

Trends in Malaria in Australia, 1991-1997

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An analysis of the malaria cases in the current NNDSS dataset was undertaken for cases with onset dates in 1991 to 1997. To allow for reporting delays, the analysis for each year included cases with onset dates in that year which were reported up to and including 30 June in each subsequent calendar year. Data were downloaded from EpiInfo version 6 and analysed using SPSS for Windows version 8.0. Time series data for the period 1917-1991 were downloaded from the NNDSS historic data collection in Microsoft Excel.

The number of malaria cases notified each year varied between a low of 622 in 1995 and a high of 866 in 1996. Each year, the state reporting the highest number of cases was Queensland (Table 1). Males have predominated with a M:F ratio varying between 2.3 and 2.5. The highest number of cases has been in the young adult age groups, with peaks in the 20-24 years age group in 1991, 1993, 1994 and 1997 and in the 25-29 years age group in 1992, 1995 and 1996 (Table 2).

Data on malaria species have been included in the NNDSS since 1995. Although reporting was initially poor, with no species recorded for over 70% of cases in 1995, there has been a gradual improvement since then. Species data were recorded for 65% of cases in 1996 and 87% of cases in 1997. In each of these years, the predominant species was *Plasmodium vivax*, accounting for between 64% and 69% of the cases for whom species was reported. *P. falciparum* accounted for between 29% and 32% of cases for whom species was reported. Mixed *falciparum/vivax* infections occurred in a small proportion of cases (<1% to 2.3%) each year.

Data on Aboriginality are poorly reported in the NDSS and, in most years, aboriginality is not recorded for over half of the cases. Where status has been recorded, the number of cases reported as occurring in Aboriginal and Torres Strait Islander persons has varied from 0 (1995) to 12 (1997).

While the number of cases has fluctuated from year to year, there appears to have been a plateauing of the upward trend in cases that was seen in the 1970s and 1980s (Figure 1). There have also been no significant

trends in the age, sex, geographic and seasonal distribution of cases. The proportions of cases due to *P. falciparum* in the 1995-1997 period are similar to those reported by the AMR for 1992 and 1993 (*Commun Dis Intell* 1998;22:11;237-244).

Figure 1. Malaria notifications, Australia, 1991-1997, by State or Territory

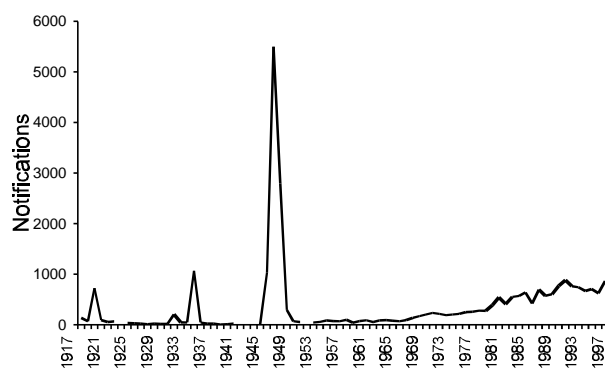


Table 1. Malaria notifications, Australia, 1991-1997, by State or Territory

State/ Territory	Year of onset						
	1991	1992	1993	1994	1995	1996	1997
ACT	22	26	18	24	21	27	17
NSW	139	125	174	185	98	213	162
NT	46	31	29	40	37	26	34
Qld	391	338	291	298	277	412	376
SA	40	35	25	30	24	21	22
Tas	10	14	11	14	1	5	5
Vic	79	132	81	83	127	107	83
WA	38	40	40	30	37	55	34
Total	765	741	669	704	622	866	733

Source: National Notifiable Diseases Surveillance System

Table 2. Malaria notifications, Australia, 1991-1997, by age group and sex

Age group (years)	1991		1992		1993		Sex ¹ 1994		1995		1996		1997	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F
0-4	10	9	8	8	10	13	9	5	4	4	13	12	16	13
5-9	13	13	19	13	14	7	13	10	10	3	18	18	15	10
10-14	39	22	24	15	20	13	15	8	20	11	27	12	17	13
15-19	68	30	53	34	54	28	59	31	33	35	74	37	55	31
20-24	87	26	68	17	79	26	89	30	59	25	85	45	73	31
25-29	85	24	100	34	71	20	71	34	76	22	96	37	68	29
30-34	47	24	62	16	46	21	58	20	50	14	58	32	63	27
35-39	46	17	57	19	39	15	41	18	42	15	60	20	50	17
40-44	49	11	37	16	39	15	50	16	38	21	46	14	38	11
45-49	36	11	29	10	38	12	30	8	45	7	56	10	43	12
50-54	9	8	18	3	17	6	32	12	24	9	19	7	34	10
55-59	12	1	11	7	16	6	12	1	17	2	20	7	15	3
60-64	10	4	12	5	8	2	4	3	7	1	7	4	8	3
65-69	3	1	4	2	5	4	3	4	7	3	13	2	10	2
70-74	3	0	8	0	4	1	2	0	3		4	2	2	2
75-79	1	0	1	0	1	0	2	0	1	1	2	0	2	2
80-84	1	0	0	1	0	0	1	0	1	1	0	0	0	1
85+	2	0	1	1	0	0	0	0		1	0	0	0	0
NS	16	17	17	5	10	2	8	4	5	2	5	1	0	2
Total	537	218	529	206	471	191	499	204	442	177	603	260	509	219

Source: National Notifiable Diseases Surveillance System

1. Excludes the following cases for whom sex was not stated: 1991 = 10, 1992 = 6, 1993 = 7, 1994 = 1, 1995 = 3, 1996 = 3, 1997 = 5.