

# MINISTRY *Of* Health

*Shaping Fiji's Health*

## FIJI COMMUNICABLE DISEASES BULLETIN 1ST QUARTER 2009

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## FIJI NATIONAL NOTIFIABLE DISEASE SURVEILLANCE

Table 1 : Fiji Syndromic surveillance

Syndrome	MONTH OF ONSET					
	Jan. 09	Feb. 09	March 09	Cumulative 2009	1st qtr 2007 Fiji NNDSS	1st qtr 2008 Fiji NNDSS
Diarrhoea <sup>1</sup>	632	212	96	940	2753	4497
Diarrhoea with blood <sup>2</sup>	5	3	0	8	85	55
Influenza-like illness <sup>3</sup>	565	120	121	826	3637	3297
Acute respiratory infection. <sup>4</sup>	905	200	173	1278	5349	5741
Acute fever & rash <sup>5</sup>	4	3	n.a	7	N.A	N.A
Acute flaccid paralysis <sup>5</sup>	0	1	n.a	1	N.A	N.A

**Notes :**

- 1 Source: Fiji National Notifiable Diseases Surveillance System (NNDSS); reported as "acute gastroenteritis", "enteritis", "gastroenteritis", "infective diarrhoea", "mild gastroenteritis", or "infective enteritis".
- 2 Source: NNDSS; reported as "dysentery amoebic & bacillary"
- 3 Source: NNDSS; reported as "influenza", or "influenza-like illness".
- 4 Source: NNDSS; reported as " pneumonia + ARI", "acute respiratory infection", "acute respiratory illness", "upper respiratory tract infection", .
- 5 Source: Hospital Based Active Surveillance System (HBAS)

Table I Fiji NNDSS

**Table I beside left** shows the selected syndromes reported in Fiji's NNDSS within the first qtr for years 2007-2009. Total number of cases reported in 2009 are markedly lower than the two previous years. This may indicate either that number of cases in the community are declining reflecting a general improvement in health status or that number of summary reports received fall way below expected levels for this period.

Table 2: Selected Syndromes by division Jan-Aug 08

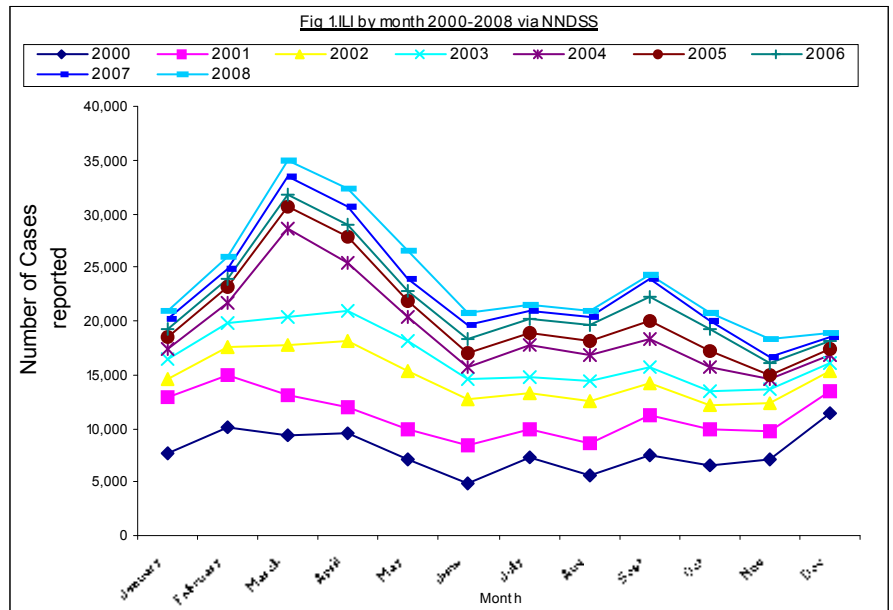
	Central	Western	Eastern	North
Diarrhoea	3,836	3,280	293	2,199
Diarrhoea with blood	55	38	17	21
ILI	4,372	3,084	311	2,083
ARI	3,613	8,422	138	6,301
Pneumonia	3,643	239	48	493
Viral Illness	7,012	6,029	1,218	3,368
Viral Infection	21	8	0	49

**Nb:** Viral illness & viral infections are as reported in notifiable certificates. Specific categories under these syndromes are not determined at this point

### Influenza like illness (ILI)

Year	Total cases
1995	63,151
1996	66,883
1997	97,048
1998	98,532
1999	100,966

Source NNDSS.



Year	Total number of measles reported	Rubella
2000	17	n.a
2001	109	n.a
2002	305	n.a
2003	37	n.a
2004	24	2
2005	50	6
2006	113	7
2007	24	0

### Measles

**Table 4 beside left** is a synopsis of clinically suspected measles & rubella cases reported for years 2000-2007. Of the documented age groups the most number of cases affected were between 1-9 yrs. In 2002 this age bracket made up the highest proportion at 14% and again in 2006 at 49% of all known cases. During the recent 2009 National EPI seminars, senior managers of subdivisions have been alerted to the increasing number of requests for measles testing to Mataika Hse. Acute fever & rash cases should have blood samples taken for measles & rubella and sent to Mataika Hse for testing .

**Fig 1: above right** represents the number of ILI reported for years 2000-2008. Generally the two peaks appeared in March & Sept yet 2008 ILI started peaking early in Feb. The 1st qtr of 2009 recorded a decline in number of ILI cases

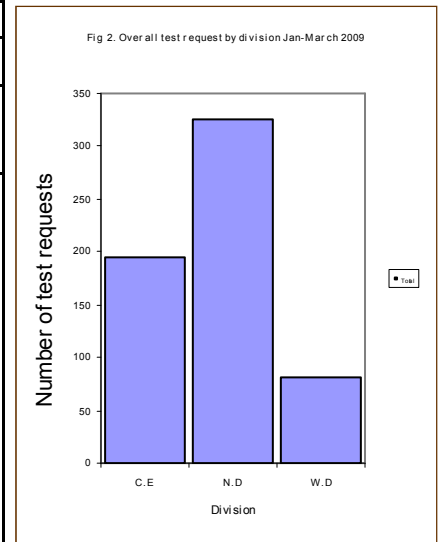
In 2006 Influenza A/H1N1 & AH3N2 were identified, this was again confirmed by the last RT-PCR trials performed at the National Influenza PCR lab, Mataika Hse in February 09 which detected flu type A/H1. These samples have been sent to WHO-CC Melbourne for further subtyping.

## Fiji CDC Public Health Laboratory (cont'd)

In this special publication we look in depth at the operations of the Mataika Hse. public health lab for the 1st quarter of 2009. Sufficient test reagents & kits were recently supplied thus enabling more tests to be conducted at the centre. The lab based health statistics provided below is aimed at providing the Fiji health sector and other stakeholders a more comprehensive picture of activities being carried out at the centre.

Table 5 : Laboratory confirmed new cases from Fiji Centre for Communicable Disease Control (FCCDC) and divisional laboratories.

Selected diseases	Jan-March 2009									
	Central			North			West			Cumm total
	Request	Tested	Positive	Request	Tested	Positive	Request	Tested	Positive	
Measles	24	24	2	0	0	0	1	1	1	3
Rubella	2	2	1	0	0	0	2	0	0	1
Dengue	78	78	33	219	170	85	31	31	16	134
Influenza	11	11	3	0	0	0	0	0	0	3
Leptospirosis	48	45	39	39	39	9	36	36	15	63
HIV/AIDS	37	37	1	12	12	3	4	3	0	4
Typhoid fever*	unk	unk	31	unk	unk	27	unk	unk	24	82
Cholera*	0	0	0	0	0	0	0	0	0	0



**Table 5. Laboratory Surveillance**

In the first quarter of 2009 there was an increase in measles and rubella tests requested for in the Central Division. This follows the increase in the number of acute fever and rash cases seen in the community. Samples submitted & tested revealed 3 positive cases which were all in the pediatric population.

Dengue fever test requests were also high particularly in the Northern division. Note that not all sample received were tested for Dengue. **The emphasis is that only sample requests with known dates of onset were selected, tested & subsequently sent overseas for further referencing.**

11 Influenza samples were received & tests were conducted in the newly established RT-PCR facilities at Mataika Hse. Influenza A/H1 was identified in 3 positive patient samples and these have been sent to WHO-CC Melbourne for further sub-typing.

63 new cases of Leptospirosis have been identified in the three divisions. Typhoid fever cases are sourced from divisional labs only total number of cases are presented. Overall the two main test requests were for Leptospirosis & Typhoid. There were no Cholera cases recorded.

On the whole the Northern division made up 54% of all test request for the 1st quarter (Fig. 2) .

Table 6 :Test request for Measles Jan-March 2009 by age group & division

Age in yrs	Central	Western	Northern	Cumm.total
1-5	6	0	1	7
6-10	2	0	0	2
11-15	2	1	0	3
21-26	1	0	0	1
<1	13	2	1	16
Total test request	24	3	2	29

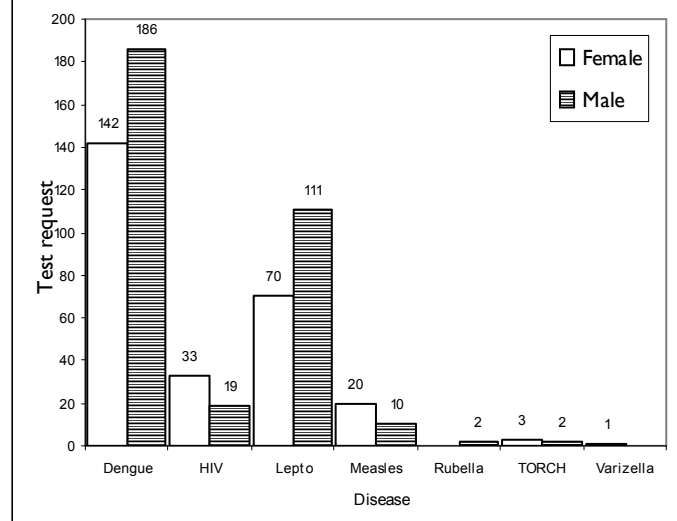
**Table 6 above** shows the number of Measles test requests for Jan-March 2009 by age and division. The most number of clinical samples originated from the Central division and approximately 50% of requests were under 1 year old .The oldest sample was of a 26 yr old .

Table 7 Measles & Rubella tests requests 2006-2008

Year	Measles	Rubella
2006	121	142
2007	26	9
2008	13	12

**Table 7 beside left** shows number of test requests received at Mataika Hse for the previous years

Fig 3. Total test requests by gender for Jan-March 09 Fiji CDC



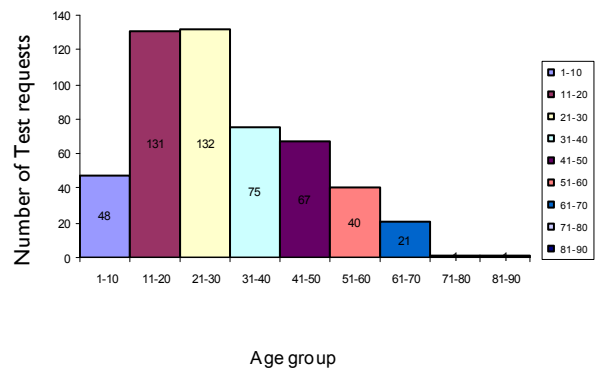
**Fig 3.above** depicts the number of test requests for each disease by gender. Note that there are more males being tested then females. for Dengue & Leptospirosis. The reverse is true for HIV & Measles

## Fiji CDC Public Health Laboratory (cont'd)

Table 8: Test request by race Jan—March 2009

Test requested	Fijian	Indian	Other	Unknown	Total test requests
Dengue	179	137	12	2	330
HIV	26	13	12	6	57
Leptospirosis	125	55	2	0	182
Measles	22	8	0	0	30
Rubella	0	2	0	0	2
TORCH	3	2	0	0	5
Varicella	0	1	0	0	1
<b>Total</b>	<b>355</b>	<b>219</b>	<b>26</b>	<b>8</b>	<b>608</b>

Fig 4. Test request by age group 1st Qtr 2009

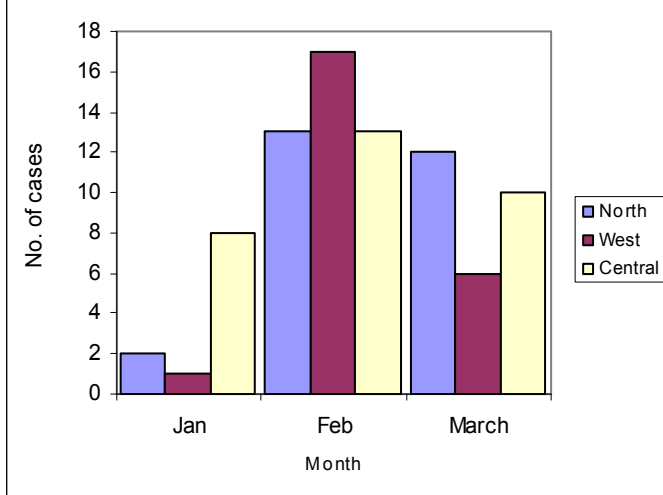


**Table 8 & fig 4 .above** portrays the number of test requests by age group and race . As the right graph indicates the most ill affected population appears to be within two age groups 11-30 & 21-30. The previous group being younger teenagers , young adults and the latter may predominantly be the younger working. Furthermore, approximately 58% of all test requests are from the within the indigenous population.

### TYPHOID

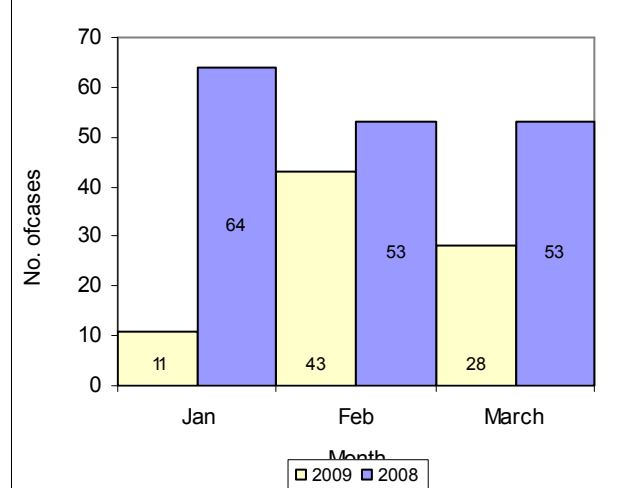
Identification of Typhoid fever is always difficult. Some of the recent cases of typhoid fever were identified from blood cultures received from the paediatrics and O&G units. the complicated cases were admitted to ICU and a few underwent life saving surgical operations. There are no denominators for laboratory confirmed cases of Typhoid available at the time of this publication.

Fig 5. Lab confirmed Typhoid cases by Divisions, Jan - Mar 2009



**Figure 5 above** compares typhoid laboratory confirmed cases from January to March for the year 2008 and 2009. There has been a reduction in cases of typhoid fever laboratory confirmed cases by more than 50%. There were 170 cases in 2008 and 82 cases in 2009.

Fig 6. Typhoid fever cases from Jan-Mar 2008 (n=170), 2009 (n=82)



**Figure 6 above** is a comparison of the laboratory confirmed cases amongst the divisions in the first quarter of 2009 & 2008 . The highest number of cases in a month was reported by the Western Division in February (n=17). There have not been any reported cases from the eastern division. In 2008 total number of cases was 170 whilst in 2009 n=82

### Other PICT's

**Rarotonga Cook Islands 1st April:** suspected Dengue fever cases have been detected since 1st week March 2009. In addition, 8 admissions to Rarotonga Hospital have been documented as probable cases. Patients present 1-2 fever onset, headache, muscle & joint pains. < 20 present with rash, vomiting and / or diarrhoea .

#### Acknowledgements

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