenzae* type b notifications, 1991 to 1997, by month of onset and age group



National Notifiable Diseases Surveillance System

The NNDSS is conducted under the auspices of the Communicable Diseases Network Australia New Zealand. The system coordinates the national surveillance of more than 40 communicable diseases or disease groups endorsed by the National Health and Medical Research Council (NHMRC). Notifications of these diseases are made to State and Territory health authorities under the provisions of their respective public health legislations. De-identified core unit data are supplied fortnightly for collation, analysis and dissemination. For further information, see CDI 1997;21:5.

Reporting period 5 March to 18 March 1997.

There were 2,677 notifications received for this two-week period (Tables 1, 2 and 3). The number of reports for selected diseases have been compared with average data for this period in the previous three years (Figure 2).

The number of hepatitis A infection notifications received this period has dropped substantially, with 97 reports received. The outbreak that occurred in several States associated with the consumption of oysters from Wallis Lake, New South Wales seems to be declining.

The number of pertussis notifications continues to be high, with 328 reports received for this period (Figure 3). The majority of notifications were received from Victoria (112) and South Australia (85). Seventy and 50 cases were reported for the 5 - 9 and 10 - 14 years age groups respectively. The male:female ratio was 0.9:1.

Five hundred and six reports of Ross River virus infection were received this period. The majority of notifications were reported from Queensland (190) and Victoria (105). Fifty-one per cent of reports were for the 25 - 44 years age range.

There were 370 notifications of salmonellosis reported this period and this was higher than the corresponding historical data for the previous three years (Figure 2). The majority of notifications were from Queensland (138) and New South Wales (67). The 0 - 4 years age group comprised 39% of notifications.

Table 1. Notifications of diseases preventable by vaccines recommended by the NHMRC for routine childhood immunisation, received by State and Territory health authorities in the period 5 March to 18 March 1997

Disease[1,2]	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
Diphtheria	0	0	0	0	0	0	0	0	0	0	0	0
Haemophilus influenzae type B	0	0	0	1	0	0	0	0	1	0	16	13
Measles	2	0	0	7	2	0	4	2	17	18	101	119
Mumps	0	1	2	NN	0	0	3	2	8	7	32	30
Pertussis	7	60	0	24	85	18	112	22	328	127	1979	808
Rubella	1	4	0	23	2	0	12	4	46	112	402	761
Tetanus	0	0	0	0	0	0	0	0	0	0	2	1

NN Not Notifiable.

1. No notifications of poliomyelitis have been reported since 1986.
2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision, so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.

Table 2. Notifications of other diseases received by State and Territory health authorities in the period 5 March to 18 March 1997

Disease[1,2]	ACT	NSW	NT	Qld	SA	Tas	Vic	WA	This period 1997	This period 1996	Year to date 1997	Year to date 1996
Arbovirus Infection (NEC)[3,4]	0	0	4	0	0	0	7	1	12	8	75	35
Barmah Forest virus infection	0	8	0	26	0	0	3	-	37	59	169	205
Campylobacteriosis[5]	4	-	21	125	83	10	39	47	329	418	2581	2703
Chlamydial infection (NEC)[6]	3	NN	20	130	0	8	70	66	297	286	1717	1538
Dengue	0	1	1	0	0	-	0	0	2	0	95	14
Donovanosis	0	NN	0	0	NN	0	0	0	0	3	2	17
Gonococcal infection[7]	0	3	42	29	0	0	12	39	125	161	807	781
Hepatitis A	3	39	5	24	3	0	20	3	97	102	1056	612
Hepatitis B incident	0	2	0	0	0	0	1	5	8	6	57	54
Hepatitis C incident	0	0	0	-	0	0	-	-	0	0	1	10
Hepatitis C unspecified	15	NN	4	122	NN	2	33	17	193	380	1664	2011
Hepatitis (NEC)	0	0	0	0	0	0	0	NN	0	1	5	7
Legionellosis	0	0	0	0	0	0	7	0	7	8	34	44
Leptospirosis	0	0	0	0	0	0	1	0	1	8	28	53
Listeriosis	0	1	0	0	1	0	0	2	4	1	22	11
Malaria	0	4	1	16	0	0	3	0	24	49	145	166
Meningococcal infection	0	2	0	1	2	1	3	1	10	11	61	58
Ornithosis	0	NN	0	0	0	0	1	0	1	0	19	17
Q Fever	0	7	0	8	0	0	1	0	16	17	117	101
Ross River virus infection	1	67	22	190	67	1	105	53	506	1246	2122	3163
Salmonellosis (NEC)	5	67	21	138	28	7	54	50	370	269	1812	1644
Shigellosis[5]	0	-	20	4	4	0	3	8	39	27	229	163
Syphilis	0	8	10	15	0	0	0	1	34	48	246	285
Tuberculosis	1	4	0	2	0	0	10	4	21	55	189	258
Typhoid[8]	0	0	0	0	0	0	0	0	0	9	15	38
Yersiniosis (NEC)[5]	0	-	0	8	5	0	0	0	13	14	84	78

1. For HIV and AIDS see Tables 4 and 5. For rarely notified diseases, see Table 3
2. Totals comprise data from all States and Territories. Cumulative figures are subject to retrospective revision so there may be discrepancies between the number of new notifications and the increment in the cumulative figure from the previous period.
3. Tas: includes Ross River virus and dengue.
4. NT, Vic and WA: includes Barmah Forest virus.
5. NSW: only as 'foodborne disease' or 'gastroenteritis in an institution'.
6. WA: genital only.
7. NT, Qld, SA and Vic: includes gonococcal neonatal ophthalmia.
8. NSW, Vic: includes paratyphoid.

NN Not Notifiable.

NEC Not Elsewhere Classified.

- Elsewhere Classified.

Table 3. Notifications of rare[1] diseases received by State and Territory health authorities in the period 5 March to 18 March 1997

Disease[2]	Total this period	Reporting States or Territories	Total notifications 1997
Brucellosis	1	Qld	11
Chancroid			1
Cholera			1
Hydatid infection	2	Qld, WA	5
Leprosy	1	WA	4

1. Fewer than 60 cases of each of these diseases were notified each year during the period 1988 to 1995.
2. No notifications have been received during 1997 for the following rare diseases: botulism, lymphogranuloma venereum, plague, rabies, yellow fever or other viral haemorrhagic fevers.

Figure 3. Pertussis notifications, 1994 to 1997, by month of onset

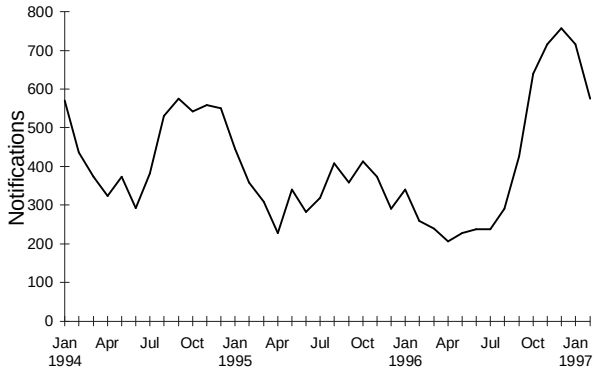
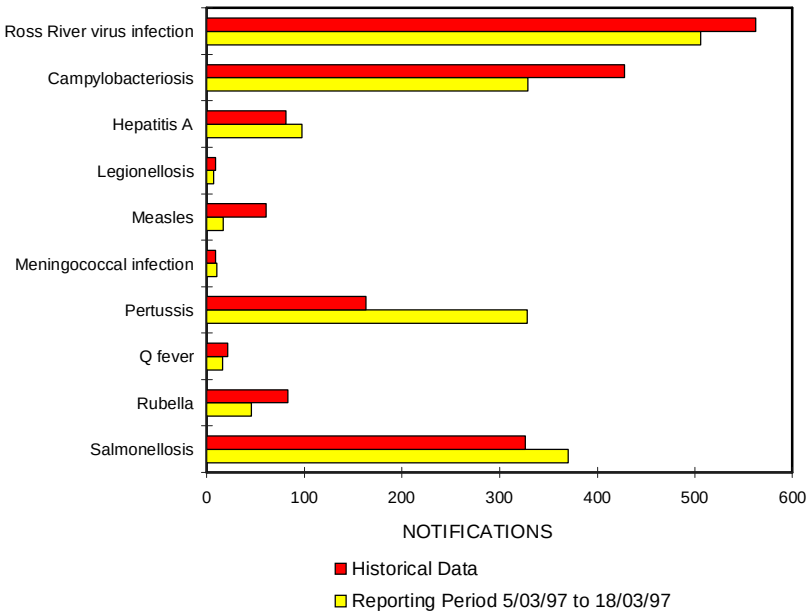


Figure 2. Selected National Notifiable Diseases Surveillance System reports, and historical data[1]



1. The historical data are the averages of the number of notifications in 9 previous 2-week reporting periods: the corresponding periods of the last 3 years and the periods immediately preceding and following those.

HIV and AIDS Surveillance

National surveillance for HIV disease is coordinated by the National Centre in HIV Epidemiology and Clinical Research (NCHECR), in collaboration with State and Territory health authorities and the Commonwealth of Australia. Cases of HIV infection are notified to the National HIV Database on the first occasion of diagnosis in Australia, by either the diagnosing laboratory (ACT, 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 three 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, available from the National Centre in HIV Epidemiology and Clinical Research, 376 Victoria Street, Darlinghurst NSW 2010. Telephone: (02) 332 4648 Facsimile: (02) 332 1837.

HIV and AIDS diagnoses and deaths following AIDS reported for November 1996 and cumulative diagnoses, as reported to 28 February 1997, are included in this issue of *CDI* (Tables 4 and 5).

Table 4. New diagnoses of HIV infection, new diagnoses of AIDS and deaths following AIDS occurring in the period 1 to 30 November 1996, by sex and State or Territory of diagnosis

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Totals for Australia: This period 1996	This period 1995	Year to date 1996	Year to date 1995
HIV diagnoses	Female	0	2	0	0	0	0	0	1	3	1	58	64
	Male	0	29	1	11	5	0	18	4	68	70	661	658
	Sex not reported	0	1	0	0	0	0	0	0	1	0	5	8
	Total[1]	0	32	1	11	5	0	18	5	72	71	725	732
AIDS diagnoses	Female	0	1	0	0	0	0	0	0	1	2	18	27
	Male	0	7	0	1	1	0	0	2	11	59	344	602
	Total[1]	0	8	0	1	1	0	0	2	12	61	362	630
AIDS deaths	Female	0	0	0	0	0	0	0	0	0	6	14	35
	Male	0	6	1	0	0	0	1	2	10	45	318	494
	Total[1]	0	6	1	0	0	0	1	2	10	51	332	530

1. Persons whose sex was reported as transsexual are included in the totals.

Table 5. Cumulative diagnoses of HIV infection, AIDS and deaths following AIDS since the introduction of HIV antibody testing to 30 November 1996, by sex and State or Territory

		ACT	NSW	NT	Qld	SA	Tas	Vic	WA	Australia
HIV diagnoses	Female	15	531	3	102	45	4	169	78	947
	Male	174	10237	85	1679	592	76	3466	794	17103
	Sex not reported	0	2049	0	0	0	0	42	0	2091
	Total[1]	189	12831	88	1786	637	80	3686	875	20172
AIDS diagnoses	Female	7	143	0	30	18	2	48	18	266
	Male	76	4001	26	670	285	32	1373	303	6766
	Total[1]	83	4154	26	702	303	34	1428	323	7053
AIDS deaths	Female	2	106	0	24	13	2	37	11	195
	Male	50	2849	22	470	197	21	1087	224	4920
	Total[1]	52	2961	22	496	210	23	1130	236	5130

1. Persons whose sex was reported as transsexual are included in the totals.

Australian Sentinel Practice Research Network

The Australian Sentinel Practice Research Network (ASPREN) comprises 99 sentinel general practitioners from throughout the country. Approximately 9,000 consultations are recorded each week for 12 conditions. Of these, CDI reports the consultation rates for chickenpox, HIV testing (doctor initiated), HIV testing (patient initiated), influenza, measles, pertussis, Ross River virus infection, rubella and gastroenteritis. For further information including case definitions see CDI 1997;21:6.

Data for weeks 8, 9 and 10 ending 23 February, 2 March and 9 March 1997 respectively are included in this issue of *CDI* (Table 6). The consultation rate for chickenpox during the last two weeks was lower than it has been in previous weeks. The consultation rate for influenza-like illness remained low. The consultation rate for gastroenteritis did not change significantly. The rates for measles, rubella and pertussis remained low, while that for Ross River virus infection showed a slight increase during the most recent week compared with the previous five weeks. Rates for HIV testing, both doctor-initiated and patient-initiated, were similar to previous weeks.

Table 6. Australian Sentinel Practice Research Network reports, weeks 8, 9 and 10, 1997

	Week 8, to 23 February 1997		*Week 9, to 2 March 1997*		*Week 10, to 9 March 1997*	
Condition	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters	Reports	Rate per 1,000 encounters
Chickenpox	20	2.7	13	2.1	12	1.8
Gastroenteritis	82	11.0	86	13.6	73	10.8
HIV testing (doctor initiated)	5	0.7	12	1.9	7	1.0
HIV testing (patient initiated)	16	2.2	18	2.8	18	2.7
Influenza	18	2.4	5	0.8	15	2.2
Measles	0	0.0	1	0.2	0	0.0
Pertussis	3	0.4	3	0.5	2	0.3
Ross River virus infection	2	0.3	2	0.3	4	0.6
Rubella	5	0.7	4	0.6	6	0.9

Figure 4. Epstein-Barr virus infection laboratory reports, 1994 to 1997, by month of specimen collection

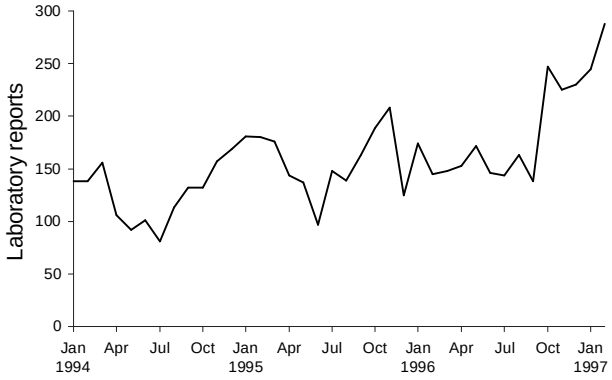
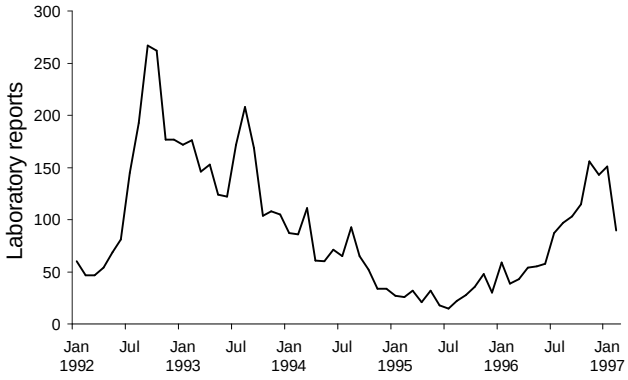


Figure 5. *Mycoplasma pneumoniae* laboratory reports, 1992 to 1997, by month of specimen collection



LabVISE

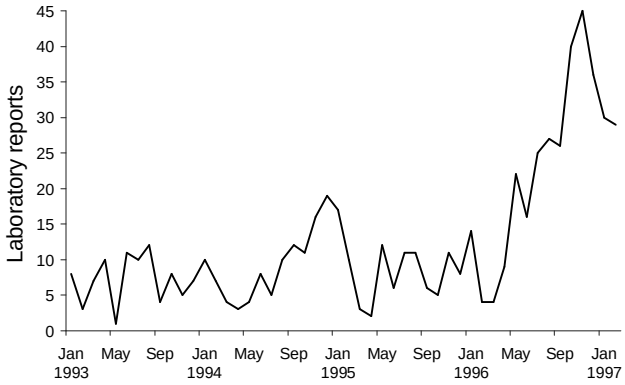
The Virology and Serology Laboratory Reporting Scheme, LabVISE, is a sentinel reporting scheme. Twenty-one laboratories contribute data on the laboratory identification of viruses and other organisms. Data are collated and published in Communicable Diseases Intelligence each fortnight. These data should be interpreted with caution as the number and type of reports received is subject to a number of biases. For further information, see CDI 1997;21:8-9.

There were 1,046 reports received in the *CDI* Virology and Serology Reporting Scheme this period (Tables 7 and 8).

Epstein-Barr virus infection was reported for 116 patients this period; diagnosis was by IgM detection (115) and total antibody (1). The number of reports received with specimen collection dates in February is the highest on record (Figure 4).

There were 41 reports of *Mycoplasma pneumoniae* received in this period. The male:female ratio was 1:1.7 with most reports (22) for children aged 5 - 14 years. The total number of reports appears to be declining after peaking over the November to January period (Figure 5).

Figure 6. Parvovirus laboratory reports, 1993 to 1997, by month of specimen collection



Laboratory reports of parvovirus remain relatively high although they appear to be declining (Figure 6). There were 16 reports received this period, all but one were from Victoria. Diagnosis was by IgM detection (15) and nucleic acid detection (1).

Table 7. Virology and serology laboratory reports by State or Territory[1] for the reporting period 27 February to 12 March 1997, historical data[2], and total reports for the year

	State or Territory[1]								Total this fortnight	Historical data [2]	Total reported in *CDI* in 1997
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
Measles, mumps, rubella											
Measles virus			1		2				3	7.3	20
Rubella virus				4	12		1	1	18	21.3	327
Hepatitis viruses											
Hepatitis A virus		7	9	1	3		1	4	25	22.0	315
Hepatitis D virus				2					2	0.2	9
Arboviruses											
Ross River virus			16	82	60		16	19	193	271.5	703
Barmah Forest virus			5	2				6	13	16.0	85
Dengue type 2				7					7	0.0	36
Dengue not typed				5					5	1.0	33
Adenoviruses											
Adenovirus type 1					4				4	0.2	12
Adenovirus type 2					5				5	1.2	18
Adenovirus type 4							1		1	0.0	3
Adenovirus not typed/pending		1		11	11		6	5	34	36.3	286

Table 7. Virology and serology laboratory reports by State or Territory[1] for the reporting period 27 February to 12 March 1997, historical data[2], and total reports for the year, continued

	State or Territory[1]								Total this fortnight	Historical data[2]	Total reported in *CDI* in 1997
	ACT	NSW	NT	Qld	SA	Tas	Vic	WA			
Herpes viruses											
Cytomegalovirus		3		9	6		8	14	40	65.2	362
Varicella-zoster virus				8	19		8		35	46.8	464
Epstein-Barr virus		9	6	6	62		12	21	116	78.3	971
Other DNA viruses											
Papovavirus group							1		1	0.2	2
Parvovirus					1		15		16	4.2	133
Picornavirus family											
Rhinovirus (all types)		2		14	9		3		28	20.5	195
Enterovirus not typed/pending				17					17	38.0	200
Ortho/paramyxoviruses											
Influenza A virus		1		12				1	14	6.3	132
Influenza B virus		1		1	2		2	1	7	1.8	82
Influenza virus - typing pending					15				15	0.0	74
Parainfluenza virus type 1				1					1	3.8	30
Parainfluenza virus type 2				1	1		2	1	5	2.5	16
Parainfluenza virus type 3		2		2	3		3		10	16.2	313
Parainfluenza virus typing pending					38				38	1.2	92
Respiratory syncytial virus		19			1		3	8	31	26.5	223
Other RNA viruses											
Rotavirus					12	4	5	17	38	15.2	275
Astrovirus							1		1	0.0	3
Small virus (like) particle							1		1	0.5	1
Other											
Chlamydia trachomatis not typed	1	12	38	30	39		8	53	181	109.3	1,473
Chlamydia psittaci							2		2	4.7	31
Mycoplasma pneumoniae		13		7	5		9	7	41	15.7	557
Coxiella burnetii (Q fever)		4		6			1		11	5.2	84
Rickettsia australis				1					1	0.5	9
Bordetella pertussis		1	1	7			76		85	35.2	772
Leptospira hardjo				1					1	0.2	7
TOTAL	1	75	76	237	310	4	185	158	1,046	874.8	8,348

1. State or Territory of postcode, if reported, otherwise State or Territory of reporting laboratory.
2. The historical data are the averages of the numbers of reports in 6 previous 2 week reporting periods: the corresponding periods of the last 2 years and the periods immediately preceding and following those.

Table 8. Virology and serology laboratory reports by contributing laboratories for the reporting period 27 February to 12 March 1997

State or Territory	Laboratory	Reports
New South Wales	Institute of Clinical Pathology & Medical Research, Westmead	28
	Royal Alexandra Hospital for Children, Camperdown	5
	Royal Prince Alfred Hospital, Camperdown	8
	South West Area Pathology Service, Liverpool	31
Queensland	Queensland Medical Laboratory, West End	54
	State Health Laboratory, Brisbane	186
South Australia	Institute of Medical and Veterinary Science, Adelaide	310
Tasmania	Northern Tasmanian Pathology Service, Launceston	4
Victoria	Microbiological Diagnostic Unit, University of Melbourne	8
	Monash Medical Centre, Melbourne	10
	Royal Children's Hospital, Melbourne	105
	Victorian Infectious Diseases Reference Laboratory, Fairfield	62
Western Australia	Princess Margaret Hospital, Perth	49
	Western Diagnostic Pathology	186
TOTAL		1046