



Health Information Bulletin

1st Quarter Bulletin, 2014

**Using Health Information for Decision making
with evidence based data**

MINISTRY
of Health
Shaping Fiji's Health

HEALTH INFORMATION BULLETIN

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Using Health Information for Decision making with evidence based data

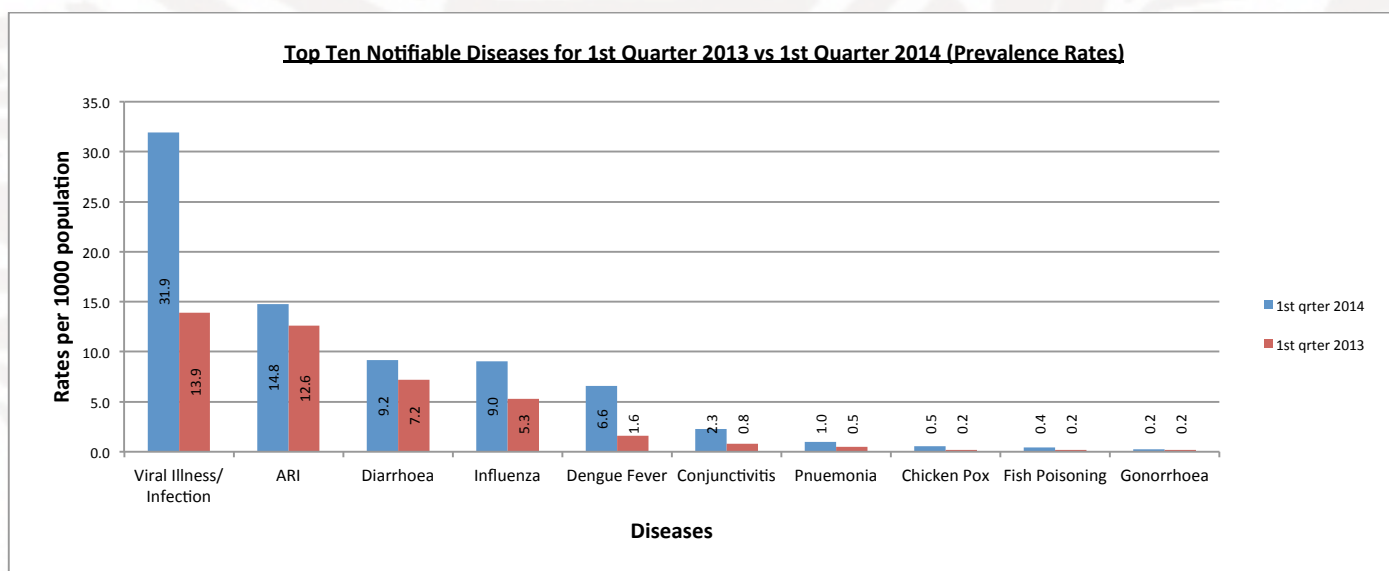
COMMUNICABLE DISEASE

Data for the Notifiable diseases are obtained from the Notifiable Diseases Certificates, every week – ending.

Notifiable Diseases by Months for 1st Quarter 2014

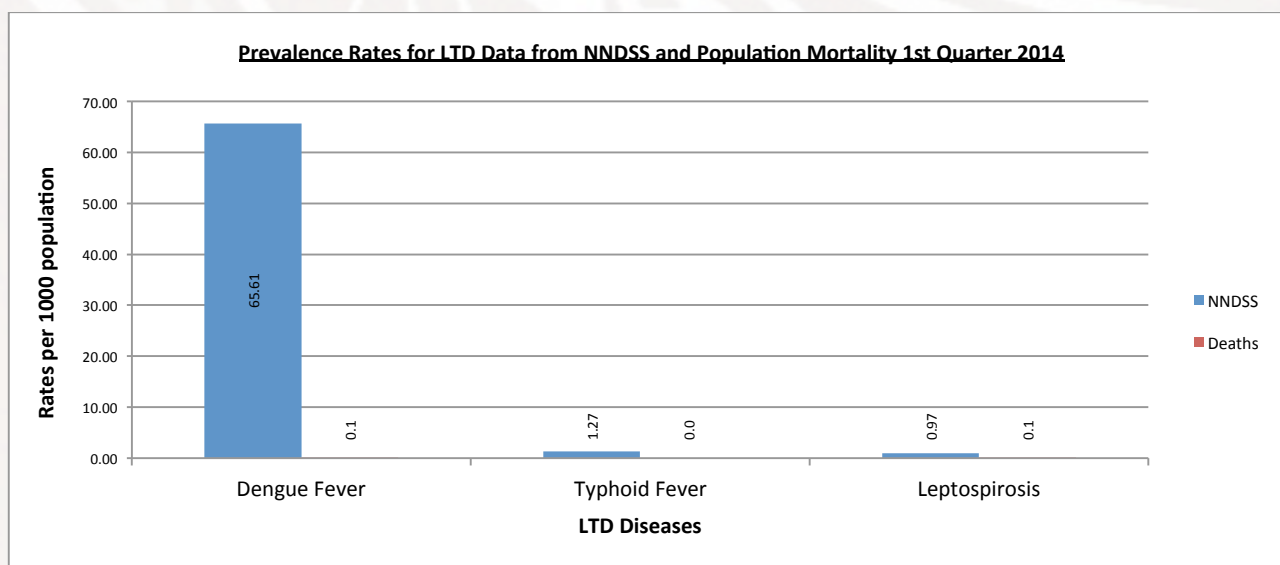
No.	Diseases	January	February	March	Total
1	Acute Poliomyelitis	0	0	0	0
2	Acute Respiratory Infection	3,265	4,132	6,101	13,498
3	Anthrax	0	0	0	0
4	Brucellosis	0	0	0	0
5	Chicken Pox	157	134	192	483
6	Cholera	0	0	0	0
7	Conjunctivitis	501	661	938	2,100
8	Dengue Fever	996	1,658	3,347	6,001
9	Diarrhoea	2,068	2,867	3,460	8,395
10	Diphtheria	0	0	0	0
11	Dysentery (a) Amoebic	0	1	4	5
	(a) Bacillary	3	14	18	35
12	Encephalitis	0	0	0	0
13	Enteric Fever (a) Typhoid	35	32	49	116
	(b) Para Typhoid	0	0	0	0
14	Fish Poisoning	116	155	127	398
15	Ciguatera Fish Poisoning	4	0	7	11
16	Food Poisoning	1	0	22	23
17	German Measles (Rubella)	6	23	32	61
18	Infectious Hepatitis	10	5	10	25
19	Influenza	2,350	2,771	3,148	8,269
20	Leprosy	0	0	0	0
21	Leptospirosis	27	21	41	89
22	Malaria	0	0	1	1
23	Measles (Morbilli)	1	0	0	1
24	Meningitis	7	9	7	23
25	Mumps	1	1	0	2
26	Plague	0	0	0	0
27	Pneumonia	80	287	518	885
28	Puerperal Pyrexia	0	0	0	0
29	Relapsing Fever	0	0	0	0
30	Rheumatic Fever	0	0	0	0
31	Smallpox	0	0	0	0
32	Tetanus	0	0	0	0
33	Trachoma	13	5	64	82
34	Tuberculosis (a) Pulmonary	13	11	24	48
	(b) Others	0	0	0	0
35	Typhus	0	0	0	0
36	Viral Illness/ Infection	4,242	11,271	13,681	29,194
37	Whooping Cough	0	0	1	1
38	Yaws	0	0	0	0
39	Yellow Fever	0	0	0	0
40	Sexually Transmitted Diseases				
	(a) Gonorrhoea	58	68	90	216
	(b) Candidiasis	8	1	21	30
	(c) Chlamydia	0	1	1	2
	(d) Congential Syphilis	0	1	0	1
	(e) Genital Herpes	0	0	0	0
	(f) Granuloma Inguinale	0	0	0	0
	(g) Herpes Zoster	0	3	11	14
	(h) Lymphogranuloma Inguinale	0	0	0	0
	(i) Ophthalmia Neonatorum	0	0	0	0
	(j) PID	0	0	0	0
	(k) Soft Chancre	0	0	0	0
	(l) Syphilis	26	40	28	94
	(m) Trichomoniasis	8	0	4	12
	(n) Veneral Warts	0	0	0	0

Source: NNDSS



Source: NNDSS

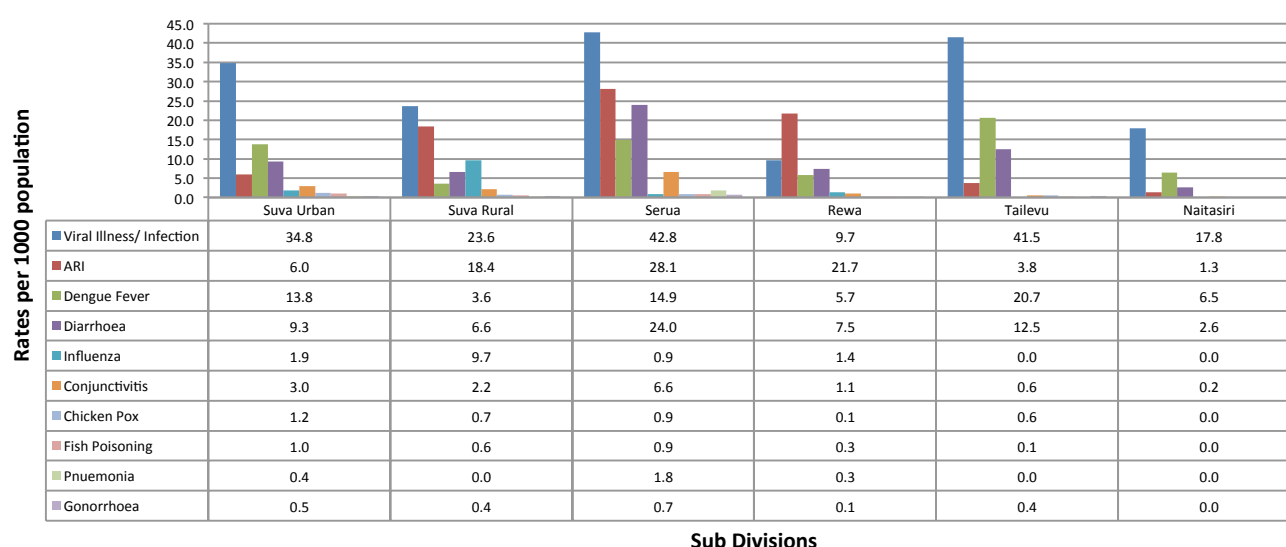
The above shows the prevalence rates for the top ten diseases for 1st quarter 2013 versus 1st quarter 2014. The 2012 total population (899735) per 1000 is used to calculate the rates for 1st quarter 2013, whereas, the 2013 total population (914663) per 1000 is used to calculate the rates for 1st quarter 2014. The leading diseases are Viral Illness, ARI, Diarrhoea, Influenza and Dengue Fever. The 1st quarter 2014 reports show increased rates compared to the 1st quarter 2013, due to improvements in reports being received by HIU compared to previous years. Dengue like illnesses may have contributed to the increase in the viral illnesses for 2014. The increase in Viral Illness may also be due to Dengue Like Illness being reported under this heading.



Source: NNDSS & Mortality Data

The LTD data are compiled from the NNDSS and the mortality data. The prevalence rate from NNDSS of Dengue fever is 65.61 per 1000 population, Typhoid Fever is 1.27 per 1000 and Leptospirosis is 0.97 per 1000 population. The mortality rate for Dengue fever is 0.1 per 1000 population; Leptospirosis is 0.1 per 1000 population and there were no cases of deaths from Typhoid Fever. The prevalence rate was calculated using the 2013 total population that is 914663 (HIU populations). There were increased cases of Dengue fever reported for 1st quarter 2014 due to the outbreak.

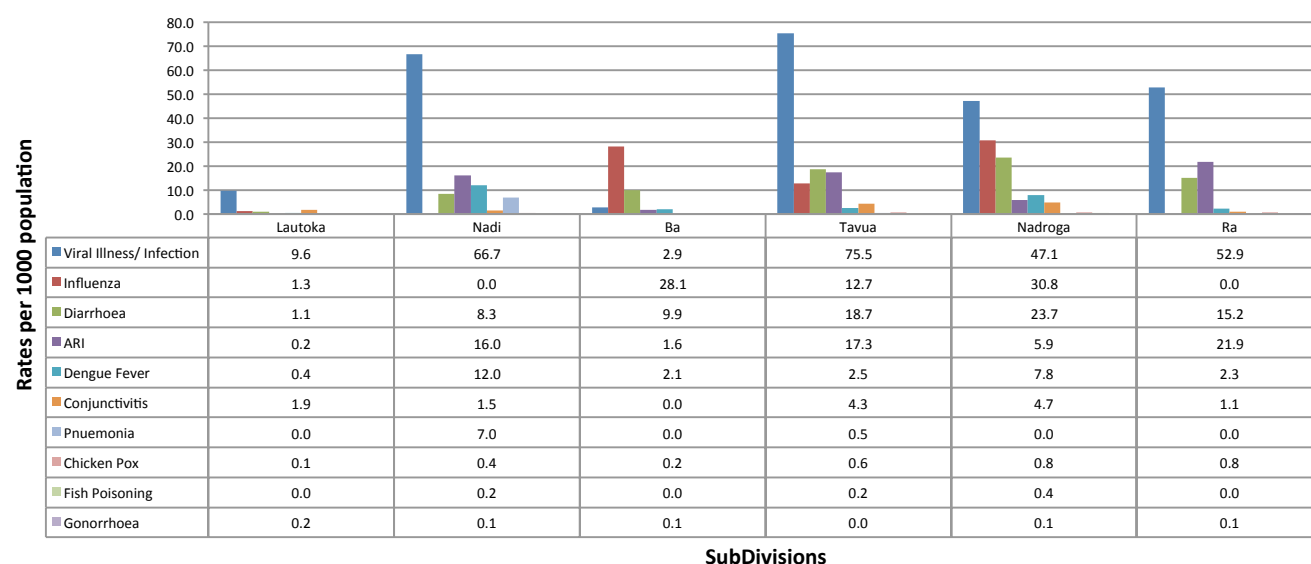
Top Ten Diseases (Rates) for Central Division by Sub Divisions 1st Quarter 2014



Source: NNDSS

The above graph shows the prevalence rates for the top ten Notifiable diseases for each subdivision under the Central division. The total populations for each subdivision for 2013 were: Suva Urban 135161, Suva Rural 81379, Serua/ Namosi 29625, Rewa 84413, Tailevu 19963 and Naitasiri 20002. Rates were calculated per 1000 population. Viral Illness, ARI, Dengue Fever and Diarrhoea are commonly recorded cases under the central division. There are more cases reported from Suva urban and Suva rural, due to the increased population density in these areas.

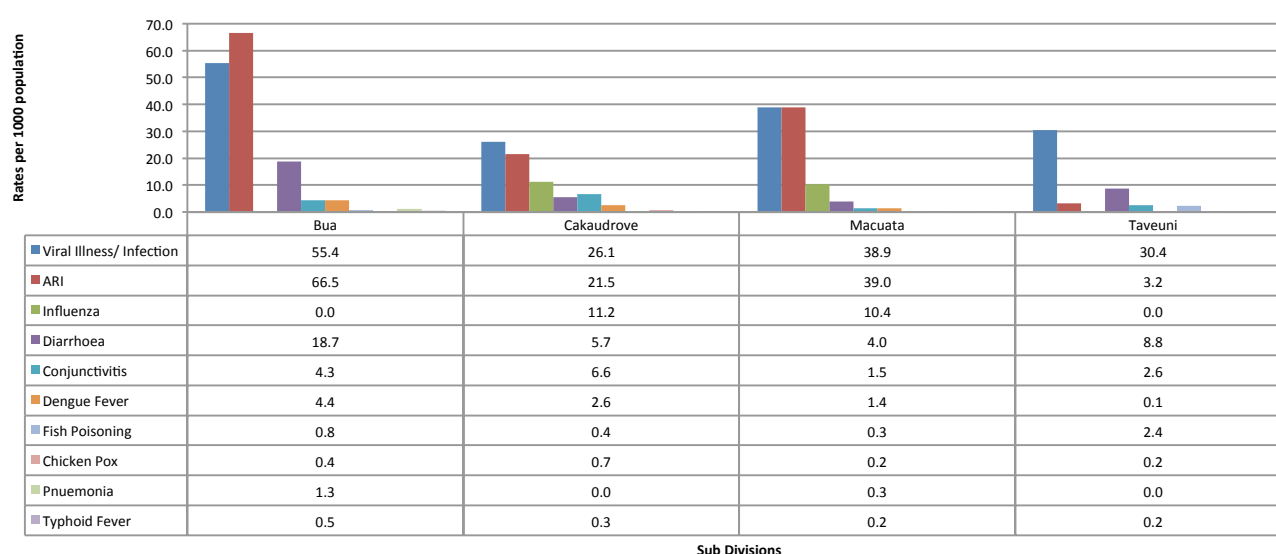
Top Ten Diseases (Rates) for Western Division by Subdivisions 1st Quarter 2014



Source: NNDSS

The above graph shows the prevalence rates for the top ten Notifiable diseases for each subdivision under the Western division. The total population for 2013 in each subdivision are: Lautoka 108141, Nadi 90993, Ba 55825, Tavua 26529, Nadroga 53971 and Ra 29920. Rates were calculated per 1000 population. The most commonly reported diseases for Western division is Viral Illness, Influenza and Diarrhoea.

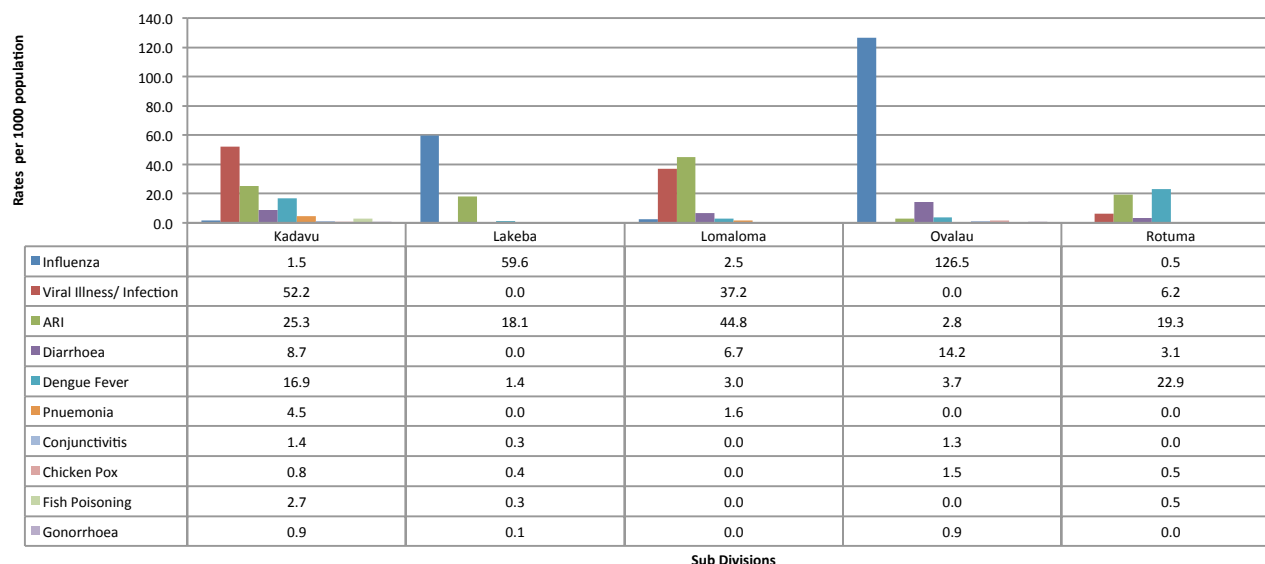
Top Ten Diseases (Rates) for Northern Division by Subdivisions 1st Quarter 2014



Source: NNDSS

The above graph shows the prevalence rate for the top ten Notifiable diseases for each subdivision under Northern division. The total population for 2013 in each subdivision are: Macuata 75089, Cakaudrove 32717, Bua 15961 and Taveuni 16556. Rates were calculated per 1000 population. The most common diseases recorded for Northern division is Viral Illness, ARI, Influenza and Diarrhoea.

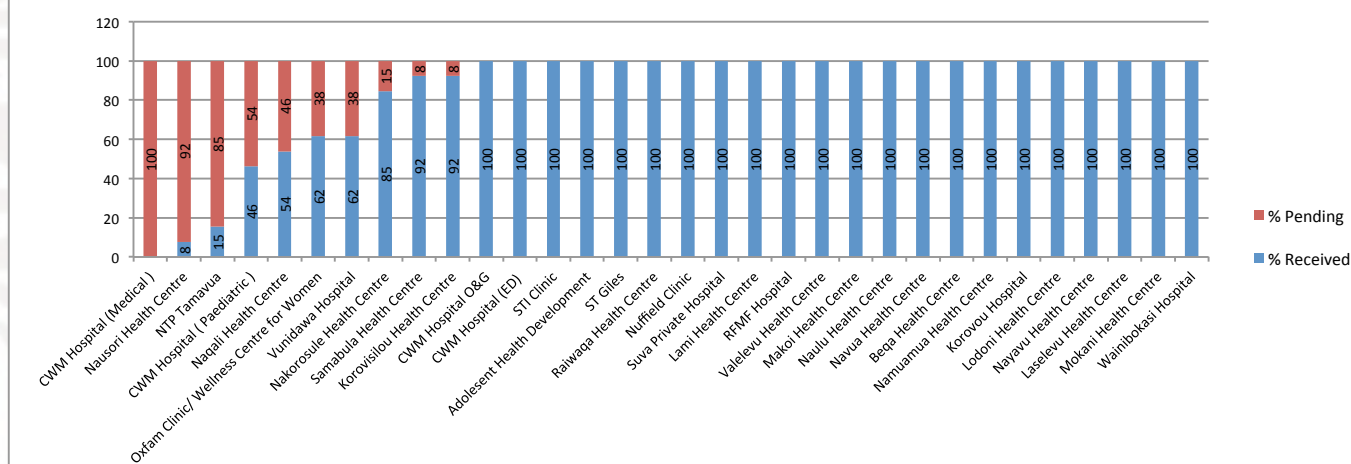
Top Ten Diseases (Rates) for Eastern Division by Subdivisions 1st Quarter 2014



Source: NNDSS

The above graph shows the prevalence rates for the top ten Notifiable diseases for each subdivision under the Eastern division. The total population for 2013 in each subdivision is: Ovalau 13886, Lakeba 7284, Rotuma 1921, Lomaloma 4332 and Kadavu 10995. Rates were calculated per 1000 population. The most common diseases recorded for Eastern division is Influenza, Viral Illness, ARI, Dengue Fever and Diarrhoea.

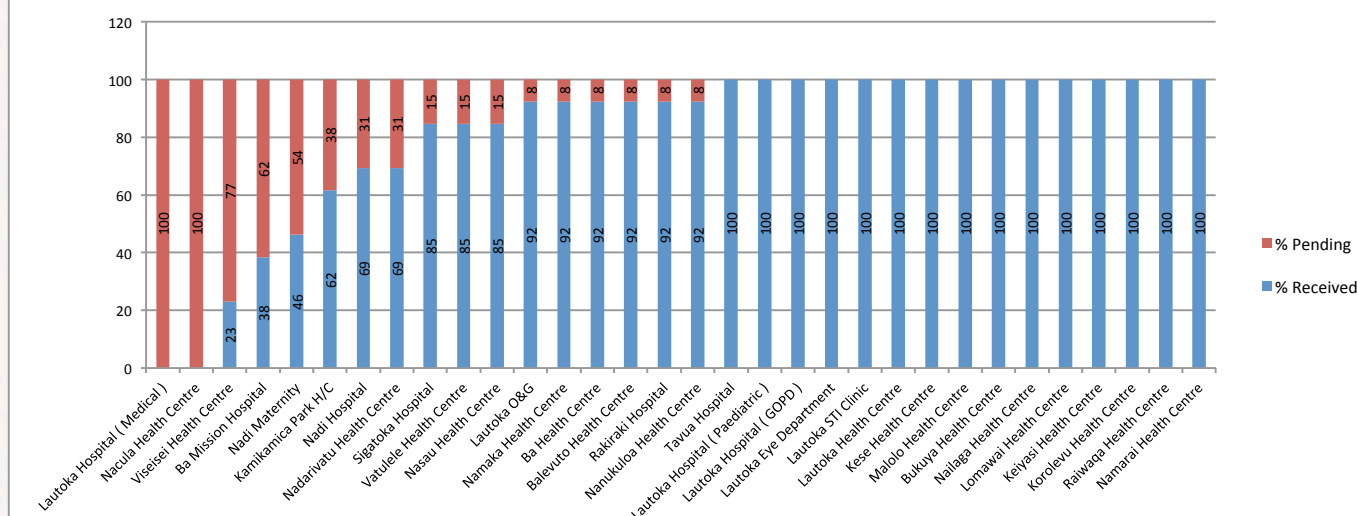
1st Quarter NNDSS Received Certificates for Central Division 2014



Source: NNDSS

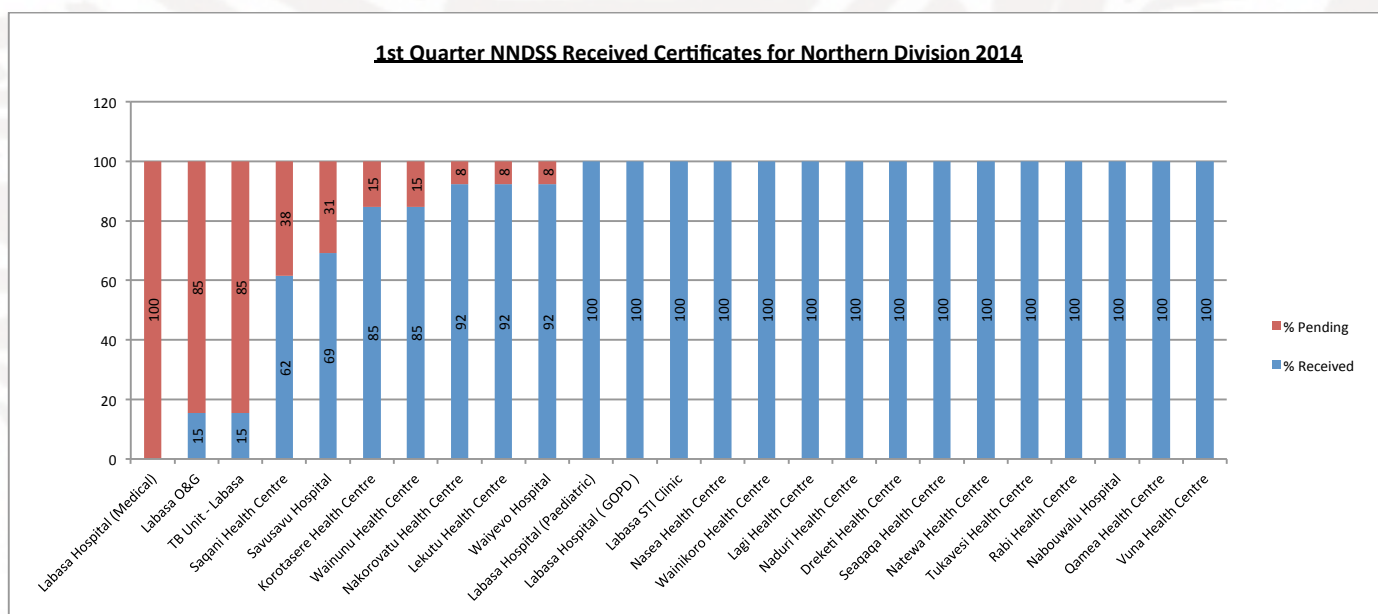
The timeliness of submission of reports (to HIU) by the facilities has improved compared to previous years. Few facilities have yet to submit their reports as illustrated in the above graph. For central division 85% reports have been received for 1st quarter 2014. No or modest reporting has been noted from CWMH (medical), Nausori Health Centre, NTP Tamavua, Naqali, Wellness Centre for Women, Vunidawa, Nakorosule, Samabula HC and Korovisiou HC.

1st Quarter NNDSS Received Certificates for Western Division 2014



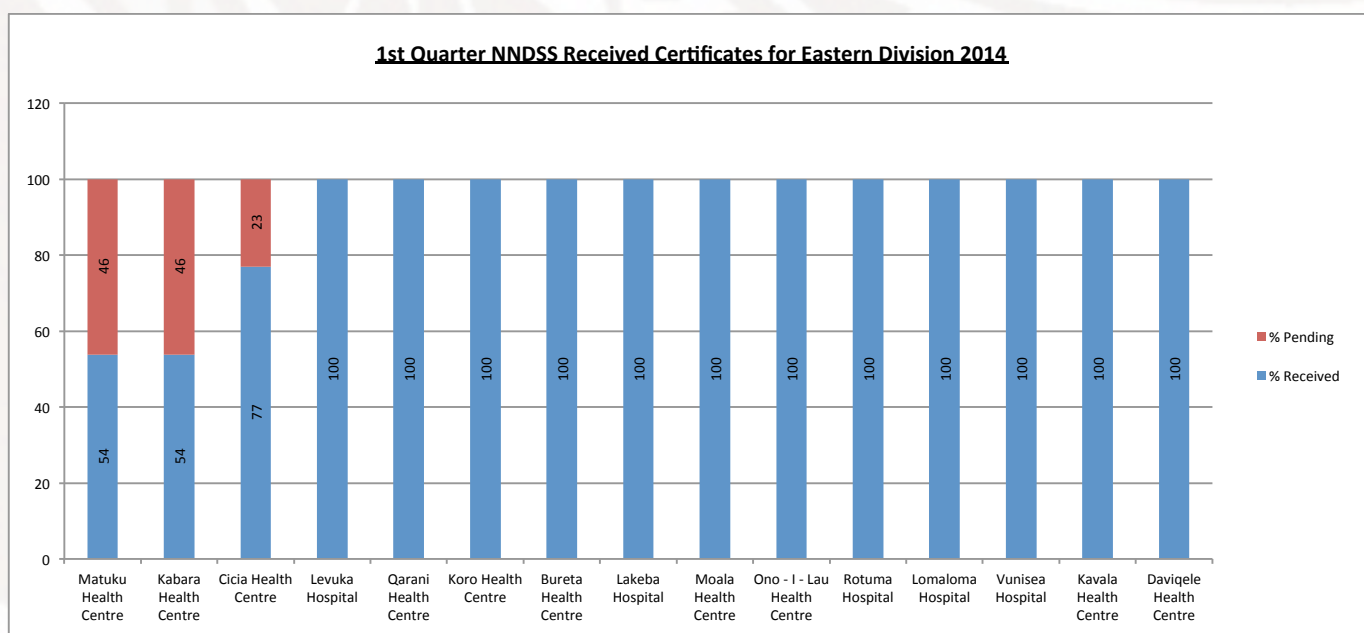
Source: NNDSS

The timeliness of submission of reports (to HIU) by the facilities has improved compared to previous years. The % reports received for Western division is 81%, few facilities have yet to submit their reports as illustrated in the above graph. Similar to the Central division there has been nil reporting from Lautoka Hospital (medical) and Nacula HC. Modest reporting is noted from Viseisei HC, Ba Mission, Nadi Maternity, Kamikamica HC, Nadi Hospital, Nadarivatu, Sigatoka Hospital, Vatulele HC, Nasau HC, Lautoka Maternity, Namaka HC, Ba HC, Balevuto, Rakiraki and Nanukuloa HC – these are all predominantly in the Western division.



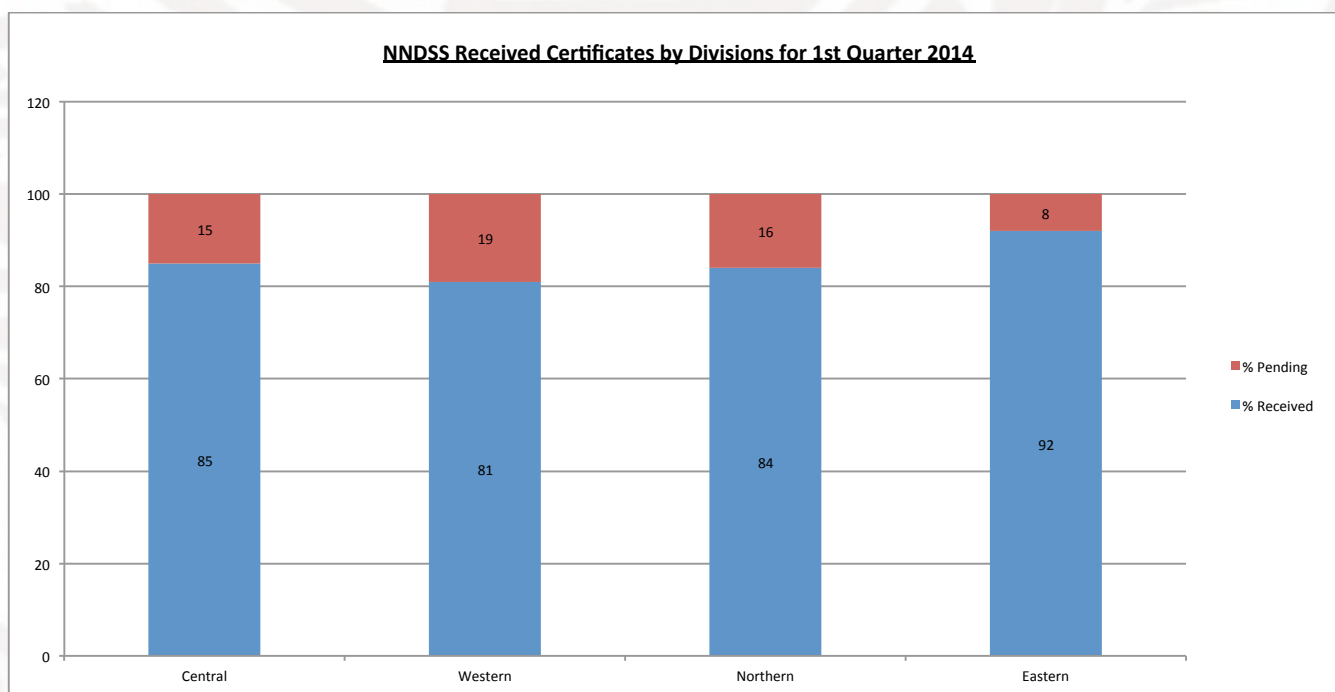
Source: NNDSS

The Timeliness submission of reports to HIU sent by the facilities has been improved compared to previous years for Northern division. The reports received for Northern division is 84%, few facilities have yet to submit their reports as illustrated in the above graph. The Labasa Hospital (medical) has sent nil reports with modest reporting from Labasa O&G, TB unit, Saqani HC, Savusavu Hospital, Korotasere HC, Wainunu HC, Nakorovatu HC, Lekutu HC and Waiyevo Hospital.



Source: NNDSS

The timeliness of reports for Eastern division has been very good and the Eastern division has been leading the charge for NNDSS. So far, 92% reports have been received from this division. Thanks to all the facilities and the Medical officers for their tremendous efforts in sending these (in a timely and complete manner). Few facilities have yet to submit their reports as illustrated in the above graph. These are Matuku HC, Kabara HC and Cicia HC.



Source: NNDSS

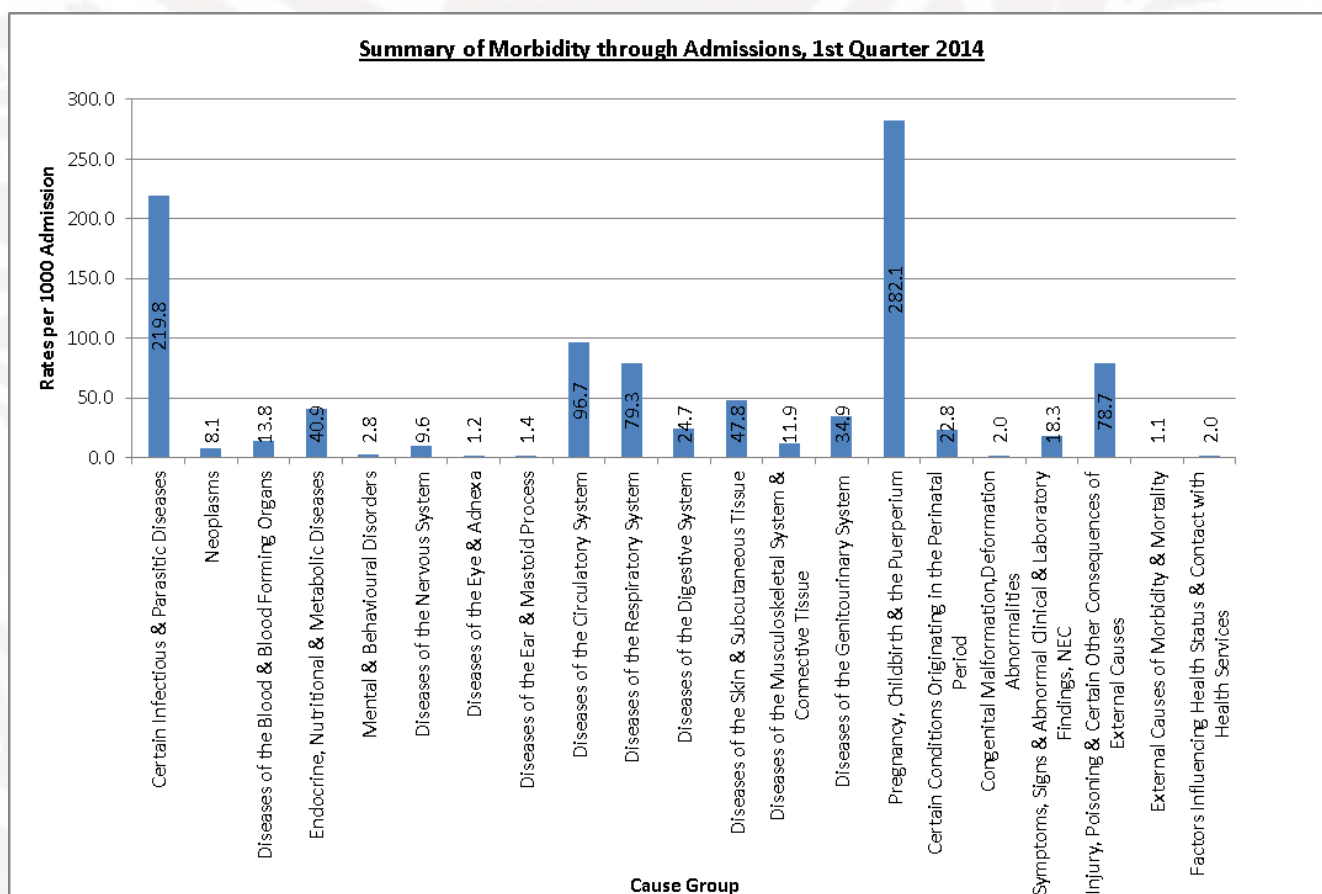
Overall, the reports received from all the divisions have improved compared to the previous years. The total percentage of reports being received for Central division is 85%, Western is 81%, Northern division 84%, and Eastern is 92%. It is encouraging to note that the compliance to reporting has improved compared to other quarterly reports in previous years.

HOSPITAL INFORMATION SYSTEM

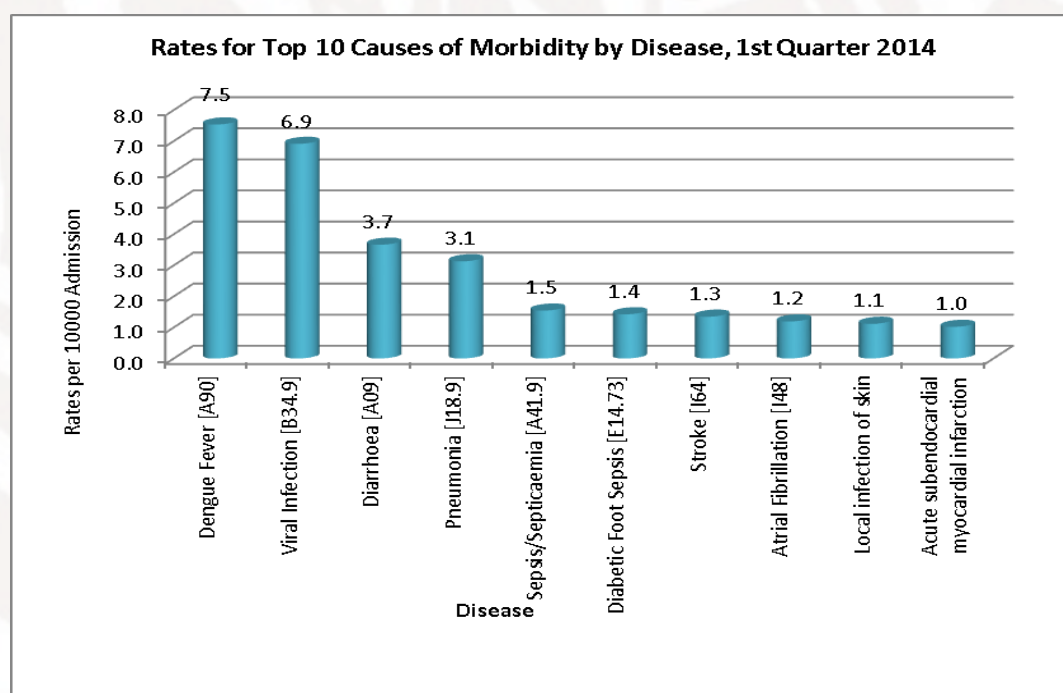
REPORTING FACILITIES

Central	Western	Northern	Eastern
CWM Hospital	Ba Mission Hospital	Labasa Hospital	Cicia Hospital
Korovou Maternity Hospital	Lautoka Hospital	Nabouwalu Hospital	Lakeba Hospital
Nausori Maternity Hospital	Nadi Hospital	Savusavu Hospital	Levuka Hospital
Navua Maternity Hospital	Naiserelagi Maternity Hospital	Wainikoro Health Centre	Lomaloma Hospital
Tamavua Hospital	Rakiraki Hospital	Waiyevo Hospital	Matuku Hospital
Vunidawa Hospital	Sigatoka Hospital		Rotuma Hospital
Wainibokasi Hospital	Tavua Hospital		

Data on Hospital services has been obtained from the Hospital Discharge Data, PATISPLUS for those facilities on-line and Manual Tear-Offs for those facilities where PATISPLUS is still not available indicated in the table. This does not include Hospital monthly returns and Obstetric monthly returns.

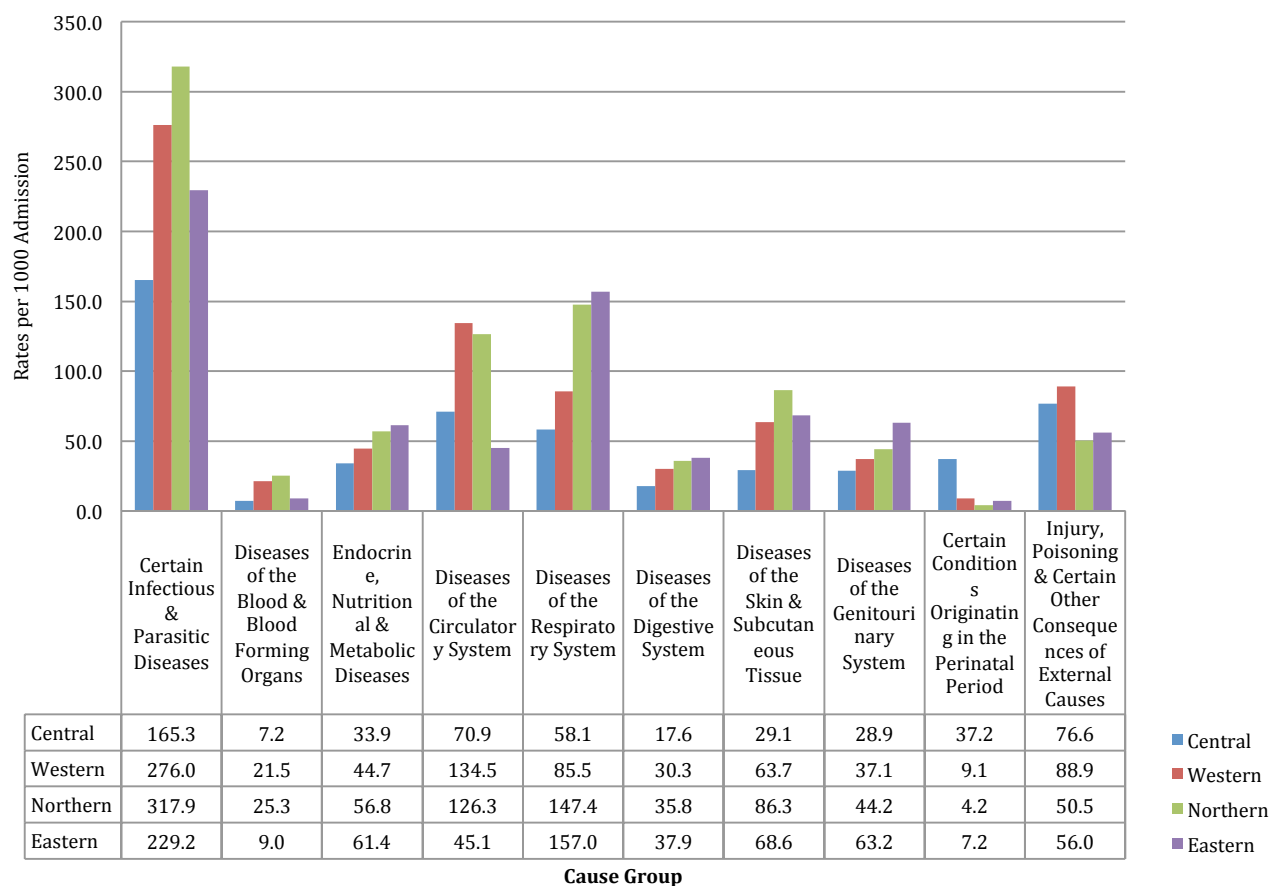


The above shows the Admissions by Cause Group in the first Quarter 2014. The leading overall admissions for 1st Quarter are Pregnancy, Childbirth & the Puerperium (n=2584), Certain Infectious & Parasitic Diseases (n=2013), Diseases of the Circulatory System (n=886) and Injury, Poisoning & Certain Other Consequences of External Causes (n=721). The rates used were calculated per 1000 admission. There were 9159 admissions in first quarter of 2014.



A graph shown is the Top 10 major causes of Morbidity by Diseases with Dengue Fever leading which accounted for 7.5 per 10000 admissions, while the 10th leading cause of admission is acute subendocardial myocardial infarction accounting for 1.0 per 10000 admissions.

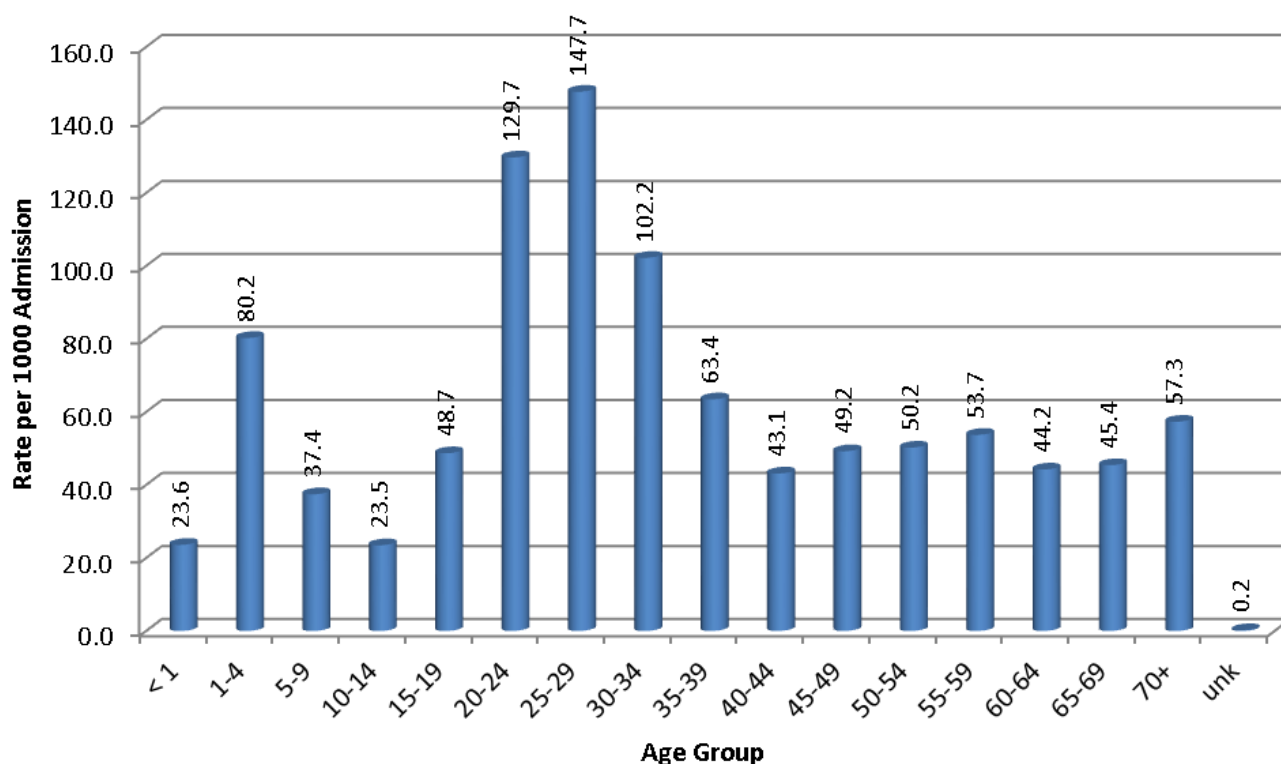
Rates for Top 10 Causes of Morbidity by Divisions, 1st Quarter 2014.



Source: Manual Tear-Offs & PATISPLUS

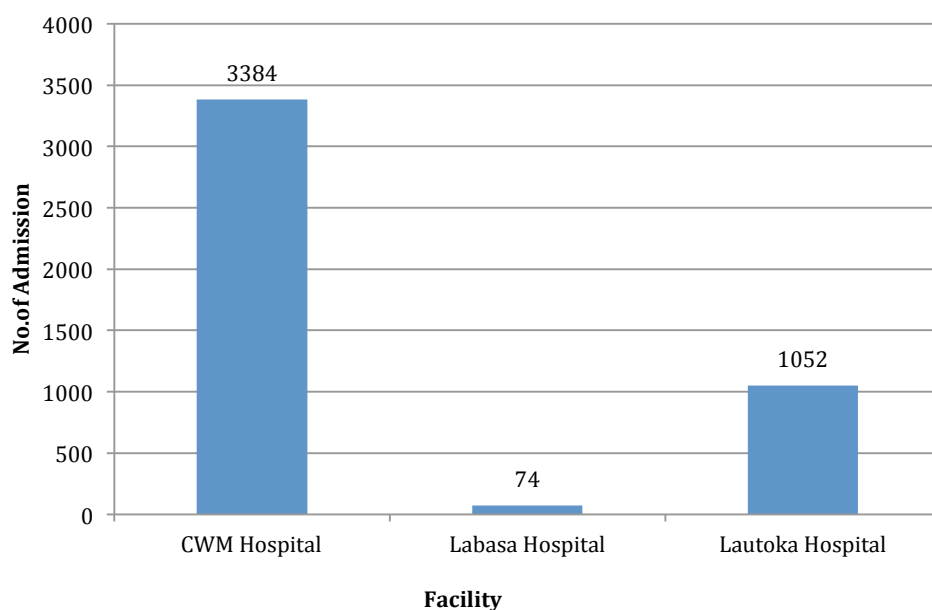
Above graphs demonstrate the top 10 classifications of morbidity by divisions. Most admissions were reported in the Western Divisions (n= 2795) followed by Central (n= 2413), Northern (n= 425) & Eastern (n= 407) in first Quarter 2014. Please note that the Northern dataset is poorly entered onto PATIS and there is a backlog of uncoded folders at the Hospital. Certain infectious and parasitic diseases were the leading cause for admissions in all Divisions. Please note that the top three causes of morbidity in the Central division were Infectious and parasitic, external causes, circulatory system origins. This compared in the other divisions noted infectious and parasitic, circulatory system and external origins in the Western division; infectious and parasitic, respiratory and circulatory system origins in the Northern division; and infectious and parasitic, respiratory and skin origins in the Eastern division.

Admission rates by age groups, 1st quarter 2014



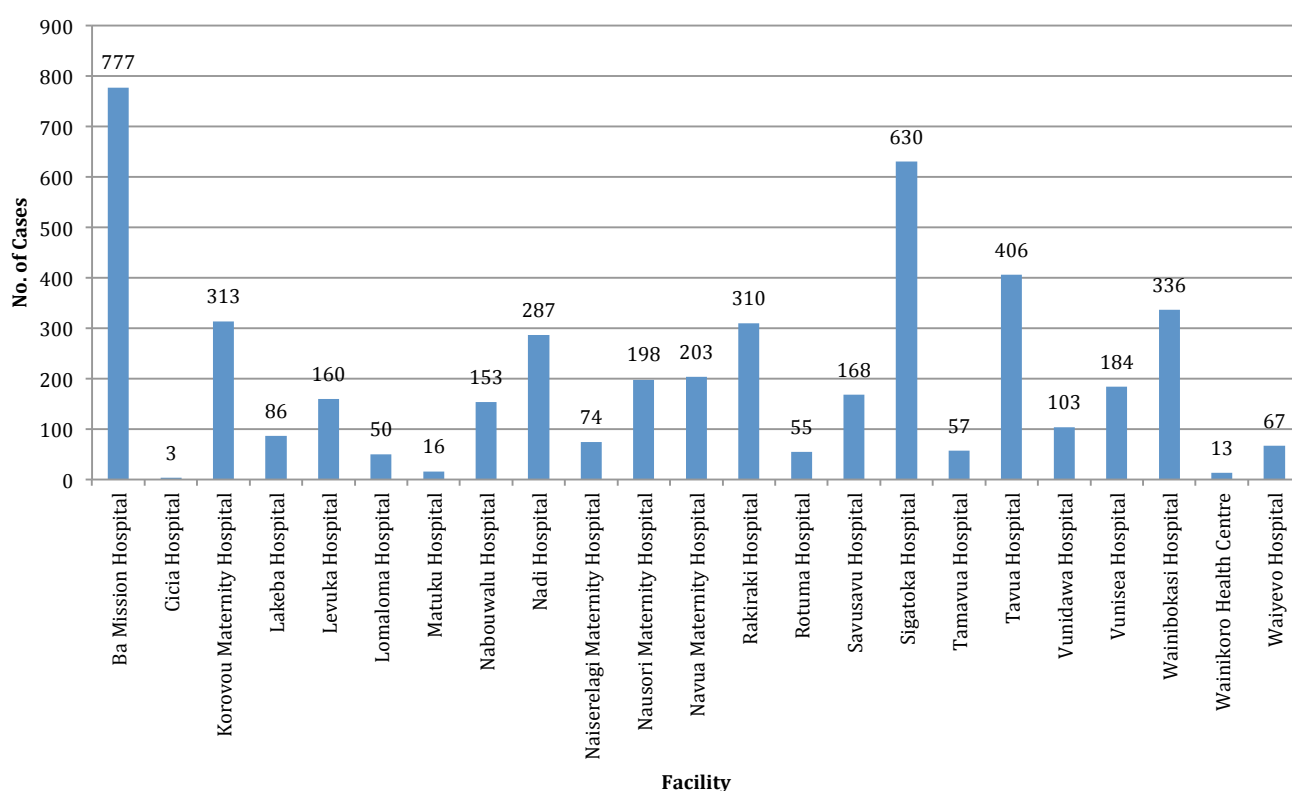
At a glance, the majority of admissions were among the 25-29 age groups. However, combined, the 35 – 70+ age group have greater rate of admissions. The under-five population comprised of more than 10% of the total admissions. Main reasons for the higher admissions between 20-34yrs were from Pregnancy, Childbirth & Puerperium cause groups. The rate was calculated per 1000 admissions.

Total admissions for the 3 Divisional Hospitals, 1st quarter 2014.



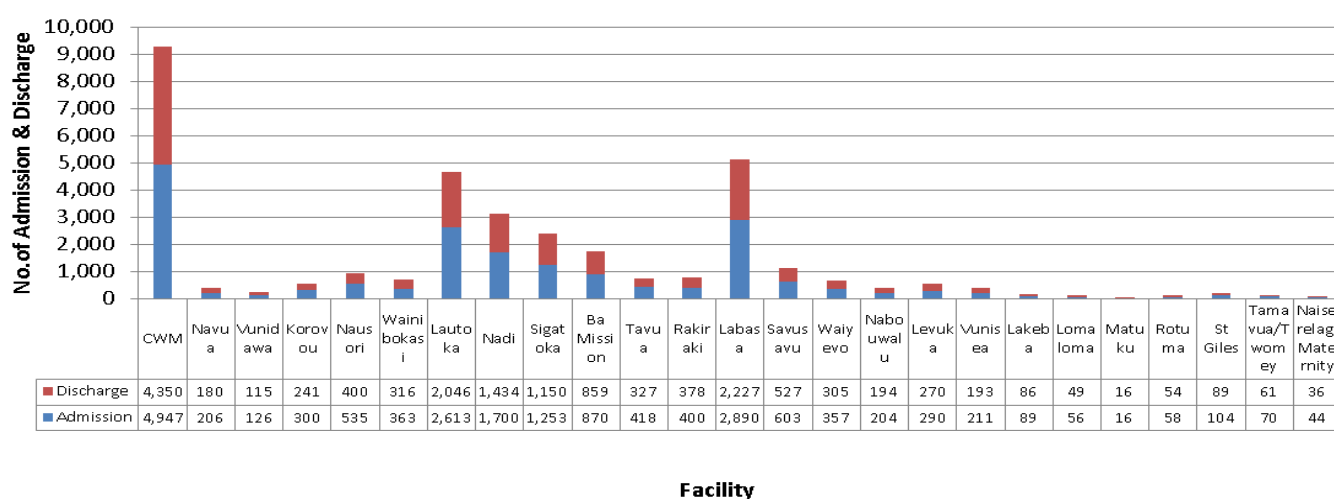
A graph shows that CWM Hospital recorded the highest number of admissions comprising about 37% of the total admissions followed by Lautoka (12%), while Labasa Hospital recorded the lowest number of admissions from the 3 Divisional Hospital due to delay on entry and coding of admissions at the Hospital.

Total admissions for Sub-Divisional Hospital , 1st quarter 2014.



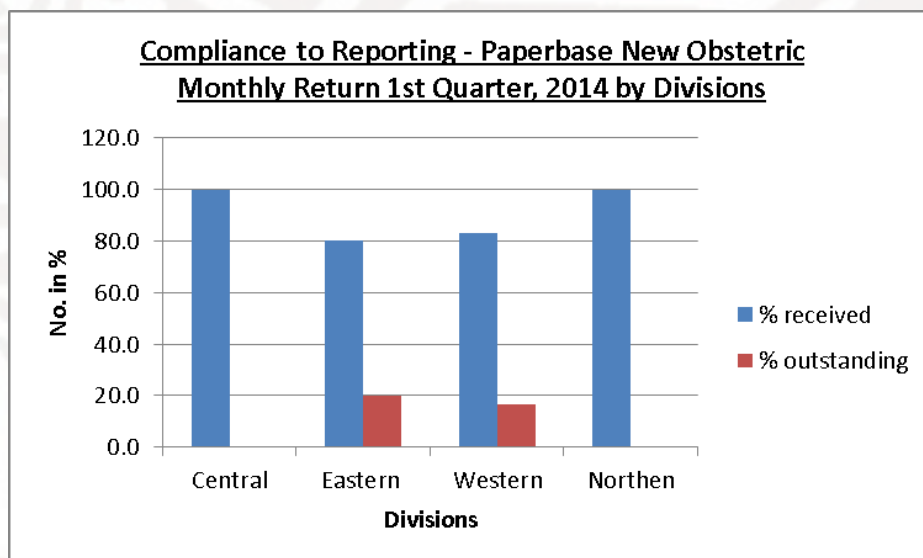
Ba Mission Hospital recorded the highest number of admissions with 8.5% of the total admissions followed by Sigatoka (6.9%), while Cicia recorded the lowest number of admissions from Sub-divisional hospitals.

Total Admission & Discharges by Facility, 1st Quarter 2014

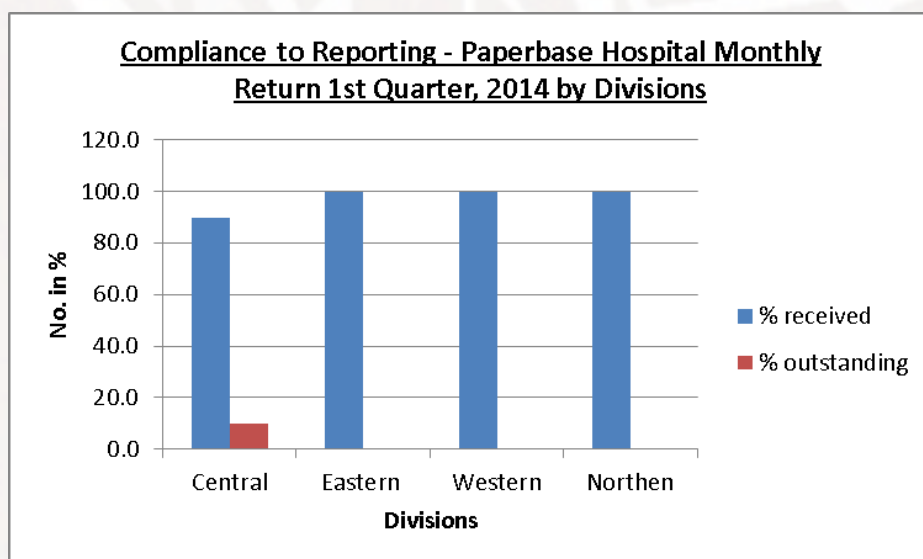


There is a discrepancy between total admissions and total discharges. In many cases, there are more admissions than discharges. This is a quality check for the team at HIU and simply means that cases admitted are not discharged due to administrative omissions or in some cases due to chronic disease such as TB or psychiatric co-morbidities. This is a reminder to all health personnel (nurses and recorders) recording admissions and discharges to be vigilant and ensure that admissions, transfers and discharges are correctly reported.

COMPLIANCE REPORTING:

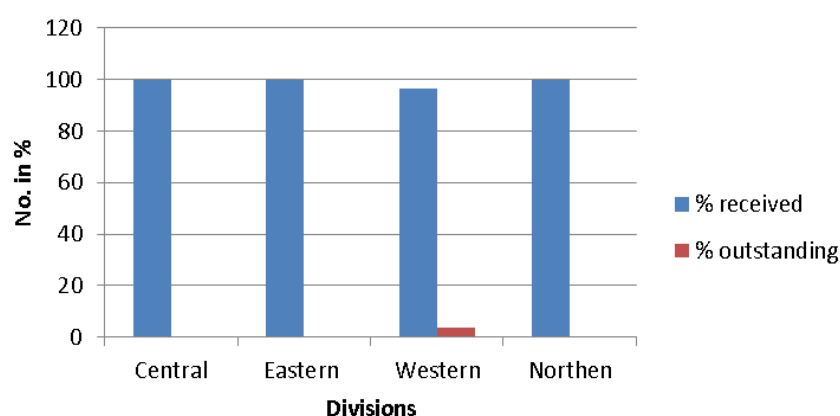


The preceding analysis for the new Obstetric Monthly Return is based on the reports received through manual returns from the four Divisions for 1st quarter 2014. Few Sub Divisional Hospitals have yet to submit their reports as illustrated in the graph. Central and Northern Division received 100% reports, Eastern Division 80% and Western Division received 83.3% for 1st Quarter 2014. The facilities yet to report on the new obstetric return form for Eastern division, Vunisea Hospital for 1st quarter 2014 and for Western Division Ra Maternity Hospital are yet pending to report for 1st quarter. The change to the new obstetrics form occurred in April 2014.



The above analysis for Hospital Monthly Return is based on the reports received through paper-based systems from the Divisions. The Central Division has outstanding returns for the 1st quarter: 10% outstanding as there was no reporting from Military Hospital for 1st Quarter 2014.

**Compliance to Reporting - Paperbase Hospital Inpatient
Tear-offs 1st Quarter, 2014 by Divisions**



The above analysis for Hospital Inpatient Tear-Offs is based on reports received through manual systems from the Divisions. Western Division has outstanding returns: 7.4% outstanding report for 1st Quarter 2014. This is due to the outstanding report from Nadi hospital for the month of March for 1st quarter 2014 (tear offs).

HOSPITAL UTILISATION

Hospital utilization data is analyzed from the Obstetric and Hospital Monthly returns. There are discrepancies between the manual tearoffs/PATIS and the Monthly returns including the number of admissions and the number of discharges during the period.

No	Institution	Number of	Number of	Total	Total	Total	Occupancy	Daily Bed	Aver Length
		Outpatient	Beds	Admission	Discharge	Patient Days	Rate	State	of Stay
1	CWM Hospital	33,166	481	4,947	4,350	19,235	44.43	213.7	4.4
2	Navua Hospital	2,045	12	206	180	399	36.94	4.4	2.2
3	Vunidawa Hospital	7,360	24	126	115	359	16.62	4.0	3.1
4	Korovou Hospital	1,839	16	300	241	712	49.44	7.9	3.0
5	Nausori Hospital	800	17	535	400	672	43.92	7.5	1.7
6	Wainibokasi Hospital	1,537	14	363	316	847	67.22	9.4	2.7
	Sub-total	46,747	564	6,477	5,602	22,224	43.78	246.9	4.0
7	Lautoka Hospital	45,965	305	2,613	2,046	10,961	39.93	121.8	5.4
8	Nadi Hospital	35,787	75	1,700	1434	3,596	53.27	40.0	2.5
9	Sigatoka Hospital	14,774	69	1,253	1,150	3,517	56.63	39.1	3.1
10	Ba Mission Hospital	23,362	55	870	859	2,352	47.52	26.1	2.7
11	Tavua Hospital	17,696	29	418	327	1,021	39.12	11.3	3.1
12	Rakiraki Hospital	11,730	24	400	378	1,264	58.52	14.0	3.3
	Sub-total	149,314	557	7,254	4,760	22,711	45.30	252.3	4.8
13	Labasa Hospital	19,786	182	2,890	2,227	8,994	54.91	99.9	4.0
14	Savusavu Hospital	14,752	56	603	527	1,614	32.02	17.9	3.1
15	Waiyevo Hospital	5,780	33	357	305	865	29.12	9.6	2.8
16	Nabouwalu Hospital	6,556	26	204	194	840	35.90	9.3	4.3
	Sub-total	46,874	297	4,054	3,253	12,313	46.06	136.8	3.0
17	Levuka Hospital	8,144	40	290	270	714	19.83	7.9	2.6
18	Vunisea Hospital	2,789	22	211	193	718	36.26	8.0	3.7
19	Lakeba Hospital	1,197	12	89	86	272	25.19	3.0	3.2
20	Lomaloma Hospital	1,452	16	56	49	125	8.68	1.4	2.6
21	Matuku	465	5	16	16	21	4.67	0.2	1.3
22	Rotuma Hospital	1,946	14	58	54	195	15.48	2.2	3.6
	Sub-total	15,993	109	720	668	2,045	20.85	22.7	3.1
	TOTAL	258,928	1,527	18,505	14,283	59,293	43.14	658.8	3.8

	GRAND TOTAL	263,778	1,770	18,723	14,469	67,110	42.13	745.7	4.2
SPECIALISED AND PRIVATE HOSPITALS									
No	Institution	Number of Outpatient	Number of Beds	Total Admission	Total Discharge	Total Patient Days	Occupancy Rate	Daily Bed State	Average Length of Stay
1	St Giles Hospital	1,895	136	104	89	4,556	37.22	50.6	51.2
2	Tamavua/Twomey Hospital	2,447	91	70	61	3,194	39.00	35.5	52.4
4	Military Hospital		9				0.00	0.0	0
5	Naiserelagi Maternity	508	7	44	36	67	10.63	0.7	1.9
	Sub-total	4,850	243	218	186	7,817	35.74	86.9	42.0

Based on the above reporting, the average length of stay is 4.2 days. The analysis is based on the reports received by Divisional and Sub divisional Hospitals for the 1st Quarter 2014. The table above shows the total number of overall Admission was 18723 and the total number of overall Discharge was 14,469. The discrepancy was noted, as the difference of 4254 patients was not discharged from the hospitals. The table above illustrates that less patients were discharged from the Divisional and Sub Divisional Hospitals; this also indicates the quality of entry and reports from the facilities. There is an obvious error in recording discharges, which then affect the average length of stay. There is a difference of 9564 of Admissions from Hospital Monthly Returns and Hospital discharge data, which includes Manual Tear-Offs and PATIS data.

MORTALITY

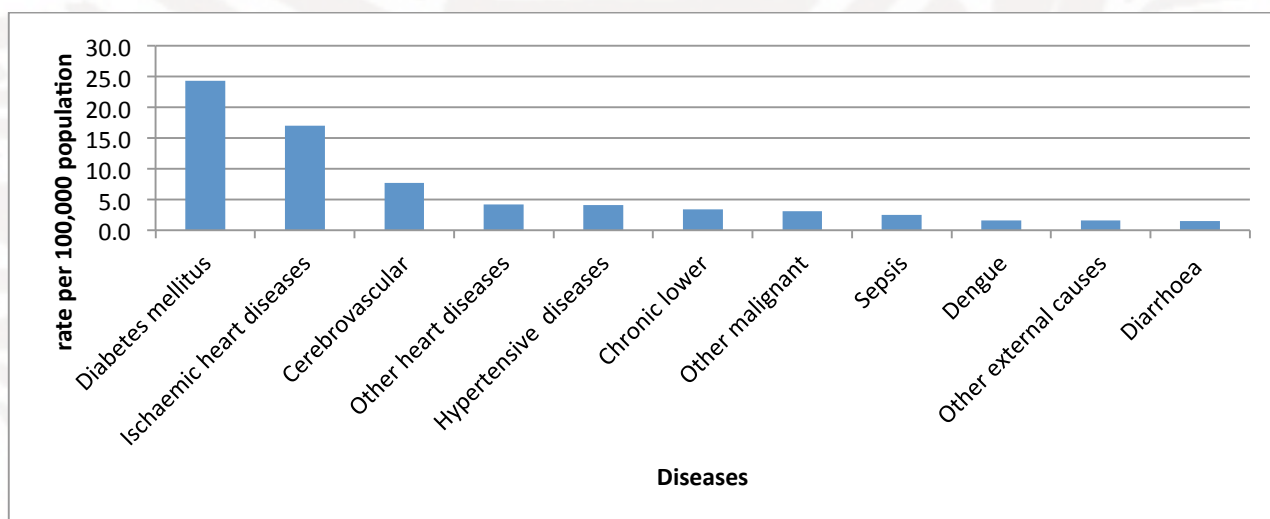
A total of 893 Medical Cause of Death Certificates were received at the Health Information Unit at the end of the first quarter 2014 giving an estimated Crude death Rate of 9.76 per 10,000 population (using the 2013 population as denominator). In comparison to the 1st quarter of 2013, 986 were the total certificates received and the CDR stood at 10.96 per 10,000 populations.

Table 1: Top 10 causes of mortality (by chapter).

#	Code	Diseases	Total	%
1	I00-I99	Diseases of the circulatory system	305	34.2
2	E00-E90	Endocrine, nutritional and metabolic diseases	229	25.6
3	C00-D48	Neoplasm	93	10.4
4	A00-B99	Certain infectious and parasitic diseases	66	7.4
5	V01-Y98	External causes of morbidity and mortality	47	5.3
6	J00-J99	Diseases of the respiratory system	44	4.9
7	N00-N99	Diseases of the genitourinary system	14	1.6
8	L00-L99	Diseases of the skin and subcutaneous tissue	13	1.5
8	P00-P96	Certain conditions originating in the perinatal period	13	1.5
8	K00-K93	Diseases of the digestive system	13	1.5
9	G00-G99	Diseases of the nervous system	9	1.0
10	Q00-Q99	Congenital malformations, deformations and chromosomal abnormalities	8	0.9

Non Communicable Diseases are the major causes of mortality for 2014 1st quarter covering 80.4% of the total mortality and 19.6% covers the rest of the diseases. Diseases of the circulatory system recorded 34.2% followed by endocrine, nutritional and metabolic diseases with 25.6%, Neoplasm recorded 10.4%, External causes of injuries 5.3% and diseases of the respiratory system 4.9%. The causes of mortality have been analyzed excluding the ill-define causes of mortality, which is 3.1%. Comparative to the 1st quarter last year, NCD was also the major causes of mortality covering 81.7% and 18.3% was the rest of the diseases. Circulatory diseases were 32%, endocrine, nutritional, and metabolic diseases covers 22.4%, neoplasm 4.1%, infectious diseases 6.4%, respiratory diseases 6.2% and injuries 5.6%.

Figure 1: Top 10 causes of mortality (tabular).



The graph above shows that NCD and infectious diseases are the top major causes of mortality with diabetes leading by 24.9%. There was an outbreak of dengue fever in this quarter making it appear in the top 10 causes of mortality. There were a total of 15 dengue fever deaths reported in this quarter. Other external causes of mortality include 9 deaths due to hanging with undetermined intent.

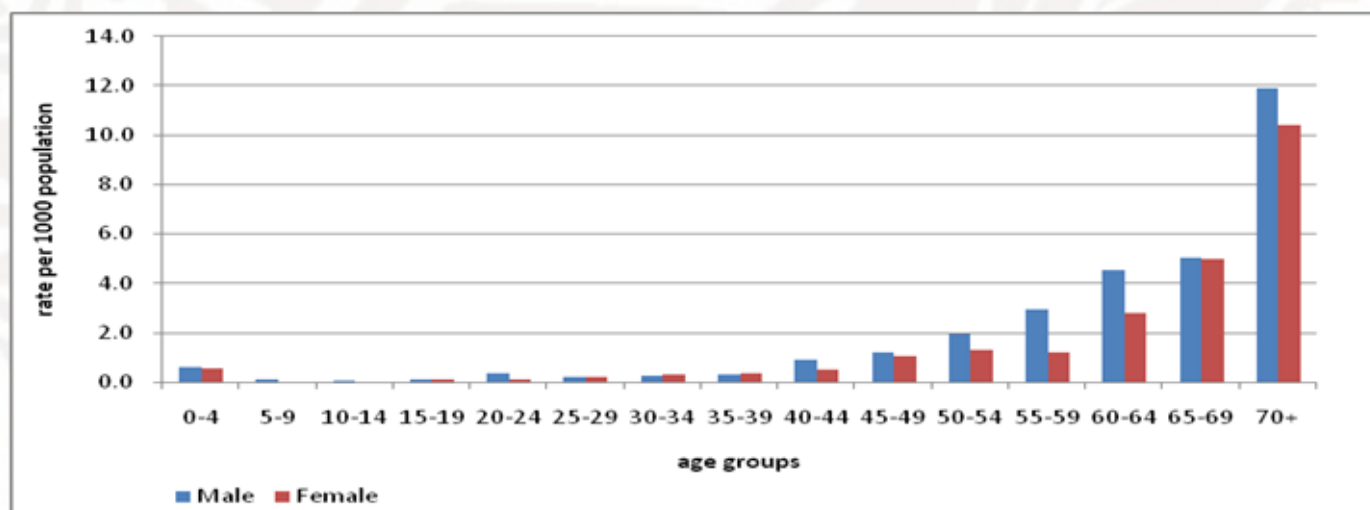
Table 2: Males vs Females mortality

Female			Male		
Code	Diseases	Total	Code	Diseases	Total
I00-I99	Diseases of the circulatory system	129	I00-I99	Diseases of the circulatory system	176
E00-E90	Endocrine, nutritional and metabolic diseases	121	E00-E90	Endocrine, nutritional and metabolic diseases	108
C00-D48	Neoplasm	56	C00-D48	Neoplasm	37
A00-B99	Certain infectious and parasitic diseases	28	A00-B99	Certain infectious and parasitic diseases	38
V01-Y98	External causes of morbidity and mortality	17	V01-Y98	External causes of morbidity and mortality	30
J00-J99	Diseases of the respiratory system	11	J00-J99	Diseases of the respiratory system	33
R00-R99	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	14	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	14
N00-N99	Diseases of the genitourinary system	4	N00-N99	Diseases of the genitourinary system	10
L00-L99	Diseases of the skin and subcutaneous tissue	4	L00-L99	Diseases of the skin and subcutaneous tissue	9
P00-P96	Certain conditions originating in the perinatal period	5	P00-P96	Certain conditions originating in the perinatal period	8
K00-K93	Diseases of the digestive system	5	K00-K93	Diseases of the digestive system	8
G00-G99	Diseases of the nervous system	5	G00-G99	Diseases of the nervous system	4
Q00-Q99	Congenital malformations, deformations and chromosomal abnormalities	5	Q00-Q99	Congenital malformations, deformations and chromosomal abnormalities	3
M00-M99	Diseases of the musculoskeletal system and connective tissue	1	M00-M99	Diseases of the musculoskeletal system and connective tissue	5
D50-D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	3	D50-D89	Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism	2
Grand Total		408	Grand Total		485

There were 485 male deaths and 408 female deaths. Males die more than female as would be expected, this is normal everywhere in the world.

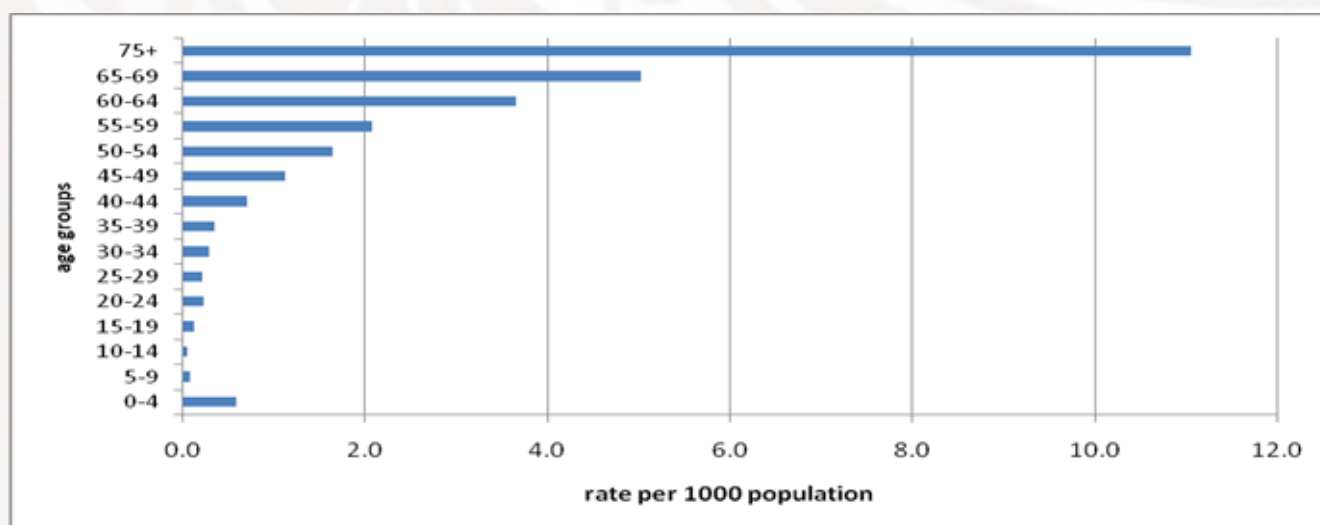
The main causes of death in both male and female are diseases of the circulatory system, endocrine, nutritional, and metabolic diseases, neoplasm, certain infectious and parasitic diseases, external causes of mortality and diseases of the respiratory system. This trend was the same compared to the same period last year.

Figure 2: Number of deaths for males and females by age groups.



The graph above shows a slight increase in male deaths at the age group of 20-24years; these were due to external causes of mortality showing vulnerability to external causes for this gender in this time period. The rise in number of deaths at the age groups of 40-44years for both sexes are due to NCDs whereas the drop at age 55 for females and age 65 for males may be due to certificates yet to be received at HIU.

iii.) Figure 3: Mortality by age groups



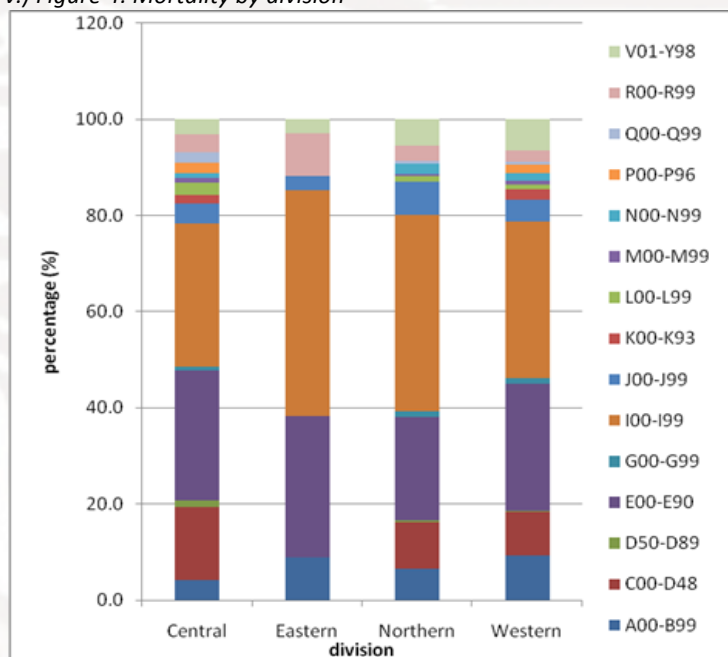
As expected the majority of deaths are occurring in the older age groups (45- 75+). However attention is also drawn to the deaths in the 0-4 year age group (under five mortality is explained below).

iv.) Table 3: Premature death due to NCD by race and ethnicity (0-64 years)

Race	Deaths			Rate (per 10,000 population)		
	Female	Male	Total	Female	Male	Total
I-Taukei	96	101	197	4.3	4.3	4.3
Fijian of Indian descent	53	108	161	3.6	7.0	5.4
Fijian of other ethnic descent	2	5	7	0.9	2.1	1.5
Total	151	214	365	0.4	0.5	0.5

Deaths due to NCD's are a critical outcome indicator for NCD surveillance. Table 3 shows premature deaths due to NCD with age less than 65 years (0-64 years) with 47.8%. Males die more than females due to NCD. For every 1000 population, 0.5 Fijian of Indian descents would die prematurely due to NCD, I-Taukei 0.4 and Fijian of other ethnic descent 0.2.

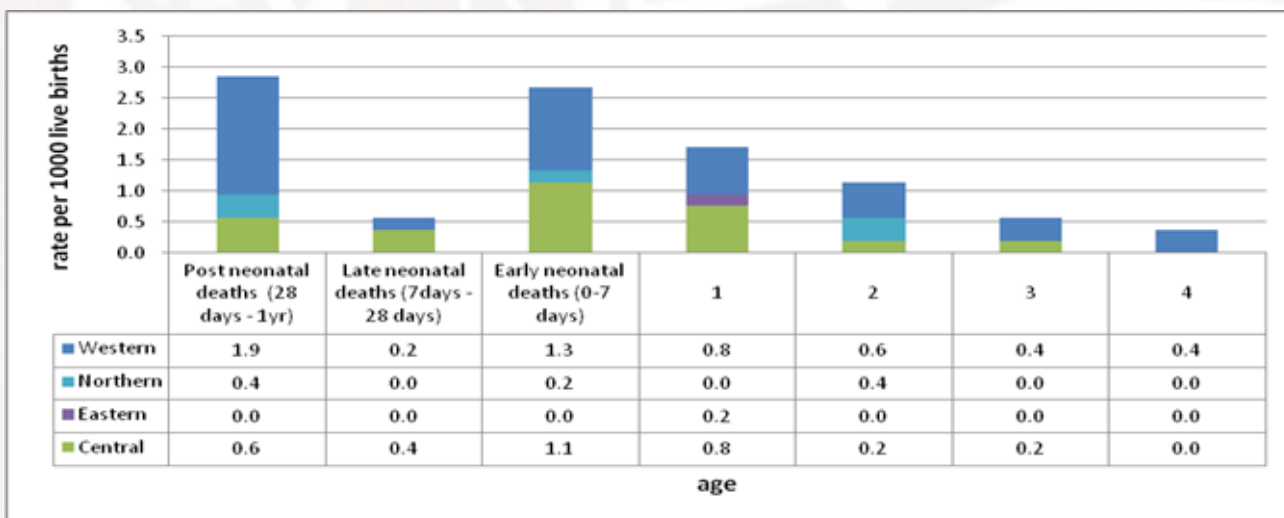
v.) Figure 4: Mortality by division



V01-Y98 - External causes of morbidity and mortality
R00-R99 - Symptoms, signs and abnormal clinical and laboratory findings, NEC
Q00-Q99 - Congenital malformations, deformations and chromosomal abnormalities
P00-P96 - Certain conditions originating in the perinatal period
N00-N99 - Diseases of the genitourinary system
M00-M99 - Diseases of the musculoskeletal system and connective tissue
L00-L99 - Diseases of the skin and subcutaneous tissue
K00-K93 - Diseases of the digestive system
J00-J99 - Diseases of the respiratory system
I00-I99 - Diseases of the circulatory system
G00-G99 - Diseases of the nervous system
E00-E90 - Endocrine, nutritional and metabolic diseases
D50-D89 - Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
C00-D48 - Neoplasm
A00-B99 - Certain infectious and parasitic diseases

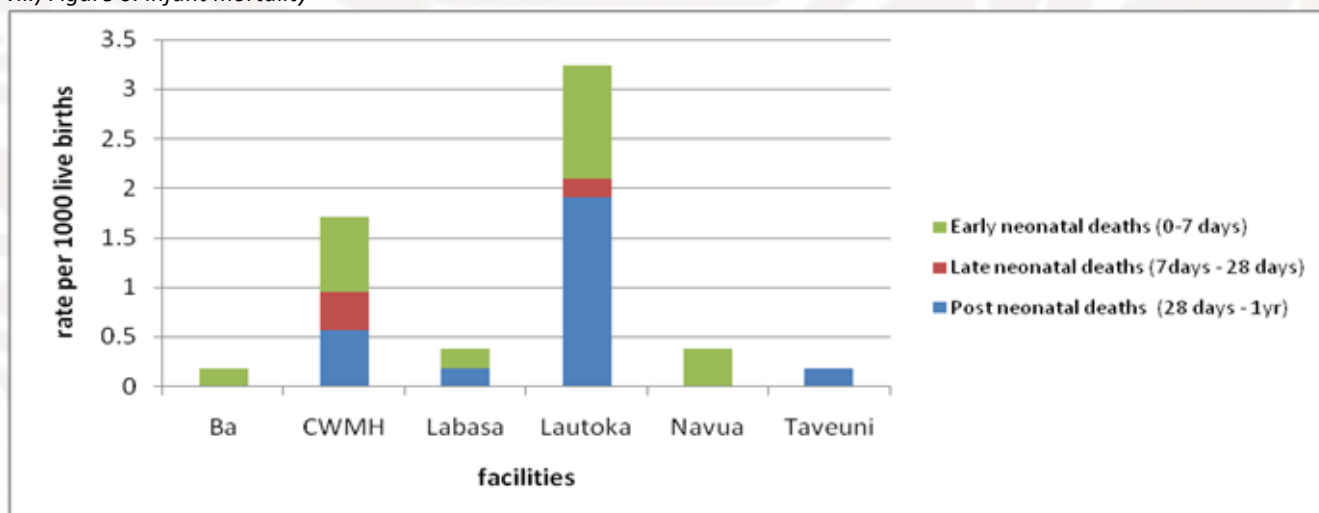
Medical Cause of Death Certificates received in the Western division were 451 (51%), Central division sent 222 certificates (25%), Northern division sent 186 certificates (21%) and 34 certificates (4%) from the Eastern division. These were the certificates received from each division from 1st January 2014 to 15th April 2014.

vi.) Figure 5: Under 5 mortality



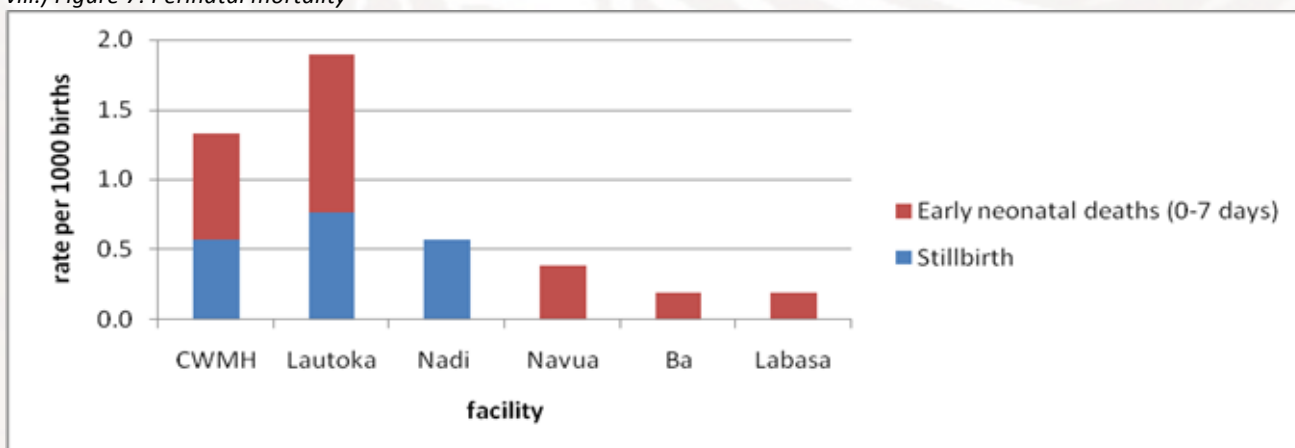
A total of 52 Under 5 mortality giving an estimated Under 5 mortality rate of 10 per 1000 live births (using 2013 ¼ live births as denominator) was reported in this quarter which means 10 out of 1000 live babies born will not reach their 5th birthday. In comparative to the same period last year with an estimated under 5 mortality rate of 14 per 1000 live births. Western division recorded the most under 5 mortality, followed by Central division, then the northern and then Eastern division. The causes of under-five mortality included diseases of infectious origin, respiratory diseases, conditions originating in the perinatal period, cancers, and external causes of mortality (drowning / burns) in no apparent order.

vii.) Figure 6: Infant mortality



A total of 32 Infant deaths giving an estimated Infant Mortality Rate of 6 per 1000 live births (using 2013 ¼ live births as denominator) was reported in this quarter which means 6 of every 1000 live babies born will not reach their 1st birthday compared to an IMR of 10 per 1000 live births at the same period last year. Most infant deaths were recorded at Lautoka hospital, followed by CWM Hospital, Labasa, Navua, Taveuni and Ba.

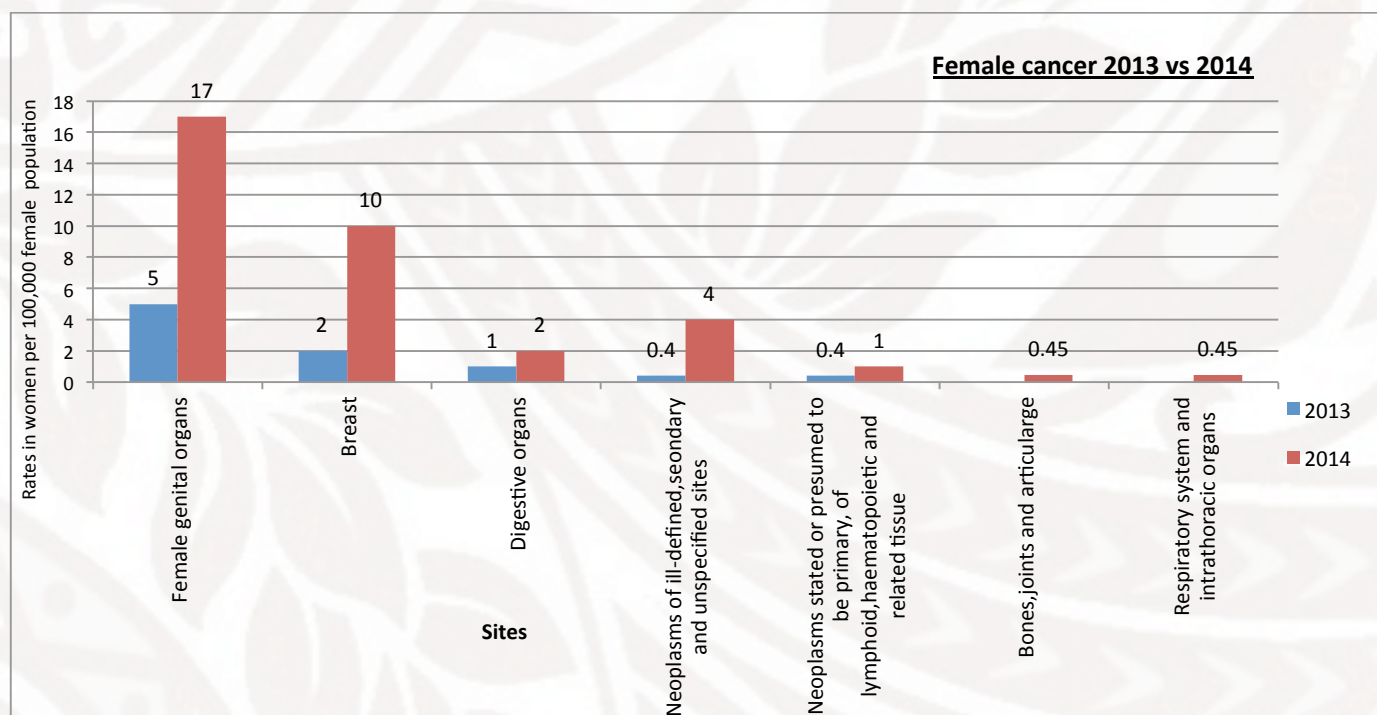
viii.) Figure 7: Perinatal mortality



A total of 24 perinatal deaths was recorded in the first quarter giving an estimated Perinatal Mortality Rate of 8 per 1000 births (using 2013 ¼ births as denominator). Lautoka hospital recorded the most with 10 perinatal deaths, CWMH recorded 7, Nadi 3, Navua 2 and Labasa and Ba recorded 1 perinatal death each. In comparison to 2013 1st quarter, there was an estimated perinatal mortality rate of 15 per 1000 births.

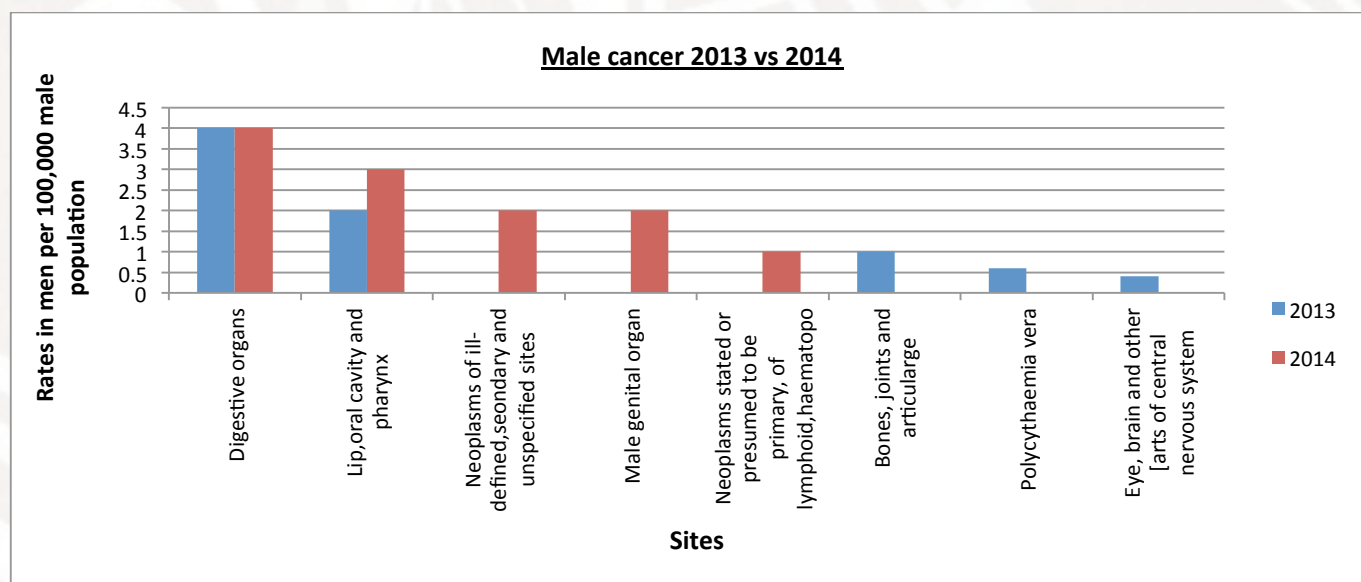
NON-COMMUNICABLE DISEASE [NCD]

CANCER:



Source: Pathology report, MCDC, Hosp.tear-off &Patis

For the 1st quarter 2014, female genital organs was the most common site of cancer among females aged between 45-54yrs. Predominantly breast cancer was the primary site of cancer for women between 45-60yrs age group. Comparing the trends among females, there were more cases in 1st quarter of 2014 compared to the same period in 2013(8.8%) and 2014 (35%).Cervical and Breast cancer continue to be the leading sites for cancer amongst women in 2014.The top three cancer sites for females in 2014 are: Female genital organs (17%), Breast (10%) and Neoplasm of ill-defined, secondary and unspecified sites (2%).Female genital organ consistsof thevulva, vagina, cervix uteri, corpus uteri, uterus, ovary, other and unspecified female genital organs and placenta. The presence of ill defined sites demonstrate poor diagnosis resulting in inability to apply correct codings to classify the disease.

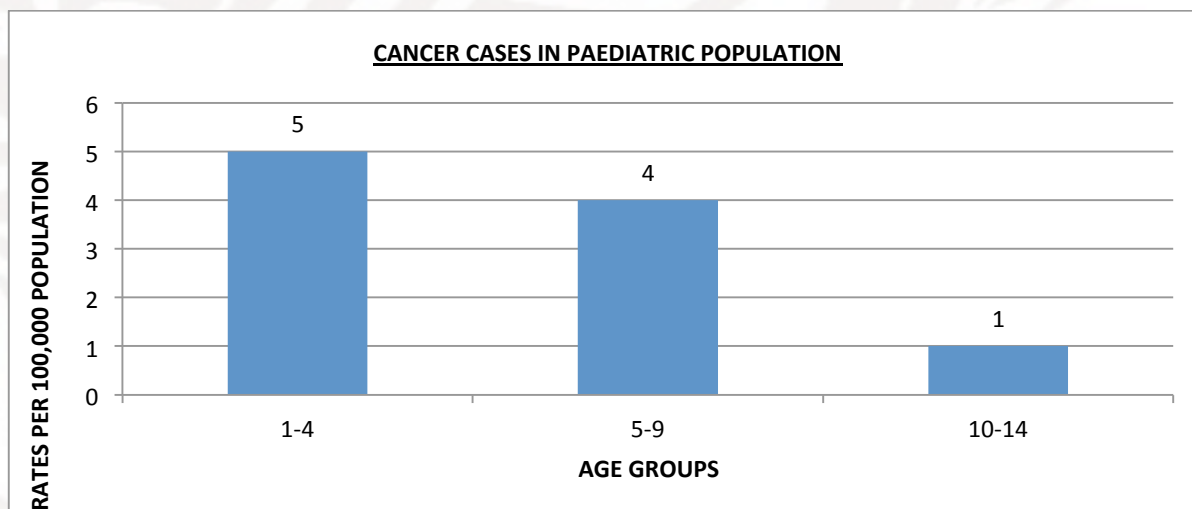


Source: Pathology report, MCDC, Hosp.tear-off &Patis

For the 1st quarter 2014, digestive organs was most common among males for men between 50-54yrs. It is important to note that Cancers of the oral cavity are in the top 5 sites for Cancer for the first time in many years and appropriate public interventions/ strategies may need to be carried out. Male genital organs comprise of Penis, Prostate gland, Testis and Other and unspecified male genital organs. The main cancer sites among males in the 1st quarter of 2014 have been digestive organs (0.004%), neoplasms of ill-defined, secondary and unspecified sites (0.003%), male genital organ (0.002%), neoplasms stated or presumed to be primary, of lymphoid, hematopoietic and related tissue (0.002%), and lip. Oral cavity and pharynx (0.001%). Similar to cancer in females the presence of ill defined sites demonstrate poor diagnosis resulting in inability to apply correct codings to classify the disease.

Cancer cases in Paediatric Population:

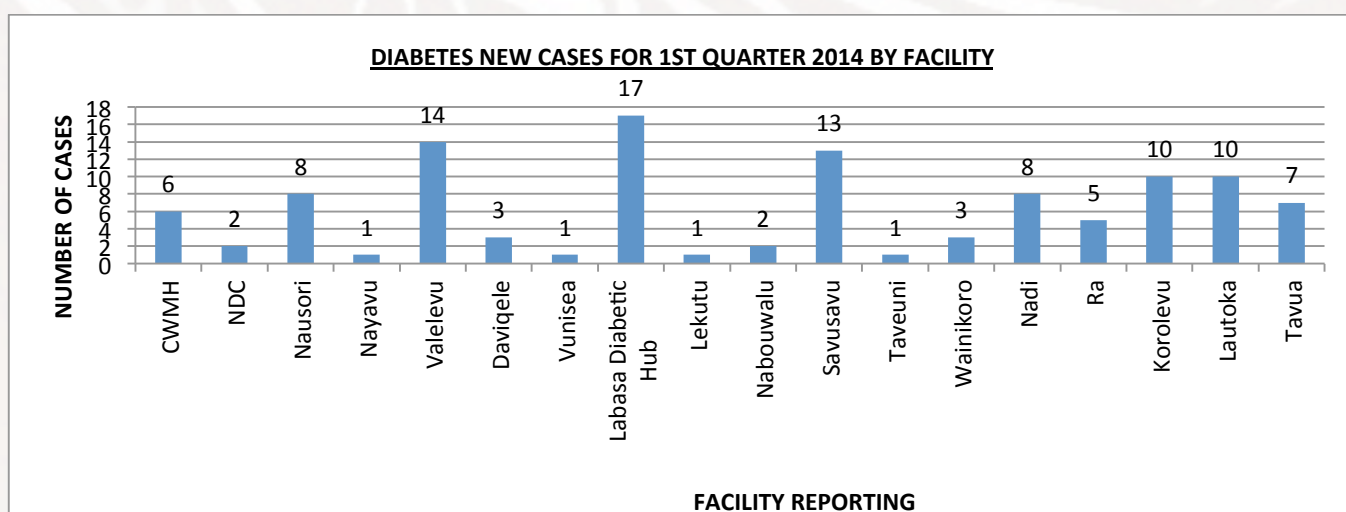
The age standardized rates of Paediatric cancer in Fijian population are 10 cases per 100,000 (n=10) for the 1st quarter in 2014.



Source: Pathology report, MCDC, Hosp.tear-off &Patis

The above consists of Neoplasms of ill-defined, secondary and unspecified sites (n=2), neoplasms stated or presumed to be primary, of lymphoid, haematopoietic and related tissue (n=4), cancer of male genital organ (n=1) and cancer of the urinary tract (n=1).

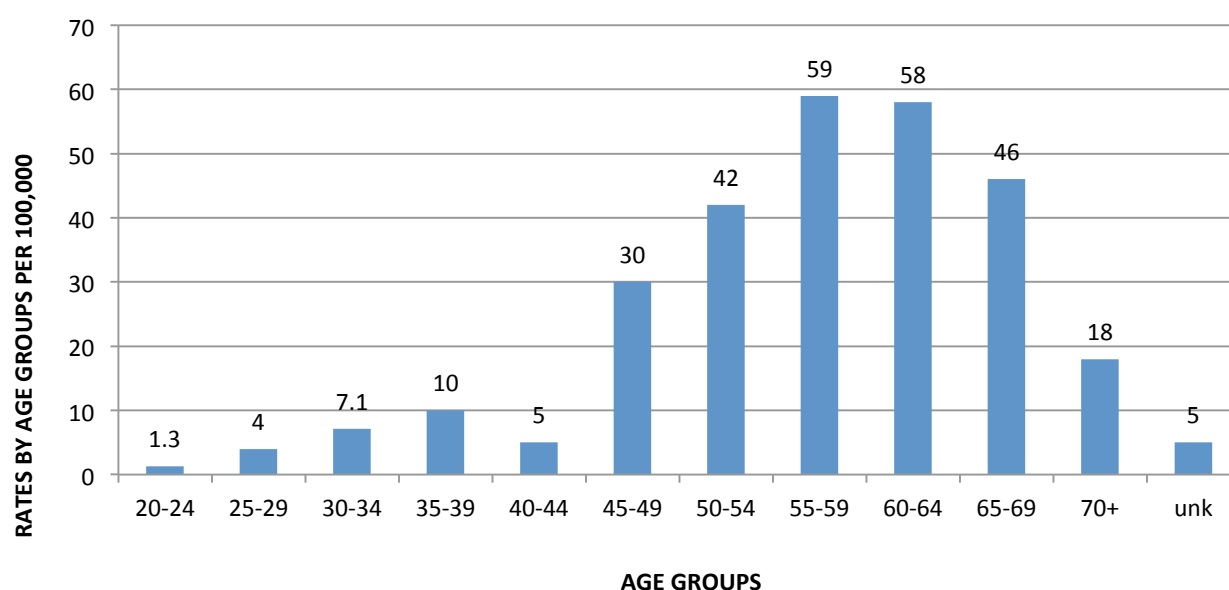
DIABETES:



Source: DM Notification Form

18 facilities reported on incidence of Diabetes in the 1st quarter of 2014 compared to 13 last year for the same period. Labasa Diabetic Hub reported the highest number of cases, 17 cases were reported in the 1st quarter of 2014 compared to 13 for the same period last year. Underreporting is significant: the form must be filled by the Medical Officers in all the Hospitals and Health Centre, where there is no Medical Officer it should be filled by the Nurse Practitioners when a new case is diagnosed which must be sent to HIU. The total incidence is 112 cases from DM notification forms but in PHIS the incidence stands at 399 (DM + Dual). This essentially translates into gross underreporting on the DM forms although PHIS online seems to be filled. In this case validations of individual cases are difficult to undertake.

DIABETES NEW CASES FOR 1ST QUARTER 2014 BY AGE-GROUPS



Source: DM Notification Form

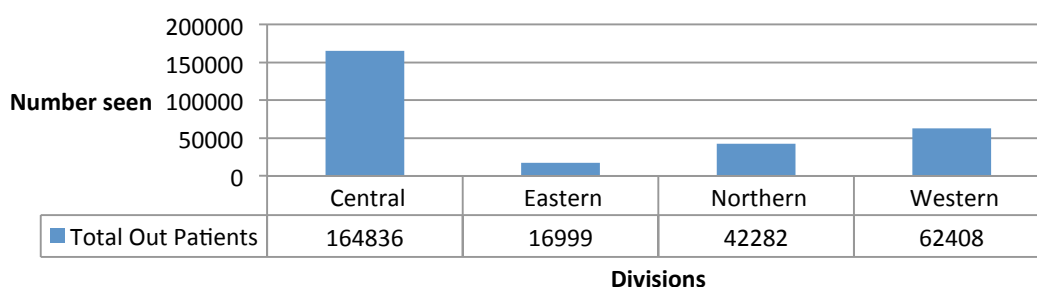
The age distribution of new cases is different to the pattern in 2013 [with the majority of cases in the middle age group 45-49], while in the 1st quarter 2014 the majority of cases are in the 55-59 age groups. There are more cases reported among females (54%) compared to males (46%). This could be due to health seeking behavior differences in the two genders.

PUBLIC HEALTH INFORMATION SYSTEM [PHIS]

The PHIS analysis is compiled from the data received from Nursing Stations and Health Centres only.

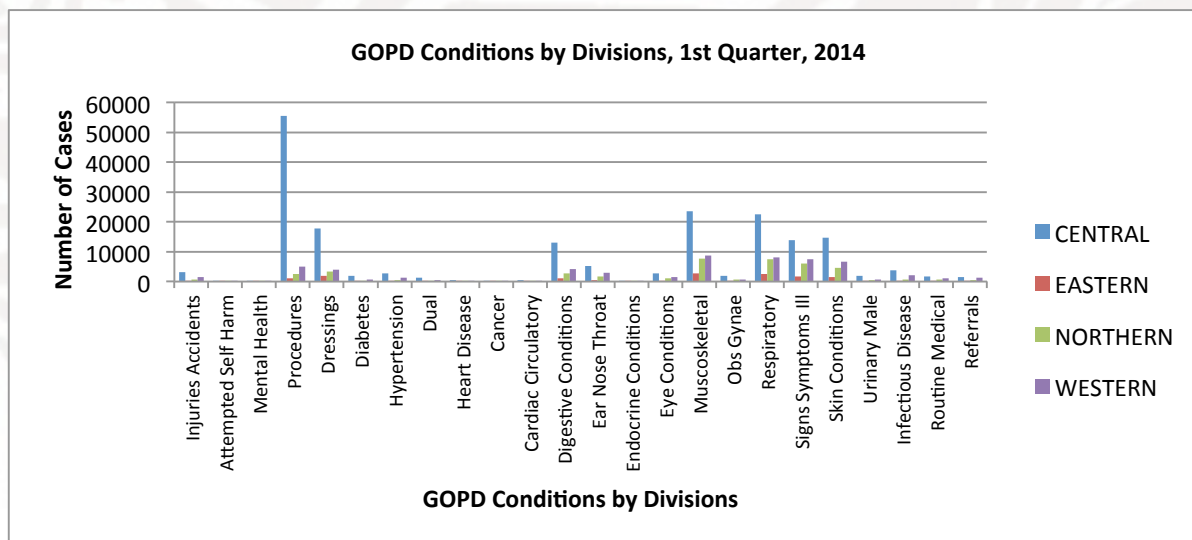
OUT PATIENTS SERVICES

Total out patients seen in Out Patient services by Divisions, 1st Quarter, 2014



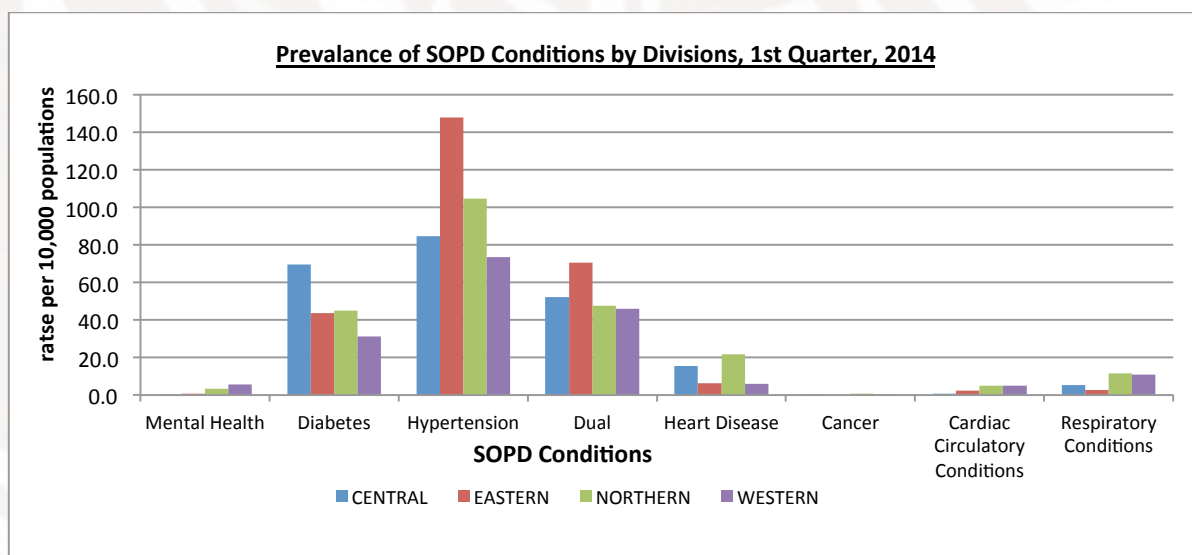
A total of 286525 outpatients were seen through the outpatient service in all the divisions compared to a total of 234368 outpatients seen through the same period in 2013. This was an increase of 18.2% in the 1st Quarter [2014] when compared to the same period last year.

GOPD Conditions



Minor Procedures and Dressing made up the majority of patients visiting the GOPD particularly in the Central Division. This was due to patients having repeat dressing or repeated procedures over the period of their treatment. Similar trends were observed in the 1st quarter of 2013 with the highest frequency noted in respiratory conditions, followed by musculoskeletal and skin conditions as causes of morbidity.

SOPD Conditions



Majority of cases seen at SOPD clinic were Hypertension followed by Diabetes and Dual particularly in the Central & Eastern Division. Similar trends were observed in 1st Quarter, 2013.

MATERNAL HEALTH

Normal and At Risk Pregnancy Table

	1 st Quarter, 2014	1 st Quarter, 2013
Normal pregnancies	1998	2369
At Risk Pregnancies	1255	1228
at risk & normal pregnancies	3253	3597

At the antenatal clinics there were a total of 1998 normal pregnancies seen compared to 2369 in the 1st quarter 2013; there seems to be a drop in the number of pregnancies overall for the first quarter of 2014 compared to 2013.. The 'at risk pregnancies' increased by 2.2% in 2014 compared to 2013. Among the complications/risk factors were those outlined in the table below:

Maternal Health Pregnancy Report, 1st Quarter 2014.

Division	Normal Pregnancy	At Risk Pregnancy
Central	373	147
Eastern	238	179
Northern	763	578
Western	624	351
total	1998	1255

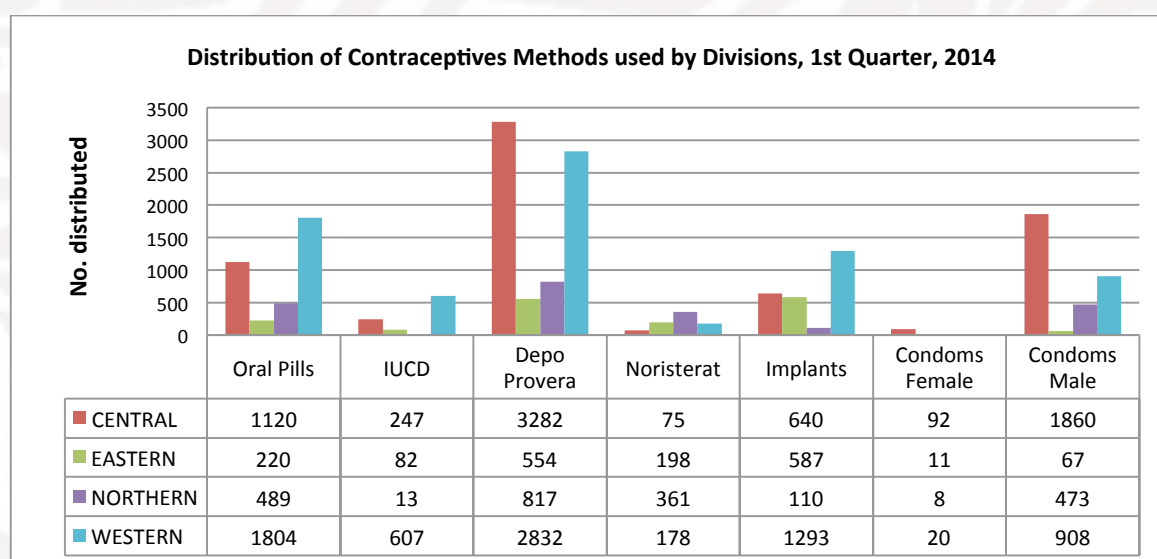
The table across shows the number of women attending ante-natal clinics under two categories which are normal pregnancy and at-risk pregnancy in 1st Quarter, 2014. Northern division recorded the highest number of At Risk Pregnancy followed by Western, Eastern and Central respectively.

Risk Factor/ Complications	(% of at risk pregnancies)	(% of at risk pregnancies + normal pregnancies)
Anaemia	9.7	3.75
Obesity	3.4	1.32
Prev Ceasar	4.7	1.81
Hyper Tension	2.5	0.95
VDRL	2.4	0.92
Elderly Prim	0.8	0.31
Obstruct Labour	0.4	0.15
Cardiac	0.2	0.06
Under Weight	0.1	0.03

The table shows the relative prevalence of various risk conditions for women attending ANC clinics. The first column shows the relative prevalence of the condition among women who were considered 'at risk' while the second column shows the prevalence of the condition among the all women attending ANC.

FAMILY PLANNING

Contraceptive methods in Family Planning



Depo Provera injections and Oral pills were the most common contraceptive methods used for birth control followed by Implants and condoms as per reported by all divisions. Central division recorded the highest distribution of contraceptive methods followed by Western division while Eastern recorded the lowest. Similar patterns were observed same period in 2013.

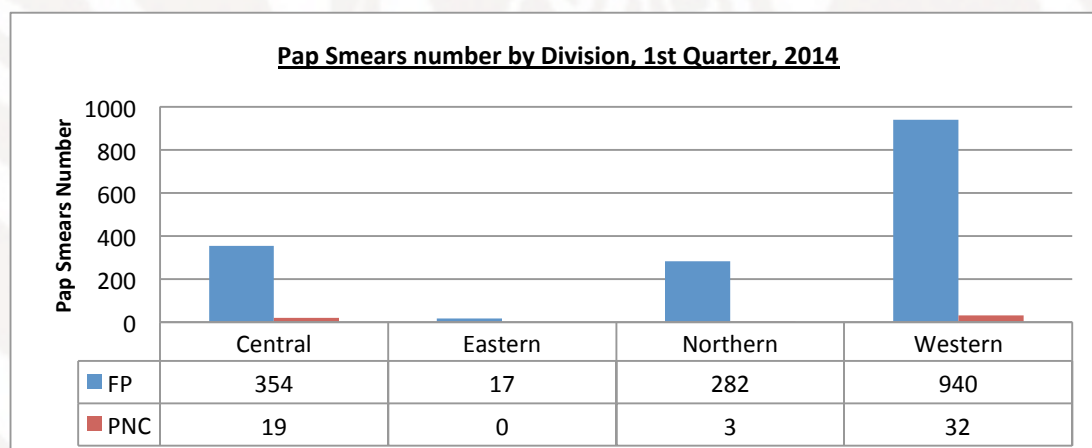
Family Planning Couple of Years Protection, 1st Quarter, 2014

Years Protection Dispensed								
Division	Oral Pills	IUCD	Depo Provera	Noristerat	Implants	Female Condoms	Male Condoms	CYP Rate (per 100 Women)
National	681.4	3131.7	1871.3	138.0	9994.0	11.8	297.7	29.5
Central	210.7	815.1	820.5	12.8	2432.0	8.3	167.4	20.2
Eastern	40.9	270.6	138.5	33.7	2230.6	1.0	6.0	118.5
Northern	91.4	42.9	204.3	61.4	418.0	.7	42.6	10.3
Western	338.3	2003.1	708.0	30.3	4913.4	1.8	81.7	37.0

Source: PHIS

This table shows the Years of Protection for each of the contraceptive method being dispensed. It is the standard international indicator for measuring the effectiveness of family planning program. This table does not only show the amount of contraceptives dispensed but the relative length of protection provided by the different methods. For example one dispensing of oral pills provides protection for 3months, while an IUCD provides protection for over 3 years.

PNC and Family Planning Pap Smears



A total of 1647 pap smears were conducted in combined clinics [96.7% of pap smears were recorded through family planning clinics and 3.3% through postnatal clinics. This is slightly higher than the numbers reported for the same period in 1st Quarter, 2013[1581]. Please note that visual inspections with acetic acid (VIA) are currently not being captured on the system.

Immunization

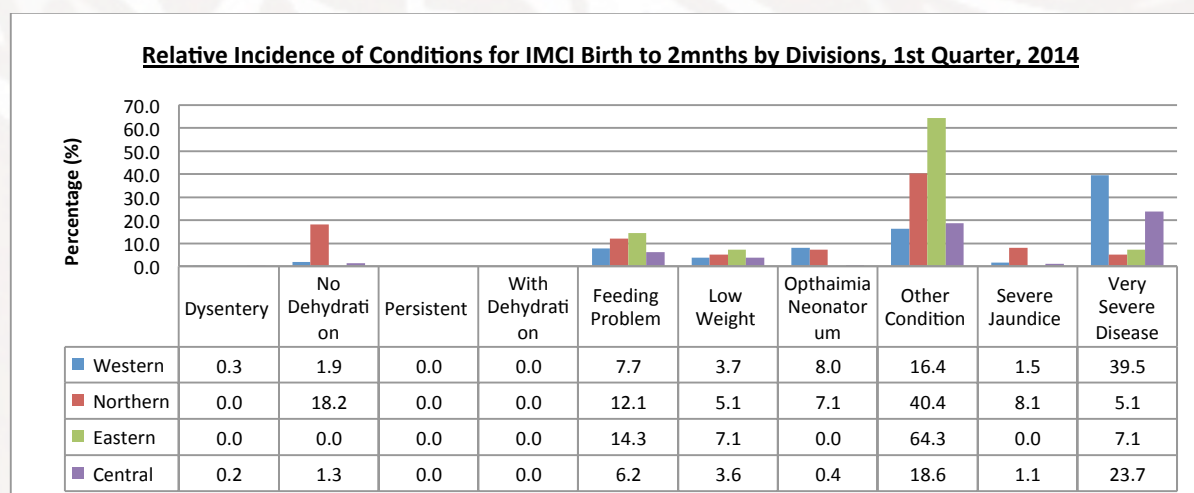
Immunization by Division, 1st Quarter, 2014

Division	HepBO	BCG0	DPTHe p BHib1	OPV1	Penum ocal1	Rotaviru s1	DPTHe p BHib2	OPV2	Penum ocal2	DPTHe p BHib3	OPV3	Penum ocal3	Rotav irus2	MR1
Central	395	394	1,829	1,829	1,828	1,824	1,575	1,578	1,572	1,723	1,722	1,724	1,708	1,919
Eastern	62	62	99	95	103	101	134	130	131	158	160	161	161	190
Northern	752	751	637	626	628	626	584	579	581	582	573	581	571	659
Western	714	714	1,383	1,383	1,386	1,381	1,223	1,221	1,221	1,256	1,258	1,258	1,266	1,343
Total	1923	1921	3,948	3,933	3,945	3,932	3,516	3,508	3,505	3,719	3,713	3,724	3,706	4,111
% per 100 births	36.7	36.6	75.3	75.0	75.2	75.0	67.1	66.9	66.9	70.9	70.8	71.0	70.7	78.4

Source: PHIS and Hospital Monthly Return[Jan-Mar Report]

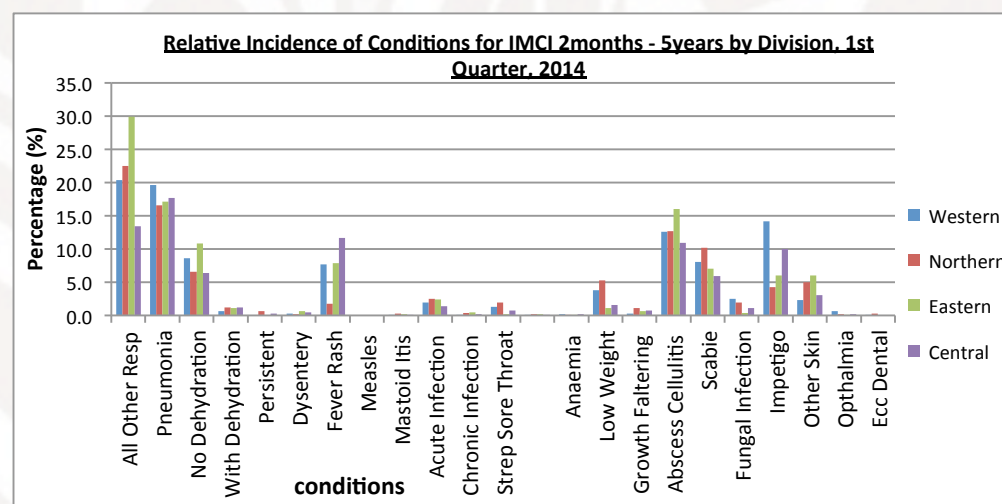
Based on the above figure, estimated coverage of MR1 was about 78.4%. [This estimation has used ¼ of 2013 live births (20970) as denominator]. About 11.9% more when compared with the same period, 2013 the estimated coverage of MR1 was about 66.5%. [This has been estimated using ¼ of 2012 live births (20174) as denominator]. The immunization coverage surveys for 2008 and 2012 report coverage at 95%.

MCH /IMCI: Birth to 2 months



Among the birth to 2 months old children attending IMCI clinic, Eastern Division recorded the highest percentage of children presented with other condition [not listed on the IMCI Table], feeding problem and low weight followed by Northern, Western & Central respectively. On the other hand Western Division was seeing more children with very severe disease than Central, Eastern and Northern.

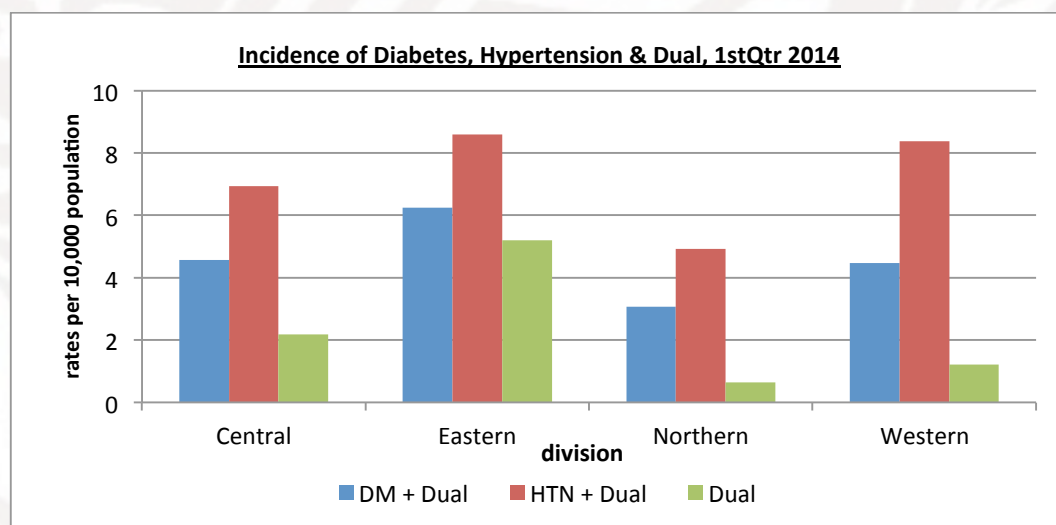
MCH /IMCI: 2 months to 5 years



This graph shows the percentage of children from 2 months to 5 years attending IMCI clinics at various health facilities in our country. More children were seen under the category of all other respiratory conditions, Pneumonia, Abscess Cellulitis, Scabies, Impetigo, Other Skin Conditions and Fever Rash in most divisions. The Eastern Division had the highest percentage of children under each of these condition followed by Western, Northern and Central. Predominantly respiratory and skin conditions are most common in children under 5 years of age in the public outpatient settings in Fiji.

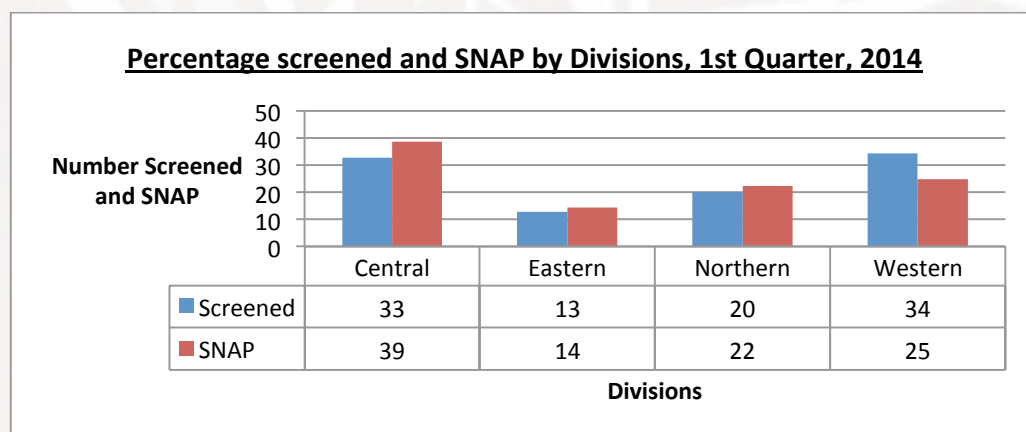
Non Communicable Diseases

Diabetes, Hypertension and Dual cases from NCD Screening



This report shows the incidence of Diabetes [DM], Hypertension [HTN] and Dual reported through PHIS. In total, hypertension recorded the highest rate through out the four division followed by Diabetes and Dual respectively. Please note that the DM and HTN rates have included the dual cases.

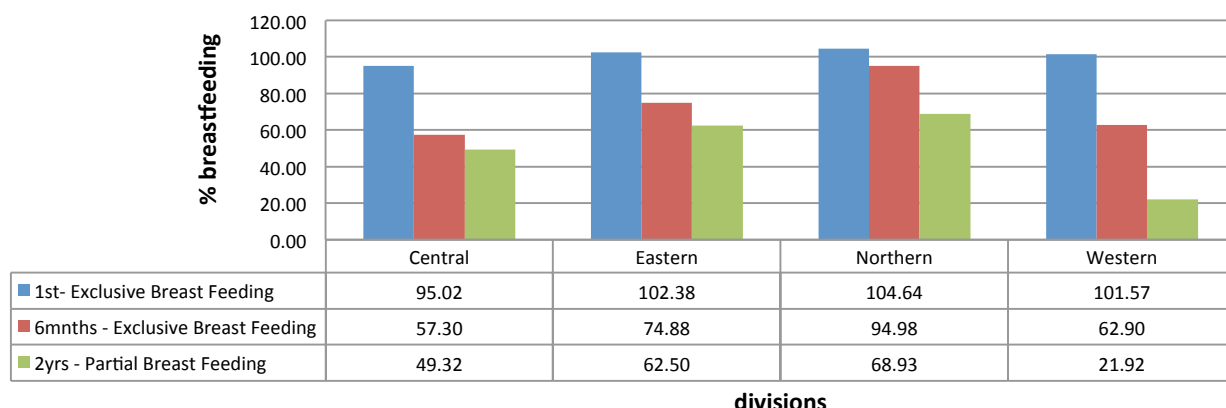
Screening and SNAP Results



In the 1st Quarter, 2014 –24,064 people were screened for diabetes and hypertension. Counseling was done regarding lifestyle activities, smoking, nutrition, alcohol and physical activity (SNAP). The largest numbers of people screened were from the Central division followed by the Western Division while Eastern division had the lowest number screened. There were similar patterns seen in the same period last year.

Nutrition – Breast Feeding

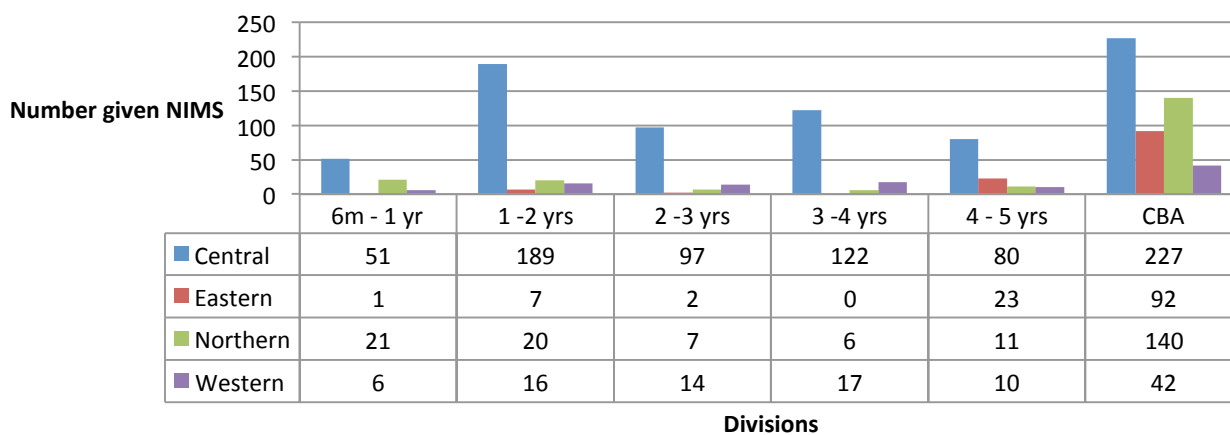
Percentage Breast Feeding by Divisions, 1st Quarter, 2014



Central Division recorded more mothers practicing breast feeding from birth to 6 months, followed by Western Division while Eastern recorded the lowest. Northern Division recorded 84.9% of mothers who continued breast feeding after 6 months and up until 2 years compared to the Western Division which recorded less than 37%. It can be concluded that 82.3% continued breastfeeding after 6 months and until 2 years. However when compared to same period in 2013, there was decline of 5.5% in 2014 [2013 - 76.8%]. *The reason why there is greater than 100% breastfeeding in the 1st MCH Visit category in the Eastern, Northern and Western is due to data entry error at source (facility level).*

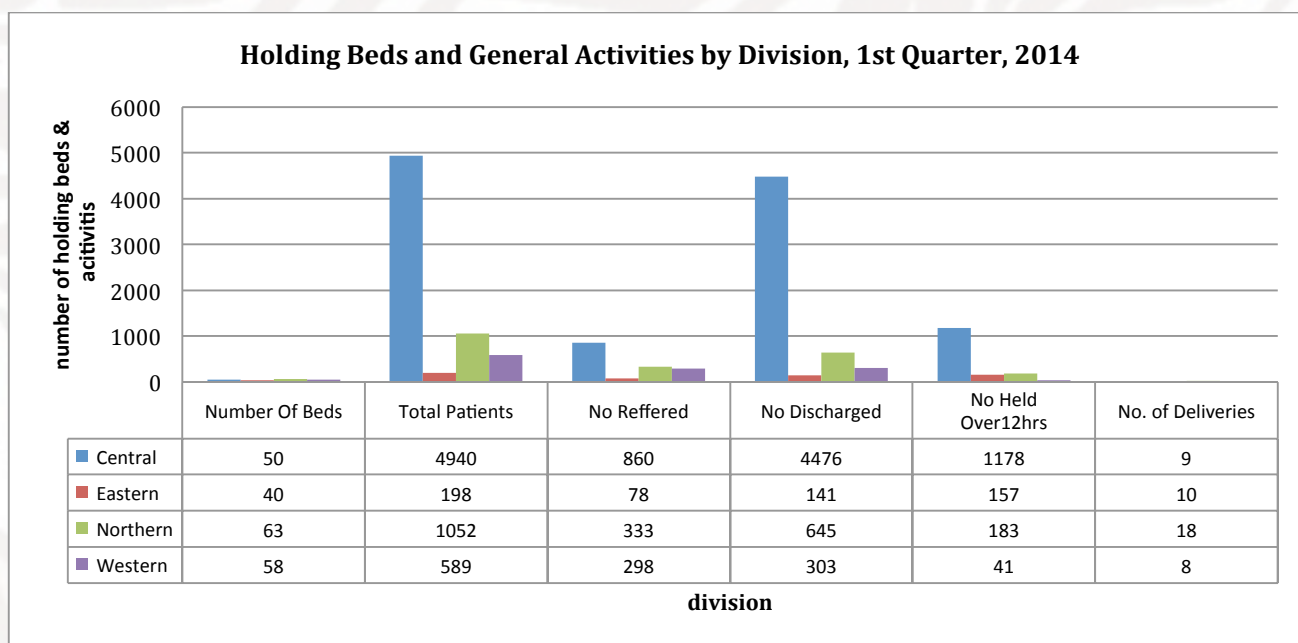
NIMS

Number of NIMS given to Children by Divisions, 1st Quarter, 2014.



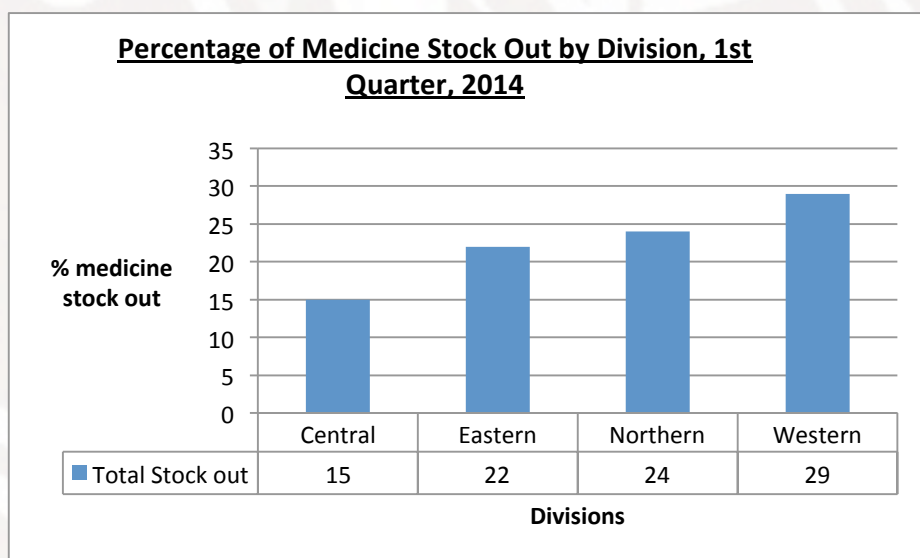
As per counting rules stated for CBA NIMS doses, only count the first 'dose' and when all three components are given: Ferrous Sulphate, Pyrantel Pamoate and Vitamin A. Hence, if only one or two doses are given, this is recorded for the facility reference, but is not reported in PHIS. HIU captures only the complete dose. All NIMS are recorded by dietitians/ nurses after which it is submitted to the Sister in Charge to be entered in the PHIS forms and the forms are then sent to the Sub-Divisional Health Sister or the Divisional Health Sister as a compiled report for entry into PHIS online. NIMS were mostly distributed in the Central Division, followed by the Western Division. When compared to the same period last year there was under reporting of NIM distributions in 2014.

Holding Beds from PHIS reports



The status of holding beds for the 1st quarter is demonstrated above. The Northern division had the greatest number of holding beds(63); however, the central division had the greatest number of total patients(4940) and also had the greatest number of people held over 12 hours(1178) followed by Northern division. The number of deliveries was also noted to be highest in the North. This is reflective of the great number of deliveries occurring at the divisional hospitals in line with the practice of Safe Motherhood. (However, when compared with the same period last year, Western division had the greatest number of holding beds (63); while, the central division had the greatest number of total patients(849) and Northern division had the greatest number of people held over 12 hours(184) followed by the Eastern division. The number of deliveries was also noted to be highest in the North (27).

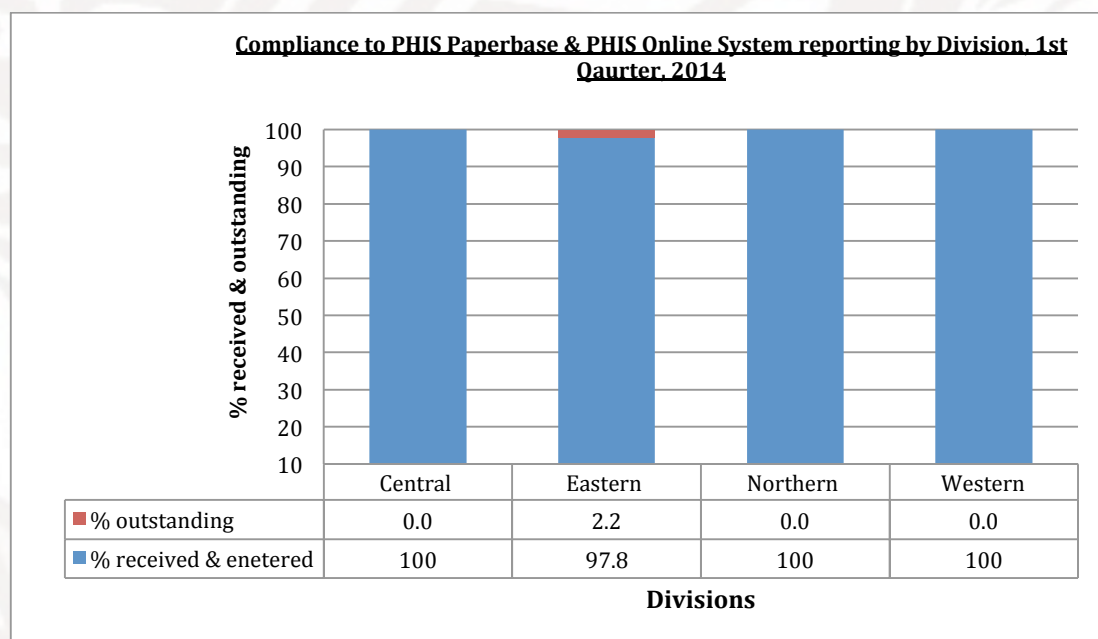
Pharmacy Indicator



The PHIS system records the number of occasions where any one of the key medicines has been out of stock for a week or more in a month from each Medical Area. During 1st Quarter, 2014, the Western Division had the most medicine stock outs with 29% across all Medical Area with Central Divisions having the lowest percentage (15) however when compared with the results of the same period last year it was recorded that the Northern Division had the most medicine stock outs with 37% across all Medical Area with Central Divisions having the lowest percentage (20). The tracer items include vaccines, contraceptives, amoxicillin elixir, paracetamol elixir, paracetamol tabs and ORS and the nursing station level; and amoxicillin capsules, flucloxacillin, soluble insulin, ranitidine, metformin and glipizide at the health center level.

Compliance to Reporting

PHIS Paper base & PHIS Online System Compliance Reporting –



Source: PHIS Register [paper based form], PHIS online www.phisonline.gov.fj [Reports entered online]

The preceding analysis is based on the 99.6% of reports received both through paper based and online system from the four divisions for 1st Quarter, 2014. There was an improvement in reporting by 3.6% in this quarter compared to the 1st Quarter, 2013 [96%]. The discrepancy between the online reporting and paper based system is due to: the ability for sub-divisions to access PHIS online for immediate data entry; the lag time for receiving paper based reports due to logistics. There is a continuation of the paper based reports until the online systems are able to sustain reporting requirements.

PHIS On-Time Compliance to Reporting

This is the 1st update of the monitoring of on-time submission.

Fig 1.1: PHIS on-time reporting

% of reports received On-Time by Division & by Month [received by 15th of the following month]			
Division	January	February	March
Central	81.0	90.5	100
Eastern	66.7	93.3	93.3
Northern	100	100	100
Western	100	92.3	100
National	86.9	94.0	98.3

This table shows the percentage of reports received On-Time by month for each division, 1st Quarter, 2014. There has been a great improvement in submission within the 3 month period and this shows the effectiveness and efficiency of reports from the reporting unit to Health Information Unit. Northern Division has been effective in submitting their PHIS reports both paper base and online even though they face challenges as per location.

Fig 1.2: PHIS late reporting

Reports received late by Month from the following Medical Areas [received after 15th of the following month]			
Division	January	February	March
Central	Samabula Medical Area	Nuffield Clinic- Tamavua MA	Nil
	Lami Medical Area	Mokani Medical Area	
	Makoi Medical Area		
	Valelevu Medical Area		
Eastern	Levuka Medical Area	Kavala Medical Area	Kavala Medical Area
	Bureta Medical Area		
	Gau Medical Area		
	Vunisea Medical Area		
	Daviquele Medical Area		
Northern	Nil	Nil	Nil
Western	Nil	Kamikamica HC	Nil

This shows the medical areas that are late in reporting for each month by division, 1st Quarter, 2014. There were no reports pending from Northern Division as they were consistent in submitting their report on-time both online and paper base.

Developments

1. PHIS extensions are expected to incorporate the Sub-divisional hospital and Divisional Hospital births, ANC, IMCI, Family Planning and PNC and this should be functional by next year
2. The change of reporting from numbers to rates is effective from this bulletin
3. The National Health Data Dictionary Policy has been drafted – please contact HIU if you wish to review this policy or make submissions.
4. The Health Information Policy is under review – please contact HIU if you wish to review this policy or make submissions.
5. The National Notifiable Disease Surveillance System (NNDSS) is under review – please contact HIU if you wish to review this policy or make submissions. HIU is also exploring online NNDSS options. Watch this space for further details.
6. The Medical Cause of Death certificates are currently being audited and closer collaborations with O&G and Paediatrics divisions at CWMH have been founded.
7. Continuing Professional Development sessions for HIU staff have commenced; epidemiology sessions have been completed and biostatistics sessions are expected to commence soon.
8. HIU staff are currently undertaking ICD 10 courses with the World Health Organization. Sincere appreciation to Dr Rodel Nodora and Mohammed Yasin.

Final Note:

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