

Health Information Bulletin

3rd Quarter Bulletin, 2014

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

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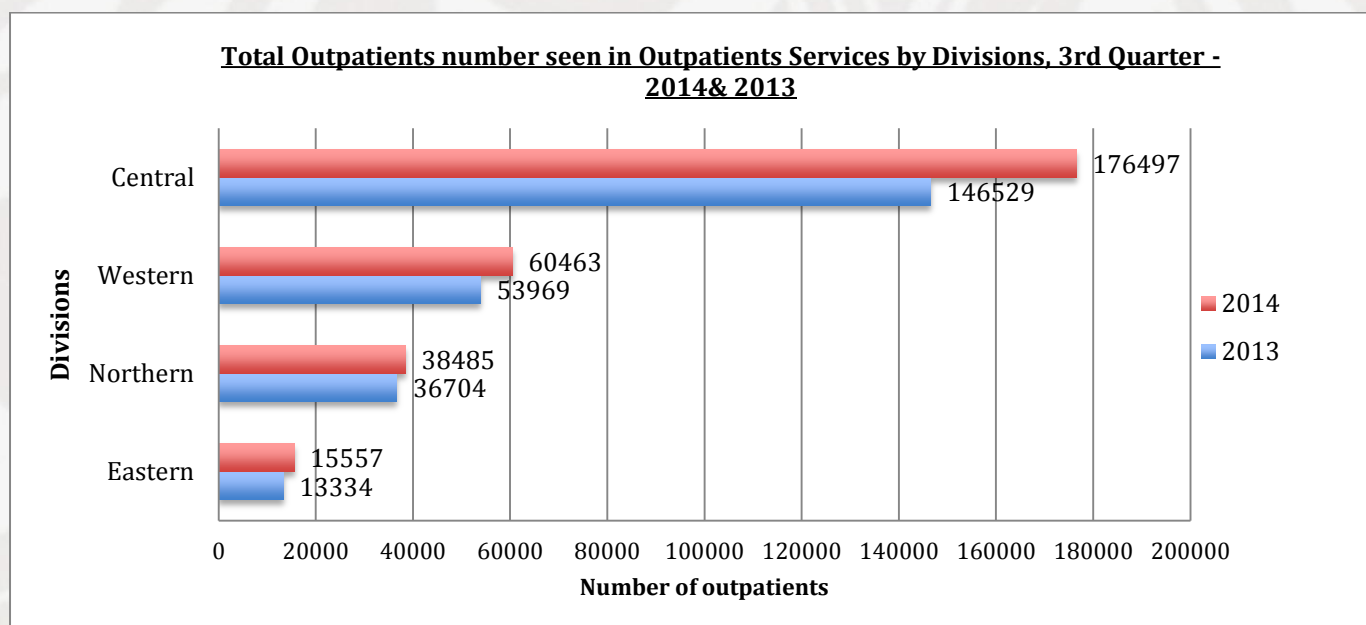
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PUBLIC HEALTH INFORMATION SYSTEM (PHIS)

1.1 Out Patient Services



Source: PHIS Online – GOPD Activities tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

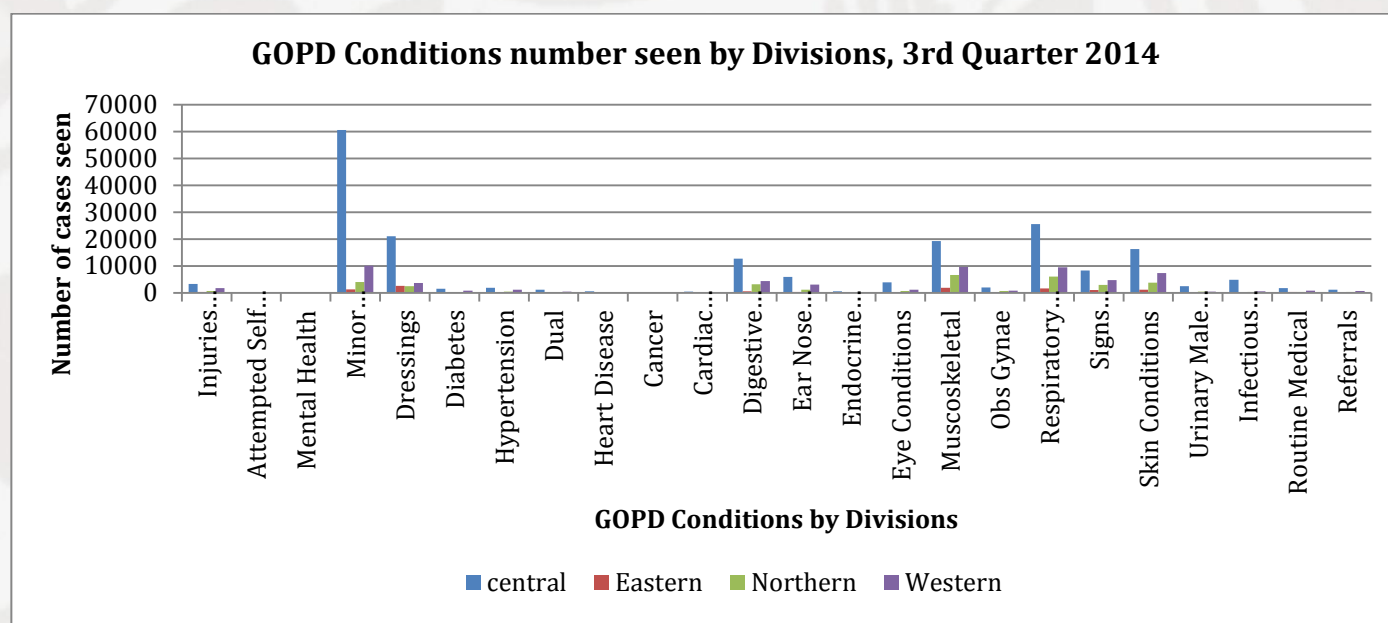
A total of 291,002 patients were seen through the outpatient service in all the divisions compared to 250,536 outpatients seen through the same period in 2013. This was an increase of 7.5% in the 3rd Quarter [2014] when compared to the same period last year. This increase is noted for all divisions but more marked in the central division.

Suva Sub-Division and the Rewa Sub-Division experienced the largest increases in GOPD load. This could be attributed to the decentralization of general outpatient services from CWM Hospital to nearby health facilities, in the Central division.

Kadavu and Lakeba Subdivisions were responsible for the increases in OPD in the Eastern division; Taveuni, Cakaudrove and Bua were the drivers of the Northern dataset. The Western division noted increases in Lautoka (designation of a new medical area – Kese; all the other facilities showed notable increases in OPD load in 2014); Namaka Health Centre noted a 41% increase in OPD load in 2014 compared to 2013; Keiyasi, Sigatoka and Lomawai were drivers for the increase in OPD in Sigatoka SD; Ra SD noted a marked decrease in OPD load except in Nanukuloa medical area; and the Tavua SD also noted a decrease in OPD load compared to the same period in 2013 (by 7.4%).

Generally the Medical area level burden of OPD has increased throughout the quarterly series. The areas which are of concern are the facility structure to cater for the burden of health service demand, human resources to cater for this demand and supporting technology for the increase in service needs. There is a need for an OPD policy, allocation of resources and capture of this OPD data (approximately 60% of health service data) in meaningful diagnostic related groups for policy, planning and financing (resourcing).

1.2 GOPD Conditions

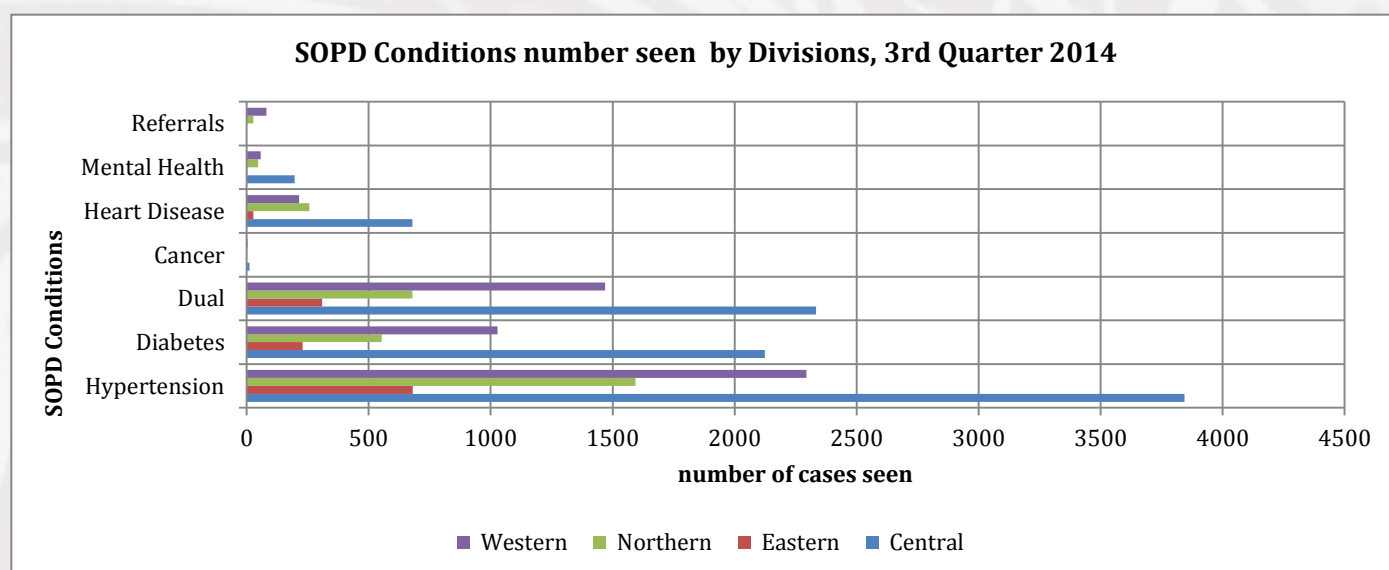


Source: PHIS Online – GOPD count tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

Minor Procedures and Dressings made up the majority of patients visiting the GOPD particularly in the Central & Western Division. This was due to patients having repeat dressing or repeated procedures over the period of their treatment. Similar trends were observed in the 3rd quarter of 2013 with the highest frequency noted in respiratory conditions followed by musculoskeletal and skin conditions as causes of morbidity.

Quality of data is important therefore the need to code OPD data more accurately so that better analysis can be made as this data is useful at operational level in the area of decision making; allocation of funding, resources and man power; development and review of policies; upgrading of health facilities at medical area and below; and programme implementation. The recommendation is to have more meaningful categories such as diagnostic related groups to ensure evidence for policy, planning and resourcing.

1.3 SOPD Conditions



Source: PHIS Online – SOPD count tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

Out of the SOPD services that were rendered to the public from health centres and below, there was a decrease by 7% in service delivery when compared to 3rd quarter, 2013 (n=21319). Majority of the patients suffered from hypertension (n=8414) in 2014 followed by Diabetes particularly in the Central Division. This is quite similar to the trends observed in 1st and 2nd quarter, 2014 and through out the 2013 quarterly series.

There is a need for innovative programs to implement and create awareness and provide wellness education to the general public who are at risk.

1.4 Maternal Health

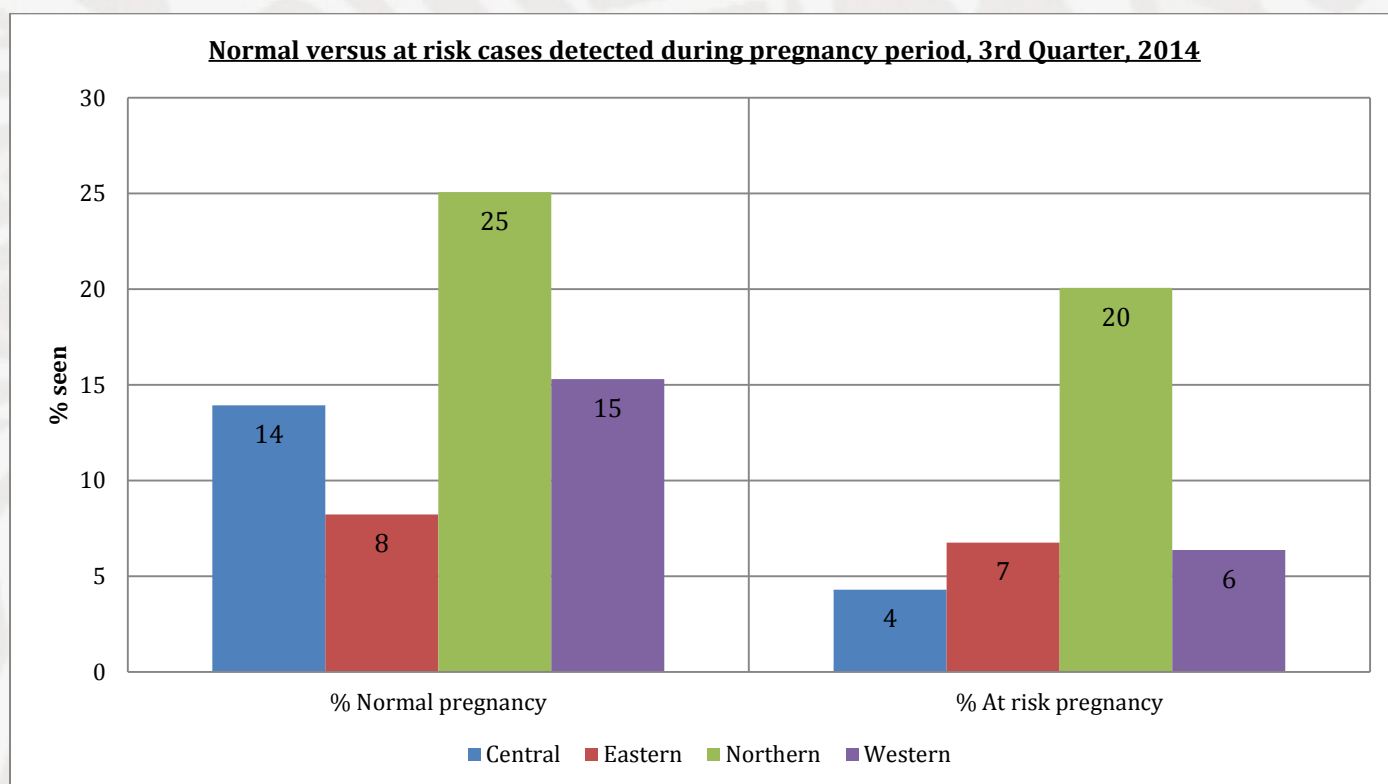
1.4.1 Normal and At Risk Pregnancy comparative Table

Pregnancy type	3 rd Quarter, 2014	3 rd Quarter, 2013
Normal pregnancies	1324	1239
At Risk Pregnancies	794	898
at risk & normal pregnancies	2118	2137

Source: PHIS Online – [www.phisonline.gov.fj], MOH.

At antenatal clinics there were a total of 1324 normal pregnancies seen compared to 1239 in the 3rd quarter 2013. The at risk pregnancies category noted a decrease of 6.1% in the 3rd Quarter 2014 compared to same period in 2013.

1.4.2 Normal and at risk during pregnancy detection rate in percentage



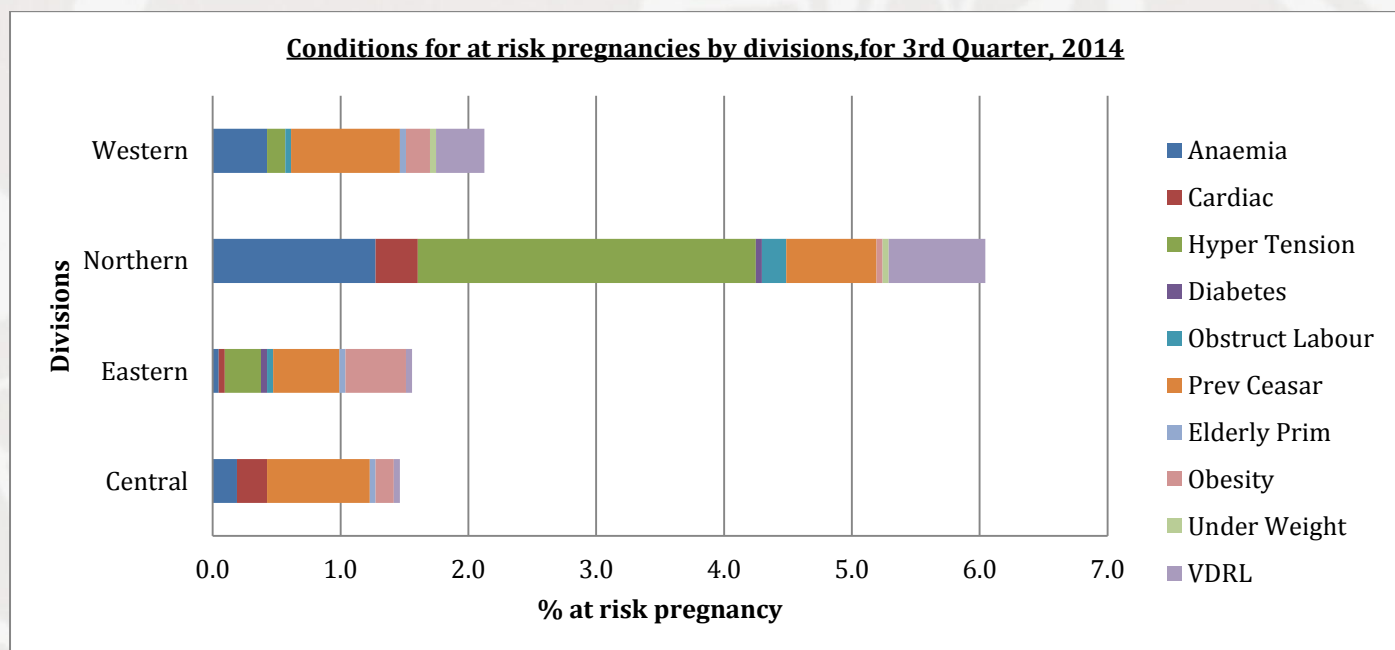
Source: PHIS Online – Normal and At risk pregnancy tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

Geographically, in Northern Division (n=425), it was observed that more women were at risk of developing complications during pregnancy when compared to Eastern (n=143), Western (n=135) and Central Divisions (n=91), in particular the Bua Sub-division (Lekutu and Wainunu medical area); Cakaudrove Sub-division (Nakorovatu and

Tukavesi medical area); and Macuata Sub-division (Seaqaqa and Dreketi medical area). Women who are at risk of developing complications during pregnancy are commonly iTaukei (n=711:33.6%) when compared to Fijian Women of Indian Descent (n=52:2.5%) and Fijian Women of Other Decent (n=31:1.5%). [Note: The denominator is the total of at risk + normal pregnancy – 2118]

There is need for health awareness for mothers who fall into the at risk group. The coefficient of the at-risk group over the 9 month period time series shows the Northern Division having most cases when compared to three other divisions.

1.4.3 At Risk Conditions



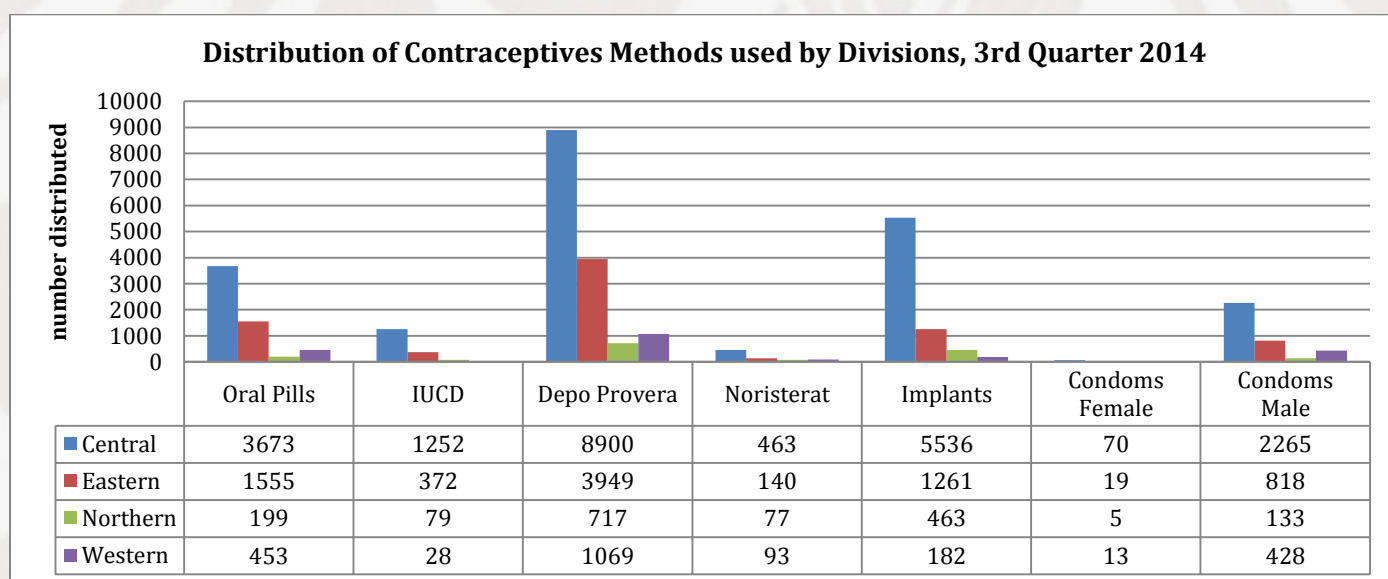
Source: PHIS Online – At risk pregnancy tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

The above shows the relative prevalence of various risk conditions for women attending ANC clinics by the four divisions. The conditions presented above indicate the contributing factors towards complications during pregnancy and delivery. The level of care and monitoring of the mother and the child during pregnancy is important for safe outcomes for both the mother and child.

Refer to the narration in 14.2 for indication of particular sites for public health/clinical interventions. There is need for awareness campaigns, training in safe motherhood practices and provision of adequate resourcing/technology to reduce complications in pregnant women in the Northern Division.

1.5 Family Planning

1.5.1 Contraceptive methods in Family Planning



Source: PHIS Online – Family Planning Activities tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

Depo Provera injections and Implants were the most common contraceptive methods used for birth control followed by oral pills and condoms as per reported by all divisions. Central division recorded the highest used of contraceptive methods followed by Eastern division while Western recorded the lowest. Similar patterns were observed same period in 2013. This does not account for hospital contraceptive dispensing and private contraceptive dispensing.

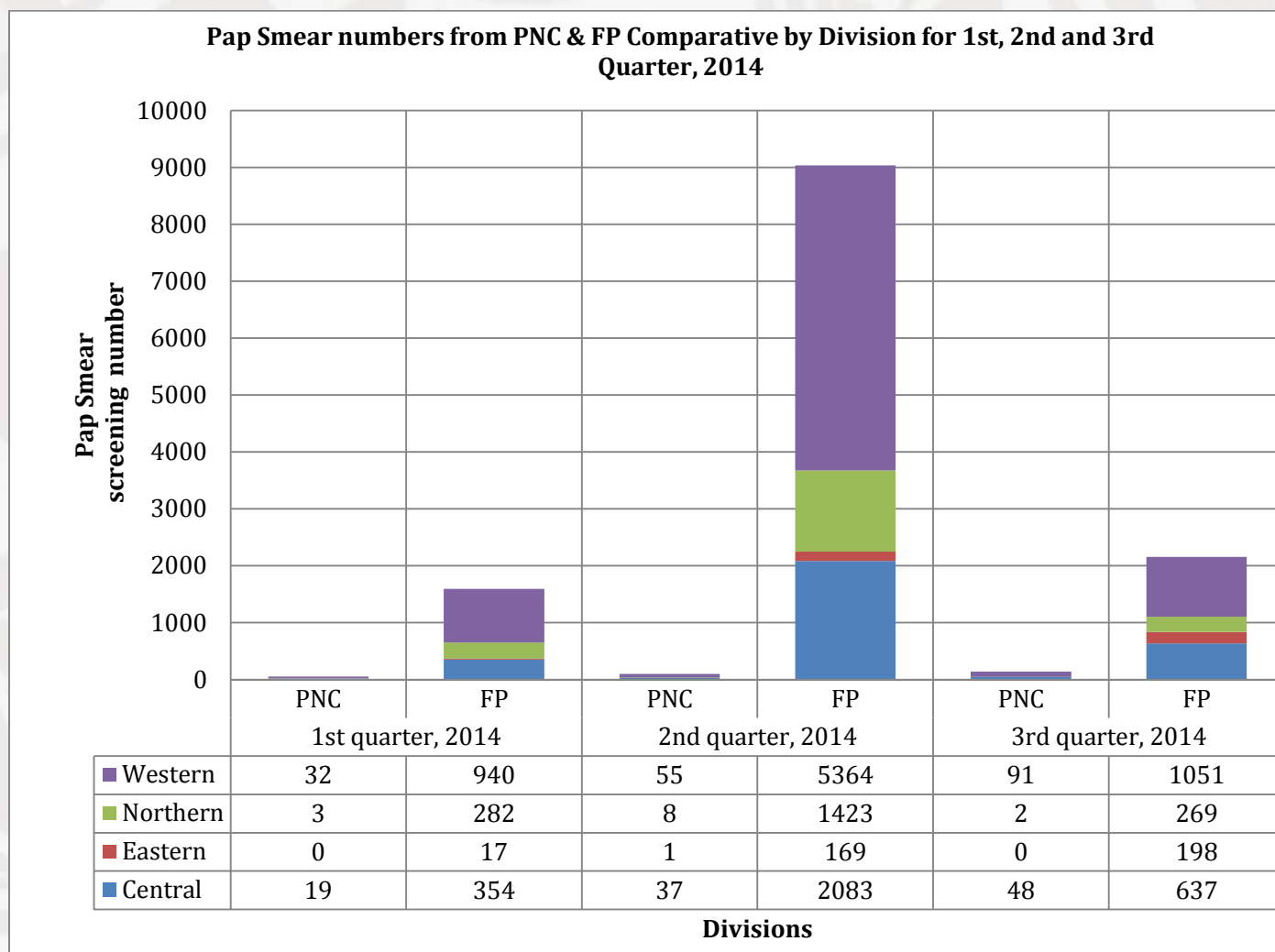
1.5.2 Family Planning Couple of Years Protection, 3rd Quarter, 2014

Division	Years Protection Dispensed							CYP Rate (per 100 Women)
	Oral Pills	IUCD	Depo Provera	Noristerat	Implants	Female Condoms	Male Condoms	
National	681.0	4131.6	2225.0	78.7	21036.8	6.3	203.9	51.9
Central	291.9	1227.6	987.3	23.8	4791.8	1.7	73.6	33.4
Eastern	37.7	260.7	179.3	13.1	1759.4	.5	12.0	98.5
Northern	84.0	92.4	267.3	15.8	691.6	1.2	38.5	14.2
Western	267.5	2550.9	791.3	26.0	13794.0	3.0	79.7	80.2

Source: PHIS Online – Family Planning Activities tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

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. This does not account for hospital contraceptive dispensing and private contraceptive dispensing.

1.5.3 PNC and Family Planning Pap Smears



Source: PHIS Online – Family Planning Activities and Postnatal clinic tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

A total of 2296 pap smears were conducted in combined clinics (93.9%) of pap smears were recorded through family planning clinics and 6.1% through postnatal clinics. This is much lesser than the numbers reported for the same period in 2013.

The gaps in the figures displayed above may be related to under reporting, low attendance by the expected group, unskilled nurses, delay in seeking Pap smear screenings, no pap smear done during Postnatal Clinic and inadequate resourcing for conducting paps smears. Accuracy in reporting is vital for optimal analysis and recommended actions for implementation of FP programs, review of policies and allocation of funding and resources at medical area and below to respond to the burden of disease.

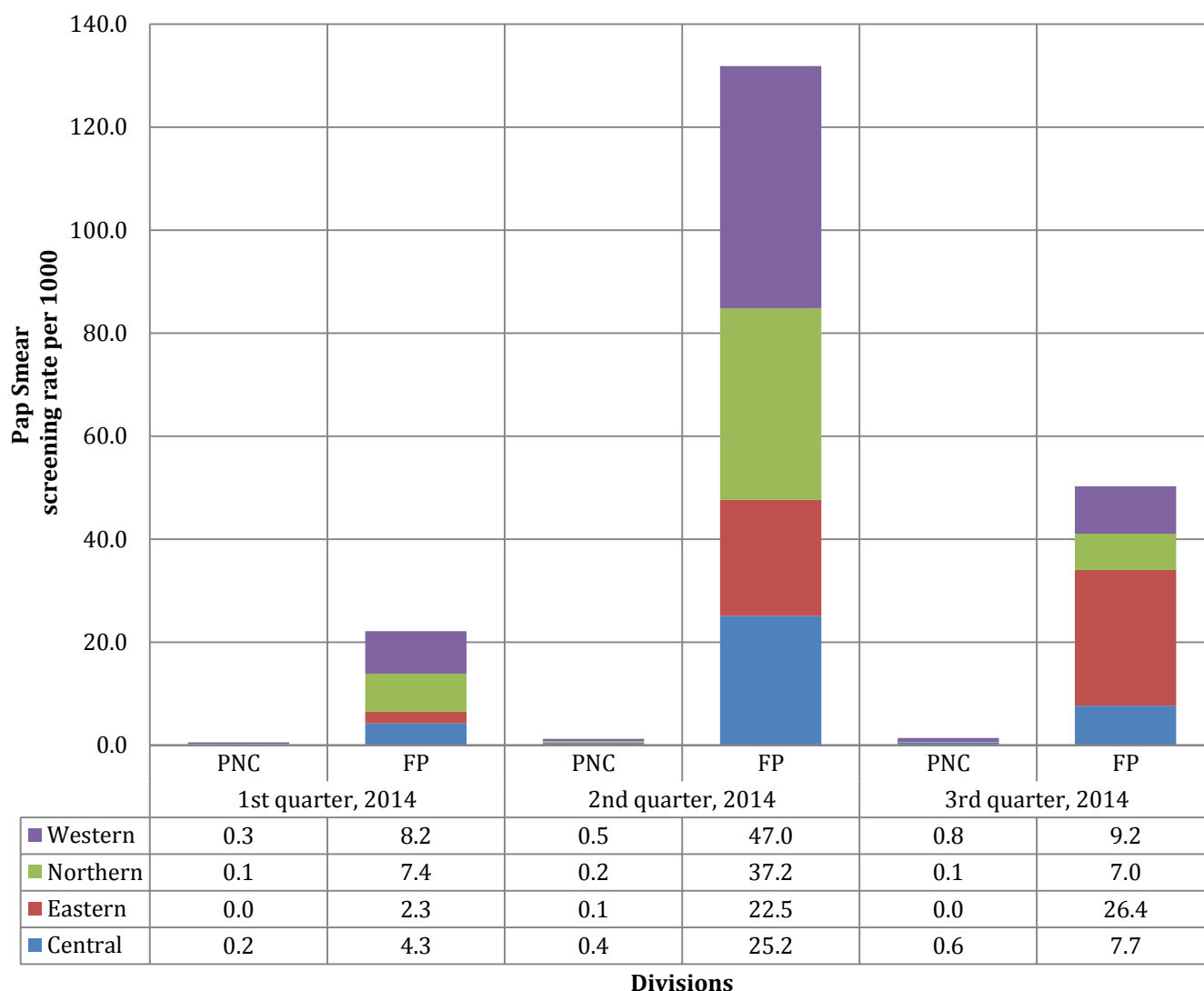
It was noted majority of the Pap smear activities were done in the family planning unit throughout the quarterly series. The Western and Central divisions had the highest frequency of pap smear conducted at their Family Planning Clinics followed by Northern and Eastern Divisions.

In the postnatal clinic the health practitioners (mostly nurses) are responsible for providing family planning advice, counseling and conducting Pap smears.

The variance in data set is dependent upon the accuracy of documentation by the FP nurse and cases referred for screening.

1.5.4 PNC & FP Pap Smears Comparative Coverage

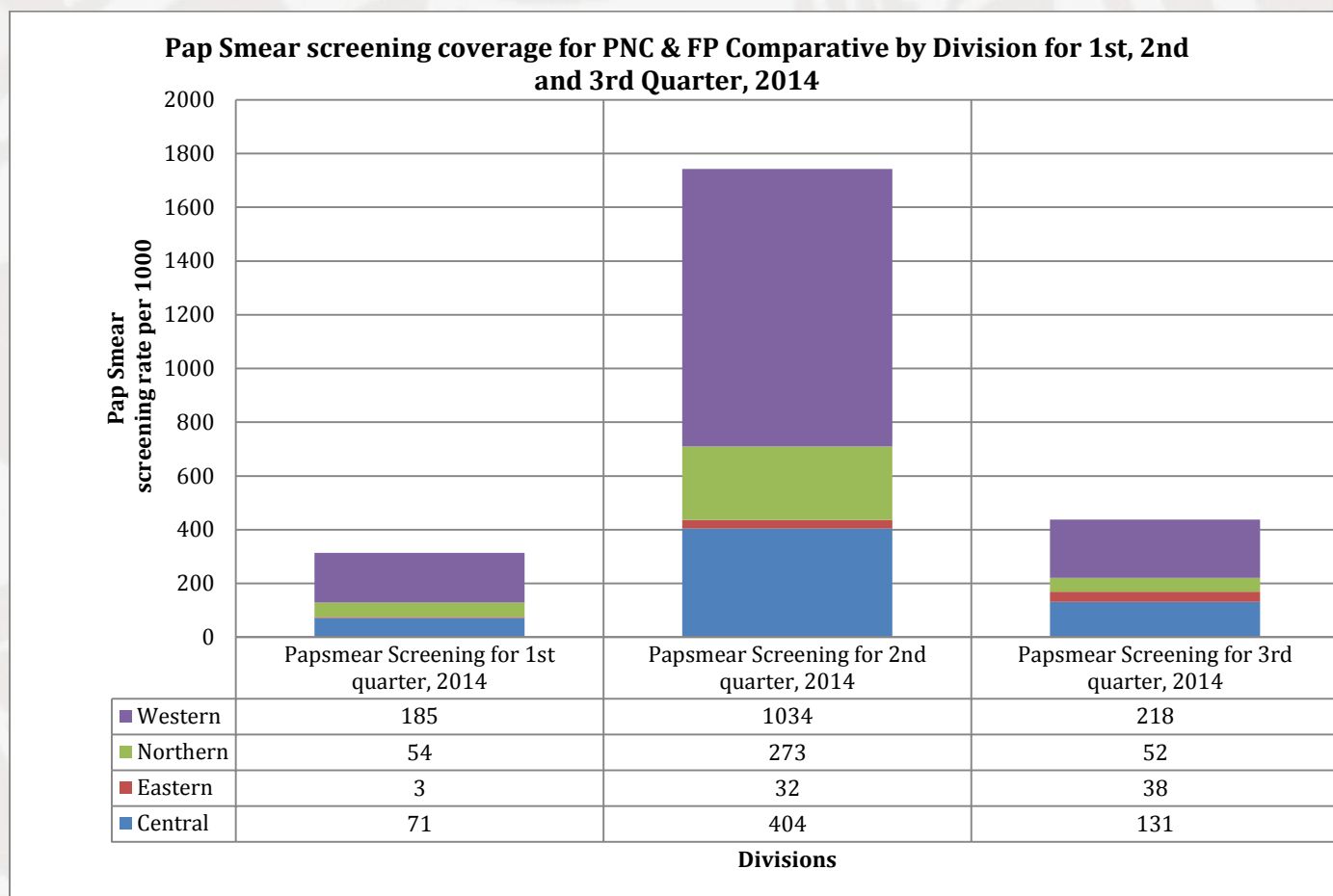
Pap Smear screening rate for PNC & FP Comparative by Division for 1st, 2nd and 3rd Quarter, 2014



Source: PHIS Online – Family Planning Activities and Postnatal clinic tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

The gender specific pap smear comparative screening rates reported through PHIS, per each Division for the three quarters, 2014 are been represented above. *[CBA by each division was used as the denominator to calculate the rate]*. The Western Division recorded the highest coverage, this trend were similar throughout the quarter series followed by the Northern and Eastern while Central Division recorded the lowest. Most of the screening were conducted in the family health clinic when compared to antenatal clinic.

1.5.5 Combine comparative Pap smear coverage



Source: PHIS Online – Family Planning Activities and Postnatal clinic tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

In the 3rd quarter period more pap smears were conducted in the Postnatal and Family Planning Clinics when compared to the 1st and the 2nd quarter period the same year. This is out-standing as the coverage per 1000 is quite high for all four Divisions.

In accordance to the policy, Registered nurses who have undergone a proper training on pap smears and have been awarded certificates are permitted to carry out the procedure independently. This procedure must be done in government facilities, free of charge under a safe physical environment. The registered Nurses must ensure confidentiality of information and protect the right of individuals. (Source: Nurse & Midwives Board Policy on Papanicolaou (PAP) Smear by Nurses - 28/03/1994, Policy and Planning Unit, MOHMS). The delivery of this service is greatly dependent upon skilled and trained health professional at the facility level to cater for service demand.

1.6 Immunization

Division	HepBO	BCG0	DPTHeP BHib1	OPV1	Penumoc cal1	Rotavirus 1	DPTHeP BHib2	OPV2	Penumoc cal2	DPTHeP BHib3	OPV3	Penumoc cal3	Rotavirus 2	MR1	OPV4
Central	3	3	2464	2463	2461	2453	2483	2483	2480	2443	2443	2443	2440	2070	952
Eastern	7	8	169	169	170	170	231	223	228	221	223	235	218	232	133
Northern	15	15	942	942	942	941	937	937	937	895	896	894	894	686	432
Western	6	5	1954	1953	1959	1959	2093	2091	2090	2048	2041	2052	2049	1394	918
All	31	31	5529	5527	5532	5523	5744	5734	5735	5607	5603	5624	5601	4382	2435

Source: PHIS Online – Immunisation tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

Based on the above figure, estimated coverage of MR1 was about 83.6%. [This estimation has used $\frac{1}{4}$ of 2013 live births (20970) as denominator]. About 2.6% less when compared with the same period, 2013 the estimated coverage of MR1 was about 86.2%. [This has been estimated using $\frac{1}{4}$ of 2012 live births (20178) as denominator].

Central and Western Division were most consistent in reporting and updating their EPI coverage followed by Northern and Eastern Division. In the Central division, Vunidawa MA (0.4%), Nausori MA (3.3%) and Valelevu MA (1.1%) respectively had the most number being immunized which has contributed to the marginal increase of reporting rates from the Central division. In Western Division, the most number immunized was reported from the main health centres and these were Lautoka (0.6%), Tavua (1.3%), Rakiraki (1.3%), Sigatoka (0.8%), Namaka (1.5%) and Nadi (0.1%). The consistency in reporting is based on the number immunized (including the late and on-time) in various health facilities which is at medical area and below. There is a need in improvement for reporting of immunization figures and updating of registers.

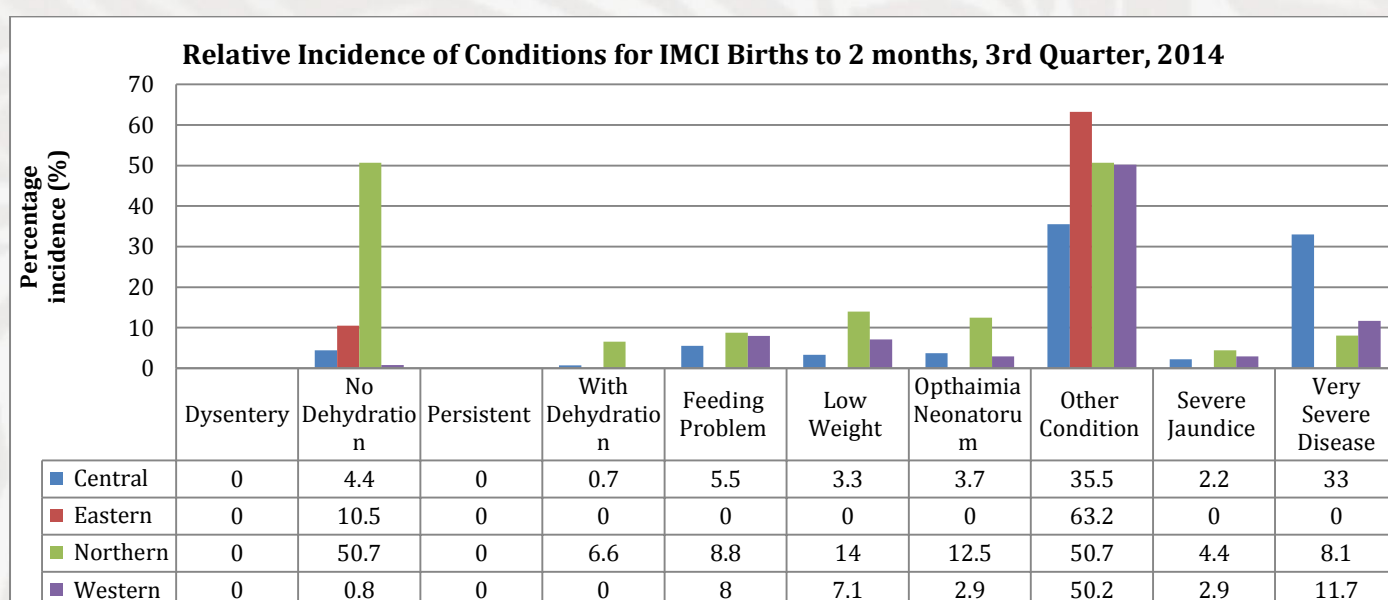
The consistency in reporting is dependent upon the follow-up/ catchment and availability of Vaccine. The immunization rates in the 3rd quarter of 2014 increased by 6% compared to the previous quarter.

Vaccine availability for Immunization is a major concern, if it is out of Stock the child is either referred to another health facility where the vaccine is available or given vaccine late when it is in-stock later in the month. The movement of people can also be a contributing factor in low reporting from health facilities. Rural-urban movement is a major issue in Fiji as this lowers the coverage for EPI in rural health facilities while the urban health facilities may report higher. The nurses need to also adhere to Protocol in the EPI Policy 2013-2016 and Vaccine Storage Guideline 2013- 2016.

The monitoring of On-time and late administration of vaccine helps in making critical decisions relating to supply of the vaccine from FPBS to health facilities at an operational level and inherently the issues of accessibility, preventive behavior and health autonomy. The assurance of good quality of data is important for measuring accuracy and producing optimal analysis from medical area and below as this is one of the key indicators at the operational and strategic level in the Ministry.

1.7 MCH /IMCI

1.7.1 Birth to 2 months



Source: PHIS Online – IMCI birth to 2 months tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

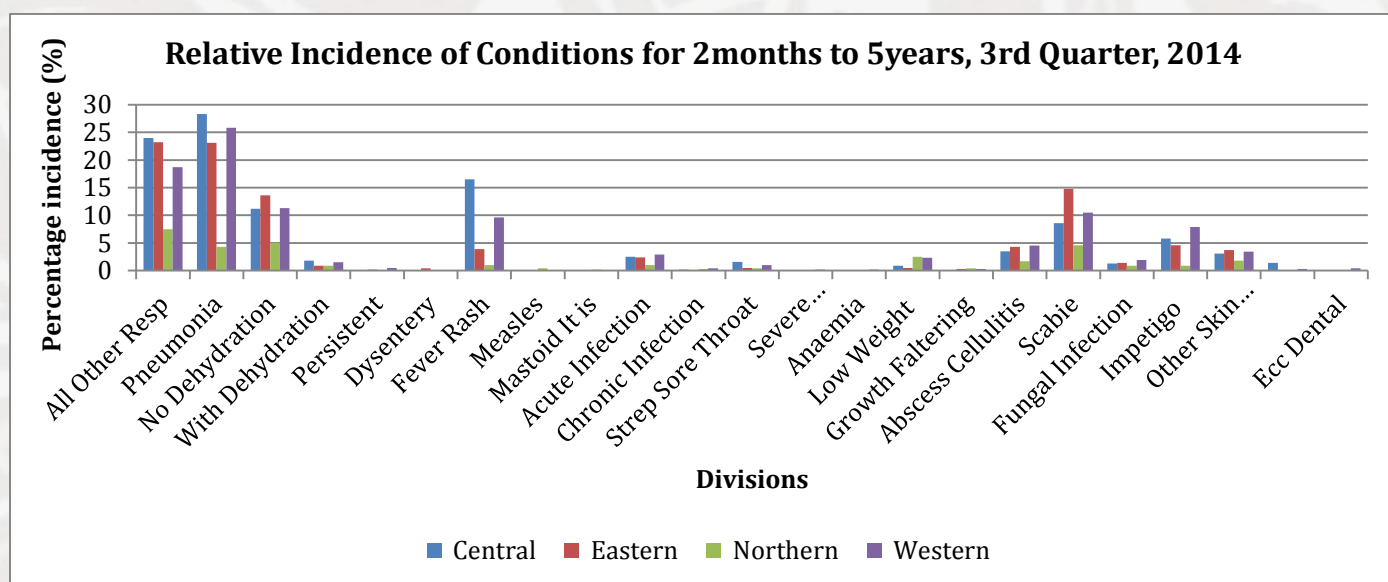
Among the birth to 2 months old children attending IMCI clinic, Eastern Division recorded the highest percentage of children presenting with other conditions, feeding problem and low weight followed by Northern, Western & Central

respectively. However, in the Western Division more children with very severe disease were seen when compared to Central, Northern and Eastern Divisions. Similar trends were seen in the same period, last year.

When compared to NNDSS (132) results, PHIS (3760) had a higher frequency of diarrhoeal cases seen for the 3rd Quarter, 2014 for followed by very severe diseases. Change in environmental patterns may be a contributing factor to increase in incidences of IMCI cases among birth to 2 months children or lack of concerns and care by mothers. Furthermore cases that the medical officers see in clinics are reported on the NNDSS and many cases seen through IMCI may not be elevated to these medical officers. In addition to this, breast feeding problems had been noted, and this is a contributing factor towards decrease in weight among children who are in their birth to 2 months period. Education and awareness of breast feeding programs should be recommended to mothers during their IMCI visits

There is a need for continued monitoring and evaluation of IMCI programme and their collaboration with existing system like NNDSS; and refresher trainings of staff at medical area and below in IMCI protocol is recommended . The facilitation of resources and man power needs to be considered and operational decisions need to be made in fulfilling this recommendation.

1.7.2 2 months to 5 years



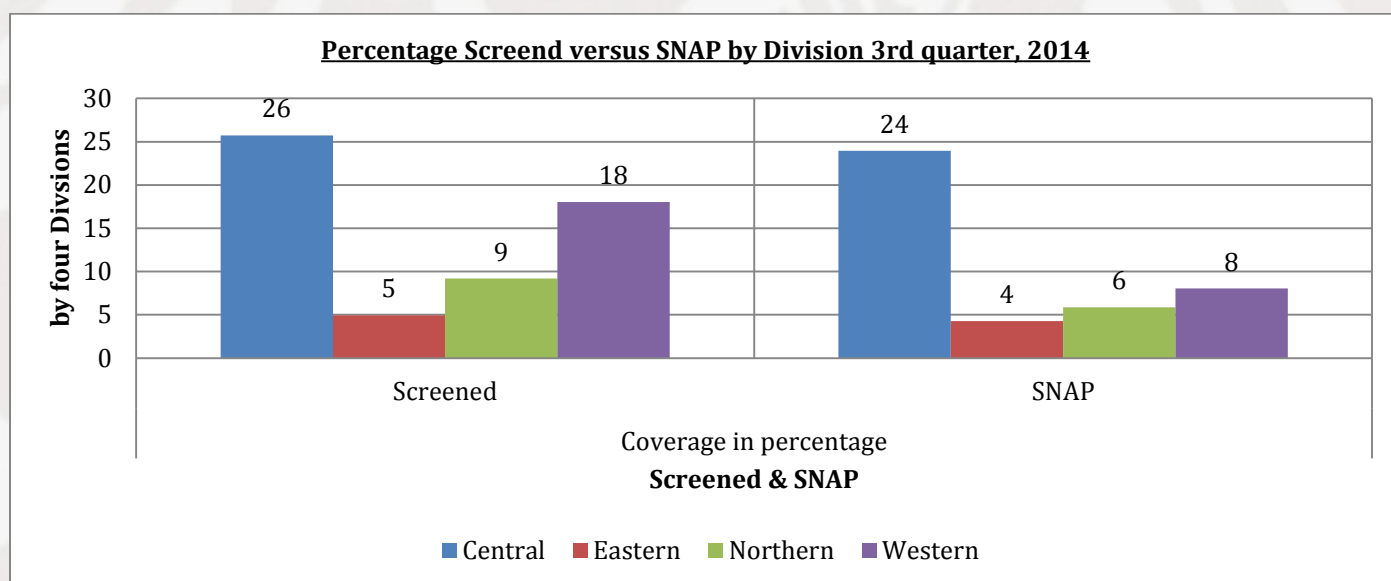
Source: PHIS Online – IMCI 2 months to 5 years tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

This graph shows the percentage of children of 2months to 5years attending IMCI clinic at various health facilities in our country. With this report, it shows that more children were seen under the category of all other respiratory condition, Pneumonia, Abscess Cellulitis, Scabies, Impetigo, Other Skin Conditions and Fever Rash. The Central Division had the highest percentage of children under each of these condition followed by Northern, Eastern and Western Divisions. Similar trends were seen in the same period, last year.

The above result indicates that there is need for IMCI resources to be put in place such as education and awareness campaigns to the general Public, initiation of new or modified public health strategies that can target the population at risk in developing these IMCI conditions, keep update in stocking of medication and resources, need of better health facilities that can cater to the increase in IMCI patients , public health protocol on IMCI needs to be practiced by trained health professionals and introduction of IMCI in a GOPD.

1.8 Non-Communicable Disease

1.8.1 Screening versus SNAP results



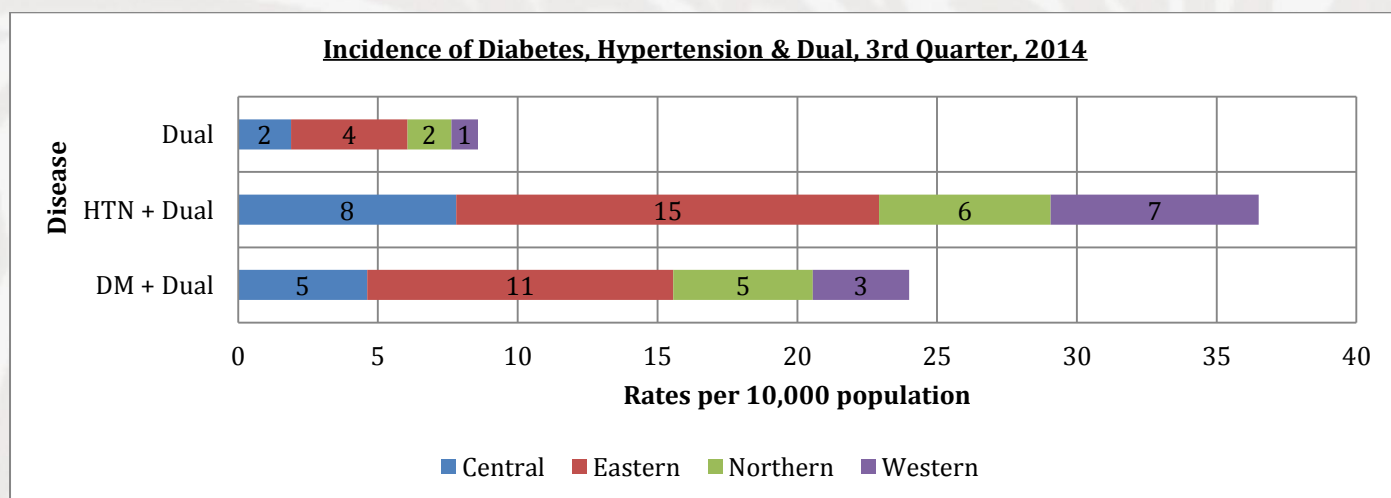
Source: PHIS Online – NCD tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

In the 3rd quarter, 2014 – 22,439 people were screened for diabetes and hypertension. Out of this 27.3% received Counseling regarding lifestyle activities, smoking, nutrition, alcohol and physical activities (SNAP). The largest number screened was from the Central division followed by the Western division, while Eastern division had the lowest number screened. Similar trends were seen in the same period last year.

The above results indicate not all individuals who are screened are provided counseling on SNAP which is a major concern, especially in the Western Division, more than 60% population screened are not counseled on SNAP. This was similar in the Northern Division (30%).

As per the PHIS counting rules the number Screened should equal to or be more than the number SNAP. The ultimate goal is to have 100% screened and SNAPed however there is a great difference between the percentage screened and SNAP for Western Division (10%) and Northern Division (3%) which needs more attention while Central Division had 2% difference followed by Eastern Division (1%) which recorded the lowest gap.

1.8.2 Diabetes, Hypertension and Dual cases from NCD Screening

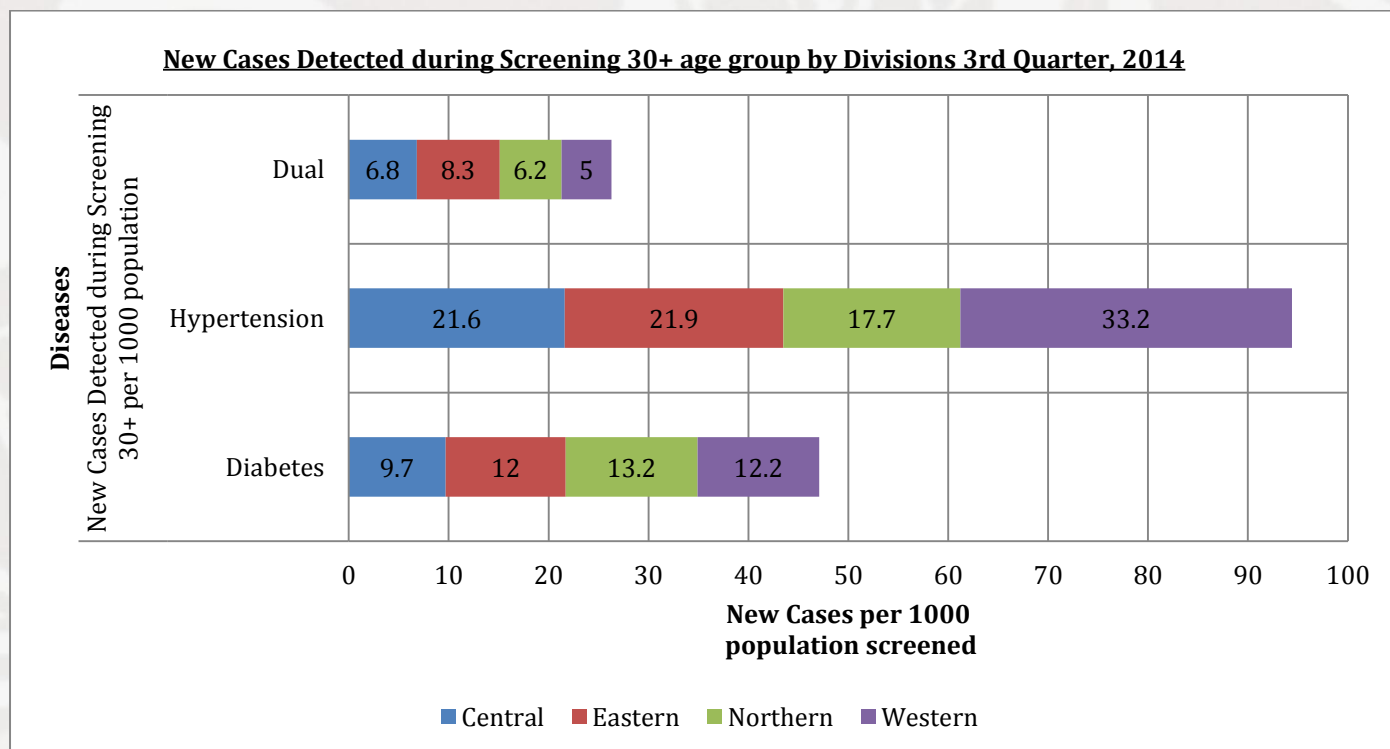


Source: PHIS Online – NCD tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

The chart above shows the incidence of Diabetes (DM), Hypertension (HTN) and Dual cases (Both DM & HTN) reported through PHIS. In total, Hypertension recorded the highest frequency throughout the four Divisions followed by Diabetes and Dual cases respectively. Please note DM and HTN rates include the dual cases. -

Eastern Division recorded the highest incidence of hypertension and diabetes while the West recorded the lowest. In comparison to the 2nd Quarter, 2014, the Central Division recorded the highest while Eastern Division recorded the lowest respectively.

1.8.3 Detection of diabetes, hypertension and dual new cases 30+ screened population per 1000 population screened by division

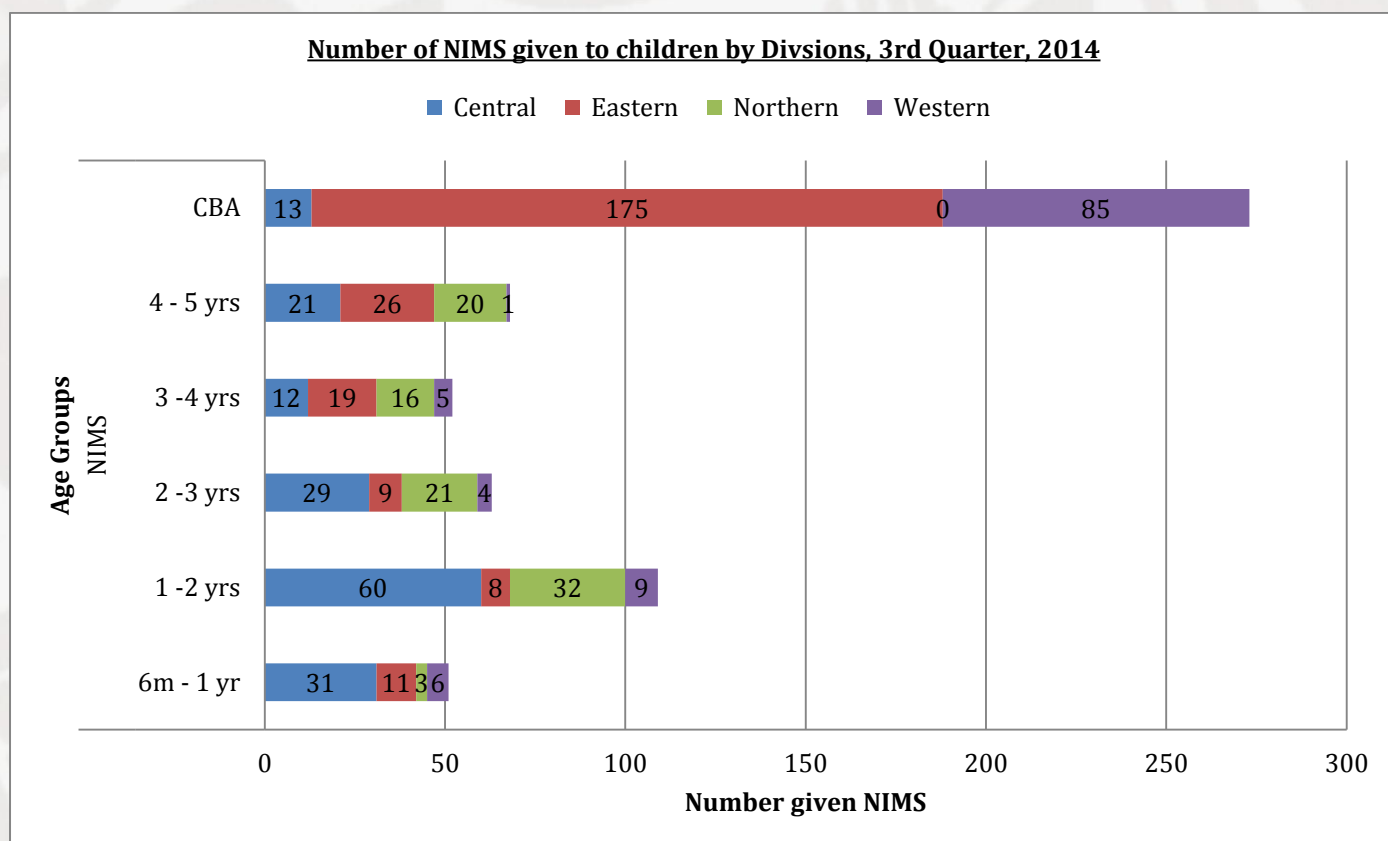


Source: PHIS Online – NCD tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

During screening there were new case detected (in 30+ age group) and these are reported per 1000 population screened. It was noted that Western Division had the highest detection of hypertension while north recorded the lowest. However, Northern Division had the highest detection of diabetes while Central recorded the lowest. The increase in detection may be due to change in policy regarding active screening of NCD, increases in population density geographically, environmental and behavioral factors relating to the individual and health services.

The areas that were active in screening are as follows: Western Division - Ba SD (Ba MA); Lautoka SD (Lautoka MA and Natabua MA); Nadi SD (Namaka MA); in the Northern Division - Bua SD (Wainunu MA), Cakaudrave SD (Natewa MA), Macuata SD (Wainikoro MA); and Eastern Division - Lakeba SD (Lakeba MA); while in the Central Division - Rewa SD (Mokani MA and Nausori MA), Serua Namosi, (Navua MA), Suva SD (Nuffield MA, Makoi MA, Samabula MA and Valelevu MA).

1.9 NIMS



Source: PHIS Online – Nutrition tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

[As per in the counting rules, it is stated for CBA NIMS doses, only count the first ‘dose’. This is when three components; Ferrous Sulphate, Pyrantel Pamoate and Vitamin A are given. If only one or two doses are given, this is recorded for the facilities’ reference, but not reported in PHIS.]

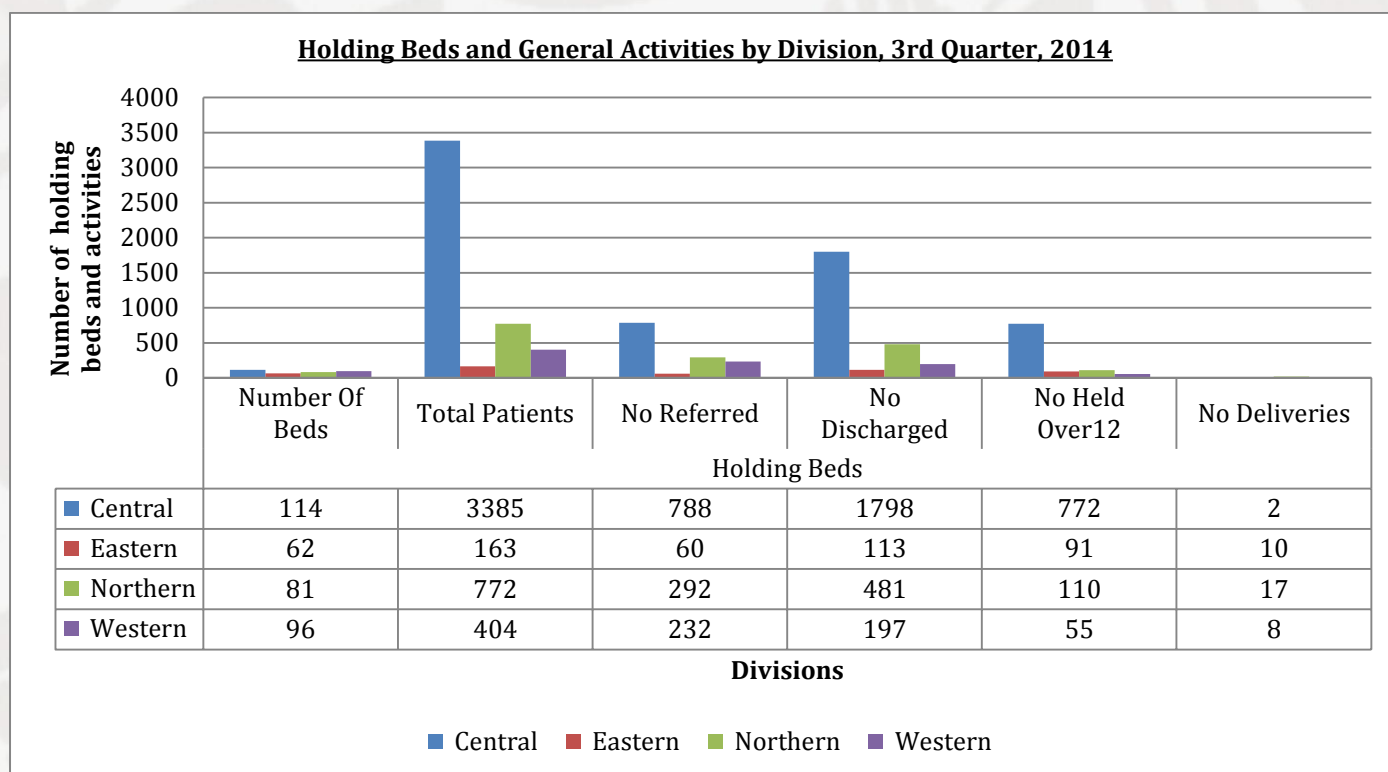
HIU captures only the complete dose. All NIMS are recorded by dietitians/ health professional, mainly the nurses, where it is submitted to the Sister in Charge to be entered in the PHIS forms, then escalated to the Sub-Divisional Health Sister or the Divisional Health Sister as a compiled report. NIM was mostly distributed in the Central Division, followed by the Northern Division. There has been continued under reporting of NIMs distribution as the number capture in PHIS is recorded only by nurses and lacks reporting from dietitians. Despite the drive by HIU to rectify the reporting issue with Family Health, Nursing division and Dietetics Division – this has not been adequately addressed. The non-availability of the components for NIMS may also result in low reporting rates.

These figures are common throughout the quarterly series and continued feedback on underreporting has been highlighted in all the quarterly series.

The CBA is also under reported for the four Divisions. A classic example is of the Northern Division where their CBA population has not been entered in the NIMS Table.

The measures of coverage can only be determined if all components required area filled accurately and completely and are largely dependent upon the reporting figures by nurses and dietitians.

1.10 Holding beds



Source: PHIS Online – General Activity tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

The status of holding beds for the 3rd quarter is demonstrated above. The Central division had the greatest number of holding beds; however, also having the greatest number of total patients and also had the greatest number of people held over 12 hours followed by the Northern division. The numbers of deliveries were noted to be highest in the North. This is reflective of the greatest number of deliveries occurring at the divisional hospitals in line with the practice of Safe Motherhood. When compared with the same period last year, the results show similar patterns.

It was noted that Central Division had the highest number discharged from its Health Centre facilities. Under Rewa Sub-division (n=827), Nausori medical area (n=789) recorded the highest discharge followed by Suva Sub-Division where Valelevu medical area recorded the second highest discharge (n=429), trailed by Makoi medical area (n=186), Samabula medical area (n=115) and Raiwaqa medical area (n=86). These facilities are not admission facilities and consideration of the issues of holding/admitting patients need to be considered in service and infrastructural reviews, as the evidence clearly indicates that quite a number of patients are being held over for longer hours of treatment.

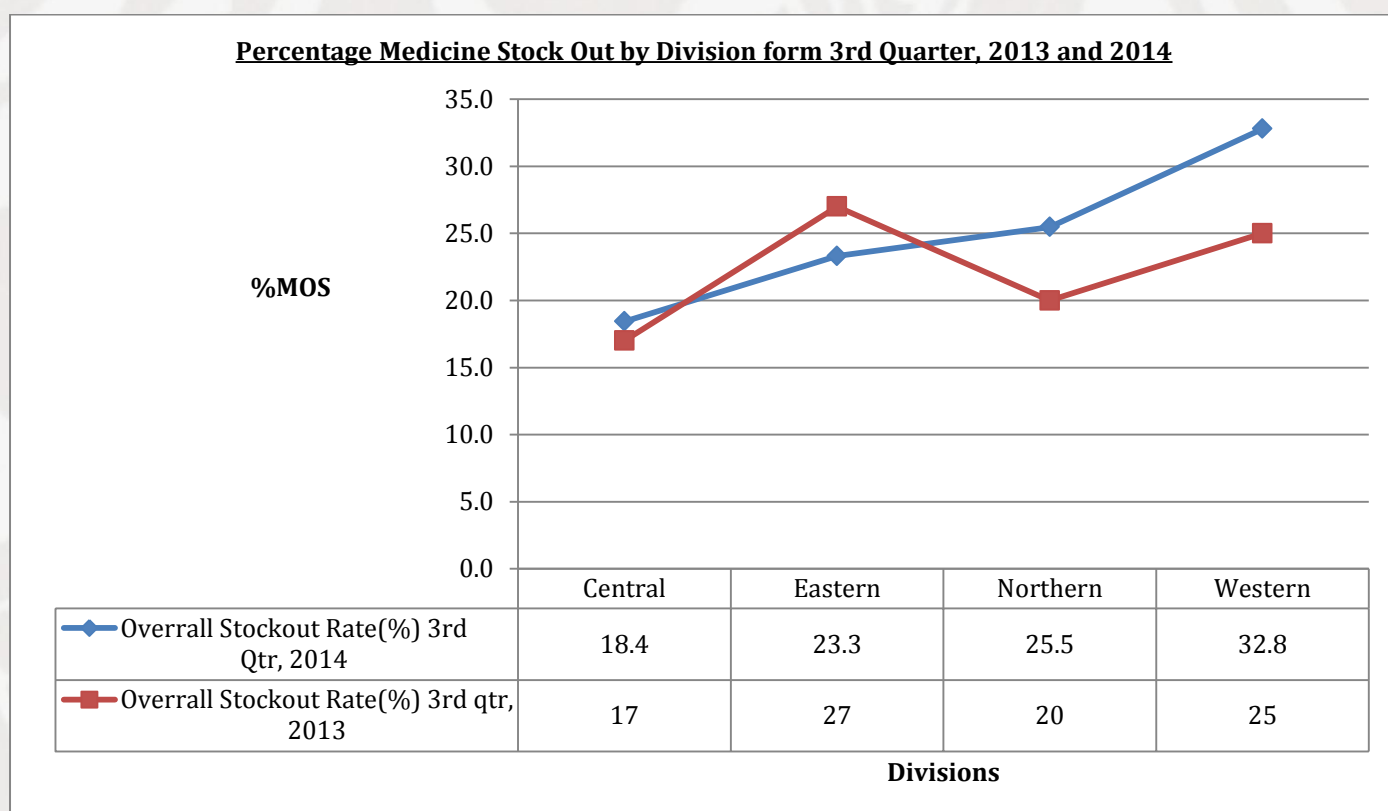
Central Division also had the highest number 'held over 12 hours' (n=772) followed by Northern division while the Western Division recorded the least. It was noted under Rewa Sub-division, that the Nausori medical area recorded the highest number 'held over 12 hours' (n=590).

Patients held over 12 hours should be transferred to hospital as the health centers are not designed to admit patients. This also warrants the initiation of a GOPD policy to ensure that pertinent service issues are adequately addressed and standardized amongst service facilities of a similar nature.

Ever since the decentralization of OPD, there has been increase in burden on Health Centres in the Central division catering for this adjustment in service direction. Therefore, the need for intervention in development of health facilities (medical area level and below) and facilitation of new strategies plan to be set in place for the improvement and strengthening of adequate care to patients is of essential. There is also a need for Policy directions to be set in place for the facilitation of resources and manpower.

1.11 Pharmacy Indicator

1.11.1 Medicine Stock-Out Comparative report



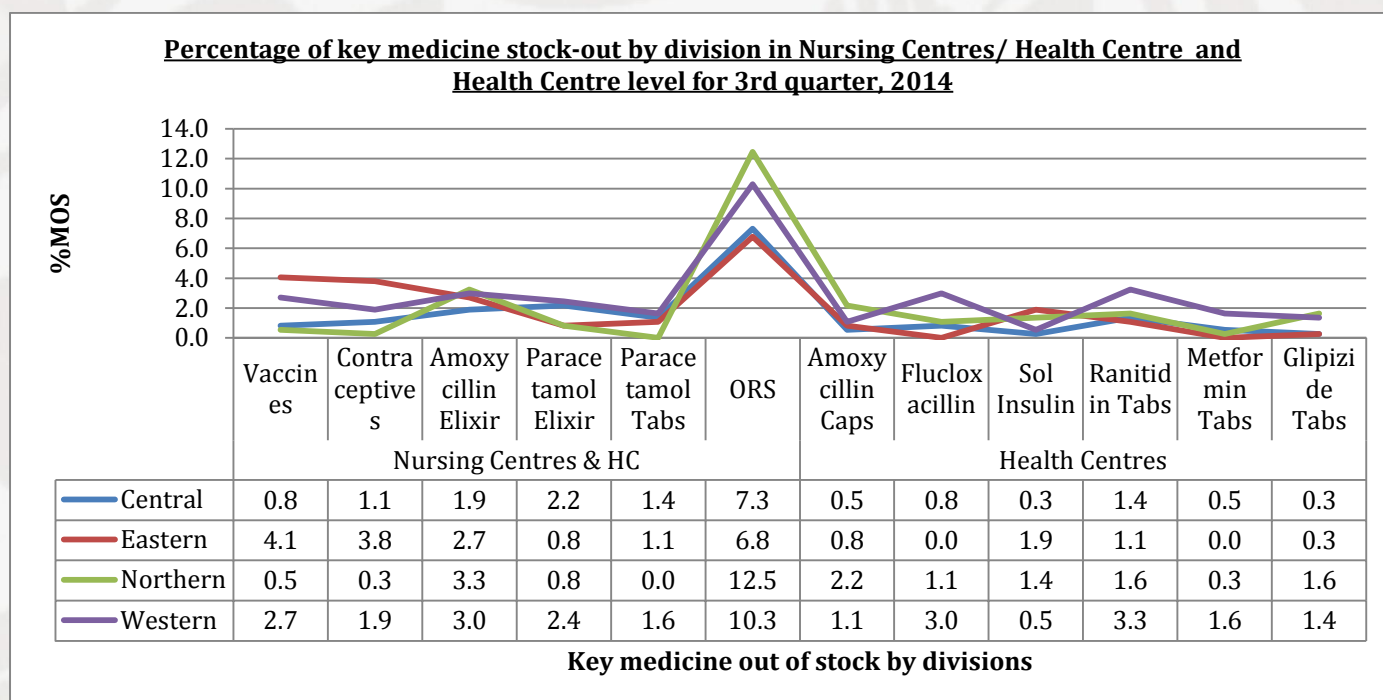
Source: PHIS Online – Medicine stock out tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

The PHIS records the number of occasions when any one of the key medicines from the 12 as per the PHIS form has been out of stock for a week or more each month for each Medical Area. As per the above graph, during 3rd Quarter, 2013, the Eastern Division had the most stock-out with 27% across all Medical Area while Central Division had the lowest percentage (17%).

When compared to the 3rd Quarter, 2014, the Western Division recorded 7.8% more stock-out followed by Northern (5.5%) and central (1.4%) in contrast Eastern Division recorded 3.7% less stock-out. The preceding analysis is based on 98% of reports received through PHIS online for the 3rd Quarter, 2013 and 100% reports received from 3rd quarter, 2014.

Commonly noted was the stock out of ORS in all four Divisions. In the Western Division, Lautoka Sub-Division and Nadroga/ Navosa Sub-Division (all medical areas) had the highest stock out followed by Northern Division where Cakaudrove Sub-Division and Macuata Sub-Division (all medical areas) had the higher frequency of stock outs; the Eastern Division stock outs were mostly in the Lakeba Sub-division (all medical areas); and Central Division stock outs were centered in Naitasiri Sub-Division (all medical areas). Out of Stocks were noted on a frequency greater than ten times in all the mentioned Sub-Divisions in the 3rd Quarter, 2014.

1.11.2 Key medicine stock-out by Division



Source: PHIS Online – Medicine stock out tabular report, [www.phisonline.gov.fj], HIU, MOHMS.

According to the above graph the Western Division recorded the highest stock-out for 3rd quarter, 2014, followed by the Eastern division, while Central Division recorded the lowest.

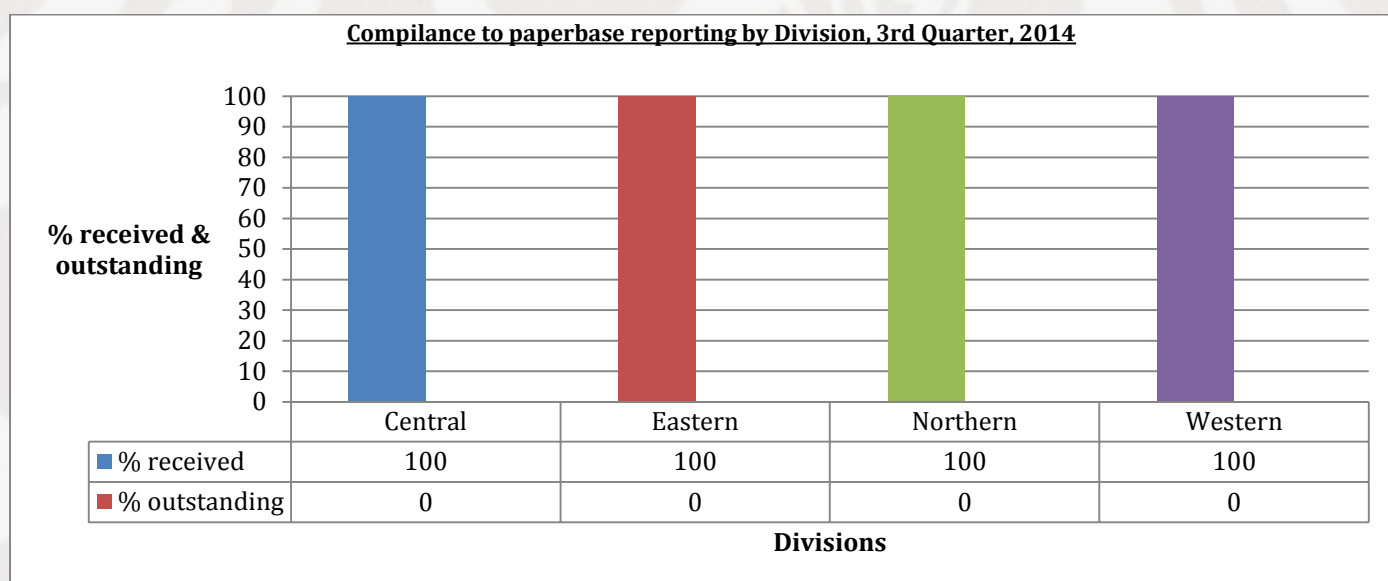
ORS recorded the highest stock out in all four Divisions. In the Northern Division (33.8%) stock outs were common in Cakaudrove Sub-Division (14.7%) and Macuata Sub-Division (8.8%), for all medical areas. The Western Division (27.9%) had stock outs centered in Lautoka (8.8%) and Nadroga/Navosa Sub-divisions (7.4%), for all medical area; and in Central Division (19.9%) stock outs were more frequent in the Naitasiri Sub-Division (7.4%) for all Medical area. The Eastern Division (18.4%) had stock outs centred in the Lakeba Sub-Division (7.4%) for all Medical areas. The stock out of ORS may be due to change in weather patterns relating to changes to accessibility of safe water and good hygiene practices giving rise to diarrhea. Alternately, this could be due to low resourcing of ORS.

Areas where medicine stock out were noted as follows, Western Division (32.8%) experienced the highest medicine stock out respectively throughout the quarterly series. In particular, Lautoka/ Yasawa (14.1) were noted to have the highest stock out, followed by Natabua MA (4.3%), Malolo MA (3.3%), Nacula MA (2.4%). The Ba SD (7.3%) frequently had stock outs in Ba MA (5.7%); and all the medical areas in Nadroga/ Navosa SD had stock outs (6.5%). The Northern Division (25.5%) had frequent stock outs in the Cakaudrove SD (12.7%) which consequentially had the highest stock out individually in its medical areas with Natewa MA (2.7%), Korotasere MA (2.4%), Saqani (2.2%), Macuata SD (7.0%), Lagi MA (2.2%) and Taveuni SD (4.1%). The Eastern Division (23.3%) had the highest frequency of stock outs in Lakeba SD (7.9%), Kadavu SD (7.3%) and Lomaiviti SD (5.7%). The Central Division (18.4%) had the lowest stock out amongst the divisions. However, Naitasiri SD (6.5%) had the highest stock outs in the Central division which evolved from Laselevu MA (2.4%); Tailevu SD contributed with (6%) the Lodon MA (5.7%) having higher frequency of stock outs in the Central division.

The relative geographical isolation could be one of the factors contributing to stock outs in the urban areas. However, proper drug management, fulfilling of quotas, abuse of stocks and review of quota according utilization and catchments may be a contributor of this consistent stock outs.

Compliance to reporting

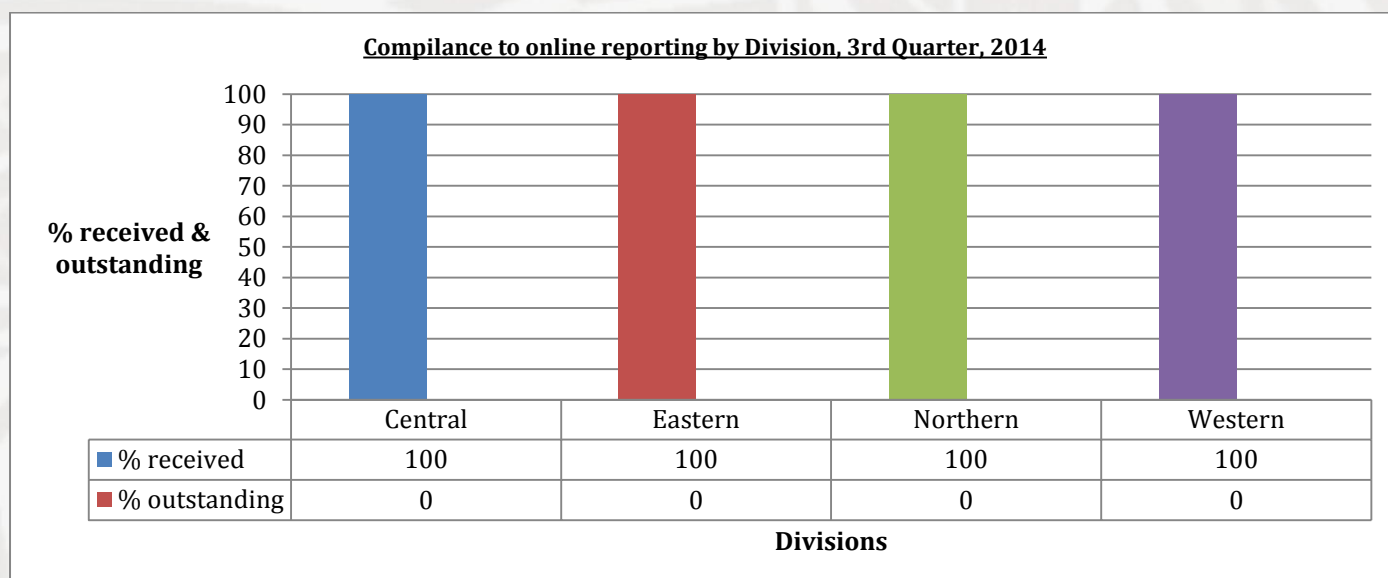
Paper base compliance to reporting – source PHIS register 2014



The preceding analysis is based on the 100% of reports received through the paper base reports from the four divisions for 3rd quarter, 2014. There was 0% decline in the receipt of reports was noted compared to 98% for the same period last year whereby western division was noted to have 91% of reports received through the paper base reports at HIU.

The above is based on the follow-up and routine monitoring by SDHS, DHIO's and HIU has contributed in the improvement in reporting.

Online compliance to reporting – source PHIS online register 2014 (www.phisonline.gov.fj)



The preceding analysis is based on 100% of reports received through PHIS online 3rd quarter, 2014. There was a great improvement in reporting by 2% in this quarter compared to the same period the previous year (98%). The discrepancy between the online reporting and paper-based is due to: the ability of Sub-divisions to access PHIS online for immediate data entry; the lag time for received paper base reports due to logistics. There is a continuation of the paper-based reports until the online systems are able to sustain reporting requirements. The need for monitoring and strengthening of the data entry is necessary and ownership of this information by contributors and users will make this sustainable in the long run.

PHIS On-Time compliance to reporting

This is the 3rd update of the monitoring of on-time submission:-

Figure 1.1 below shows the percentage of reports received On-Time by month for each division, 3rd Quarter, 2014. There has been a great improvement in submission within the 3 month period and this demonstrates the Divisions are effective and efficient in delivering 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 geographical challenges. Central division still lags completeness despite being less geographically isolated than the other divisions.

% of reports received On-Time by Division & by Month [received by 15th of the following month]				Total %
Division	July	August	September	
Central	85.71	100	100	95.2
Eastern	100	100	100	100
Northern	100	100	100	100
Western	100	100	100	100
National	96.4	100	100	98.8

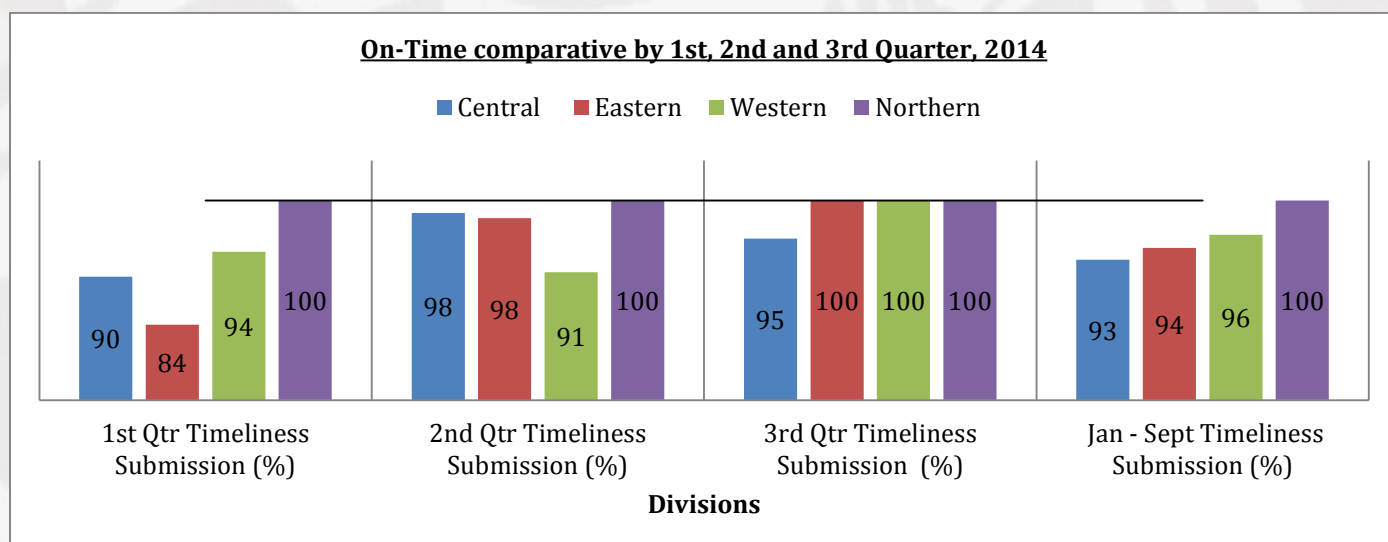
Figure 1.1 PHIS On-Time report for 3rd Quarter, 2014 (Source: PHIS register 2014)

Figure 1.2 below shows the medical areas that were late in reporting for each month by each division, 3rd Quarter, 2014. There were no reports pending from Northern Division as they were consistent in submitting their reports on-time, both online and paper based. Western and eastern divisions were consistent in submissions, however, some online entries were done centrally by HIU after receipt of the paper based reports

Reports received late by Month from the following Medical Areas [received after 15th of the following month]			
Division	July	August	September
Central	Valelevu Medical Area	Nil	Nil
	Lami Medical Area		
	Nuffield Clinic- Tamavua MA		
Eastern	Nil	Nil	Nil
Northern	Nil	Nil	Nil
Western	Nil	Nil	Nil

Fig 1.2: PHIS late reporting for 2nd Quarter, 2014. (Source: PHIS register 2014)

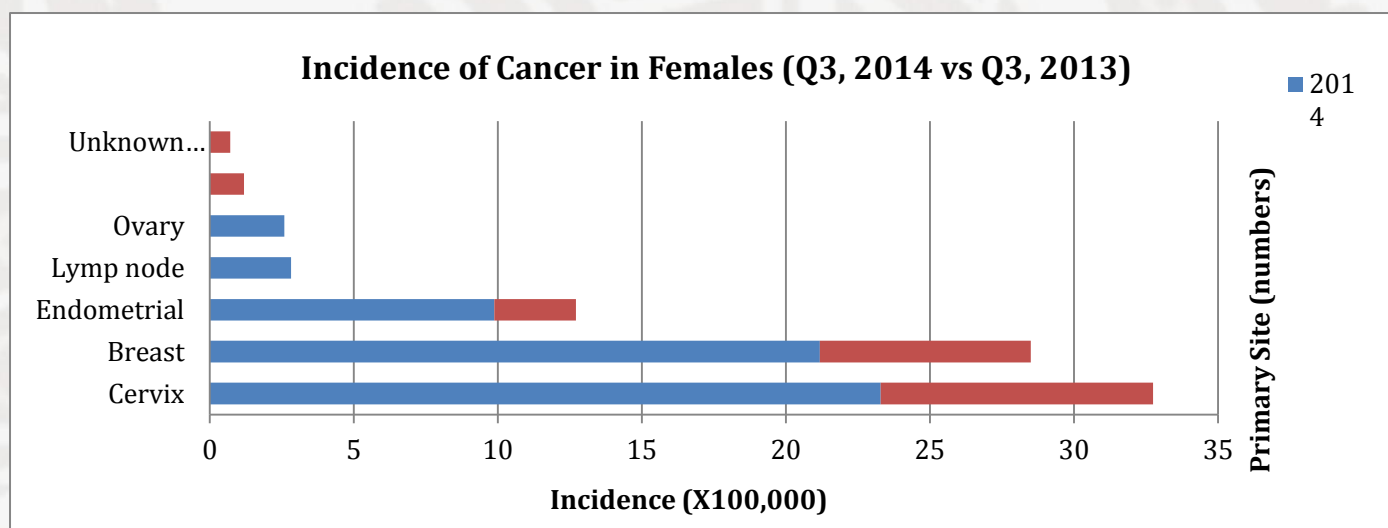
Comparative consistency in reporting by four Divisions for the last three quarters, 2014



The above graph shows the insinuations to the results on consistency in submitting On-Time coverage in reporting (100%). Northern, Western and Eastern Divisions were seen committed in submitting their report while Central struggle in On-Time submission

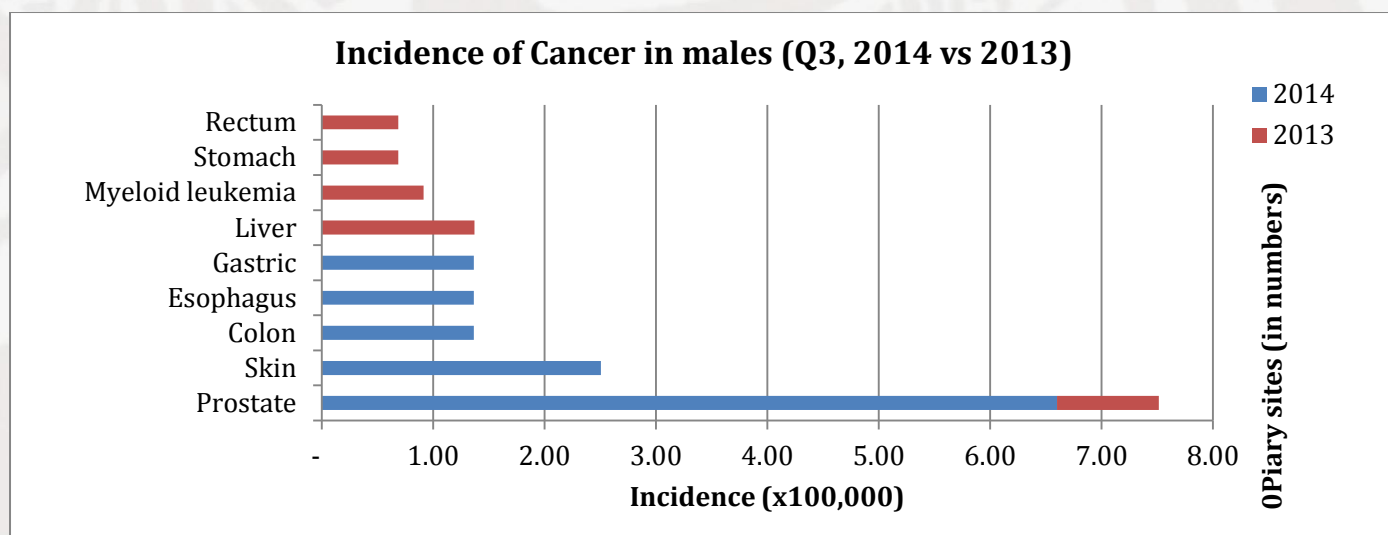
Non-Communicable Diseases

Cancer:



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

In the Q3 of 2014, a total of 99 cases were received from pathology reports and MCDC. This is compared to 40 cases received for this time last year. The substantial increase in cases can be attributed to increased timeliness in reporting. The 3 leading sites for cancer amongst women continue to be cervical, breast and endometrial. This reflects a 5 year trend. Cervical cancer was noted to be higher in the 45-49 age group. However when disaggregated by ethnicity, Itaukei women had 2 peaks, 35-39 and 45-54. FIDs had one peak reflecting the general trend at 45-49. The cases of breast cancer were reported with a higher frequency amongst the 55+ age groups, higher in I-Taukei than FIDs (2:1 ratio approximately). Endometrial cancers were noted to be higher in Itaukei females compared to FIDs females (2:1 ratio) with a peak in the >55 age group.



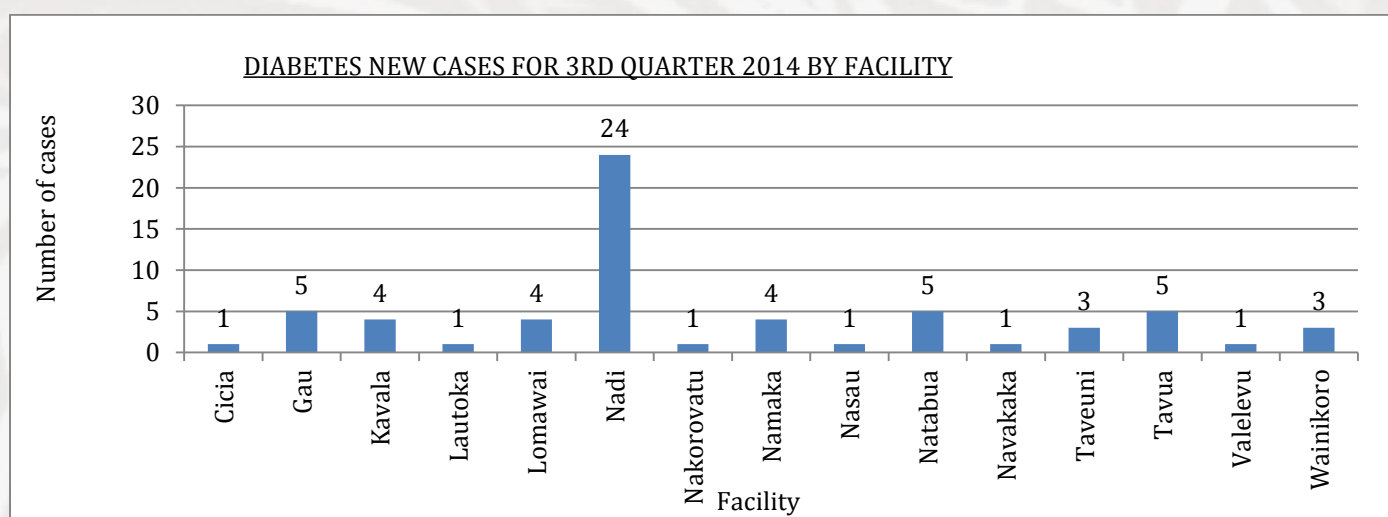
Source: Pathology report, MCDC, Hosp.tear-off & Patis

A total of 516 cases were received in Q3, 2014 compared to 391 for 2013. Out of this 29% were males (n= 152) and 71% were females (n=364). I-Taukei had a higher frequency of cancers compared to FIDs and FODs (almost twice as many cases). The rise in cases can be attributed to increase reporting, as can also observe with female cancer rates. Prostate cancer continues to be the leading site for males (n=30). Prostate cancers were reported with greatest frequency in the 70+ age group for this quarter, with the highest frequency noted in the Itaukei population (almost twice as high as in the FIDs populations). This quarter also had an unusual rise in reporting of skin cancers (n=11). Skin cancers were noted to be almost equally distributed amongst the 2 predominant ethnicities with a peak in the 50-64 age group. Cancers of the Colon were noted to be higher in FIDs males with a peak age group in 55-59.

Cancer cases in Paediatric Population

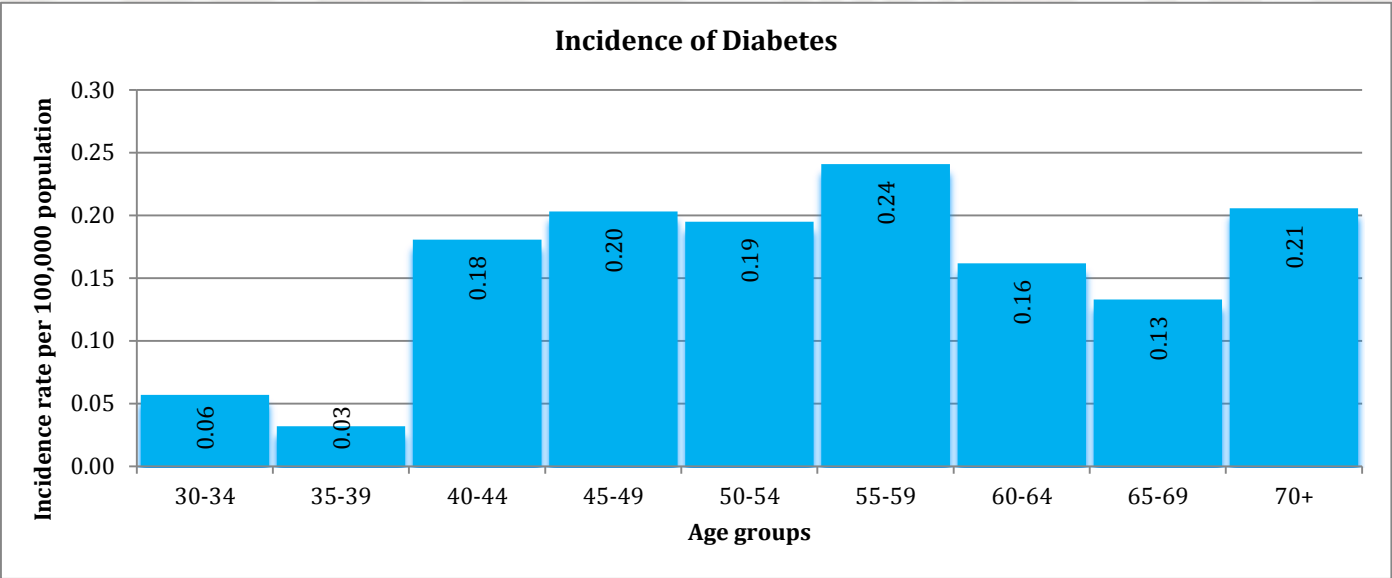
In Q3, 2014, 1 case of Paediatric cancer was reported. This is a decrease of 10 compared to the same time last year. The overall standardized rate is 0.43063 cases per 100,000 of the Paediatric population. The case was a FID aged 6 years, reported from the Western division, diagnosed with Cancer of the Bone marrow.

2.3 DIABETES:



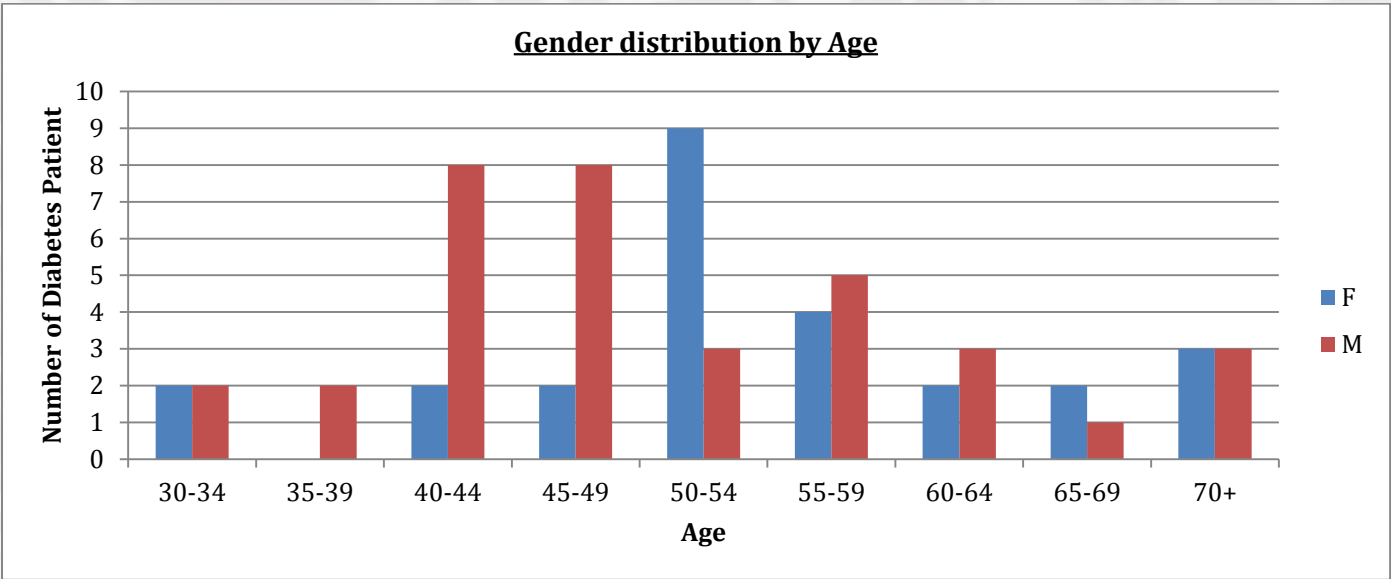
Source: DM Notification Form

63 diabetic notifications were received for the Q3, 2014. This figure is likely to be grossly underreported with only 15 out of 102 facilities submitting reports. For the same time period, PHIS online reports 266 new cases.



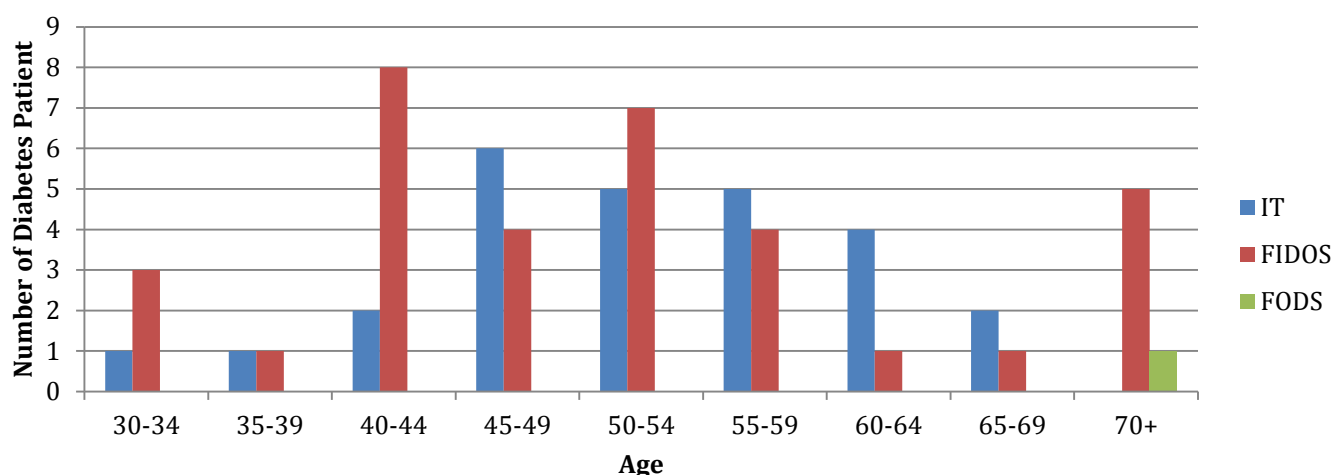
Source: DM Notification Form

The majority of new cases of diabetes are in those ranging from 45-59. This trend has continued from 2013.



The above graph represents the new diabetic cases between the age group of 30-70 by gender. It indicates that males contribute the highest number of diabetes patient in the age group 40-49 in the present quarter compared to females in the age group 40-59 in the same quarter of 2013. However for women between the ages of 50-54 the number of new cases significantly increases, making up the majority of cases in this group. This may be due to severe underreporting from health facilities.

Ethnicity distribution by Age



Fijians of Indian Descent continue to make up the bulk of new diabetes cases. This reflects the overall national trend and also reflects known genetic risk factors. It should be noted however, that this rising trend may also be as a result of health seeking behavior.

NOTIFIABLE DISEASES

Data for the Notifiable diseases are obtained from the Notifiable Diseases Certificates received from the public Health Facilities and Private Practitioners, every week – ending.

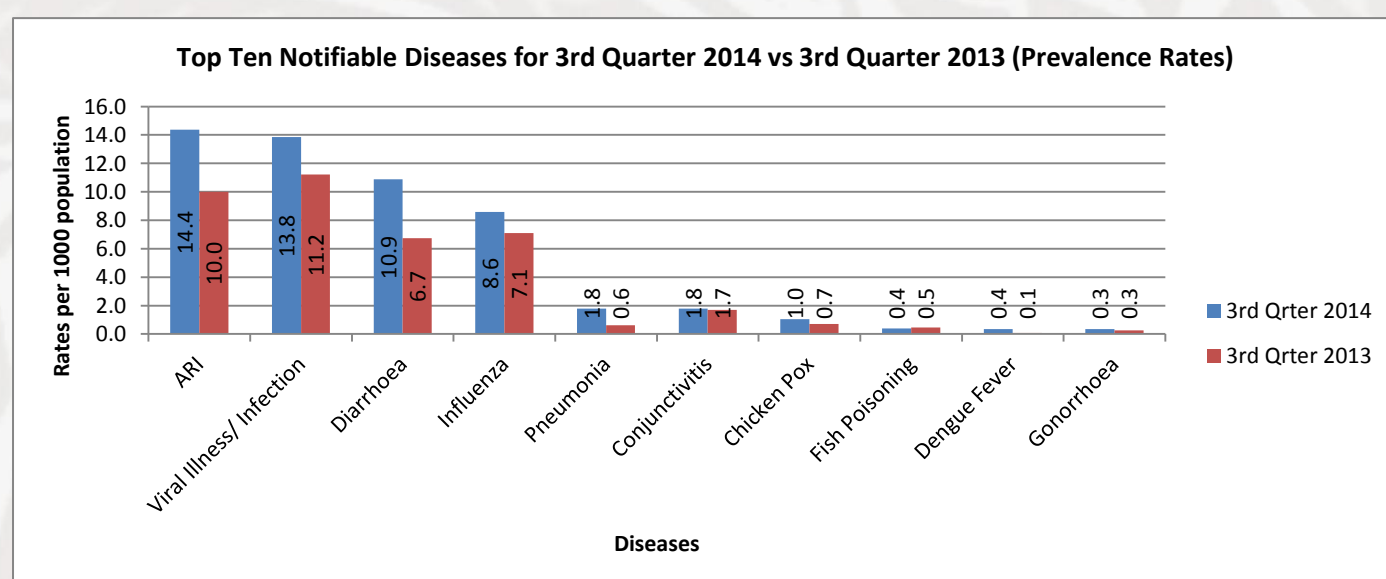
Notifiable Diseases by Months for 3rd Quarter 2014

No.	Diseases	July	August	September	Total
1	Acute Poliomyelitis	0	0	0	0
2	Acute Respiratory Infection	5009	4632	3493	13134
3	Anthrax	0	0	0	0
4	Brucellosis	0	0	0	0
5	Chicken Pox	233	383	331	947
6	Cholera	0	0	0	0
7	Conjunctivitis	510	548	576	1634
8	Dengue Fever	214	66	44	324
9	Diarrhoea	2966	4720	2264	9950
10	Diphtheria	0	0	0	0
11	Dysentery (a) Amoebic	0	0	0	0
	(a) Bacillary	9	25	8	42
12	Encephalitis	0	0	0	0
13	Enteric Fever (a) Typhoid	29	14	15	58
	(b) Para Typhoid	0	0	0	0
14	Fish Poisoning	117	131	119	367
15	Ciguatera Fish Poisoning	7	1	0	8
16	Food Poisoning	7	6	6	19
17	German Measles (Rubella)*	10	24	11	45
18	Infectious Hepatitis	13	25	32	70
19	Influenza	3031	2942	1888	7861
20	Leprosy	0	0	0	0
21	Leptospirosis	3	2	4	9
22	Malaria	0	0	0	0
23	Measles (Morbilli)*	1	34	8	43
24	Meningitis*	5	3	5	13

25	Mumps	0	1	1	2
26	Plague	0	0	0	0
27	Pneumonia	343	723	574	1640
28	Puerperal Pyrexia	0	0	0	0
29	Relapsing Fever	0	0	0	0
30	Rheumatic Fever	2	1	1	4
31	Smallpox	0	0	0	0
32	Tetanus	0	0	0	0
33	Trachoma	4	14	23	41
34	Tuberculosis (a) Pulmonary	34	40	10	84
	(b) Others	0	0	0	0
35	Typhus	0	0	0	0
36	Viral Illness/ Infection	3613	4654	4393	12660
37	Whooping Cough	8	0	0	8
38	Yaws	0	0	0	0
39	Yellow Fever	0	0	0	0
40	<u>Sexually Transmitted Diseases</u>				
	(a) Gonorrhoea	93	104	118	315
	(b) Candidiasis	29	59	34	122
	(c) Chlamydia	0	0	0	0
	(d) Congenital Syphilis	9	3	4	16
	(e) Granuloma Inguinale	0	0	0	0
	(f) Herpes Zoster	3	3	1	7
	(g) Ophthalmia Neonatorum	4	3	0	7
	(h) PID	0	0	0	0
	(i) Syphilis	41	51	28	120
	(j) Trichomoniasis	2	2	4	8
	(k) Veneral Warts	0	0	0	0

Source: NNDSS

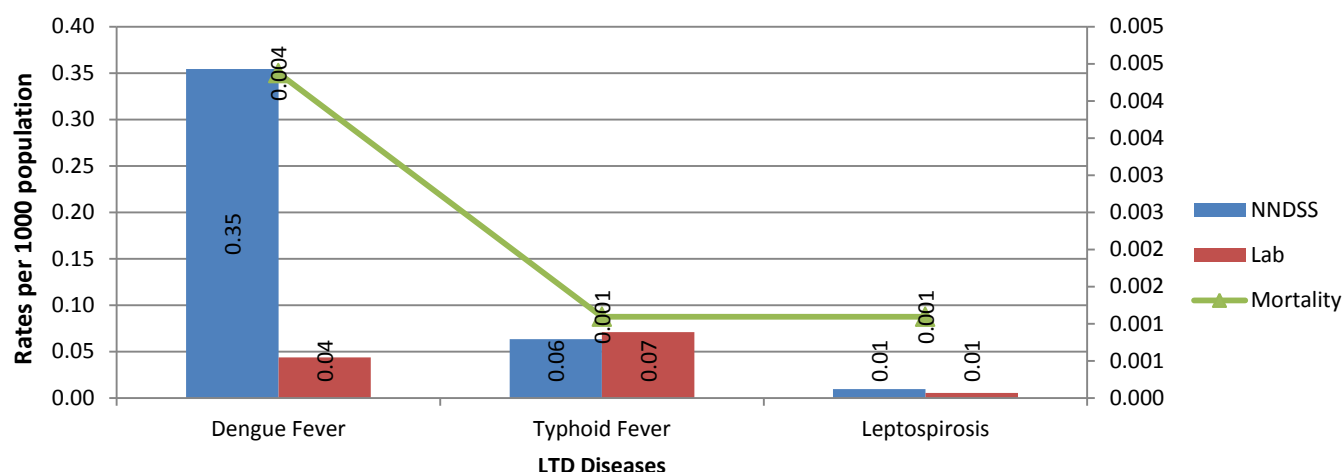
*The measles (Rubella and Morbilli) are suspected cases; there are no confirmed cases as clarified by the FCCDC team. This could possibly mean that some clinicians are still confusing chicken pox and other rash like illnesses with measles; in lieu of this a request to the Family Health unit would be to ensure specific training to address this. Meningitis cases were reported from CWMH (6), Lautoka Hospital (2), Labasa Hospital (4) and Levuka (1).



3.2 Source: NNDSS

The rates were calculated using 2012 population (899735) and 2013 population (914663) and reported as per 1000 population. The predominance of ARI, Viral Illness, Diarrhoea and Influenza is noted in both 2013 and 2014. The GPs reports are also included; therefore the figures are higher in 2014 compared to 2013.

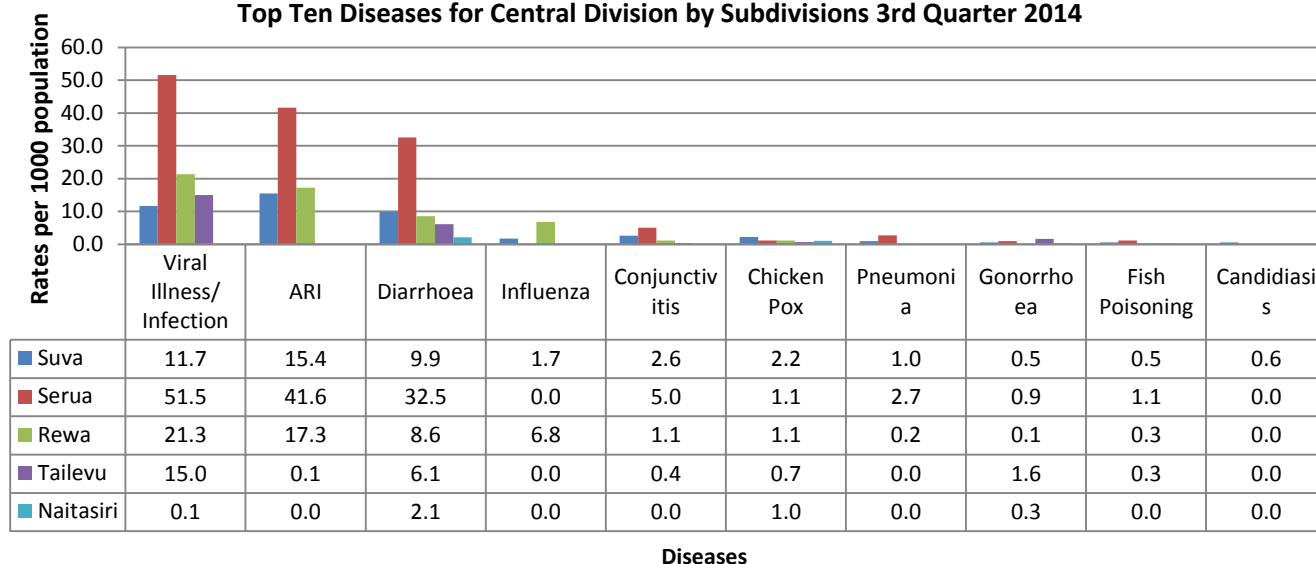
Prevalence Rates for LTD Data from NNDSS, Lab Data and Mortality 3rd Quarter 2014



Source: NNDSS & Lab Data

The rates were calculated using 2013 population (914663) and reported as per 1000 population. These data are obtained from NNDSS and Lab data from Mataika House. There is a predominance of Dengue Fever from the NNDSS compared to lab data; due to the suspected cases are also being reported as Dengue Fever in NNDSS. The NNDSS reported 324 cases of Dengue Fever compared to lab confirmed are 40 cases. The Lab confirmed cases of Typhoid fever are 65 and NNDSS are 58 cases. According to the Mataika House when this report was compiled, the Leptospirosis samples for September are yet to be tested due to the batching of samples from the divisions. There were 9 cases of Leptospirosis reported from NNDSS whereas 5 cases were from Lab data. The Mortality numbers for Typhoid fever is 1 case, Dengue Fever 4 cases and Leptospirosis is 1 case.

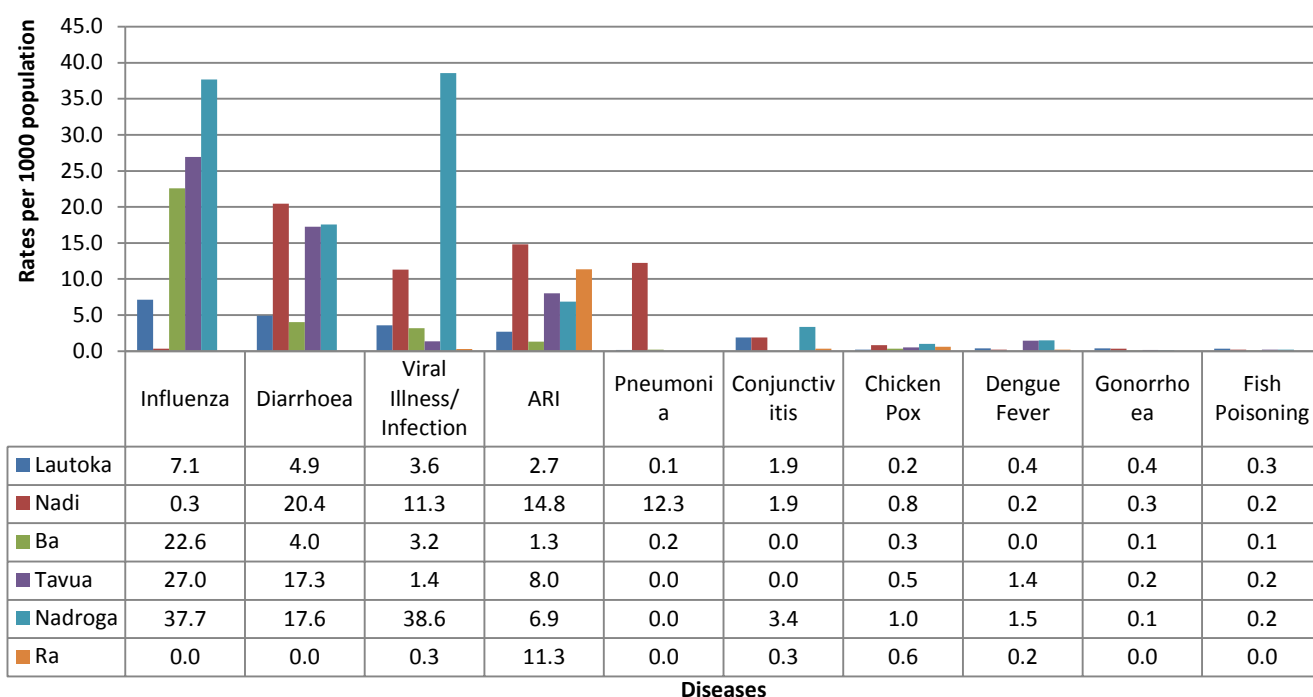
Top Ten Diseases for Central Division by Subdivisions 3rd Quarter 2014



Source: NNDSS

The rates were calculated using 2013 sub divisional population (Suva 216540, Serua 29625, Rewa 84413, Tailevu 19963 and Naitasiri 20002) and reported as per 1000 population. The predominance of Viral Illness, ARI, Diarrhoea, Influenza and Conjunctivitis were recorded in central division and is mostly recorded in Serua/ Namosi; due to the complete report received from this sub division. The top four conditions in Central division are following the national ranking but in different rank order.

Top Ten Diseases for Western Division by Subdivisions 3rd Quarter 2014

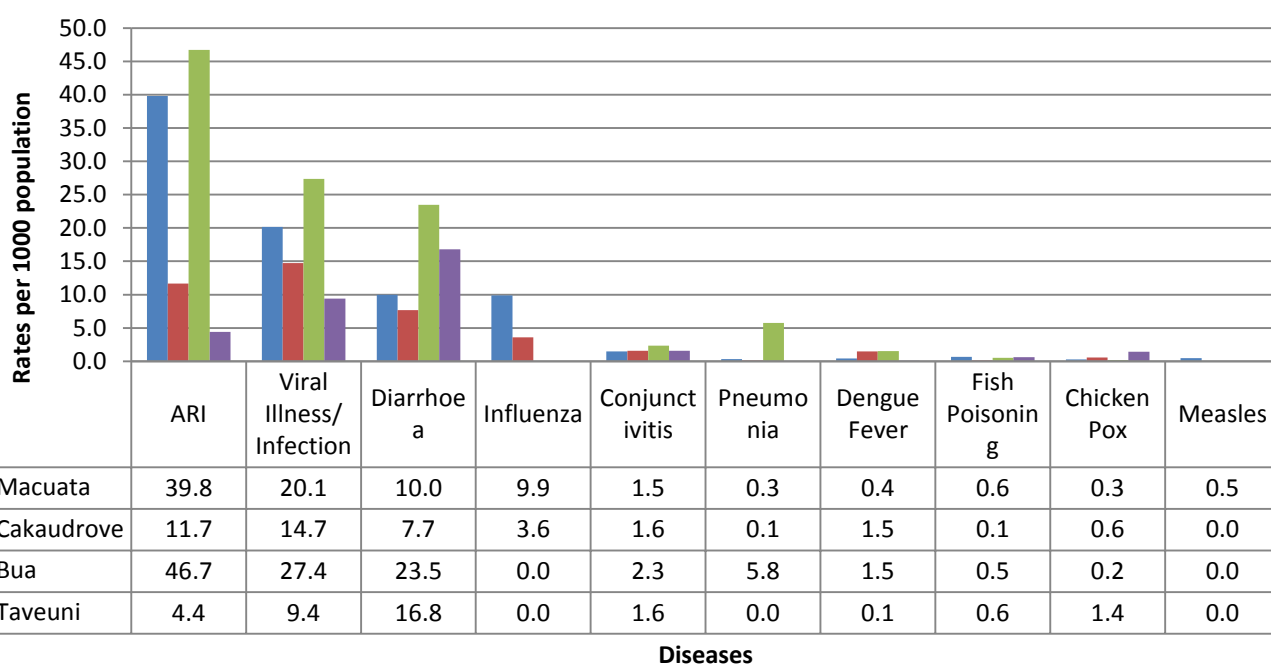


Source: NNDSS

The rates were calculated using 2013 sub divisional populations (Lautoka 108141, Nadi 90993, Ba 55825, Tavua 26529, Nadroga 53971 and Ra 29920) and reported as per 1000 population. The predominance of Influenza, Diarrhoea, Viral Illness, ARI and Pneumonia were recorded in Western division and is mostly recorded in Nadroga; due to the complete report received from this sub division. All the conditions in Western division are following the national ranking order but in differing rank order

Dengue cases are noted in Lautoka, Nadi, Tavua, Nadroga and Ra signaling for public health interventions for prevention of outbreaks such as the 2013-2014 outbreaks.

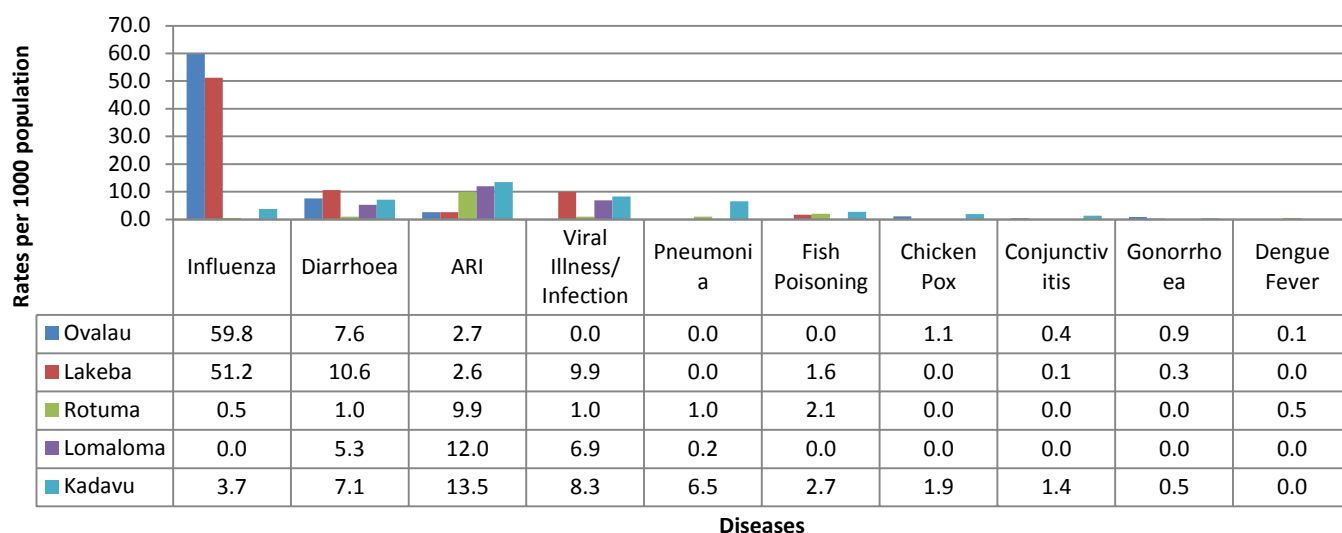
Top Ten Diseases for Northern Division by Subdivisions 3rd Quarter 2014



Source: NNDSS

The rates were calculated using 2013 sub divisional population (Macuata 75089, Cakaudrove 32717, Bua 15961 and Taveuni 16556) and reported as per 1000 population. The predominance of ARI, Viral Illness, Diarrhoea, Influenza and Conjunctivitis were recorded in Northern division. Majority of the cases are recorded in Bua and Macuata sub divisions; due to the complete reports received from these sub division. The top nine conditions in Northern division are following the national ranking but in different rank order. Measles was noted amongst the top ten with 34 cases reported in Macuata sub division.

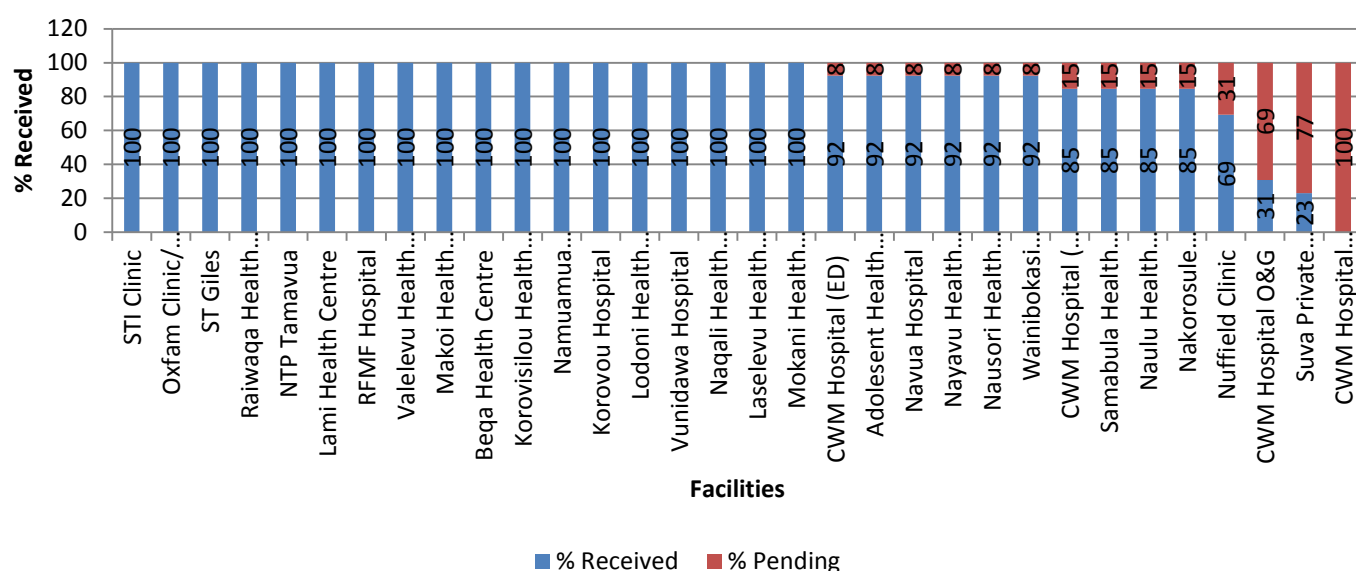
Top Ten Diseases for Eastern Division by Subdivisions 3rd Quarter 2014



Source: NNDSS

The rates were calculated using 2013 sub divisional population (Lomaiviti 13886, Lakeba 7284, Rotuma 1921, Lomaloma 4332 and Kadavu 10995) and reported as per 1000 population. The predominance of Influenza, Diarrhoea, ARI, Viral Illness and Pneumonia were recorded in Eastern division. Majority of the cases are recorded in Ovalau and Lakeba sub divisions. All the conditions in Eastern division are following the national ranking order but in differing rank order.

3rd Quarter NNDSS Received Certificates for Central Division 2014

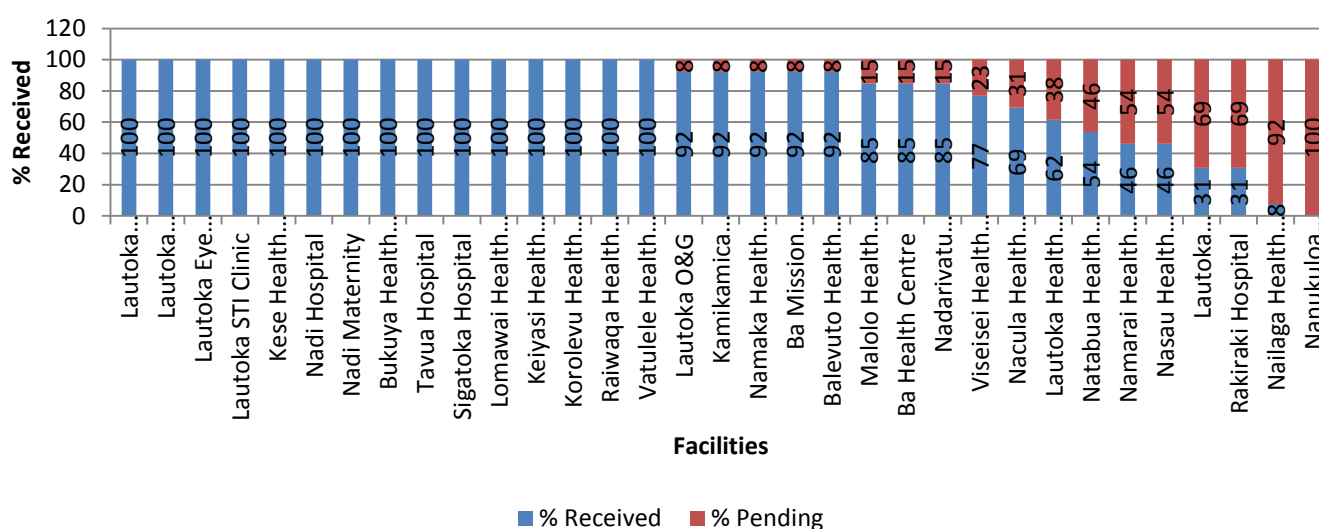


Source: NNDSS

For Central division 88% reports being received for 3rd quarter 2014.

When this issue had been compiled reports from CWM Hosp O&G, CWM Paediatric, CWM Medical, CWM ED, Adolescent Health Development, Nuffield Clinic, Samabula HC, Suva Private, Naulu HC, Navua Hosp, Nayavu HC, Nakorosule HC, Nausori HC and Wainibokasi HC were still pending resulting in lower cases of reportable communicable diseases in Central division.

3rd Quarter NNDSS Received Certificates for Western Division 2014

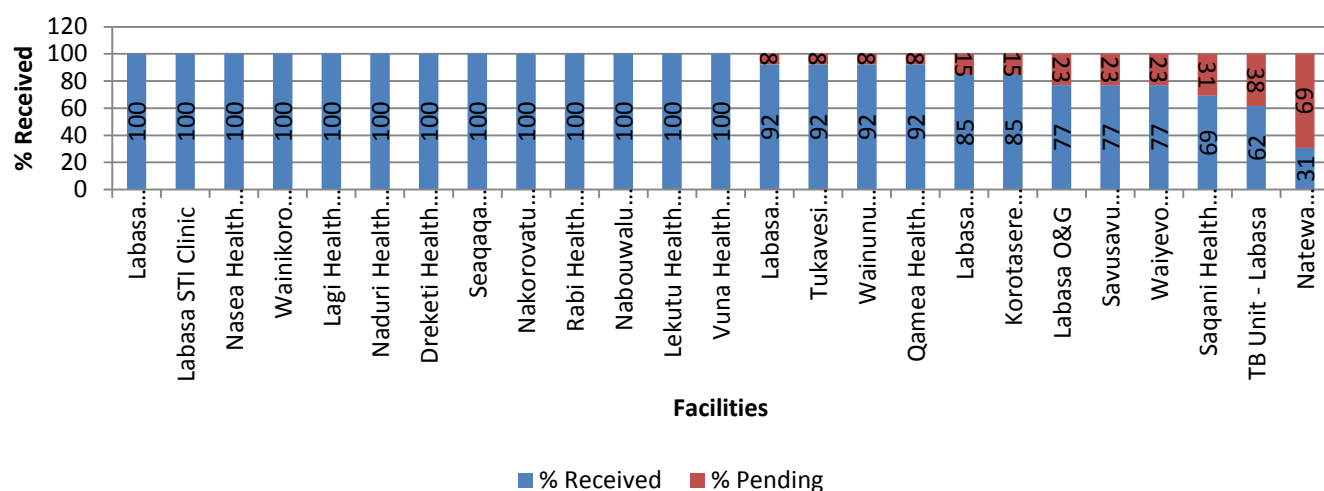


Source: NNDSS

For Western division 80% reports being received for 3rd quarter 2014.

When this issue had been compiled reports from Lautoka Hosp (medical), Lautoka O&G, Lautoka HC, Natabua HC, Nacula HC, Malolo HC, Viseisei HC, Kamikamica HC, Namaka HC, Ba HC, Ba Mission Hosp, Balevuto HC, Nailaga HC, Rakiraki Hosp, Nanukuloa HC, Namarai HC and Nasau HC were still pending resulting in lower cases of reportable communicable diseases in Western division.

3rd Quarter NNDSS Received Certificates for Northern Division 2014

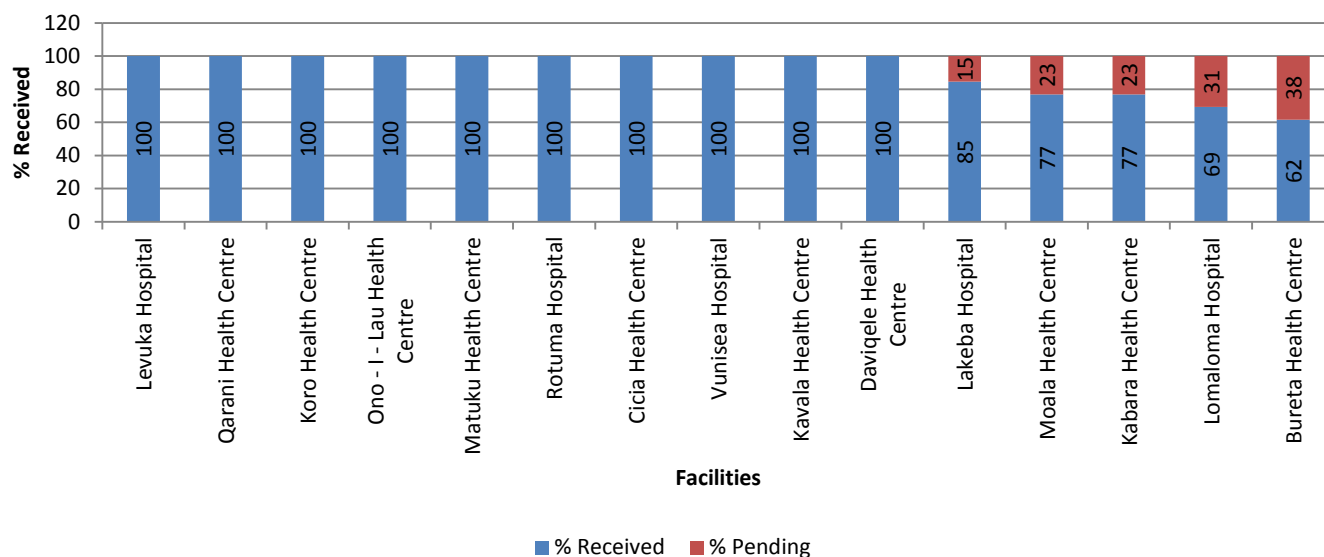


Source: NNDSS

For Northern division 89% reports being received for 3rd quarter 2014.

When this issue had been compiled reports from Labasa Hosp (GOPD), Labasa O&G, TB unit Labasa, Savusavu Hosp, Natewa HC, Tukavesi HC, Saqani HC, Korotasere HC, Wainunu HC and Waiyevo Hosp were still pending resulting in lower cases of reportable communicable diseases in Northern division.

3rd Quarter NNDSS Received Certificates for Eastern Division 2014

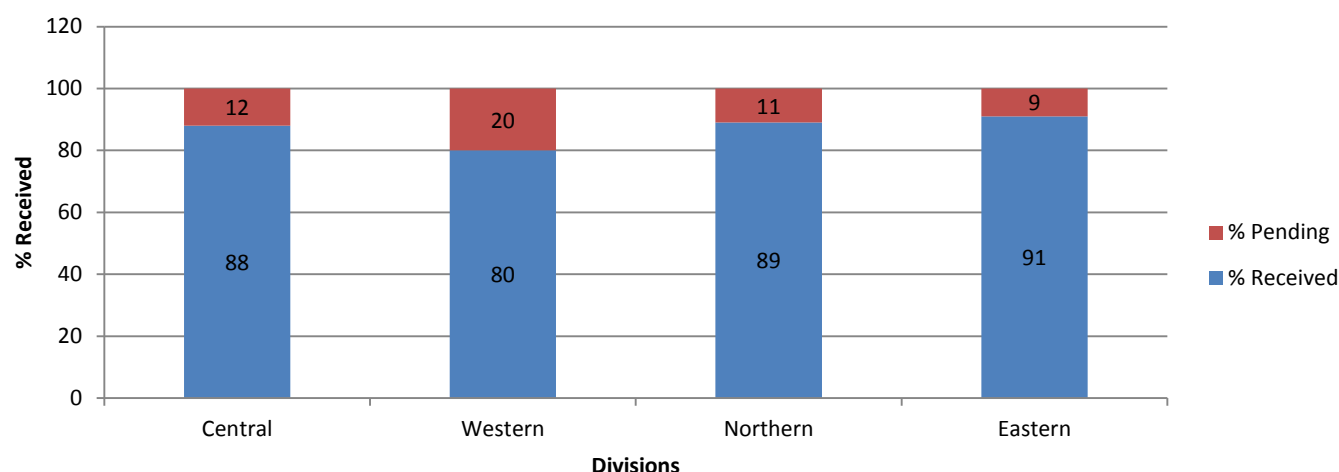


Source: NNDSS

For Eastern division 91% reports being received for 3rd quarter 2014.

When this issue had been compiled reports from Bureta HC, Lakeba Hosp, Moala HC, Kabara HC and Lomaloma Hosp were still pending resulting in lower cases of reportable communicable diseases in Eastern division.

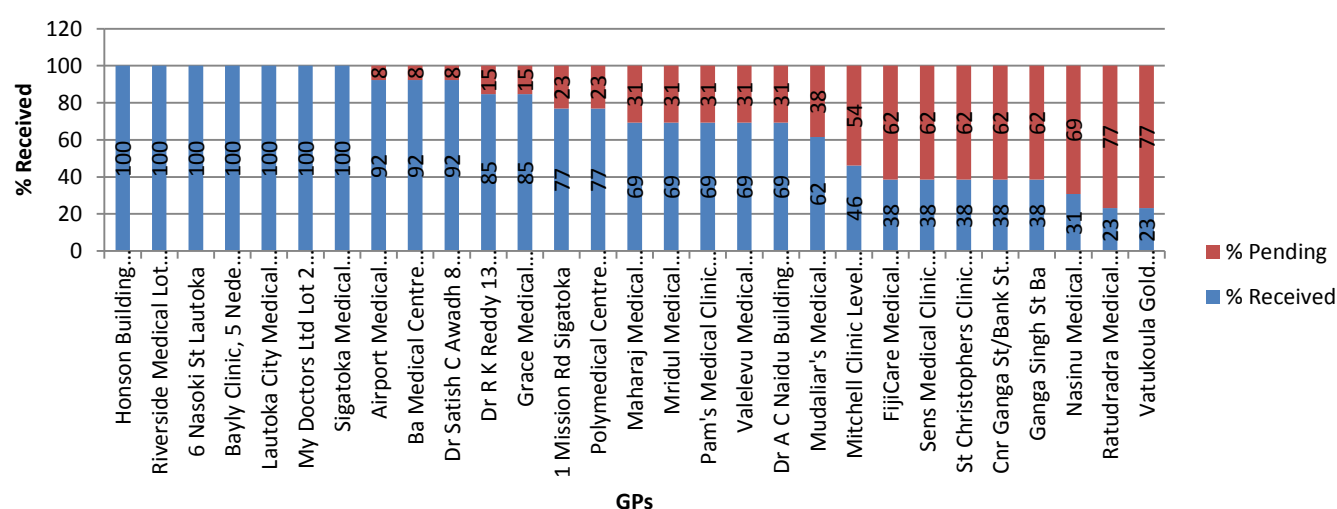
NNDSS Received Certificates by Divisions for 3rd Quarter 2014



Source: NNDSS

Overall the reports received from all the division has been improved compared to the previous years. The total percentage of reports being received for Central division is 88%, Western is 80%, Northern division 89%, and Eastern is 91%. This report is compiled in the 3rd week of October but still there is no 100% report received from any of the divisions.

GPs Reports Received for 3rd Quarter 2014



Source: NNDSS

The General Practitioners have been reporting the Notifiable disease reports since April of this year (2014) and acknowledging all the private practitioners who have been submitting their reports. A total of 29 GPs have submitted their reports for the 3rd quarter 2014 (July to September). Acknowledgement is made to the 7 GPs who have complied with 100% reporting for the 3rd 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 Suva Private Lab). This also draws your attention to the non-compliance of reporting from the Suva Private Hospital and Nasese Medical Centre, two of the largest provider of private health care in-country.

MORTALITY

(Data source: Medical cause of death certificates)

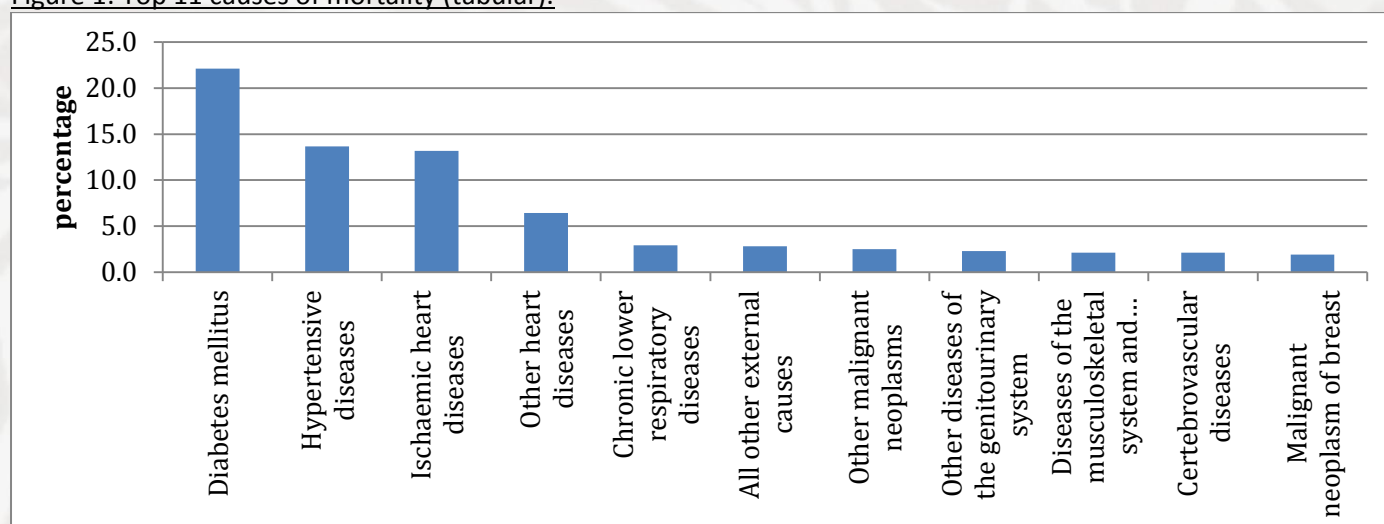
A total of 995 Medical Cause of Death Certificates were received at the Health Information Unit at the end of the third quarter 2014 giving an estimated Crude death Rate of 1 per 1000 population (using the 2013 population as denominator). This does not include twenty one stillbirths and eight abortions. Compared to the third quarter of last year there were 848 certificates received giving an estimated crude death rate of 1 per 1000 population (using the 2012 population as denominator).

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

Code	Description	Total	%
I00-I99	Diseases of the circulatory system	360	37.7
E00-E90	Endocrine, nutritional and metabolic diseases	234	24.5
C00-D48	Neoplasms	101	10.6
V01-Y98	External causes of mortality	69	7.2
A00-B99	Certain infectious and parasitic diseases	46	4.8
J00-J99	Diseases of the respiratory system	45	4.7
N00-N99	Diseases of the genitourinary system	25	2.6
M00-M99	Diseases of the musculoskeletal system and connective tissue	21	2.2
G00-G99	Diseases of the nervous system	17	1.8
K00-K93	Diseases of the digestive system	16	1.7
Grand Total		955	100

Non Communicable Diseases are the major causes of mortality for 2014 third quarter covering 80% of the total mortality and 20% covers the rest of the diseases. Diseases of the circulatory system recorded 37.7% followed by endocrine, nutritional and metabolic diseases with 24.5%, Neoplasm recorded 10.6%, External causes of injuries 7.2% and diseases of the respiratory system 4.7%. The causes of mortality have been analyzed excluding the ill-defined causes of mortality, which is 2.2%. In comparison to the same period last year, NCD was also the major causes of mortality covering 75.7% and 24.3% accounted for the diseases. Circulatory diseases made up 38.1%, endocrine and nutritional and metabolic diseases contributed by 21.0%, neoplasms 11.6%, infectious diseases 5.1%, respiratory diseases 4.0% and injuries 5.1%.

Figure 1: Top 11 causes of mortality (tabular).



The graph above shows that NCDs are the major causes of mortality with diabetes leading by 22.1%. Other external causes of mortality include 19 deaths due to hanging with undetermined intent, 3 due to poisoning, 2 due to accidental exposure to unspecified factor, 2 due to inhalation and ingestion of food causing obstruction of respiratory tract, 1 due to late complication of surgery and 1 due to contact with blunt object.

74% of deaths due to ischaemic heart diseases and 53.7% of deaths due to hypertension are male while 60% of the deaths due to diabetes mellitus are females. These are all adult deaths from age 40 years and above.

Table 2: Males vs Females mortality

Male

Code	Description	Total	%
I00-I99	Diseases of the circulatory system	216	40.6
E00-E90	Endocrine, nutritional and metabolic diseases	94	17.7
V01-Y98	External causes of mortality	52	9.8
C00-D48	Neoplasms	37	7.0
J00-J99	Diseases of the respiratory system	28	5.3
A00-B99	Certain infectious and parasitic diseases	26	4.9
N00-N99	Diseases of the genitourinary system	13	2.4
K00-K93	Diseases of the digestive system	12	2.3
R00-R99	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	10	1.9
M00-M99	Diseases of the musculoskeletal system and connective tissue	9	1.7
P00-P96	Certain conditions originating in the perinatal period	9	1.7
G00-G99	Diseases of the nervous system	7	1.3
Q00-Q99	Congenital malformation, deformation and chromosomal abnormalities	7	1.3
D50-D89	Diseases of blood and blood forming organs and certain disorders involving the immune mechanism	5	0.9
F00-F99	Mental and behavioral disorders	3	0.6
L00-L99	Diseases of the skin and subcutaneous system	1	0.2
	Total	528	

Female

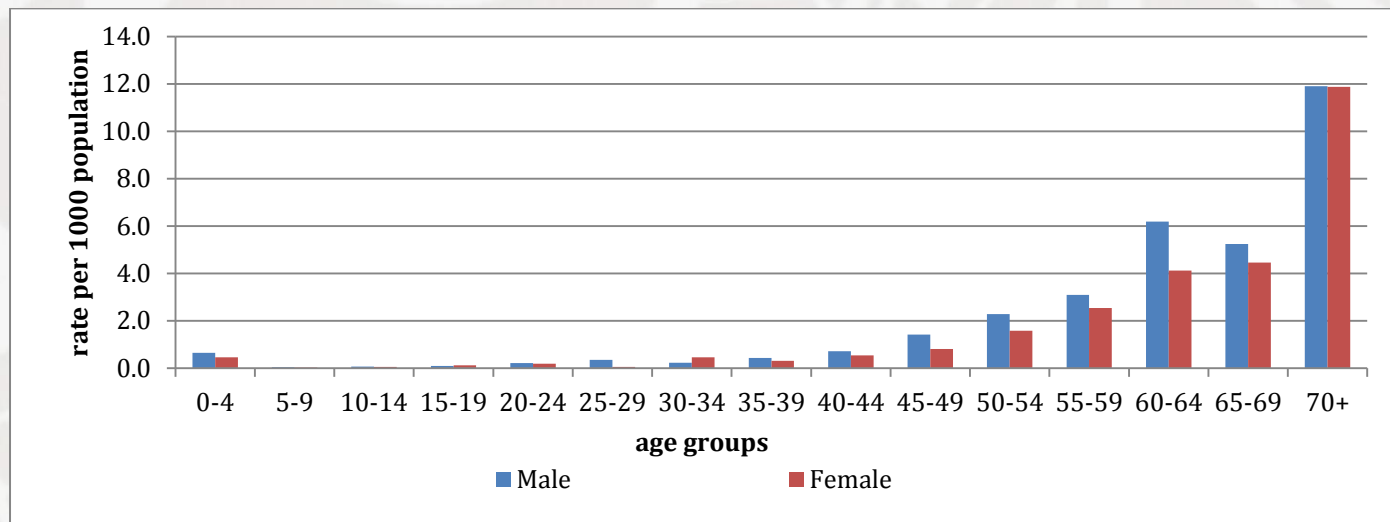
Code	Description	Total	%
I00-I99	Diseases of the circulatory system	144	31.1
E00-E90	Endocrine, nutritional and metabolic diseases	140	30.2
C00-D48	Neoplasms	64	13.7
A00-B99	Certain infectious and parasitic diseases	20	4.3
V01-Y98	External causes of mortality	17	3.7
J00-J99	Diseases of the respiratory system	17	3.7
N00-N99	Diseases of the genitourinary system	12	2.6
M00-M99	Diseases of the musculoskeletal system and connective tissue	12	2.6
R00-R99	Symptoms, signs and abnormal clinical and laboratory findings not elsewhere classified	11	2.4
G00-G99	Diseases of the nervous system	10	2.2
P00-P96	Certain conditions originating in the perinatal period	6	1.3
L00-L99	Diseases of the skin and subcutaneous system	5	1.1
K00-K93	Diseases of the digestive system	4	0.9
D50-D89	Diseases of blood and blood forming organs and certain disorders involving the immune mechanism	3	0.6
Q00-Q99	Congenital malformation, deformation and chromosomal abnormalities	1	0.2
	Total	466	

There were 528 male deaths and 466 female deaths. There were more female deaths on neoplasm and endocrine, nutritional and metabolic diseases than male even though male die more than female. 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.

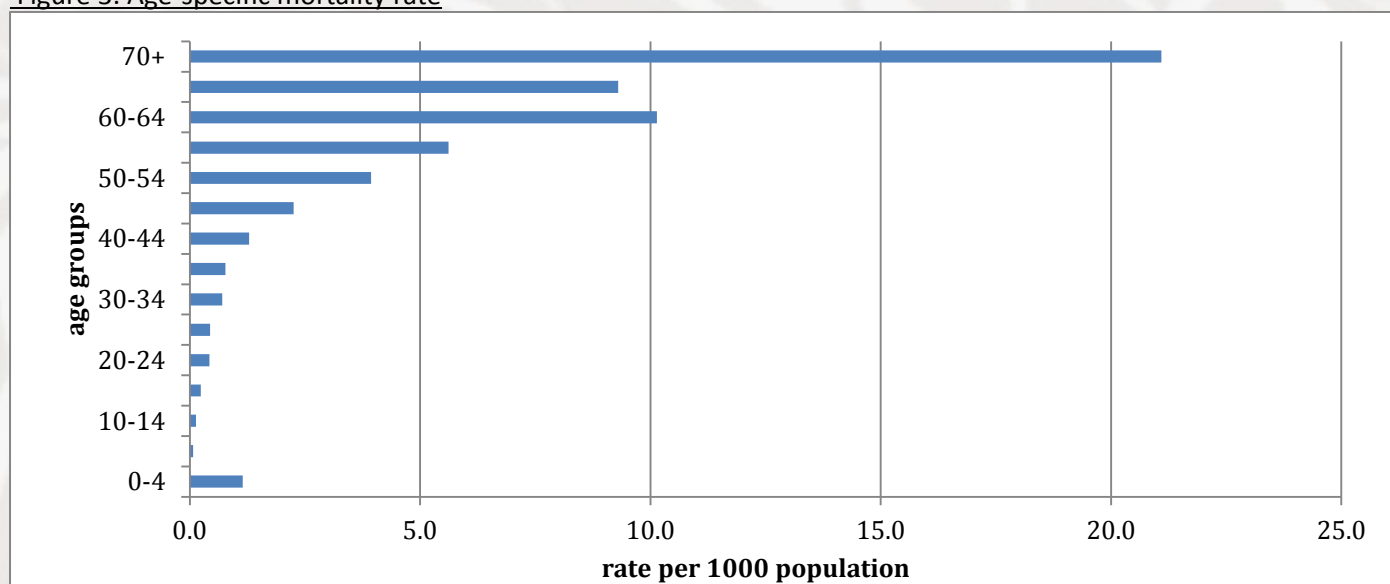
Poor diagnosis and documentation of cause of death resulted in R00-R99 being in the top 10 causes of mortality disaggregated by Gender (top 9 in both gender categories). This indicates an urgent need to train all certifiers in the establishing the correct Cause of Death and documenting the same.

Figure 2: Age-specific and gender specific mortality rate.



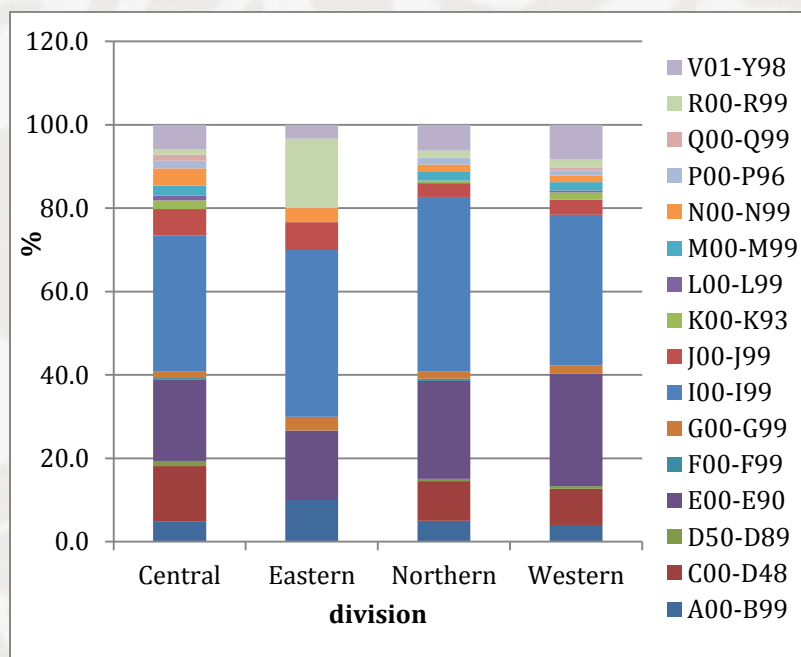
The graph above shows that more males die prematurely at the age groups of 0-4, 25-29year age group and also between 35-69 years. In the 0-4 year age group most of these deaths were due to conditions originating in the perinatal period and these were almost equivalent in both genders with no significant ethnic distributions, except in ITaukei males who had a higher frequency of congenital malformations. The 25-29 year age group deaths were mainly due to external causes of mortality showing vulnerability to external causes for this gender in this time period. It is important to note that for this quarter the external causes included hanging and paraquat poisoning; these were wholly noted in males (paraquat poisoning was only noted in males of Fijians of Indian descent and hanging was common in both males of Itaukei and Fijians of Indian descent in this quarter. Adult mortality is expected to increase at the age of 55 whereas in this case it increases at the age of 45 signaling a higher frequency of premature mortality

Figure 3: Age-specific mortality rate



As shown on the graph adults are dying prematurely at the age of 30, which is supposed to increase at the age of 55years. However an attention is also drawn to the deaths in the 0-4 year age group as explained in the figure 2 narrative above.

Figure 4: Mortality by division (%)



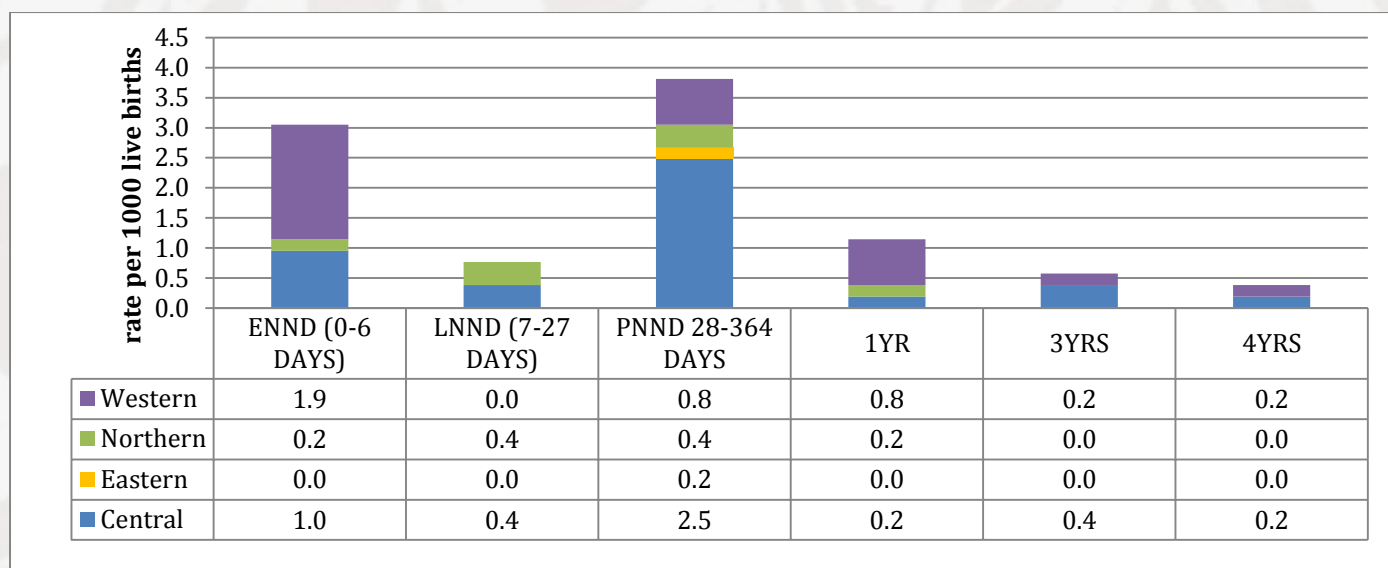
A00--B99 - Certain infectious and parasitic diseases
C00-D48 - Neoplasms
D50-D89 - Diseases of the blood and blood-forming organs and certain disorders involving the immune mechanism
E00-E90 - Endocrine, nutritional and metabolic diseases
F00-F99 - Mental and behavioral disorders
G00-G99 - Diseases of the nervous system
H60-H95 - Diseases of the ear and mastoid process
I00-I99 - Diseases of the circulatory system
J00-J99 - Diseases of the respiratory system
K00-K93 - Diseases of the digestive system
L00-L99 - Diseases of the skin and subcutaneous tissue
M00-M99 - Diseases of the musculoskeletal system and connective tissue
N00-N99 - Diseases of the genitourinary system
P00-P96 - Certain conditions originating in the perinatal period
Q00-Q99 - Congenital malformations, deformations and chromosomal abnormalities
R00-R99 - Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified
V01-Y98 - External causes of morbidity and mortality

Medical Cause of Death Certificates received in the Western division were 450 (45.2%), Central division sent 336 certificates (33.8%), Northern division sent 179 certificates (18%) and 30 certificates (3%) from the Eastern division. These were the certificates received from each division from 1st July 2014 to 15th October 2014 Western recorded the most deaths in the top 5 causes of mortality while the Central division recorded the most neoplasm deaths. The top 10 diseases per division is demonstrated below (no division mimics the national trend although differing rank order is seen in the Central and Western divisions):

Central	Western	Northern	Eastern
1. Diabetes Mellitus	1. Diabetes Mellitus	1. Diabetes Mellitus	1. Hypertension
2. Hypertension	2. Ischemic Heart Disease	2. Hypertension	2. Ill-defined Causes
3. Ischemic Heart Disease	3. Hypertension	3. Ischemic Heart Disease	3. Diabetes Mellitus
4. Other Heart diseases	4. Other Heart diseases	4. Other Heart diseases	4. Other Heart diseases
5. Other Diseases of the genitourinary system	5. Other External Causes of Death	5. Other malignancies	5. Sepsis
6. Chronic lower respiratory Diseases	6. Chronic lower respiratory Diseases	6. Diseases of the musculoskeletal & Connective Tissue	6. Chronic lower respiratory Diseases
7. Other External Causes of Death	7. Transport Accidents	7. Sepsis	7. Cerebrovascular Disease
8. Other malignancies	8. Breast Cancer	8. Other Endocrine, nutritional & metabolic diseases	8. Drowning
9. Diseases of the musculoskeletal & Connective Tissue	9. Ill-defined Causes	9. Cerebrovascular Disease	9. Other Diseases of the genitourinary system
10. Breast Cancer	10. Diseases of the musculoskeletal & Connective Tissue	10. Other Diseases of the genitourinary system	10. Meningitis

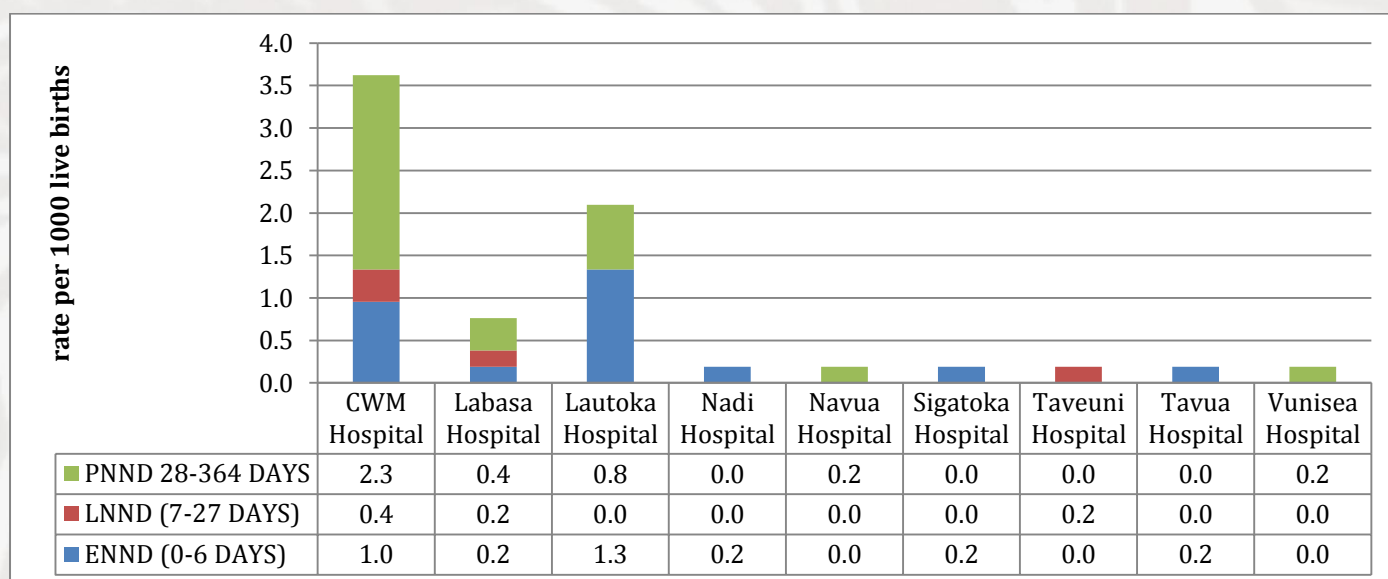
Ill-defined causes of death demonstrate certification problems and illustrate the need for certification of death training in the respective areas.

Figure 5: Under 5 mortality rate



A total of 51 Under 5 mortality giving an estimated Under 5 mortality rate of 9.7 per 1000 live births (using 2013 3/4 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 8 per 1000 live births. Central division recorded the highest rate of Under 5 mortality, followed by Western division, then the Northern and the Eastern division. It is important to note that most of the under five deaths occurred in the I-Taukei population (almost 3x that of FIDs & FODs) and these deaths were mainly due to diarrhea, pneumonia and congenital anomalies.

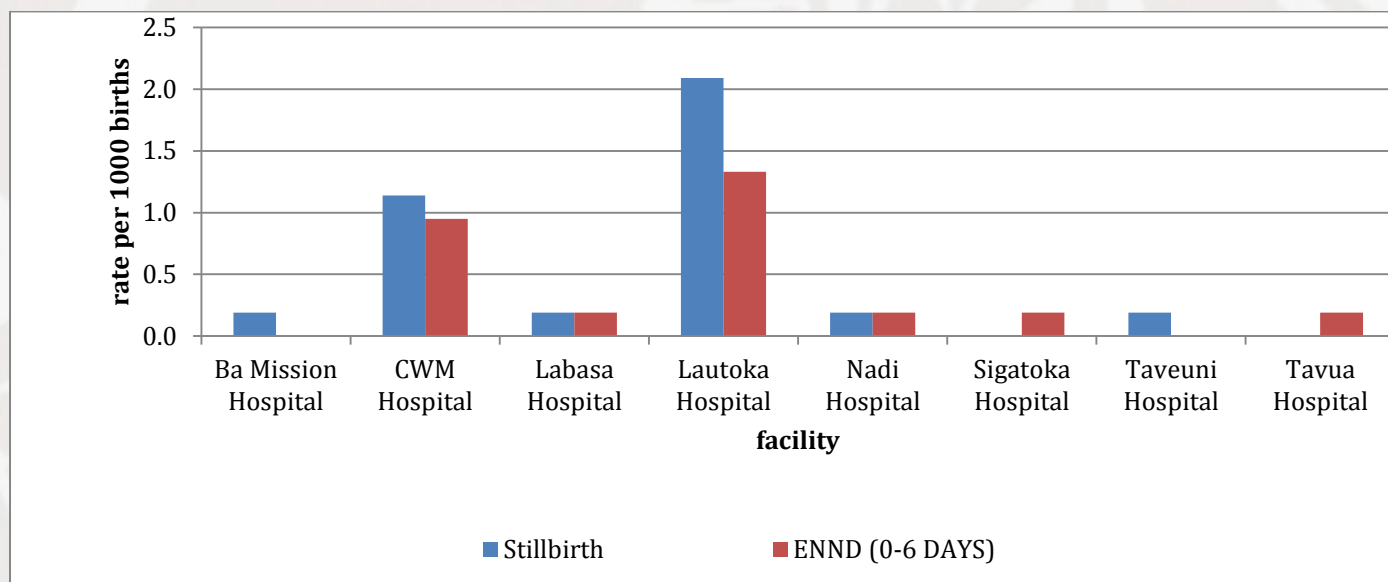
Figure 6: Infant mortality rate



A total of 40 Infant deaths giving an estimated Infant Mortality Rate of 7.6 per 1000 live births (using 2013 3/4 live births as denominator) was reported in this quarter which means 8 of every 1000 live babies born will not reach their 1st birthday compared to an IMR of 7 per 1000 live births at the same period last year.

The most infant deaths were recorded from CWM hospital, followed by Lautoka Hospital, Labasa Hospital, and one each from Nadi, Navua, Sigatoka, Taveuni, Tavua and Vunisea hospital. Twenty infant deaths were not required postmortem and 1 was declined by parents. There were 10 home deaths where 3 did not require post mortem and 1 was declined by relatives. All deaths without a definite cause of death must be sent for post mortem to ensure the accuracy in cause of death reporting. No medical cause of death certificate should be issued without determining exact cause of death.

Figure 7: Perinatal mortality rate



A total of 37 perinatal deaths were recorded in the third quarter giving an estimated Perinatal Mortality Rate of 7 per 1000 births (using 2013 3/4 births as denominator). Lautoka hospital recorded the most with 18 perinatal deaths, CWMH recorded 11, Labasa and Nadi recorded 2 each, while Sigatoka, Tavua and Taveuni recorded 1 perinatal death each. In comparison to 2013 3rd quarter, there was an estimated perinatal mortality rate of 6 per 1000 births. There were 25 I-Taukei, 11 Fijian of Indian descents and 1 of Fijian of Other ethnic descent perinatal deaths.

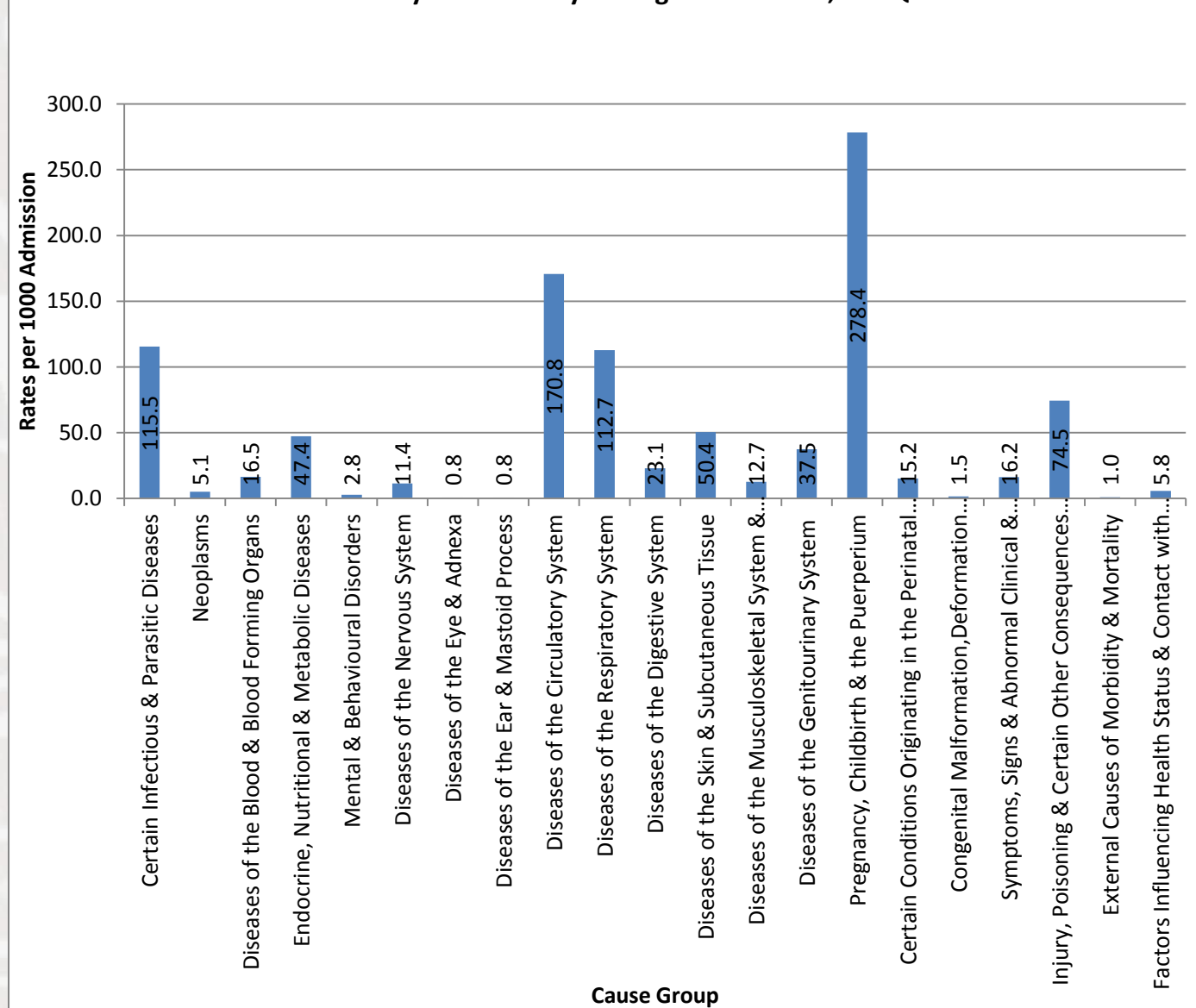
HOSPITAL INFORMATION SYSTEM

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	Waiyevo Hospital	Lomaloma Hospital
Tamavua/Twomey Hospital	Rakiraki Hospital		Matuku Hospital
Vunidawa Hospital	Sigatoka Hospital		Rotuma Hospital
Wainibokasi Hospital	Tavua Hospital		Vunisea 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. PATISPLUS is only available at CWM, Labasa, Lautoka and Nadi. Manual tear-offs are from Sub-Divisional Hospitals. Hospital Discharge Data are obtained from all Sub-Divisional Hospitals and Divisional Hospitals (PATISPLUS).

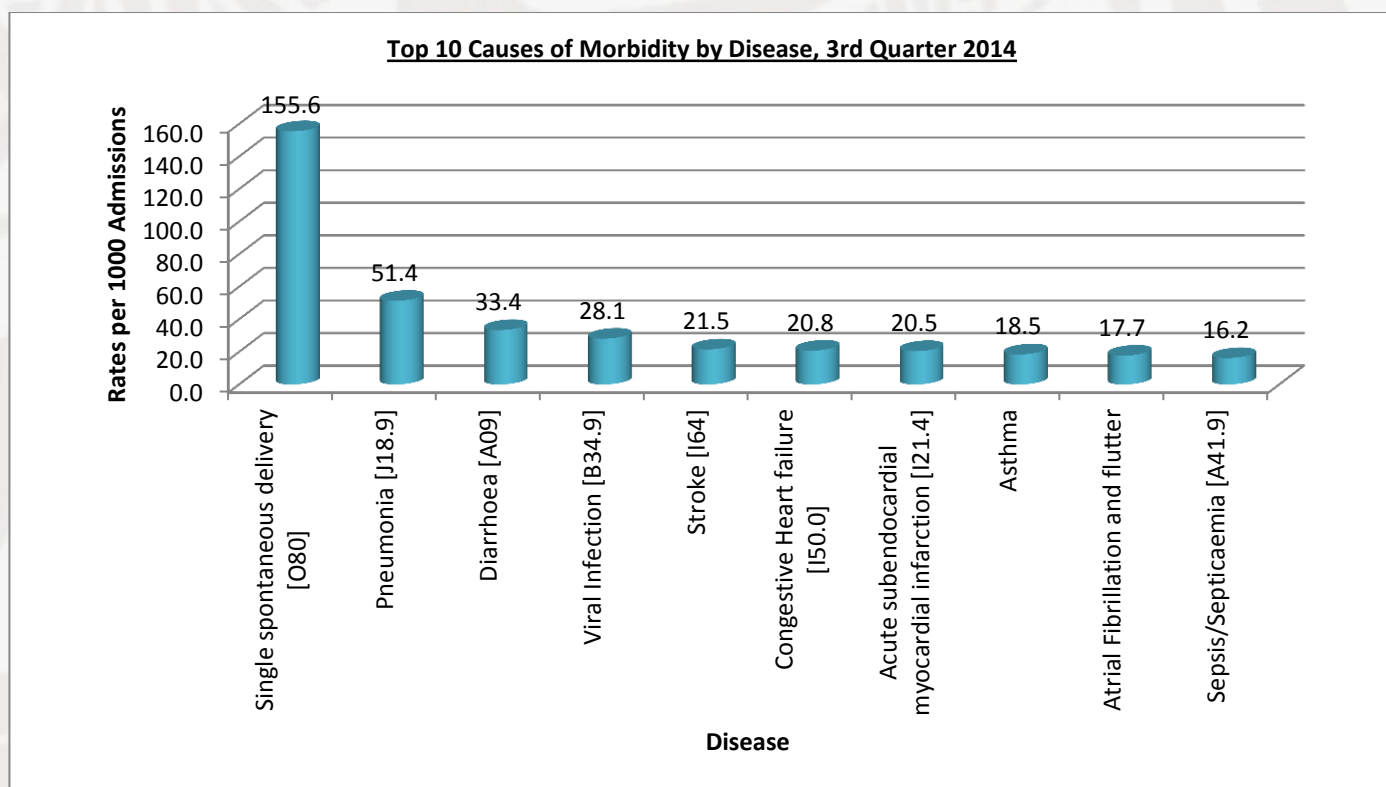
Summary of Morbidity through Admissions, 3rd Quarter 2014



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

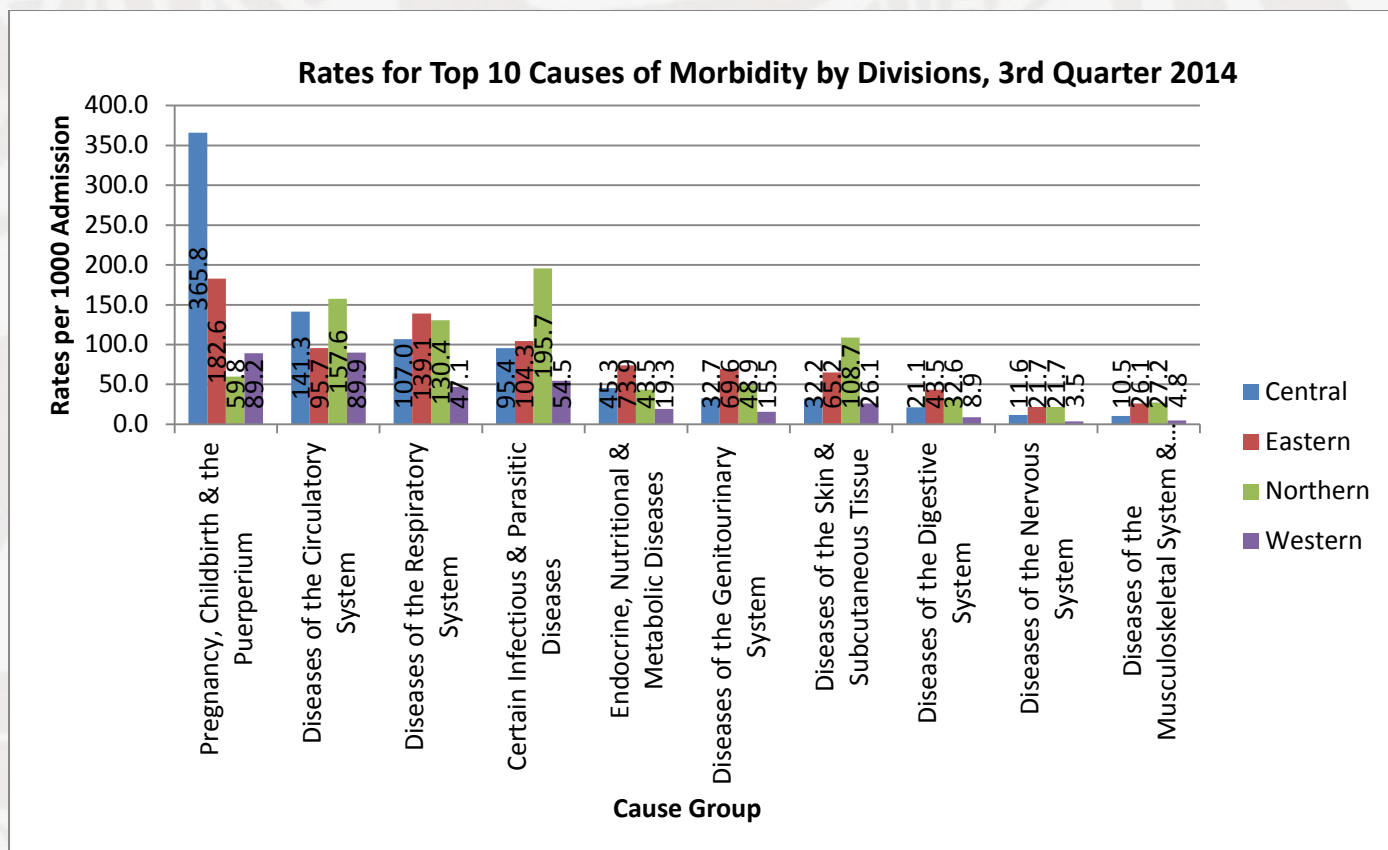
The above shows the Admissions by Cause Group in the 3rd Quarter 2014. The leading overall admissions for the 3rd Quarter are:

Pregnancy, Childbirth & the Puerperium (n=1099), diseases of the Circulatory System (n=674), certain Infectious & Parasitic diseases (n=456), diseases of the Respiratory System (n=445) and Injury, Poisoning & Certain Other Consequences of External Causes (n=294). The rates used were calculated per 1000 admissions. The admissions from the 3rd Quarter 2013 were the same cause group admissions as in 3rd Quarter 2014. The leading admissions for 2013 were once again attributed to Pregnancy, Childbirth & the Puerperium (n=1121), Diseases of the Circulatory System (n=906), followed by Diseases of the Respiratory System (n=714), Injury, Poisoning & Certain Other Consequences of External Causes (n=708) and Certain Infectious & Parasitic Diseases (n=626).



Source: HDD from Sub-Divisional and PATISPLUS

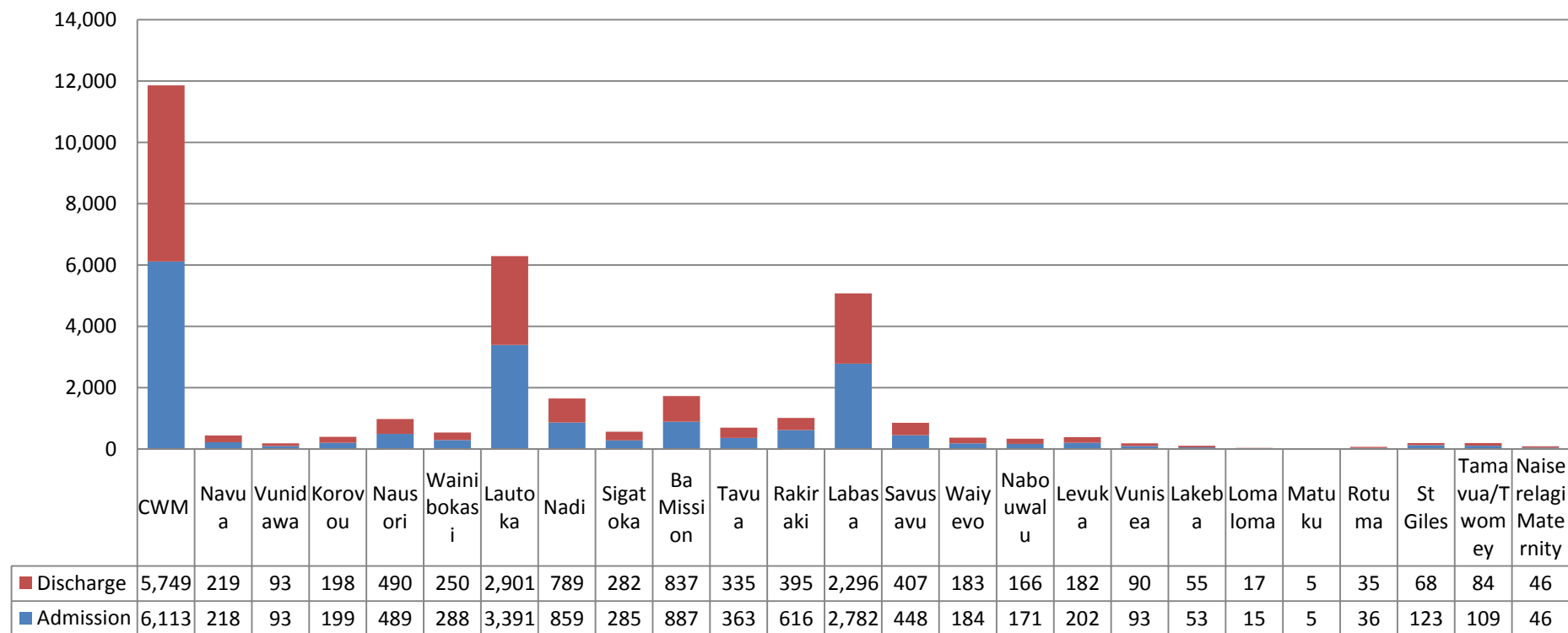
The graph above demonstrates the top 10 major causes of admission for the 3rd quarter of 2014. **Single Spontaneous Delivery** accounted for the largest rate of admissions (n=614), while the 10th leading cause of admission was Sepsis/Septicaemia (n= 64). There is a similarity in the leading cause of admissions for 3rd Quarter 2013 which was attributed to Single spontaneous deliveries (n=590). The age groups with the highest rates of Single spontaneous deliveries are the 20-39 years for the 3rd Quarter in both 2013 and 2014. Most admissions for Single spontaneous delivery were from Nausori Maternity Hospital for 3rd Quarter 2014 as there was no reporting from CWM Hospital, Lautoka Hospital and Labasa Hospital on PATISPLUS (obstetric module). Please also note that there was no submission of the Obstetric Returns for 3rd Quarter 2014 by CWMH. The second leading cause of morbidity is **Pneumonia**, where the admissions were highest among the 1-4 years; greater in males compared to females and highest among the Itaukei compared to Fijians of Indian descent or Fijians of other descent. The Central Division recorded the highest number of admissions for Pneumonia followed by Western, Eastern and Northern Division for the 3rd quarter 2014. Pneumonia was also among the top 10 major causes of admission in the 3rd quarter 2013. The third leading cause of admission is diarrhoea where the Western Division recorded the highest admission rates followed by the Central, Northern and Eastern Divisions, with the highest morbidity among the 1-4 year olds, higher in males than females, greatest in the I-taukei compared to Fijians of Indian Descent and Fijians of Other Descent (combined). **Diarrhoea** was also among the top 10 admissions in the 3rd quarter 2013. Viral Infection admissions were highest among the 20-29 year age group, highest in the I-taukei compared to Fijians of Indian Descent and Fijians of Other Descent (combined), with no apparent differences in gender distribution for the 3rd Quarter 2014. **Stroke** was most common in the 55-70+ age group, there was no ethnic and gender differences. **Acute subendocardial myocardial infarction** admissions were highest among the 45-70+ age group, highest in males (1 female to 6 males), and highest in Fijians of Indian Descent for this reporting period. **Congestive heart failure** was highest among 50-70+ age group; there was no difference in gender or ethnicity for this quarter. **Asthma** admission had no differences in age group, gender or ethnicity for this quarter. **Atrial Fibrillation & flutter** was highest in the 45-49 age groups, more common in males (almost twice as high in males as females) and there was no gender differences noted for this quarter. **Sepsis/Septicaemia** admissions were highest among the 70+ age group with no differences in ethnicity or gender for this reporting period.



Source: Manual Tear-Offs & PATISPLUS

The above graphs demonstrate the top 10 classifications of morbidity by divisions. Most admissions were reported in the Central Divisions (n= 1637) followed by Western (n= 1416), Eastern (n= 189) & Northern (n= 152) in 3rd Quarter 2014. The Central division demonstrated leading causes of admissions as Pregnancy, Childbirth & the Puerperium, circulatory system, respiratory system origins; the western division illustrated the leading causes of admissions as circulatory system, Pregnancy, Childbirth & the Puerperium, and Certain Infectious and Parasitic Diseases; the northern division demonstrated the leading causes of admissions as Certain Infectious and Parasitic Diseases, circulatory system and respiratory system origins; and the Eastern Division noted the leading causes of admissions as Pregnancy, Childbirth & the Puerperium, respiratory system origins, Certain Infectious and Parasitic Diseases. The Central division closely simulated the national trend and may have been the driver in the dataset.

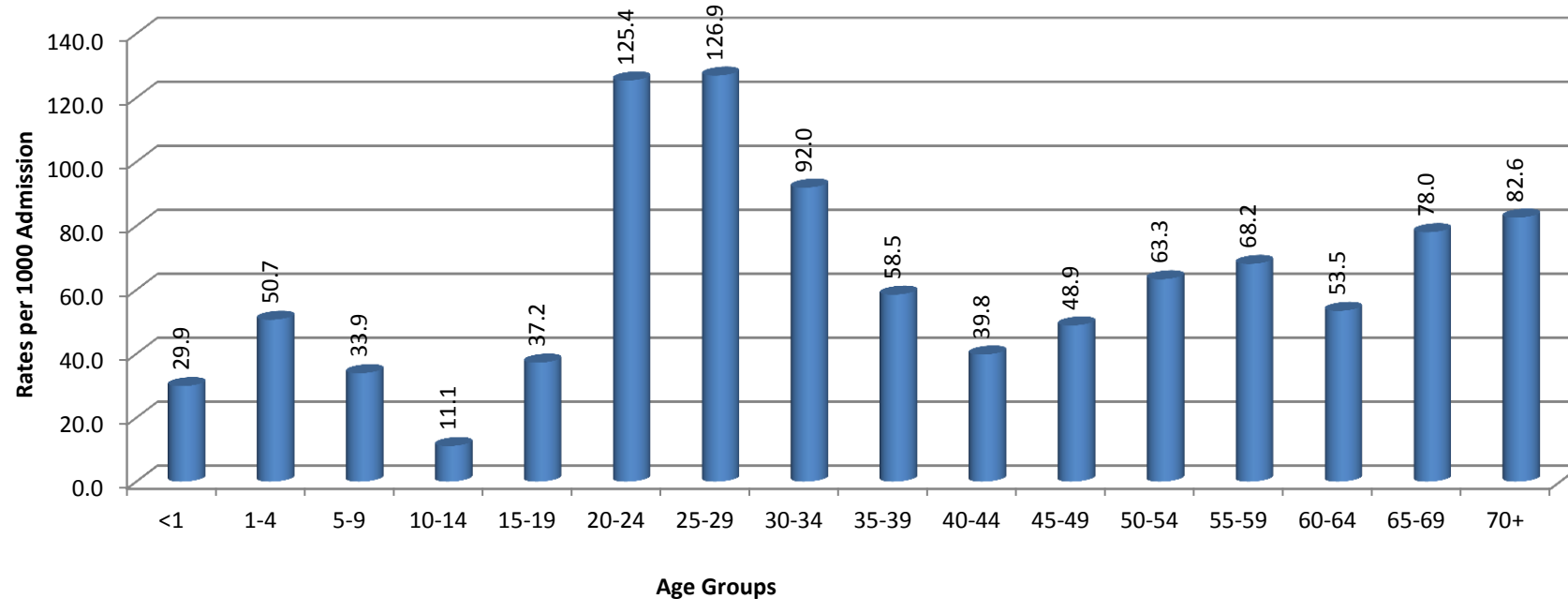
Total Admission & Discharges by Facility, 3rd Quarter 2014



Source: Hospital Monthly Returns (Sub-Divisional Hospitals) & PATISPLUS (ATD Report)

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 ensure that admissions, transfers and discharges are correctly reported. However, it is important to note that the wide gap between discharges and admissions are being slowly addressed except in CWMH, Lautoka Hospital, Labasa Hospital and St Giles. For CWMH, Lautoka and Labasa Hospital the patients discharged from the hospitals are sometimes not discharged in PATISPLUS on time due to network problems, role delineation issues, willful omissions and poor compliance to timely, complete and accurate reporting.

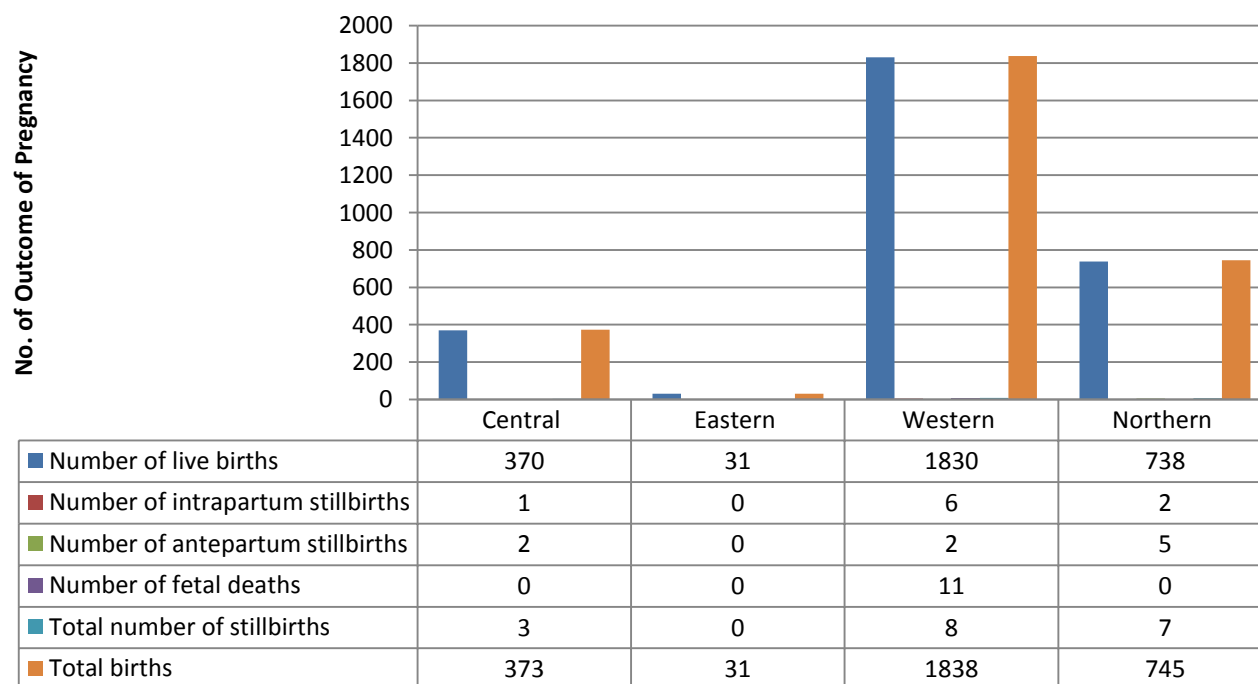
Admission rates by age groups, 3rd quarter 2014



Source: Manual Tear-Offs & PATISPLUS

The greatest frequency of admissions were among the 20 - 34 age groups (n=1359); this was approximately 34% of all admissions, where the cause of morbidity were due to pregnancy, its complications and outcomes (single spontaneous delivery (n=512), preterm delivery (n=51), pregnancy induced hypertension (n=44), PROM unspecified (n=32) and false labour (n=21)). The under-five population comprised of approximately 8% of the total admissions for 3rd Quarter 2014; which has reduced by 2% compared to the last quarter; the top 3 causes of morbidity for this age group are Pneumonia, Diarrhoea and bacterial sepsis of the newborn. The adolescents (only 15-19 years) had the lowest frequency of admissions at approximately 4.8% (n=191); the top 3 causes of morbidity for this age group are singleton spontaneous delivery (n=36) Injury, Poisoning & Certain Other Consequences of External Causes (n=23) and Diseases of the Respiratory System (n=14) and Certain Infectious and Parasitic Diseases (n=14).

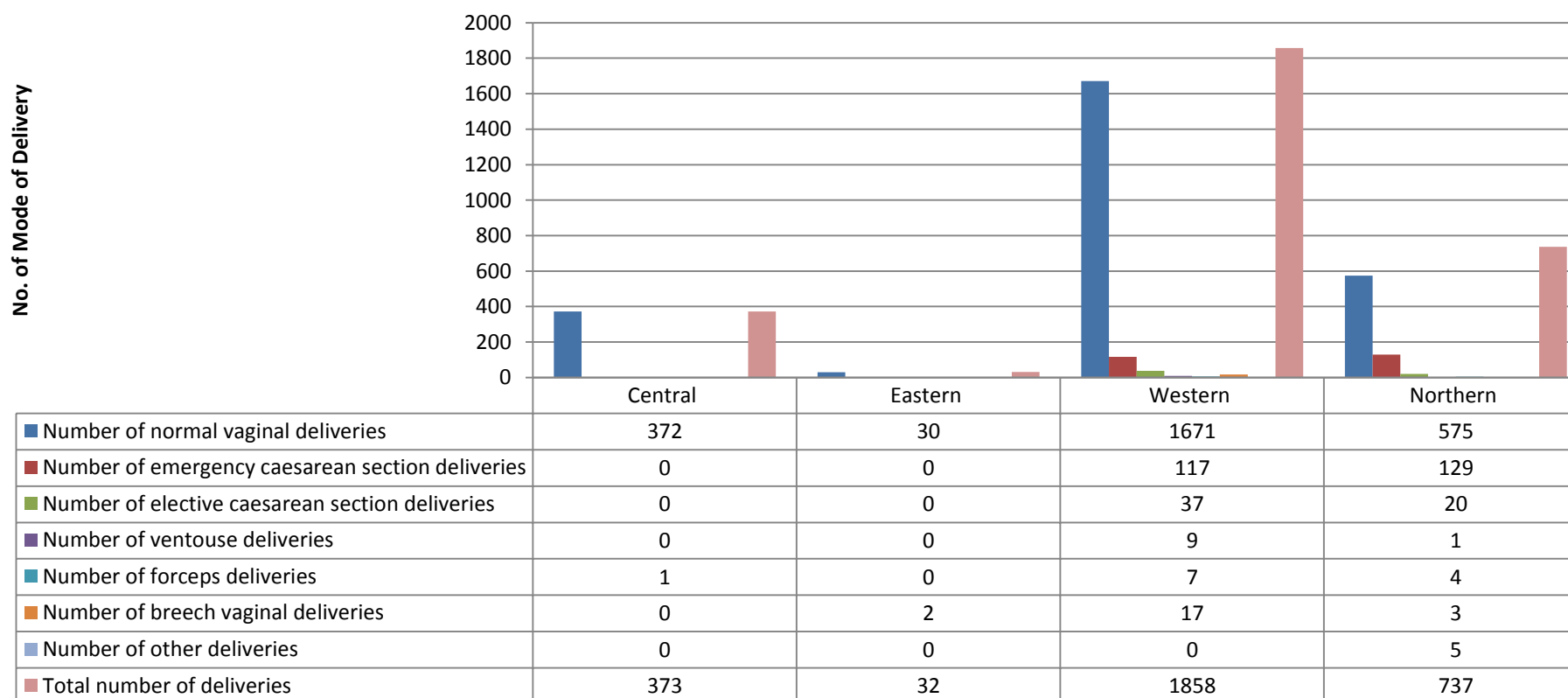
Divisional Hospital Obstetric Reporting by Outcome of Pregnancy, 3rd Quarter 2014



Source: Divisional Hospital Obstetric Monthly Reporting Form

The Graph above demonstrates the Outcomes of Pregnancy for the Divisional Hospital 3rd Quarter 2014. The Divisional Hospital with the leading number of total births is the Western Division (n=1838), Northern Division (745), Central Division (373) and Eastern Division (31) for the 3rd Quarter 2014. The highest number of fetal deaths were recorded in the Western Division (n=11), Northern Division (n=7), Central Division (n=3) and the Eastern Division with nil cases. **There was no reporting from CWM Hospital for the Obstetric Returns for 3rd Quarter 2014.**

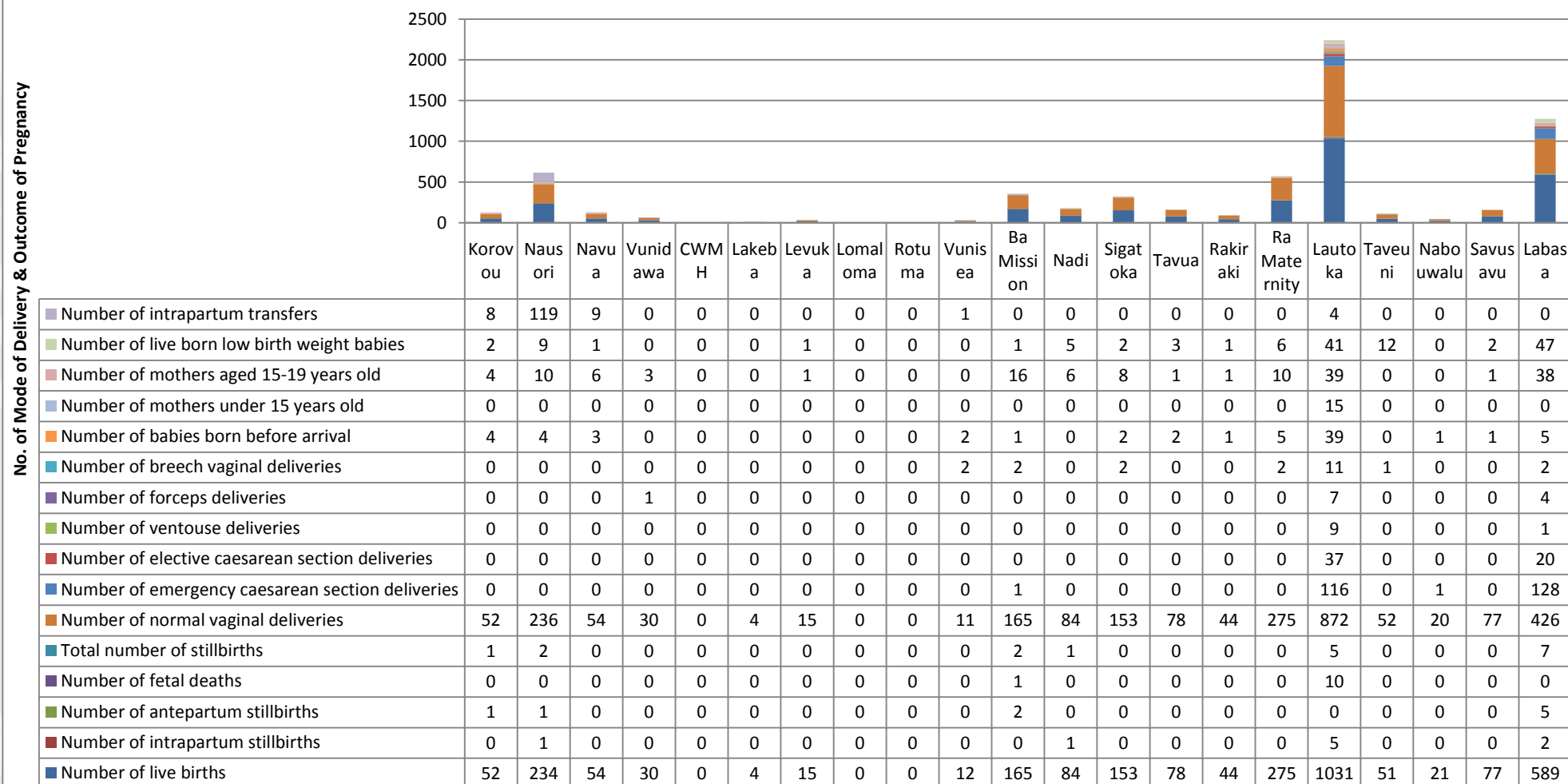
Divisional Hospital Obstetric Reporting by Mode of Delivery, 3rd Quarter 2014



Source: Divisional Hospital Obstetric Monthly Reporting Form

The Graph above demonstrates the Mode of Deliveries for the Divisional Hospitals for the 3rd Quarter 2014. The leading number of emergency caesarean section deliveries were in the Northern Division (n=129), Western Division (n=117), Eastern Division and Central Division had nil cases reported **as there were no reports received from CWMH for 3rd Quarter 2014.** For the normal vaginal deliveries Western Division had leading number of cases (n=1671), Northern Division (575), Central Division (n=372) and Eastern Division (30). **There was no reporting from CWM Hospital for the Obstetric Returns for 3rd Quarter 2014.**

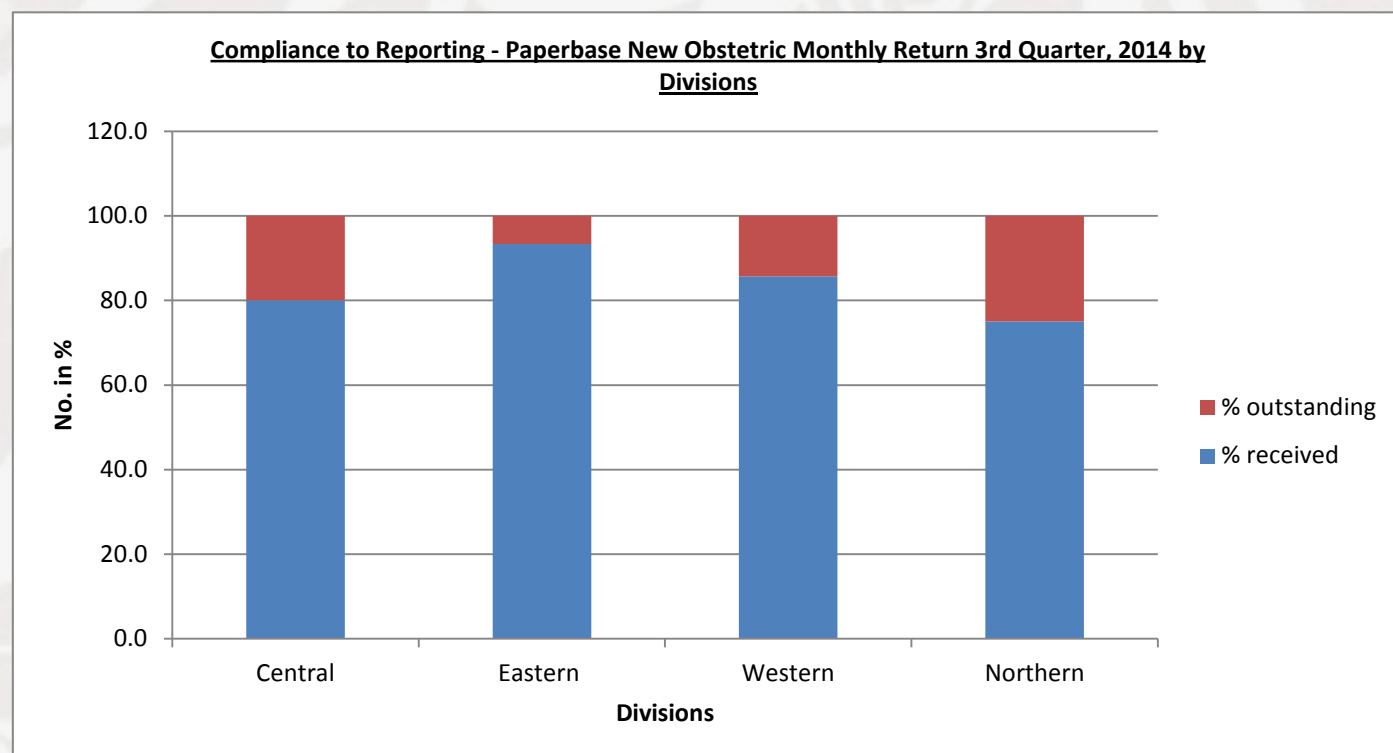
Sub-Divisional Hospital Obstetric Reporting by Mode of Delivery and Outcome of Pregnancy, 3rd Quarter 2014



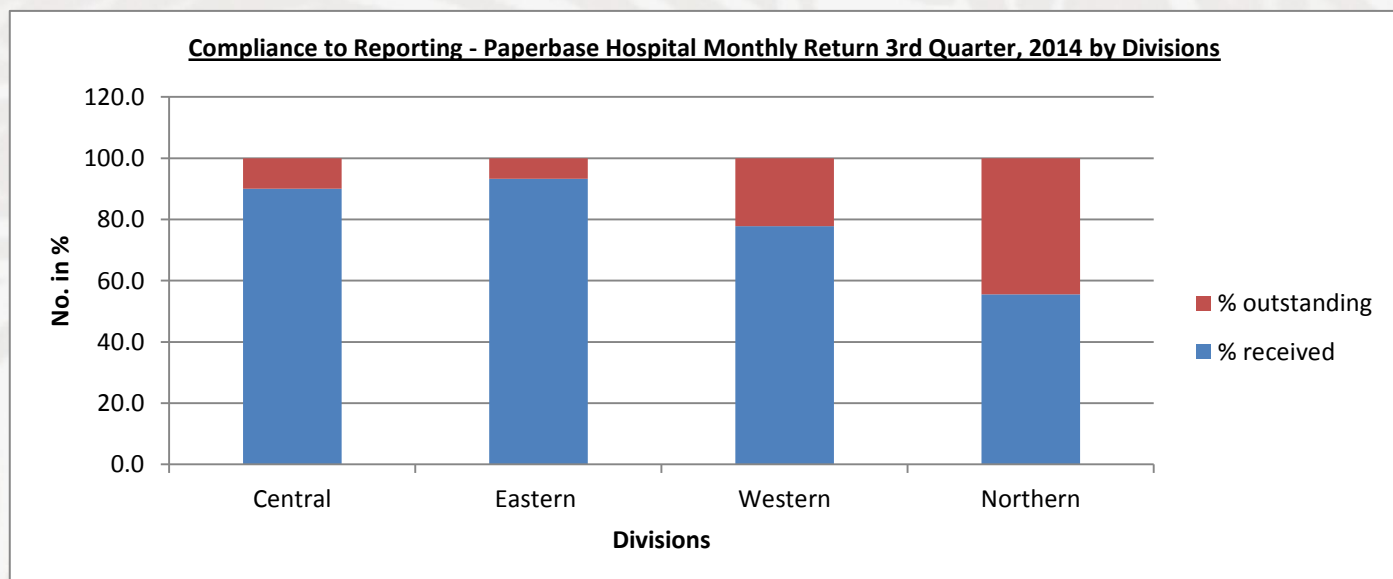
Source: Sub-Divisional Hospital Obstetric Monthly Reporting Form

The bar graph above illustrates the Outcome of Pregnancy and the mode of deliveries for the respective Sub divisional Hospitals for 3rd Quarter, 2014. The leading number of live births were recorded in Lautoka Hospital (n=1031), while the lowest number of live births were in Lakeba Hospital (n=4) for the 3rd Quarter 2014. **There was no Obstetric Return reported from CWMH 3rd Quarter 2014.**

COMPLIANCE REPORTING:

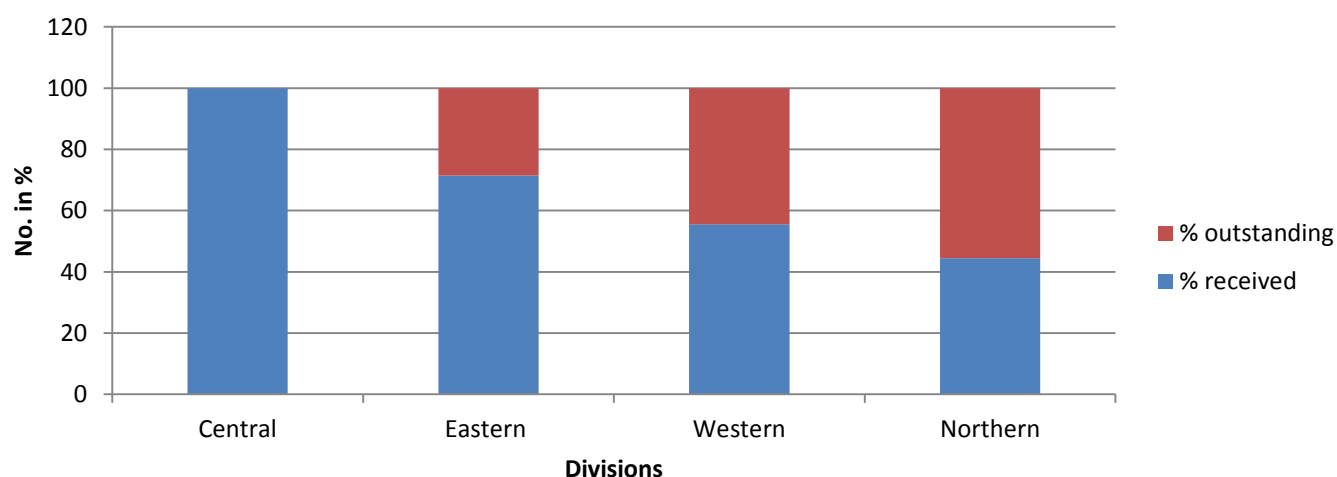


The preceding analysis for the new Obstetric Monthly Return is based on the reports received through manual returns from the four Divisions for 3rd quarter 2014. A few Sub Divisional Hospitals have yet to submit their reports as illustrated in the graph. The Central Division submitted 80%, the Eastern Division is at 93%, the Western Division is at 85.7% and the Northern Division submitted 75.0% reports for 3rd Quarter 2014. The facilities yet to report on the new obstetric return forms are CWM Hospital, Lomaloma Hospital, Nadi, Sigatoka and Taveuni Maternity Hospital. The change to the new obstetrics form occurred in April 2014.



The preceding 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 3rd quarter which stands at 10%; as there was no reporting from Military Hospital. The Eastern Division has 6.7% outstanding reports due to outstanding reports from Lomaloma Hospital, the Western Division has 22% outstanding reports as there was outstanding reports from Sigatoka and Nadi, the Northern Division has 44.4% outstanding reports for 3rd Quarter 2014 due to outstanding reports from Savusavu Hospital.

Compliance to Reporting - Paperbase Hospital Inpatient Tear-offs 3rd Quarter, 2014 by Divisions



The preceding analysis for Hospital Inpatient Tear-Offs is based on reports received through manual systems from the Divisions. Congratulations to the Central Division for 100% submission. The other divisions still have outstanding returns; the Western Division has yet to submit 44.4% of the returns; the Eastern Division outstanding returns stand at 14.3%; and the Northern Division has 55.6% outstanding reports for 3rd Quarter 2014. The facilities yet to submit their reports are Cicia, Rakiraki and Savusavu Hospital.

HOSPITAL UTILISATION

(source: Hospital Monthly Returns and ATD [PATISPLUS])

#	Institution	Number of Outpatient	Number of Beds	Total Admission	Total Discharge	Total Patient Days	Occupancy Rate	Daily Bed State	Average Length of Stay
1	CWM Hospital	20,430	481	6,113	5,749	31,819	71.90	345.9	5.5
2	Navua Hospital	235	12	218	219	507	45.92	5.5	2.3
3	Vunidawa Hospital	2,017	24	93	93	242	10.96	2.6	2.6
4	Korovou Hospital	992	17	199	198	444	28.39	4.8	2.2
5	Nausori Hospital	969	17	489	490	574	36.70	6.2	1.2
6	Wainibokasi Hospital	1,441	12	288	250	884	80.07	9.6	3.5
	Sub-total	26,084	563	7,400	6,999	34,470	66.55	374.7	4.9
7	Lautoka Hospital	45,964	305	3,391	2,901	11,471	40.88	124.7	4.0
8	Nadi Hospital	29,077	75	859	789	2,452	35.54	26.7	3.1
9	Sigatoka Hospital	6,083	66	285	282	868	14.30	9.4	3.1
10	Ba Mission Hospital	18,362	50	887	837	2,137	46.46	23.2	2.6
11	Tavua Hospital	8,552	29	363	335	749	28.07	8.1	2.2
12	Rakiraki Hospital	6,402	30	616	395	1,148	41.59	12.5	2.9
	Sub-total	114,440	555	6,401	5,539	18,825	36.87	204.6	3.4
13	Labasa Hospital	19,290	182	2,782	2,296	9,848	58.82	107.0	4.3

1 4	Savusavu Hospital	16,202	56	448	407	1,237	24.01	13.4	3.0
1 5	Waiyevo Hospital	2,499	33	184	183	443	14.59	4.8	2.4
1 6	Nabouwalu Hospital	2,848	26	171	166	724	30.27	7.9	4.4
	Sub-total	40,839	297	3,585	3,052	12,252	44.84	133.2	3.4
1 7	Levuka Hospital	5,117	40	202	182	607	16.49	6.6	3.3
1 8	Vunisea Hospital	1,761	22	93	90	311	15.37	3.4	3.5
1 9	Lakeba Hospital	748	12	53	55	239	21.65	2.6	4.3
2 0	Lomaloma Hospital	974	16	27	27	172	11.68	1.9	6.4
2 1	Matuku	266	5	5	5	10	2.17	0.1	2.0
2 2	Rotuma Hospital	1,042	14	36	35	90	6.99	1.0	2.6
	Sub-total	9,552	109	404	384	1,357	13.53	14.8	3.5

SPECIALISED AND PRIVATE HOSPITALS

#	Institution	Number of Outpatient	Number of Beds	Total Admissions	Total Discharge	Total Patient Days	Occupancy Rate	Daily Bed State	Average Length of Stay
1	St Giles Hospital	1,840	136	123	68	4,839	38.67	52.6	71.2
2	Tamavua/Twomey Hospital	4,076	91	109	84	3,559	42.51	38.7	42.4
4	Military Hospital		9				0.00	0.0	0
5	Naiserelagi Maternity	463	7	46	46	79	12.27	0.9	1.7
	Sub-total	6,379	243	278	198	8,477	37.92	92.1	42.8
	TOTAL	190,915	1,524	17,790	15,974	66,904	47.72	727.2	4.2
	GRAND TOTAL	197,294	1,767	18,068	16,172	75,381	46.44	820.1	4.7

Based on the above reporting, the average length of stay is 4.7 days. The analysis is based on the reports received by Divisional and Sub divisional Hospitals for the 3rd Quarter 2014. The table above illustrates that less patients were discharged from the Divisional and Sub Divisional Hospitals. The discrepancy was noted, as the difference of 1898 patients was not discharged from the hospitals; this also indicates the quality of entry and reports have narrowed with more discharges being reported in the 3rd quarter. There were no outpatients reported from Navua Hospital for August and September, as it is reported in PHIS. The bed occupancy rates have improved and with improved statistics on admissions and discharges, the perception is that BOR will reflect the true facility incidence.

Compilations of this bulletin are attributable to the following:

1. NNDSS Team – Anjana Deo
2. Hospital Statistical Team – Arishma Bali, Atunaisa Degei and Miriama Rokovutoro
3. PHIS Statistical Team – Senjalin Shankar and Rosimina Tubuitamana
4. Mortality Statistical Team – Kelesita Mataitoga
5. NCD Statistical Team – Alisi Naiqero
6. Special acknowledgment to Ms Guddu Kaur (DFAT Volunteer Epidemiologist)
7. Director Epidemiology – Dr Devina Nand

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