



Communicable Diseases Intelligence

Bulletin number 82/12

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Contents:

- Prevention of malaria in travellers.
- Malaria in Australia - 1981.

VIRUS REPORTING SCHEME - A total of 1,134 reports were received this period. Patterns suggested by the reports included the beginning of the seasonal rise of rotavirus infections (104 reports compared with 55, 27 and 19 for the previous three periods).

- Arbovirus infections - The localities of the 44 dengue infections reported by the State Health Laboratory, Brisbane, were Cairns (23 cases), Townsville (8), Mareeba (5), Atherton (1), Mossman (1), Ravenshoe (1), Gordonvale (1), Edmonton (1), Kuranda (1) and Charters Towers (2). The three Kunjin virus infections reported emanated from Gayndah, Morven and Roma.
- Encephalitis - A serological and clinical diagnosis of varicella encephalitis in an eight year old girl was reported by the Royal Alexandra Hospital for Children, Sydney. Similarly, specific IgM against rubella virus was identified by Fairfield Hospital, Melbourne, in a 15 year old male with encephalitis. The Prince of Wales Hospital, Sydney, reported an HI titre of 1/160 against Ross River virus in a 63 year old male with confusion, ataxia, meningism and a query encephalitis. Although the absence of specific IgM was indicative of a past infection, no other serological activities apart from a CF titre of 1/256 against cytomegalovirus were identified.
- Herpes simplex virus type 1 and herpes simplex virus type 2 were isolated by Fairfield Hospital from a facial lip lesion and labial lesion respectively from a 35 year old female.
- Chlamydia trachomatis was isolated by the Institute of Clinical Pathology and Medical Research, Sydney, from a throat swab specimen referred by a general practitioner. The specimen had been taken from a male of unspecified age who presented with a sore throat. However, the isolation was not regarded as significant since the patient had had recent homosexual contact with a male with nonspecific urethritis.

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PREVENTION OF MALARIA IN TRAVELLERS

Each year Australians travel overseas to malarious areas of the world. Unfortunately, travellers are unaware of the risk of acquiring this very debilitating and occasionally fatal disease, and of the protection afforded by malaria prophylaxis. The following is an up-date of the article on malaria prophylaxis published in CDI 79/23, and is based primarily on "Prevention of Malaria in Travelers - 1982", MMWR Supplement (1982) 31:IS and "Malaria prevention in travellers from the United Kingdom", BMJ (1981) 283:214.

INTRODUCTION

Malaria is a disease caused by several species of Plasmodium, a parasite which infects red blood cells. Transmission is usually effected by the bite of an infected female Anopheles mosquito. Attacks can be minimised by the use of relatively safe, convenient and inexpensive prophylactic medication. Regardless of age, all travellers to areas where the risk of malaria transmission exists should take prophylactic medication, even for visits as brief as one night.

Because of the nocturnal feeding habits of Anopheles mosquitoes, travellers can further reduce their risk of acquiring malaria by remaining in well-screened areas between dusk and dawn, or by sleeping under mosquito netting. Exposure to mosquitoes out-doors can be reduced by wearing clothing that adequately covers the arms and legs, and by applying mosquito repellent to exposed areas of the skin. The most effective repellent is N,N diethyl-meta-toluamide, an ingredient of many commercially available insect repellents.

GEOGRAPHIC AREAS AT RISK

Malaria is known to exist in parts of Central and South America, Africa, the Middle East, Turkey, the Indian subcontinent, South East Asia, the People's Republic of China, the Malay Archipelago and Oceania. Table 1A lists the countries where malaria transmission has been documented. However, the risk of acquiring malaria is not uniform between countries, or even within countries. Transmission is dependent on local conditions such as the density and habits of mosquito vectors, weather, altitude and prevalence of infection. Because these factors change frequently, current information is not always available for many locales. As a result, Table 1A may not include all areas with risk of occasional malaria transmission, especially infrequently visited areas. Moreover some countries may control transmission in the near future. Nevertheless, it is better to err on the side of caution by taking prophylaxis.

Table 1B lists the countries where strains of chloroquine-resistant P. falciparum (CRPF) have been documented according to the current information from WHO. Again these data have several limitations; - the testing for chloroquine resistance has been done only in certain areas so that the status of strains in neighbouring areas may be unknown; many studies of chloroquine resistance were completed 5-10 years ago; and susceptible and resistant strains of P. falciparum can co-exist in the same or neighbouring areas.

TABLE 1A. Malaria risk by country.

No reference is given to the malarious districts and provinces in each country, nor the risk of infection with respect to season and altitude.

* - malaria risk in urban areas;

————— - areas with known chloroquine-resistant P. falciparum.

----- - areas with isolated reports of chloroquine-resistant P. falciparum.

<u>AFRICA</u>		<u>AMERICA</u>		<u>EUROPE</u>	<u>ASIA & OCEANIA</u>	
<u>North of Sahara</u>	<u>South of Sahara</u>	<u>Central</u>	<u>South</u>		<u>West of India</u>	<u>East of India</u>
Algeria	Angola*	Belize	Argentina	Turkey*	Afghanistan*	Bangladesh*
Egypt	Benin*	Costa Rica	Bolivia	USSR?	Bahrein*	Burma*
Libyan Arab Jamahiriya	Botswana*	Dominican Republic	Brazil	(Few scattered areas	Democratic Yemen*	Butan
Morocco	Burundi*	El Salvador	<u>Colombia</u>	adjacent to borders with	Iran	China?
Syrian Arab Republic	Cape Verde	Guatemala*	<u>Ecuador</u>	Iran and Afghanistan.	Iraq*	<u>Democratic Kampuchea*</u>
Tunisia	Central African Republic*	Haiti*	<u>French Guiana*</u>	No risk in tourist areas)	Jordan	<u>India*</u>
	Chad*	Honduras	<u>Guyana</u>		Oman*	<u>Indonesia*</u>
	Comoros*	Mexico	<u>Paraguay</u>		Pakistan*	<u>Lao People's</u>
	Congo*	Nicaragua	Peru		Saudi Arabia*	<u>Democratic Republic*</u>
	Djibouti?	<u>Panama</u>	Surinam		Syrian Arab Republic	<u>Malaysia</u>
	Equatorial Guinea*		<u>Venezuela</u>		United Arab Emirates*	<u>Maldives*</u>
	Ethiopia*				Yemen*	<u>Nepal</u>
	Gabon*					<u>Papua New Guinea*</u>
	Gambia*					<u>Philippines</u>
	Ghana*					<u>Solomon Islands*</u>
	Guinea*					<u>Sri Lanka*</u>
	Guinea-Bissau*					<u>Thailand</u>
	Ivory Coast*					<u>Vanuatu*</u>
	Kenya*					<u>Vietnam?</u>
	Liberia*					
	Madagascar*					
	Malawi*					
	Mali*					
	Mauritania?					

TABLE 1B. Countries with known or suspected chloroquine-resistant P. falciparum.

<u>AFRICA</u>	<u>AMERICA</u>	<u>ASIA & OCEANIA</u>
Comoros (isolated reports); Kenya (isolated reports, but chloroquine is still the prophylactic drug of choice); Madagascar (isolated reports); United Republic of Tanzania (isolated reports, but chloroquine is still the prophylactic drug of choice).	Panama (all malarious areas east of Canal Zone including San Blas Islands); Brazil (States in interior of country); Colombia (all malarious areas); Ecuador (Provinces in interior of country bordering Colombia); French Guiana (isolated reports); Guyana (areas in interior of country); Surinam (all malarious areas); Venezuela (all malarious areas).	Bangladesh (areas bordering States of Assam, Meghalaya, Tripura, and Mizoram, India; and Burma); Burma (all malarious areas); China (parts of provinces of Guangdong (including Hainan Island), Guangxi and Yunnan adjacent to Burma, Lao People's Democratic Republic, and Vietnam); Democratic Kampuchea (whole country; resistance to Pyrimethamine - sulphadoxine is also possible); India (States of Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Orissa and Tripura. Except for Orissa State, these areas are north and east of Bangladesh where foreign tourists are not permitted to travel); Indonesia (East Kalimantan, Irian Jaya); Lao People's Democratic Republic (all malarious areas); Malaysia (all malarious areas); Papua New Guinea (all areas); Philippines (Luzon Island, Basilan Island, and Sulu Archipelago, Mindoro Island, Palawan Island); Solomon Islands (all malarious areas); Thailand (all malarious areas. Resistance to Pyrimethamine - sulphadoxine documented in refugee camps in eastern part of country near border with Democratic Kampuchea); Vietnam (all malarious areas).

CHEMOPROPHYLAXIS

Although currently recommended anti-malarial medications are generally effective while they are being taken, routine prophylaxis does not prevent relapses of P. vivax and P. ovale infections which have a persistent liver (exoerythrocytic) stage. Travellers should be warned that if they experience malaria symptoms during, or even several years after, possible exposure to malaria, they should inform their general practitioner of their travel history so that this diagnosis will be considered. If prophylaxis is continued for four weeks after leaving a malarious area, infections with P. falciparum are eliminated.

(a) PROPHYLAXIS AGAINST P. VIVAX, P. MALARIAE, P. OVALE AND CHLOROQUINE-SENSITIVE STRAINS OF P. FALCIPARUM

Chloroquine phosphate - Chloroquine phosphate is the drug of choice for the suppression of infections caused by P. vivax, P. malariae, P. ovale and strains of P. falciparum that are sensitive to chloroquine. The recommended adult dose is 300 mg base (500 mg salt) taken orally on the same day each week beginning two weeks before entering a malarious area and continuing for four weeks after leaving the area. Chloroquine is safe and effective when taken as prescribed, but it is active only against the erythrocytic stages of Plasmodium species. Therefore it prevents a malaria attack, but does not prevent the infection. In P. falciparum and P. malariae infections, which have no persistent exoerythrocytic phase, chloroquine usually eliminates the infection when continued for four weeks after the traveller leaves the malarious area. The advice to commence prophylaxis two weeks before entering a malarious area will ensure that an adequate chloroquine blood level develops, and any adverse effects can be assessed and managed before departure. Serious adverse reactions to suppressive doses of chloroquine are rare, but occasionally minor side effects such as urticaria, gastrointestinal disturbance, headache, dizziness and blurred vision may occur. These may be minimised by taking the drug after meals. Although chloroquine when used in high doses, as in the treatment of rheumatoid arthritis, may cause a severe retinopathy, it has been an infrequent complication following the recommended suppressive antimalarial dose. Nevertheless, periodic ophthalmological examinations are recommended after the total cumulative chloroquine dose exceeds 100-500 g base, equivalent to 6-10 years of continuous use.

Because the exoerythrocytic stages of P. vivax and P. ovale persist in the liver, attacks caused by these two species can occur as long as four years after chloroquine suppression is discontinued. These delayed attacks can be prevented by the use of primaquine, which is active against the liver stage of these species (see below for its use for terminal prophylaxis and radical cure).

Alternatives to chloroquine phosphate - The most suitable alternatives to chloroquine phosphate are chloroquine sulphate, hydroxychloroquine or amodiaquine, all of which are 4-aminoquinolines with activities and toxicities basically similar to those of chloroquine phosphate. Following the prolonged administration of amodiaquine, pigmentary deposition may occur in the fingernails and palate. In individuals who experience an allergic dermatitis in response to chloroquine, an alternative to the 4-aminoquinolines is recommended.

TABLE 2 Drugs and dosages for malaria prophylaxis.

<u>GENERIC NAME</u>	<u>ORAL ADULT DOSE</u>	<u>ORAL PAEDIATRIC DOSE</u>
CHLOROQUINE PHOSPHATE	300 mg base (2 tablets) once/week; 2 weeks before, during and for 4 weeks after exposure.	5 mg base/kg once/week up to maximum adult dose for same duration.
CHLOROQUINE SULPHATE	300 mg base (3 tablets) once/week; 2 weeks before, during and for 4 weeks after exposure.	5 mg base/kg once/week up to maximum adult dose for same duration. (Available as a syrup - Nivaquine).
AMODIAQUINE	400 mg base (2 tablets) once/week; 2 weeks before, during and for 4 weeks after exposure.	7 mg base/kg once/week up to maximum adult dose for same duration. (Available as a powder - Camoquine).
CHLOROGUANIDE (PROGUANIL)	100 mg (1 tablet) once/day; 2 weeks before, during and for 4 weeks after exposure.	1.5 mg/kg once/day up to maximum adult dose for same duration.
HYDROXYCHLOROQUINE	310 mg base (2 tablets) once/week; 2 weeks before, during and for 4 weeks after exposure.	5 mg base/kg once/week up to maximum adult dose for same duration.
PYRIMETHAMINE	25 mg (1 tablet) once/week; 2 weeks before, during and for 4 weeks after exposure.	0.5 mg/kg once/week up to maximum adult dose for same duration.
PYRIMETHAMINE-SULPHADOXINE (FANSIDAR)	25 mg pyrimethamine plus 500 mg sulphadoxine (1 tablet) once/week; 2 weeks before, during and for 4 weeks after exposure.	0.5 mg/kg pyrimethamine plus 10 mg/kg sulphadoxine once/week up to maximum adult dose for same duration.
PYRIMETHAMINE-DAPSONE (MALOPRIM)	12.5 mg pyrimethamine plus 100 mg dapsone (1 tablet) once/week; 2 weeks before, during and for 4 weeks after exposure.	0.25 mg/kg pyrimethamine plus 2 mg/kg dapsone once/week up to maximum adult dose for same duration. Should not be used in infants < 6 weeks of age.
PRIMAQUINE	15 mg base (1 tablet) once/day for 14 days; or, 45 mg base once/week for 8 weeks, during the last week of, or just following a course of suppression with chloroquine or comparable drug.	0.3 mg base/kg (up to maximum adult dose) once/day for 14 days; or, 0.9 mg base/kg (up to maximum adult dose) once/week for 8 weeks during the last week of, or just following a course of suppression with chloroquine or comparable drug.

Alternatives to 4-aminoquinolines - Proguanil (chloroguanide) and pyrimethamine are alternative drugs. Like chloroquine, proguanil and pyrimethamine are active against the erythrocytic stages of malaria parasites and suppress the clinical symptoms of these infections. They have no significant toxicity in prophylactic doses. However, in some areas strains of P. falciparum and more rarely P. vivax are resistant to proguanil and/or pyrimethamine.

Primaquine - Primaquine is an 8-aminoquinoline and is effective against the exoerythrocytic stage of P. vivax and P. ovale and the gametocyte of P. falciparum. The drug is therefore used in conjunction with chloroquine as the radical treatment of a clinical attack or to eliminate any latent infection with the vivax group. The standard course of radical treatment is administered orally as a total dose of 1.5 g chloroquine base over three days (increased to 2.4 g of base over five days in a severe clinical infection) with 15 mg primaquine in divided doses daily over 14 days. For infections originating in West Irian and Papua New Guinea, Solomon Islands and New Hebrides 22.5 mg primaquine is given daily over 14 days to eliminate the Chesson strain of P. vivax. Relapses are still seen even after radical treatment, in which case the course of treatment is repeated.

The use of primaquine for terminal prophylaxis is not indicated for all travellers, and should be evaluated on an individual basis i.e. the intensity and duration of the individual's exposure to P. vivax or P. ovale and whether the traveller is returning to the receptive area in Australia.

Although Australia was entered in the Register of Countries which have eradicated malaria on 31 May 1981, Australia to the north of 19°S latitude remains receptive and vulnerable to the disease, and transmission could be re-established from imported cases unless the appropriate surveillance continues. In 1980, there were 33 cases of malaria in the receptive area - 30 were imported, two were introduced and one was a relapse of an introduced case.

(b) PROPHYLAXIS AGAINST CHLOROQUINE-RESISTANT STRAINS OF P. FALCIPARUM

The most serious form of malaria is due to P. falciparum, and the areas where strains of chloroquine-resistant P. falciparum (CRPF) occur are listed in Table 1B. In these conditions the choice of antimalarial is between pyrimethamine-sulphadoxine (Fansidar) and pyrimethamine-dapsone (Maloprim).

Pyrimethamine-sulphadoxine - This fixed combination of pyrimethamine, a folate antagonist, and sulphadoxine, a long acting sulphonamide, is commonly used by travellers to suppress CRPF malaria. The combination contains the amount of pyrimethamine prescribed for the prevention of malaria with P. vivax strains. Although not a routine procedure, terminal prophylaxis with primaquine may be advisable for some individuals against delayed P. vivax attacks. Serious side effects from the combination occur, and general practitioners should be aware of the known adverse reactions to each of the two components. Adverse effects of sulphonamide include allergy (including skin rashes) and disorders of the blood, kidney, liver and nervous system. The use of pyrimethamine in high doses or for prolonged periods may cause haematological toxicity, including megaloblastic anaemia due to folate deficiency.

The main use of pyrimethamine-sulphadoxine is in the treatment of acute attacks of CRPF malaria in conjunction with quinine, and it should preferably be reserved for this purpose. However it can be considered for short term prophylaxis. Strains of P. falciparum resistant to pyrimethamine-sulphadoxine have recently been recorded in eastern Thailand.

Pyrimethamine-dapsone - This is the preferred prophylactic combination for Australian travellers to areas with CRPF malaria. As with pyrimethamine-sulphadoxine, there is no necessity to give chloroquine when prescribing pyrimethamine-dapsone providing there is no resistance to pyrimethamine in the area. The action of pyrimethamine is potentiated with the addition of dapsone. Terminal prophylaxis with primaquine may be necessary to eliminate a P. vivax infection when the returned traveller stops taking prophylaxis. Adverse reactions to the combination have included mild gastrointestinal disorders, allergic dermatitis and agranulocytosis with overdoses.

(c) PROPHYLAXIS AGAINST BOTH CHLOROQUINE- AND PYRIMETHAMINE-SULPHADOXINE-RESISTANT STRAINS OF P. FALCIPARUM

Strains of CRPF resistant to pyrimethamine-sulphadoxine have been reported recently in some Indochinese refugee camps along the Thai-Kampuchean border. Pyrimethamine-sulphadoxine treatment failures in Brazil are also being reported. At present there is no in-vitro method to test for pyrimethamine-sulphadoxine resistance, so that "host-failures" (i.e. a host-drug interaction that impairs the drug action on the parasite) may cloud the overall analysis. There is no other regimen currently available that has been tested thoroughly for safety and efficacy as prophylaxis against these strains of P. falciparum.

The prescription of quinine or tetracycline has been suggested by one group as prophylaxis for persons with such intense and unavoidable exposure to these multiresistant strains of P. falciparum. However, there is no evidence to date that resistance to pyrimethamine-dapsone occurs in these areas, and there have been misgivings over the use of oral quinine as a prophylactic, particularly since the pyrimethamine-sulphadoxine resistance has occurred in areas where the response to quinine is poor. Therefore, travellers to Thailand should continue to use the recommended antimalarials.

(d) PROPHYLAXIS IN PREGNANCY

Malaria infection poses a serious threat to both a pregnant woman and her fetus. However, pregnancy is not a contraindication to malaria prophylaxis with chloroquine, amodiaquine or proguanil in the recommended doses.

Pyrimethamine is teratogenic when administered in very high doses to animals. Although there is no recorded evidence that pyrimethamine alone, or with -sulphadoxine or -dapsone has any teratogenic effects on the human fetus in the doses used for antimalarial purposes, its use during pregnancy should be avoided, especially in the first trimester. In addition, sulphonamides are to be avoided in the late stages of pregnancy because of the risk of kernicterus. Therefore women who are pregnant, or are likely to become so, should not travel to chloroquine-resistant malaria areas. Pregnant women who cannot

avoid exposure to these strains of malaria should be informed of the adverse effect of an attack of malaria on the fetus and of the possible risks of fetal teratogenicity with prophylaxis. Pyrimethamine-dapsone has been considered by one expert group to be a satisfactory antimalarial in these special circumstances. (BMJ (1981) 283; 214).

Both tetracycline and quinine are contraindicated in pregnancy unless they are required to treat life-threatening infections of the mother. In addition, if the physician does not wish to give primaquine in pregnancy, chloroquine should be given once a week until delivery, and then primaquine administered.

(e) PROPHYLAXIS IN CHILDREN

Regardless of age, all children who may be exposed to malaria should be protected with prophylactic medication. Drugs of choice and alternative drugs are the same as for adults, except where indicated in the paediatric dosage recommendations of Table 2. Doses should be calculated carefully according to body weight, since overdose of chloroquine or pyrimethamine in children can be fatal. Medications should be stored in child-proof containers out of reach of children.

The neonatal period represents difficulties. The immaturity of enzyme systems and the practical problems of giving the correct dose mean that only the least toxic antimalarials should be given prophylactically. Proguanil or chloroquine syrup may be given in areas without resistance to these antimalarials. Everywhere mosquito nets should be used to avoid exposure to mosquito bites. In areas of chloroquine resistance, neither pyrimethamine-sulphadoxine nor pyrimethamine-dapsone is suitable for the first six weeks of life.

MALARIA IN AUSTRALIA - 1981

(Contributed by R.H. Black, Central Registry of Malaria Cases, Commonwealth Institute of Health, Sydney.)

A total of 497 cases of malaria were recorded in the Central Register of Malaria Cases during 1981 compared with 628 in 1980 (see CDI 18/14). All of these were imported. The distribution of cases by State and Territory was: Australian Capital Territory - 16; New South Wales - 137; Victoria - 95; Queensland - 165; South Australia - 39; Western Australia - 31; Tasmania - 4; Northern Territory - 10. Plasmodium vivax infections were the most common (378 reports) followed by P. falciparum (108), P. malariae (1) and P. ovale (1). There were six mixed infections of P. vivax with P. falciparum and three cases where the species was not determined. The origins of the cases were SW Pacific (300), Asia (164) and Africa (23) with 10 cases unspecified.

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

1

REPORTING PERIOD - 27/5/82 - 9/6/82

BULLETIN NUMBER

. 001 82/12

VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES

VIRUS OR VIRAL ANTIGEN	ICPMB		PHH/	FAIR-			STATE	STATE	Total
	(NSW)/ WVH (ACT)	RABC (NSW)	POW (NSW)	FIELD (VIC)	RCH (VIC)	IMVS (SA)	LAB (QLD)	LAB (WA)	
0100 ADENOVIRUS NOT TYPED.....	6		2	1		1	10	3	23
0101 ADENOVIRUS TYPE 1.....	1								1
0102 ADENOVIRUS TYPE 2.....						6		2	8
0103 ADENOVIRUS TYPE 3.....			1					2	3
0105 ADENOVIRUS TYPE 5.....						1			1
0107 ADENOVIRUS TYPE 7.....	1								1
0110 ADENOVIRUS TYPE 10.....	1								1
0119 ADENOVIRUS TYPE 19.....				5				1	6
0130 ADENOVIRUS TYPE 30.....						1			1
0199 ADENOVIRUS TYPING PENDING.....					3	1			4
0201 INFLUENZA A VIRUS.....						1		3	4
0203 INFLUENZA B VIRUS.....			1	1	6	3	2	1	14
0301 PARAINFLUENZA VIRUS TYPE 1.....					1	1		2	4
0302 PARAINFLUENZA VIRUS TYPE 2.....				5	3	3	4	1	16
0303 PARAINFLUENZA VIRUS TYPE 3.....							4	5	9
0399 PARAINFLUENZA VIRUS TYPING PENDING..						1			1
0400 RESPIRATORY SYNCYTIAL VIRUS (RS)....	16	22	1	9	24	18	29	1	120
0500 RHINOVIRUS (ALL TYPES).....	1			4	3	7	5		20
0600 MYCOPLASMA PNEUMONIAE.....	16	2	1	2		6	6	3	36
0700 ORNITHOSIS-PSITTACOSIS.....	1								1
0899 COXSACKIEVIRUS GROUP A TYPING PENDING.....								2	2
0902 COXSACKIEVIRUS B2.....							1		1
0904 COXSACKIEVIRUS B4.....						1			1
0905 COXSACKIEVIRUS B5.....					1		1		2
1000 ECHOVIRUS NOT TYPED.....							3		3
1003 ECHOVIRUS TYPE 3.....						1			1
1006 ECHOVIRUS TYPE 6.....							3		3
1009 ECHOVIRUS TYPE 9.....						2			2
1011 ECHOVIRUS TYPE 11.....								4	4
1014 ECHOVIRUS TYPE 14.....								1	1
1016 ECHOVIRUS TYPE 16.....							1		1

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

2

REPORTING PERIOD - 27/5/82 - 9/6/82 BULLETIN NUMBER . 82/12
 VIRAL IDENTIFICATIONS FROM CONTRIBUTING LABORATORIES-Continued

VIRUS OR VIRAL ANTIGEN	ICPAR	RNSC (NSW)	PHB/ POW (NSW)	PAIR- FIELD (VIC)	RCH (VIC)	IMVS (SA)	STATE LAB (QLD)	STATE LAB (WA)	Total
	(NSW)/ NH (ACT)								
1017 ECHOVIRUS TYPE 17.....	1			1				3	5
1022 ECHOVIRUS TYPE 22.....			3			1			4
1023 ECHOVIRUS TYPE 23.....								1	1
1024 ECHOVIRUS TYPE 24.....								2	2
1030 ECHOVIRUS TYPE 30.....	1			1					2
1101 POLIOVIRUS TYPE 1.....				1		1	1		3
1102 POLIOVIRUS TYPE 2.....							2		2
1103 POLIOVIRUS TYPE 3.....						2		1	3
1104 POLIOVIRUS-VACCINAL STRAIN.....			1		4				5
1199 POLIOVIRUS TYPING PENDING.....						2			2
1200 KUMPS VIRUS.....	8	1	1	3		2	3		18
1300 HERPES VIRUS GROUP-NOT TYPED.....	10			2		12			24
1301 HERPES SIMPLEX VIRUS NOT-TYPED.....		2		1				42	45
1302 EPSTEIN-BARR VIRUS (EB VIRUS).....	9			2				2	13
1303 VARICELLA-ZOSTER VIRUS.....	4	1						3	8
1306 HERPES SIMPLEX TYPE 1.....	2		11	22		6	16		57
1307 HERPES SIMPLEX TYPE 2.....	42		11	35		10	21		119
1399 HERPES VIRUS TYPING PENDING.....			15		3	2			20
1401 COXIELLA BURNETI.....	4					1	8		13
1521 MEASLES VIRUS.....	1					2	2		5
1522 RUBELLA VIRUS.....	1			9			1		11
1532 HEPATITIS B ANTIGEN.....	11		8	36		7	7	13	80
1535 HEPATITIS A ANTIBODY.....	12		2	5		5	6	6	36
1541 CHLAMYDIA A - C TRACHOMATIS.....	22	2	3					41	68
1556 CMV - CYTOMEGALOVIRUS.....	5		1	34	10		9	12	71
1564 ROTAVIRUS.....	2	5	9	11	8	64		5	104
1599 ENTEROVIRUS TYPING PENDING.....			4		7				11
ROSS RIVER VIRUS			1	1			55	1	58
DENGUE							44		44
KUNJIN VIRUS							3		3
ARBO. GROUP B.				1			1		2
Total.....	178	55	74	192	73	171	248	163	1,134

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

3

PERIOD : 27/5/82 to 9/6/82 ----

82/12

Viral Identifications by Clinical Information Table 1.

Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Encephalitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CMS other unspec.; 07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.

VIRUS OR VIRAL ANTIGEN	No-ill or data	respiratory	Encephalitis	meningitis	Paralysis	CMS other unspec	GI	hepatic	CVS	Urinary	SKIN/mucous
0101 ADENOVIRUS TYPE 1.....			7								
0102 ADENOVIRUS TYPE 2.....	1		7								
0103 ADENOVIRUS TYPE 3.....							1				
0105 ADENOVIRUS TYPE 5.....							1				
0107 ADENOVIRUS TYPE 7.....			1								
0130 ADENOVIRUS TYPE 30.....							1				
0201 INFLUENZA A VIRUS.....			4		1						
0203 INFLUENZA B VIRUS.....	2		12						1		
0301 PARAINFLUENZA VIRUS TYPE 1.....			4								
0302 PARAINFLUENZA VIRUS TYPE 2.....	1		14								
0303 PARAINFLUENZA VIRUS TYPE 3.....	1		0						1		
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....			121								
0500 RHINOVIRUS (ALL TYPES).....			18								1
0600 CHLAMYDIA PNEUMONIAE.....	6		24			1			1		
0899 COXSACKIEVIRUS GROUP A TYPING PENDING.....							1				
0902 COXSACKIEVIRUS B2.....			1								
0904 COXSACKIEVIRUS B4.....							1				
0905 COXSACKIEVIRUS B5.....			1				1				
1006 ECHOVIRUS TYPE 6.....			1		1						
1009 ECHOVIRUS TYPE 9.....						1	1				
1011 ECHOVIRUS TYPE 11.....					4						
1014 ECHOVIRUS TYPE 14.....					1						
1016 ECHOVIRUS TYPE 16.....							1				
1017 ECHOVIRUS TYPE 17.....					3		1				
1022 ECHOVIRUS TYPE 22.....			1				3				
1024 ECHOVIRUS TYPE 24.....	1				1						

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

4

PERIOD : 27/5/82 to 9/6/82

82/12

Viral Identifications by Clinical Information Table 1.

Code 00,99 -No ill or data; 01,02,11,12 -Respiratory; E3 -Enceph-
alitis; M3 -Meningitis; 04 -Paralysis; 05,13 -CNS other unspec.;

07,49 -GI; 17,47 -Hepatic; 19 -CVS; 89 -Urinary; 06 -Skin/mucous.-Continued

VIRUS OR VIRAL ANTIGEN	No-ill or data	Respir atory	Enceph alitis	Mening -itis	Para- lysis	CNS other unspec	GI	Hepa -tic	CVS	Urin -ary	Skin/ muc membr
1030 ECHOVIRUS TYPE 30.....					1						
1101 POLIOVIRUS TYPE 1.....		3									
1102 POLIOVIRUS TYPE 2.....	1						1				
1103 POLIOVIRUS TYPE 3.....	1						1				1
1104 POLIOVIRUS-VACCINAL STRAIN....		1					3				
1200 MUMPS VIRUS.....	2		2	4							
1301 HERPES SIMPLEX VIRUS NOT-TYPED		1		1							32
1302 EPSTEIN-BARR VIRUS (EB VIRUS).	1							2			1
1303 VARICELLA-ZOSTER VIRUS.....			1					1			8
1306 HERPES SIMPLEX TYPE 1.....	1	2		1						4	24
1307 HERPES SIMPLEX TYPE 2.....	5										10
1401 COXIELLA BURNETI.....	2							1			
1521 MEASLES VIRUS.....	1										2
1522 RUBELLA VIRUS.....	1		1								5
1532 HEPATITIS B ANTIGEN.....	31							49			
1535 HEPATITIS A ANTIBODY.....	3							33			
1541 CHLAMYDIA A - C TRACHOMATIS...		1									
1556 CMV - CYTOMEGALOVIRUS.....	10	16				1		1		9	
1564 ROTAVIRUS.....						1	103				
ROSS RIVER VIRUS	11		1	1							17
DENGUE	4										31
ARBO. GROUP B.											1
Total.....	86	240	5	19	1	3	120	87	3	13	134

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

5

PERIOD : 27/5/82 to 9/6/82 ... 82/12
 Viral Identifications by Clinical Information Table 2.
 Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;
 38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;
 68 -Fever/malaise; 09 -Other; A1 -SIDS ...

VIRUS OR VIRAL ANTIGEN	Eye	Gen-ital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
0100 ADENOVIRUS NOT TYPED.....			1							
0103 ADENOVIRUS TYPE 3.....	1									
0110 ADENOVIRUS TYPE 10.....	1									
0119 ADENOVIRUS TYPE 19.....	5	1								
0203 INFLUENZA B VIRUS.....					2					
0302 PARAINFLUENZA VIRUS TYPE 2....										1
0303 PARAINFLUENZA VIRUS TYPE 3....								1		
0400 RESPIRATORY SYNCYTIAL VIRUS (RS).....								2		
0500 RHINOVIRUS (ALL TYPES).....								1		
0600 MYCOPLASMA PNEUMONIAE.....								2	2	
0700 ORNITHOSIS-PSITTACOSIS.....							1			
1005 ECHOVIRUS TYPE 3.....										1
1006 ECHOVIRUS TYPE 6.....					1			1		
1017 ECHOVIRUS TYPE 17.....							2			
1023 ECHOVIRUS TYPE 23.....										1
1030 ECHOVIRUS TYPE 30.....									1	
1104 POLIOVIRUS-VACCINAL STRAIN....										1
1200 MUMPS VIRUS.....			8					2		
1301 HERPES SIMPLEX VIRUS NOT-TYPED		13					1			
1302 EPSTEIN-BARR VIRUS (EB VIRUS) ..			5				2	2		
1303 VARICELLA-ZOSTER VIRUS.....				1						
1306 HERPES SIMPLEX TYPE 1.....	5	18						2		
1307 HERPES SIMPLEX TYPE 2.....		105								
1401 COXIELLA BURNETI.....					1		1	9		
1521 MEASLES VIRUS.....								1	1	
1522 RUBELLA VIRUS.....						1		1	2	
1532 HEPATITIS B ANTIGEN.....					2					

AUSTRALIA - COMMUNICABLE DISEASES INTELLIGENCE

6

PERIOD : 27/5/82 to 9/6/82 ...

82/12

Viral Identifications by Clinical Information Table 2.

Code 10 -Eye; 59 -Genital; 39 -Endo/sal gland;

38 -RES; 29 -Muscle/joint; 69 -Congenital; P8 -PUO;

G8 -Fever/malaise; 09 -Other; A1 -SIDS ...

-Continued

VIRUS OR VIRAL ANTIGEN	Eye	Genital	Endo/sal gland	RES	Muscle/joint	Con-genital	PUO	Fever/malaise	Other	SIDS
1541 CHLAMYDIA A - C TRACHOMATIS....	4	64								
1556 CMV - CYTOMEGALOVIRUS.....		5				11	3	8	11	
ROSS RIVER VIRUS					41			1	1	
DENGUE					10			29		
KUNJIB VIRUS					1			3		
ARBO. GROUP B.								1		
TOTAL.....	16	206	14	1	58	12	10	66	15	4

NOTIFIABLE DISEASES REPORTED IN AUSTRALIA

4th, 1982
 4 Weekly Period for.....
 28.3.82 to 24.4.82 inclusive

Bulletin 82/12

Disease	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
Amoebiasis	N.N.		1	1					2	9
Ankylostomiasis	N.N.								—	5
Anthrax									—	—
Arbovirus infection	8	4		11					23	146
Brucellosis	1			2					3	13
Campylobacter infections	N.N.	N.N.	N.N.	29	N.N.	N.N.	1	N.N.	30	138
Chancroid				N.N.		N.N.	N.N.		—	4
Cholera									—	—
Congenital rubella syndrome	N.N.	N.N.	N.N.		N.N.	N.N.	N.N.	N.N.	—	—
Diphtheria									—	—
Donovanosis		N.N.	14	N.N.		N.N.			14	31
Giardiasis	N.N.	N.N.	N.N.	48	N.N.	N.N.	N.N.	N.N.	48	226
Genital herpes	N.N.	N.N.	N.N.	48	N.N.	N.N.	N.N.	N.N.	48	85
Gonococcal ophthalmia neonatorum		N.N.			N.N.	N.N.	N.N.	N.N.	—	—
Gonorrhoea	298	256	119	58	132	12	70	21	966	4108
Hepatitis A (infectious)	20	17	13	13	2	1	2	5	73	422
Hepatitis B (serum)	20	12	3	15	3			2	55	231
Hepatitis - unspecified	N.N.	N.N.			3	N.N.	1		4	26
Hydatid disease		1							1	6
Lassa Fever	N.N.		N.N.			N.N.	N.N.	N.N.	—	—
Legionnaires disease	N.N.		N.N.	3	N.N.	N.N.	N.N.	N.N.	3	8
Leprosy			1		2		1		4	10
Leptospirosis		3	3			4			10	38
Lymphogranuloma venereum		N.N.	N.N.	N.N.	N.N.	N.N.			—	2
Malaria	6	6	12	7	3		1		35	156
Marburg Disease	N.N.		N.N.			N.N.	N.N.	N.N.	—	—
Meningococcal infections	N.N.	1	1			N.N.			2	18
Non-specific urethritis	N.N.	N.N.	N.N.	239	N.N.	N.N.	N.N.	N.N.	239	391
Ornithosis									—	4
Pertussis (whooping cough)	N.N.	15	N.N.		N.N.	N.N.	N.N.	N.N.	15	96
Plague									—	—
Poliomyelitis									—	—
Q. fever	11			2	N.N.		N.N.		13	49
Rabies	N.N.	N.N.	N.N.			N.N.	N.N.	N.N.	—	—

DISEASE	N.S.W.	VIC	QLD	S.A.	W.A.	TAS.	N.T.	A.C.T.	Total	CUMULATIVE TOTAL TO DATE FOR YEAR
Salmonella infections	86	18	51	35	44	3	18	5	260	910
Shigella infections	N.N.	—	19	2	35	—	3		59	139
Smallpox									—	—
Syphilis	150	18	43	8	25	—	29	1	274	1146
Tetanus				1					1	5
Trachoma	N.N.	N.N.			N.N.	N.N.			—	—
Tuberculosis (all forms)	34	17	13	10	14		1	5	94	422
Typhoid fever	3	1							4	12
Typhus (all forms)									—	—
Vibrio parahaemolyticus infections	N.N.	N.N.	N.N.		N.N.	N.N.	N.N.	N.N.	—	—
Yellow Fever									—	—
Yersinia enterocolitica infections	N.N.	N.N.	N.N.		N.N.	N.N.	N.N.	N.N.	—	—

(Note: Data collected under the Notifiable Diseases Returns may bear little or no correlation to that collected under the CDI laboratory scheme. Whilst the latter is a sampling program, the Notifiable Diseases data is dependent upon voluntary reporting by medical practitioners etc.)

N.N. Not Notifiable