QUARTER 1 FEEDBACK

2016

HEALTH INFORMATION BULLETIN

Using Health Information for Measuring and Improving Health Outcomes

MINISTRY of HEALTH & MEDICAL SERVICES

Shaping Fiji's Health

Strategic Pillar 1: Preventive, curative, and rehabilitative health services

1. Non-communicable diseases, including nutrition, mental health and injuries
2. Maternal, infant, child and adolescent health
3. Communicable diseases, environmental health and health emergency preparedness, response and resilience

Strategic Pillar 2: Health systems strengthening

4. Expanded primary health care, with an emphasis on providing a continuum of care and improved quality and safety
5. Productive, motivated health workforce with a focus on patient rights and customer satisfaction
6. Evidence-based policy, planning, implementation and assessment
7. Medicinal products, equipment and infrastructure
8. Sustainable financing of the health system

Diagram note: the canoe represents the MoHMS initiative to promote health and wellness in the Fiji population

Message from the Director Health Information, Research and Analysis (DHIRA)

"Sound and reliable information is the foundation of decision-making across all health system building blocks, and is essential for health system policy development and implementation, governance and regulation, health research, human resources development, health education and training, service delivery and financing." (WHO)

The availability of health information is critical in allowing us to ask, and to answer, the right questions about health care in Fiji. It is for this reason that Health Information Unit produces the quarterly bulletins which reflect the health care performance from the data received from various health facilities across the country.

This information is inclusive of health information systems such as Public Health and Information Systems (PHIS), Patient Information Systems (PATISPlus), Non communicable diseases data, Hospital Admission and Discharge data, Communicable diseases data and Mortality statistics and other providers of health statistics.

The health information unit collects data on the 15th of the following month of the end of quarter from the health sector and other relevant sectors, analyses the data and ensures their overall quality, relevance and timeliness, and converts data into information for health-related decision-making. This rich dataset needs to be disseminated and communicated to all the health facilities and private doctors and practitioners for measuring and improving health outcomes. It also paves the way for use of reliable information as evidence for monitoring and evaluation that leads to effective and efficient planning, policy formulation, preventative interventions and clinical improvements.

It is vital that the data providers take note of the recommendations and compliance issues in order to contribute and obtain quality information that will have a better statistical analysis for improved decision making at various levels of the health system. The selection of current indicators in this report is based on available information and importance to various sections requirements.

We are susceptible to new ideas and improvements on this revised structure and look forward towards hearing more from the users on the use of health information for measuring and improving health outcomes. As you would note sections 5 (Human Resources) and 8 (Financing) are not part of the bulletin due to its separate feedback mechanisms.

I would like to thank all involved in the process for their diligent and consistent effort in ensuring this bulletin is made available to us.

Mr Shivnay Naidu
Director Health Information, Research and Analysis
Ministry of Health and Medical Services
Suva, Fiji.

Acknowledgement

The Health Information Unit would like to acknowledge the data contributors and providers from all the Divisional hospitals, the Sub divisional hospitals, health centers and nursing stations from in Fiji.

There are various key persons whose technical and analytical contribution are acknowledged in the collating, analyzing and producing relevant data for measuring and improving health outcomes.

- Mr S. Naidu – Director Health Information, Research and Analysis
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- Ms K. Mataitoga – Statistical Officer [Mortality]
- Ms A. Naiqero – Statistical Officer [NCD]
- Ms A. Deo – Statistical Officer [CD]
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- Ms N. Nisha – Project Officer
- Ms L. Marama – Project Officer
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Abbreviations

ANC	Ante Natal Clinic
ARI	Acute Respiratory Infection
ATD	Admission Transfer Discharge
CD	Communicable Disease
CPMR	Clinical Performance Management Report
CMRIS	Consolidated Monthly Return Information System
DM	Diabetes Mellitus
FBOS	Fiji Bureau of Statistics
HIU	Health Information Unit
LTD	Leptospirosis Typhoid Fever Dengue Fever
MCDC	Medical Cause of Death Certificate
MCH	Maternal Child Health
MDG	Millennium Development Goal
MoHMS	Ministry of Health and Medical Services
N	Number
NCD	Non-Communicable Disease
NIMS	National Iron Micronutrient
NNDSS	National Notifiable Disease Surveillance System
PATIS	Patient Information System
PHIS	Public Health Information System
RBS	Random Blood Sugar
SIC	Sister-In-Charge
UCOD	Underlying Cause of Death
WHO	World Health Organization

Glossary of Key Terms

The following glossary provides definitions of key terms used in the context of this bulletin.

Antepartum still births	A stillbirth where the baby died before the onset of labour (≥ 28 weeks gestation or, in absence of a reliable gestational age, those with a birth weight of ≥ 1000G).
Caesarean section	Carried out when a normal vaginal birth could put the mother or the unborn baby at risk.
Crude death rate	The total number of deaths occurring among the population of a given geographical area during a given year per 1000 population.
Fetal deaths	Baby expelled from the mother's body at ≥ 22 weeks gestation, but before 28 weeks gestation that shows no signs of life. (In the absence of a reliable gestational age, includes those with a birth weight between 500-999g).
Intrapartum stillbirths	A stillbirth where the baby died after the onset of labour or during delivery (≥28 weeks gestation or, in absence of a reliable gestational age, those with a birth weight of ≥ 1000g).
Premature mortality	Deaths that occur before a person reaches an expected age, for instance, age 75
Perinatal mortality	The "number of stillbirths and deaths in the first week of life per 1,000 live births, the **perinatal** period commences at 22 completed weeks (154 days) of gestation and ends seven completed days after birth
Still births	A baby born with no sign of life at or after 28 weeks gestation.
Under 5 mortality	Number of deaths occurring in a given population of under-five children during a specified time period.

Contents

Section 1: Non Communicable Diseases [NCD], including Nutrition, Mental Health and Injuries

1.1 Cancer

A **cancer incidence rate** is the number of new cancers of a specific site/type occurring in a specified population during a year, usually expressed as the number of cancers per 100,000 population at risk. That is,

Incidence rate = (New cancers / Population) × 100,000

The numerator of the incidence rate is the number of new cancers; the denominator is the size of the population. The number of new cancers may include multiple primary cancers occurring in one patient. The primary site reported is the site of origin and not the metastatic site. In general, the incidence rate would not include recurrences. The population used depends on the rate to be calculated. For cancer sites that occur in only one sex, the sex-specific population (e.g., females for cervical cancer) is used.

http://surveillance.cancer.gov/statistics/types/incidence.html

More than 20 million new cases of cancer are predicted worldwide in 2025, with four fifths of the burden falling on low- and middle-income countries (LMICs). To understand the local cancer situation and tackle the increasing incidence, there is a pressing need for planners to have relevant and unbiased data on the cancer burden in their communities.

1.1.1 Top 5 leading Cancer Sites by Sex and Proportion distributions, Fiji

Male	Cases 2016	%	Cases 2015	%	Female	Cases 2016	%	Cases 2015	%
Prostate gland	49	11	6	8	Breast, NOS	270	28	34	20.2
Liver	36	8	0	0	Cervix uteri	221	23	35	20.8
Lung, NOS	25	6	2	3	Endometrium	64	7	4	2.4
Unknown primary site	21	5	21	27	Ovary	37	4	0	0.0
Colon, NOS	20	5	4	5	Unknown primary site	28	3	36	21.4
Stomach, NOS	0	0	3	4	Lung, NOS	0	0	6	3.6
All Sites	435	100	79	100	All Sites	951	100	168	100
Source: Cancer Registry, 2016									

The above table shows the top five leading cancer sites by gender. In the male category Prostate gland is a leading cause which comprises of 11% followed by liver with 8 % in this reporting period. When comparing to same period last year Prostate remains constant whereas Unknown primary sites with 27% is the 2nd highest. In this reporting period it has dropped to 4th place. In the female category, breast (28%) and cervix (20%) remains the two leading cancer sites in both the reporting period. However, endometrium case was increased by 4% in this reporting period when compared to the same period last and this could be due to better reporting or basically indicates that more female were coming in for testing and diagnosed with such site.

1.1.2 Cancer Rate, Quarter 1 2016

Age	Cases	Population	Crude rate per 100,000	Re-weighted rate for WHO population
1-4	1	44008.97	2.3	1.7
5-9	2	45893.24	4.4	3.3
10-14	2	40630.88	4.9	3.7
15-19	1	38769.51	2.6	1.9
20-24	3	37711.35	8.0	5.7
25-29	2	33933.65	5.9	4.1
30-34	9	33886.92	26.6	17.6
35-39	16	30700.03	52.1	32.4
40-44	19	27332.11	69.5	39.8
45-49	32	24766.14	129.2	67.8
50-54	29	24641.25	117.7	54.9
55-59	41	21000.54	195.2	77.2
60-64	28	15270.91	183.4	59.2
65-69	34	10808.07	314.6	80.9
70+	45	12797.46	351.6	161.1

An age-adjusted rate is a weighted average of the age-specific rates, where the weights are the proportions of persons in the corresponding age groups of a standard population. The potential confounding effect of age is reduced when comparing age-adjusted rates computed using the same standard population.

http://surveillance.cancer.gov/statistics/types/incidence.html

1.2 Diabetes

Diabetes is a chronic disease that occurs either when the pancreas does not produce enough insulin or when the body cannot effectively uses the insulin it produces. In 2012 diabetes was the direct cause of 1.5 million deaths. In 2014 the global prevalence of diabetes was estimated to be 9% among adults 18+ years. (IARC on Cancer, 1965)

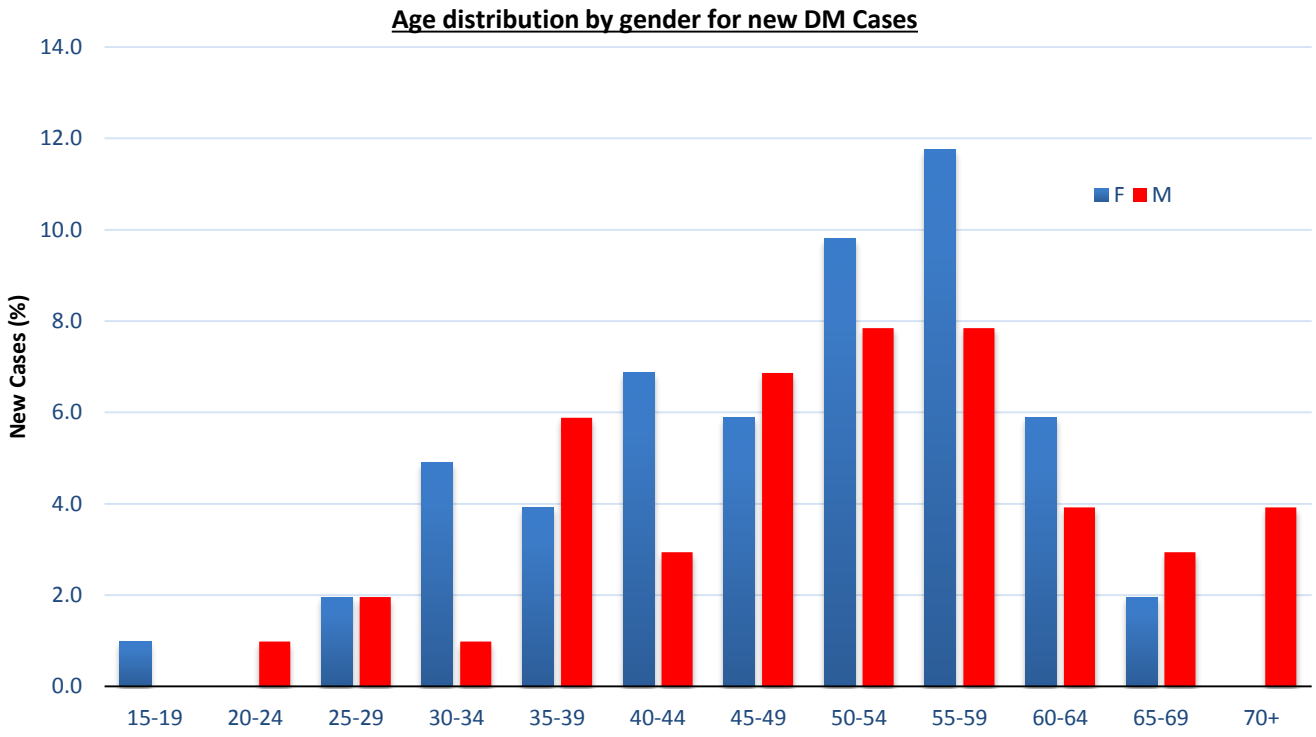
DM report through PHIS is not fully captured for this quarter due to CMRIS system not ready for reporting.

Data for Diabetes are obtained from the Diabetes notification form received from the Public Health Facilities every week.

Facility	Forms received N (%)
Lekutu Health Centre	3 (2.9)
Lomawai Health Centre	1 (1.0)
Nadi Hospital	91 (89.2)
Nasea Health Centre	1 (1.0)
Suva Diabetes Hub	4 (3.9)
Wainikoro Health Centre	2 (2.0)
Grand Total	102 (100)
Source: Diabetes Notification Form **Note: The denominator for calculating percentage is Total Diabetes forms received**	

The table shows the incidence of DM for Q1, 2016. 102 DM notifications were received compared to 200 reports in the same period last year. This figure is likely to be grossly underreported with only 6 out of 102 facilities submitting reports.

1.2.1 Age distribution by gender for new DM cases



Source: Diabetes Notificaiton Form

Note

1. *The denominator for calculating percentage is total Diabetes forms received.*
2. *A total of 102 reported DM new cases were received;*

The above graph represents new diabetes cases between the age groups 15-70+ age groups. It indicates that females contributed the highest number of diabetes patients in the age groups 55-59 years. Female for this quarter seemed to have earlier detection or earlier onset of disease (15-19 age groups).

1.2.2 Fasting Blood Sugar by gender and ethnicity

Blood Sugar	Total	Percentage	Gender				Ethnicity					
RBS			**F**	**%**	**M**	**%**	**FID**	**%**	FOD	%	**I-Taukei**	**%**
9-10	1	1.0	1	1.8	0	0.0	1	1.3	0	0.0	0	0.0
11-12	4	3.9	2	3.6	2	4.3	3	3.8	0	0.0	1	0.0
13-14	1	1.0	0	0.0	1	2.1	1	1.3	0	0.0	0	0.0
15-16	5	4.9	2	3.6	3	6.4	3	3.8	1	0.5	1	0.0
17-18	5	4.9	3	5.5	2	4.3	5	6.3	0	0.0	0	0.0
19	1	1.0	0	0.0	1	2.1	1	1.3	0	0.0	0	0.0
>20	12	11.8	8	14.5	4	8.5	7	8.9	1	0.5	4	0.2
Not answered	73	71.6	39	70.9	34	72.3	58	73.4	0	0.0	15	0.7
Total	102	100	55	100	47	100	79	100	2	1	21	1

Percentage calculation;

1. Formula:[number diagnosed/Total number of reports received*100]

2. Gender & Ethnicity: Total Number of Gender /Number per RBS level.

source: DM Notification Form

The above table shows the total number of RBS level and its percentage, it also represents the gender and ethnicity proportion. It was also noted that most of the RBS column was not answered from Nadi Hospital Please be advised that these fields are important to fill in which HIU reports on the incidence of DM in Fiji.

1.2.3 Proportion per division

RBS	Central		Eastern		Northern		Western	
	Number	%	Number	%	Number	%	Number	%
9-10	0	0.0	0	0.0	0	0.0	1	0.0
11-12	0	0.0	0	0.0	0	0.0	4	0.0
13-14	0	0.0	0	0.0	0	0.0	1	0.0
15-16	0	0.0	0	0.0	0	0.0	5	0.1
17-18	0	0.0	0	0.0	1	0.2	4	0.0
19	0	0.0	0	0.0	0	0.0	1	0.0
>20	1	0.3	0	0.0	1	0.2	10	0.1
Not answered	3	0.8	0	0.0	4	0.7	66	0.7

Source: DM notification form

Formula: Number per RBS level/ Total number by division

The above table indicates the reporting of the DM form by the 4 division. It was noted that the Western division recorded the highest reports received in Quarter 1, 2016, followed by the Northern division, and then the Central division. No case was received in the Eastern Division. It was also noted that the Western Division did not filled the DM forms completely and were shown not answered and followed by the Northern Division. *The total numbers of forms received were not used and only used the total number by division as the denominator and numerator as the number per RBS.*

Section 2: Maternal, Infant, Child and Adolescent Health

The Hospital MCH data collection form and PHIS form were revised to improve the data collection on these two main sections ANC and Births. These revision also leads to changing the data entry features online. Therefore, at present the data entry online is on hold and will progress once the changes in the CMRIS online is completed. Thus, the following reports will not be featured in this reporting period and it would be included in the next reporting bulletin: **1) National Iron Micronutrient (NIMS), NCD – PHIS report, Antenatal & Post Natal Care, Family Planning, Immunization, MCH/ IMCI, School Health Report, PHIS Outpatient, Holding beds and Pharmacy Indicator.**

2.1 Births

The Birth report for the Central Division is not fully captured for this quarter due to the pending reports yet to be received at HIU **from CWMH.**

This evidence is an imperative for comprehensive measuring of health outcomes for delivery; resource allocation; improvement and development of birthing units for better health care; and service planning.

2.1.1 Hospital birth per Division – Quarter 1, 2016

Division	Live Births	Total Births	No. of Women Delivering
Central	1786	1839	1806
Eastern	40	40	35
Northern	772	781	780
Western	1824	1844	1840
Total	**4422**	**4504**	**1192**
Source: Data Collection for Hospital MCH			

The table above shows the total Live births, total births and total number of women delivering per division for quarter 1, 2016.

The Western Division reported the highest number of live births and the majority of births were reported from the Lautoka Divisional Hospital (n=1125) followed by Sigatoka Hospital (n=168), and Ba Hospital (n=120).

The Central division reported the second highest number of live births with 1786 followed by Northern division and Eastern division with 772 and 40 live births, respectively.

Majority of delivering women were reported from the Western division (n=1806) followed by the Central division (n=1840) and the Northern and Eastern divisions recorded the lowest with 780 & 35 women respectively.

Section 3 – Communicable Diseases [CD]

The Notifiable Diseases analyses have been compiled from the Notifiable Disease Certificates received from 97 sites out of all public health facilities, 101 private health facilities and 2 private labs nationally. This report has been compiled from 86% data from 1st quarter 2016 (public health facilities only).

HIU urges all divisions to improve their submissions and capture of notifiable diseases as the deadline for receiving of all the notifiable diseases certificates is on a weekly basis. All outbreak situations still require routine reporting on the Notifiable Disease Certificate. The HIU draws attention to the timeliness of submissions which **continues** to need marked improvement from all facilities in all divisions.

The Public Health Act confers the responsibility of reporting notifiable diseases to medical practitioners:

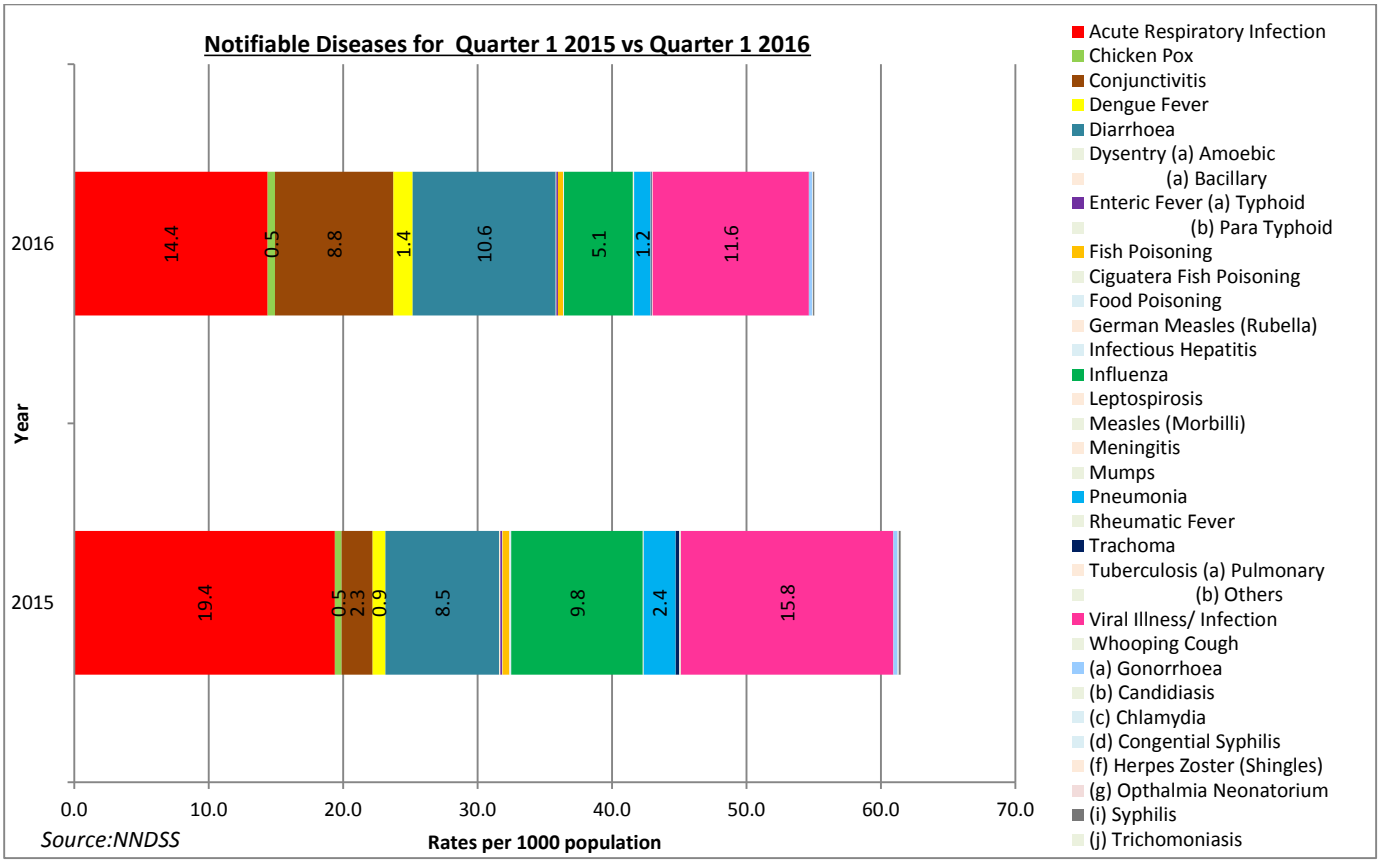
"Notification of infectious diseases

71. (1) When any person is suffering or has died from an infectious disease; any medical practitioner attending or called in to visit such person, on diagnosing that such person suffers or has died from an infectious disease, shall send at the prescribed times to the Permanent Secretary or to the medical officer of health of the Division where such person is residing or has died, a notice signed by him in the prescribed form containing such particulars as may be prescribed.

(2) Any medical practitioner required by this section to give a notice or certificate whether of sickness or of death or of both sickness and death who fails to give the same shall be liable to a fine not exceeding forty dollars."

Notifiable Disease Certificates should be populated with all cases of notifiable diseases, both suspected and lab confirmed cases. Please note that this edition contains some of the reports from the General Practitioners.

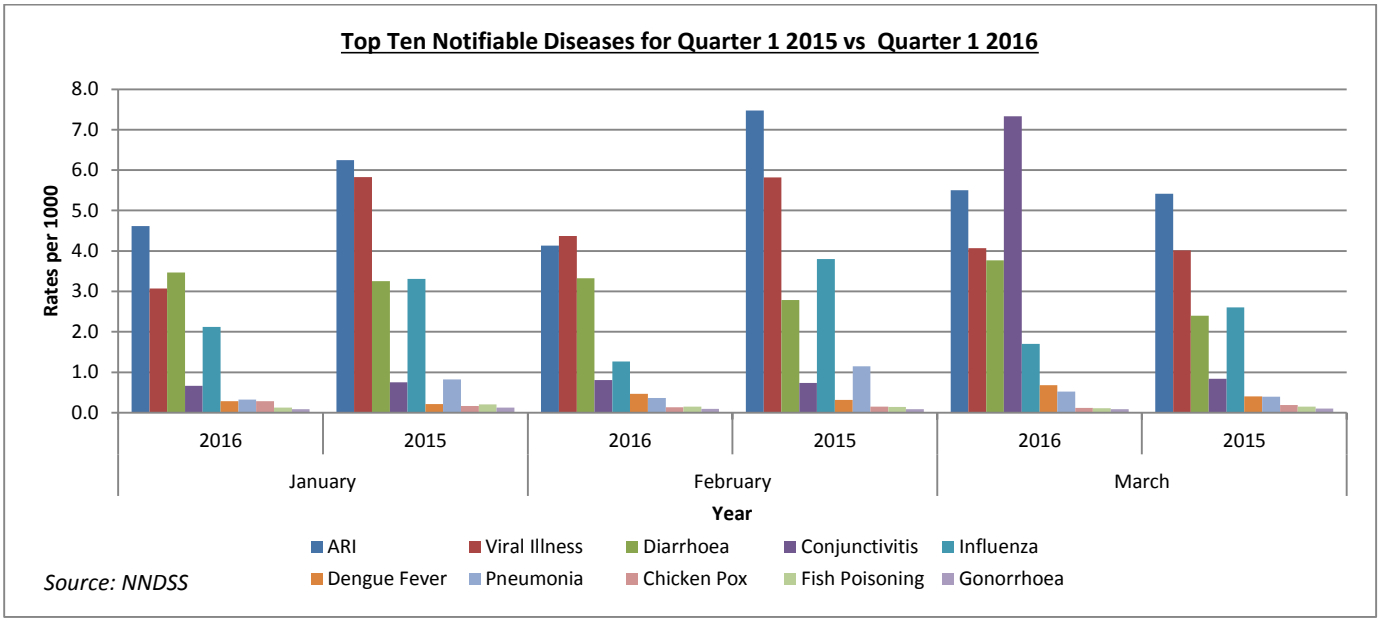
3.1 National Notifiable Disease Surveillance System



The incidence rates were calculated using population at risk from 2016 projections from FBOS (870984) and reported as per 1,000 populations. The predominance of ARI, Viral Illness, Diarrhoea and Influenza is noted in both 2015 and 2016. The GPs reports are also included. Generally, reporting was higher in 2015 compared to 2016; this is because many of the reports are yet to be received. There may be some discrepancies as all lab based data are not reported and private sector data is still largely incomplete.

There is an obvious time lag noted for this reporting period as a result of pending submissions. Time lags affect analysis and comprehensiveness of reports markedly. On average there was only 86% reporting for this period from the Divisions which makes surveillance for infectious diseases difficult as sensitivity of the system reduces with reduction of complete and timely reports. The decrease in percentage of reporting is due to the Tropical Cyclone Winston which damaged health facilities and posed communication challenges due damages in infrastructure and unavailability of public utilities. The state of emergency declaration for the nation and utility of health workers with the DISMAC teams also caused delays in compilation and receipt of health information.

3.1.1 Top Ten Notifiable Diseases for Quarter 1 2015 vs Quarter 1 2016



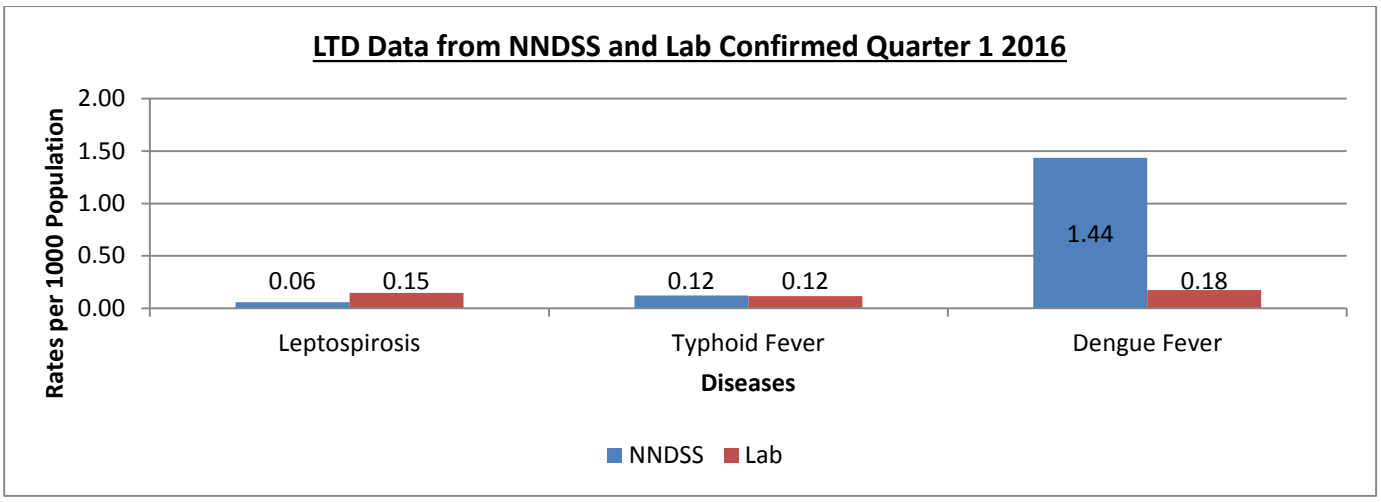
The incidence rates were calculated using population at risk from 2016 projections from FBOS (870984) and reported as per 1,000 populations. Over both the years, a predominance of diseases with viral origins was noted, such as ARI, Viral Illness and Diarrhoea.

Conjunctivitis was the 4th leading condition for 2016 (n=7619) and 2015 (n=2018), as there was an outbreak of this in the Central Division (predominantly Suva).

Dengue Fever was the 6th leading cause of diseases for 2016 (n= 1245) and 2015 (n=816) signaling a clear need for early public health response.

Chicken Pox totaled 470 cases in 2016 and 435 cases in 2015 signaling for public health interventions for these areas to reduce risks of outbreaks.

3.1.2 LTD Diseases

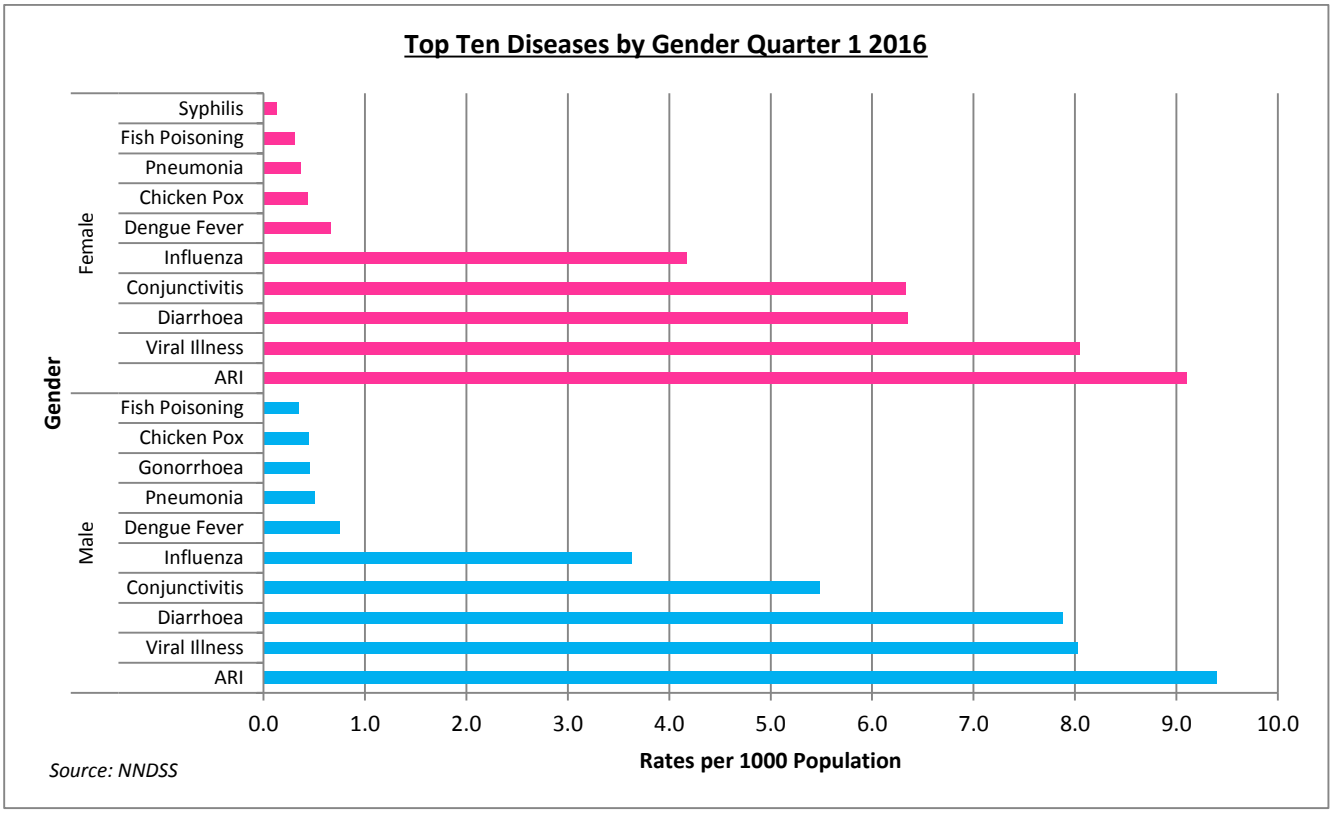


The incidence rates were calculated using the population at risk from 2016 projections from FBOS (870984) and reported as per 1000 population. The data sources are NNDSS and Laboratory data from FCCDC.

There is a higher case load of Dengue Fever from the NNDSS (n=1245) compared to laboratory confirmed data (n= 152); this is due to clinically suspected cases being reported in NNDSS. The Laboratory confirmed cases of Typhoid fever are 102 and NNDSS noted 106 cases. There were 51 cases of Leptospirosis reported from NNDSS whereas 128 cases were from Laboratory data. It signals the need to ensure that leptospirosis cases are regularly reported through the NNDSS mechanism.

All reporting officers are reminded to report all Notifiable cases through the mechanism of the NNDSS.

3.1.3 Top Ten Diseases by Gender

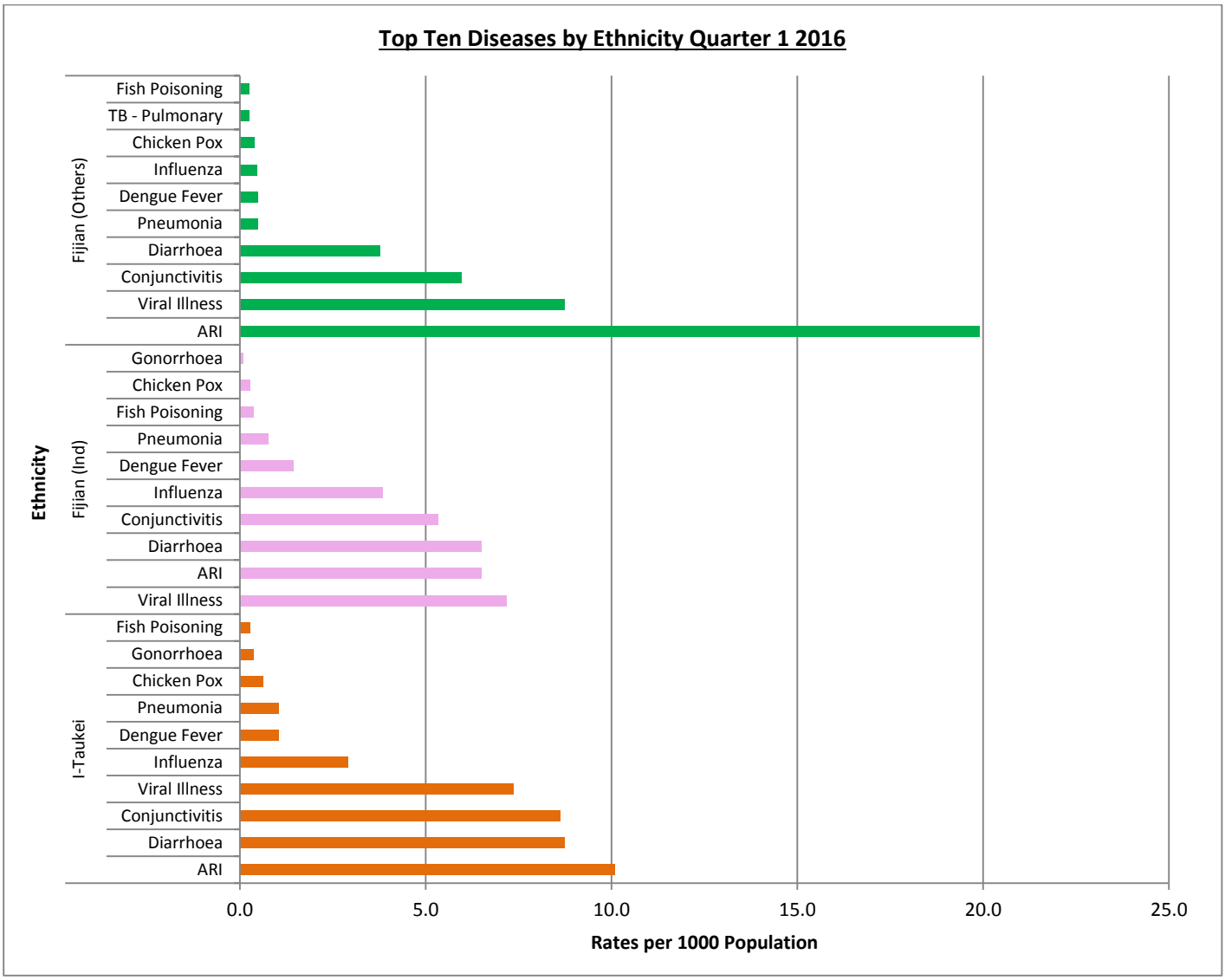


The incidence rates were calculated using the population at risk from 2016 population projections from FBOS (Male 442151 and Female 428833) and reported as per 1,000 populations. There is conformity to the national trend for males but in a different rank order. There is also agreement in the top nine cases in female category but in a different

rank order. The 10th leading condition for the female category is Syphilis instead of Gonorrhea. This could be due to the ANC screening of pregnant women for syphilis and the earlier presentation of men with Gonorrhea.

The cases of unknown gender made up 33% (n= 15406) in 1st quarter 2016. It is important for those reporting Notifiable diseases to specify gender, ethnicity and age. The current percentage demonstrates that those reporting on NNDSS are still unresponsive to the request to clearly state gender, ethnicity and age.

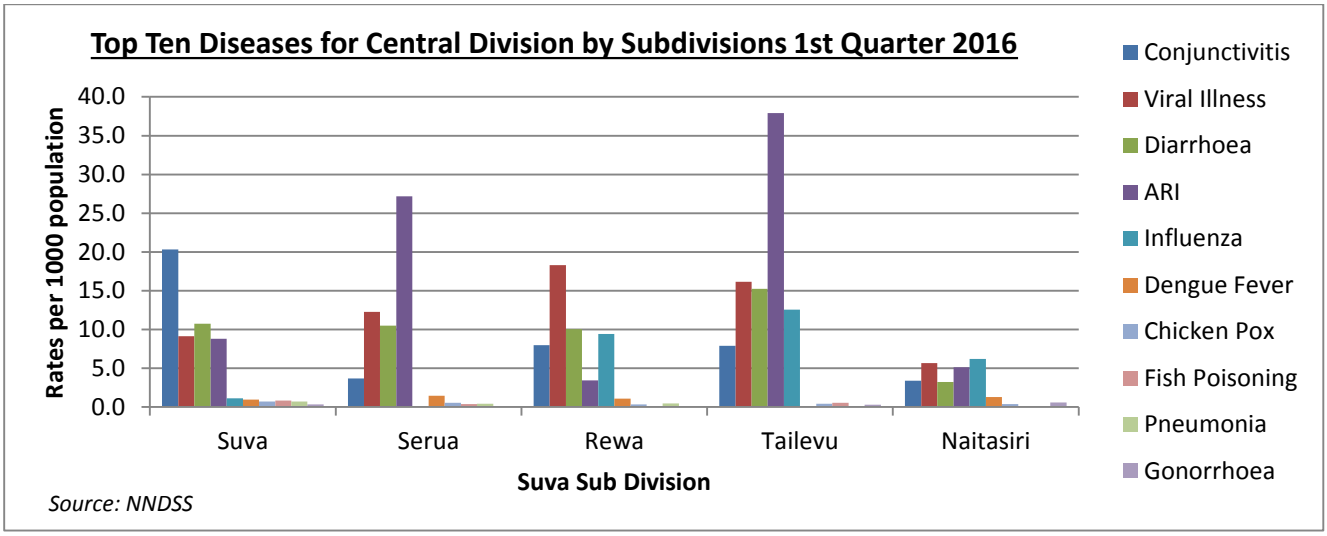
3.1.4 Top Ten Diseases by Ethnicity



The incidence rates were calculated using the population at risk from MoHMS 2015 population (I-Taukei 527844, Fijian (Ind) 351087 and Fijian (Others) 44807) and reported as per 1,000 populations**.** 27% (n= 12492) of cases were unclassified by ethnicity in 1st quarter 2016. It is important to categorize each reportable disease according to ethnicity, age, gender, and locality.

I-Taukei and Fijians of Indian category simulate the national dataset but in different rank order. The Fijians of other category simulate the top nine conditions of the national dataset differing in rank order; the 10th leading condition for this category is TB (n=10), this could be due to the relative incidence in the Rabian communities.

3.1.5 Top Ten Diseases for Central Division

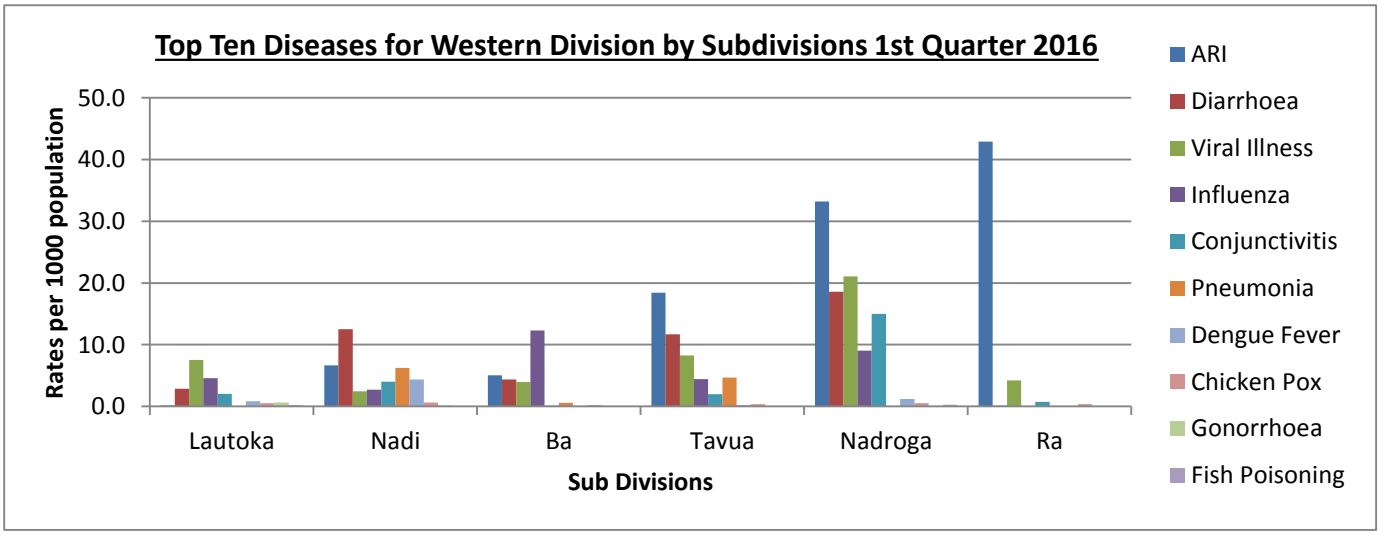


Source: NNDSS

The incidence rates were calculated using the population at risk from MoHMS 2015 population (Suva 223816, Serua 30587, Rewa 88361, Tailevu 21578 and Naitasiri 19472) and reported as per 1,000 population**.** The predominance of ARI, Viral Illness, Diarrhoea, and Influenza were recorded in Central division and is mostly reported from Suva, Serua, Rewa and Tailevu. All the conditions in Central division are following the national rank order but in a differing array.

Conjunctivitis is the leading condition in the Central division [Suva (n=4454), Rewa (n=699), Tailevu (n=169), Serua (n=112) and Naitasiri (n=66)]. This was predominantly reported in Suva. Chicken Pox cases were also noted in Suva (n=156), Serua (n=17), Rewa (n=31), Tailevu (n=9) and Naitasiri (n=7), signaling a clear need for early public health response. In addition, cases of dengue fever were reported in Suva (n=213), Serua (n=44), Rewa (n=96), Tailevu (n=1) and Naitasiri (n=25), signaling for public health interventions for these areas to reduce risks of outbreaks. Calls for adequate preventions and control are made in the light of emerging infectious diseases in the country and the region.

3.1.6 Top Ten Diseases for Western Division

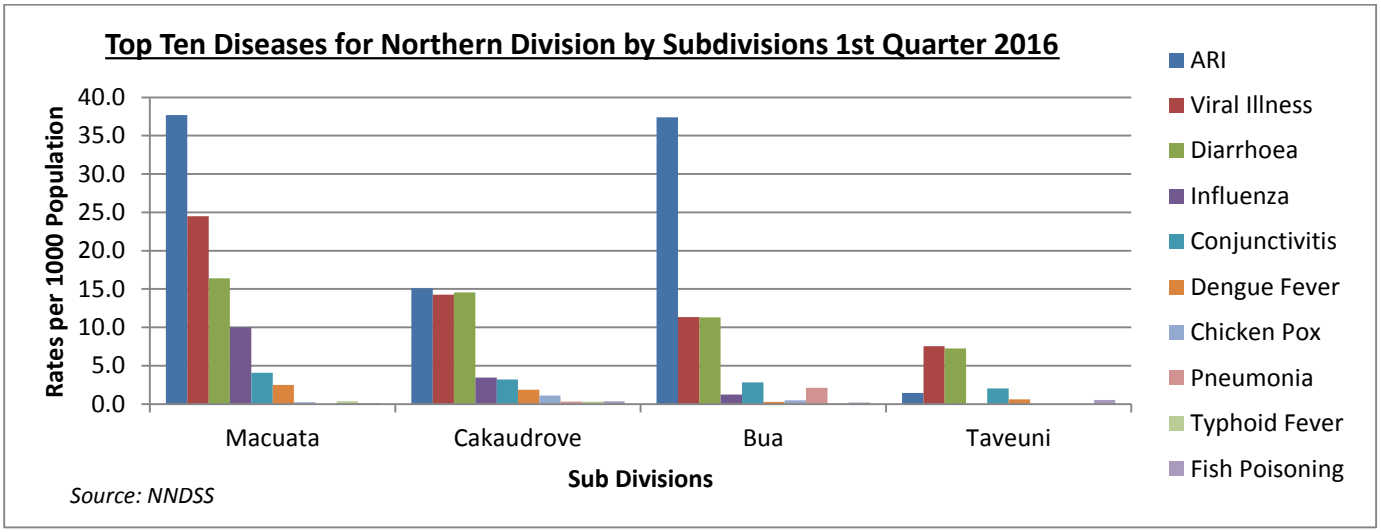


The incidence rates were calculated using the population at risk from MoHMS 2015 population (Lautoka 110733, Nadi 91702, Ba 56450, Tavua 26551, Nadroga 51871 and Ra 28232) and reported as per 1,000 populations**.** The predominance of ARI, Influenza, Viral Illness, Diarrhoea and Pneumonia were reported from the Western division and was more frequently reported from Tavua, Nadroga and Nadi (due to the majority of the reports being received

from these sub divisions only). All the conditions in Western division are following the national rank order but in a differing array.

Conjunctivitis was the 5th leading condition is Western division with Lautoka (n=227), Nadi (n=366), Ba (n=7), Tavua (n=53), Nadroga (n=768) and Ra (n=21) reporting this disease. Additionally, cases of dengue fever were reported in Nadi (n=401), Lautoka (n=96), Nadroga (n=62), Tavua (n=6) and Ra (n=1) signaling for public health interventions for these areas to reduce risks of outbreaks. Chicken Pox cases were also reported from all the subdivisions signaling a clear need for early public health response.

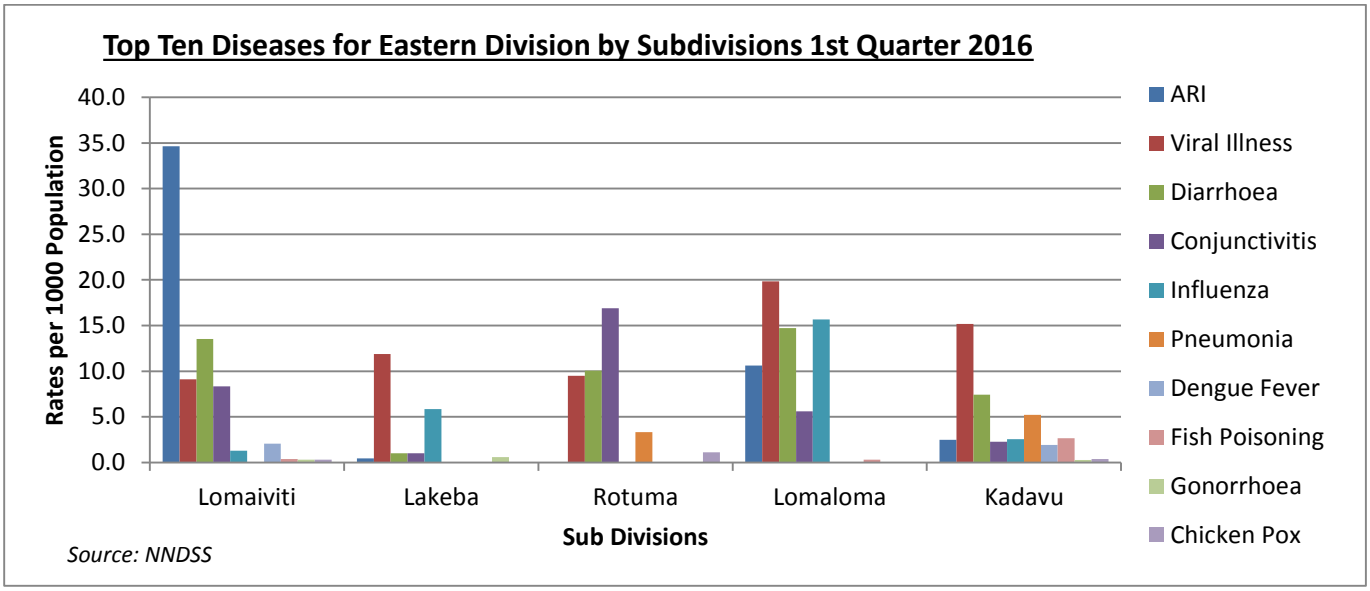
3.1.7 Top Ten Diseases for Northern Division



The incidence rates were calculated using the population at risk from MoHMS 2015 population (Macuata 66699, Cakaudrove 34883, Bua 17032 and Taveuni 16668) and reported as per 1000 population. The predominance of ARI, Viral Illness, Diarrhoea, Influenza and Influenza were noted in the Northern division. The majority of the cases were reported from Macuata, Cakaudrove and Bua sub divisions which are the most populated in the Northern Division. The top nine conditions in Northern division are consistent with the national rankings, although in a differing array. The 10th leading condition is for the North is Typhoid Fever.

Macuata (n=166), Cakaudrove (n=65) Bua (n=5) and Taveuni (n=10) have reported dengue cases requiring ongoing public health awareness and effective prevention and control. The North has a localized outbreak of dengue fever although reporting is poor on NNDSS. The advice continues to ensure that all Notifiable diseases are duly reported on NNDSS as per the Public Health Act provisions. Conjunctivitis cases were reported in Macuata (n=270), Cakaudrove (n=111) Bua (n=48) and Taveuni (n=34). In addition, chicken pox cases were reported from all the subdivisions signaling a clear need for early public health response.

3.1.8 Top Ten Diseases for Eastern Division



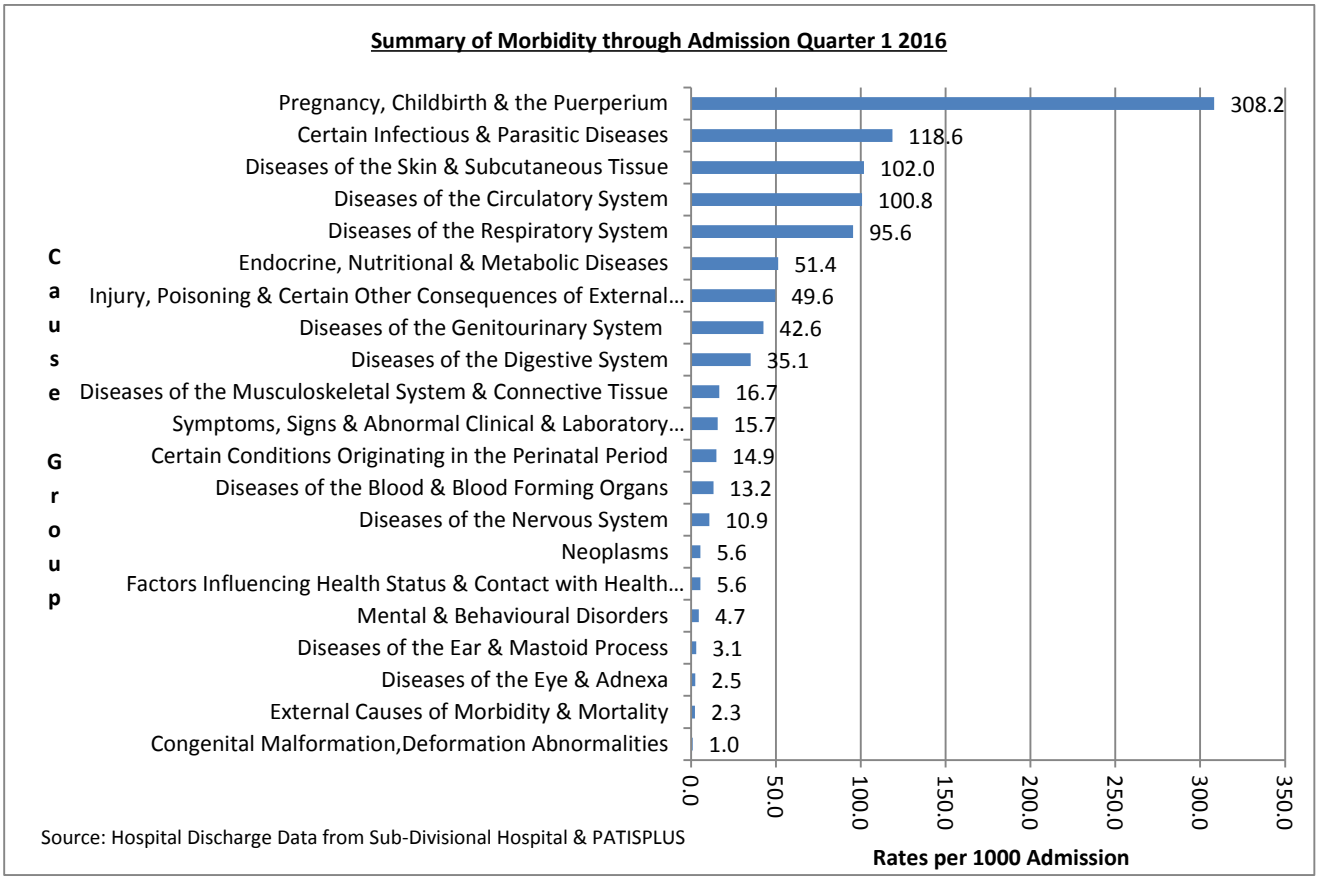
The rates were calculated using the population at risk from MoHMS 2015 population (Lomaiviti 16187, Lakeba 6892, Rotuma 1806, Lomaloma 3240 and Kadavu 10978) and reported as per 1000 population. The predominance of Viral Illness, ARI, Influenza, Diarrhoea and Influenza were recorded in Eastern division. Majority of the cases were recorded in Lomaiviti, Lomaloma and Kadavu sub divisions.

All the conditions in Eastern division are following the national rankings but in a differing rank order. Conjunctivitis cases were reported from all the subdivisions signaling a clear need for early public health response.

Section 4 – Expanded Primary Health care – Hospital Report

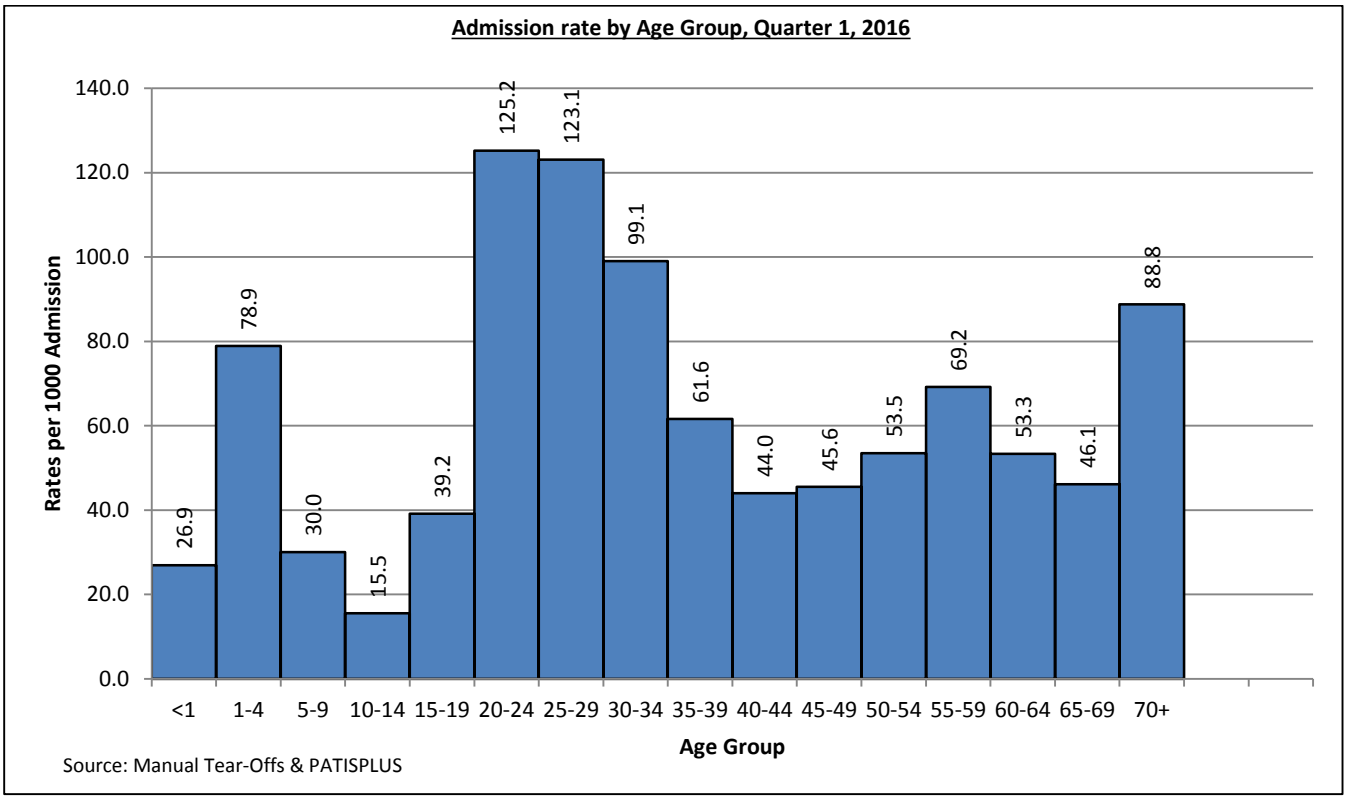
4.1 Summary of Morbidity

4.1.1 Summary of Morbidity through Admission, Quarter 1, 2016



The above graph demonstrates the Admissions by Cause Group in the 1st quarter 2016. Leading overall admissions are Pregnancy, Childbirth & Puerperium [n=1590], Certain Infectious & Parasitic Diseases [n=612], Diseases of the Skin & Subcutaneous Tissue [n=526] and Diseases of the Circulatory System [n=520]. Compared with the 1st Quarter of 2015, the leading admissions were still Pregnancy, Childbirth & Puerperium [n=2908], Diseases of the Respiratory System [n=676], Certain Infectious & Parasitic Diseases [n=662] and Diseases of the Circulatory System [n=585]. The rates used were calculated per 1000 admissions. The change in the 2nd leading cause of admissions for this quarter may be a result of increased communicable diseases post TC Winston.

4.1.2 Admission Rate by Age-Group, Quarter 1, 2016



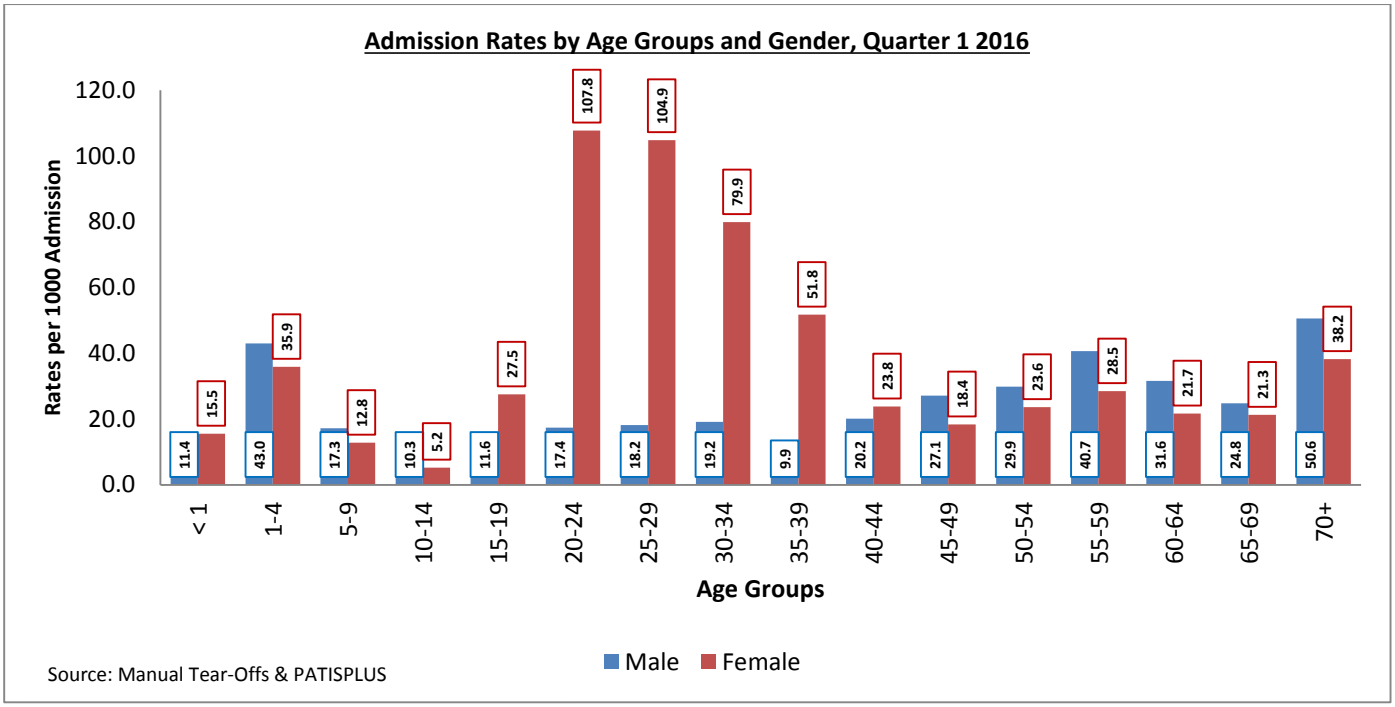
The highest occurrence of admissions were among the 20 – 34 years age groups [n=1792]; this was approximately 35% of all admissions, where the cause was pregnancy, its complications and outcomes. These outcomes included like single spontaneous (normal) delivery [n=688], perineal laceration during delivery [n=210], preterm delivery [n=107], other specified diseases & conditions complicating pregnancy, childbirth & the puerperium [n=44], gestational (pregnancy-induced) hypertension without significant proteinuria [n=42] and labour & delivery complicated by fetal stress, unspecified [n=41].

The under-five population comprised of approximately 10.5% of the total admissions for 1st Quarter 2016. The top 3 causes of morbidity for this age group are diarrhoea & gastroenteritis of presumed infectious origin [n=105], pneumonia unspecified [n=86] and bacterial sepsis of the newborn, unspecified [n=23].

The 70+ age group comprised of approximately 9% of the total admissions. The top 3 causes of morbidity for this age group are congestive heart failure [n=37], septicaemia unspecified [n=35], and stroke not specified as haemorrhage/infarction [n=25].

The lowest frequency of admissions were among the 10-14 age groups (n=80) at approximately 1.5%. The top 3 causes of morbidity for this age group are cutaneous abscess, furuncle & carbuncle of limb [n=7], diarrhoea & gastroenteritis of presumed infectious origin [n=6] and unspecified injury of head [n=5].

4.1.3 Admission by Gender, Quarter 1, 2016

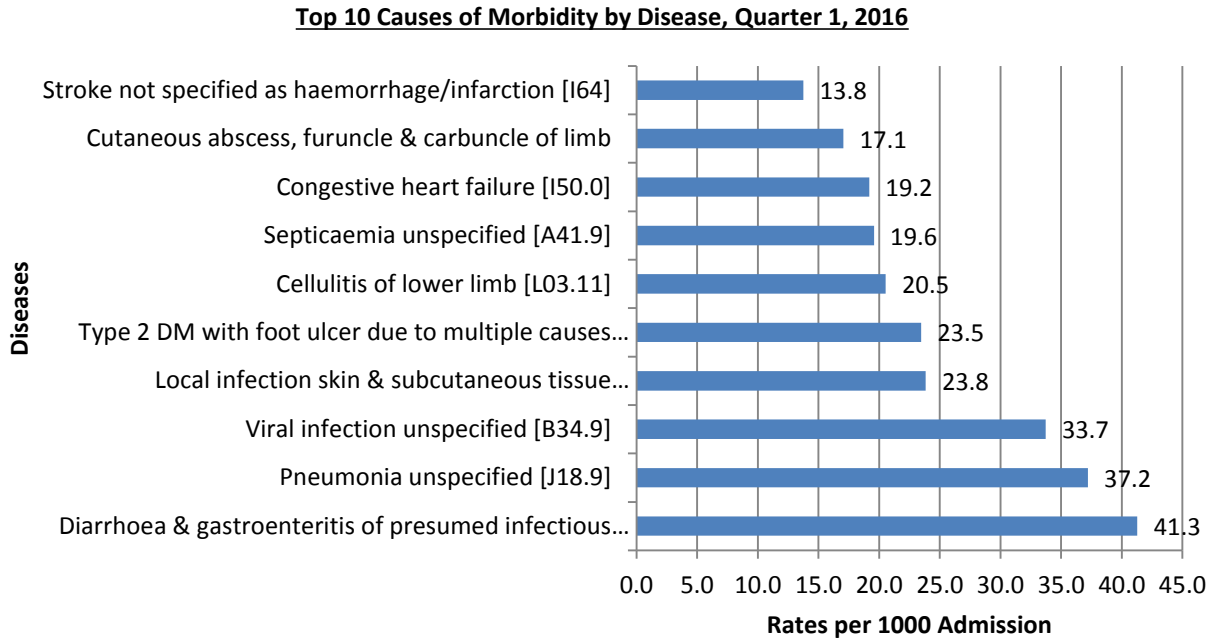


The graph represents the age groups disaggregated by gender. It shows that females contributed a higher rate in the age groups 20-24, making up the majority rate in this group with 107.8%. This is due to pregnancy, childbirth and puerperium.

Males in the age groups <5 were mostly admitted due to Diarrhoea & gastroenteritis of presumed infectious origin [n=67], Pneumonia unspecified [n=34] and Bacterial sepsis of newborn, unspecified [n=13].

Males in the age group >50 contributed a higher rate of 17.7% admissions for congestive heart failure [n=56], type 2 DM with foot ulcer due to multiple causes [n=52] and local infection skin & subcutaneous tissue unspecified [n=49].

4.1.4 Top 10 Causes of Morbidity by Disease, Quarter 1, 2016



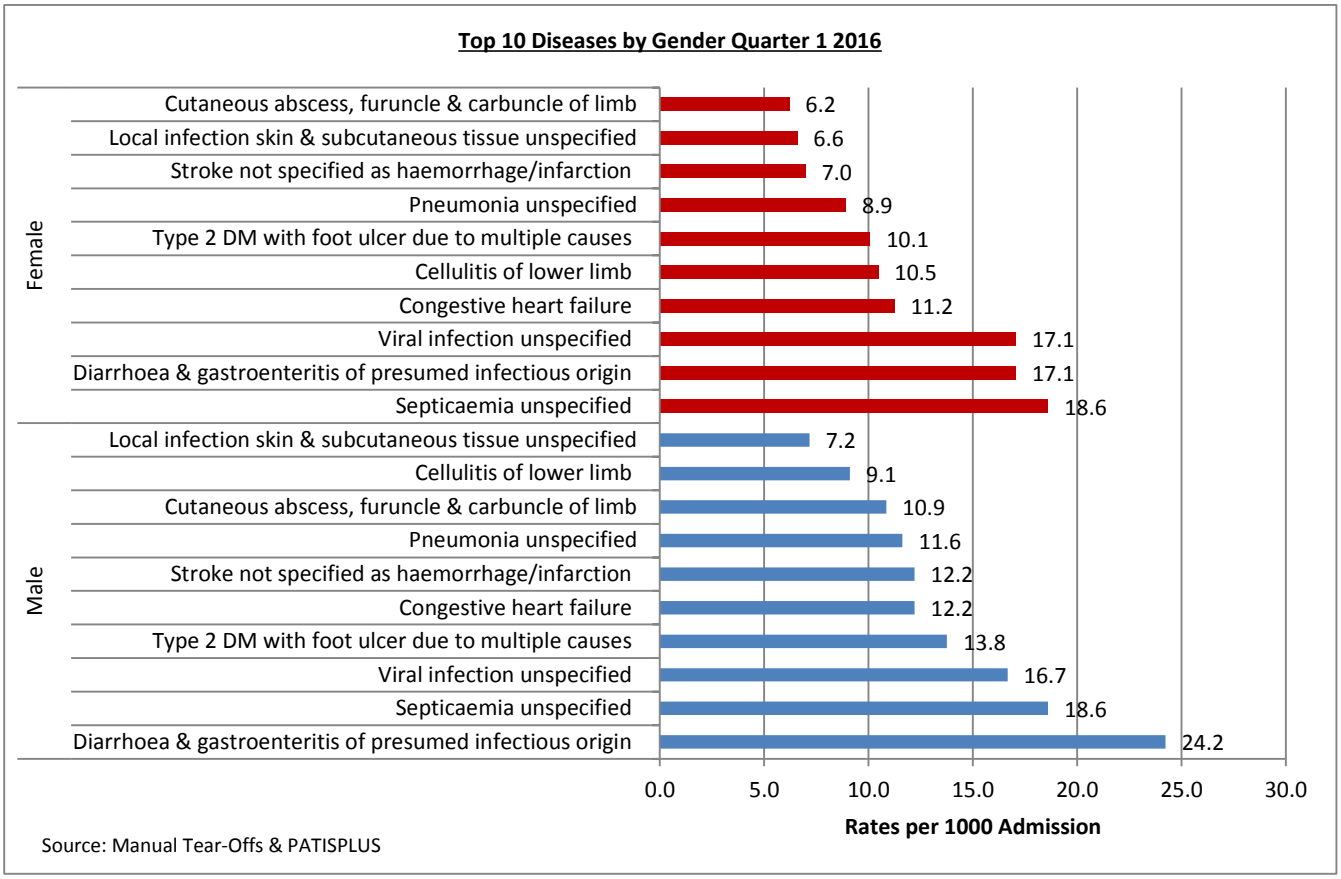
Source: Hospital Discharge Data from Sub-Divisional Hospitals & PATISPLUS

The graph displays the Top 10 causes of admissions by diseases with diarrhoea & gastroenteritis of presumed infectious origin [n=213] leading at 41.3 per 1000 admissions. This could be the post TC Winston effect with an increase in communicable diseases. Stroke not specified as haemorrhage/infarction [n=71] was 13.8 per 1000 admissions, as the tenth leading cause of admission. For the same period in 2015 pneumonia unspecified [n=289] was the leading cause of admissions and cellulitis of lower limb [n=58] accounted for the least admissions.

Diarrhoea & gastroenteritis of presumed infectious origin and pneumonia unspecified were highest among the I-Taukei with 35.4% admissions compared to Fijians of Indian Descent at 8.6% and Fijians of Other Descent with 1.3% of admissions.

The gender distribution in the 1st quarter 2016 demonstrated the highest admissions for both diarrhoea & gastroenteritis of presumed infectious origin with 9.7% [n=125] and pneumonia unspecified at 7.5% [n=96] in males.

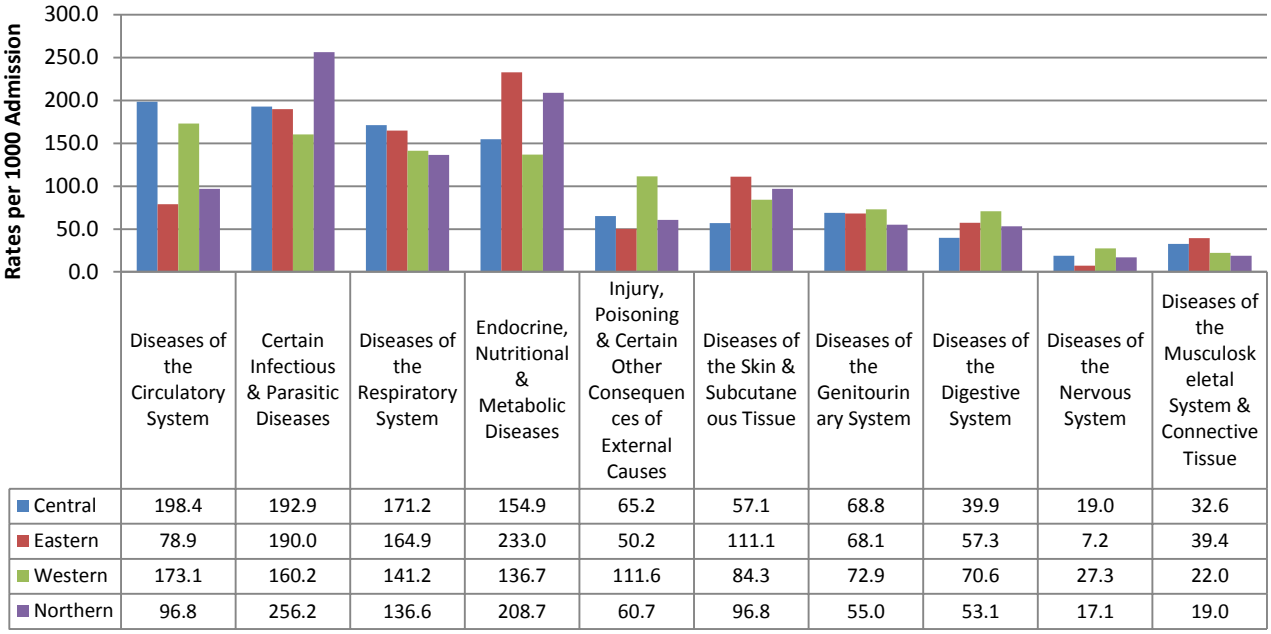
4.1.5 Top 10 Diseases by Gender, Quarter 1, 2016



The above graph shows the top 10 causes of morbidity distributed by gender. The leading admissions by diseases for female are septicaemia unspecified [n=96] with I Taukei in the lead followed by the Fijian of Indian decent and then Fijian of other ethnic descent and highest in the western division. The male had diarrhoea & gastroenteritis of presumed infectious origin [n= 125]as the leading cause of admissions with again I Taukei in the lead followed by the Fijian of Indian decent and then Fijian of other ethnic descent and highest in the northern division.

The 10th leading cause of admission for the females are cutaneous abscess, furuncle & carbuncle of limb [n=32] with I Taukei leading in both the central and the western division with [n=10] in each.
In males local infection skin & subcutaneous tissue unspecified [n=37] was the 10th leading cause of disease for I Taukei in the western division. The rates used were per 1000 admissions.

4.1.6 Rates for Top 10 Causes of Morbidity by Divisions, Quarter 1, 2016



	Diseases of the Circulatory System	Certain Infectious & Parasitic Diseases	Diseases of the Respiratory System	Endocrine, Nutritional & Metabolic Diseases	Injury, Poisoning & Certain Other Consequences of External Causes	Diseases of the Skin & Subcutaneous Tissue	Diseases of the Genitourinary System	Diseases of the Digestive System	Diseases of the Nervous System	Diseases of the Musculoskeletal System & Connective Tissue
Central	198.4	192.9	171.2	154.9	65.2	57.1	68.8	39.9	19.0	32.6
Eastern	78.9	190.0	164.9	233.0	50.2	111.1	68.1	57.3	7.2	39.4
Western	173.1	160.2	141.2	136.7	111.6	84.3	72.9	70.6	27.3	22.0
Northern	96.8	256.2	136.6	208.7	60.7	96.8	55.0	53.1	17.1	19.0

Source: Manual Tear-Offs & PATISPLUS

The graph above shows the top 10 causes of morbidity by divisions. Most admissions were reported from the Western Division [n=1317] followed by the Central Division [n=1104], the Northern Division [n=527] & the Eastern Division [n=279] for the 1st Quarter of 2016. The Diseases of the Circulatory System was highest in the central and the western division in the 70+ age group, while in the northern division the Certain Infectious & Parasitic Diseases, highest in the age group 1-4 years was the leading cause of morbidity. The eastern division had Endocrine, Nutritional & Metabolic Diseases with 55-64 age group as the lead cause of admissions in the 1st quarter 2016. The 10th leading cause of morbidity in the central, eastern and northern division was the Diseases of the Nervous System, while for the western division the 10th leading causes of morbidity was the Diseases of the Musculoskeletal System & Connective Tissue.

Different divisions have differing top 10 causes of morbidity compared to the 1st quarter of 2015; which has pregnancy, childbirth & the puerperium as the leading cause of morbidity for all the divisions. In this quarter the leading cause of admissions nationwide are pregnancy, childbirth & the puerperium. This is also reflected in the Central Division (n=761), Western Division (n=755), and Eastern Division [n=65]. However, the Northern Division has certain infectious & parasitic diseases (n=135) as the leading cause of admission. **The Labasa Divisional Hospital has backlog of uncoded folders which is the reason for low numbers reported from the Northern division**.

Section 6 – Evidence-based Policy, Planning, Implementation and Assessment.

Mortality

A total of 1,545 deaths (excluding 39 stillbirths) were reported at the end of 1st quarter, 2016 giving an estimated crude death rate of 1.8 per 1000 population (using the 2016 FBOS population projections as a denominator). In comparison to the 1st quarter of 2015, 1199 MCDC were received at HIU and the crude death rate (CDR) stood at 1.3 per 1000 population. These were from the certificates received from each division from 1st January 2016 to 15th April 2016. The reporting period was from 1st January 2016 to 31st March 2016.

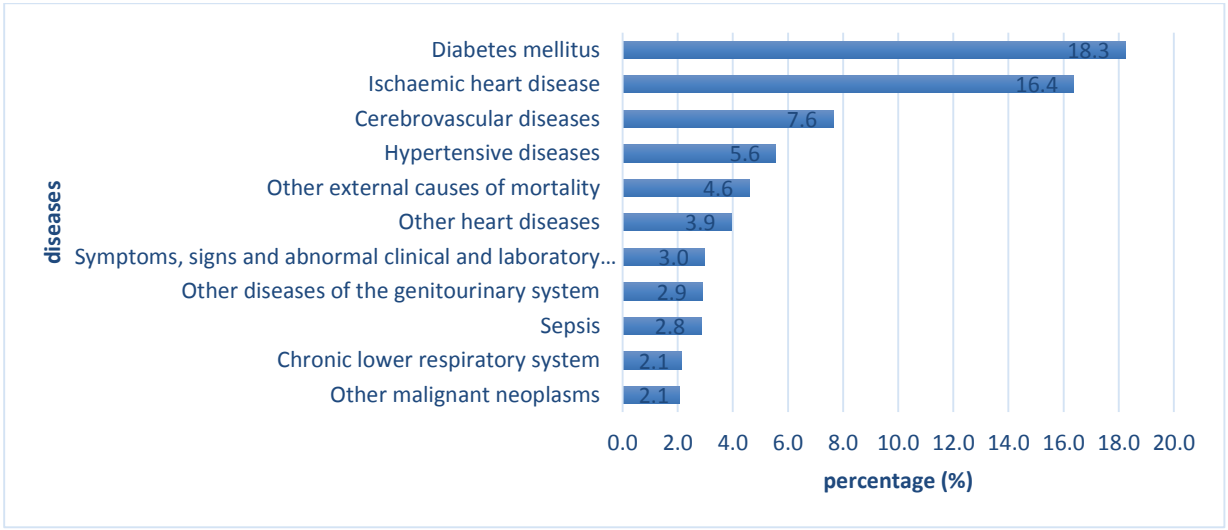
6.1 Mortality by Chapter & Tabular

The major cause of mortality recorded for this quarter is Non Communicable Disease covering 77% of the total mortality while 23% is attributed to the rest of the diseases. Diseases of the circulatory system; endocrine, nutritional and metabolic diseases; and neoplasms continue to be the three leading causes of mortality, similar to the 1st quarter, 2015. There was a significant change in the top 10 chapters of mortality in this reporting period compared to the same period last year.

6.1.1 Top Ten causes of mortality (by chapter)

#	Code	Diseases	Total	%
1	I00-I99	Diseases of the circulatory system	530	34.3
2	E00-E90	Endocrine, nutritional and metabolic disorders	307	19.9
3	C00-D48	Neoplasm	166	10.7
4	V01-Y98	External causes of mortality	112	7.2
5	J00-J99	Diseases of the respiratory system	76	4.9
6	A00-B99	Certain infectious and parasitic diseases	70	4.5
	N00-N99	Diseases of the genitourinary system	55	3.6
8	R00-R99	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	46	3.0
9	K00-K93	Diseases of the digestive system	46	3.0
10	L00-L99	Diseases of the musculoskeletal tissue	31	2.0
	P00-P96, G00-G99, Q00-Q99, D50-D89, M00-M99, F00-F99, O00-O99, H00-H59	Remainder of other diseases	106	6.9
	Grand Total		**1545**	100.0

6.1.2 Top 10 causes of mortality (tabular-103 list)



The graph shows that the five major causes of mortality by diseases are diabetes (n=282), IHD (n=253), cerebrovascular disease (n=118), hypertension (n=86) and other external causes of mortality (n=71). Other external cause of mortality has moved up in ranking from 6th place in 1st quarter, 2015 to the 4th place in this reporting period. These are cases of accidental threats to breathing (n=25), exposure to an unspecified factor (n=20), Victims of cyclone Winston (n=8), sequelae of surgical and medical procedure as the cause of abnormal reaction (n=5), exposure to unspecified electric current (n=4), poisoning due to pesticide, undetermined intent (n=4), drugs and medication causing adverse effects (n=2), exposure to high and low pressure and changes in air pressure (n=2) and contact with blunt object, undetermined intent (n=1). Diseases of the "Other" classifications have bulked cases which may be unspecified and is the reason that this classification has appeared in the top 10 causes of mortality by disease.

6.2 Mortality Disaggregated by Sex

6.2.1 Mortality Disaggregated by Sex

Male				Female		
Diseases	**Cases**	**%**		**Diseases**	**Cases**	**%**
Diseases of the circulatory system	319	37.6		Diseases of the circulatory system	211	30.3
Endocrine, nutritional and metabolic disorders	154	18.1		Endocrine, nutritional and metabolic disorders	153	22.0
External causes of mortality	81	9.5		Neoplasm	101	14.5
Neoplasm	65	7.7		Certain infectious and parasitic diseases	37	5.3
Diseases of the respiratory system	48	5.7		External causes of mortality	31	4.5
Certain infectious and parasitic diseases	33	3.9		Diseases of the respiratory system	28	4.0
Diseases of the genitourinary system	32	3.8		Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	24	3.4
Diseases of the digestive system	29	3.4		Diseases of the genitourinary system	23	3.3
Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	22	2.6		Diseases of the musculoskeletal tissue	18	2.6
Certain conditions originating in the perinatal period	14	1.6		Diseases of the digestive system	17	2.4
Diseases of the skin and subcutaneous tissue	13	1.5		Diseases of the skin and subcutaneous tissue	15	2.2
Congenital malformation, deformation and chromosomal abnormalities	13	1.5		Certain conditions originating in the perinatal period	11	1.6
Diseases of the nervous system	8	0.9		Congenital malformation, deformation and chromosomal abnormalities	11	1.6

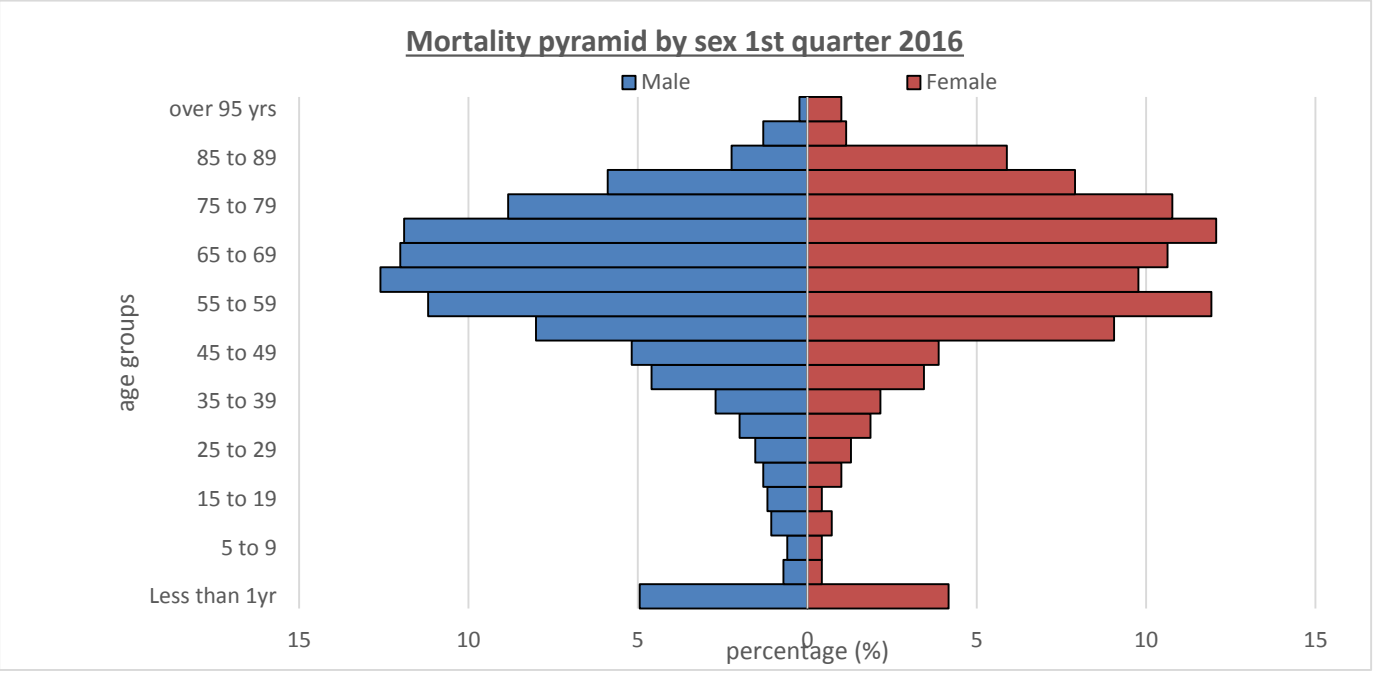
Mental and behavioural disorders	7	0.8		Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism	7	1.0
Diseases of the blood and blood forming organs and certain disorders involving the immune mechanism	6	0.7		Diseases of the nervous system	5	0.7
Diseases of the musculoskeletal tissue	5	0.6		Mental and behavioural disorders	2	0.3
Total	**849**	**100**		Diseases of the musculoskeletal tissue	1	0.1
				Diseases of the eye and adnexa	1	0.1
				Total	**696**	**100**

Fifty – five percent (55%) of the deaths for this reporting period are male and 45% are female. The same top chapters remain the leading causes of mortality in both genders (Diseases of the circulatory system and Endocrine, nutritional and metabolic diseases).

Diseases of the respiratory system have moved up in ranking from 8th in the same period last year to 5th ranking in this reporting period for females. Females may be driving the Endocrine and Neoplasms dataset and may be contributing to the higher ranking, but not by too much of a margin than males.

The external causes of mortality has moved up in ranking from 5th in 1st quarter 2015 to 3rd ranking in this reporting period; and diseases of the respiratory system has moved down from 3rd ranking in 1st quarter 2015 to 5th ranking in 1st quarter 2016 for males. The Externals causes of mortality ranks higher in males than females as a cause of death and may be attributed to the risky behaviors that males may be engaged in. This pattern is observed globally.

6.2.2 Percentage of deaths for males and females by age-groups



The pyramid above shows the percentage of mortality by age groups and gender for this quarter. Adult males have a greater proportion of deaths between 55 to 74 age groups at 47.7% (n=405) when compared to the rest of the age groups. The top 5 causes of death were Ischaemic heart disease, 24.7% (n=100) followed by diabetes mellitus at 22.7% (n=92), cerebrovascular diseases at 9.4% (n=38), hypertensive diseases at 5.7% (n=23) and other heart diseases at 4.2% (n=17).

Adult females have a high proportion of deaths in the age group 50-79 with 64.2% (n=447). The top 5 causes of death were diabetes mellitus at 25.3% (n=113) followed by ischaemic heart disease at 13.0% (n=58), cerebrovascular diseases with 8.9% (n=36), hypertensive diseases with 6.9% (n=31 and breast cancer with 4.5% (n=20).

Male: Female deaths in the <1yearage group stood at almost 2, which is almost double the female deaths in this age group. The major cause of mortality was 'conditions originating in the perinatal period' (33.3%).

6.3 Premature mortality

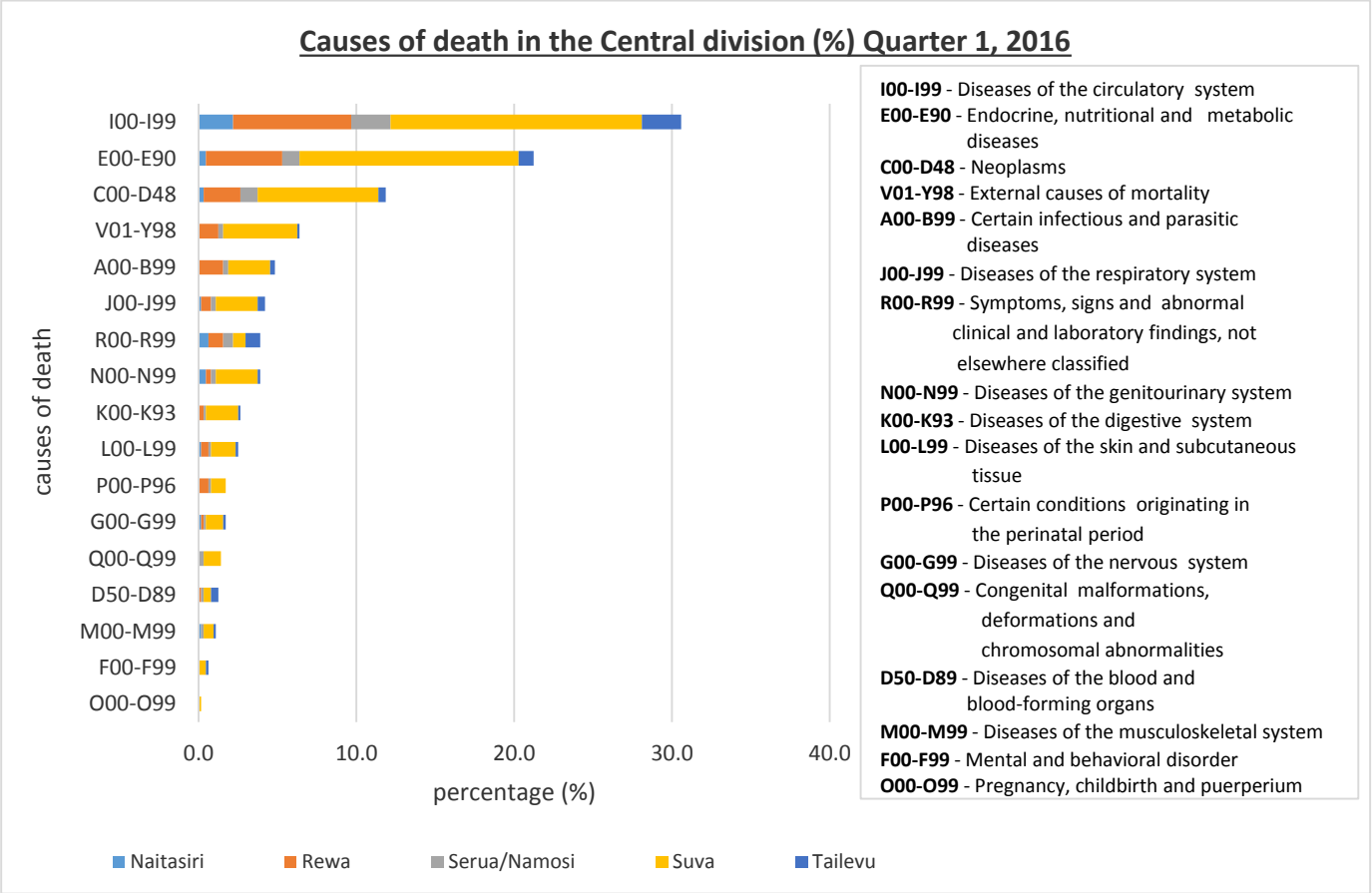
6.3.1 Premature mortality rate per 1000 population (<60yrs)

Age groups	Number of deaths			FIBOS population projection			Premature mortality rate per 10,000 population		
	Male	Female	Total	Male	Female	Total	Male n(95%CI)	Female n(95%CI)	Total n(95%CI)
0-4	48	32	80	44181	41696	85957	10.9 *(8.0-15.9)*	7.7 *(5.2-12.2)*	9.3 (7.4-12.5)
5-9	5	3	8	43902	41324	85235	1.1 *(0.4-3.3)*	0.7 *(0.1-2.7)*	0.9 (0.4-2.2)
10-14	9	5	14	40852	37880	78746	2.2*(1.0-5.0)*	1.3 *(0.4- 3.8)*	1.8 (1.0-3.5)
15-19	10	3	13	39141	36228	75382	2.6 *(1.2-5.6)*	0.8 *(0.2-3.1)*	1.7 (0.9-3.5)
20-24	11	7	18	38648	35966	74632	2.8 *(1.4-6.0)*	1.9 *(0.8-4.9)*	2.4 (1.4-4.4)
25-29	13	9	22	35357	32666	68044	3.7 *(2.0-7.4)*	2.8 *(1.3-6.3)*	3.2 (2.0-5.6)
30-34	17	13	30	35301	32787	68118	4.8 *(2.8-8.9)*	4.0 *(2.1-8.0)*	4.4 (3.0-7.1)
35-39	23	15	38	31795	30312	62146	7.2 *(4.6-12.4)*	4.9 *(2.8-9.5)*	6.1 (4.3-9.4)
40-44	39	24	63	28080	26231	54374	13.9 *(9.9-21.1)*	9.1 *(5.9-15.5)*	11.6 (8.9-16.2)
45-49	44	27	71	25240	24725	50035	17.4 *(12.7-25.9)*	10.9 *(7.2-18.0)*	14.2 (11.1-19.5)
50-54	68	63	131	24914	24514	49560	27.3 *(21.2-37.7)*	25.7 *(19.7-35.9)*	26.4 (21.9-31.0)
55-59	95	83	178	21145	20760	42082	44.9 *(36.3-59.1)*	40.0 *(31.8-53.6)*	42.3 (36.1-48.5)
Total	**382**	**284**	**666**	**408556**	**385090**	**794312**	**9.4 (8.4-10.3)**	**7.4 (6.5-8.2)**	**8.4 (7.7-9.0)**

Premature mortality in Fiji refers to deaths for those individuals who are less than 60 years of age (43.1%, n=666) for this period. The population projection for 2016 from FIBOS was used to calculate this rate. In this reporting period, the premature mortality rate per 10,000 population stands at 8.4 with 95% CI (7.7-9.0), male stands at 9.4 with 95% CI (8.4-10.3) whilst female stand at 7.4 with 95% CI (6.5-8.2).Majority of these deaths are recorded in the age groups between 45-59 years. In the 55-59 age group, 45 per 10,000 males died prematurely compared to 40 per 10,000 females in this reporting period.

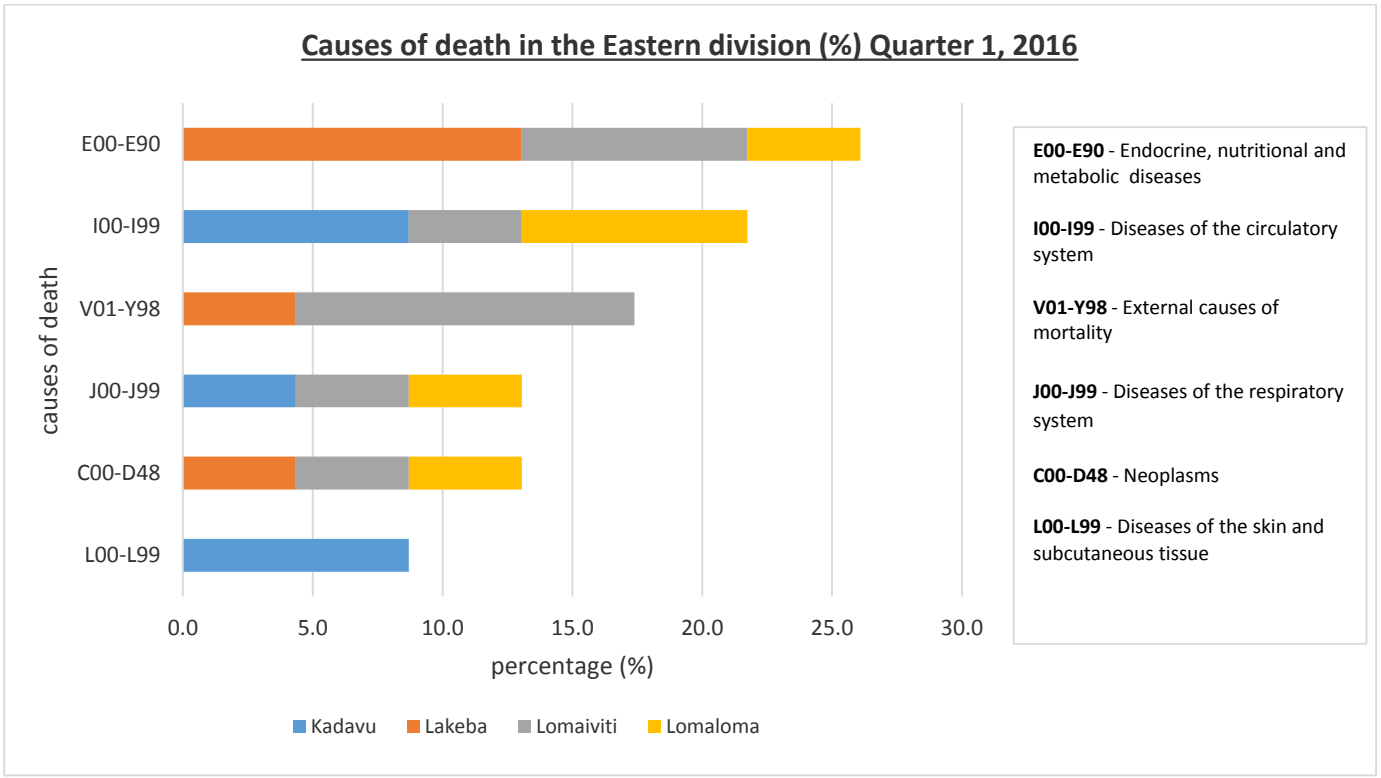
6.4 Mortality by Divisions

6.4.1 Mortality by divisions

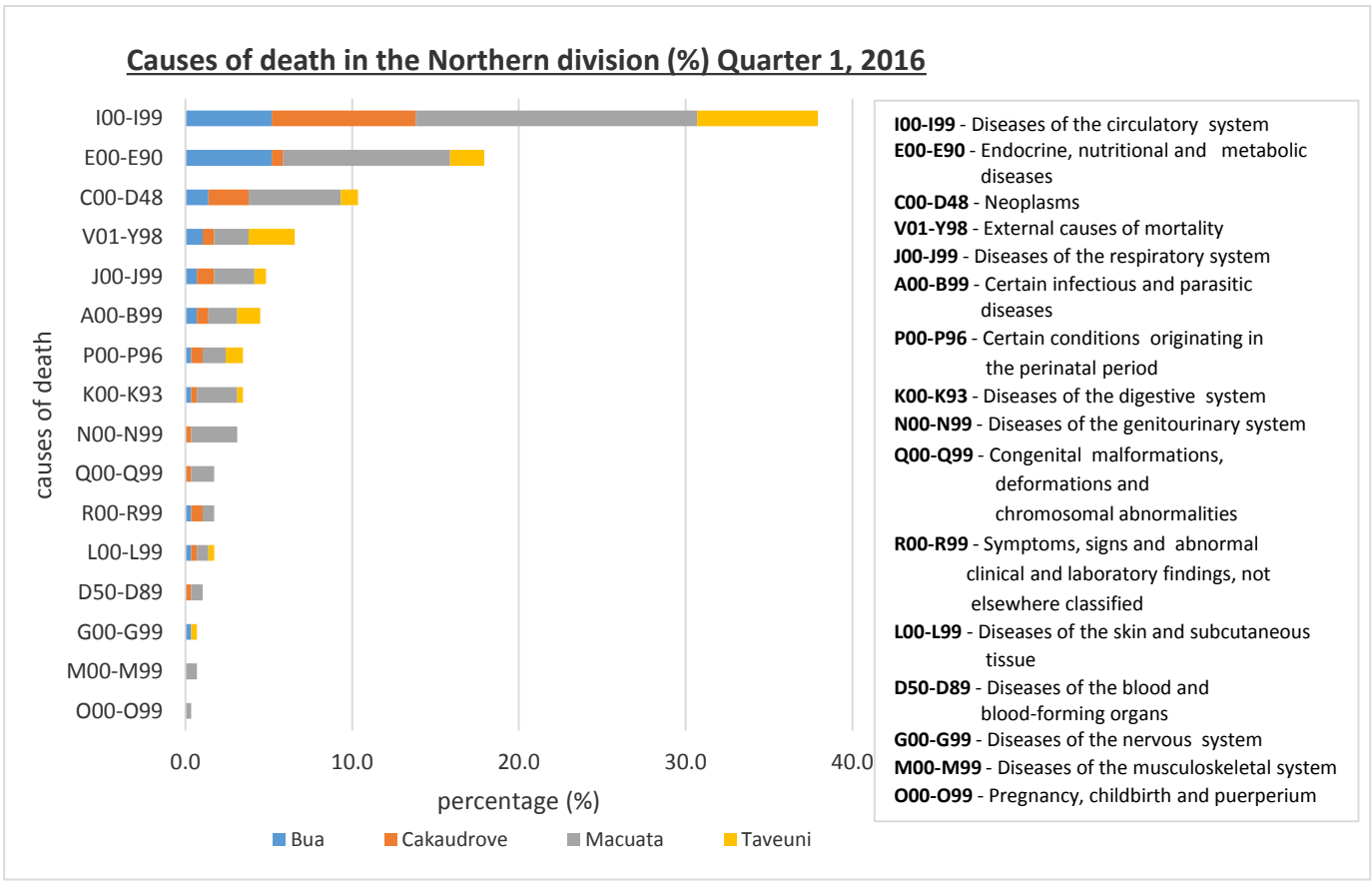


The graph shows the causes of deaths in the Central division. The 4 major causes of death are circulatory diseases (30.6%, n=196), endocrine, nutritional and metabolic diseases (21.2%, n=136), cancer (11.9%, n=76) and external causes of mortality (6.4%, n=41).

The 3 major causes of death for I-Taukei are circulatory diseases, endocrine, nutritional and metabolic disorders, and cancer ,whereas for FID, the 3 major causes of death are circulatory diseases followed by endocrine, nutritional and metabolic diseases then external causes of mortality while for FODs the 3 major causes of deaths are circulatory diseases, cancer and diabetes mellitus.

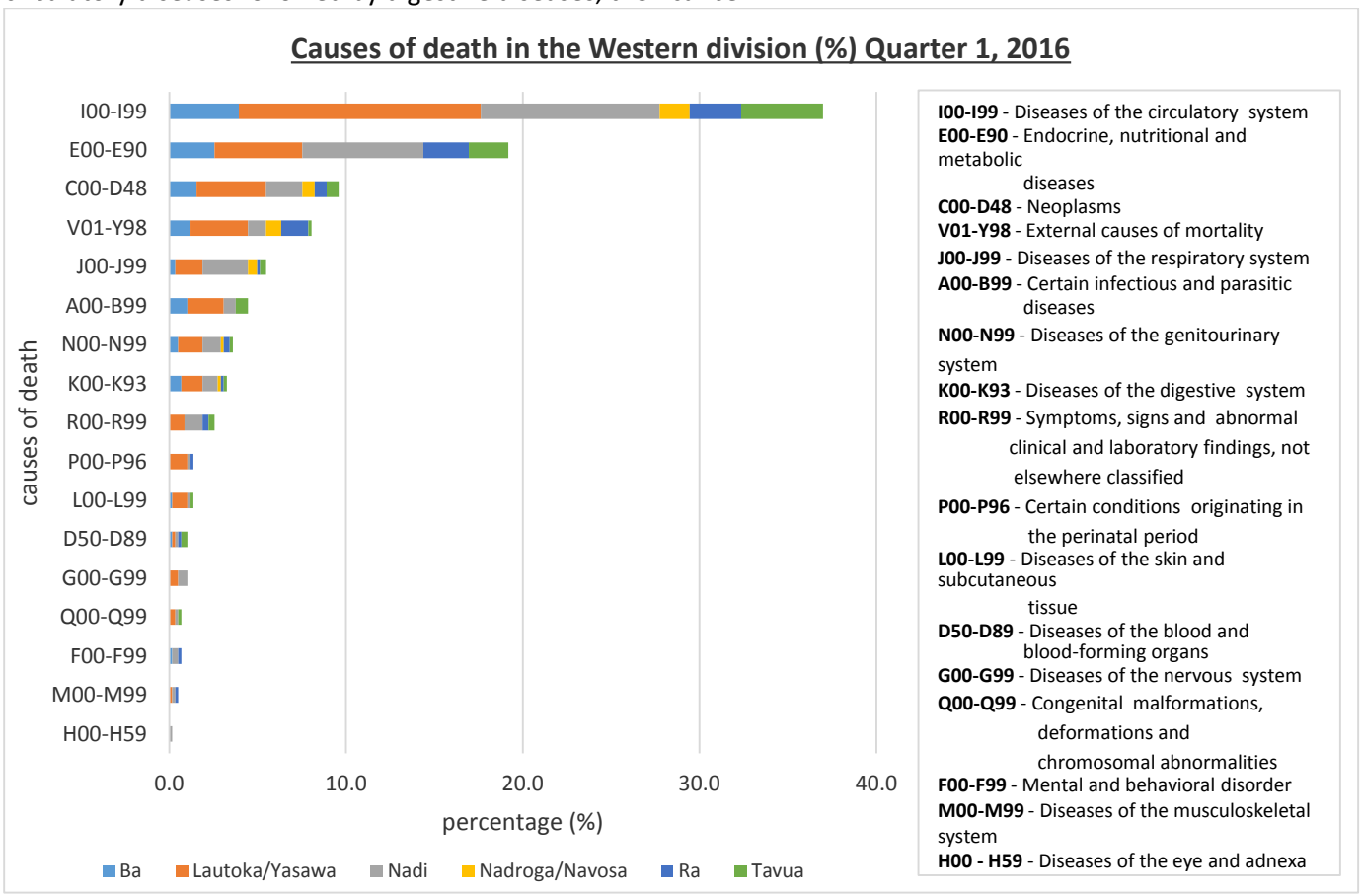


The graph shows the causes of mortality in the Eastern division. The major causes of death are endocrine, nutritional and metabolic diseases with 26.1% (n=6), followed by circulatory diseases with 21.7% (n=5), external causes of mortality with 17.4% (n=4, circulatory diseases and cancer with 13.0% (n=3) There was no reported death for FIDS and FODs in this reporting period.



The graph shows the causes of deaths in the Northern division. The 4 major cause of death are circulatory diseases (37.9%, n=110), endocrine, nutritional and metabolic diseases (17.9%, n=52), cancer (10.3%, n=30) and external causes of mortality (6.6%, n=19). The leading cause of death for I-Taukei and FID are circulatory diseases followed

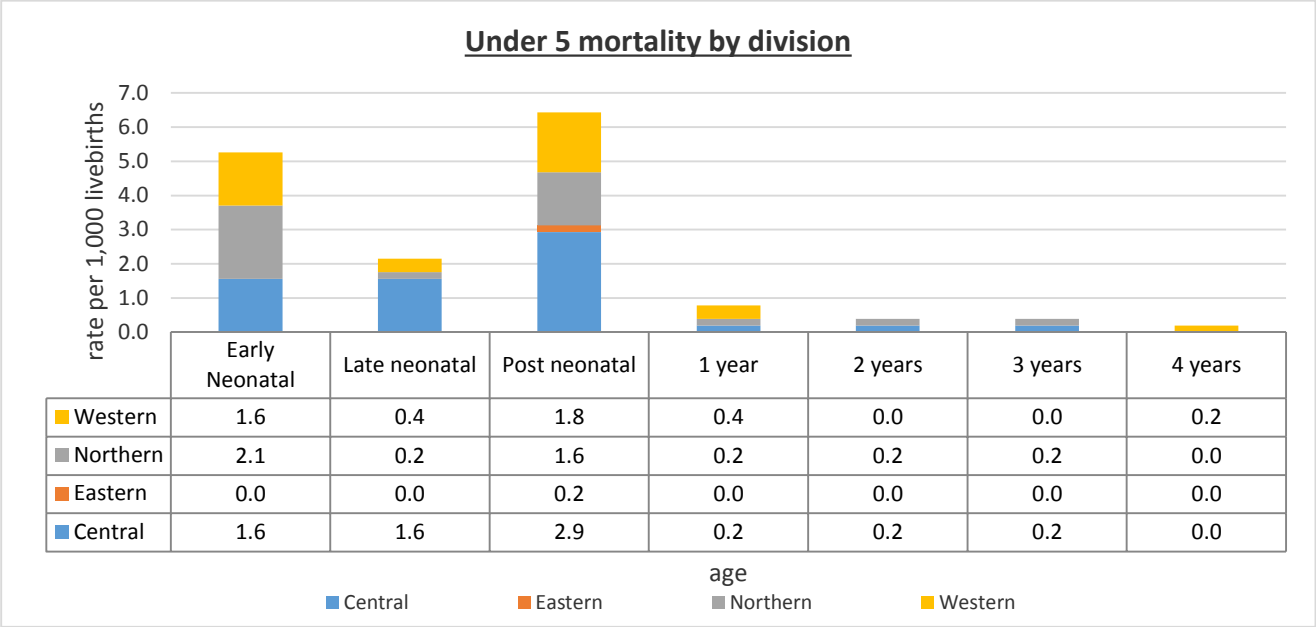
by endocrine, nutritional and metabolic diseases, then cancer whereas for FOD the leading cause of death was circulatory diseases followed by digestive diseases, then cancer.



The graph shows the causes of deaths in the Western division. The 4 major causes of death are circulatory diseases (37%, n=216), endocrine, nutritional and metabolic diseases (19.2%, n=112), cancer (9.6%, n=56) and external causes of mortality (8%, n=47). The 3 major causes of death for I-Taukei and FOD are circulatory diseases followed by endocrine, nutritional and metabolic diseases, then cancer whereas for FID, the 3 major causes were circulatory diseases followed by endocrine, nutritional and metabolic diseases then external causes of mortality.

6.5 Under 5 mortality by division

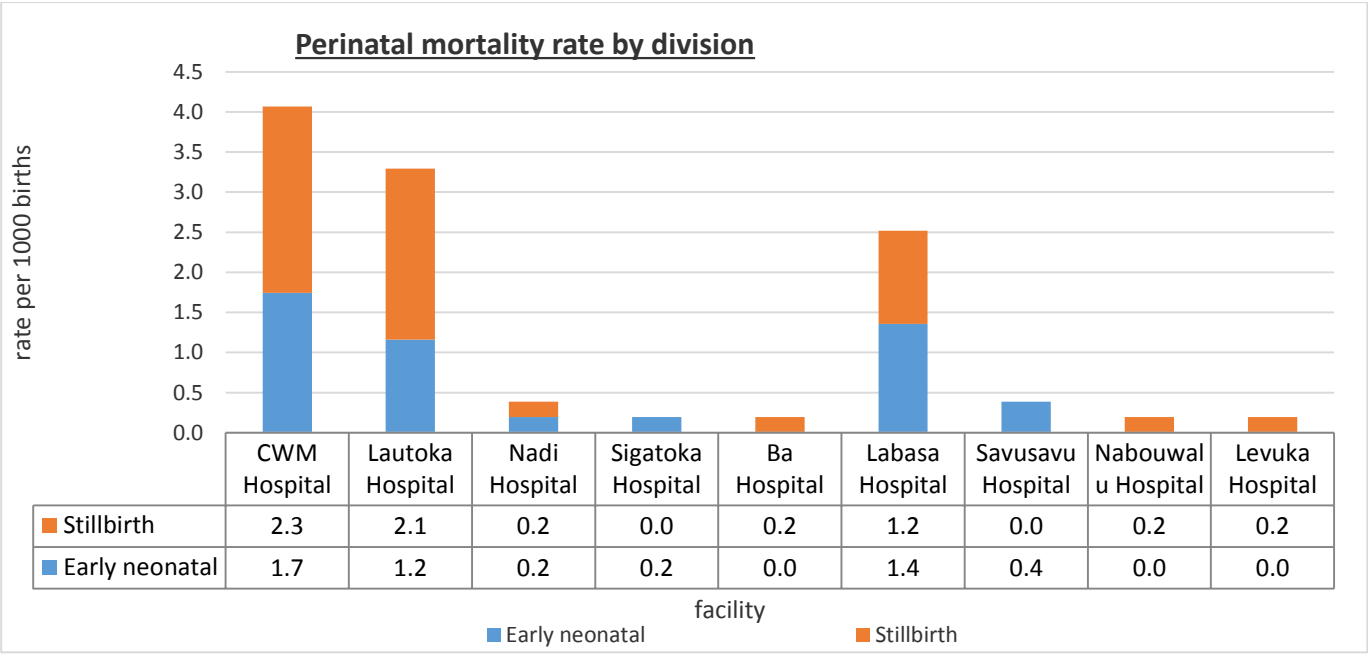
6.5.1 Under 5 Mortality



	Early Neonatal	Late neonatal	Post neonatal	1 year	2 years	3 years	4 years
Western	1.6	0.4	1.8	0.4	0.0	0.0	0.2
Northern	2.1	0.2	1.6	0.2	0.2	0.2	0.0
Eastern	0.0	0.0	0.2	0.0	0.0	0.0	0.0
Central	1.6	1.6	2.9	0.2	0.2	0.2	0.0

The 2015 MDG target for Under 5 mortality rate is 9.3 per 1,000 live births. The Under 5 mortality rate stands at 15.6 per 1,000 live births for this quarter compared to 7.9 per 1,000 live births in 1st quarter 2015. The infant mortality rate stood at 13.8 per 1,000 live births compared to 5.7 per 1000 live births in the same period last year. The Central division reported the highest Under 5 mortality (n=34) followed by Northern division (n=23), Western division (n=22) and Eastern division (n=1) in this reporting period.

6.5.2 Perinatal Mortality by Facility



	CWM Hospital	Lautoka Hospital	Nadi Hospital	Sigatoka Hospital	Ba Hospital	Labasa Hospital	Savusavu Hospital	Nabouwalu Hospital	Levuka Hospital
Stillbirth	2.3	2.1	0.2	0.0	0.2	1.2	0.0	0.2	0.2
Early neonatal	1.7	1.2	0.2	0.2	0.0	1.4	0.4	0.0	0.0

The Perinatal mortality rate stands at 12.8 per 1000 births for this quarter compared to 6.1 per 1000 births in 1st quarter 2015. The most perinatal death was reported from CWMH (n=21), followed by Lautoka Hospital (n=17), then Labasa Hospital (n=13). Nadi Hospital and Savusavu Hospital recorded 2 perinatal deaths each while Sigatoka, Ba, Nabouwalu and Levuka Hospital recorded 1 each in this reporting period

6.6 Compliance to Reporting Requirements

6.6.1 PHIS

Percentage PHIS Paper based form received

Divisions	% Received
Central	**96.8**
Northern	**100**
Western	**99**
Eastern	**74**

The analysis is based on the receipt of 93.2% of reports through the paper based system from the four divisions for quarter 1, 2016. When compared with the results from same period last year there was a 5.4% decline in the receipt of reports. This was due to the effects of TC Winston and the upgrades to the CMRIS.

Source: CMRIS Online [PHIS]

On-time monitoring of PHIS paper-based and online reports received at HIU per Quarter.

Divisions	Jan	Feb	Mar	1st Qtr 2016
Central	91	91	86	88.9
Eastern	93	47	87	75.6
Northern	100	100	100	100
Western	71	83	86	79.3
% coverage monthly	**88.7**	**80.3**	**89.6**	**86**
% coverage quarterly		**86.2**		

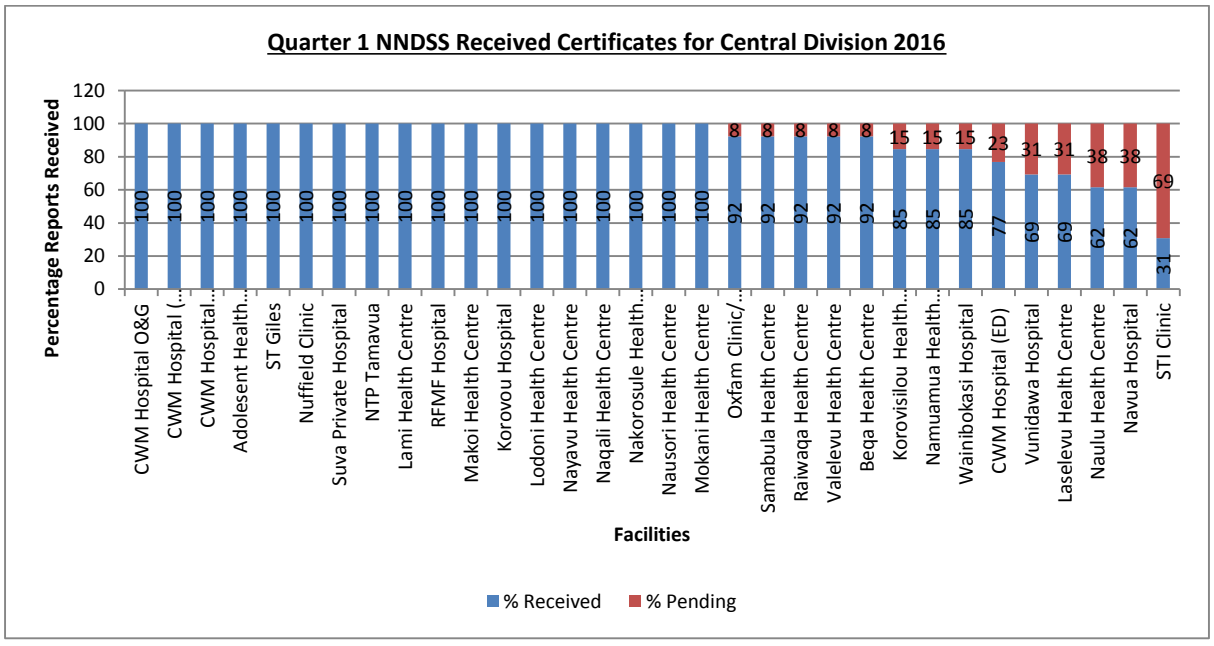
Source: PHIS register 2016, HIU, MOHMS.

The table above shows the percentage of monthly reports received on-time from each division in 2016. The table illustrates the performance of each division's consistency in delivering reports to HIU. There has been an improvement in submission of PHIS reports over the quarterly series. However, there is still a need for improvement in submission. The Northern Divisions (100%) has been consistent in submitting their PHIS reports (paper based) followed by the Central Division (88.9%) and the Western Division (79.3%) while **the Eastern Division had 75.6% on time submission. This may be due to TC Winston and it's after effects.**

PHIS late reporting Quarter 1, 2016.

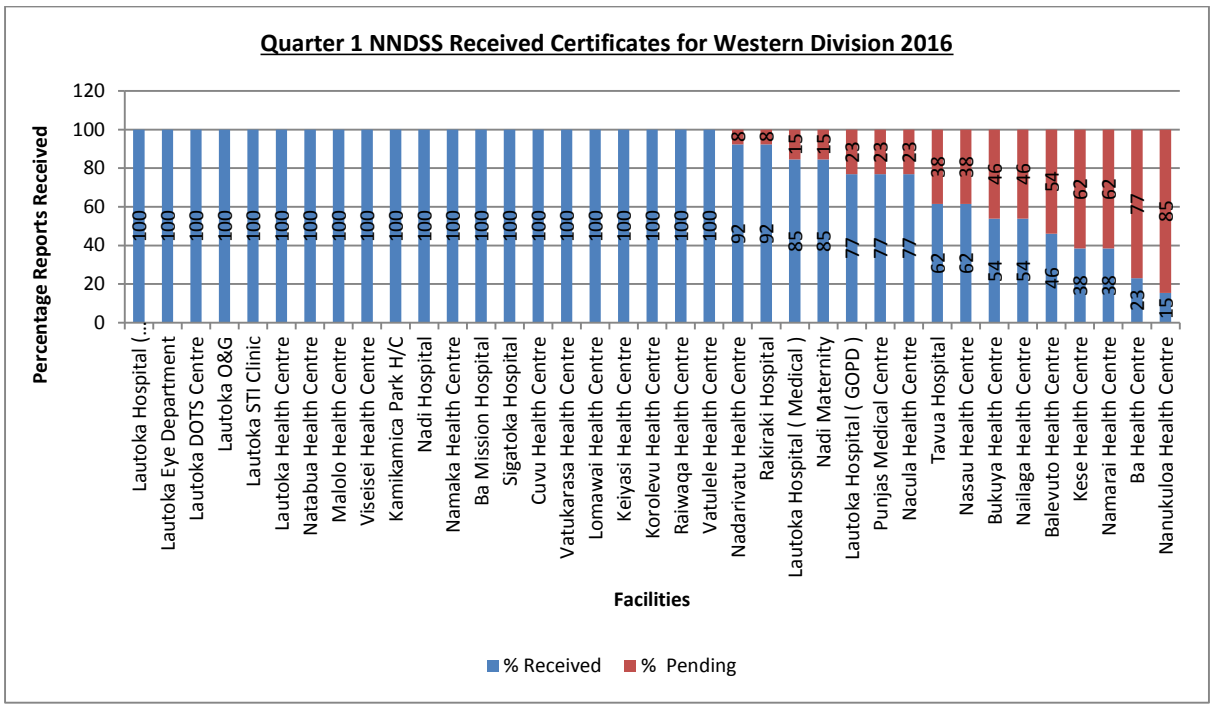
Reports received late by Month from the following Medical Areas [received after 15th of the following month]			
Division	**Jan**	**Feb**	**Mar**
Central	Samabula Medical Area Nausori Medical Area	Suva Medical Area Lodoni Medical Area	Suva Medical Area Valelevu Medical Area Makoi Medical Area
Eastern	Kavala Medical Area	Bureta Medical Area Koro Medical Area Rotuma Medical Area Lakeba Medical Area Moala Medical Area Matuku Medical Area Ono-i-Lau Medical Area Kabara Medical Area	Gau Medical Area Koro Medical Area Rotuma Medical Area
Northern	Nil	Nil	Nil
Western	Sigatoka Medical Area Cuvu Medical Area Raiwaqa Medical Area Keiyasi Medical Area Korolevu Medical Area Vatulele Medical Area Lomawai Medical Area	Keiyasi Medical Area Rakiraki Medical Area Nanukuloa Medical Area Namarai Medical Area Nasau Medical Area	Rakiraki Medical Area Nanukuloa Medical Area Namarai Medical Area Nasau Medical Area

6.6.2 Communicable Disease

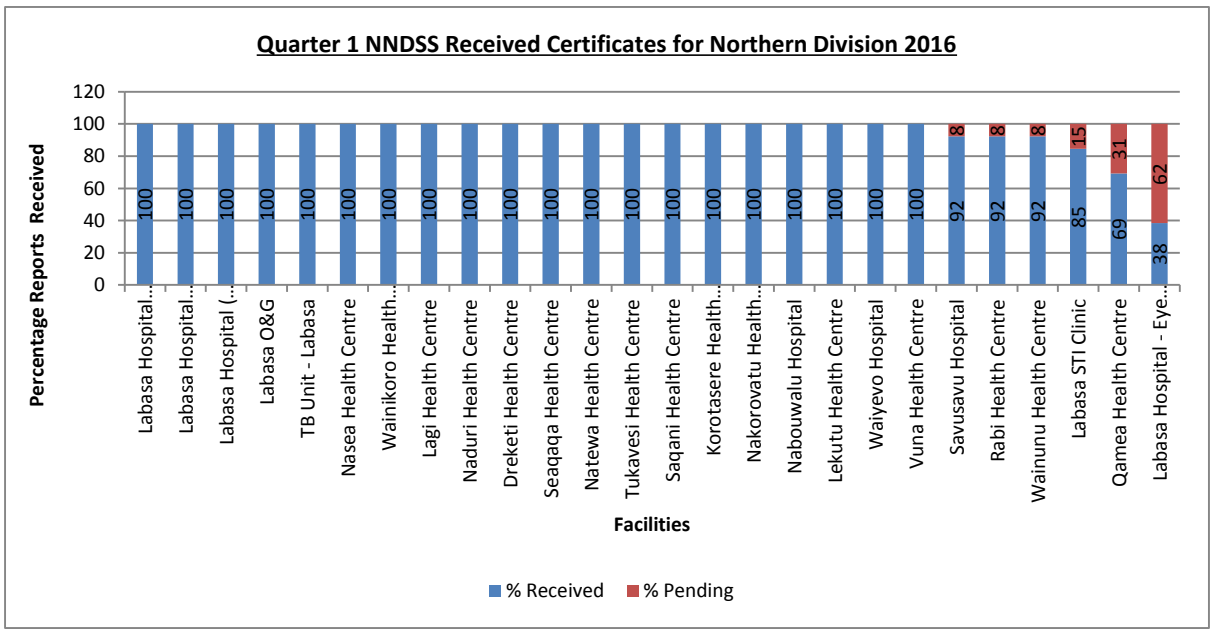


Ninety percent (90%) of reports were received for 1st quarter 2016 from the Central division.

This division had the 2nd comprehensive coverage of report submission when compared to all other Divisions and has improved in the submission of reports as compared to other quarterly reports compliance rate. The poorest reporting site for this quarter was the STI clinic at 31% coverage only.

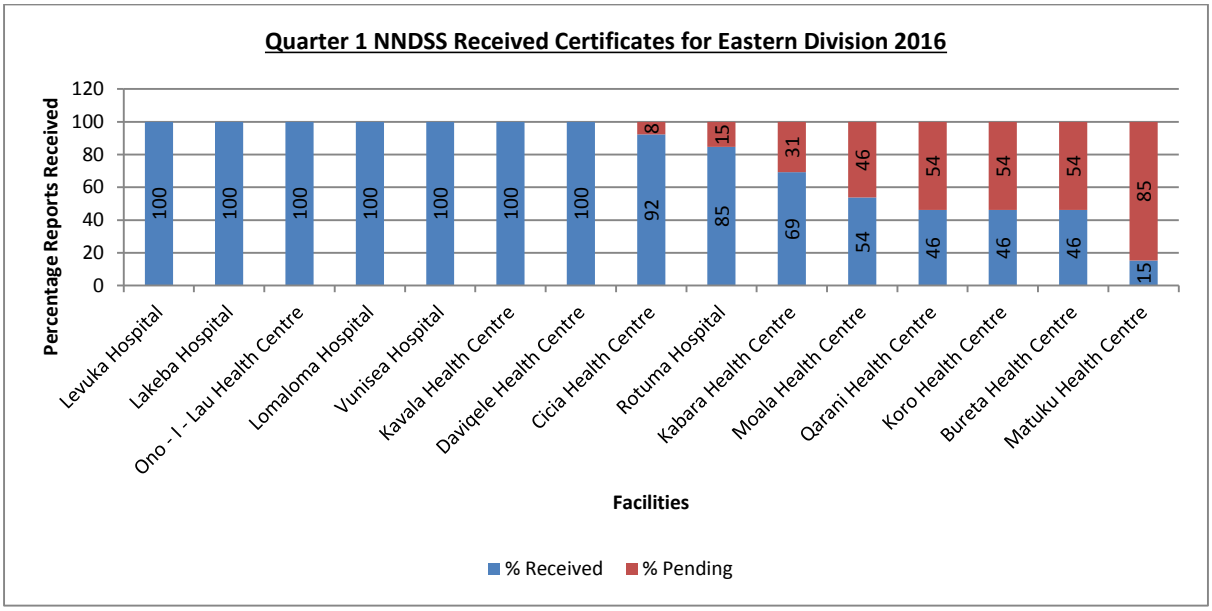


Eighty-three percent (83%) of reports were received for 1st quarter 2016 from the Western Division. The poorest reporting site for this quarter was the Nanukuloa HC at 15% coverage only. Other important sites to mention with reduced coverage are Ba HC, Namarai HC, Kese HC, Balevuto HC, Nailaga HC, and Bukuya HC.

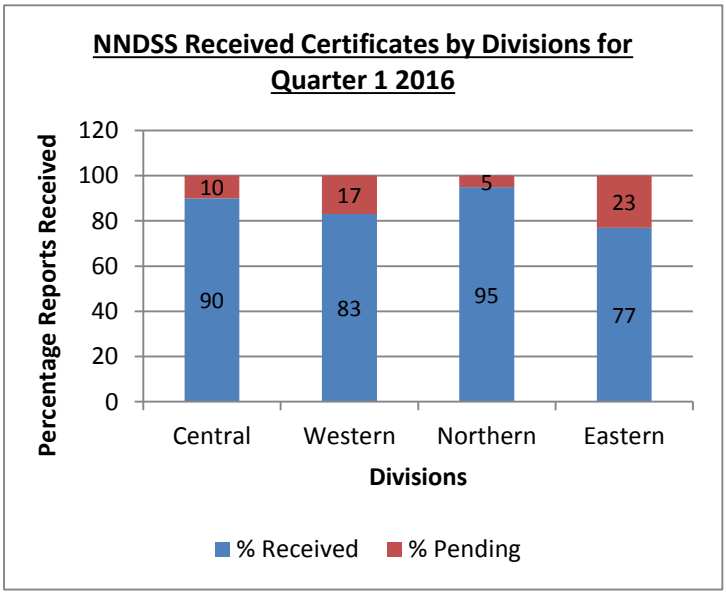


Ninety - five percent (95%) of reports were received for the 1st quarter 2016 from the Northern division. This division had the most comprehensive coverage of submissions when compared to all other Divisions. The poorest reporting site for this area was the Labasa Hospital Eye Clinic at 38% coverage only.

Acknowledgements to the Northern division facilities for their reports as these are the best division in reporting of the Notifiable diseases for this quarter.



Seventy-seven percent (77%) of reports were received for 1st quarter 2016 from the Eastern division. The poorest reporting site for this area was the Matuku HC at 15% coverage only.

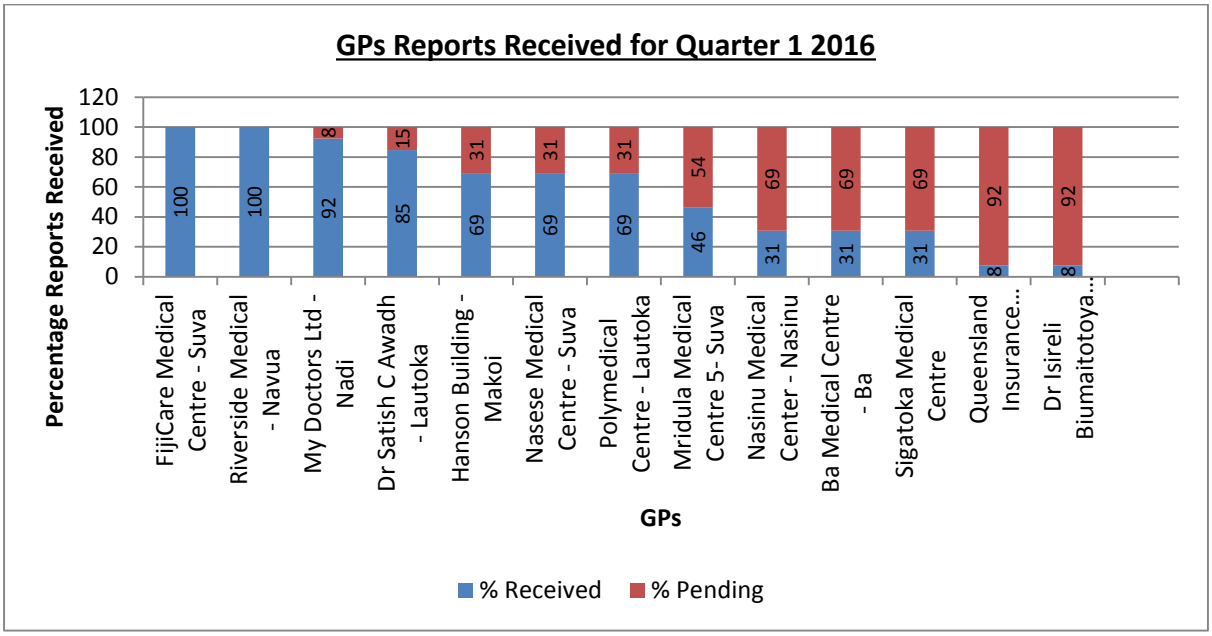


The following divisions are congratulated for being the best divisions in NNDSS reporting:

- ✓ Northern – 95% for 1st quarter 2016.

The Eastern division had the lowest rates of reporting at 77%, followed by Western 83% and Central division with 90% reporting for 1st quarter 2016. However, the influence of the Tropical Cyclone Winston also may be a causative factor for the under reporting on the NNDSS form the badly affected areas.

HIU urges all the divisions to improve their submissions and capture of notifiable diseases as the deadline for receiving of all the notifiable diseases certificates is on a weekly basis. All outbreak situations still require routine reporting on the Notifiable Disease Certificate. **The HIU draws attention to the timeliness of submissions which needs marked improvement from all facilities in all divisions.**



The General Practitioners have been reporting the Notifiable diseases since April of 2014 and HIU acknowledges all the private practitioners who have been submitting their reports. A total of 13 GPs have submitted their reports for the 1st quarter 2016 (January to March) which equates to 15% of coverage from GPs. Acknowledgement is made to the 2 GPs who have complied with 100% reporting for the 1st quarter. The rest of the GP's and private laboratories are encouraged to follow suit.

Requesting all the GPs to report the Notifiable disease reports as required according to the Public Health Act to report every week ending and if there is no case also report and indicate as NIL case.

Private laboratories are yet to report cases (Vanmed, Austec and SPH).

6.6.4 Hospital Monthly Returns

Reporting Facilities

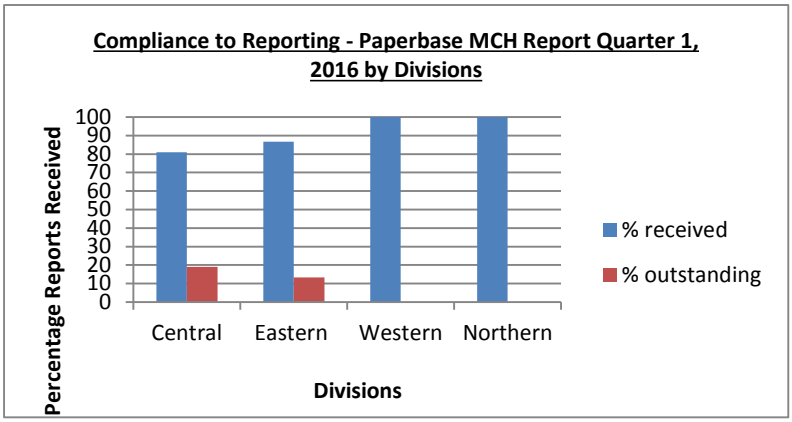
Central	Western	Northern	Eastern
CWM Hospital (Patisplus)	Lautoka Hospital (Patisplus)	Labasa Hospital (Patisplus)	Cicia Hospital (Manual Tearoffs
Korovou Maternity Hospital (Manual Tearoffs	Ba Mission Hospital (Manual Tearoffs	Nabouwalu Hospital (Manual Tearoffs	Lakeba Hospital (Manual Tearoffs
Nausori Maternity Hospital (Manual Tearoffs	Nadi Hospital (Manual Tearoffs	Savusavu Hospital (Manual Tearoffs	Levuka Hospital (Manual Tearoffs
Navua Maternity Hospital (Manual Tearoffs	Naiserelagi Maternity Hospital (Manual Tearoffs	Waiyevo Hospital (Manual Tearoffs	Lomaloma Hospital (Manual Tearoffs
Tamavua Hospital (Manual Tearoffs)	Rakiraki Hospital (Manual Tearoffs		Matuku Hospital (Manual Tearoffs
Vunidawa Hospital (Manual Tearoffs	Tavua Hospital (Manual Tearoffs		Rotuma Hospital (Manual Tearoffs
Wainibokasi Hospital (Manual Tearoffs	Sigatoka Hospital (Manual Tearoffs		Vunisea Hospital (Manual Tearoffs
St Giles Hospital (only Hospital Monthly Returns			

Source: Manual Tear-Offs & PATISPLUS

Total: 25; Divisional Hospitals – 3; Subdivisional Hospitals – 18; Specialized Hospitals – 2 (St Giles, Tamavua/ Twomey Hospital; Private Hospitals – 2 (Naiserelagi Maternity and Military Hospital). The Military Hospital does not do any reporting to HIU. Tamavua/Twomey Hospital had 66.7% coverage of reports received from the Hospital Monthly Report. There is no reporting of Tear offs and PATISplus from the St Giles Hospital except for the Hospital Monthly Return. There were no reports received from Cicia Hospital for this quarter.

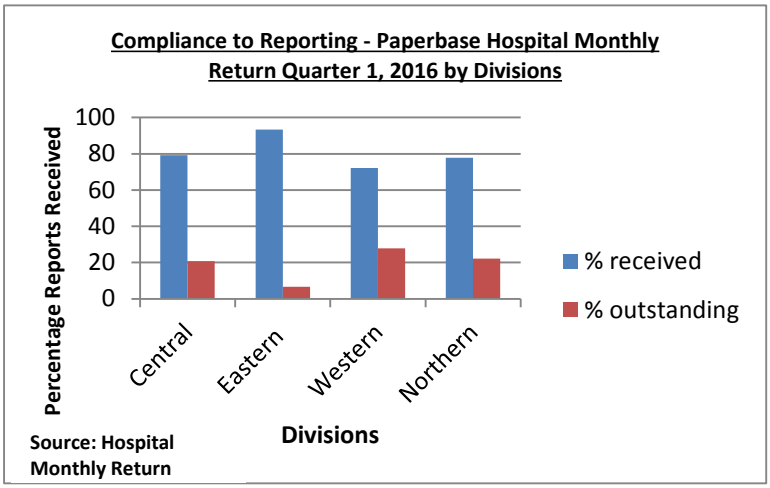
Data on Hospital services has been obtained from the Hospital Discharge Data, PATISPLUS for those facilities on-line and Manual Tear-Offs for those facilities where PATISPLUS is still not available. PATISPLUS is only available at CWM, Labasa, Lautoka and Nadi. Manual tear offs are from the Sub-Divisional Hospitals. Hospital Discharge Data are obtained from all Sub-Divisional Hospitals and Divisional Hospitals (PATISPLUS). There is poor coverage of reporting of Tear offs from Taveuni Hospital as there was nil reporting for the 1st quarter 2016.

Percentage received for Hospital Maternal and Child Health [MCH] reports



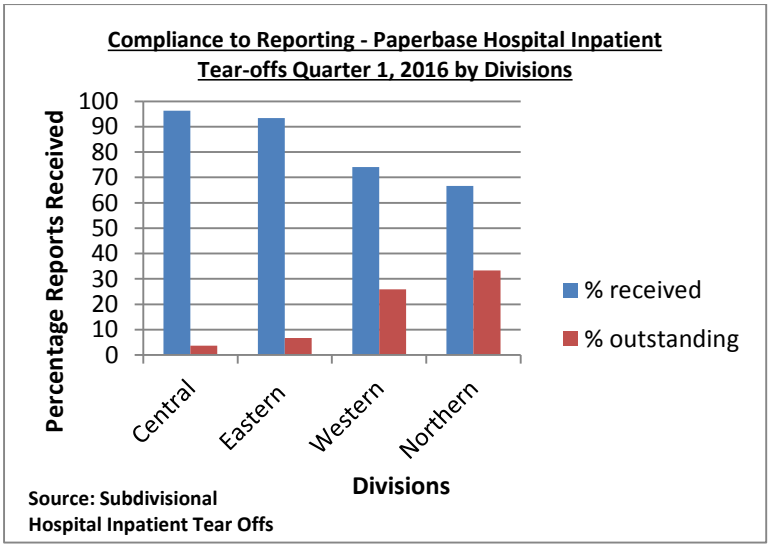
The analysis for the MCH Report is based on the reports received through paper based reports from the four Divisions for the 1st Quarter 2016. A few Sub-Divisional Hospitals have yet to submit their reports as illustrated in the graph. Central Division submitted 81% of the MCH Form and the Eastern Division submitted 86.7% reports. Congratulations to the Western and Northern Divisions for 100% submission. **The facilities yet to report on the MCH forms are CWM and Rotuma Hospital.**

Percentage received for Hospital Monthly Return reports



The analysis for Hospital Monthly Return is based on the reports received through paper-based systems from the Divisions. The Central Division still has outstanding returns for the 1st quarter which stands at 20.8%; **as there were no reports from the Military Hospital.** The Western Division has outstanding returns of 27.8%, Eastern Division stands at 6.7% the Northern Division has outstanding reports of 22.2%. The facilities have not submitted all the reports for the 1st quarter 2016 are: Nausori Maternity, Tamavua Twomey, Rotuma, Nabouwalu, Savusavu, Sigatoka and Rakiraki hospital. Which sites? Please add. **This is consistent with PHIS on time reports and CMRIS where the Central division lags behind the other divisions.**

Percentage received for Inpatient Tear-offs reports



The analysis for Hospital Inpatient Tear-Offs is based on reports received through Manual systems from the Divisions. The Central Division's outstanding reports stands at 3.7%, Western stands at 25.9%, Northern Division still have outstanding returns which stand at 33.3% and the Eastern Division is at 6.7% for 1st quarter 2016. **The facilities yet to submit their reports are Nausori Maternity, Rotuma, Taveuni, Ba Mission, Rakiraki, Sigatoka and Nadi Hospital**. All divisions need to improve in their submissions as Inpatient data cannot be coded without these submissions and datasets presented are not complete without the inclusion of these core inpatient datasets.

6.6.5 Mortality

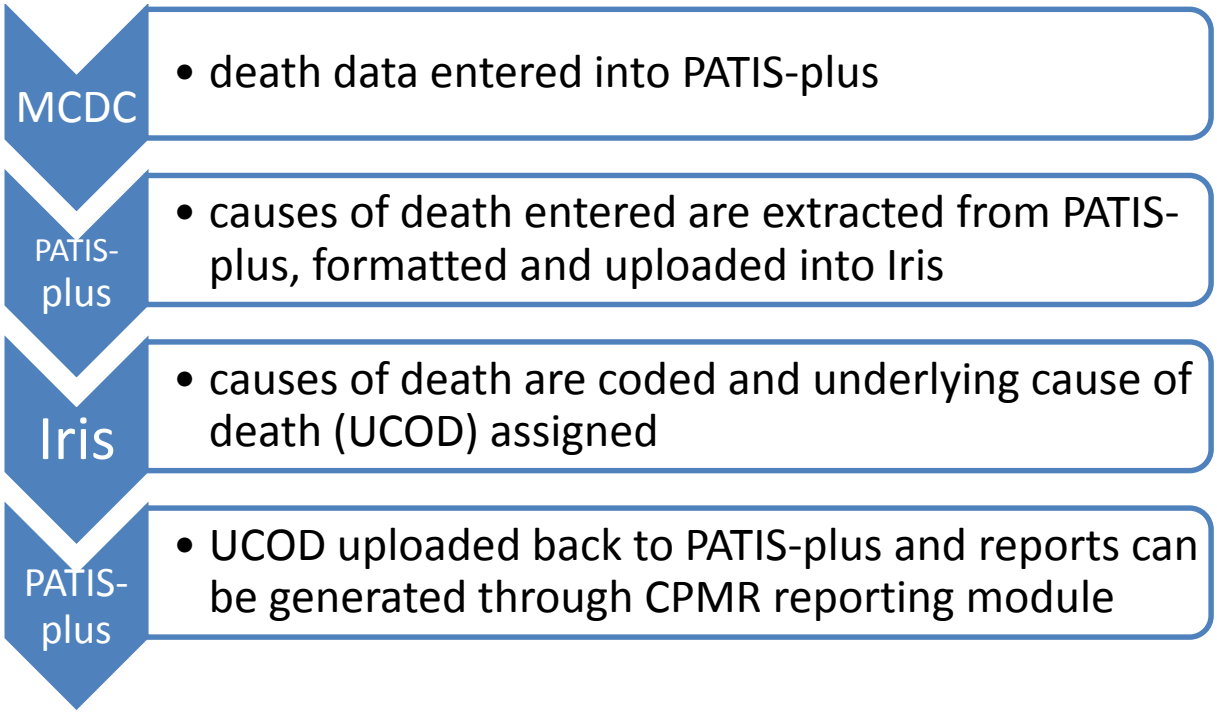
Number of MCDC yet to be received at HIU by months

Facility	Month			Grand Total
	January	February	March	
CWM Hospital	1	6	6	13
Labasa Hospital	0	2	1	3
Lautoka Hospital	3	0	2	5
Grand Total	**4**	**8**	**9**	**21**

The table shows the number of Medical Cause of Death Certificates (MCDCs) yet to be received at HIU. These are admissions in the Patis-plus system with the mode of discharge as deceased.

IRIS FLOWCHART

Iris is the software used in HIU for coding causes of death and selecting the underlying cause of death.



Section 8 - Reference Table

8.1 Hospital Utilization

No	Institution	Number of Outpatient	Number of Beds	Total Admissions	Total Discharges	Total Patient Days	Occupancy Rate	Daily Bed State	Average Length of Stay
1	CWM Hospital	3,150	481	5,398	4,844	27,444	63%	302	5.7
2	Navua Hospital	-	22	423	415	1,444	72%	16	3.5
3	Vunidawa Hospital	1,985	24	128	125	252	12%	3	2.0
4	Korovou Hospital	1,195	16	254	237	580	40%	6	2.4
5	Nausori Hospital	217	17	354	353	378	24%	4	1.1
6	Wainibokasi Hospital	1,038	12	222	215	782	72%	9	3.6
-	Central Division Sub-total	7,585	572	6,779	6,189	30,880	59%	339	5.0
7	Lautoka Hospital	42,188	305	3,488	3,341	17,332	62%	190	5.2
8	Nadi Hospital	39,247	75	1,351	1,220	4,069	60%	45	3.3
9	Sigatoka Hospital	8,807	66	541	541	2,277	38%	25	4.2
10	Ba Mission Hospital	11,941	50	719	679	1,916	42%	21	2.8
11	Tavua Hospital	9,637	29	297	253	828	31%	9	3.3
12	Rakiraki Hospital	4,513	30	223	215	791	29%	9	3.7
-	Western Division Sub-total	116,333	555	6,619	6,249	27,213	54%	299	4.4
13	Labasa Hospital	34,919	182	2,598	2,111	9,190	55%	101	4.4
14	Savusavu Hospital	8,521	56	410	407	1,516	30%	17	3.7
15	Waiyevo Hospital	962	33	76	73	150	5%	2	2.1
16	Nabouwalu Hospital	4,024	26	266	251	1,009	43%	11	4.0
-	Northern Sub-total	48,426	297	3,350	2,842	11,865	44%	130	3.5
17	Levuka Hospital	6,273	40	161	150	425	12%	5	2.8
18	Vunisea Hospital	4,942	22	93	91	444	22%	5	4.9
19	Lakeba Hospital	1,134	12	81	77	279	26%	3	3.6
20	Lomaloma Hospital	1,634	16	47	47	221	15%	2	4.7
21	Matuku	366	5	13	13	47	10%	1	3.6
22	Rotuma Hospital	1,879	14	12	11	27	2%	0	2.5
-	Eastern Division Sub-total	16,228	109	407	389	1,443	15%	16	3.7
-	TOTAL (Divisional)	188,572	1,533	17,155	15,669	71,401	51%	785	4.6
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	1,786	86	140	117	5,106	65%	56	43.6
2	Tamavua/Twomey Hospital	3,451	91	51	39	2,251	27%	25	57.7
4	Military Hospital	-	9	-	-	-	0%	0	0
5	Naiserelagi Maternity	459	7	39	36	58	9%	1	1.6
-	Specialized Hospital Sub-total	5,696	193	230	192	7,415	42%	81	38.6
-	GRAND TOTAL	194,268	1,726	17,385	15,861	78,816	50%	866	5.0

Source: Hospital Monthly Returns and ATD PATISPLUS

8.2 Notifiable Diseases by Months for Quarter 1 2016

No.	Diseases	January	February	March
1	Acute Poliomyelitis	0	0	0
2	Acute Respiratory Infection	4,004	3,587	4,763
3	Anthrax	0	0	0
4	Brucellosis	0	0	0
5	Chicken Pox	248	117	105
6	Cholera	0	0	0
7	Conjunctivitis	579	699	6,341
8	Dengue Fever	250	402	593
9	Diarrhoea	3,007	2,889	3,270
10	Diphtheria	0	0	0
11	Dysentry (a) Amoebic	0	0	0
	(a) Bacillary	8	11	20
12	Encephalitis	0	0	0
13	Enteric Fever (a) Typhoid	29	29	48
	(b) Para Typhoid	0	0	0
14	Fish Poisoning	109	129	94
15	Ciguatera Fish Poisoning	1	3	0
16	Food Poisoning	10	0	4
17	German Measles (Rubella)	1	5	5
18	Infectious Hepatitis	13	15	10
19	Influenza	1,841	1,104	1,480
20	Leprosy	0	0	0
21	Leptospirosis	19	16	16
22	Malaria	0	0	0
23	Measles (Morbilli)	11	7	3
24	Meningitis	5	9	9
25	Mumps	1	0	0
26	Plague	0	0	0
27	Pneumonia	284	317	452
28	Puerperal Pyrexia	0	0	0
29	Relapsing Fever	0	0	0
30	Rheumatic Fever	3	1	3
31	Smallpox	0	0	0
32	Tetanus	0	0	0
33	Trachoma	29	31	20
34	Tuberculosis (a) Pulmonary	22	20	19
	(b) Others	0	0	0
35	Typhus	0	0	0
36	Viral Illness/ Infection	2,667	3,793	3,529
37	Whooping Cough	0	1	2
38	Yaws	0	0	0
39	Yellow Fever	0	0	0
40	**Sexually Transmitted Diseases**			
	(a) Gonorrhoea	75	82	77
	(b) Candidiasis	9	8	9
	(c) Chlamydia	0	0	0
	(d) Congential Syphilis	1	2	0
	(e) Lymphogranulona Venerum	0	0	0
	(f) Herpes Zoster (Shingles)	5	2	5
	(g) Ophthalmia Neonatorium	1	2	0
	(h) PID	0	0	0
	(i) Syphilis	41	21	14
	(j) Trichomoniasis	21	9	4
	(k) Genital Warts	0	0	0

DEPARTMENT OF HEALTH INFORMATION, RESEARCH & ANALYSIS

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