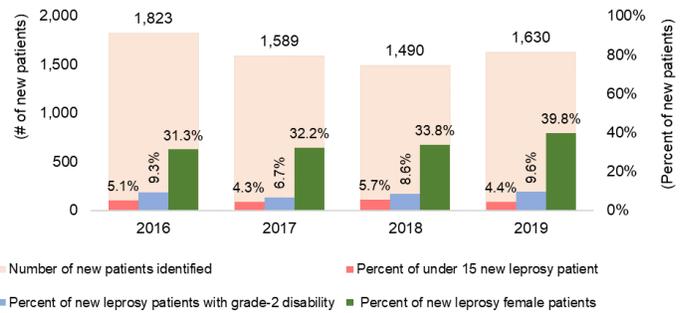
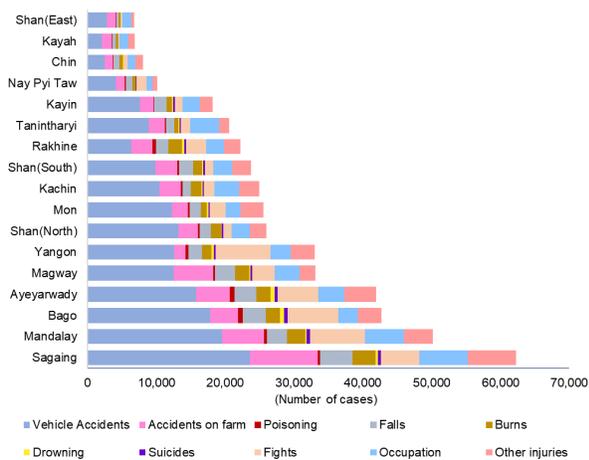
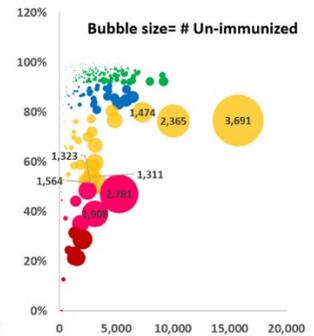
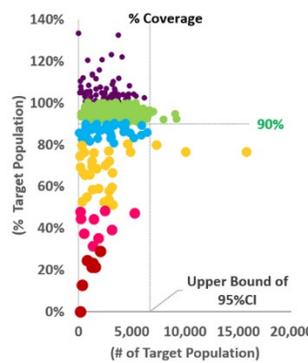
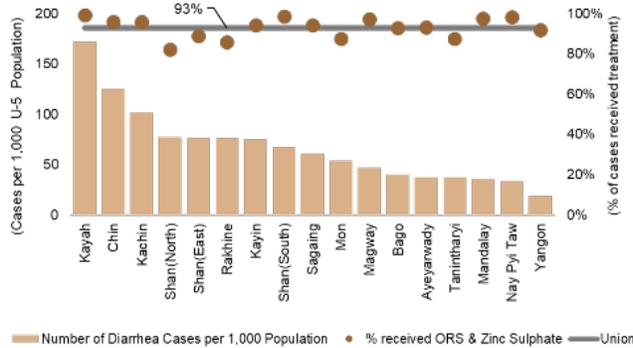


Republic of the Union of Myanmar
Ministry of Health



PUBLIC HEALTH STATISTICS
2017-2019



Health Information Division, Department of Public Health



PUBLIC HEALTH STATISTICS

2017-2019

Health Information Division

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September 2021

Nay Pyi Taw, Myanmar

Foreword

I am pleased to present the public health statistics report reflecting the activities and achievements of public health services in Myanmar throughout the years 2017 to 2019. Steady improvements are seen in many key areas of public health services though there is a long way to achieving SDGs targets.

Strong health data system is a core requirement for improving population health outcomes and meeting the SDG health targets. Aiming for efficient monitoring on our progress, the Ministry of Health has invested in data and health information systems as part of the overall public health capacity building.

Acknowledging the crucial role of having timely, reliable, and actionable health information, the electronic health management information system deploying District Health Information Software (DHIS2) has been launched in 2014 and implemented nationwide since 2018. The responsive use of DHIS2 for timely monitoring the progress and challenges in the implementation of public health activities by decision makers and supervisors at different levels of health system is strongly encouraged.

I hope that this report will help and support key stakeholders at national and sub-national levels in improving public health services through the strategic use of information for making tailored health plan with better resources allocation and distribution in a way that enables achieving the health and well-being of the Myanmar people.

I would like to express my special and great appreciation to all staff who have contributed to the entire process starting from service provision, data collection, data submission, data analysis, report preparation and publication.



Prof. Dr. Thet Khaing Win

Union Minister

Ministry of Health

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List of Acronyms

ANC	Ante-Natal Care
ART	Ante-Retroviral Therapy
BCG	Bacillus Calmette–Guérin (vaccine)
BHSP	Basic Health Services Professional
CBR	Crude Birth Rate
CDR	Crude Death Rate
CFR	Case Fatality Rate
CNR	Case Notification Rate
CPR	Contraceptive Prevalence Rate
CPT	Co-trimoxazole Preventive Therapy
CSOM	Chronic Suppurative Otitis Media
DCC	Data Consistency Check
DHIS2	District Health Information Software (Version 2)
DM	Diabetes Mellitus
DQA	Data Quality Assessment
DUNS	Diseases Under National Surveillance
FBS	Fasting Blood Sugar
HbA1c	Hemoglobin A1c
HMIS	Health Management Information System
IUCD	Intra-Uterine Contraceptive Device
MCH	Maternal and Child Health
MCV	Measles-Containing Vaccine
MMR	Maternal Mortality Ratio
MRH	Maternal and Reproductive Health
MDHS	Myanmar Demographic Health Survey

MDR-TB	Multi-Drug Resistant TB
NCD	Non-Communicable Disease(s)
OPD	Out-Patient Department
Penta	Pentavalent Vaccine
PNC	Post-Natal Care
RBS	Random Blood Sugar
RHC	Rural Health Center
RTA	Road Traffic Accidents
SBA	Skilled Birth Attendances
SDG	Sustainable Development Goals
Sub-RHC	Sub-Rural Health Center
Td	Tetanus-Diphtheria
UHC	Urban Health Center
VDRL	Venereal Disease Research Laboratory
VF	Verification Factor
WHO	World Health Organization

Executive Summary

The public health statistic report for the year 2017 to 2019 is prepared based on data being captured and compiled on the national digital health information reporting platform, DHIS2, which has been implemented countrywide since the year 2017.

In the year 2019, HMIS division has updated its data dictionary, initiated routine data consistency check at sub-national level, deploying WHO data quality App on DHIS2 platform, and piloted data entry from sub-township level in few townships. Health services information for a total of 22 public health projects have been collecting from primary health care level deploying the standardized tools.

Through the year 2016 to 2019, over 13 million people sought primary health care services every year. The improved transportation, and patient friendly hospital environment in the recent years have contributed to the significant increase in people seeking services from township and sub-township level public hospitals which increased from 0.2 million in 2016 to 2.84 million in 2019.

Comparing states and regions, higher proportion of population living in states rely on primary health care services than those in regions. More than 30 percent of population living in Kachin, Kayah, Chin and Kayin States pursued primary health care services in 2019.

A slightly increased in the uptake of pregnancy related services were observed in the past four years though the recent change in operational definitions have challenged the inclusion of antenatal care (ANC) for at least 4 visits, and the postnatal care (PNC) within the first 48 hours in the trend analysis. About five percent increase from respective baseline was observed for the nutritional services (iron tablet distribution, vitamin B1 supplementation, and tetanus diphtheria immunization) for pregnant women in the recent four years from 2016 to 2019.

In 2019, most states and regions faced the significant dropped out from ANC 1st visit to 4th visit. In addition, health services coverage during ANC and PNC period were lower in Rakhine, Shan (North), Shan (East), and Chin States than other states and regions.

During the period of 2016 to 2019, the Skilled Birth Attendance (SBA) increased from around 78 to 87 percent while the institutional delivery showed a gradual increasing trend which increased from 61 to 69.3 percent. The significant increase was seen in delivery in public health facilities which increased from 51.3 to 59.5 percent of total deliveries during the same four years period.

In 2019, less than 40 percent of institutional delivery and less than 70 percent of SBA were seen in Rakhine and Chin States. According to the changed definition for PNC, less than 70 percent of deliveries received PNC within the first 48 hours.

States faced higher morbidity rates of diarrhea and pneumonia among Under-5 children than the regions. In 2019, Kayah, Chin and Kachin States had more than 100 per 1,000 Under-5 population suffered from diarrhea which was higher than other states and regions. Opportunely, the treatment coverage with ORS and Zinc Sulphate was more than 95 percent, above the national average, in these three high burden states. Scooping by states and regions, higher proportion of Under-5 children living in Chin and Shan(East) States suffered suspected pneumonia.

A steady increase in BCG, Polio and Penta vaccination coverage among Under-5 children was seen in the period of 2016 to 2019. However, Measles vaccination coverage was fluctuated without obvious improvement during the same period. Detailed analysis by townships revealed that few townships contributed the big proportion of un-immunized children. This highlights the need to figure out tailored immunization strategy to reaching the unreached in these townships.

Malaria morbidity rate of Myanmar was decreasing year by year, starting from 0.6 per 1,000 population in 2016 to 0.23 per 1,000 population in 2019. The highest malaria morbidity rates were seen in Chin and Kachin States with three to four per 1,000 population being diagnosed as infected with malaria in 2019. Malaria case fatality rate fluctuated around 0.4 to 0.8 percent during 2016 to 2019.

With the decreasing trends of TB prevalence, the case notification rate (CNR) for all forms of TB cases declined from 281 per 100,000 population in 2017 to 252 per 100,000 population in 2019. In 2019, CNR of both all forms and bacteriologically confirmed TB cases were the highest in Yangon Region followed by Kachin State, and the lowest in Chin State. Among 130,000 registered all forms of TB patients, treatment success rate was 86.5 percent, death rate was 4.9 percent and lost to follow up was 5.6 percent.

There was an increasing trend for reported sexually transmitted infections in the past four years. Although the Syphilis testing for primigravidae has increased from over 100,000 in 2018 to over 240,000 in 2019, the positivity rate also increased from 0.34 percent to 0.45 percent. Among 15+ male population, those shown up with genital discharge increased from 3.8 to 5.2 per 100,000 population; and those with genital ulcer increased from 2 to 6.3 per 100,000 population for the period of 2017 to 2019.

Increasing hypertension cases were detected by Basic Health Service Professionals (BHSP) which increased from 13.5 to 17.6 per 1,000 population of aged 15+ from 2016 to 2019. The number of hypertension cases sought health care were higher in regions than states. Similar pattern of higher cases in regions was observed with Diabetes Mellitus. In 2019, the highest number of Diabetes case was seen in Mandalay Region (about 55,000 cases) followed by Yangon, Sagaing and Ayeyarwady Regions.

Prevalence of major risk factors for non-communicable diseases: smoking and betel chewing were reported to be 186 and 215 per 1,000 population aged 15+. Among states and regions, the highest prevalence was reported from Rakhine State at 308 and 400 per 1,000 population aged 15+ for smoking and betel chewing respectively.

The increasing number of mental disorder cases were reported in the period of 2016 to 2019, the most obvious increase was seen in alcohol dependency disorder during the four-year period. In 2019, the prevalence per 100,000 population was 330 for alcohol dependency disorder, 16 for anxiety disorder, 12 for mental retardation, 12 for psychosis and 7 for depression. Among states and regions, the total number of reported mental disorders was the highest in Bago Region with about 30,000 cases followed by Mandalay and Sagaing Regions.

Unintentional injuries such as Road Traffic Accidents (RTA), Occupational Injuries in farm, Poisoning, Fall, Burns and Drowning, and intentional injuries like Suicide and Assault confronted by community living in juristic areas of BHSP were reported. Among all injury categories, RTA contributed the biggest proportion, 45 to 50 percent of all injuries, followed by Occupational Injuries in farm, Assault, Fall and Burns in the recent four years.

Among all injury incidences, 85 percent of drowning cases did not survive, about 50 percent of attempted suicide resulted in death, and about 7 percent of poisoning did not recover.

The information on sanitary latrine coverage by households was assessed and reported annually by BHSP. At national level, 68.3 percent of households had sanitary latrine in 2016 and the coverage increased to 72.9 percent in 2019. The collected information on safe water coverage at primary health facilities revealed that on average 8 out of 10 primary health care facilities had access to improved water source in 2019. However, only 6 out of 10 primary health facilities in Chin and Rakhine States had access to safe water.

Health literacy promotion on maternal and reproductive health, immunization, communicable and non-communicable diseases, personal hygiene and environmental sanitation, and other health related topics that were provided to clinic attendants at the health facilities, and to public during

field activities. In general, 398 health talks were conducted by BHSP in a township every month; and 69 health-talk-sessions were conducted by one BHSP in the year 2019.

Applying the WHO data quality App for the DHIS2 information platform, data quality assessment on public health information collected through the HMIS system has been conducted since 2018. The overall reporting completeness rate was 98.3 percent in 2017, 99.6 percent in 2018, and 99.1 percent in 2019. Less than 5 percent of townships had incomplete values for the selected variables under assessment. Regarding the timeliness of reports: upmost 80 percent of facilities completed the report within the next 15 days of reporting period. For consistency, less than 2 percent of townships had reported extreme outlier values i.e., more than ± 3 SD from the mean values over the recent three years.

Aiming for improving data quality at sub-national level, an exercise on cross checking data value between the reported and source data was introduced as a quarterly exercise in 2019. A total of 20 variables were selected for the data checking exercise for which about half of the expected reporting units participated in the exercise. The total number of facilities conducted data verification exercise for the selected variables ranged from just over 100 to about 550. The percent of facilities with the exact match on source and reported data ranged from 75 to 95 percent across the selected variables. Over-reporting was found in 2 to 24 percent and under-reporting in less than 1 to 14 percent of the facilities participated in Data Consistency Check (DCC) exercise.

There is a need to assess the low level of facilities participated in DCC exercise, and an urgent need to explore the reasons for low consistency between reported and source data. Consequently, it is crucial to figure out and devise activities for improving awareness on and implementation of data quality improvement and data use at all levels of public health system.

1. Introduction

Envisioning on having a strong health information system for a strong health system, the National Health Information Strategic Plan (2017-2021) has been formulated with twelve major strategic areas being identified. It is pursuing that the health information system will provide strategic inputs towards the Ministry of Health and Sports' progress towards Universal Health Care coverage by 2030.

The public health information system has been established since the year 1995 as one of the major areas of the Health Management Information System (HMIS) in Myanmar. The standard records, reports, and data dictionary have been developed and updated with the evolving requirements on necessary information for monitoring the progress towards the National Health System Goals and Sustainable Development Goals.

The HMIS has initiated its first step of movement from paper-based reporting to electronic reporting in 2014 with the use of DHIS2 piloted in two townships with the technical support from University of Oslo. The platform has been fully deployed as the national reporting platform after the phase expansion within 2014 to 2017. From 2018 onwards public health information are reported through the DHIS2 platform by all townships.

The year 2019 has major milestones of HMIS which include: updating data dictionary, initiating routine data consistency check at sub-national level, deploying WHO data quality App on DHIS2 platform, and scaling up decentralized data entry from sub-township level.

The data dictionary has been updating on every seven to ten years from the year of establishment, the first revision was conducted in the year 2005, then in 2012, and the recent revision was conducted in 2018. Major changes in the updated data dictionary included: information for a total of 22 projects (increased from 20 to 22) being collected; the operational definitions for major indicators being updated to be in line with WHO recommended standard ones; procedures for quarterly data consistency check exercise being introduced etc..

The process of updating operational definition make the trend analysis for some key indicators such as PNC coverage, ante-natal care of at least four times, morbidity rate of ophthalmia neonatorum in newborn infants, etc., unavailable in the year 2019. This is mainly because the previously collected information were not continued and the information for the new operational definitions/indicators began to be available only from the year 2019 onwards.

Aiming for nurturing the data verification process as a routine procedure at decentralized levels: routine data checking exercise, assessing the consistency between recorded and reported data, was described in detail in the updated data dictionary and started practicing every quarter since the first quarter of 2019. Every quarter five variables to be used for verification exercise are identified by central HIS division and the list of variables is provided to states and regions. The list is passed further to townships where a number of randomly selected health centers participate in the exercise.

With the maturity of reporting through the DHIS2 platform, decentralization of data entry from township level to sub-township level was introduced in three townships of Kayin State in 2019. The decentralization process was also practicing in additional five townships: one in Kayin State, two in Mandalay Region, one in Bago Region, and one in Sagaing Region. With the decentralized process, focal persons from Rural Health Centers (RHCs) submit the report of respective sub-RHC facilities, and this makes data disaggregation by sub-RHC level becomes available.

2. Information captured through the public health statistics

The extent of information being captured and updates for each public health service project is displayed in table 1.

Table 1. Number of variables and indicators for public health projects, 2012 and 2019

No.	Project Name	# of variables		# of indicators	
		2012	2019	2012	2019
1	Primary Health Care Project	7	7	7	6
2	Maternal and Reproductive Health Program	14	24	13	14
3	Nutrition Promotion Program	16	21	18	22
4	Newborn and Child Health Development Program	11	13	8	8
5	Expanded Programme on Immunization	6	9	6	9
6	Diseases Under National Surveillance	17	17	17	17
7	National Malaria Control Programme	7	6	3	4
8	Cardiovascular Diseases Project	2	4	2	3
9	Injury Prevention Project	8	10	8	10
10	Vital Statistics	14	22	15	17
11	Prevention and Control of Diabetes Mellitus Project	-	6	-	3
12	School Health Project	6	29	6	11
13	Prevention and Control of Deafness Project	3	3	3	3
14	Mental Health Project	6	5	6	5
15	National TB Programme	2	13	2	11
16	National Leprosy Control Program	7	11	7	7
17	National AIDS Programme	5	10	4	5
18	Trachoma Control and Prevention of Blindness Programme	4	4	4	4
19	Zoonosis Diseases Control Project	4	3	2	1
20	Health Literacy Promotion Project	4	3	2	6
21	Myanmar Epilepsy Initiative Project	-	4	-	2
22	Environmental Sanitation Project	4	19	1	8
	Total	147	243	134	176

3. Public Health Services

3.1 Primary Health Care Project

Primary health care services are being accessed by the public at different primary health care facilities including sub-Rural Health Centers (sub-RHCs), Rural Health Centers (RHCs), Urban Health Centers (UHCs), Maternal and Child Health Centers (MCHs), Station and Township Hospitals.

Increasing number of people pursued primary health care services through the year 2016 to 2019 with the increase from 13.2 million to 13.7 million (Figure 1). Among those sought primary health care services, people sought services from hospitals increased from 0.2 million in 2016 to 2.84 million in 2019. The number of cases being referred to higher level of health facilities also increased from 290,000 to 420,000 during the same period. The improved transportation, and patient friendly hospital environment in the recent years have contributed to the significant increase in number of patients seeking health care from primary level hospitals.

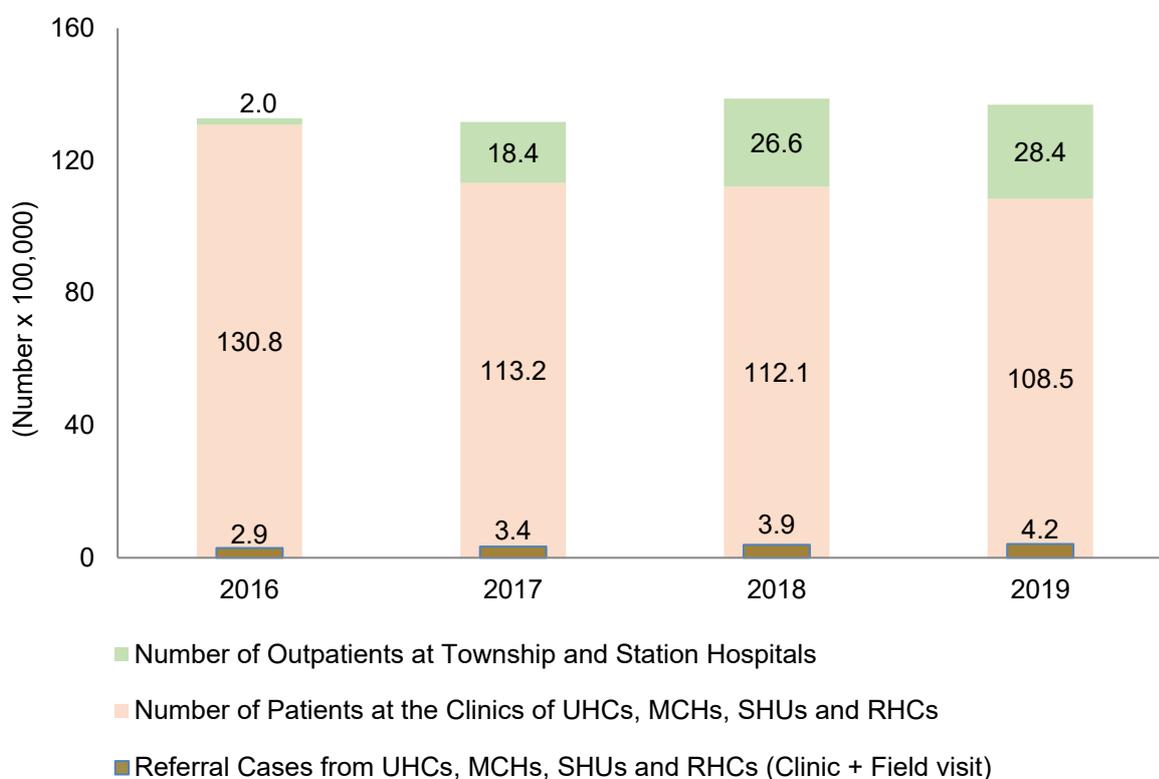


Figure 1. Total Number of Patients attending Primary Health Care Facilities, Myanmar, 2016-2019

In the year 2019, about 26 percent of the total population visited the primary health care facilities (Figure 2). Accessibility to higher level and specialist hospitals, availability of private clinics might contribute to the different proportion of people seeking health care from primary health care facilities across states and regions. Kachin, Kayah, Chin and Kayin States had more than 30 percent of population sought health care at primary health care facilities. Yangon Region and Mandalay Region and Nay Pyi Taw Territory had the lowest proportion of population seeking care from primary health care facilities.

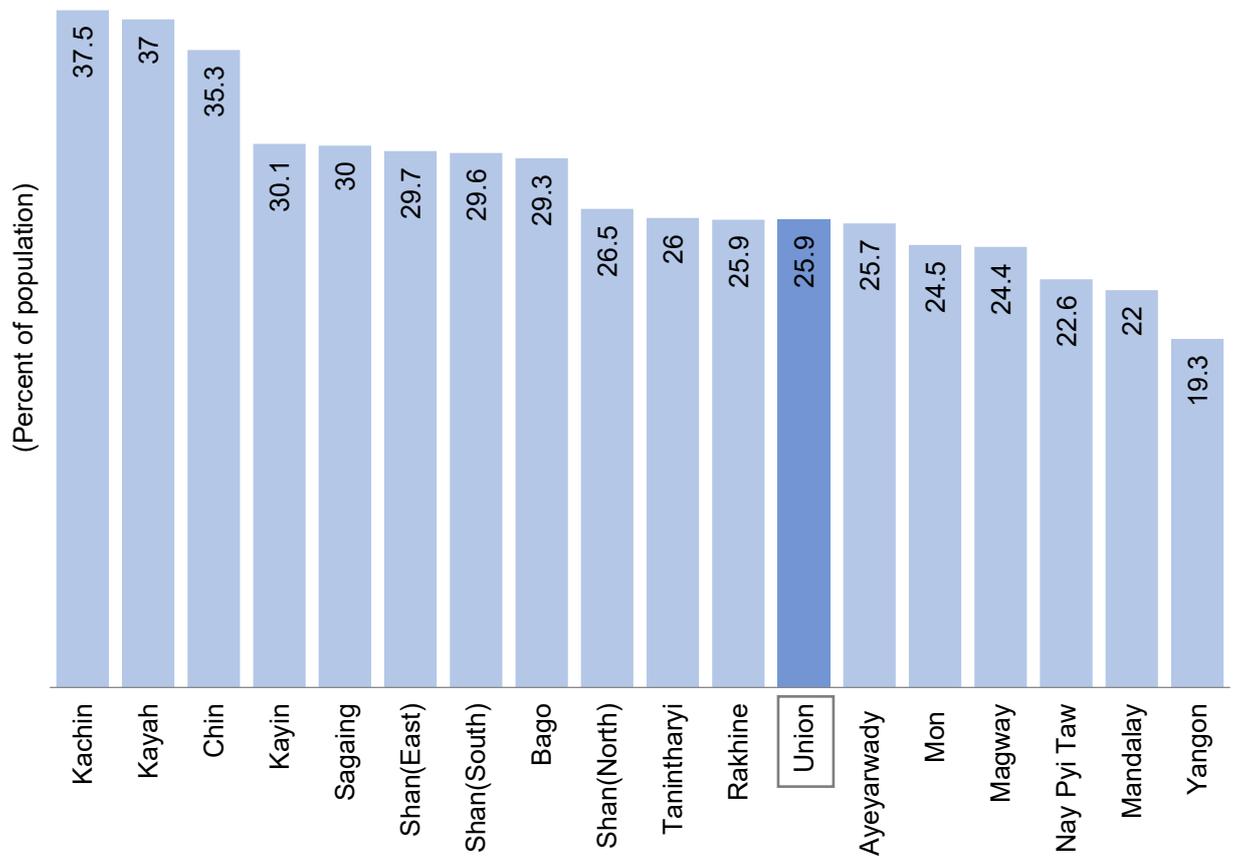


Figure 2. Proportion of Population seeking Primary Health Care Services by States and Regions, 2019

3.2. Maternal and Reproductive Health Program

To ensure health and well-being for every woman, it is vital to figure out what has worked in the past and use what we have learned to overcome existing and emerging challenges. The routine recording, reporting and interpretation of the data are essential to understand how far we have achieved maternal health related Sustainable Development Goals (SDG). The current situation of maternal and reproductive health service coverage should be evaluated first to develop better strategies for reaching the goal of ending preventable maternal deaths in 2030.

Maternal health care services are being delivered by primary health care providers at township level and below, by specialist obstetricians and gynecologists at district, state and regional level in Myanmar. Midwives are the key persons in providing antenatal, delivery and postnatal services in rural areas.

Maternal and reproductive health information presented in this report mainly covers the health services reported from primary health care level. However, information for some key indicators such as Skilled Birth Attendances (SBA), institutional delivery, and abortion were collected from both the public health and the hospital reporting systems.

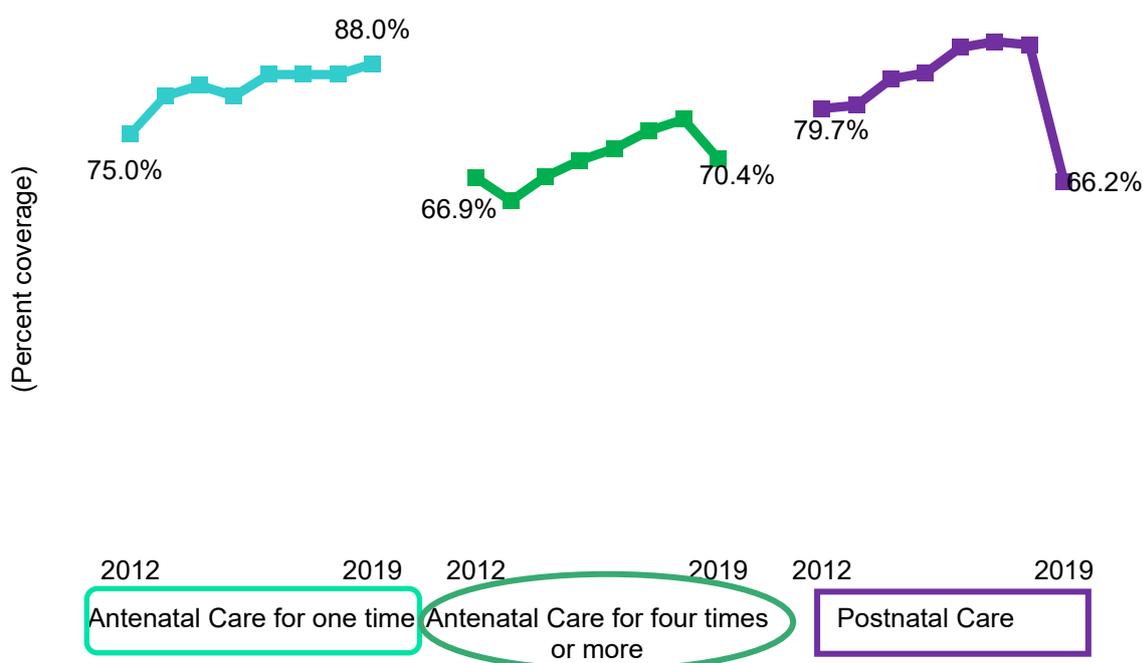


Figure 3. Antenatal and Postnatal Care Coverage, Myanmar, 2016-2019

The above line graphs (Figure 3) illustrate the progress and comparisons of Ante-Natal Care (ANC) for one time and four times as well as access to Post-Natal Care (PNC) in eight years period from 2012 to 2019. There was an increasing trend on pregnant women seeking ANC

for at least one time (ANC1) which increased from 75 percent in 2012 to 88 percent in 2019. Similarly, the ANC four times (ANC4) or more increased from 66.9 percent in the year 2012 to about 78 percent in 2018. However, a sudden drop of coverage to 70.4 percent was seen in 2019. In the updated data dictionary, both the numerator and denominator of ANC4 indicator were changed from the previously used “total births” to “live births”. The change in definition has changed the way of data capturing procedure and this might explain the sudden drop seen in the year 2019.

An increasing trend on PNC coverage was observed from 80 percent in 2012 to 91 percent in 2018. A sudden drop to 66 percent was observed in the year 2019 which was most likely because of the change in data definition for PNC from within 42 days to within 2 days of puerperium.

The graph below (Figure 4) specifically shows the difference between uptake of ANC1 and ANC4 in different states and regions of Myanmar in 2019. ANC1 was more than 85 percent in most states and regions except Yangon Region, Shan (North) and Shan (East) States. The drop of ANC4 from ANC1 was observed in all states and regions and a significant drop by 37 percent to 51 percent was seen in Bago Region, Nay Pyi Taw Territory, and Shan (South) State.

The dropped out of ANC visits might be due to the health seeking behavior of people in Myanmar: pregnant women usually visit the primary health centers at least once for the checkup and immunization, and then take the follow up visits and delivery at hospitals. Factors contributing to the drop of ANC4 from ANC1 should be thoroughly assessed by the Maternal and Reproductive Health Project to improve the uptake of follow up visits so that quality ANC can be provided, and high-risk pregnancies can be detected earlier to end preventable maternal deaths.

The bar graphs in (Figure 5) show the achievement of four major health services: Deworming, Iron and Vitamin B1 supplementation, and Tetanus-Diphtheria (Td) vaccination provided by Basic Health Services Professionals (BHSP) during ANC visits at primary care level over the four-year period of 2016 to 2019. It was observed that Td vaccination coverage was the highest while Vitamin B1 supplements provision was the lowest among all four services. Most of the health services achieved better results over time at a gradual rate except the deworming service which even declined around 2 percent from the achievement in 2016.

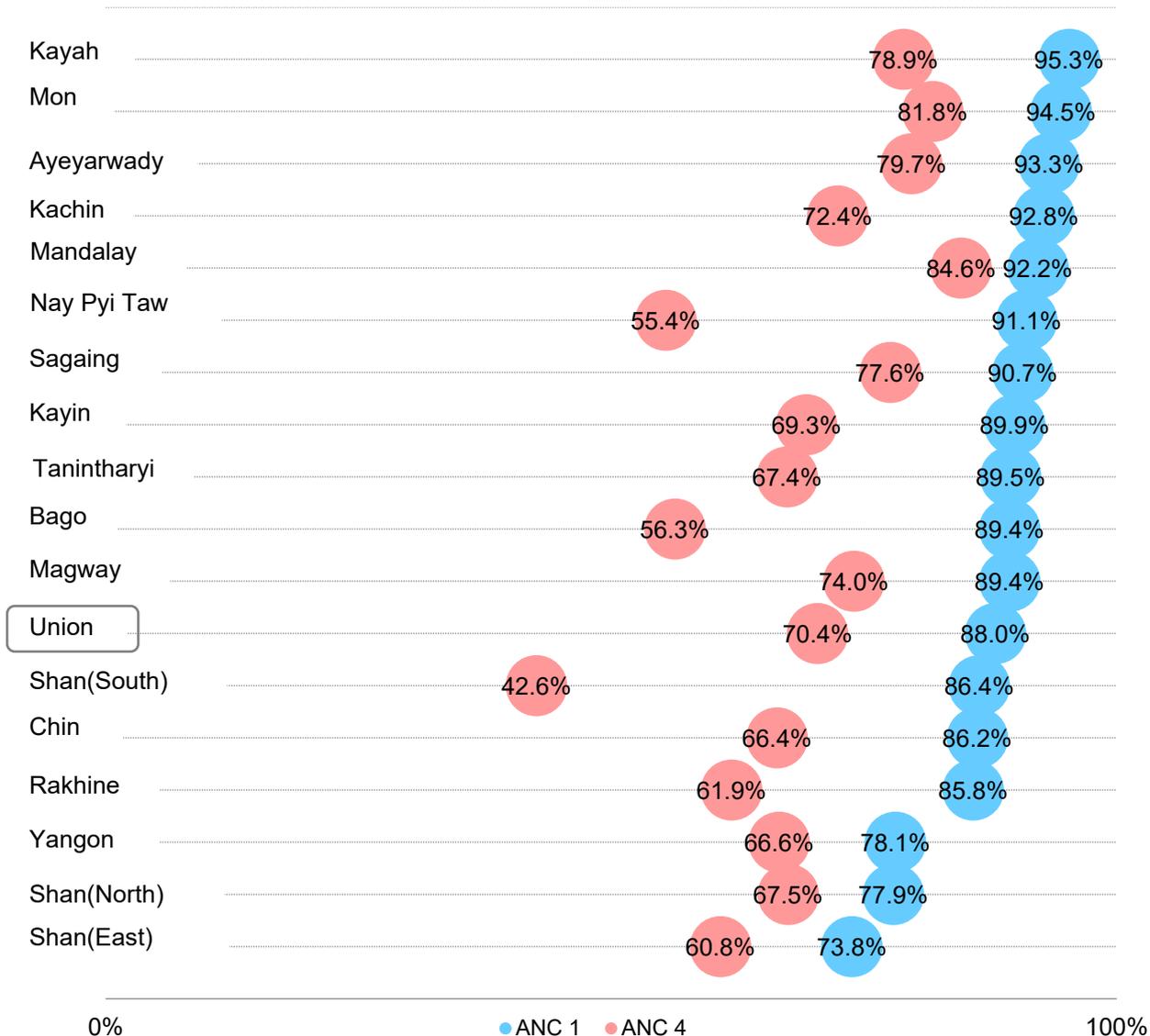


Figure 4. Antenatal care coverage by States and Regions, 2019

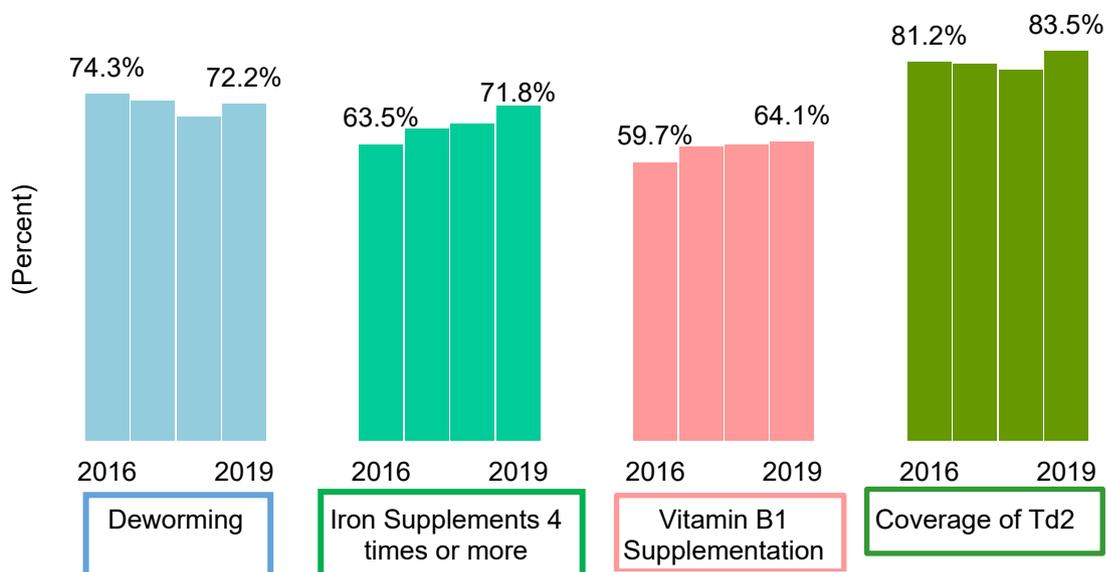


Figure 5. Health Services during Antenatal Care Period, Myanmar, 2016-2019

Table 2. Health Services during Antenatal Care by States and Regions, 2019

Sr. No.	States & Regions	Percent of Pregnant Women received Deworming Drugs	Percent of Pregnant Women received Iron Supplements 4 times or more	Percent of Pregnant Women received B1 Supplements	Coverage of Td based on Target	Percent of Pregnant Women who were tested for Hemoglobin
1	Kachin	62.7	70.3	58.5	83.5	86.2
2	Kayah	83.6	77.7	72.5	89.1	99.1
3	Kayin	82.6	70	68.2	85.3	95
4	Chin	61.9	68.4	60.6	82	66.6
5	Sagaing	71.1	78.6	68.4	85.8	83.4
6	Tanintharyi	79	66.2	60.7	85.7	92
7	Bago	80.9	71.8	70.3	87.4	93
8	Magway	89.7	82.5	75.2	87.7	85.2
9	Mandalay	75.7	83.6	69.8	90.3	94.8
10	Mon	88.7	81.4	74.6	92.3	102.7
11	Rakhine	43.4	57.5	45.6	79.2	49.3
12	Yangon	67.3	66.4	56.8	72	73.4
13	Shan (South)	80.3	70	65.1	83.2	92.9
14	Shan (North)	37.9	47.2	37.7	66.7	69.5
15	Shan(East)	61.6	45.3	42.2	67.2	65.4
16	Ayeyarwady	77.9	76.1	73	90	94.7
17	Nay Pyi Taw	82.6	76.1	68.9	82.5	89.2
	Union	72.2	71.8	64.1	83.5	84.5

Table 2 shows the health services during ANC by states and regions in 2019. Testing for hemoglobin and prevalence of anemia in pregnancy are the new indicators in 2019. The services coverages were quite low in Rakhine, Shan (North) and Shan (East) States. The provision of Vitamin B1 supplements was lower than other services in all states and regions in 2019.

The prevalence of anemia in pregnancy ranged from over 3 percent to 17 percent across states and regions and the overall prevalence was 6.6 percent (Figure 6) in 2019. The value was 57 percent in MDHS (2015-2016) and 40 percent in Myanmar Micronutrient and Food Consumption Survey (2017-2018). Given around 85 percent of pregnant women received blood test for hemoglobin, the huge discrepancy between routine service data and survey data should be thoroughly reviewed especially the sensitivity and specificity of blood tests/test kit, and definition used should be assessed to capture the valid prevalence of anemia in pregnancy.

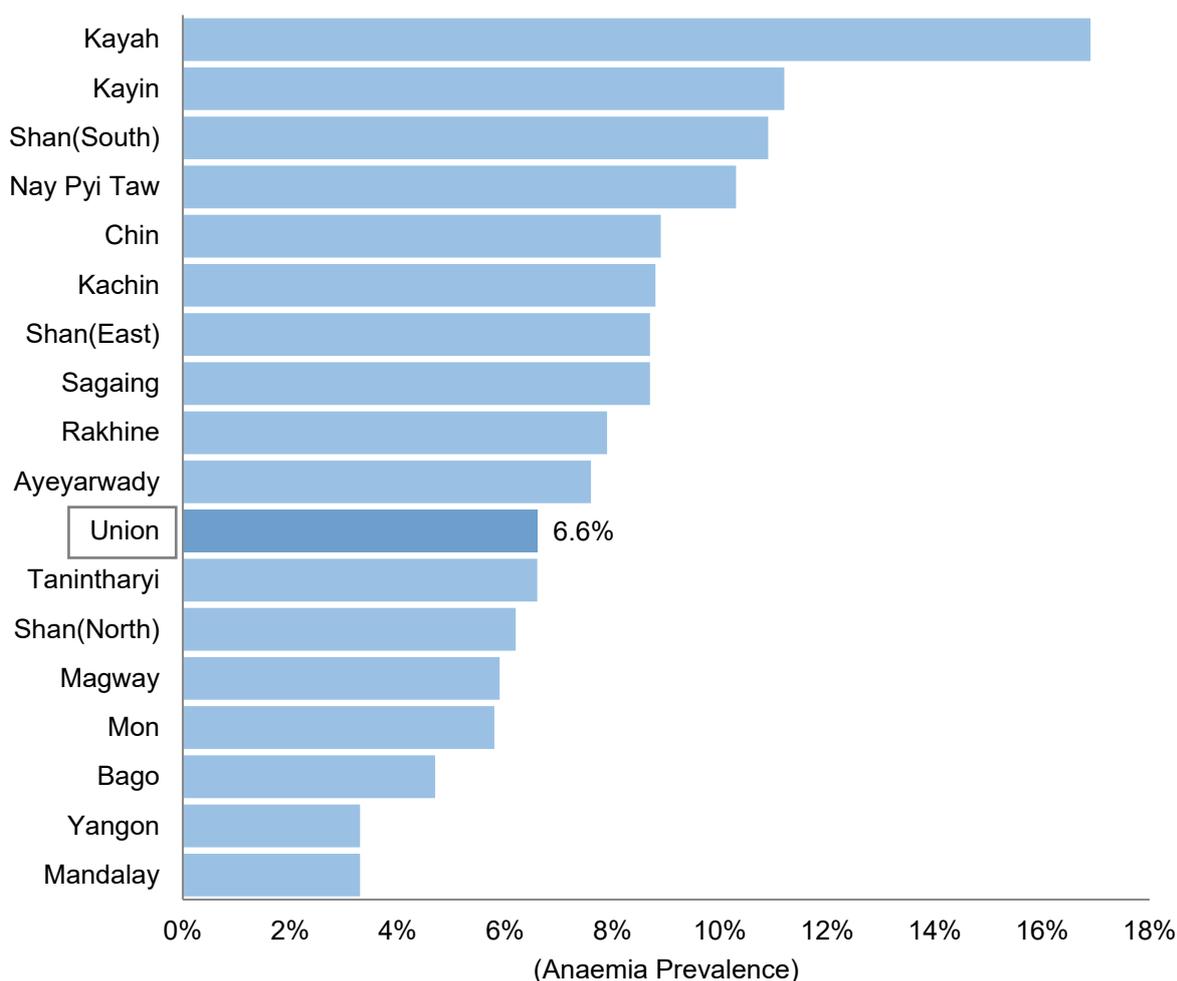


Figure 6. Prevalence of Anaemia among Pregnant Women by States and Regions, 2019

Assessment on the progress of delivery related indicators was conducted deploying data being captured through the MRH project, vital statistics project, and hospital reports. As per the vital statistics project, BHSP are responsible for collecting and reporting incidences of birth and death confronted by residents within his/her jurisdiction i.e., according to place of residence. The hospital reports and MRH project (to a certain extent) are mainly based on service provision i.e., the place of occurrence.

Although around one million pregnancies were estimated for each of the year from 2016 to 2019, only around nine hundred thousand births were reported annually across these four years.

Analysis on Skilled Birth Attendance (SBA) and Institutional Delivery was conducted using the number of total births reported through the vital statistics project as denominator, and the number of deliveries being collected through MRH project, vital statistics project, and hospital reports for the numerator.

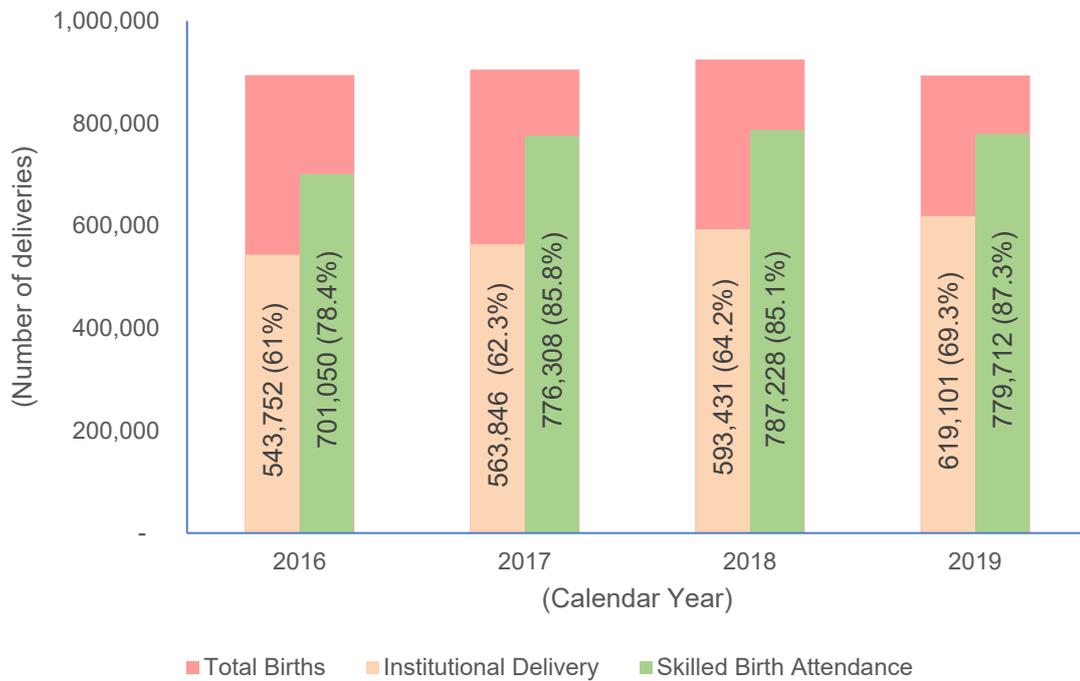


Figure 7. Delivery Services (number and percent of total births), Myanmar, 2016-2019

Among the reported deliveries, the number attended by skilled birth attendants fluctuated around 701,000 to 780,000 during 2016 to 2019, which were equivalent to 78.4 to 87.3 percent of deliveries.

An increasing trend was observed for the institutional delivery in terms of both absolute numbers and proportion of total births. It increased gradually from 61 percent in 2016 to 69.3 percent in 2019 (Figure 7).

Being not a comprehensive vital registration process, the potential for varying degrees of under reporting for both numerator and denominator should be minded while interpreting the SBA and institutional delivery. In addition, the nature of being place of residence for denominator whereas a mixture of place of residence and occurrence for numerator should be minded especially for disaggregated state and regional information.

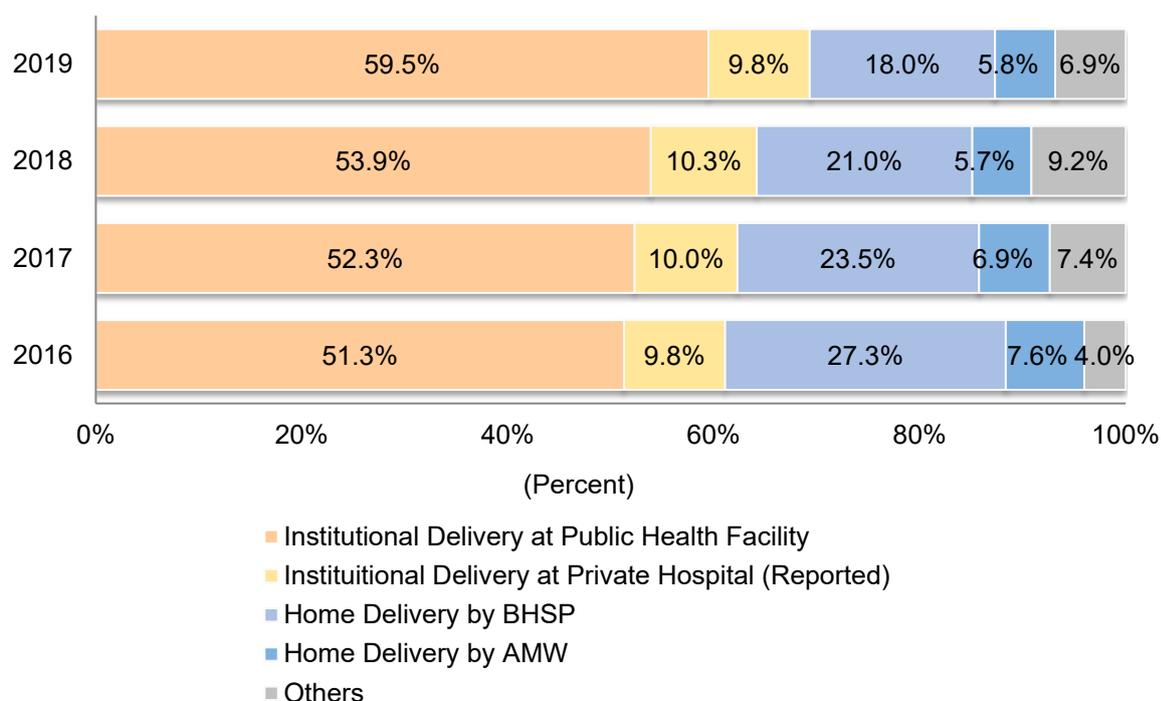
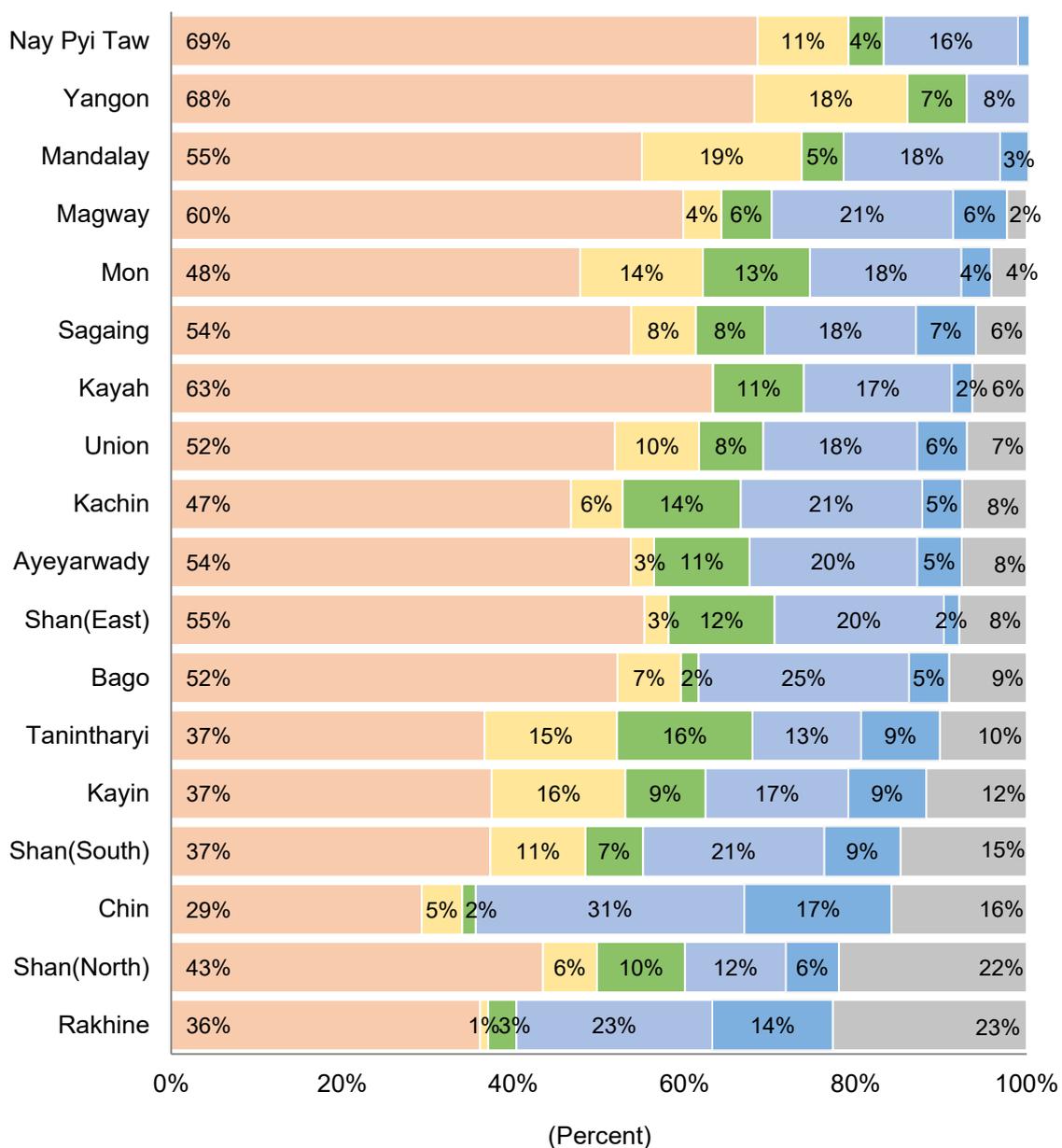


Figure 8. Places of Delivery, Myanmar, 2016-2019

Half of the child births occurred at public health facilities with increasing trend in the period of 2016 to 2019 (Figure 8). The delivery at private hospital remained constant at around 10 percent. Home delivery by BHSP was declined gradually from 27.3% in 2016 to 18% in 2019. The other births might be attended by retired Midwives at villages, traditional birth attendants, unreported deliveries at private hospitals or else.

In 2019, around 70 percent of deliveries took place at delivery institutions where 62 percent happened at public and private hospitals (Figure 9). Institutional delivery was the highest in Yangon Region at 93 percent followed by Nay Pyi Taw Territory at 83 percent and Mandalay Region at 79 percent. It was the lowest in Chin State at 36 percent and Rakhine State at 40 percent. The home deliveries by BHSP and AMW were higher in these two states compared with other states and regions. The geographic terrain and transportation difficulties might play a role in accessibility to delivery institutions across states and regions.

On average 87 percent of deliveries were attended by skilled birth professionals in 2019, the SBA rate was more than 90 percent in Yangon Region, Nay Pyi Taw Territory, Mandalay Region, Magway Region, Mon, Kayah, Shan (East) States. On the other side, the lowest level of SBA (less than 70 percent) was seen in Rakhine and Chin States.



(Note: Data labels are rounded values)

- Institutional Delivery at Public Hospital
- Institutional Delivery at Private Hospital (Reported)
- Institutional Delivery by BHSP at Delivery Room
- Home delivery by BHSP
- Home delivery by AMW
- Others

Figure 9. Places of Delivery by States and Regions, 2019

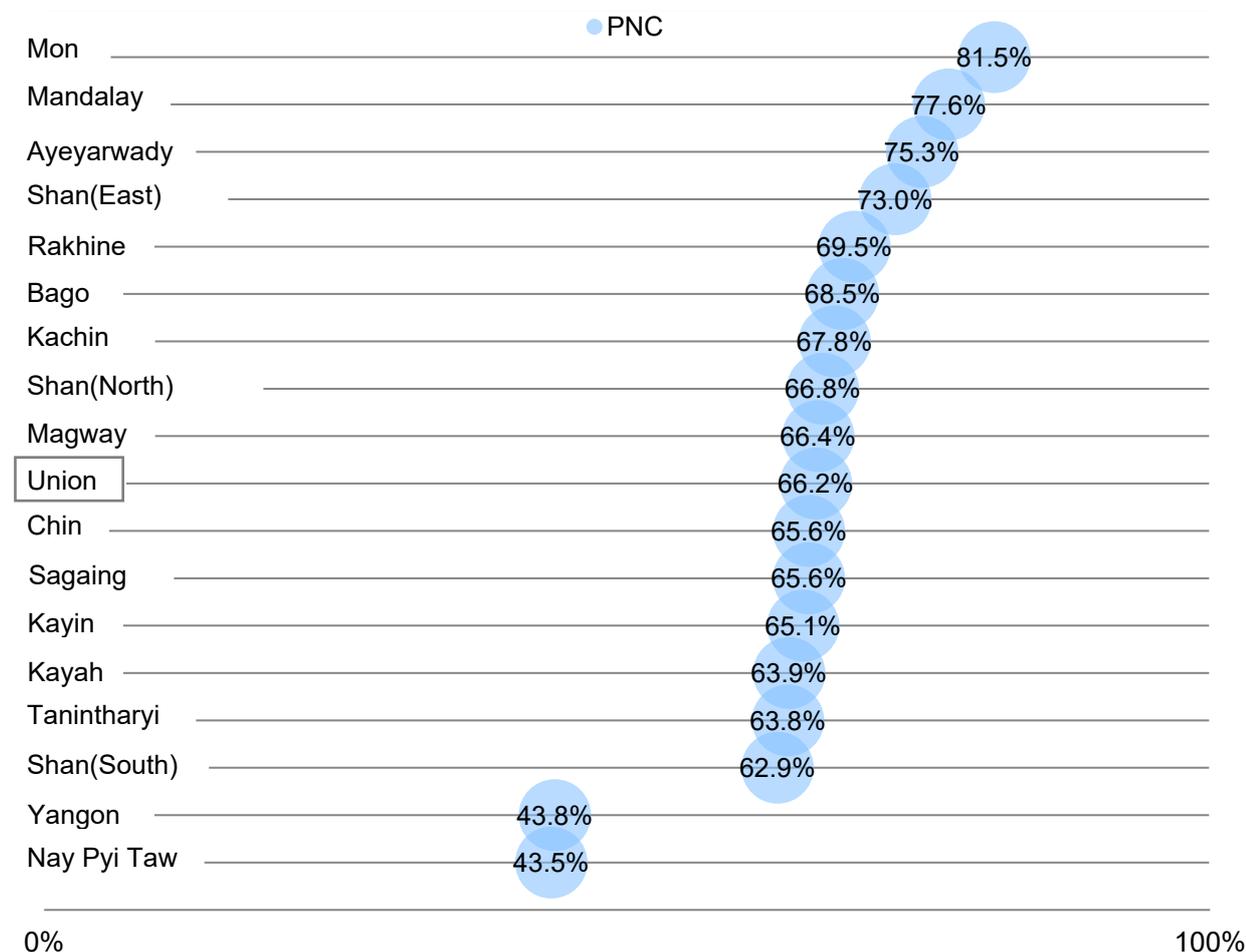


Figure 10. Postnatal Care Coverage by States and Regions, 2019

Postnatal care coverage was more than 60 percent in all states and regions except in Yangon Region and Nay Pyi Taw Territory. It should be very cautious interpreting this finding, the information shown in the above graph contained the data reported from primary healthcare facilities only. With the changing operational definition of PNC to be reported for those received the care within two days of delivery, information for deliveries happened at hospitals would be severely under-reported. The low PNC coverage seen in Yangon Region and Nay Pyi Taw Territory would be attributable to the under-reporting for hospital deliveries which accounted for about 70 percent of deliveries in these two regions.

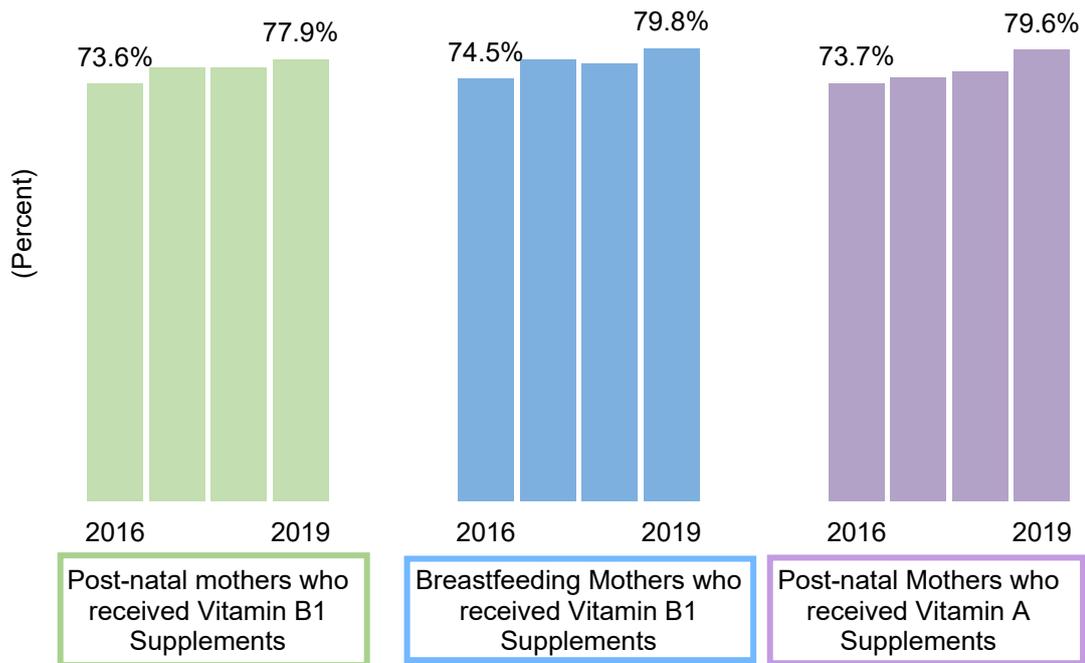


Figure 11. Health Services during Postnatal Period, Myanmar, 2016-2019

During PNC period, vitamin B1 and vitamin A supplements are provided by BHSP at primary health care level. It was observed that the service coverage was increased gradually across the years from 2016 to 2019 though the coverage was still lower than 80 percent (Figure 11).

Postnatal care coverage was around 80 percent in most states and regions (Table 3), with the lower coverage seen in Shan (North), Shan (East), Rakhine States and Yangon Region.

Table 3. Health Services during Postnatal Care Period by States and Regions, 2019

	States & Regions	Percent of Postnatal Mothers received Vitamin B1 Supplements	Percent of Breastfeeding Mothers received Vitamin B1 Supplements	Percent of Postnatal Mothers received Vitamin A Supplements
1	Kachin	75.1	77.7	79
2	Kayah	86.7	86.3	86.1
3	Kayin	80.7	84.1	81.4
4	Chin	77.1	74.9	78.2
5	Sagaing	83	83.8	87.3
6	Tanintharyi	82.8	83.2	82.4
7	Bago	81.4	85.9	83.7
8	Magway	88.4	88.6	88
9	Mandalay	84.3	85.8	85.6
10	Mon	91.5	90.7	91.2
11	Rakhine	55.2	56.6	64.1
12	Yangon	67.8	69.1	72
13	Shan(South)	81.7	82.2	82.7
14	Shan(North)	55.6	56.5	52.4
15	Shan(East)	56.4	56.1	55.1
16	Ayeyarwady	85.1	90.5	82.6
17	Nay Pyi Taw	90.3	96.5	89
	Union	77.9	79.8	79.6

In general, 1 in 50 girls in 10 to 19 years of age gave births in the year 2019. Among states and regions, the adolescent birth rate was higher in states than regions and the highest rate was seen in Shan (East) State at 42 births among 1,000 adolescent girls (Figure 12).

There is still a long way to go for achieving the family planning 2020 commitment of having less than 10 per 1,000 adolescents in Myanmar. The only region, Yangon Region, achieved that target with the rate of 8.6 per 1,000 girls in the year 2019. However, we should also be cautious with possible under-reporting for Yangon Region.

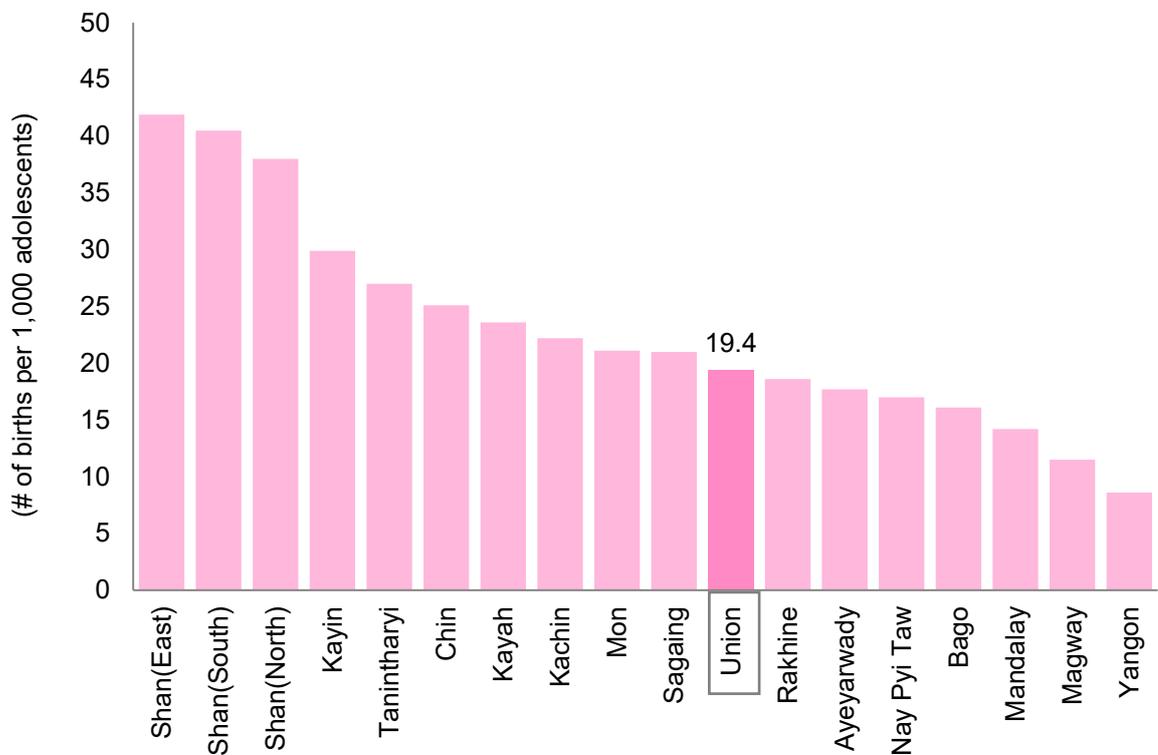


Figure 12. Adolescent Birth Rate by States and Regions, 2019

In the current data collection process, the number of abortions was captured and reported from both hospital and public health information systems. Given the aggregate nature of data recording and reporting, it is not possible to tease out those incidences received care at hospitals and those received care from primary healthcare facilities. The number in this report has taken from hospital report only which might be under-represented to a certain extent.

In 2019, abortion contributed to six percent of total births. The rate ranges from four to ten percent across the states and regions. A rate of higher than national level of six percent was found in Yangon Region at around ten percent, Nay Pyi Taw Territory and Kayah State at eight percent, and Kachin State at seven percent while the remaining states and regions had the rate of five to six percent (Figure 13).

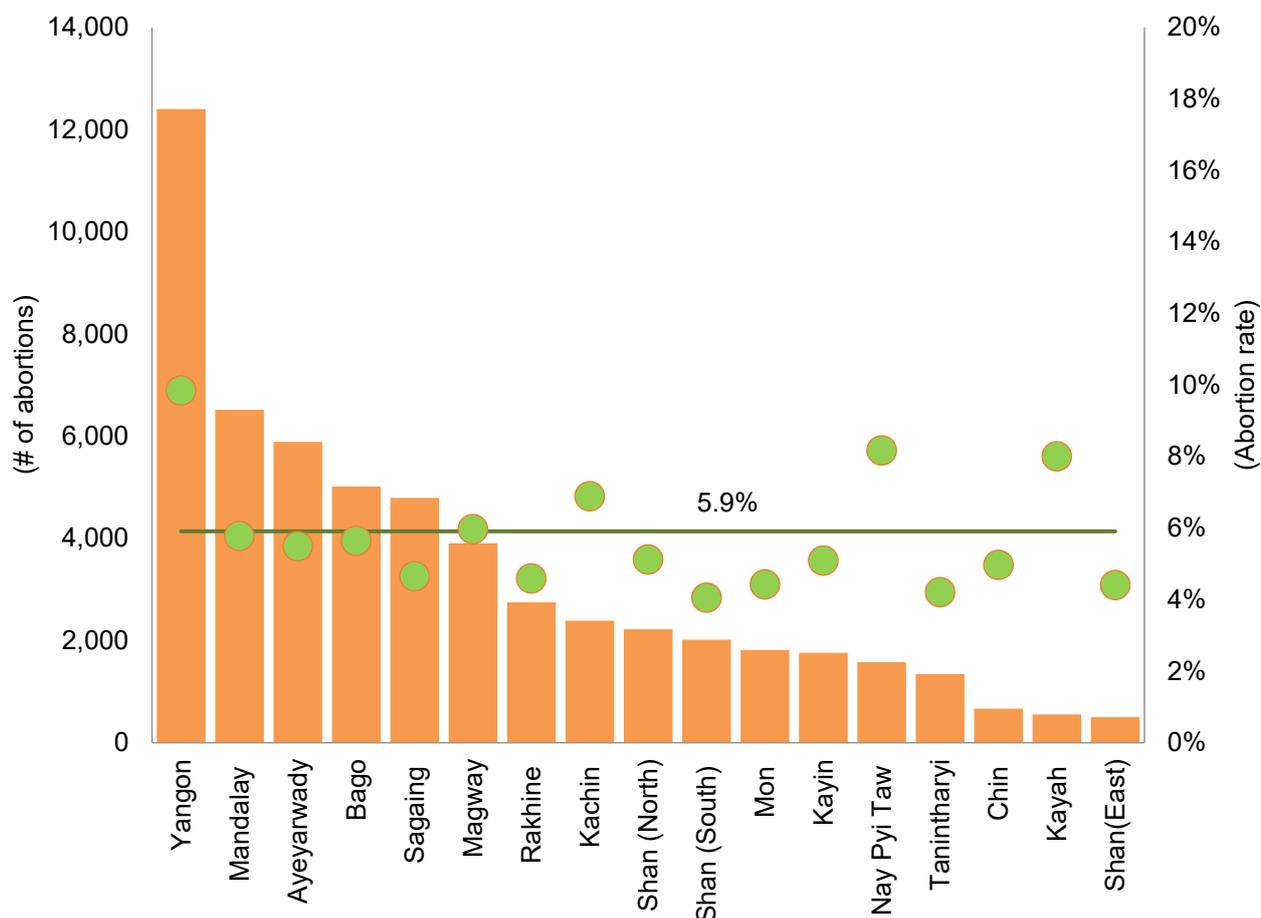


Figure 13. Abortion Rate by States and Regions, 2019

Acknowledging the fact that contraception is essential for family planning and prevention of unintended pregnancies and unsafe abortion, contraception service is included in basic essential package of health services in Myanmar. There was an increasing trend of consuming modern contraceptive methods among eligible couples with the contraceptive prevalence rate (CPR) increased from around 50 percent in 2014 to more than 70 percent in 2019 (Figure 14).

Among the modern contraceptive users, IM injection and oral pills accounted for more than 80 percent of usage every year from 2016 to 2019. Each of the remaining contraceptive methods like IUCD, implant, and condom usage contributed two to four percent of usage. Subcutaneous injection was introduced in reporting system in 2019 and it accounted for about 4 percent of contraceptive use in that year (Figure 15).

Family planning 2020 commitment includes improving method mix with increased use of long-acting reversible methods. The data showed that MRH project should focus on low usage of IUCD and implant. It is vital to reach to the inaccessible couples / to increase demand satisfied by modern contraceptive methods. The graph (Figure 16) compares the modern contraceptive prevalence rate (mCPR) and close birth interval by states and regions

in 2019. The mCPR was the highest in Yangon Region at 77.6 percent and the lowest in Chin State at 34.2 percent. It was also observed that close birth interval was more than 10 percent in Chin and Kayah States.

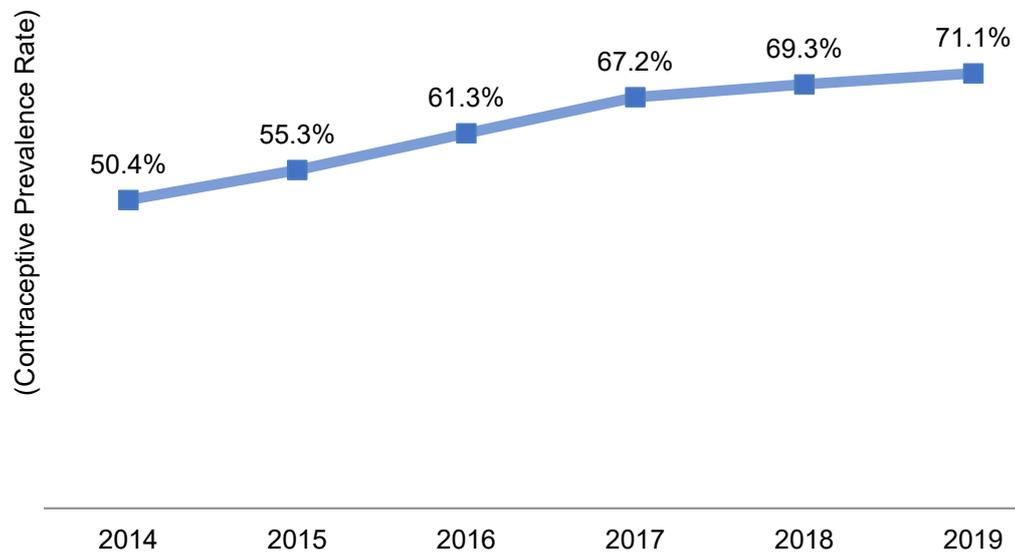


Figure 14. Contraceptive Prevalence Rate (Modern Methods), Myanmar, 2016-2019

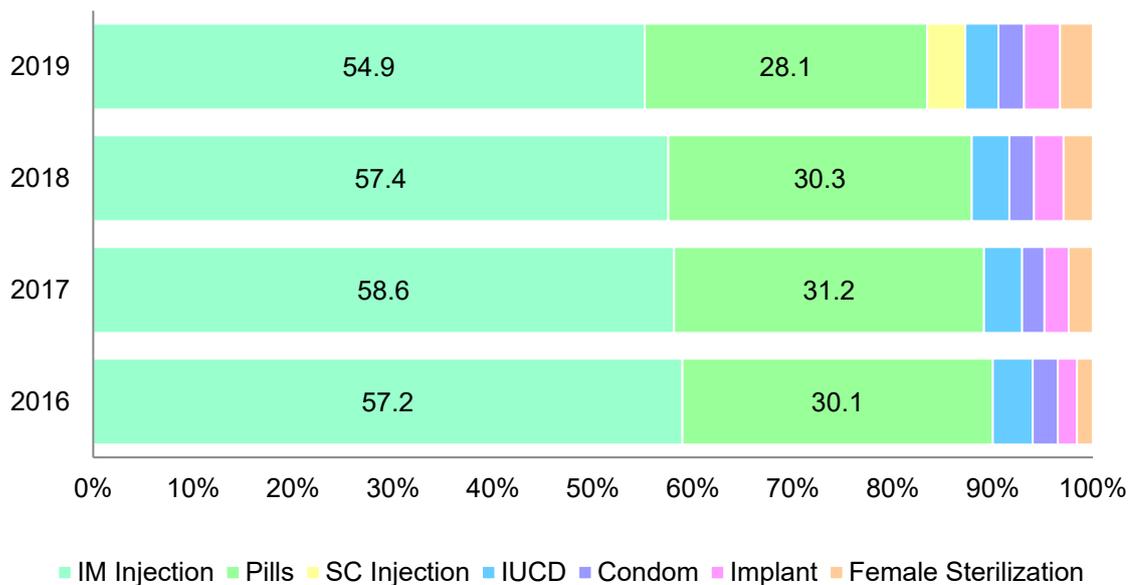


Figure 15. Utilization of Modern Contraceptive Methods among the Couples who use Modern Contraceptive Methods, Myanmar, 2016-2019

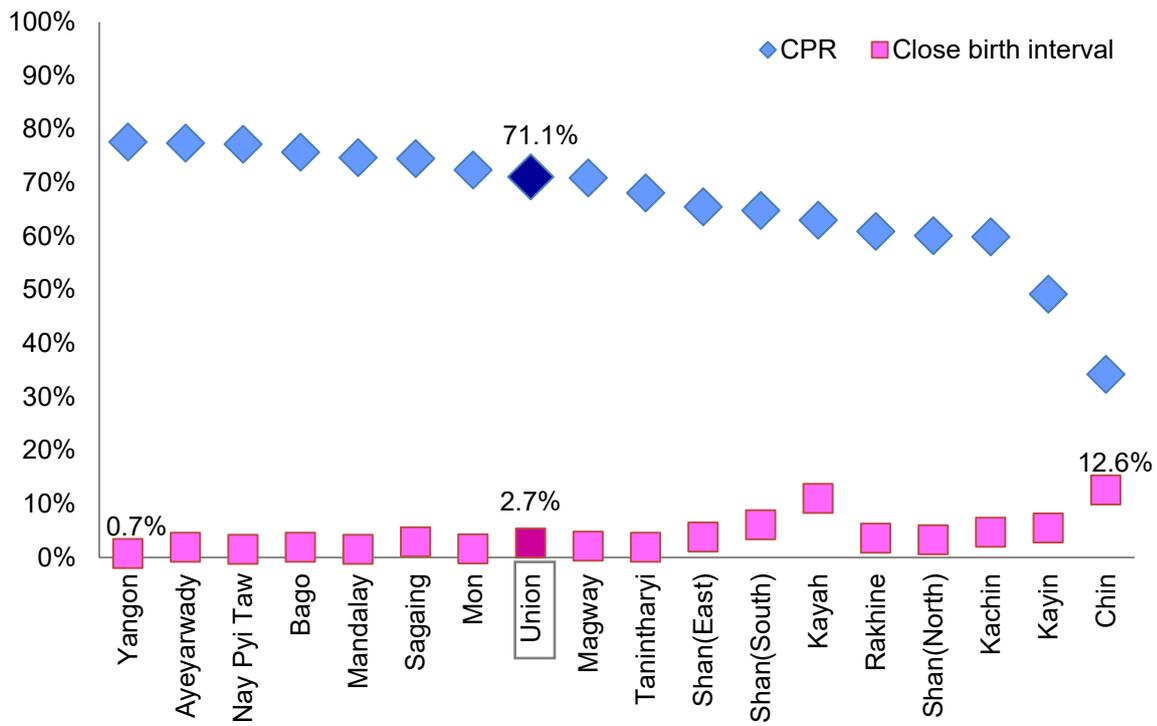


Figure 16. Modern Contraceptive Prevalence Rate and Close Birth Interval by States and Regions, 2019

3.3. Newborn and Child Health Development Program

Indicators for child health services at primary health care level include treatment coverage for diarrhea and pneumonia among Under-5 children, PNC for newborns within two days, early initiation of breastfeeding, newborn resuscitation with bag and mask, kangaroo mother care for preterm and low birth weight babies. The SDG targets for child health are: to end preventable newborns deaths, and to reduce neonatal mortality to at least as low as 12 per 1,000 live births and under-5 mortality to at least as low as 25 per 1,000 live births by 2030.

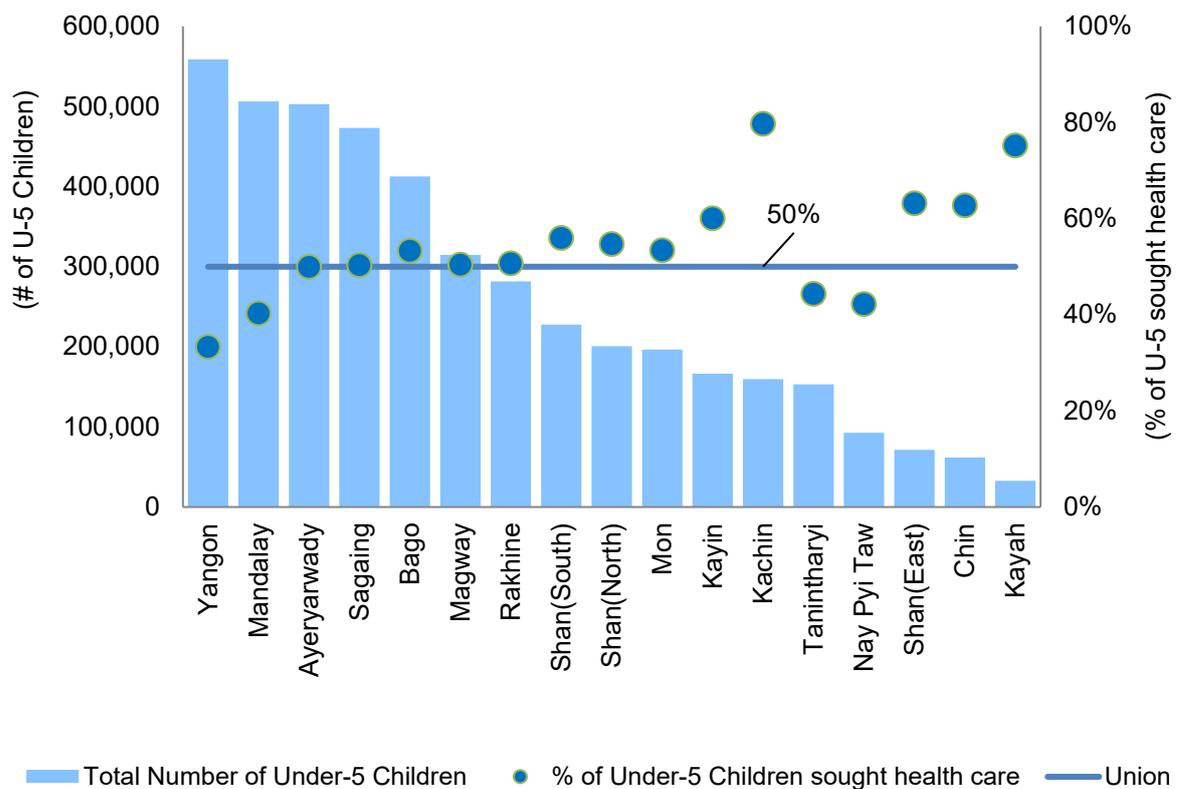


Figure 17. Clinic Attendance among Under-5 Children by States and Regions, 2019

Half of Under-5 children sought primary health care services in 2019. Percent of health seeking among Under-5 children was the highest in Kachin State and the lowest in Yangon Region (Figure 17). In big cities like Nay Pyi Taw Territory, Yangon and Mandalay Regions, parents might prefer seeking health care for Under-5 children from the tertiary public hospitals, private hospitals, and private clinics other than primary health care facilities. This might explain the relatively lower proportion of Under-5 received primary healthcare services in these regions.

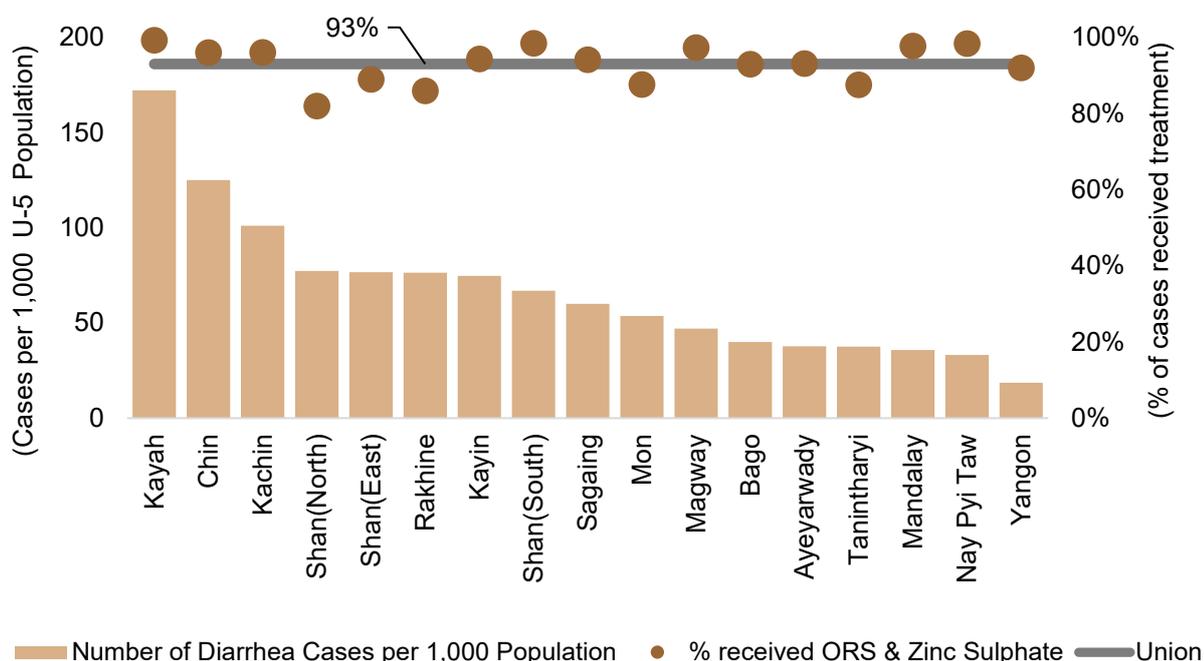


Figure 18. Morbidity Rate and Treatment Coverage of Diarrhea among Under-5 Children by States and Regions, 2019

In 2019, more than 100 out of 1,000 Under-5 children resided in Kayah, Chin and Kachin States suffered from diarrhea. The lowest morbidity rate was reported from Yangon Region, Nay Pyi Taw Territory and Mandalay Region. The low morbidity rate might be due to the low incidence of diarrhea or low health care seeking practice from primary healthcare facilities for Under-5 children in these three regions.

Among the diarrhea cases, 93 percent received oral rehydration therapy with Zinc sulphate, and the treatment coverage ranged from 82 to 99 percent across states and regions (Figure 18).

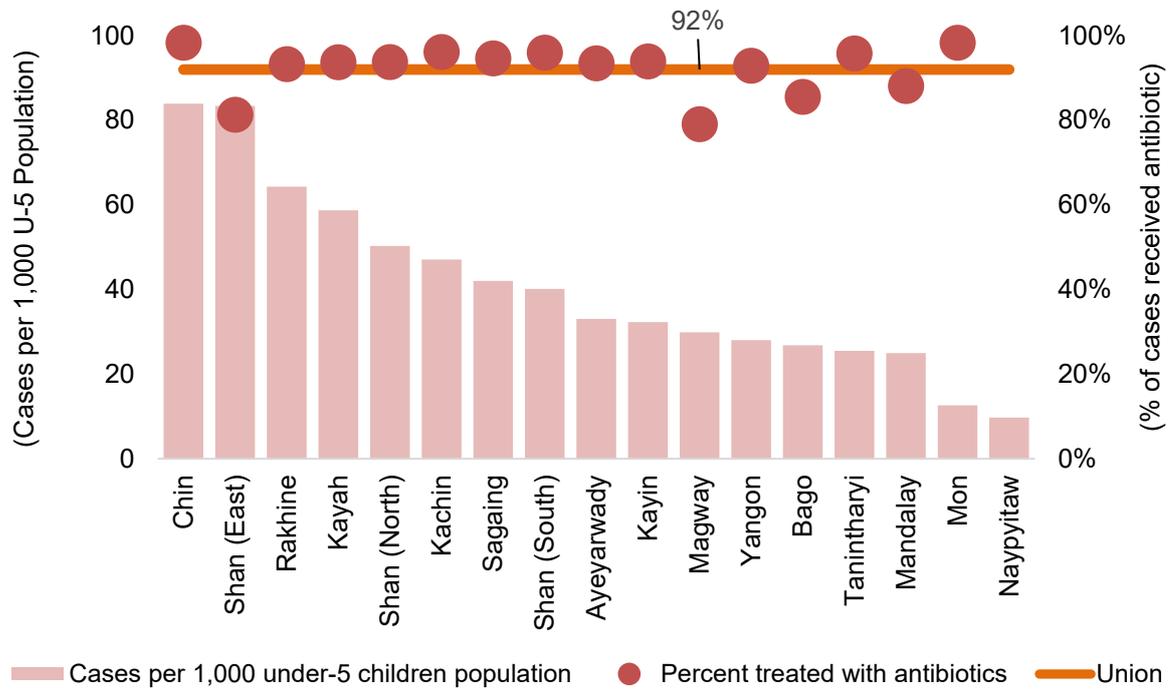


Figure 19. Morbidity Rate and Treatment Coverage for Suspected Pneumonia among Under-5 Children by States and Regions, 2019

More than 80 out of 1,000 Under-5 children living in Chin and Shan (East) States suffered from suspected pneumonia, and this accounted for highest case load among all states and regions. The case load was the lowest in Nay Pyi Taw Territory and Mon State. On average, 92 percent of pneumonia cases received antibiotic treatment and the treatment coverage ranged from 79.1 to 98.3 percent among states and regions (Figure 19).

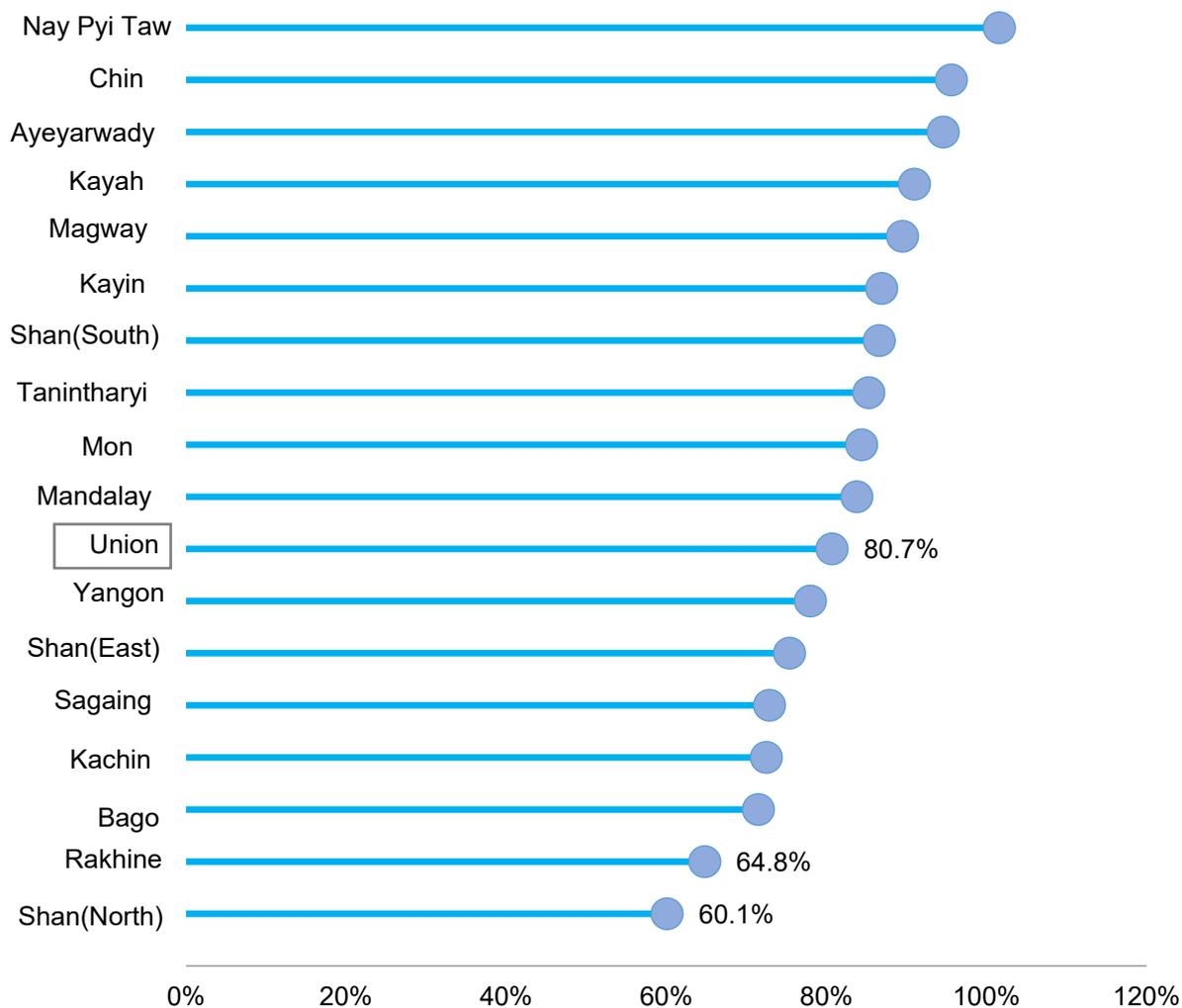


Figure 20. Early Initiation of Breast Feeding by States and Regions, 2019

In 2019, eight out of ten newborns were breastfed within one hour of birth. The early initiation of breast feeding was more than 70 percent in most states and regions except Shan (North) and Rakhine States (Figure 20).

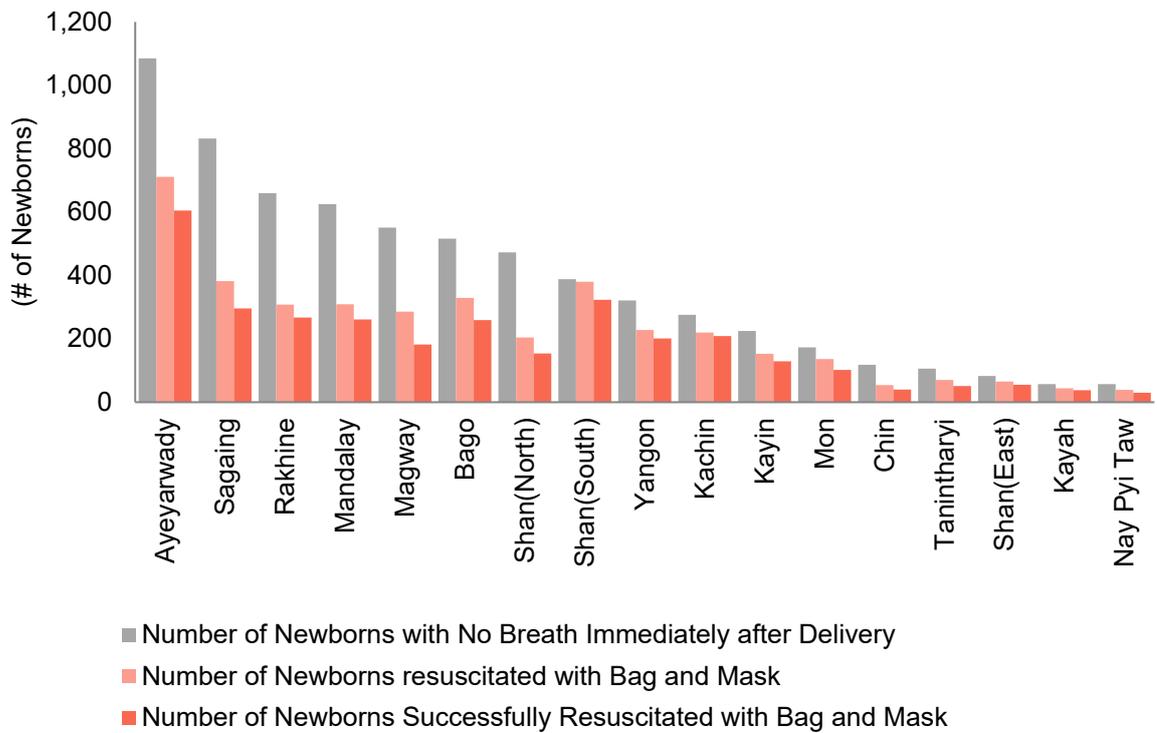


Figure 21. Newborn Resuscitation Coverage by States and Regions, 2019

The cascade of newborn resuscitation services at primary care level by state and region was displayed in the graph (Figure 21). The big gap for newborn resuscitation was observed in Ayeyarwady, Sagaing, Mandalay, Magway, Bago Regions and Rakhine, Shan(North) States. The successful resuscitations ranged from 63.6 percent in Magway Region to 95 percent in Kachin State.

3.4. Nutrition Promotion Program

Nutrition promotion program focuses on nutritional status of children and pregnant women. The information on the nutritional status of Under-5 children, low birth weight, early initiation of breast feeding, infants with beriberi, vitamin A supplementation, deworming and maternal vitamin and nutrient supplementation such as provision of vitamin A, vitamin B1, iron supplements, and hemoglobin test during pregnancy, childbirth and postpartum period are collected through HMIS. The reporting system also covers testing of iodine in salts among the households.

New indicators for nutrition were added in the updated version of HMIS data dictionary, however some nutrition related key indicators included in WHO 100 core indicators, SDG and Global Nutrition indicators like obesity, stunting and wasting were left to be collected in the current system.

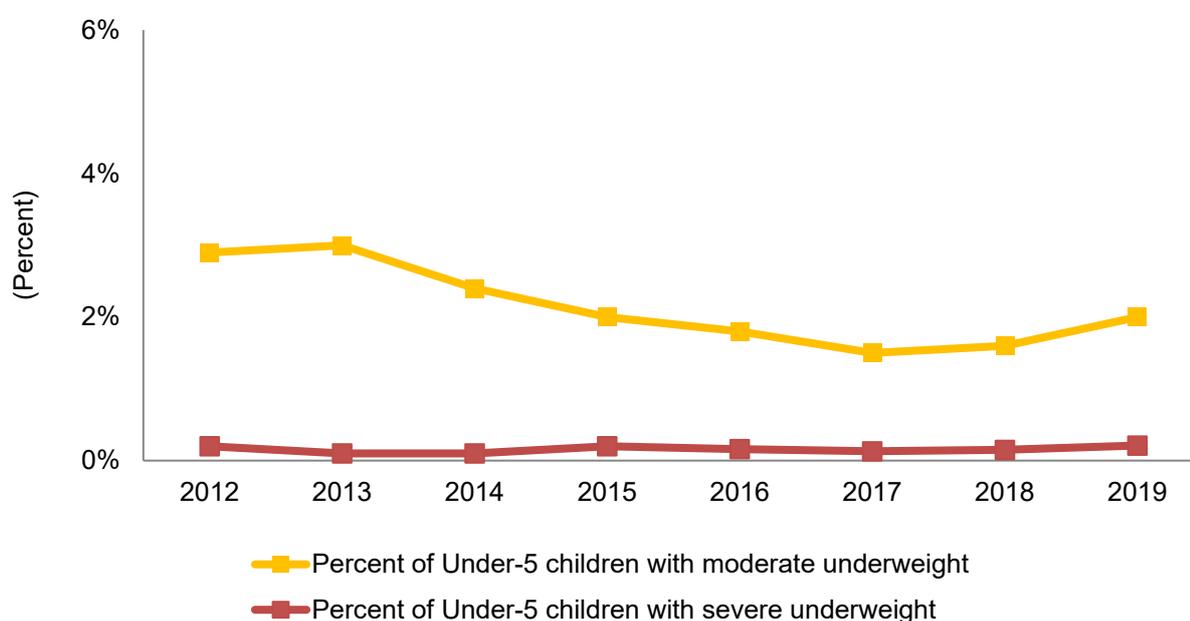


Figure 22. Percent of Under-5 children with underweight, Myanmar, 2012-2019

Weight measurement among under-5 children is regularly conducted by BHSP, and weight for age is regularly assessed according to the National Nutrition Guideline. The union weight measurement coverage was 97.4 percent in 2019. The prevalence of severe underweight remained constant at 0.2 percent across the years from 2012 to 2019 while moderate underweight declined slightly across eight years period from 3 percent in 2013 to 2 percent in 2019 (Figure 22). Scooping by states and regions, the underweight prevalence was the highest at 6.9 percent in Kayah State followed by Chin State and Sagaing Region in 2019, and the value was 2.2 percent at national level (Figure 23).

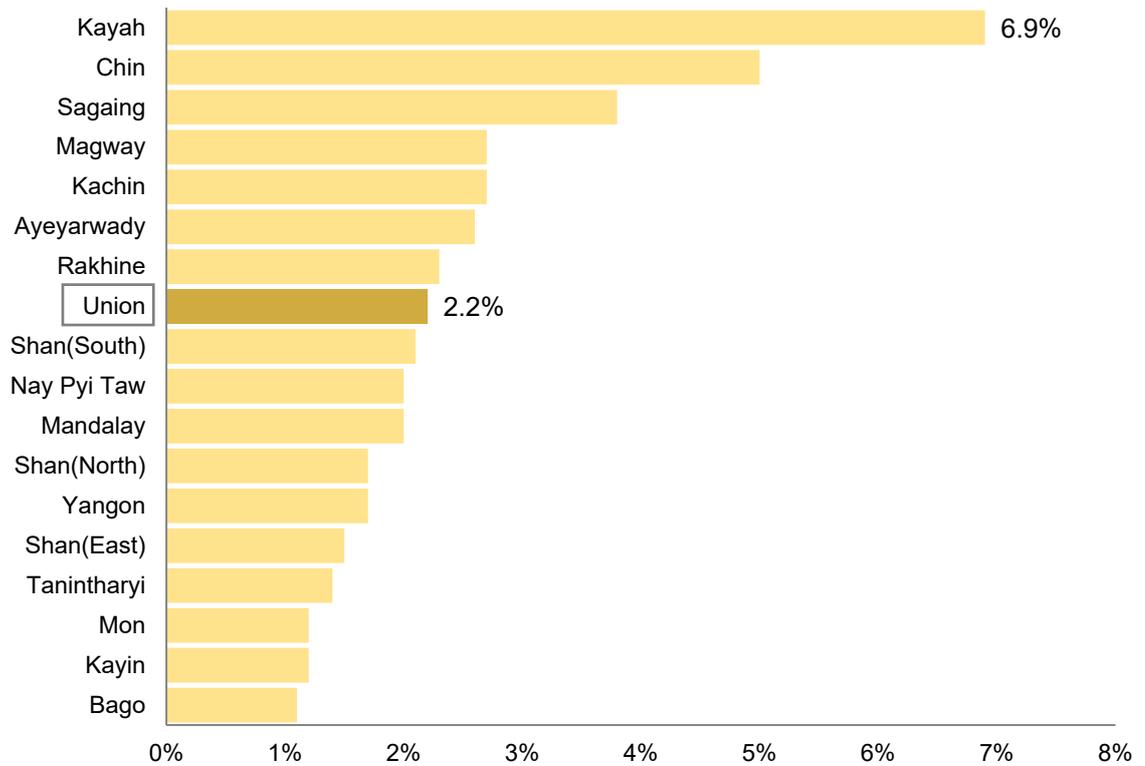


Figure 23. Percent of Under-5 children with underweight by States and Regions, 2019

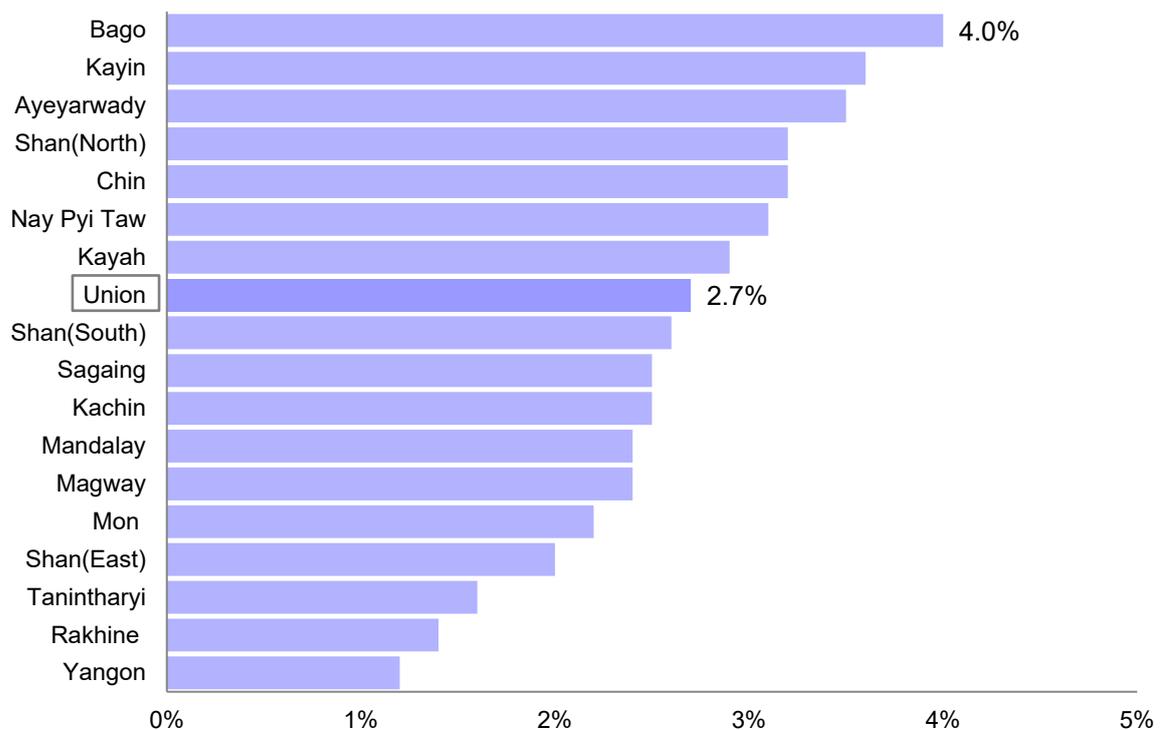


Figure 24. Percent of Low Birth Weight by States and Regions, 2019

The low-birth-weight information revealed in the graph above (Figure 24) was based on information being captured from primary healthcare level, and hospitals. The percent of low

birth weight was the highest at 4 percent in Bago Region followed by Kayin State, Ayeyarwady Region, Shan(North) State, Chin State and Nay Pyi Taw Territory at more than 3 percent. The low-birth-weight information for those deliveries took place at the secondary and tertiary hospitals were not included in this report, and the possibility of under reporting should be minded while interpreting the information.

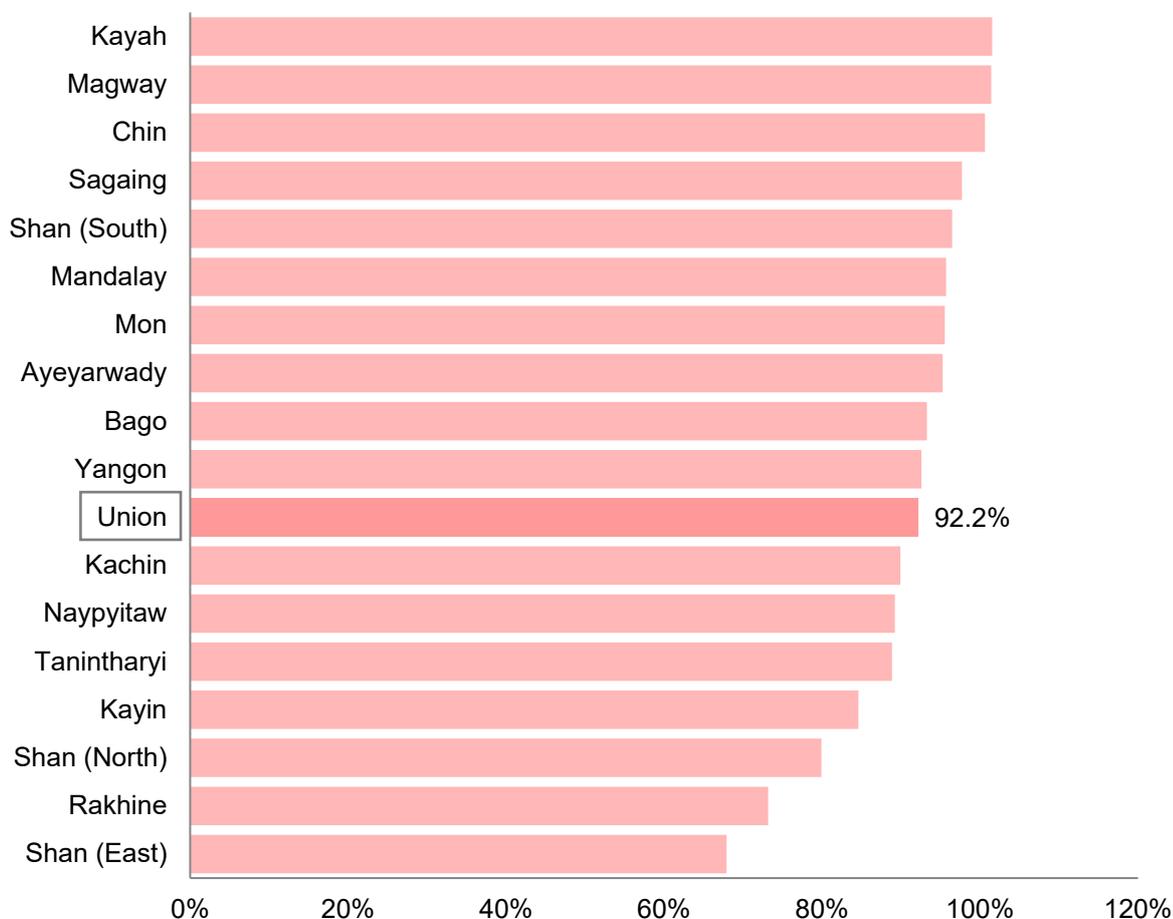


Figure 25. Vitamin A Supplementation Coverage among Children Aged 6 to 59 months by States and Regions, 2019

According to WHO guideline, the Vitamin A is delivered to children aged 6 to 11 months once and to children aged 1 to 4 years at six-monthly intervals and the information started being collected in HMIS in 2019. The coverage rate was more than 90 percent in most states and regions while less than 80 percent coverage was seen in Shan (North), Rakhine and Shan (East) states (Figure 25).

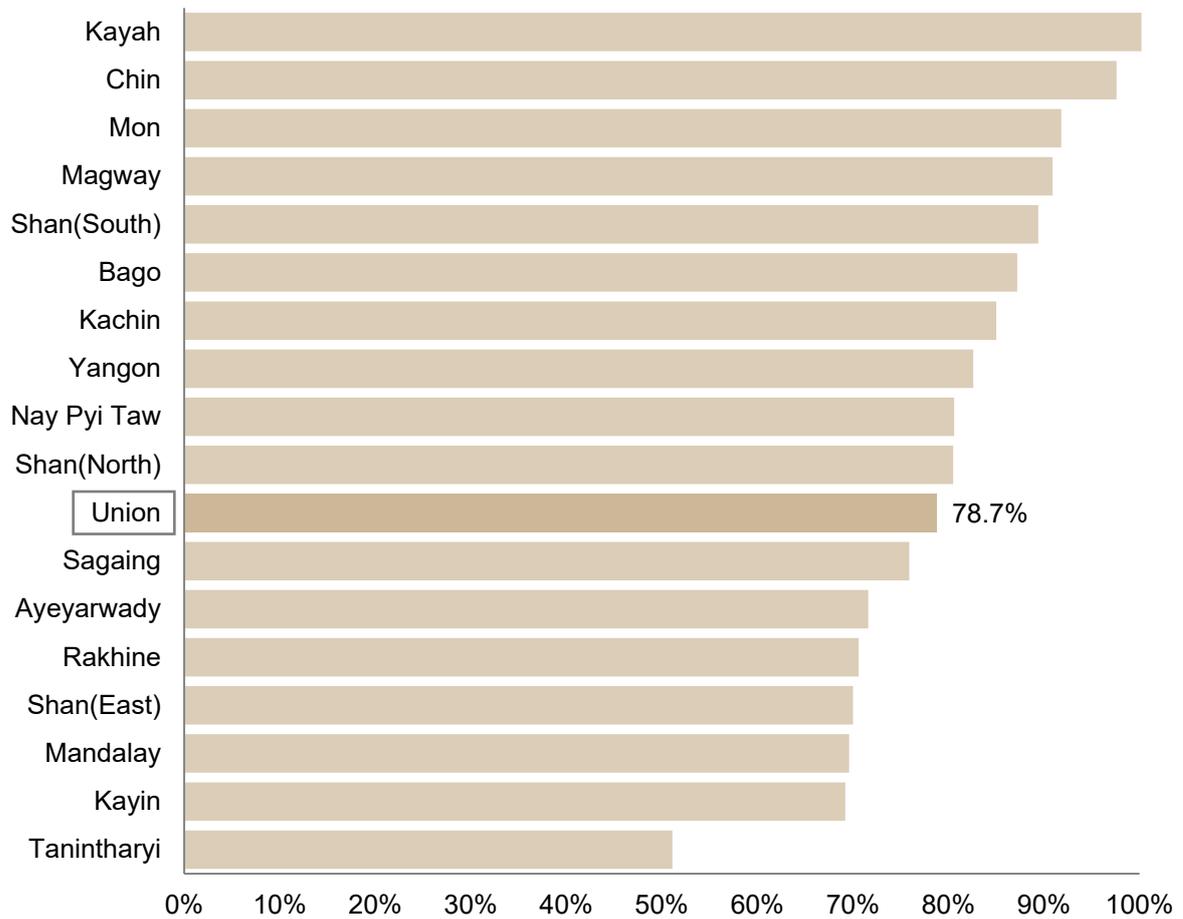


Figure 26. Coverage of Deworming for 2-4 years old Children by States and Regions, 2019

Deworming drugs are administered to preschool as well as school children in Myanmar. In 2019, eight out of ten children aged 2-4 years received deworming drug. The coverage was the highest in Kayah State at 100 percent and the lowest in Tanintharyi Region at 51 percent (Figure 26).

3.5. Expanded Program on Immunization

Immunization is very cost-effective way to protect the community against vaccine preventable diseases, improve individual’s life expectancy and quality of life. In Myanmar, routine Immunization starts at birth and subsequently at the age of two, four, six and nine months for the under one-year children and then second doses of Measles and Rubella vaccine (MCV2) administered at eighteen months of age. Moreover, expanded immunization program includes two doses of Td vaccination for all pregnant women.

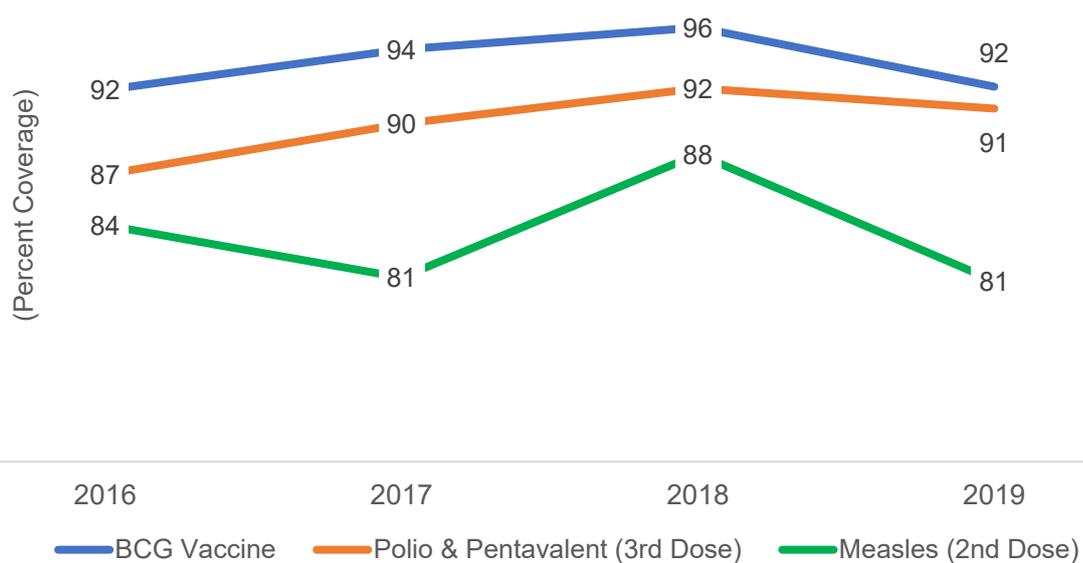


Figure 27. Immunization Coverage among Under-5 Children, Myanmar, 2016-2019

Trends of immunization coverage revealed fluctuations for Measle Vaccine 2nd dose (MCV2) over the recent four years; an increase for Polio 3rd dose (Polio3) and Penta 3rd dose (Penta3) coverage from 87 percent in 2016 to 91 percent in 2019; and some degree of fluctuations for BCG coverage which remained more than 90 percent during 2016 to 2019 (Figure 27).

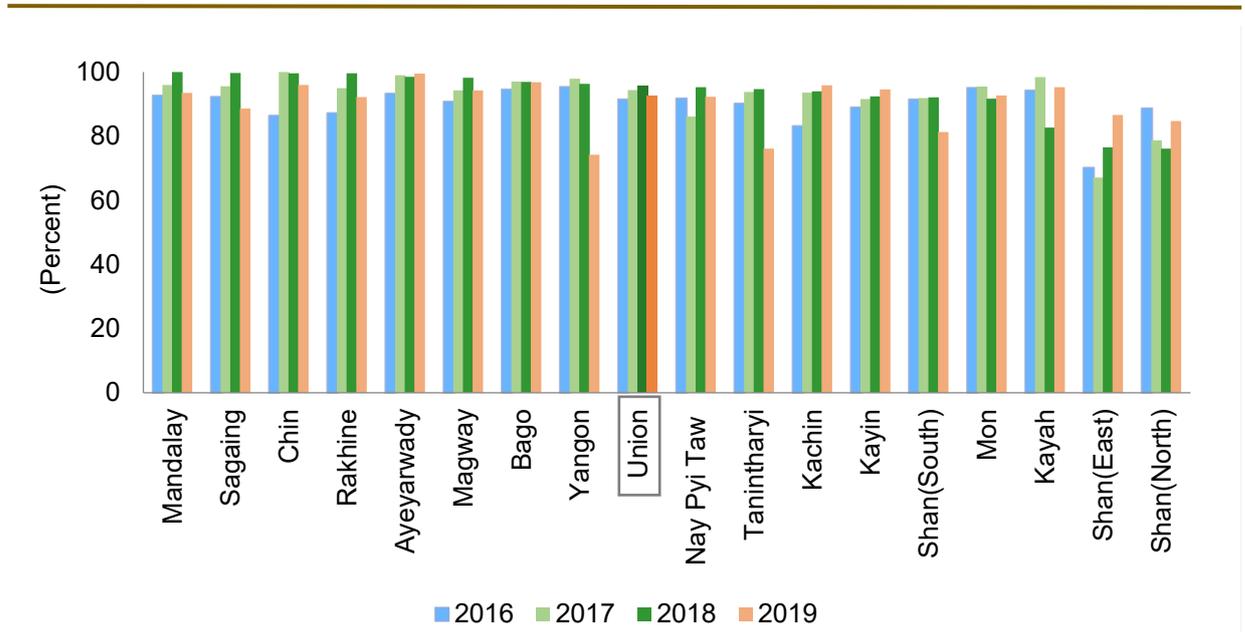


Figure 28. BCG Immunization Coverage by State and Region (2016 – 2019)

Trend of BCG coverage by state and region showed that the coverage was lower in 2019 for some states and regions, with Yangon Region, Tanintharyi Region, and Shan State (South) showed an obvious decreased coverage in the year 2019 (Figure 28).

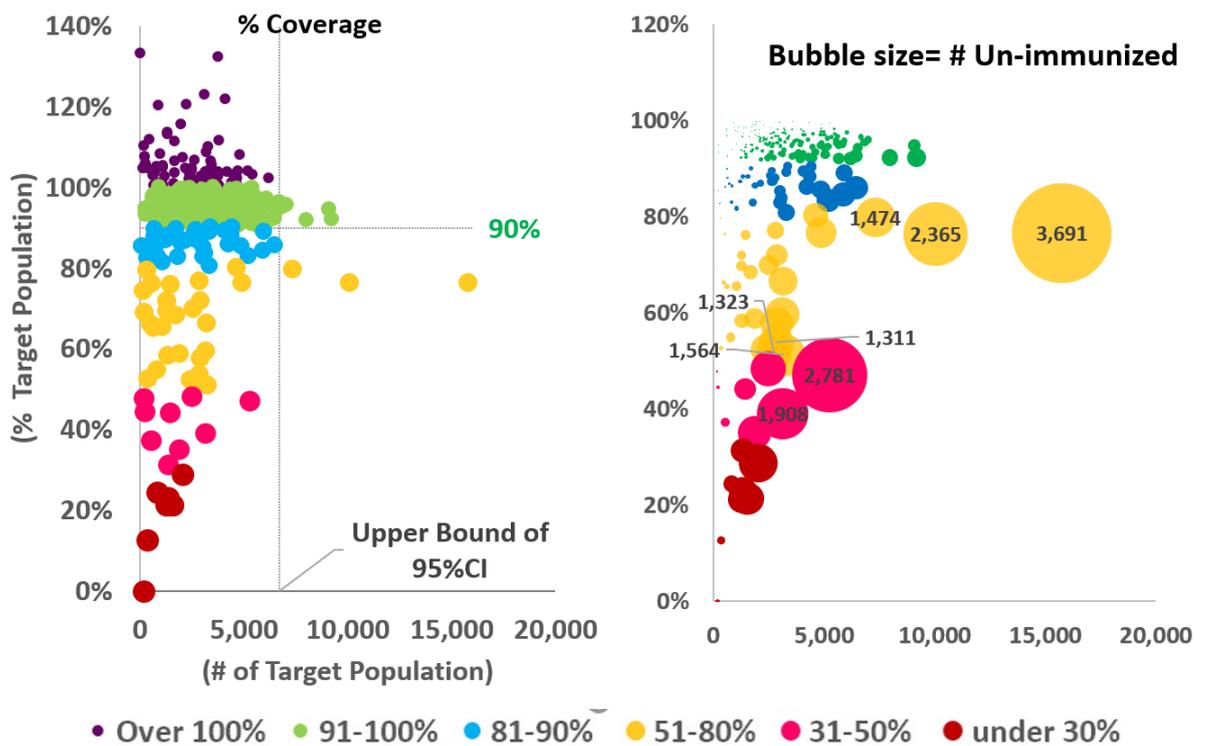


Figure 29. BCG Immunization Coverage by Townships, 2019

Assessment on the BCG immunization by township (Figure 29) revealed that the coverage was not uniformly good as national level achievement in all townships. Many townships achieved more than 90 percent coverage with few townships achieved even more than 100 percent. Meanwhile, some townships achieved under 30 percent coverage though the target population was within the 95% confidence limit of overall townships. Difficulties in transportation and long-distance travel might be major challenges for these townships to achieve high immunization coverage. It was also obvious that high number of unimmunized children were found in only a few townships i.e., a high proportion of unimmunized was attributable to certain proportion of townships that need detailed exploration on the underlying causes so that tailored strategies can be devised and implemented for making sure that no child is left behind.

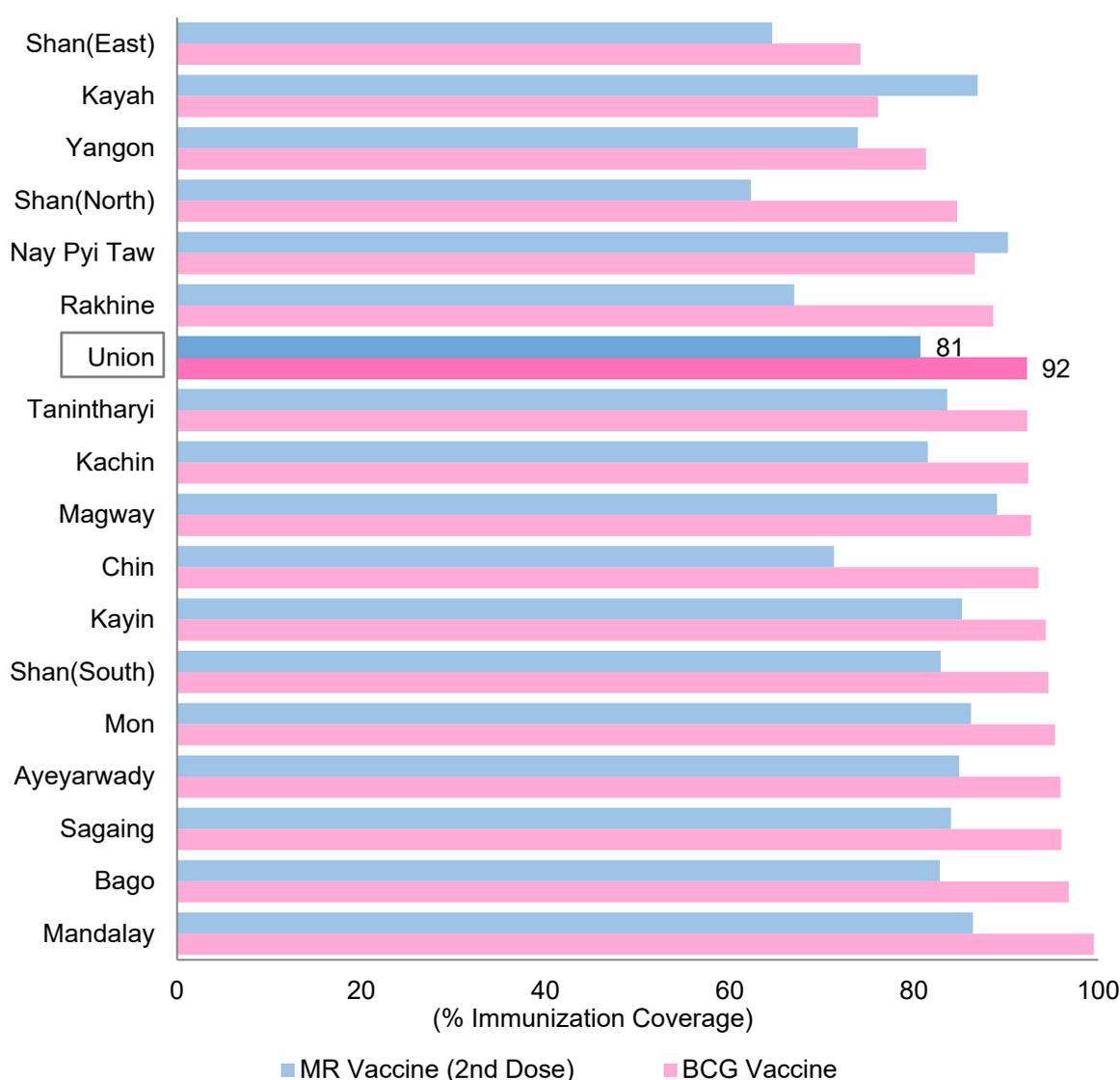


Figure 30. BCG, and Measle-Rubella (2nd Dose) Coverage by State and Region, 2019

Myanmar had 92 percent of BCG and 81 percent of MCV2 coverage in 2019. In that year, Mandalay, Bago, and Sagaing Regions achieved the highest (nearly 100 percent) BCG coverage while Shan(East) and Kayah States attained the lowest with 74 percent and 76 percent coverage respectively. In term of MCV2 coverage, Nay Pyi Taw Territory achieved the highest (90 percent), and Shan(North) and Shan(East) States attained the lowest coverage among all the states and regions with 62 percent and 65 percent respectively in 2019.

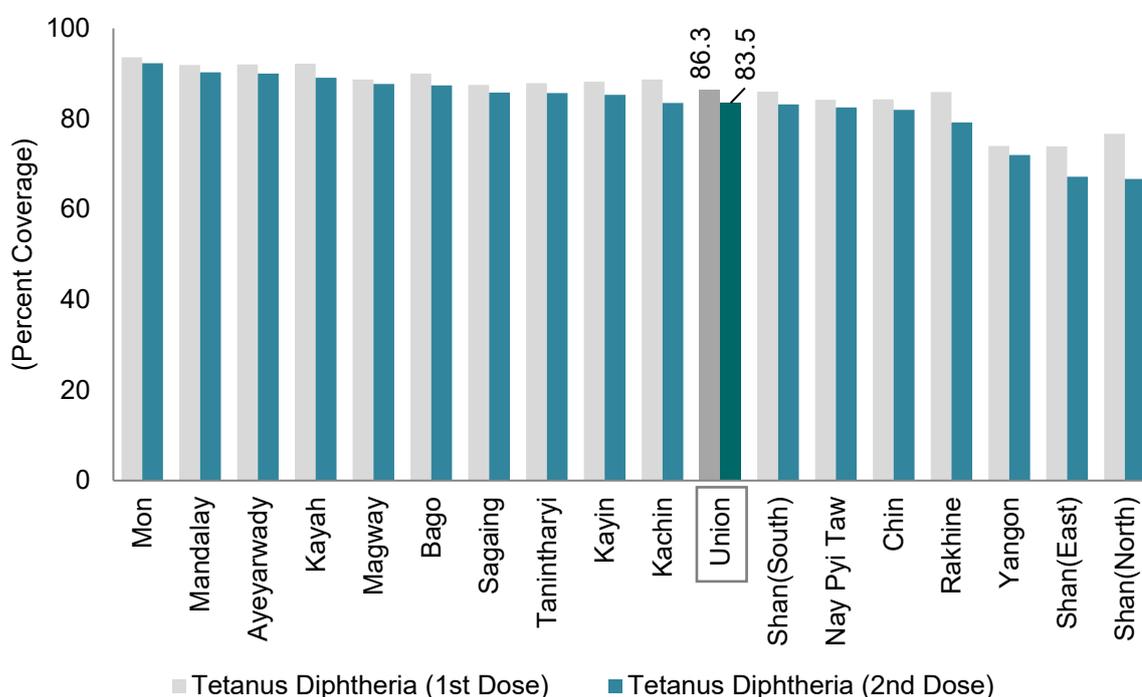


Figure 31. Tetanus Diphtheria (1st and 2nd Dose) Coverage among Pregnant Women by States and Regions, 2019

In 2019, a slight dropped-out from the first to the second dose of Tetanus Diphtheria (Td) vaccination coverage (Td1 and Td2), from 86.3 to 83.5 percent, was seen at National level. Among all states and regions, Mon State achieved the highest coverage for both Td1 and Td2 at 93.6 and 92.3 percent respectively while the lowest coverage for Td2 was found in Shan(East) and Shan(North) States at about 67 percent coverage (Figure 31).

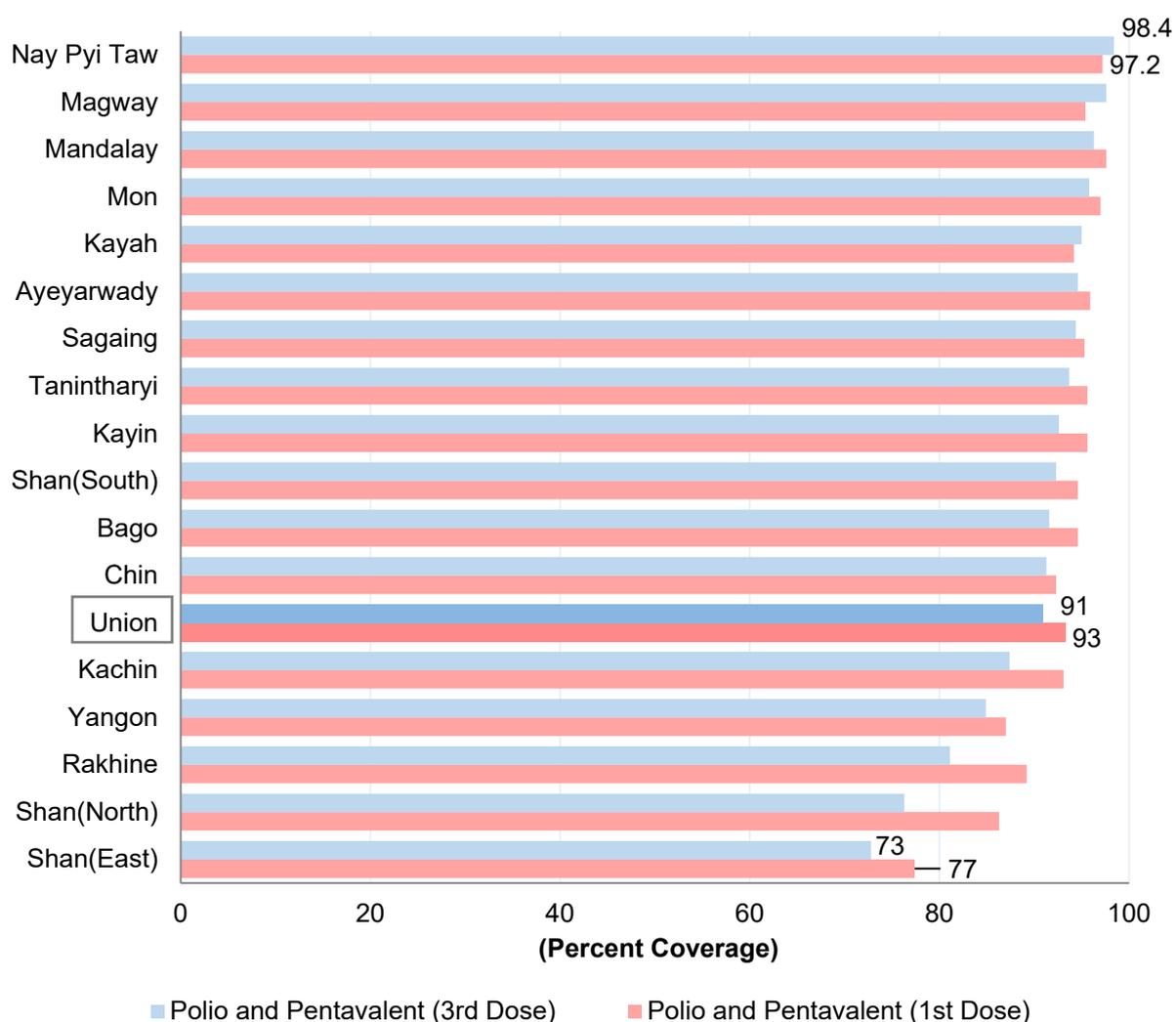


Figure 32. Polio and Pentavalent Vaccination Coverage by States and Regions, 2019

In 2019, 13 out of 17 states and regions achieved more than 90 percent coverage for the first dose of Polio and Pentavalent vaccination. Among the four states and regions with less than 90 percent coverage, Shan (East) State had the lowest coverage at 77 percent (Figure 32).

The degree of dropped out from the first dose to the third dose varied across state and region. At national level, a slight drop from 93 percent for the first dose to 91 percent for the third dose was reported. More than five percent dropped-out rate was seen in Shan(North), Rakhine, and Kachin States. On the other hands, a higher coverage for the third dose than the first dose of vaccination was observed in Nay Pyi Taw Territory, Magway Region, and Kayah State.

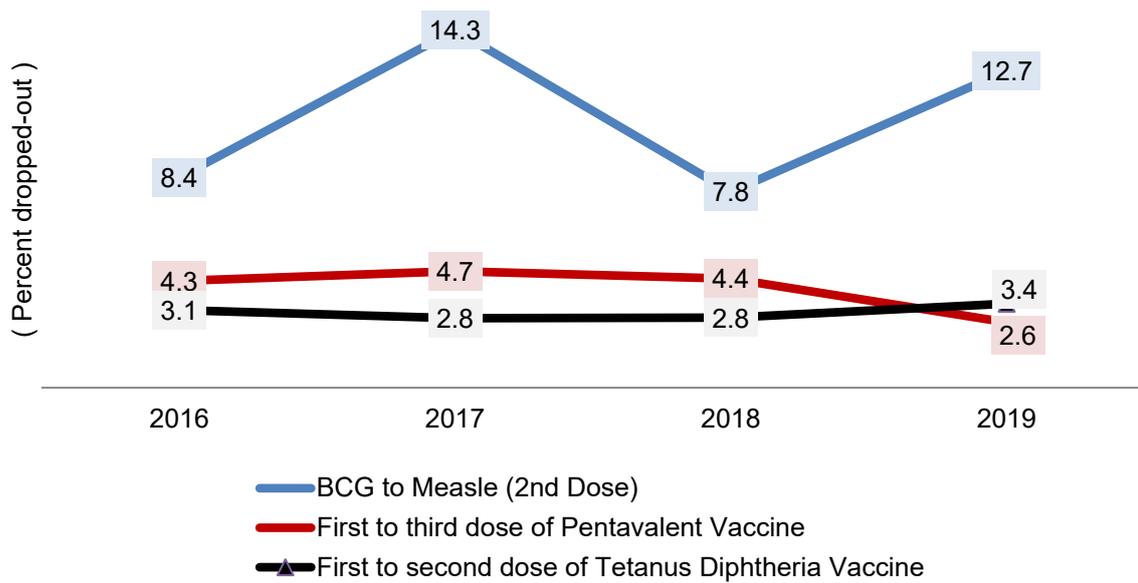


Figure 33. Dropped-out Rates: BCG to MCV2; Penta-1 to Penta-3; and Td1 to Td2 Vaccinations, Myanmar, 2016-2019

Vaccination coverage was further assessed by comparing the coverage of an earlier dose with a later dose of vaccination, and the dropped-out rate is calculated as percent of the earlier coverage. During the period of 2016 to 2019, there was a slight fluctuation in the dropped-out rate from the BCG vaccination (given at birth or two months of age) to MCV2 dose (given at 18-months of age). In general, the BCG to MCV2 dropped-out rate increased from 8.4 percent in 2016 to 12.7 percent in 2019. There was also a slightly increasing trend of dropped-out rate of Td1 to Td2 for pregnant women moving from 3.1 percent in 2016 to 3.4 percent in 2019. On the other hand, the gap between the first dose and third dose of Penta vaccination coverage became narrow down from 4.3 percent in 2016 to 2.6 percent in 2019 (Figure 33).

3.6. School Health Project

School health project is a worth area to adopt healthy lifestyles since childhood. If the school health activities are implemented well at all townships and the students acquired healthy behaviors, this can have great impact on the burden of non-communicable diseases in the future.

Data collected in school health services, reported by BHSP and school health teams, included the coverage of schools examined, availability of water source and sanitary latrine, the coverage of physical examination and weight and height measurement for primary school students, biannual deworming among the students, nutrition promotion and health promoting school activities.

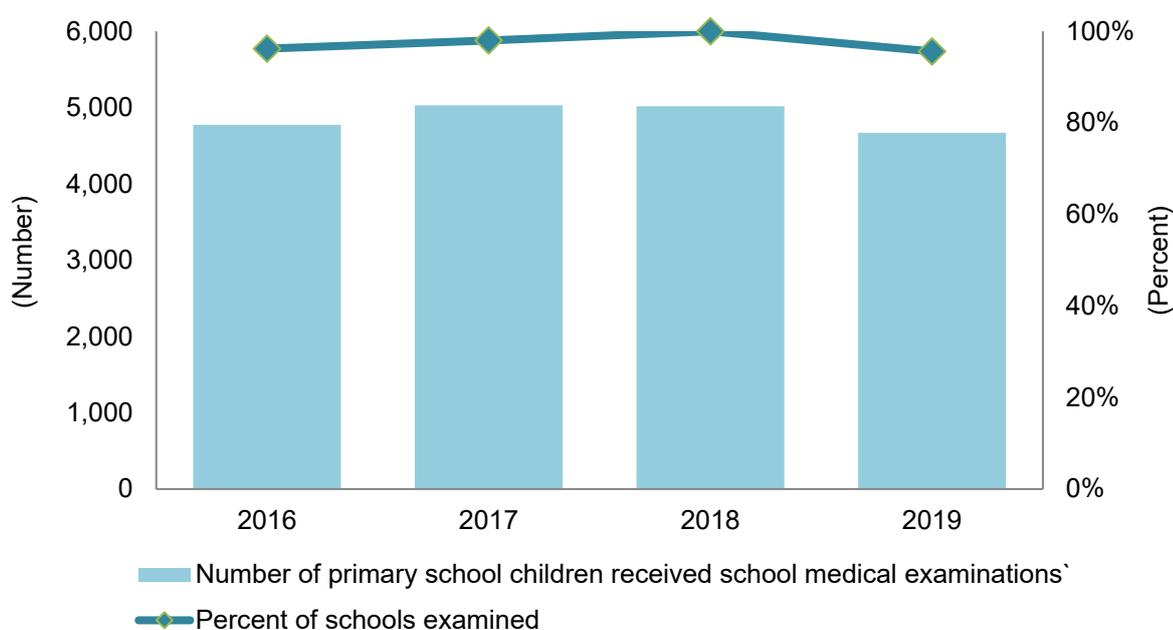


Figure 34. Coverage of School Health Services, Myanmar, 2016-2019

The graph (Figure 34) illustrates the number of primary school children received medical examinations and percent of schools examined for school healthcare over the four years period of 2016 to 2019. More than 95 percent of schools received school health services with about 4.7 to 5 million primary school children received medical examinations every year in the recent four years.

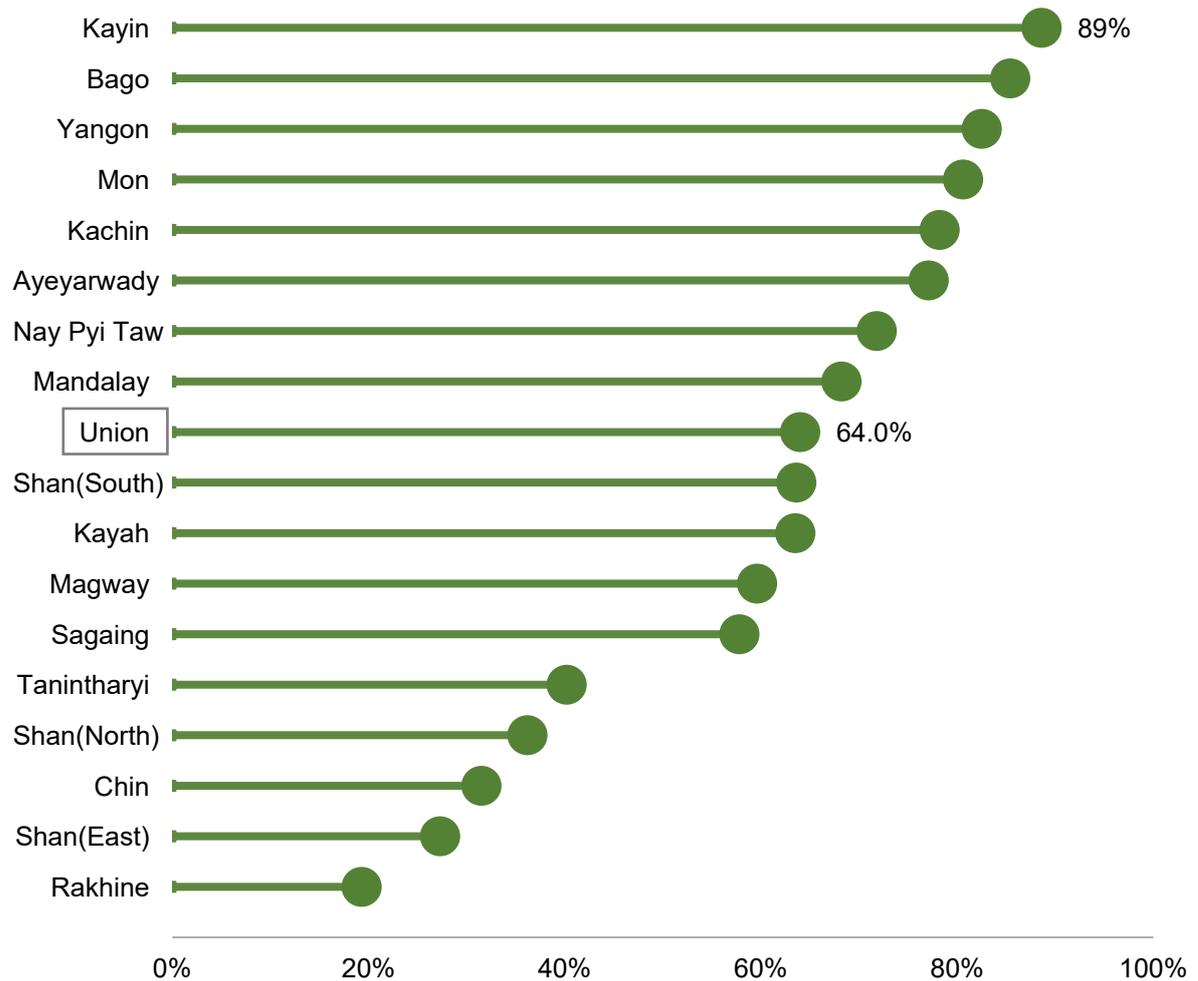


Figure 35. Percent of Schools with Nutritional Promotion Activities by States and Regions, 2019

Aiming for improving the nutritional status and nurturing the habit of practicing healthy diet among school children and their families, nutrition promotion activities have been provided as one of the health promoting school activities in Myanmar. In 2019, around six in ten of the primary schools conducted nutrition promotion activities with the highest rate of coverage in Kayin State followed by Bago and Yangon Regions and Mon State. The lowest rate was seen in Rakhine and Shan (East) States (Figure 35).

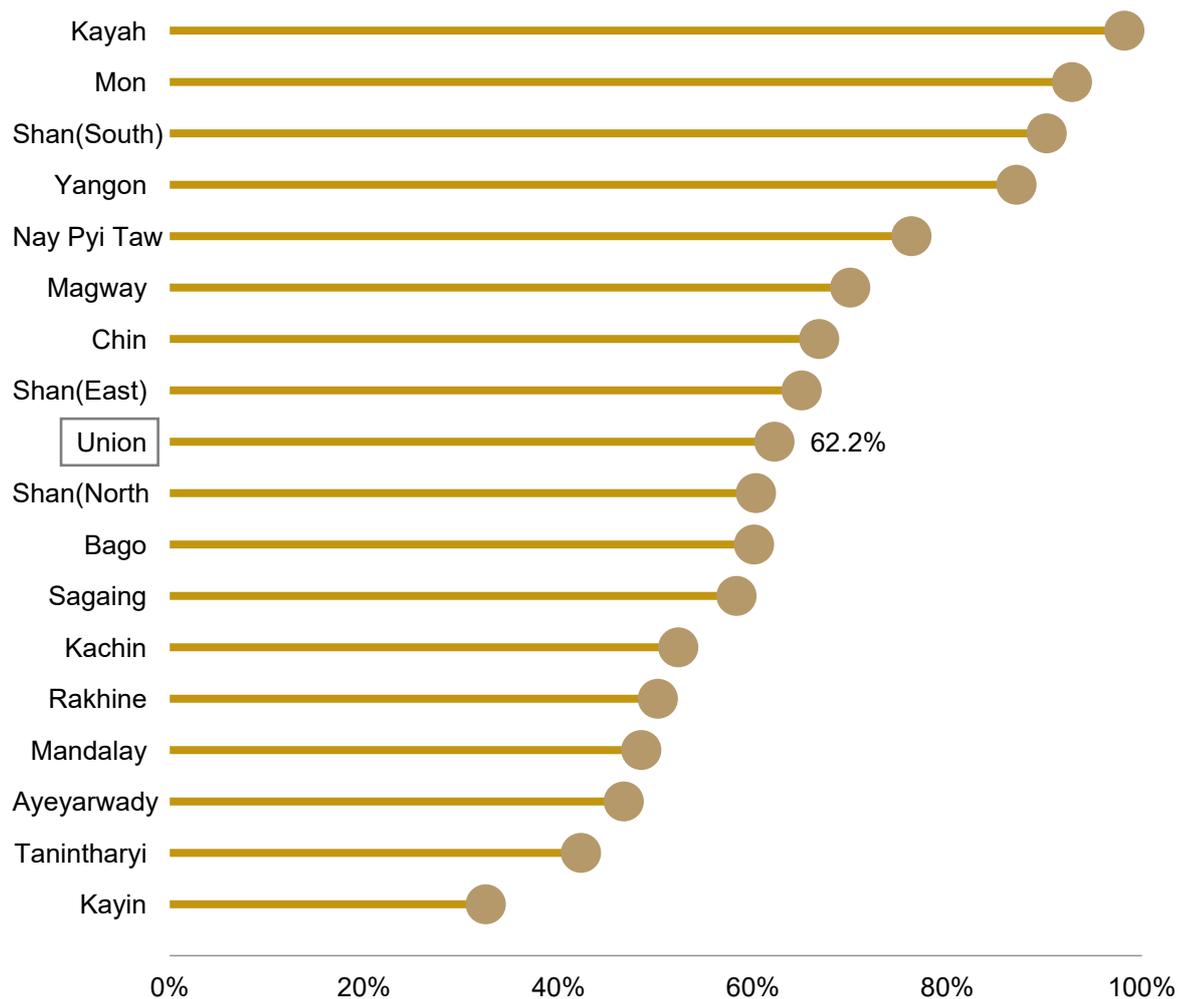


Figure 36. Percent of Students received Regular Biannual Deworming by States and Regions, 2019

As one of the school health activities, deworming drugs are dispensed to all primary, middle, and high school students for two times in February and August every year. About six in ten students received deworming twice in a calendar year. The percent of regular biannual deworming was the highest in Kayah State followed by Mon State, Shan(South) State and Yangon Region whereas the lowest coverage was observed in Kayin State (Figure 36).

Communicable Diseases

3.7. National Malaria Control Program

Malaria Testing and Positivity Rate in Myanmar, 2016 to 2019

Malaria blood tests have been providing, free of charge, to all people with fever seeking care from public health facilities down to primary health care facilities. Blood tests include rapid diagnostic tests and blood film test using microscopy. In 2019, the testing conducted during field visits were incorporated into the previously collected facility-based blood testing data.

The number of malaria test has increased with notably decreased positivity rate year by year from 2016 to 2019. A sudden increase in number of tests in 2019 was most probably due to the inclusion of community-based testing information.

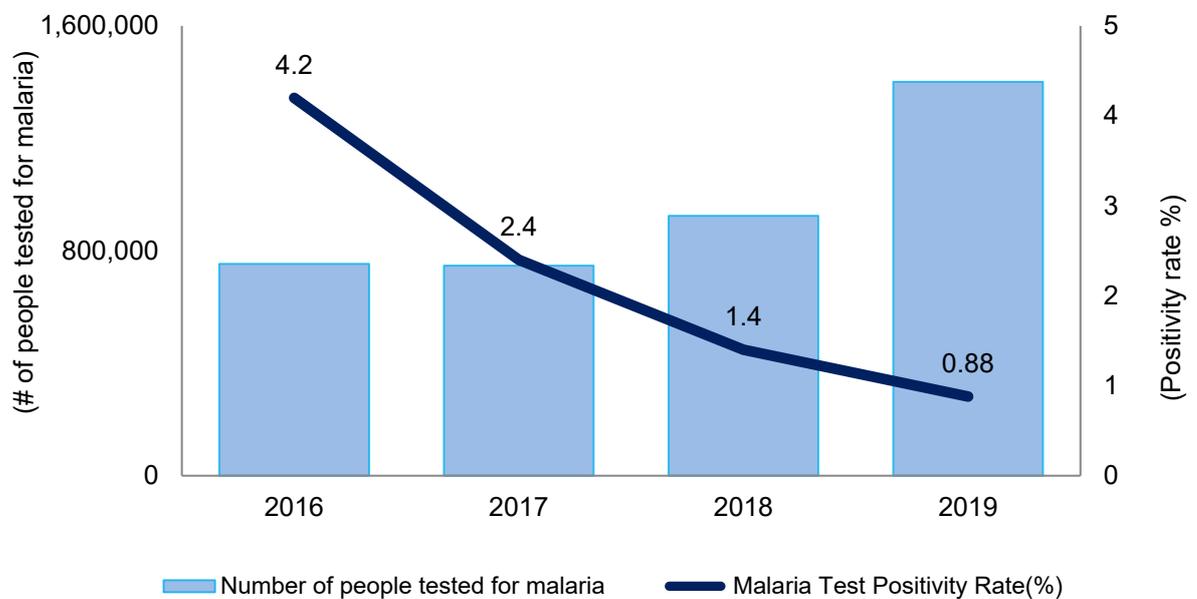


Figure 37. Number of Malaria Test and Positivity Rate, Myanmar, 2016-2019

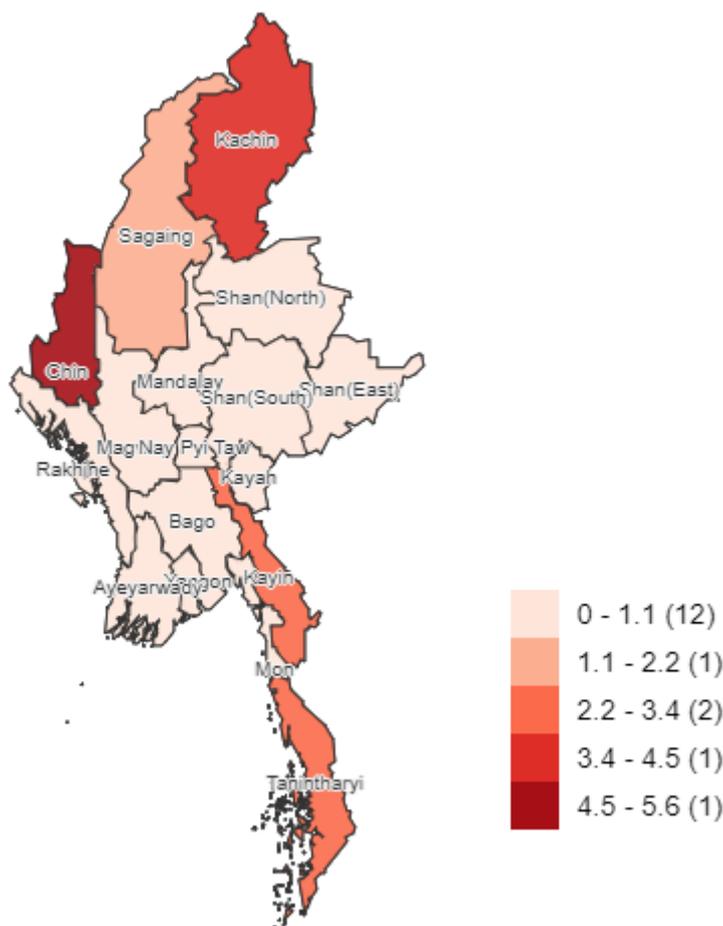


Figure 38. Malaria positivity rate by States and Regions, 2019

In 2019, Chin State had the highest positivity rate at 5.6 percent, followed by Kachin State at 3.9 percent, and Kayin State and Tanintharyi Region at 2.2 percent, and Sagaing Region at 1.1 percent. All other twelve states and regions had less than one percent positivity rate (Figure 38).

Malaria Morbidity Rate and Case Fatality Rate (CFR)

Malaria morbidity rate of Myanmar is decreasing year by year, starting from 0.6 per 1,000 population in 2016 to 0.23 per 1,000 population in 2019. The highest malaria morbidity rates were seen in Chin and Kachin States showing three to four per 1,000 population being diagnosed as infected with malaria (Figure 39).

Malaria case fatality rate ranged from 0.4 to below 0.8 percent during the year 2016 to 2019 (Figure 40).

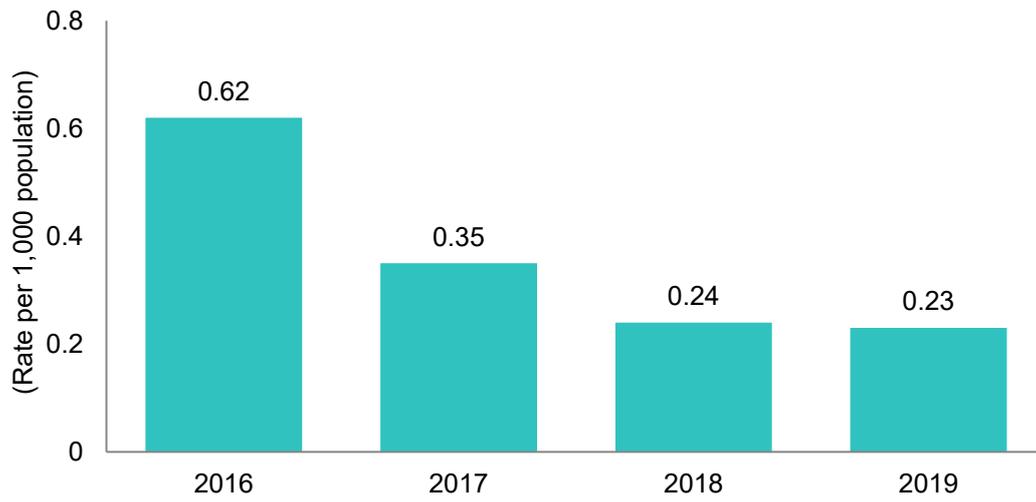


Figure 39. Malaria Morbidity Rate per 1,000 Population, Myanmar, 2016-2019

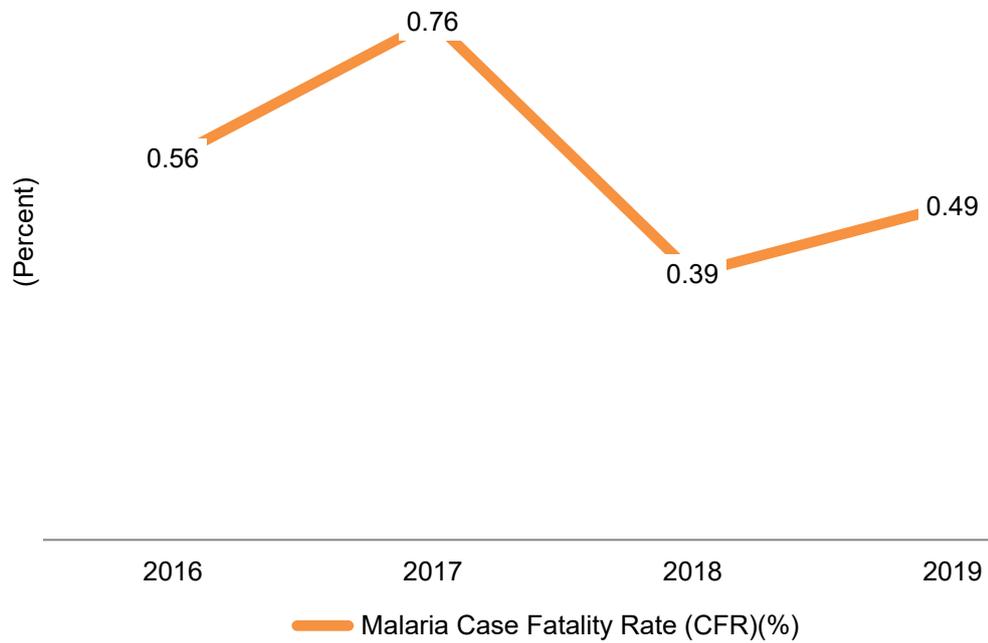


Figure 40. Malaria case fatality rate (CFR), Myanmar, 2016-2019

3.8 National TB Program

Case Notification Rate

With the decreasing trends of TB prevalence, the Case Notification Rate (CNR) for all forms of TB cases showed a slight decline from 281 per 100,000 population in 2017 to 252 per 100,000 population in 2019. However, the CNR for bacteriologically confirmed cases has slightly increased from 96 to 104 cases per 100,000 population in the year 2017 and 2019 respectively (Figure 41).

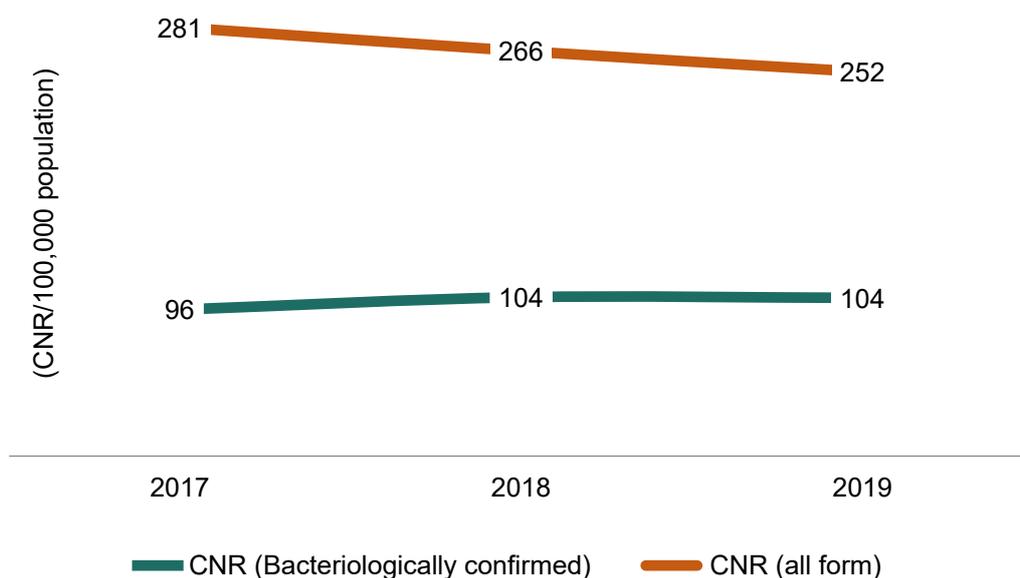


Figure 41. Trend of TB case notification rate (CNR), Myanmar, 2017-2019

Among all states and regions, CNR of both all forms and bacteriologically confirmed TB cases were the highest in Yangon Region followed by Kachin State, and the lowest in Chin State in 2019 (Figure 42).

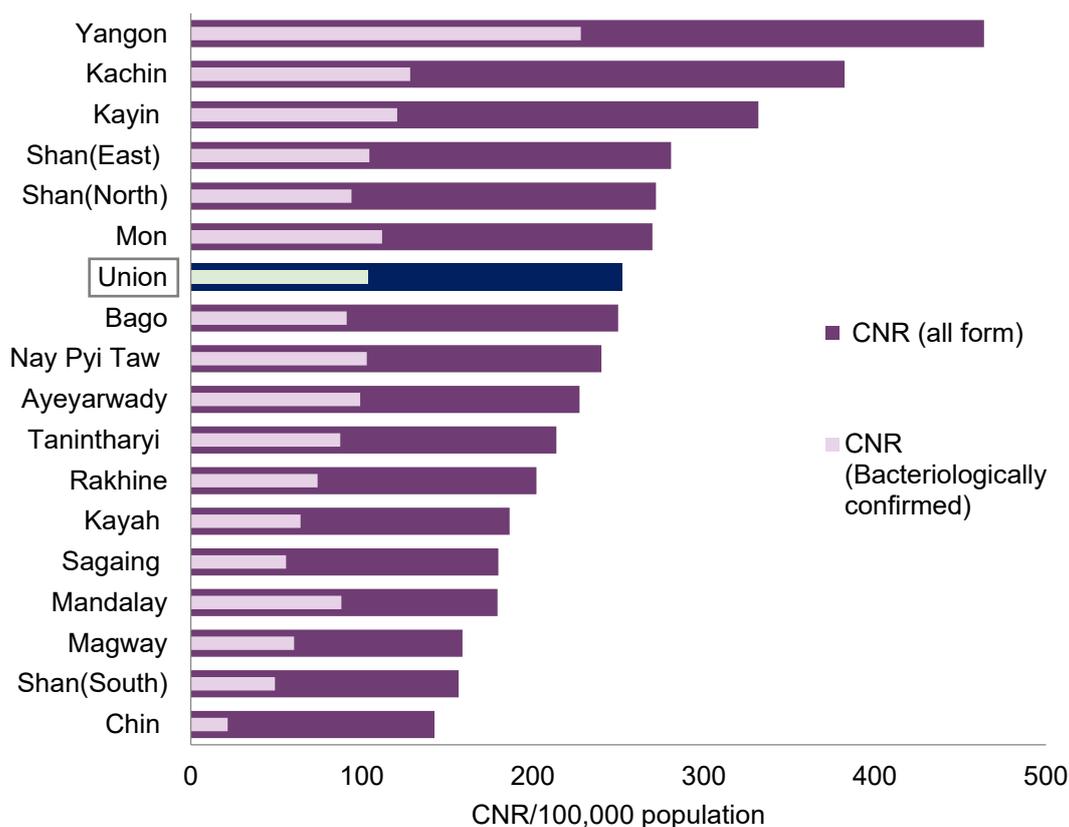


Figure 42. TB case notification rate (CNR) by States and Regions, 2019

Treatment Outcome

In 2019, around 130,000 all forms of TB patients were registered and treatment success rate was found to be 86.5 percent, death rate among those cases was 4.9 percent and loss to follow up was 5.6 percent (Figure 43).

The highest treatment success rate of 92.2 percent was seen in Chin and Rakhine States, and the lowest rate was found in Shan(North) State which was 78.4 percent.

Nearly 7 out of 100 TB cases died in Kachin State, which was the highest and, only 2 out of 100 TB cases died in Rakhine State. The second highest death rates were found in Magway Region, Mandalay Region and Nay Pyi Taw Territory.

Shan(North) State, Kayin State, Tanintharyi Region, Shan(East) State and Kachin State had the highest lost to follow up rates ranging from 6 to 13 out of 100 (all registered TB cases) and, the lowest rates were found in Chin State and Mandalay Region.

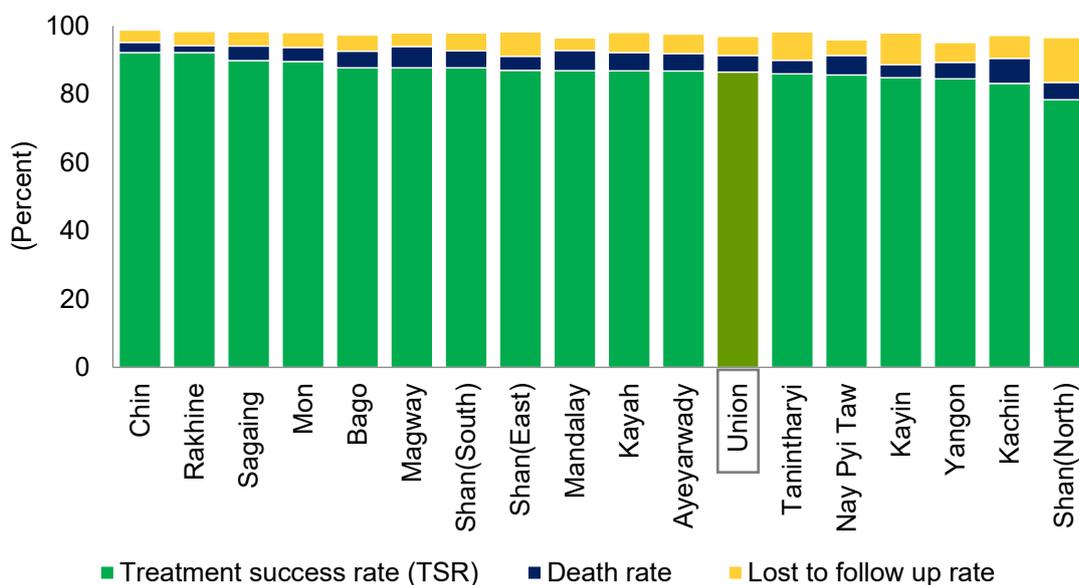


Figure 43. TB treatment outcomes, Myanmar, 2019

TB-HIV coinfections

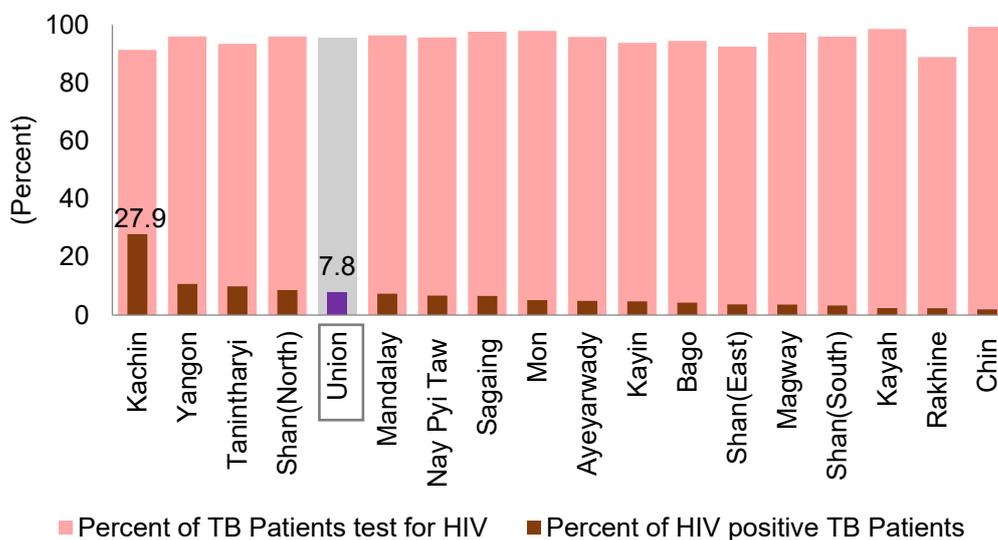


Figure 44. HIV testing Coverage and Positivity Rate among TB Patients by States and Regions, 2019

In 2019, 95 percent of TB patients received HIV tests and among them 7.8 percent were infected with HIV. The highest positivity rate of 27.9 percent was seen in Kachin State followed by Yangon and Tanintharyi Regions at around 10 percent positivity. The lowest rates were seen at around 2 percent in Chin, Kayah and Rakhine States (Figure 44).

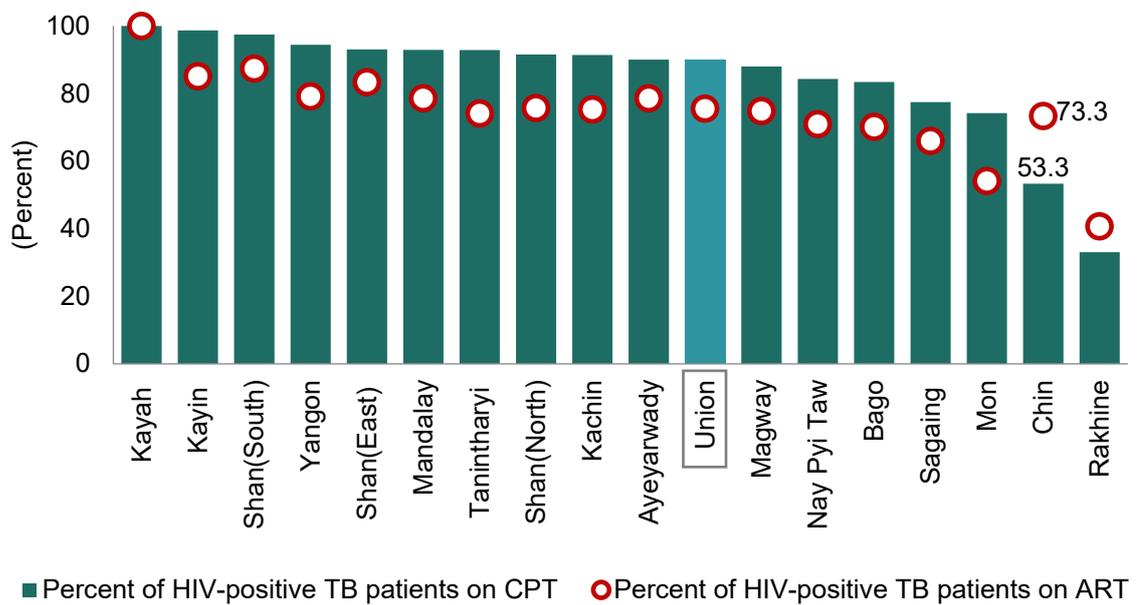


Figure 45. TB-HIV Co-infected Patients on CPT and ART during TB Treatment by States and Regions, 2019

Among HIV positive new and relapse TB patients, 89.9 percent took Co-trimoxazole preventive therapy (CPT) and 75.5 percent received Antiretroviral therapy (ART) during their TB treatment in 2019. The percent coverage for both therapies was found to be highest in Kayah State (100 percent) and lowest in Rakhine State (CPT 33.1 percent and on ART 40.7 percent).

Although percent of TB-HIV co-infected patients on CPT and ART were not much different in most states and regions, Chin State, Mon State, and Tanintharyi Region showed a larger gap, about 20 percent gap, between CPT and ART coverage. The percent coverage of CPT was 20 percent higher than that of ART in Tanintharyi Region and Mon State, whereas the higher ART coverage was seen in Chin State (Figure 45).

Table 4. Notified multidrug-resistant TB (MDR-TB) cases and second line anti-TB treatment by States and Regions, 2019

State and Region	Number of notified Multidrug-resistant TB cases	Number of treated Multidrug-resistant TB cases with second line drug
Chin	3	3
Kayah	6	5
Shan(East)	23	16
Shan(South)	39	31
Rakhine	52	47
Magway	55	71
Nay Pyi Taw	66	48
Kayin	81	71
Tanintharyi	84	67
Shan(North)	104	75
Sagaing	125	108
Mon	126	108
Kachin	128	103
Bago	233	219
Ayeyarwady	247	242
Mandalay	256	171
Yangon	1577	1189
Union	3205	2574

In Myanmar, the MDR-TB treatment is provided at state and regional MDR-TB center for patients residing in the respective geographic areas. Case finding is conducted by BHSP from UHC, MCH, RHC and sub-RHC, and suspected cases are referred to respective state and regional MDR-TB centers for confirmed diagnosis, registration, and treatment initiation. In 2019, all states and regions except Magway Region showed varying degree of drop-out from confirmation to treatment initiation. With the migration and some socio-economic reasons, it is likely that some identified cases be registered and treated at MDR-TB centers located at different states and regions. However, the assessment on drop-out rate was challenging given the lack of individual patient tracking mechanism with unique ID.

In 2019, a total of 3,205 MDR-TB cases were notified and 80.3 percent of these cases were treated with second line drug. This was equivalent to about 20 percent dropped out from diagnosis to treatment. The number of notified MDR-TB cases and those treated with second line drug were found to be the highest in Yangon Region and the lowest in Chin State (Table 4).

3.9. National AIDS Program

Syphilis

The VDRL (Syphilis) testing during pregnancy for primigravidae has increased from over 100,000 in 2018 to over 240,000 in 2019. There was a slight increase in overall positivity rate from 0.34 percent in 2018 to 0.45 percent in 2019. This means that about 4 to 5 out of 1,000 tested primigravidae have acquired Syphilis infection.

Comparing the positivity rate among states and regions: Yangon Region, Shan(East) State and Nay Pyi Taw Territory showed the highest rates in 2018. Yangon Region, Nay Pyi Taw Territory, Tanintharyi Region and Rakhine State had higher positivity rate than the national average of 0.45 percent in 2019. Comparing the positivity rate between 2018 and 2019, most of the states and regions except Shan(East) and Kachin States, had higher rates in 2019 (Figure 46).

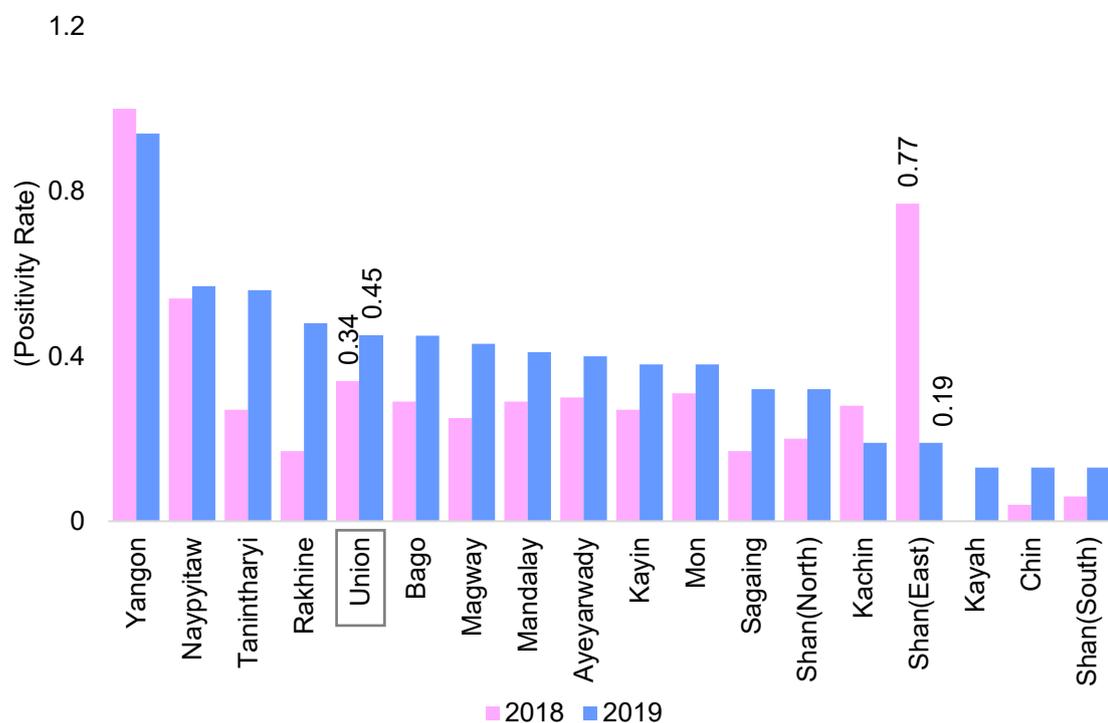


Figure 46. Syphilis Positivity Rate among Primigravidae by States and Regions, 2018- 2019

Genital Discharge

The proportion of 15 years and above males who seek care for genital discharge has been gradually increasing over the years 2017 to 2019 from 3.8 to 5.2 per 100,000 15+ male population (Figure 47).

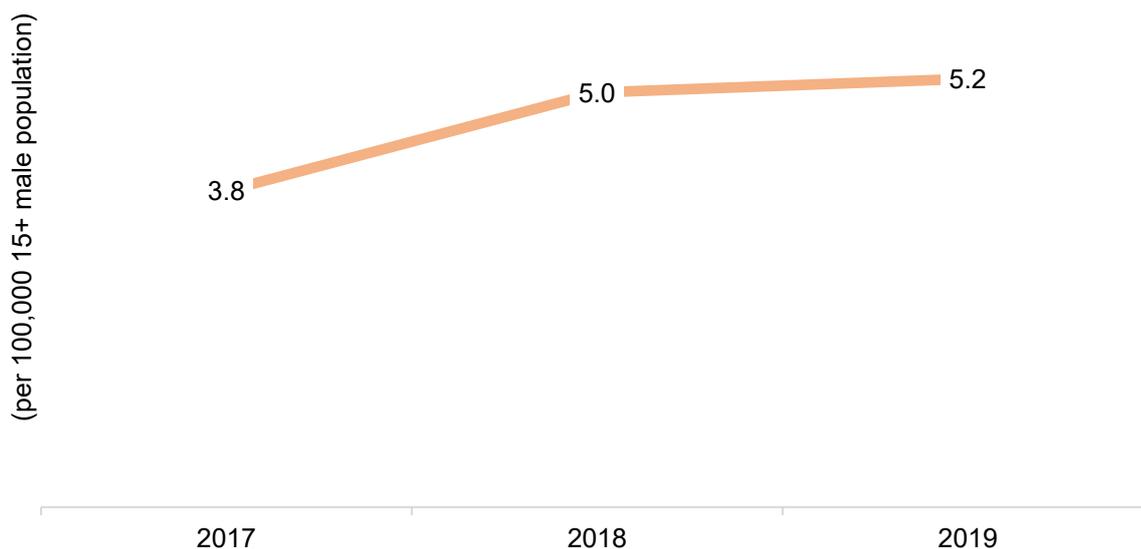


Figure 47. Male Genital Discharge (per 100,000 15+ Male Population), Myanmar, 2017-2019

Genital Ulcer

Genital ulcer detection rate has significantly increased from 2 per 100,000 population in 2017 to 6.3 per 100,000 population in 2019. Males had higher rate than females during the years from 2017 to 2019 (Figure 48).

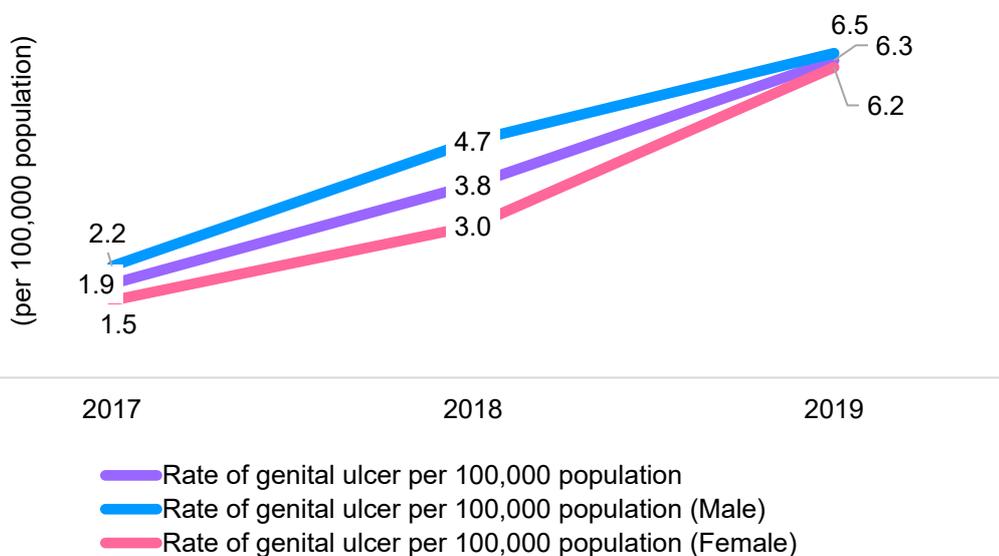


Figure 48. Genital Ulcer Detection Rate (per 100,000 population), Myanmar 2017-2019

3.10. National Leprosy Control Program

Leprosy new case detection rate at national level was slightly fluctuating between 2.9 and 3.1 per 100,000 population in 2017 to 2019. Bago Region, Shan(South) State, Sagaing, Magway and Mandalay Regions had higher case detection rates than the national level across the years 2017 to 2019.

The highest new case detection rate was seen in Bago Region in 2017 and 2018 at around 6 per 100,000 population. In 2019, the highest rate was seen in Shan(South) State at 10 per 100,000 population which was about double increase in rate from the previous two years. Magway Region, Shan (North) State, Nay Pyi Taw Territory and Shan(East) State also showed higher case detection rates than the past two years (Figure 49).

Among newly identified leprosy patients, 4-5 percent was under 15 years, 6-9 percent was those with grade 2 disability and 31-39 percent was female patients. Percent of new patients under 15 years was decreased but female patients, and those with grade 2 disability were increased over the years (Figure 50).

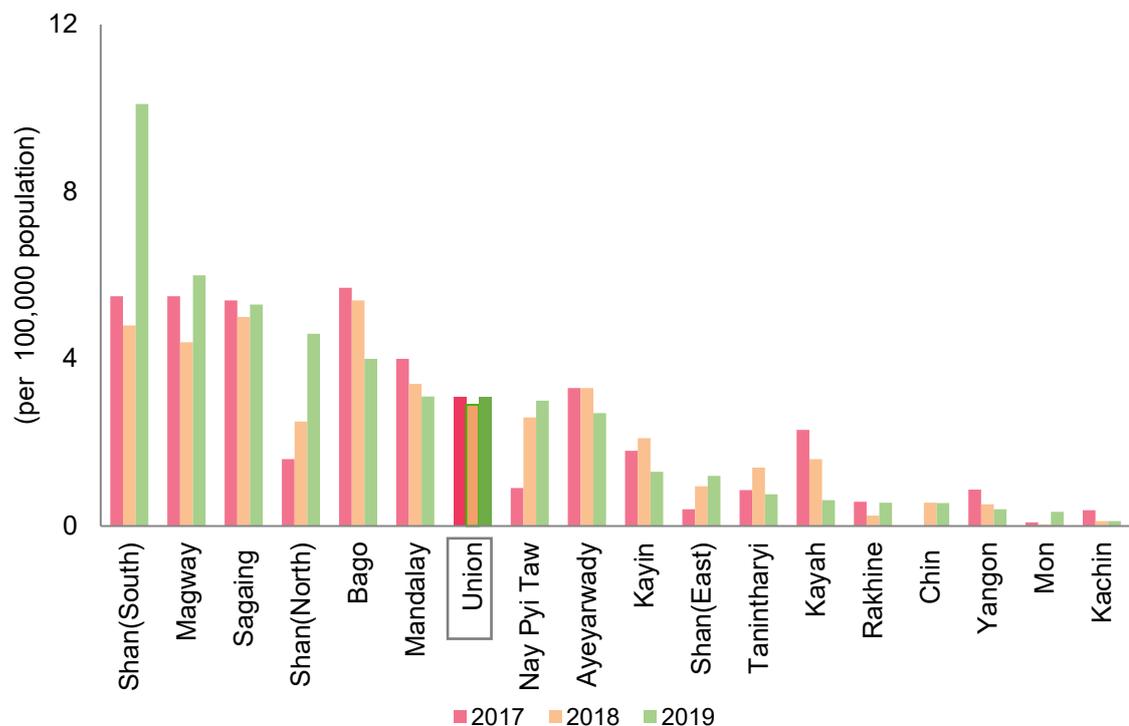


Figure 49. Leprosy New Case Detection Rate per 100,000 Population by State and Region, 2017 to 2019

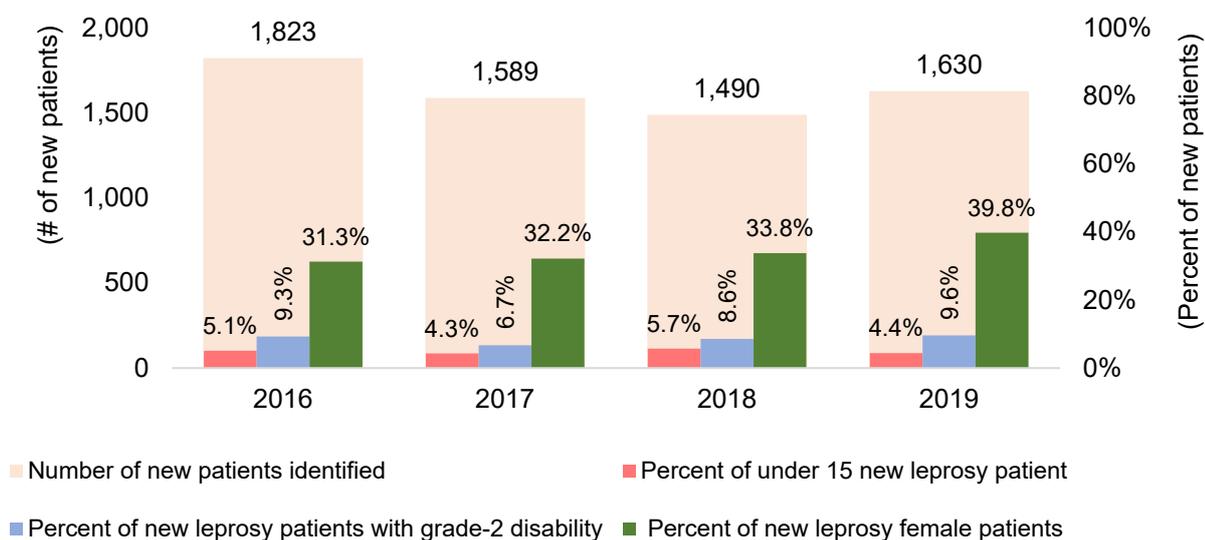


Figure 50. Percent of Under 15 years, Female Patients and Patients with Grade-2 Disability among New Leprosy Patients, Myanmar, 2016-2019

3.11. Trachoma Control and Prevention of Blindness Program

Morbidity of eye diseases per 100,000 population had increased but, rate of blindness per 100,000 population had decreased through the years 2016 to 2019 (Figure 51). It may indicate that there is an increasing public awareness on health care seeking for eye diseases, and the early diagnosis and appropriate treatment have led to reducing loss of vision in the population.

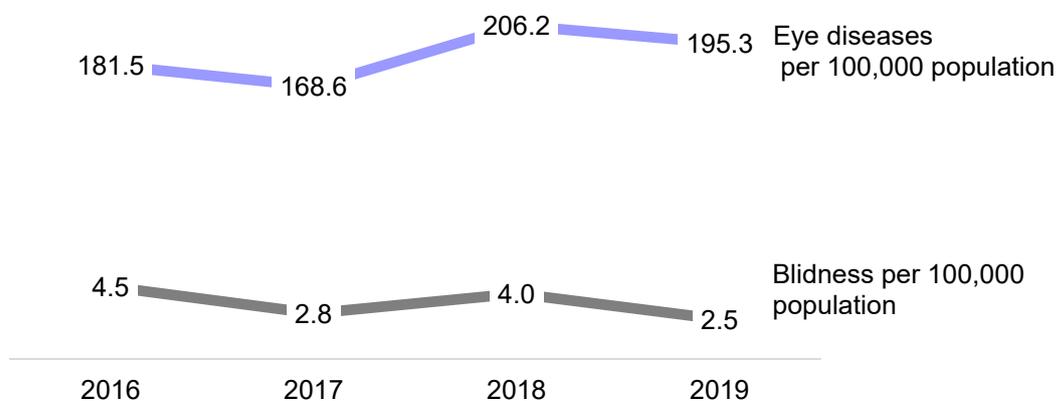


Figure 51. Morbidity of Eye Diseases and Blindness per 100,000 Population, Myanmar, 2016-2019

3.12. Zoonosis Diseases Control Project

There was an increasing trend of reported dog bite cases per 100,000 population, about 30 percent increased, from the years 2016 to 2019 (Figure 52). Bago Region had the highest morbidity in 2017, and the second highest in the latter years. Yangon Region ranked the highest in 2018, and Nay Pyi Taw Territory in 2019. A remarkable increased cases were reported from Nay Pyi Taw Territory at 342 per 100,000 population in 2019 (Figure 53).

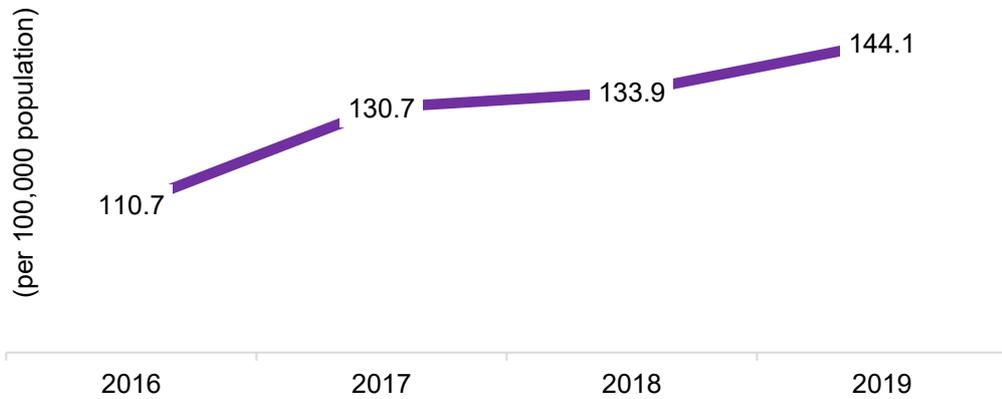


Figure 52. Dog Bite Cases per 100,000 Population, Myanmar, 2016-2019

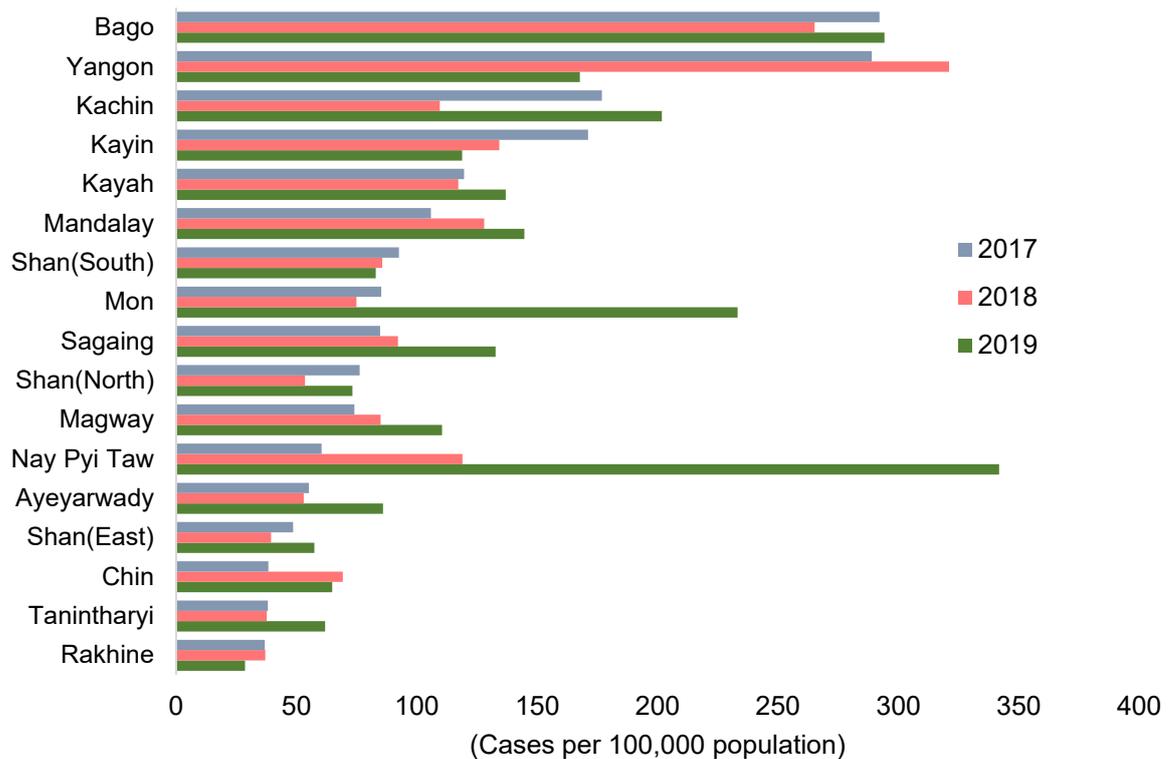


Figure 53. Dog Bite Cases per 100,000 Population by State and Region, 2017-2019

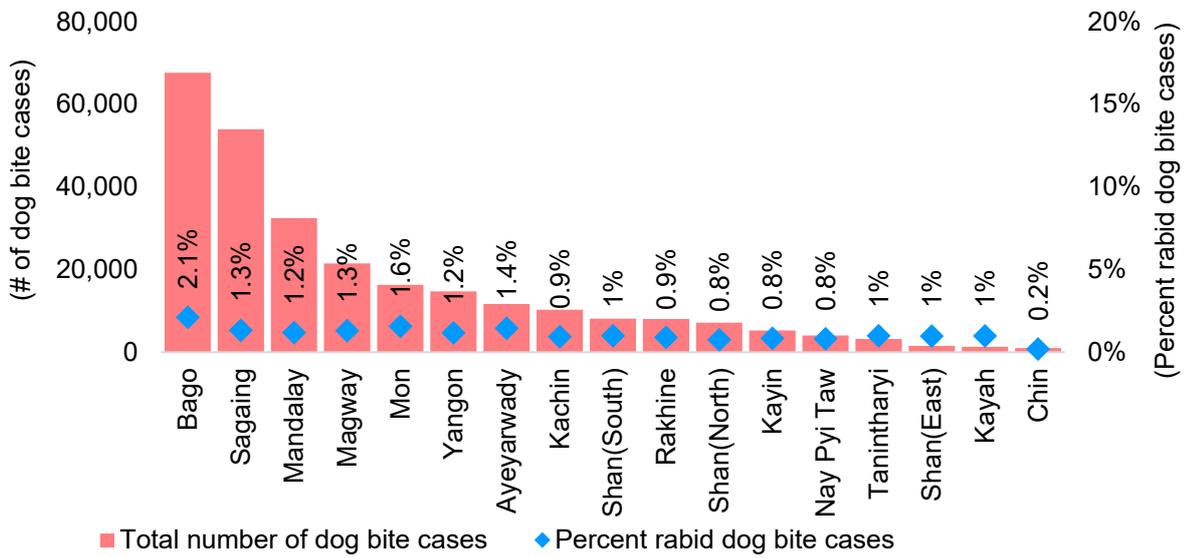


Figure 54. Reported number of dog bites and rabid dog bites by States and Regions, cumulative cases from 2016 to 2019

This graph (Figure 54) displays total number of dog bite cases and percent of rabid dog bite cases for four-year period of 2016 to 2019. Around 270,000 of dog bite cases were reported during these years and only 3,900 (1.5 percent) were rabid dog bite cases. Bago Region had the highest number of dog bite and proportion of rabid dog bite cases among all states and regions followed by Sagaing Region, Mandalay Region, Magway Region, Mon State, Yangon Region and Ayeyarwady Region. The cases were the lowest in Shan(East), Kayah and Chin States.

Among 56,000 to 76,000 of reported dog bite cases, 64 to 75 percent received rabies vaccine in the recent four years (Figure 55).

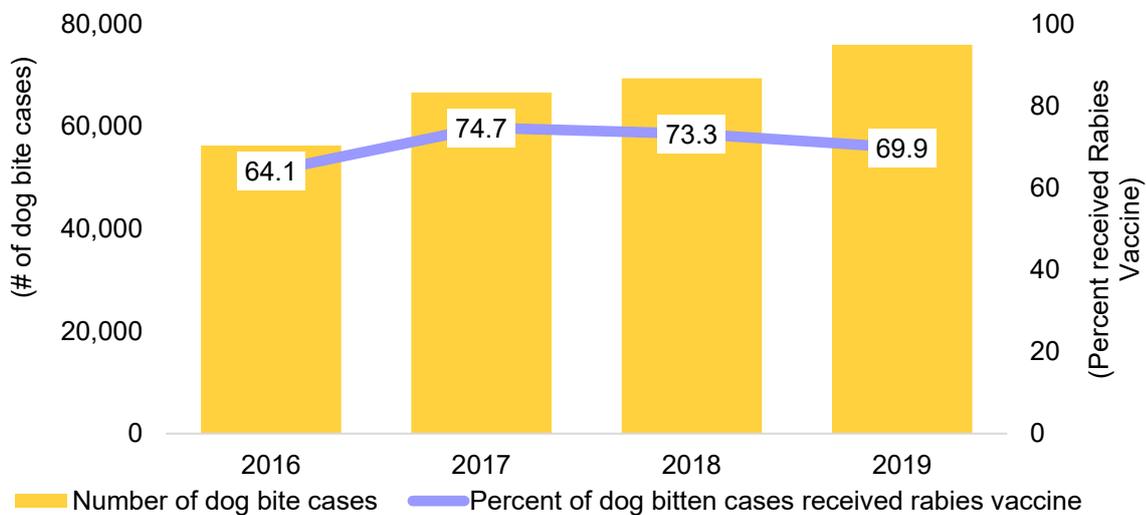


Figure 55. Reported Cases of Dog Bites and Percentage of Dog Bitten Cases received Rabies Vaccines, 2016-2019

3.13. Diseases Under National Surveillance

The Ministry of Health and Sports has identified 17 diseases as diseases under national surveillance (DUNS) that must be reported every month through Public Health Information System. These 17 diseases mainly include communicable diseases and vaccine preventable diseases such as diarrhea, dysentery, food poisoning, typhoid fever, measles, diphtheria, whooping cough, tetanus (including neonatal tetanus), meningitis, acute respiratory tract infection (ARI), hepatitis, rabies, malaria, poisoning, snake bite, tuberculosis (TB) and anthrax.

Among the 17 diseases, more than 460,000 diarrhea cases were reported in 2019 which was the highest number of cases followed by about 160,000 cases of ARI, 90,000 cases of dysentery, over 84,000 TB, 13,000 malaria cases and so on. Among remaining other DUNS, about 8,400 of poisonous snake bite cases and 4,082 measles cases were reported (Table 5).

Table 5. Number of Reported Cases for Diseases Under National Surveillance, Myanmar, 2019

No.	Diseases	Number of cases	
1.	Diarrhea	(Mild Cases)	462,481
		(Severe Cases)	7,131
2.	ARI	159,780	
3.	Dysentery	89,433	
4.	Tuberculosis	(Newly Diagnosed)	76,473
		(Relapsed Cases)	7,965
5.	Malaria	13,053	
6.	Poisonous snake bite	8,414	
7.	Food poisoning	5,831	
8.	Hepatitis	5,514	
9.	Typhoid fever	5,227	
10.	Measles	4,082	
11.	Meningitis	1,371	
12.	Rabies	138	
13.	Tetanus	91	
14.	Diphtheria	71	
15.	Whooping cough	31	
16.	Neonatal tetanus	26	
17.	Anthrax	9	

3.13.1. Snake bite

Snake bite has been considered as one of the major occupational hazards in rural areas of Myanmar for many decades. About eight to ten thousand poisonous snake bite cases were reported annually during 2016 to 2019, and five percent of the cases had tragic ending (Figure 56).

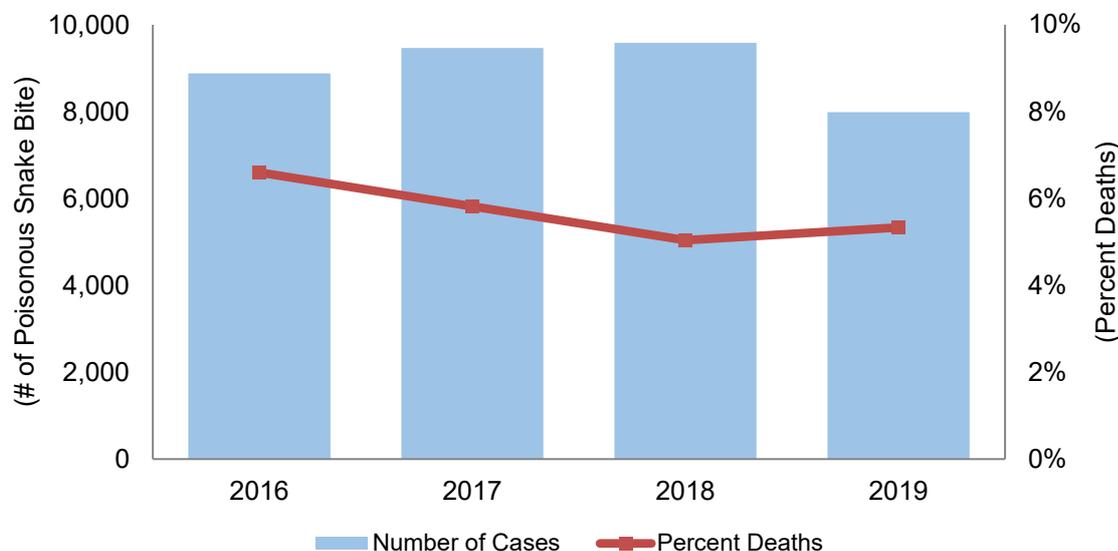


Figure 56. Cases and Deaths due to Poisonous Snake Bite, Myanmar, 2016-2019

Scoping by states and regions reveals that 80 percent of all casualties were reported from those living in dry zone (Magway, Sagaing and Mandalay Regions) and delta area (Ayeyarwady and Bago Regions). The case fatality rate was 5.3 percent at national level which ranged from 0 percent in Kayah State to 13.3 percent in Ayeyarwady Region. Among other states and regions, Mon State, Kayin State, Nay Pyi Taw Territory, and Bago Region had fatality rate higher than the national level of 5.3 percent (Figure 57).

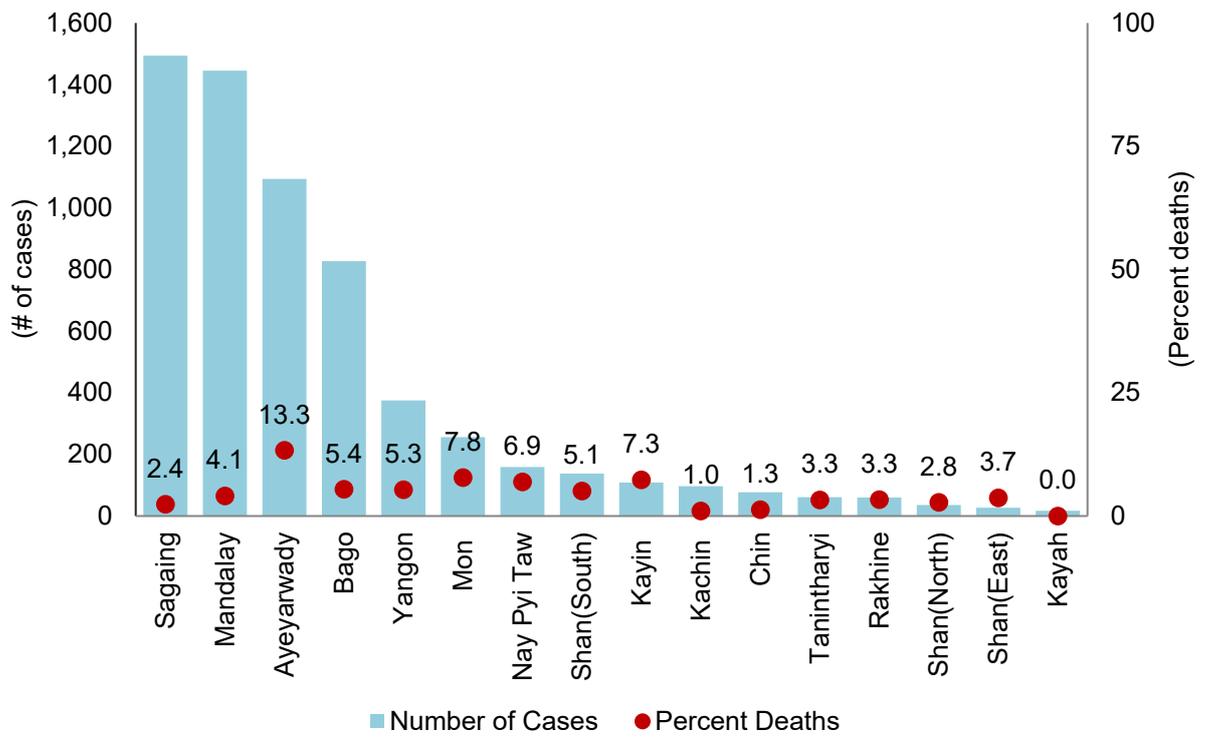


Figure 57. Poisonous Snake Bites Cases and Death Rate by States and Regions, 2019

3.13.2. Rabies

The total reported number of rabies cases decreased slightly from 198 cases in 2016 to 138 cases in 2019. Confined to the nature of being a most deadly disease, the case fatality rate was 100 percent for all four years.

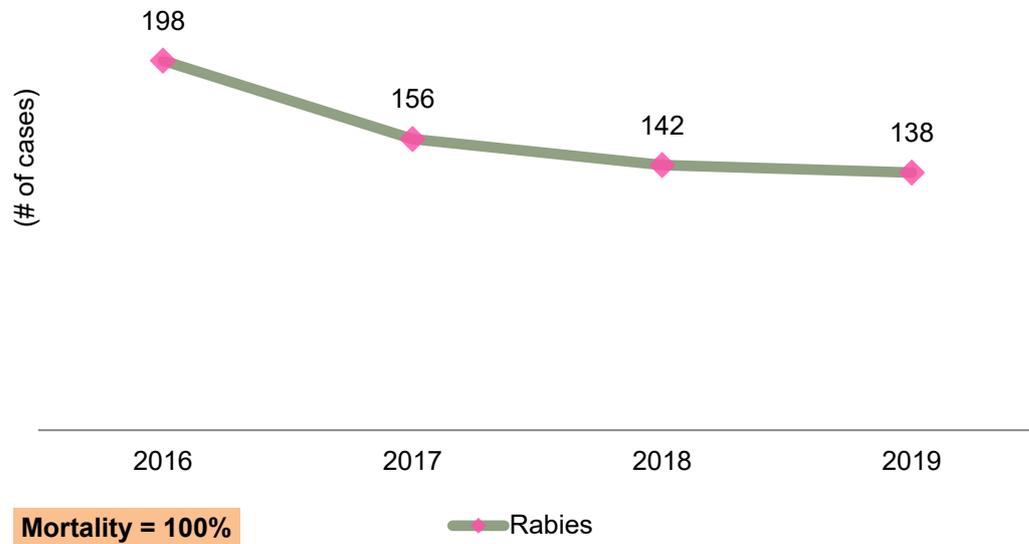


Figure 58. Reported Rabies Cases, Myanmar, 2016-2019

Non-Communicable Diseases

Myanmar is facing the same global trend of increasing morbidity and mortality of non-communicable diseases (NCDs), and minimum package of NCD services are provided through the primary health care. Health information for a total of six NCD projects' services provided via primary health care are collected through the HMIS system. To get the headcount, only the first time of clients' visit during the calendar year were collected.

3.14. Cardiovascular Diseases Project

3.14.1. Hypertension

Increasing number of hypertensive cases were detected by BHSP in the recent years. During 2016 to 2019, the number of cases per 1,000 15+ population increased from 13.5 to 17.6 at the national level. In this four-year time, the increasing trend of hypertension was observed in all states and regions except Shan(East) State (Figure 59). The data mainly represented those attending primary health care facilities and thus the case load could be underestimated.

The number of patients received BP measurement and those identified as hypertension varies across states and regions, and both numbers were higher in regions than states. In 2019, Sagaing Region had the highest number of cases followed by Ayeyarwady, Bago, Mandalay and Yangon Regions. More than one million clinic attendants received BP measurement in each of these five regions (Figure 60).

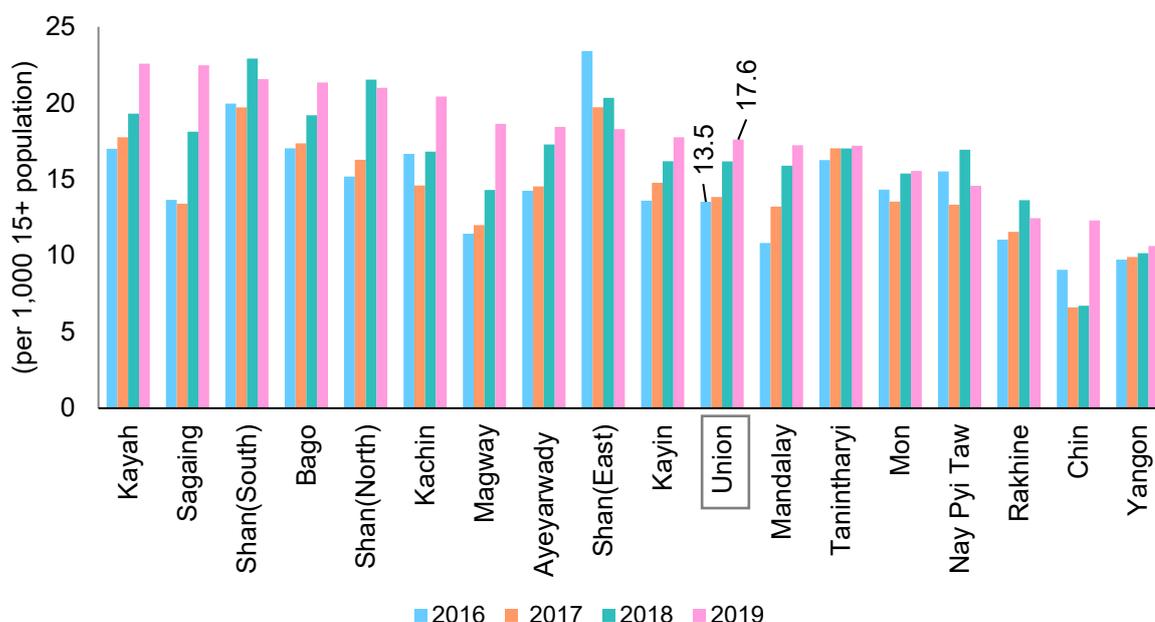


Figure 59. Number of Hypertension Cases Detected at Primary Health Care Facilities by States and Regions, 2016-2019

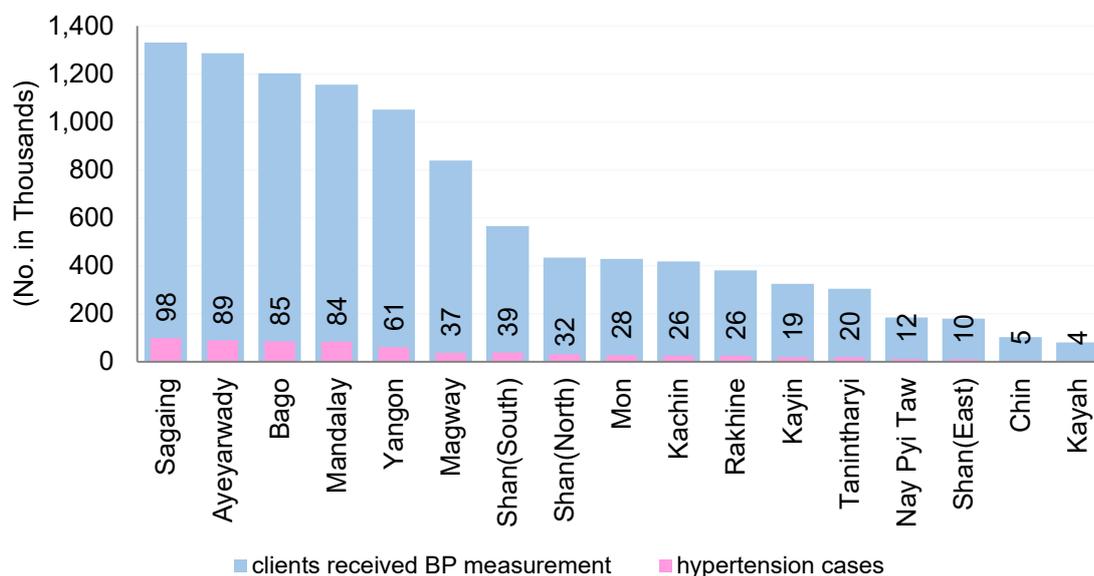


Figure 60. Number of Clients received BP Measurement and Detected Hypertension Cases by States and Regions, 2019

In general, about seven percent of clients who received BP measurement were diagnosed as hypertension. The proportion of cases detected was more than seven percent in Magway Region, Sagaing Region, Mandalay Region, Shan(North) State and Bago Region (Figure 61).

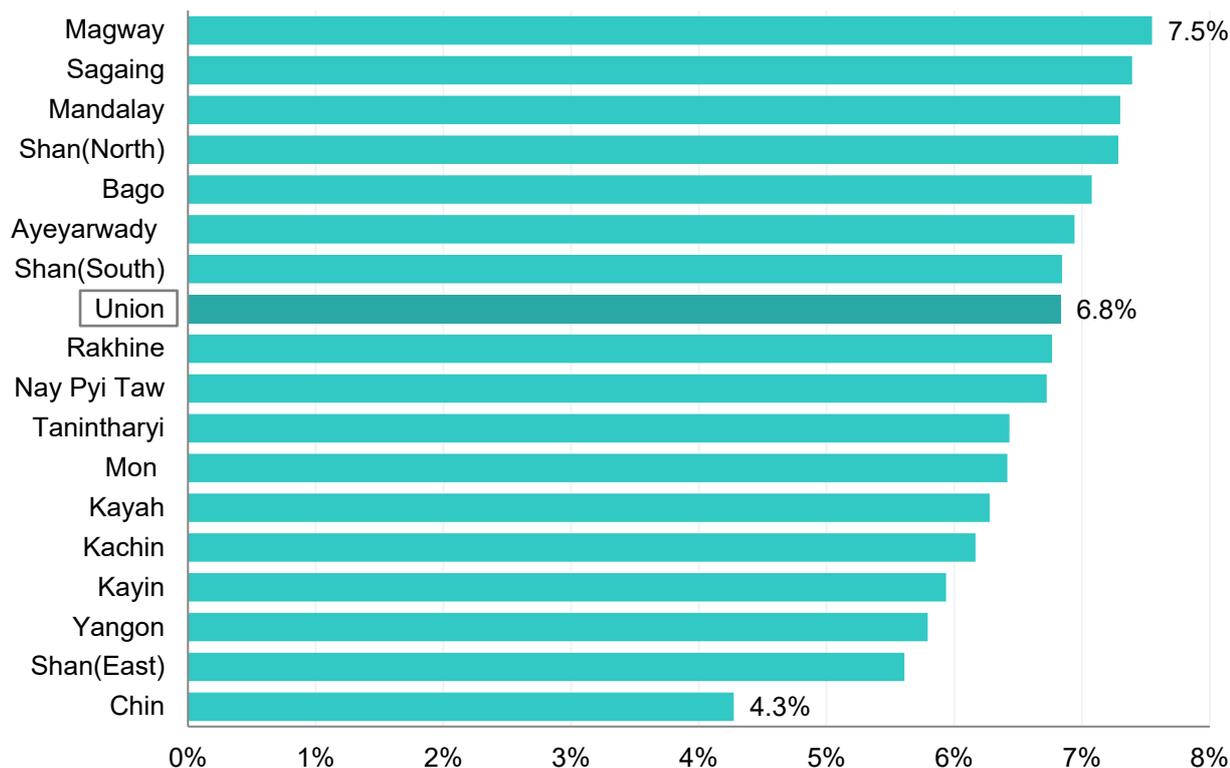


Figure 61. Proportion of Hypertension Cases among those received BP Measurement at Primary Health Facilities by States and Regions, 2019

3.14.2. Smoking

Information on one of the major risk factors for NCDs, the number of current smokers, has been collected annually by BHSP via household visit during which the smoking status of family members is captured. Current smoker is defined as an adult (15 years and above) who has smoked 100 cigarettes in his or her lifetime and who currently smokes cigarettes. The term “cigarette” includes any types of smoking includes Cigarette, Cheroot, Cigar and Dottle, etc.

Smoking prevalence is calculated as number of current smokers per 1,000 population aged 15 years and older. At national level, there was an increasing trend of smoking prevalence during 2016 to 2019 which increased from 175 to 186 per 1,000 population.

In 2019, the prevalence was the highest in Rakhine State at 308.6 followed by Tanintharyi Region at 284.4, and Kayin State at 246.6 per 1,000 15 years and older population. The prevalence was the lowest in Kayah State at 109.1 per 1,000 adult population (Figure 62).

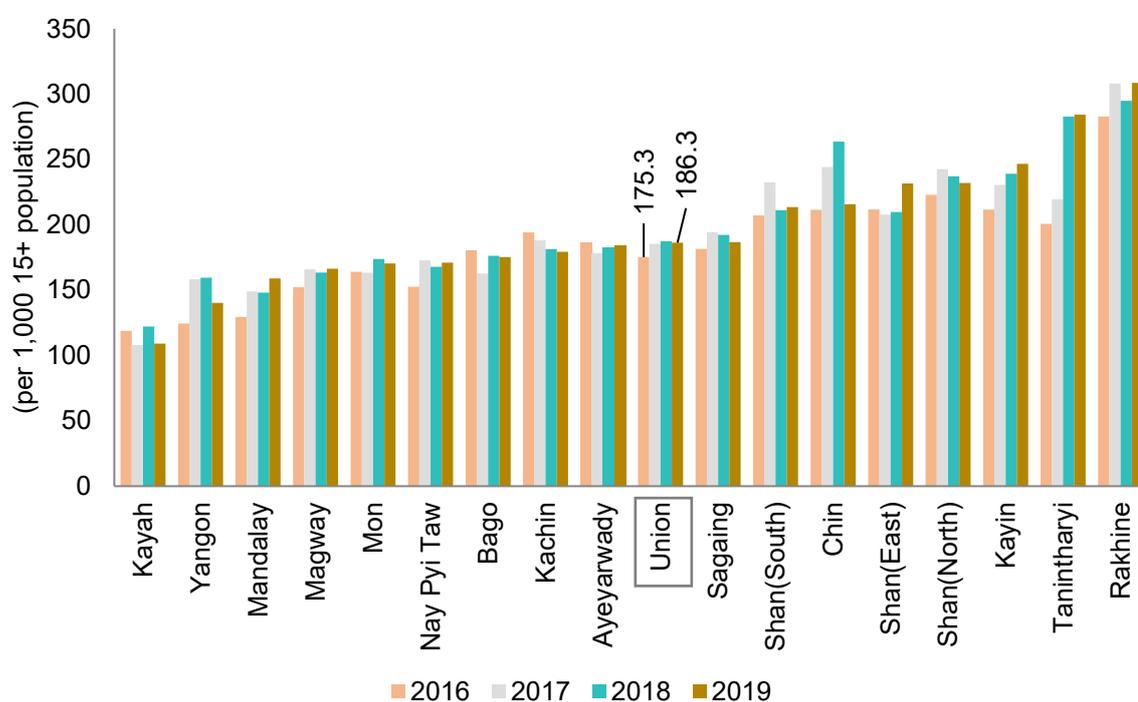


Figure 62. Current Smokers by States and Regions, 2016-2019

3.14.3. Betel Chewing

Information on betel chewing, one of the NCD risk factors, was added to routine data collection in 2019 using the same data collection methodology as smoking. Current betel chewer is defined as an adult (15 years and above) who has chewed 100 betel quid in his or her lifetime and who currently chews betel quid.

Prevalence of betel chewing is calculated as number of current betel chewers per 1,000 population of aged 15+. In 2019, one in five of the population aged 15 years and older are current betel chewers. The highest prevalence was reported from Rakhine State at about 400 per 1,000 adult population (Figure 63).

In 2019, the prevalence of betel chewing was higher than that of smoking at all states and regions except in Shan (East), Shan (North), Chin and Kachin States.

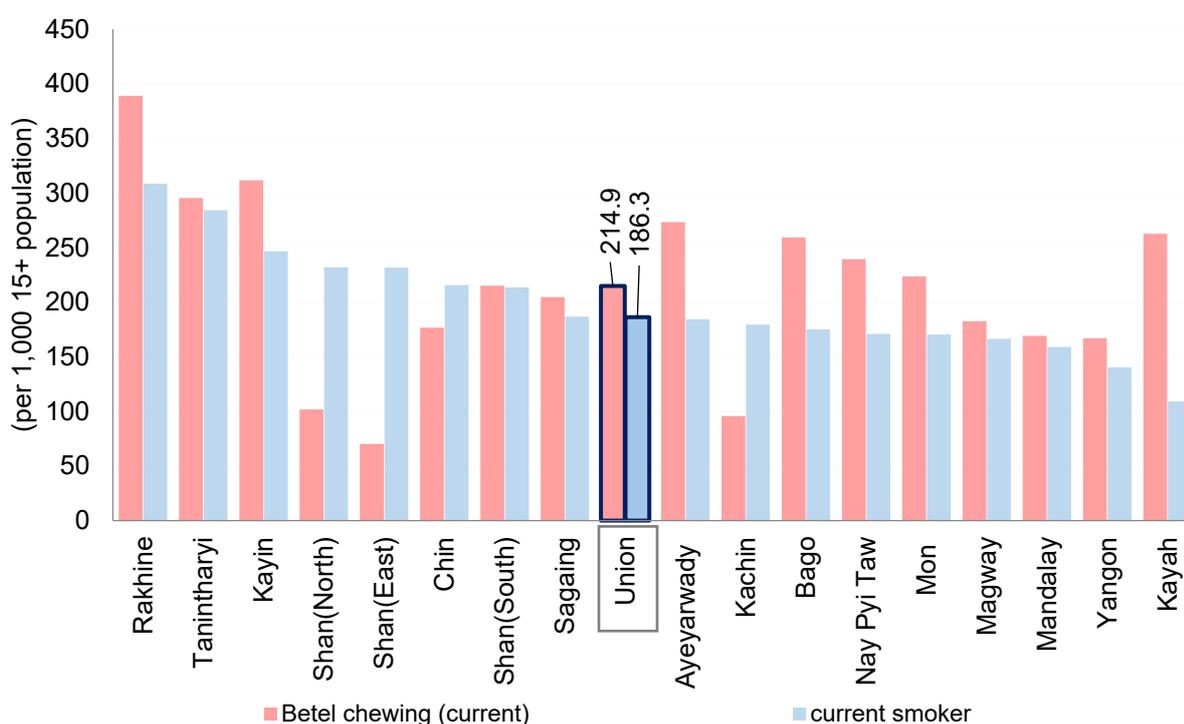


Figure 63. Prevalence of Betel Chewing and Smoking among Population Aged 15 years and older by States and Regions, 2019

3.15. Prevention and Control of Diabetes Mellitus Project

The Diabetes Mellitus (DM) was added as a new project for data collection through HMIS in 2019. A person who has fasting blood sugar (FBS) more than or equal to 126 mg/dl (7.0 mmol/L), or random blood sugar (RBS) more than or equal to 200mg/dL (11.1mmol/L), or Hb A1C level more than or equal to 6.5 percent (48mmol/mol) is diagnosed as DM.

Both newly identified cases and known cases who sought care at primary healthcare facilities were included in the report, however every client was counted only once in the calendar year. The number of DM cases received care varied greatly across states and regions with the highest number in Mandalay followed by Yangon, Sagaing and Ayeyarwady Regions. It was the lowest in Kayah State followed by Chin State, Shan(East) State and Nay Pyi Taw Territory (Figure 64).

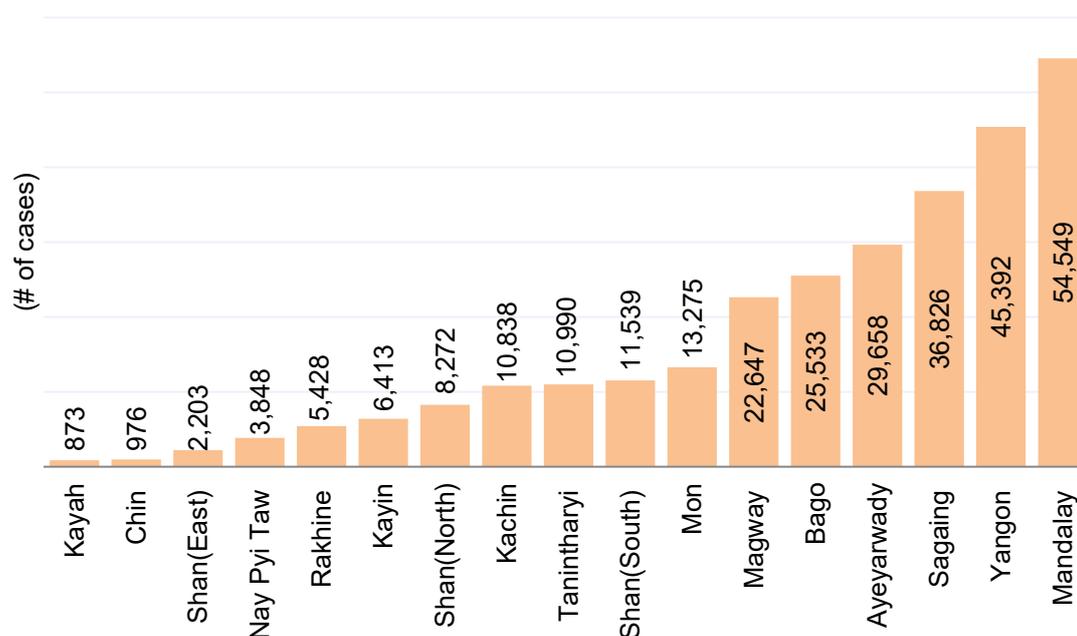


Figure 64. Number of (Known & Newly Identified) Diabetes Cases Sought Care from Primary Care Facilities by States and Regions, 2019

3.16. Prevention and Control of Deafness Project

Applying the operational definition “no response to loud noise in three consecutive months among under 6 months old infants”, congenital deafness was identified by BHSP. Around one hundred cases were identified and reported by BHSP annually from 2016 to 2019 except in 2018 when more than 400 cases were reported.

In 2019, the prevalence of congenital deafness was about 10 per 100,000 live births as national average. The prevalence varies across states and regions with the highest prevalence being reported from Shan(East) State at 74 per 100,000 Live birth followed by Shan(North) State at 17 per 100,000 Live birth and Mon State at 15 per 100,000 Live birth. The lowest prevalence was reported from Kayah State at “zero” followed by Tanintharyi Region at 3 per 100,000 Live births (Figure 65). Possible causes of such huge variation among states and regions should be assessed. Any variations in case detection strategies, degree of understanding and adherence to the case definition should be explored. In addition, it is worth to discover any possible environmental factors associated with congenital deafness in high prevalence areas.

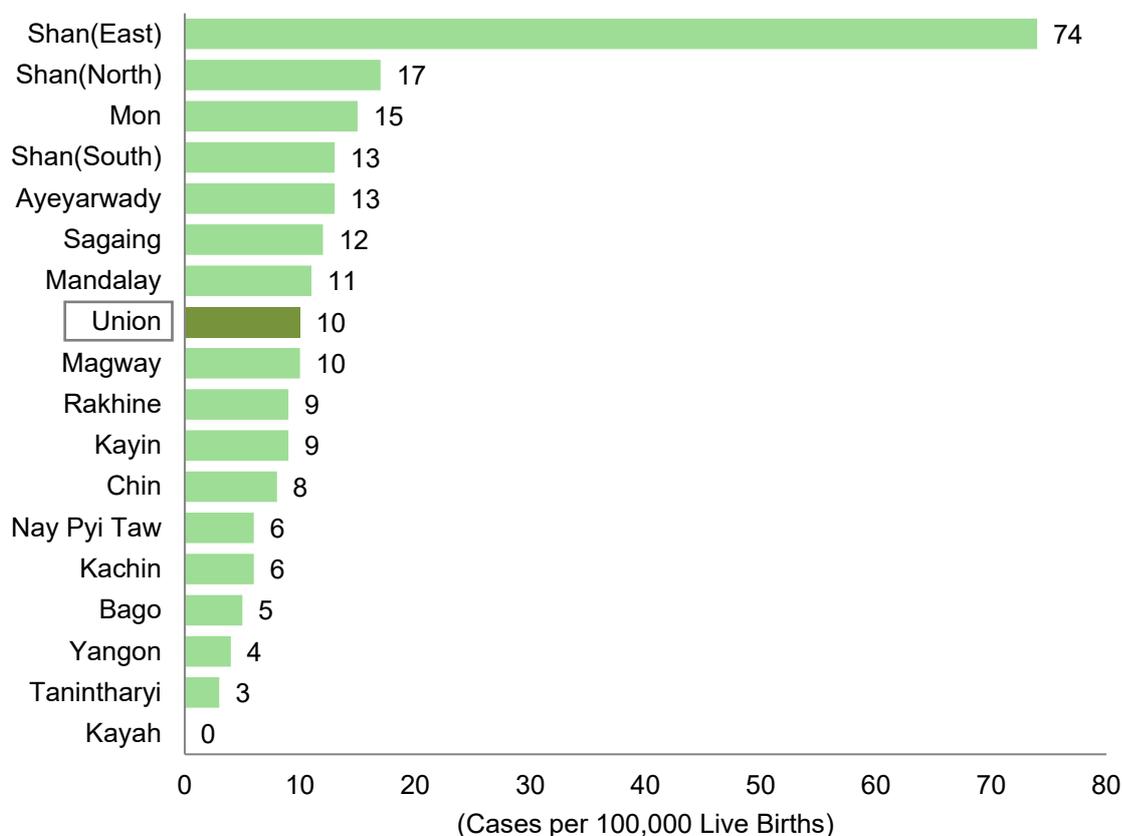


Figure 65. Reported Congenital Deafness per 100,000 Live Births by States and Regions, 2019

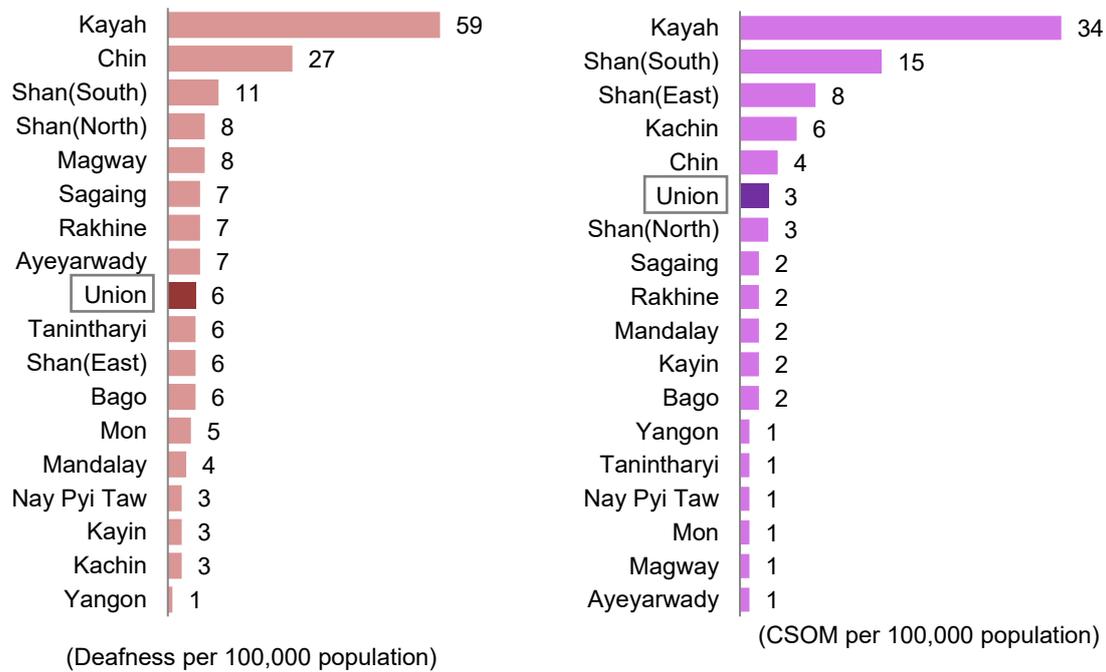


Figure 66. Hearing Impairment without Ear Discharge (Left) and Chronic Otitis Media (Right) per 100,000 Population by States and Regions, 2019

The prevalence of hearing impairment without ear discharges (deafness) was 6 per 100,000 population, and chronic ear discharge from either both or one side of the ears for more than 3 months (Chronic Suppurative Otitis Media-CSOM) was 3 per 100,000 population in the year 2019 (Figure 66).

Kayah and Chin States had a higher prevalence of deafness at 59 and 27 cases per 100,000 population respectively in the year 2019.

Higher than the national average prevalence of CSOM were reported from Kayah State at (34 per 100,000 pop) followed by Shan(South) State at 15 per 100,000 population, Shan(East) State at 8 per 100,000 population, Kachin State at 6 per 100,000 population, and Chin State at 4 per 100,000 population.

Although the reported hearing problems based on cases identified at primary healthcare level would be an under-representative for national level prevalence, high numbers of deaf cases were reported from Hpruso, Kyankin, Pekhoh, Sipaw, and Mudon townships with 278, 178, 97, 63, and 56 cases per 100,000 population. These rates were about 10 to 45 times higher than the national rate of 6 per 100,000 population.

3.17. Myanmar Epilepsy Initiative Project

In 2019, the health information for epilepsy was detached from its previous mental health project. The project has estimated the Epilepsy prevalence as 1.5 per 1,000 population in 2019 which was higher than the WHO estimates of 1.1 per 1,000 population.

Being re-oriented as a new project, the number of cases identified was much higher than previous years in more than half of the states and regions. A sudden jump in number of identified cases was seen in Mon State and Ayeyarwady Region in 2019 (Figure 67).

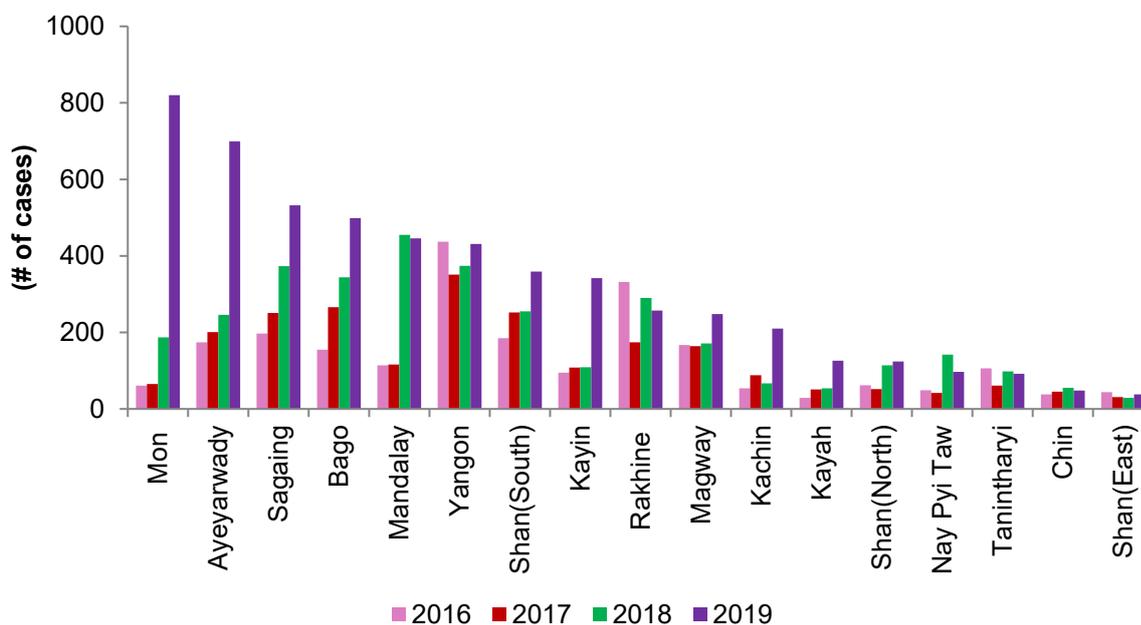


Figure 67. Number of Epilepsy Cases by States and Regions, 2016-2019

In 2019, the number of reported cases was less than 5 percent of the estimated cases in almost all states and regions except Kayah and Chin States (Figure 68). The variation in degree of case finding across states and regions might be due to the varying level of BHSP engagement, and proportion of cases sought care from primary healthcare level. Moreover, the program might have to review the estimation process especially to explore whether there is geographic variation in case distribution.

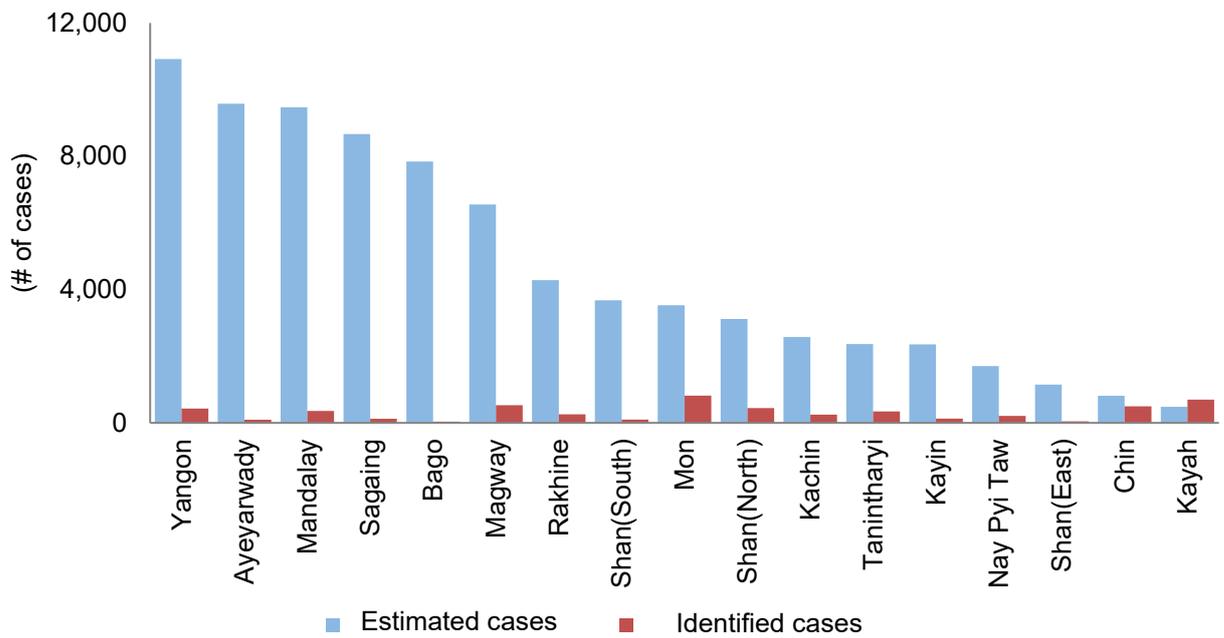


Figure 68. Estimated Versus Identified Epilepsy Cases by States and Regions, 2019

An exploration on treatment gap revealed that the proportion of epileptic cases who got treatment varied from less than 25 percent to more than 90 percent across states and regions. The lowest treatment coverage was seen in Rakhine State at 22 percent, and the highest in Mon State at 95 percent treatment coverage. The treatment coverage for most states and regions were around 50 to 60 percent (Figure 69). The underlying reasons for treatment gap should be explored.

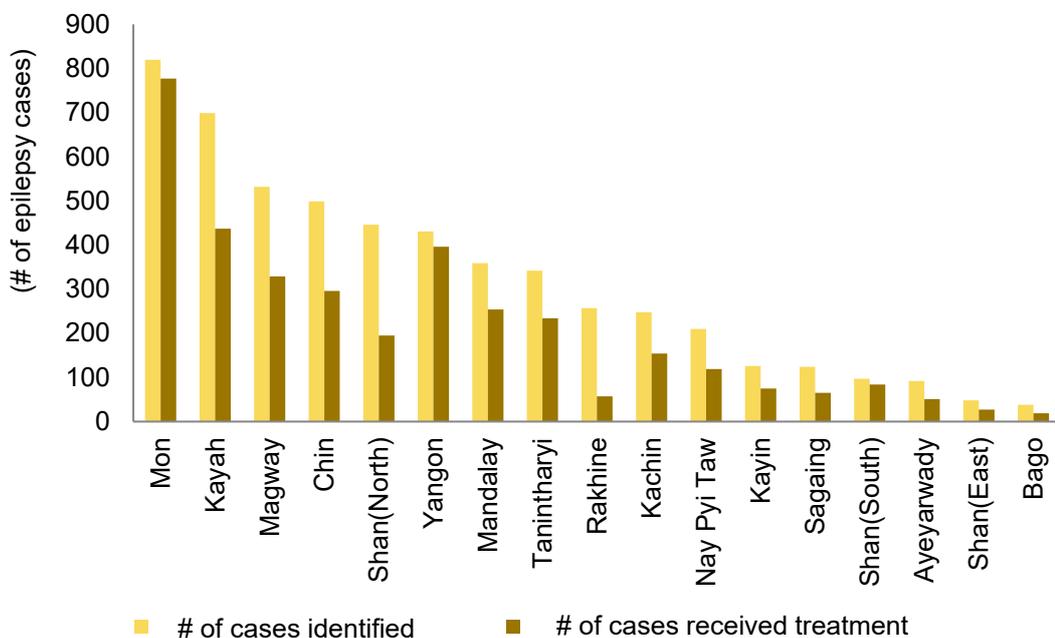


Figure 69. Number of Epilepsy Cases Identified and Treated by States and Regions, 2019

3.18. Mental Health Project

The number of people suffering from mental disorders: psychosis, depression, anxiety, alcohol use disorder, and mental retardation were collected and reported by BHSP annually.

Increasing number of mental disorder cases were reported during the period from 2016 to 2019. The significant increase in case was seen in alcohol use disorder during the four-year period. The increasing trends and/or chronology of alcohol use might be the main contributor to the increase. The relatively low prevalence and chronic nature of the other four mental disorders might explain the stable number of reported cases throughout this period (Figure 70).

In 2019, the prevalence per 100,000 population was 330 for alcohol use disorder, 16 for anxiety disorder, 12 for mental retardation, 12 for psychosis and 7 for depression (Figure 70). Among states and regions, the total number of reported mental disorders was highest in Bago Region with about 30,000 cases followed by Mandalay and Sagaing Regions. The reported number is lowest in Shan(East), Chin and Kachin States (Figure 71).

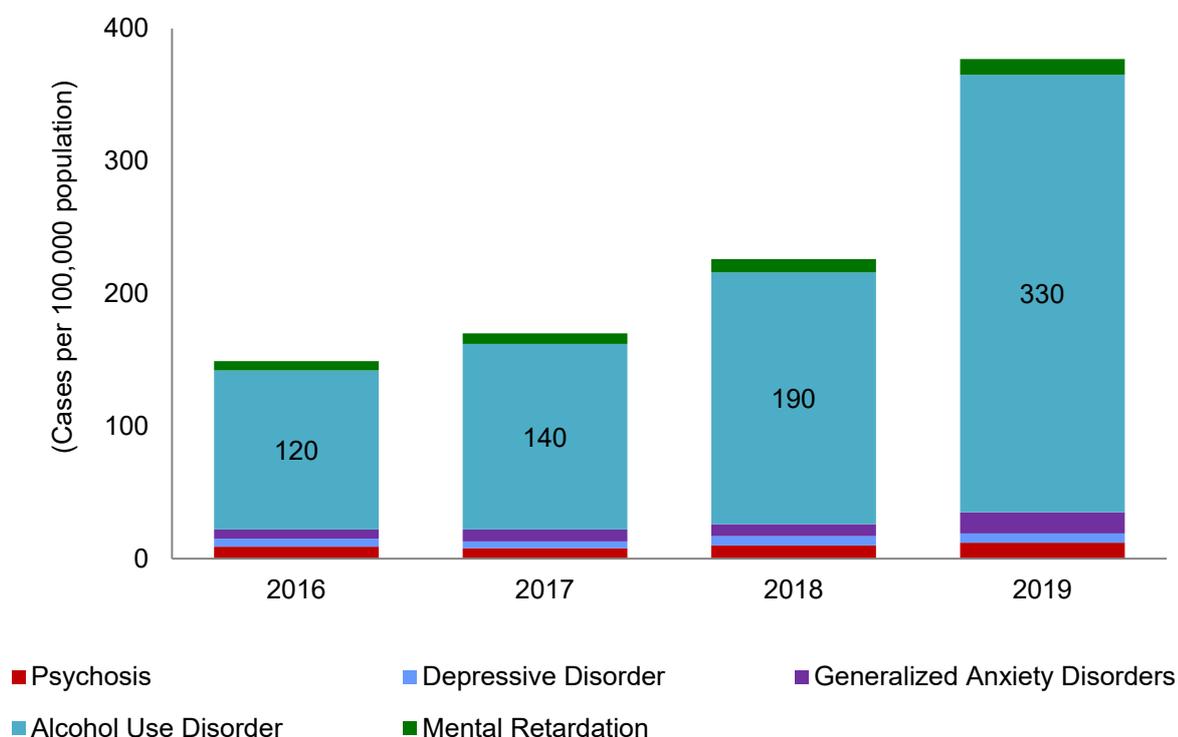


Figure 70. Major Types of Mental Disorders, Myanmar, 2016-2019

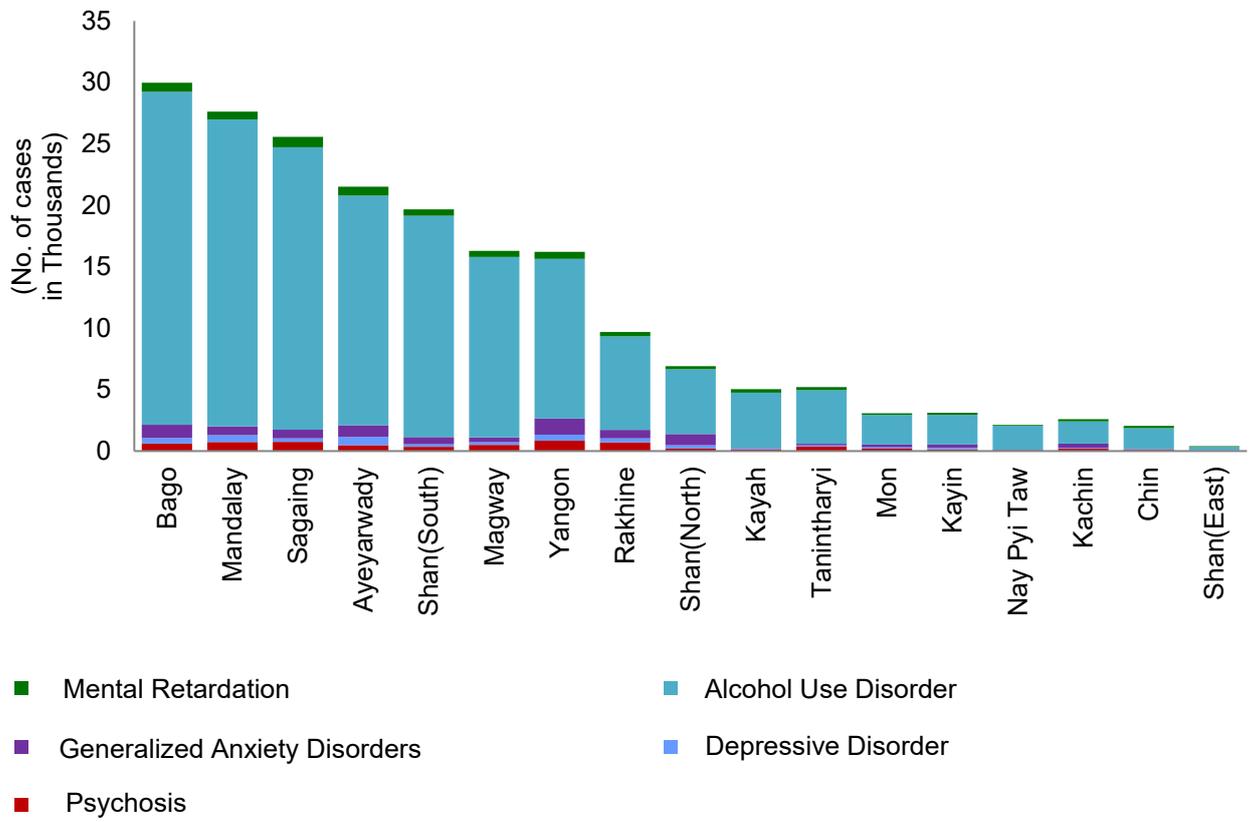


Figure 71. Mental Disorder Cases by States and Regions, 2019

3.19. Injury Prevention Project

The information on incidence of unintentional injuries such as road traffic accidents (RTA), occupational injuries in farm, poisoning, fall, burns and drowning; and intentional injuries like suicide and assault are reported by BHSP. The report is based on place of residence of the victims rather than the place of occurrence. In 2019, additional types of injury such as injury in workplace, and other injuries that cannot be classified in any of the above nine categories were included.

Among all injury categories, RTA contributed the biggest proportion, which was followed by Farm Injuries, Assault, Fall and Burn in the recent four years of 2016 to 2019. A total of about 370,000 injuries were reported in 2016 which increased gradually to around 460,000 in 2020. RTA accounts for 45 to 50 percent of all injuries in these four years (Figure 72).

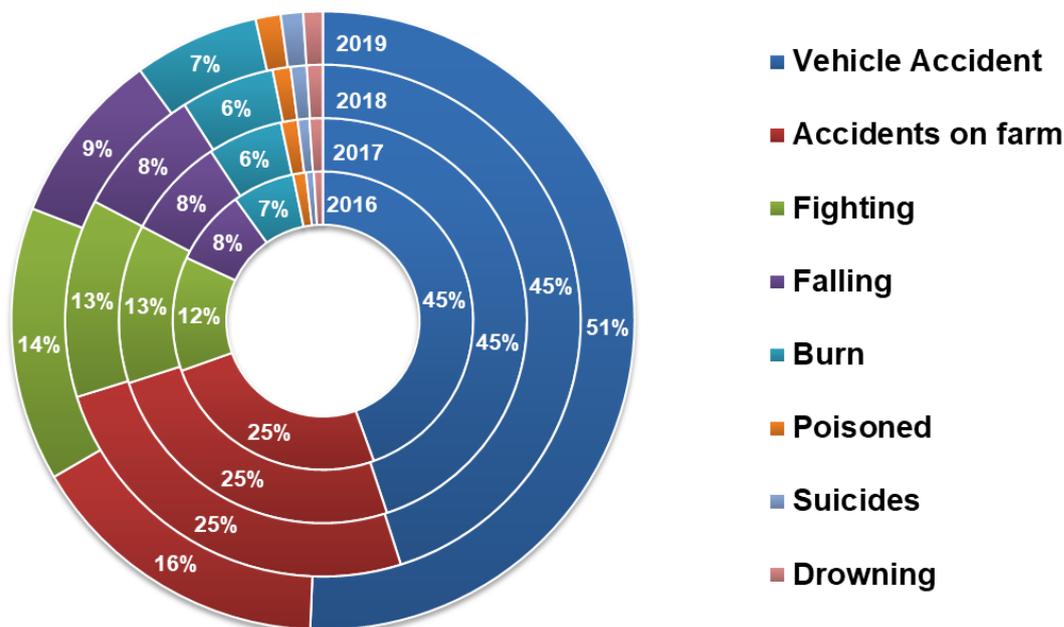


Figure 72. Distribution of Causes of Injury, Myanmar, 2016-2019

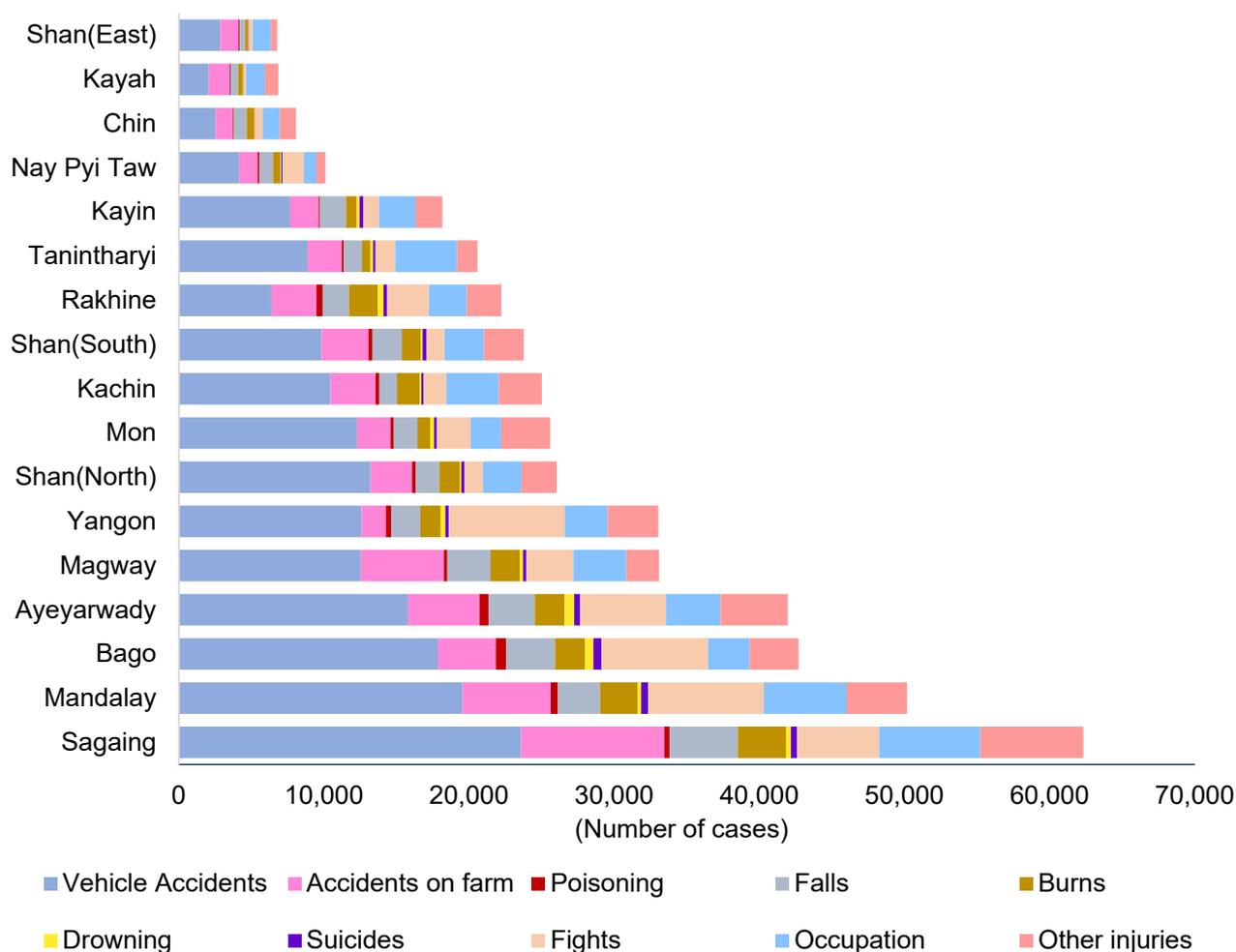


Figure 73. Number of Injury Cases by states and regions, 2019

In 2019, the highest number of injuries was reported from Sagaing Region followed by Mandalay and Bago Regions. The reported numbers were the lowest in Shan(East), Kayah, and Chin States (Figure 73).

RTA contributes the highest proportion of all injuries in all states and regions: More than 50 percent contribution found in Shan(North) State, and more than 40 percent in Mon State, Bago Region, Kachin State, Shan(South) State, Tanintharyi Region, Kayin State, Nay Pyi Taw Territory and Shan(East) State. Proportional distribution of injury type varies largely by states and regions (Figure 74). A higher distribution of assault cases with more than 24 percent contribution was found in Yangon Region; higher proportion of injuries in farm seen in Kayah and Chin States; occupation accidents seen in Tanintharyi Region and Kayah State.

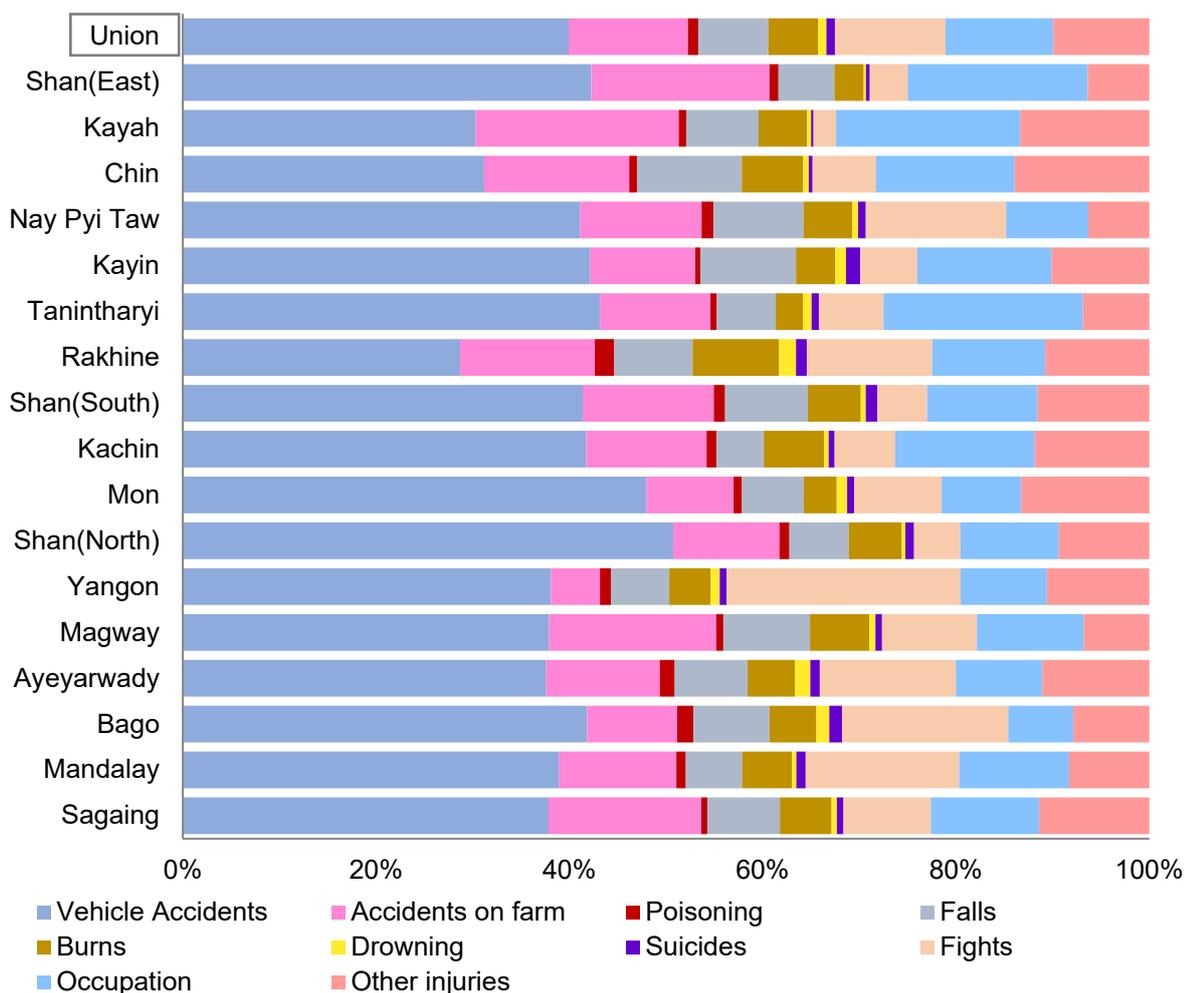


Figure 74. Proportional distribution of injuries by states and regions, 2019

Poisoning, drowning and suicide problems contributed a smaller proportion of total cases compared with other categories. However, the death rate was higher for these three categories. Investigation on injury type specific fatality rate found that 85 percent of drowning cases did not survive, about 50 percent of attempted suicide resulted in death, and about 7 percent of poisoning did not recover.

About 11,300 injury deaths were reported in 2016 and the number increased gradually during the four years period to about 15,300 in 2019. Among the reported deaths: two-fifth was attributed to RTA, one-fourth to drowning, and one-eighth to suicide (Figure 75). In 2019, the highest number of injury related mortalities was reported from Bago Region followed by Ayeyarwady and Sagaing Regions (Figure 76).

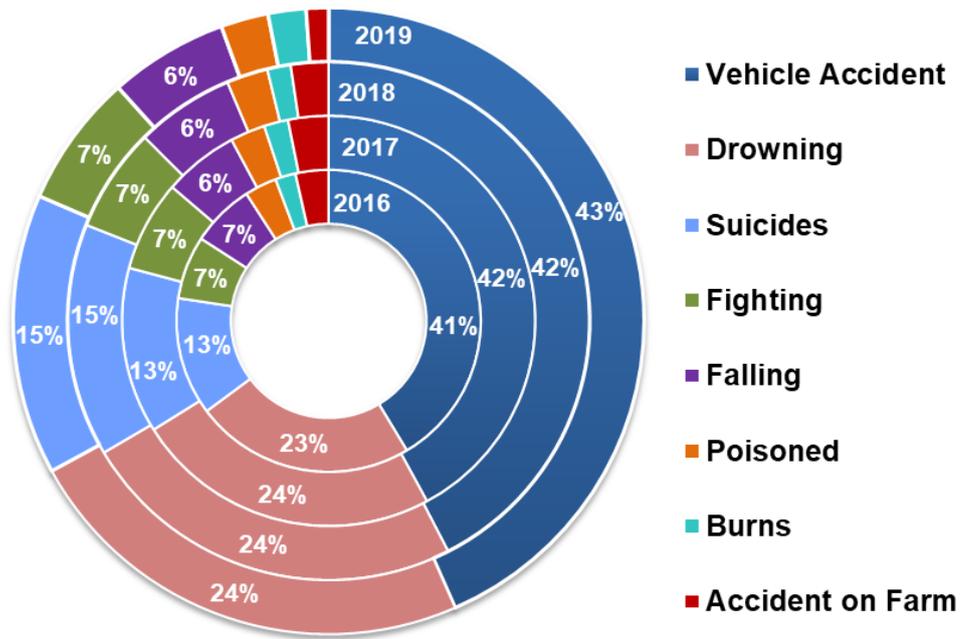


Figure 75. Distribution of Injury Deaths, Myanmar, 2016-2019

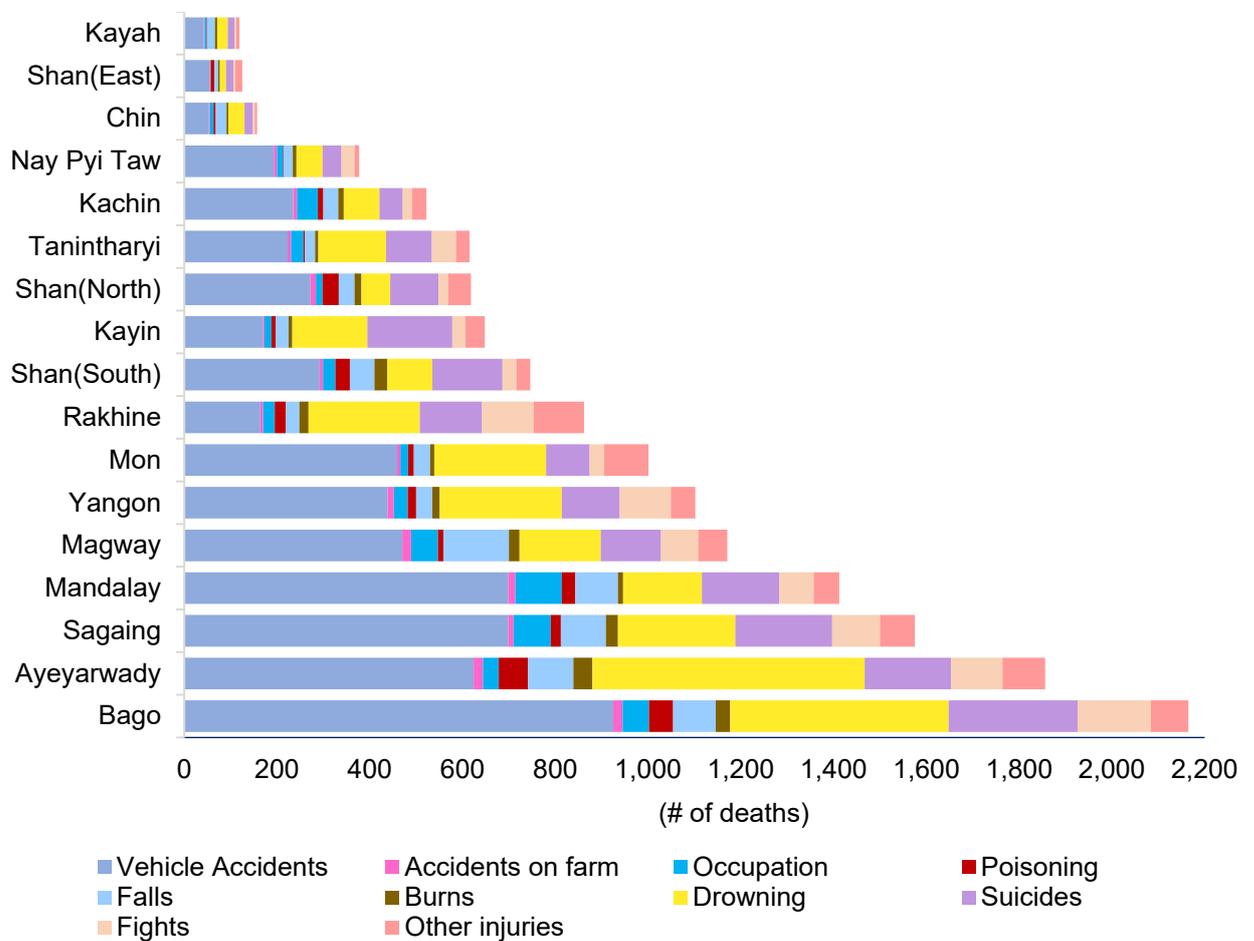


Figure 76. Number of Injury Deaths by states and regions, 2019

3.20. Environmental Sanitation Project

Environmental sanitation is one of basic requirements for the uplift of human well-being and quality living conditions. The information on sanitary latrine coverage by households was assessed and reported annually by BHSP. At national level, 68.3 percent of households had sanitary latrine in 2016 and the coverage increased to 72.9 percent in 2019 (Figure 77).

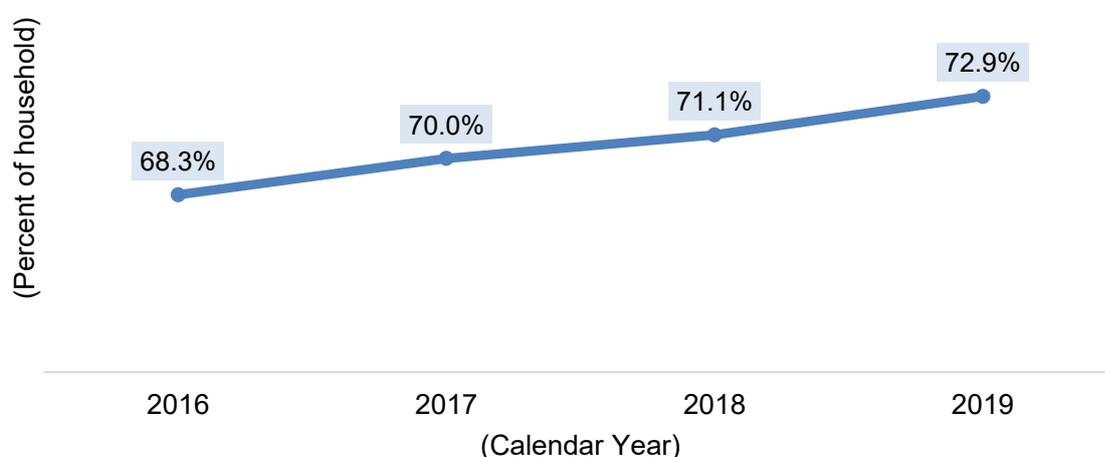


Figure 77. Sanitary Latrine Coverage, Myanmar, 2016-2019

Over the four-year period of 2016 to 2019, a steady increase of latrine coverage was seen in most states and regions except Chin State for which the coverage decreased in the year 2019. Rakhine State had the lowest coverage with a minimal increase throughout the four years period. The level of coverage was fluctuated during these four years in Shan(East), Shan(South) and Kachin States, and Tanintharyi Region (Figure 78).

In 2019, Yangon Region had the highest level of sanitary latrine coverage at 85.9 percent whereas Rakhine State had the lowest coverage at 39.1 percent. Although Shan(North) State, Bago Region, Chin State, Shan(South) State, and Ayeyawady Region had over 60 percent coverage, it was lower than the national average (Figure 78).

Acknowledging the access to safe water at health facilities is crucial for proper sanitary procedures, the information on safe water coverage at primary health facilities was collected annually since 2019. On average around 8 out of 10 primary health care facilities have access to improved water source in 2019. Primary health facilities in Chin and Rakhine States had the lowest level of access with only six out of ten health care facilities received safe water (Figure 79).

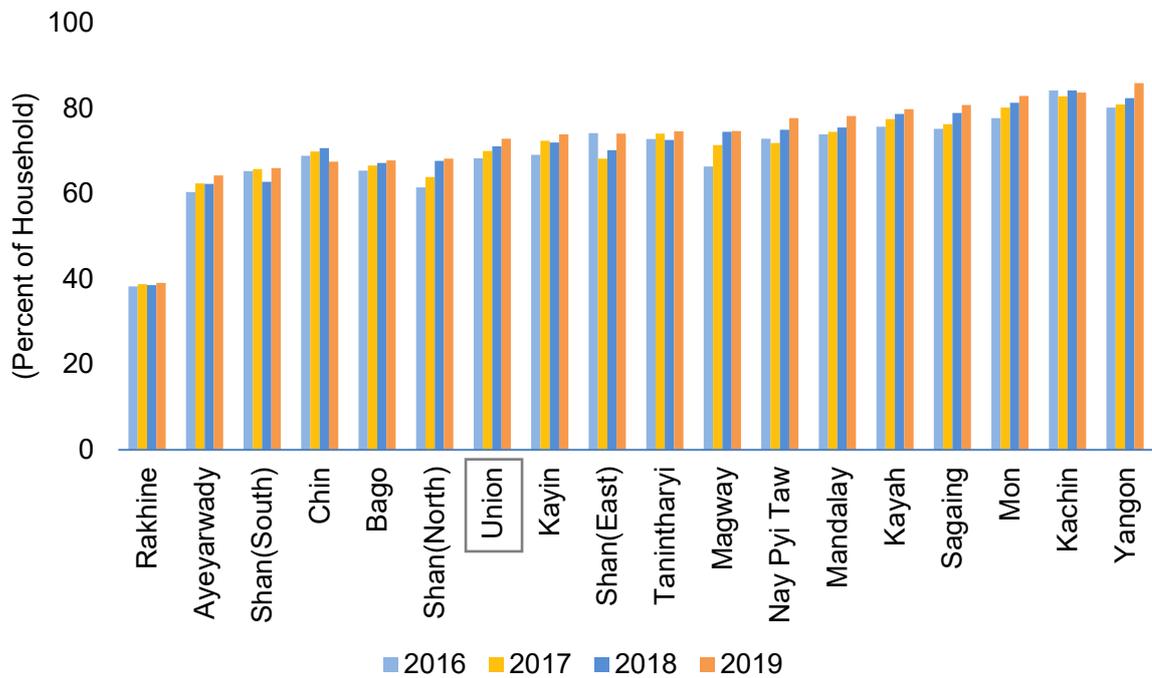


Figure 78. Sanitary Latrine Coverage by States and Regions, 2016-2019

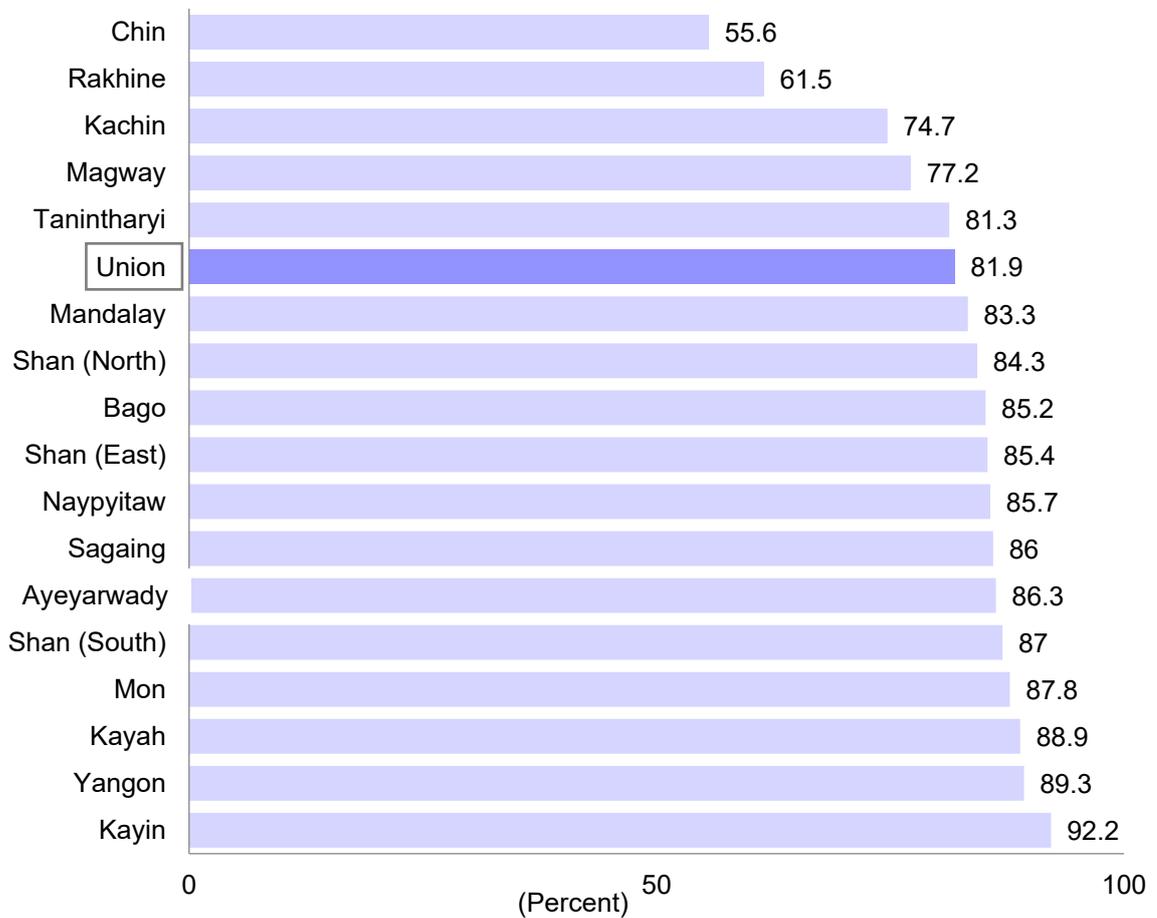


Figure 79. Primary Health Care Facilities with Improved Water Source by States and Regions, 2019

3.21. Health Literacy Promotion Project

The number of health talks on maternal and reproductive health, immunization, communicable and non-communicable diseases, personal hygiene and environmental sanitation, and other health related topics that were provided to clinic attendants at the health facilities, and to public during field activities have been reported since 2019.

On average, 398 health-talk-sessions were conducted by BHSP in a township every month; and 69 health-talk-sessions were conducted by one BHSP in 2019. Comparing the performance by states and regions revealed that more than 600 health-talk-session were conducted in a month within each township in Ayeyarwady, Mandalay and Magway Regions. The highest number of health talks given by each BHSP was also found in these three regions with more than 100 health-talk-session in a year (Figure 80).

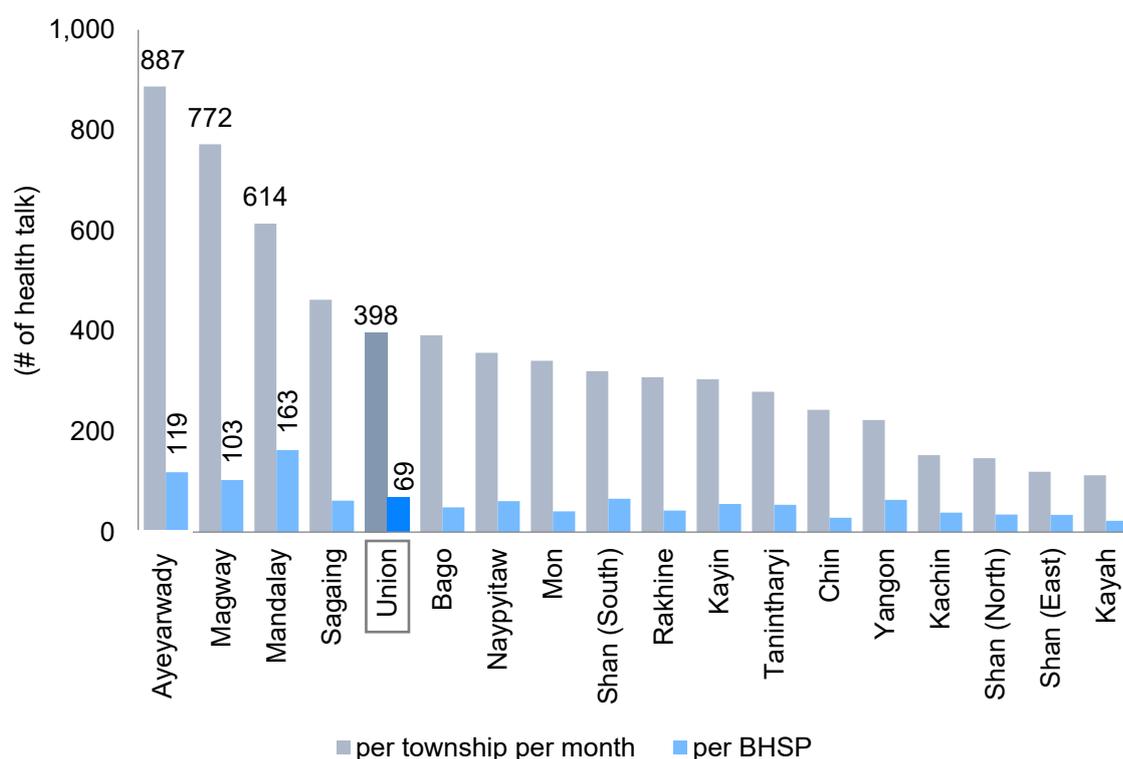


Figure 80. Average Number of Health Talks in Township per month and per BHSP by States and Regions, 2019

4. Vital Statistics

The BHSP are responsible for registration and reporting the major vital events occurring in his/her jurisdiction. Overall, there was a slight fluctuation without obvious changes in the reported birth rate and death rate across the year from 2016 to 2019. Assessing the reported crude birth rate (CBR) revealed that it declined slightly in 2019 for both urban and rural areas (Figure 81). However, the reported crude death rate (CDR) showed a tiny increase in the four-year period, which was 5.6 per 1,000 population in 2016 and 6 per 1,000 population in 2019 (Figure 82).

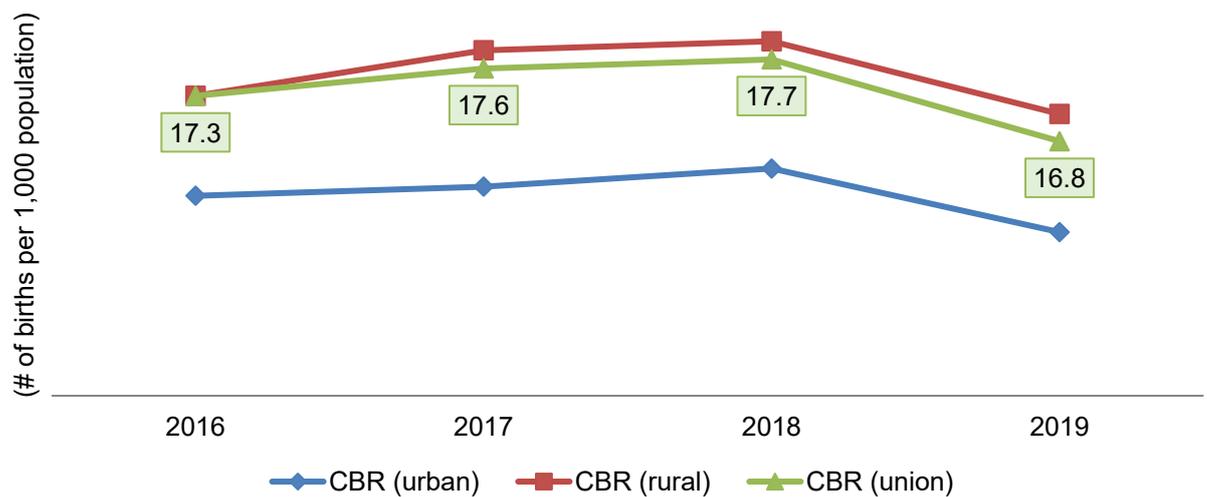


Figure 81. Crude Birth Rate (Reported), Myanmar, 2016-2019

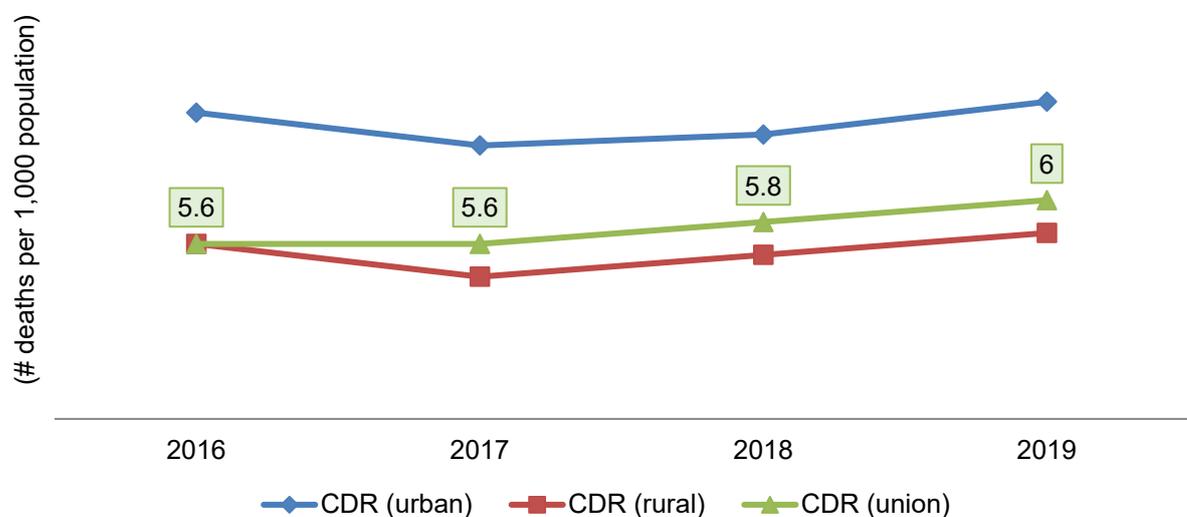


Figure 82. Crude Death Rate (Reported), Myanmar, 2016-2019

The mortality was specifically analyzed for maternal and child. Although fluctuation was seen in maternal mortality ratio (MMR) during 2016 and 2019, it was about one hundred cases per 100,000 live births (Figure 83). In 2019, the MMR in Chin, Rakhine, Shan(South), Shan(North) and Kayin States were higher than the national level. In addition, Ayeyarwady and Bago Regions as well as Nay Pyi Taw Territory had higher reported MMR compared to other regions (Figure 84).

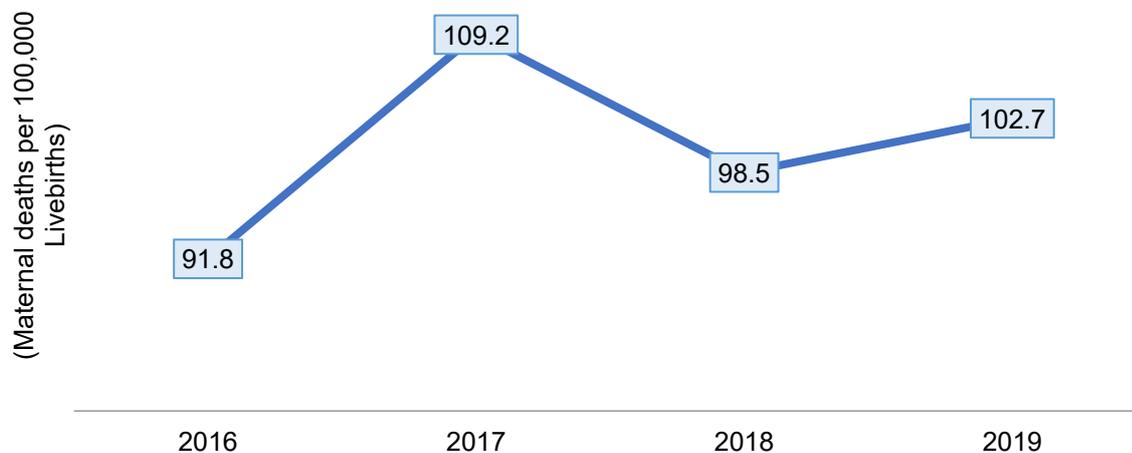


Figure 83. Maternal Mortality Ratio (Reported), Myanmar, 2016-2019

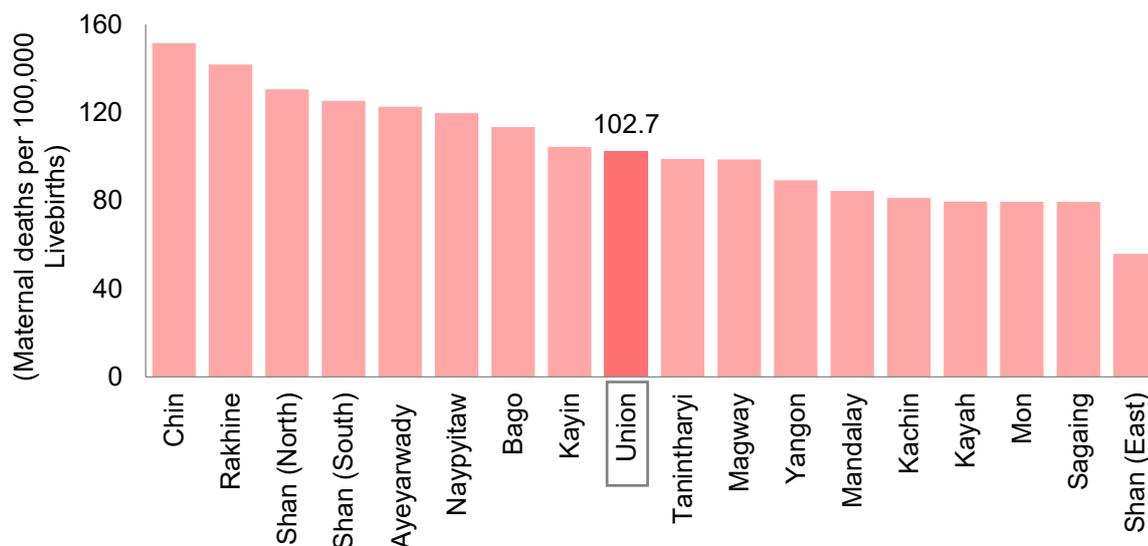


Figure 84. Maternal Mortality Ratio (Reported) by States and Regions, 2019

Under-5 mortality was described by early neonatal mortality rate, neonatal mortality rate, infant mortality rate and under-five mortality rate which were 5.8, 7.5, 11.6 and 14.5 per 1,000 live births respectively in 2019(Figure 85). All of these mortality rates were higher in

Chin, Kayah, Kayin, Kachin and Shan(North) States comparing to the union level. Similarly the higher mortality rates were seen in Nay Pyi Taw Territory, Sagaing, Ayeyarwady and Magway Regions (Figure 86).

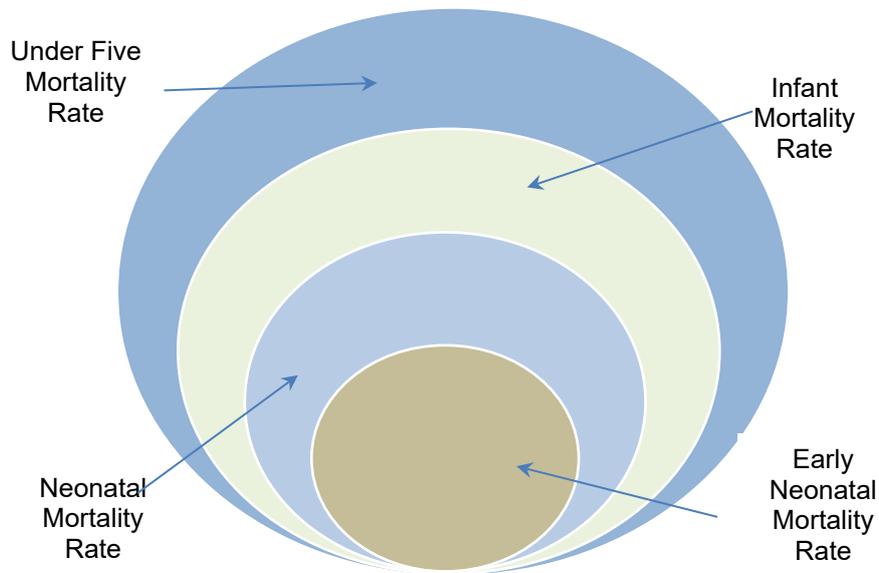


Figure 85. Under-5 Mortality Rates, Myanmar, 2019

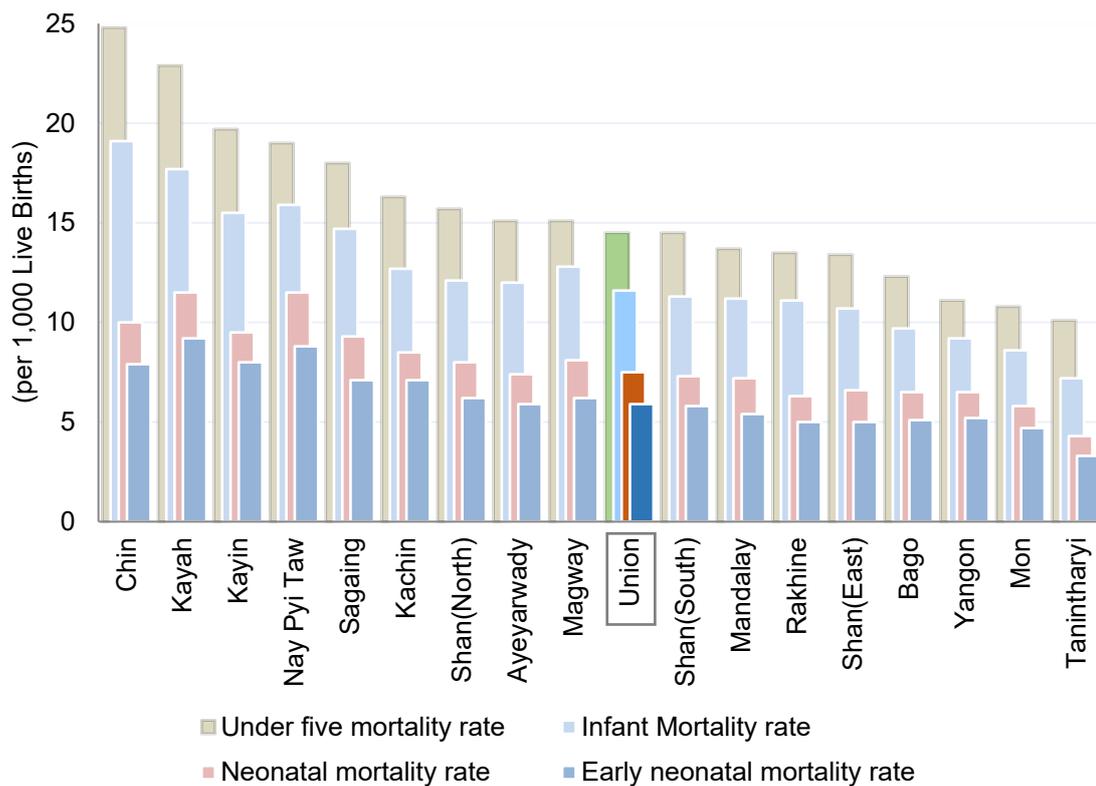


Figure 86. Mortality Rates among Under-5 Children by States and Regions, 2019

5. Data Quality

Applying the data quality review framework of WHO DQA tool, the two major dimensions of data quality: 1) *completeness and timeliness of data*; 2) *internal consistency of reported data* were assessed for the selected indicators from public health information.

The WHO Data Quality Tool application for the DHIS2 information platform has been customized on the HMIS DHIS2 platform since 2018 and deployed for assessing the completeness, timeliness, and consistency of data for the year 2018 and 2019.

Dimension 1: Completeness and Timeliness of data

1.a) Completeness (in terms of reporting status)

In DHIS2 reporting platform, the primary reporting is from facility level which includes UHC, MCH, RHC, station hospitals and township hospitals. In eight townships where the decentralized data entry has been practicing, the sub-RHC is counted as reporting unit.

There was a total of 3,439 primary reporting units in 2018, and 3,641 in 2019. The assessment on reporting completeness was conducted for the monthly reporting form named (Form 1) by reporting units. The overall reporting completeness rate was 98.3 percent in 2017, 99.6 percent in 2018, and 99.1 percent in 2019 (Figure 87).

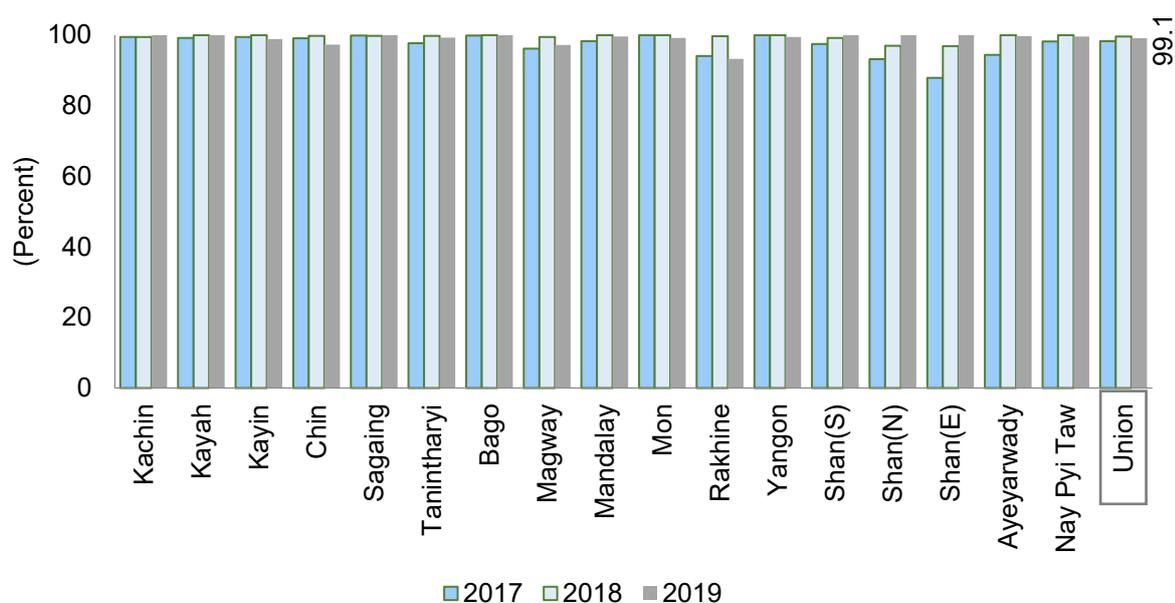


Figure 87. Reporting Completeness Rate by States and Regions, 2017-2019

In-depth assessment by township revealed that most townships have achieved more than 80 percent of facilities completed the report. The exception was observed in four townships for 2018, and in six townships for 2019. Two townships in Shan(North) State: Naphant, and Mongmaw did not complete any reports throughout the two years (Table 6).

Table 6. Facility Level Reporting Completeness Rate, and Township with Poor Reporting Completeness, 2018-2019

No.	Description	2018	2019
1.	Number of reporting facility	3,439	3,641
2.	Percent of facilities completed the report	99.6%	99.1%
3.	Number and percent of townships with under 80 percent reporting completeness	4 (1.2%)	6 (1.8%)
4.	Township with facility completeness rate below 80% Name (% Facilities Completed the Report)	Khaung Lan Phoo (79.2%), Matman (79.2%), Naphant (0%), Mongmaw (0%)	Rambre (76%) Lashio (77%) Myebon (78%) Myaing (79%) Naphant (0%), Mongmaw (0%)

1.b) Completeness (in term of specific variables information)

This assessment is more exclusively on the completeness of selected data elements (variables/indicators). In other words, it is measuring the extent to which the selected core indicators were reported by facilities.

Four variables namely ANC visit for at least one time (ANC1), Skilled Birth Attendance (SBA), immunization coverage for the 3rd dose of Penta vaccine (Penta3), and OPD visits were selected for the assessment.

National completeness score is defined as the percent of monthly values for selected indicators/variables that are not zero/not missing for the specified period (usually one year).

Sub-national completeness is assessed as the percent of townships (administrative units) where at least 90 percent of the monthly values are not missing and non-zero values.¹ Townships with more than ten percent missing or zero values are defined as incomplete category.

Proportion of townships with in-complete values for each of the four selected variables ranged from 0.6 to 4.5 percent (Table 7).

Table 7. Completeness on Selected Indicators at National and Township Level, 2018-2019

No.	Variables	National Completeness		Township with at least 90 percent non-missing and non-zero values	
		Score (%)		Number (%)	
		2018	2019	2018	2019
1.	ANC1	99.1%	98.9%	326 (98.8%)	324 (98.2%)
2.	SBA	98.8%	98.6%	322 (97.6%)	323 (97.9%)
3.	Penta3	96.6%	97.1%	315 (95.5%)	315 (95.5%)
4.	OPD	99.3%	99.4%	327 (99.1%)	328 (99.4%)

1.c) Reporting timeliness

Timeliness of reporting is assessed with two target dates: within the first five days, and within the 15 days of the next month. In 2018 about 55 percent of the facilities could complete the reports within the first five days which increased to 65 percent within the additional ten days period. The situation seems a bit worse in the year 2019 when less than half of the facilities completed the reports within the first five days and 58 percent within the additional ten days period.

Monthly assessment revealed that the timeliness of reporting, by the 15th of the next month, increased from month to month across January to December in both 2018 and 2019. For the

¹ Page 25, Module 2: Desk Review of Data Quality,
<https://apps.who.int/iris/bitstream/handle/10665/259225/9789241512732-eng.pdf?sequence=1>

month of December, about 80 percent of the reporting units completed the report within 15 days of the next month (Table 8).

By states and regions wise assessment, Tanintharyi Region, Kachin and Shan(East) State showed less than 50 percent reporting while Ayeyarwady Region, Mon State, Nay Pyi Taw Territory and Kayin State had 70 percent reporting within the first 15 days of next month in 2019 (Figure 88).

The internet accessibility, server stability and the technical support to focal person at township, RHC and Sub-RHC during the initial phase of implementation played crucial roles to achieve completeness and timeliness of electronic reporting.

Table 8. Percent of Facilities Completed the Monthly Reports within the first 5 or 15 days of Next Month, Myanmar, 2018-2019

No.	Month	Report within the first 5 days of next month (% of facilities)		Report within 15 days of next month (% of facilities)	
		2018	2019	2018	2019
1.	January	41.1	22.5	49.2	29.6
2.	February	34.3	24.7	51.4	32.9
3.	March	51.3	36.7	57.1	43.0
4.	April	47.9	35.8	61.5	46.6
5.	May	55.7	53.3	64.7	59.8
6.	June	62.3	56.0	68.0	65.6
7.	July	57.7	59.7	68.7	68.5
8.	August	64.7	62.3	72.2	67.7
9.	September	63.4	55.4	70.1	65.0
10.	October	59.5	58.1	66.4	67.5
11.	November	62	60.1	70.0	69.0
12.	December	59.3	54.3	82.5	78.2
Union (average)		55	48.4	65.2	57.9

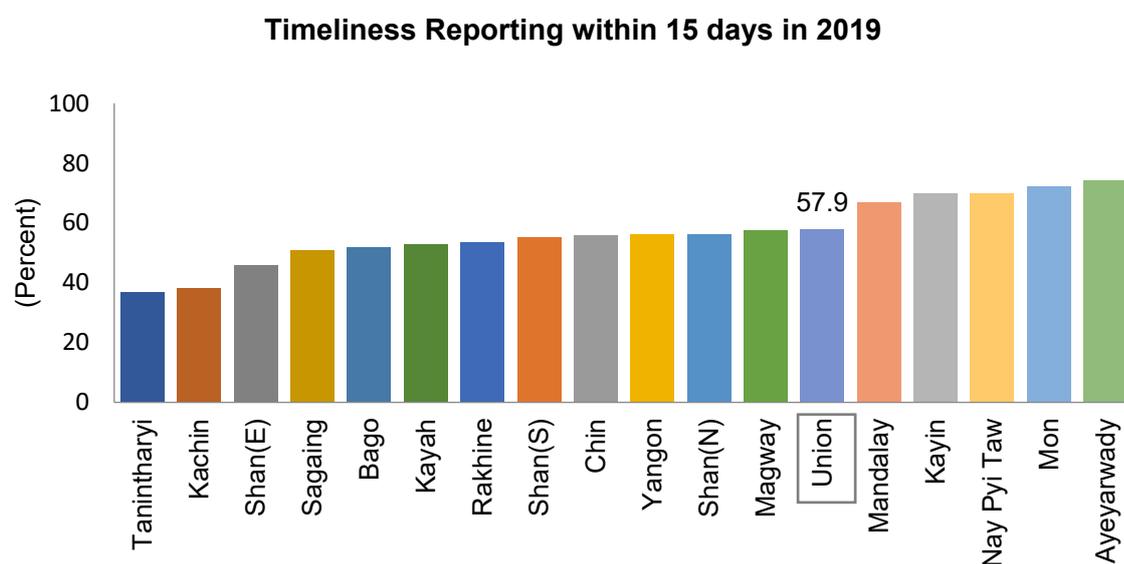


Figure 88. Percent of Facilities Reported within the next 15 days by States and Regions, 2019

Dimension 2: Internal Consistency of Reported Data

Four metrics of internal consistency were included in the internal consistency assessment such as presence of outliers, consistency over time, consistency between indicators/variables, and consistency of reported source data.

2.a) Presence of outliers

This examined if a data value in a series of values was extreme in relation to the other values in the series. The extreme outliers were defined as values which were at least ± 3 SD from the mean while the moderate outliers were values between ± 2 to 3 SD from the mean.

The four selected variables were examined for the outliers in the series of 12 months period of 2018 and 2019 (Table 9 and 10). The findings based on township level assessment revealed that less than two percent of extreme outliers and 31%-42% of moderate outliers were identified at township level in 2018 and 2019.

Names of townships with extreme outlier values were shown in (Table 11). The existence of mobile specialist clinic services, immunization services in hard to reach areas after rainy season might be contributing to extreme outlier values.

Table 9. Extreme Outliers at National, State and Regional, and Township Level, 2018-2019

No.	Variables	National Score for States and Regions (%)		National Score for Township Level (%)		State and Regional Score (%)		Township Score (Number (%))	
		2018	2019	2018	2019	2018	2019	2018	2019
1	ANC1	0%	0%	0.2%	0%	0%	0%	6 (1.8%)	0 (0%)
2	SBA	0%	0%	0.1%	0.1%	0%	0%	3 (0.9%)	4 (1.2%)
3	Penta-3	0%	0%	0.2%	0.2%	0%	0%	6 (1.8%)	6 (1.8%)
4	OPD	0%	0%	0%	0%	0%	0%	1 (0.3%)	1 (0.3%)

Table 10. Moderate outliers at National, State and Regional, and Township level 2018-2019

No.	Variables	National Score for States and Regions (%)		National Score for Township Level (%)		State and Regional score (Number (%))		Township Score (Number (%))	
		2018	2019	2018	2019	2018	2019	2018	2019
1.	ANC1	2%	3.4%	3%	3.4%	4 (24%)	7 (41%)	117 (36%)	133 (40%)
2.	SBA	6.5%	4.9%	3.5%	3%	12 (71%)	10 (59%)	137 (42%)	118 (36%)
3.	Penta3	2.0%	3.4%	2.6%	2.6%	4 (24%)	7 (41%)	102 (31%)	101 (31%)
4.	OPD	2.5%	2%	3.1%	3.2%	5 (29%)	4 (24%)	121 (37%)	125 (38%)

Table 11. Name of Townships with Extreme Outliers for Selected Indicators/ Variables, 2018-2019

No.	Variable	Name of Townships with extreme outliers	
		2018	2019
1.	ANC1	AungMyayTharzan Mayangone, Hlaing SanChaung, Moenai Pantanaw	Nil
2.	SBA	Mrauk-U Dawbon Lashio	PyiGyiTagun Mawlamyaing Maungdaw ShwePyithar
3.	Penta3	Chipwe Pekon Loilem Paletwa Mongshu Hsipaw	Chipwe Pekon Loilem Khamti Mongyal Monton
4.	OPD	Kunhein	Kunhein

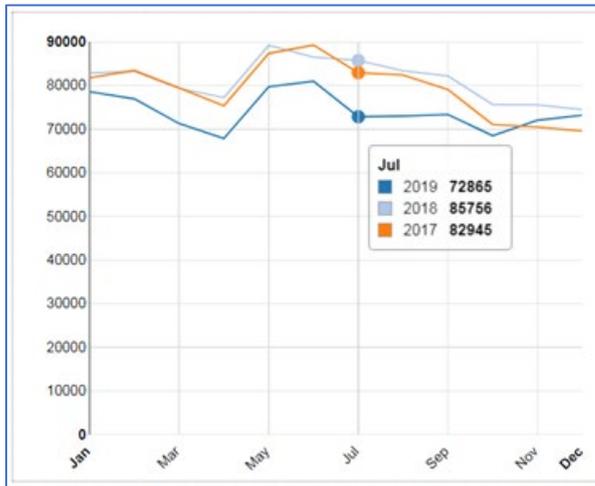
2.b) Consistency over time

Using the WHO data quality App. <https://mm.dhis2.net/hmis/api/apps/WHO-Data-Quality-Tool/index.html#/consistency>, trends of reported values for specific indicators/variables were assessed to determine whether reported values were extreme in relation to other values being reported during the specific year or over several years.

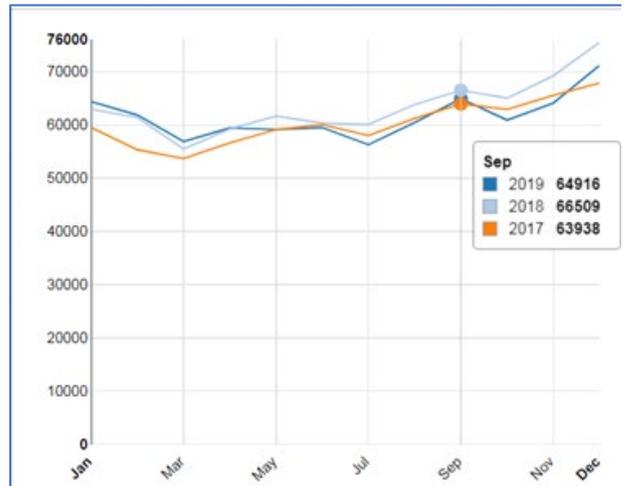
The consistency overtime, for each selected variable, was computed as the ratio of current value and the average of the past two years' values. At national level, the ratio was 0.93 for ANC; and 1.03 for SBA, Penta3 and OPD. The respective ratio values revealed that comparing to the mean achievement of the previous two years: the ANC1 services decreased by 7 percent while that of SBA, Penta3 vaccination and OPD visits increased by 3 percent in 2019 (Figure 89).

Assessment on consistency of townships level data over the past two years was also conducted. Any townships with the ratio values that lay outside the ± 33 percent areas of the national ratio line were identified as having data inconsistency comparing to its past three years average (Figure 90).

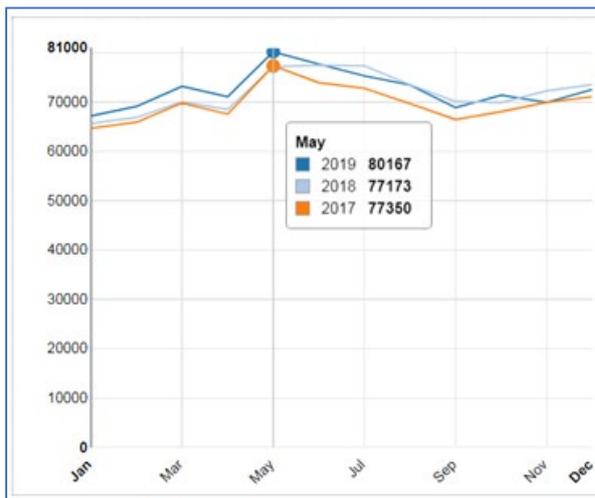
ANC1 consistency over time



Delivery by SBA consistency over time



Penta3 consistency over time



OPD consistency over time

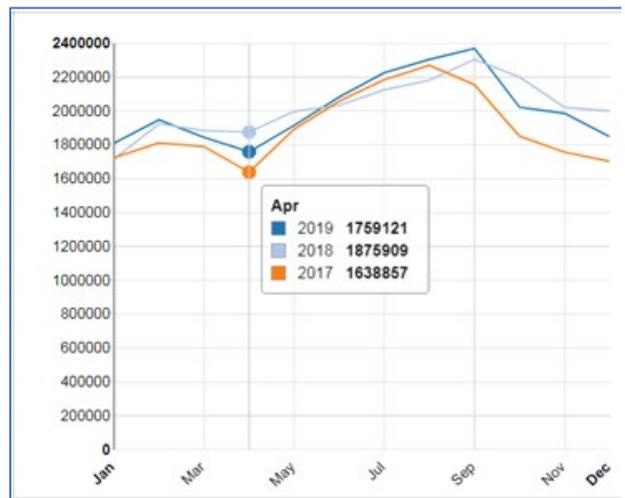
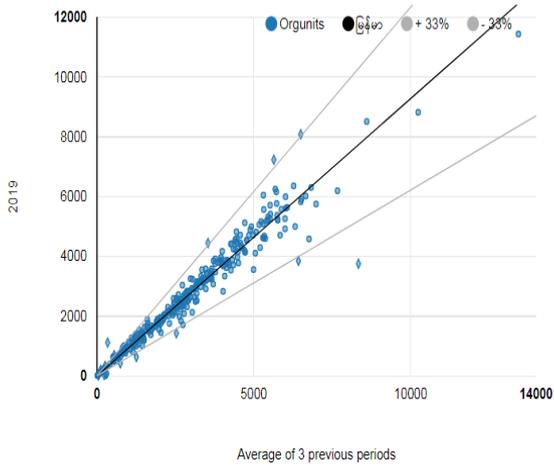


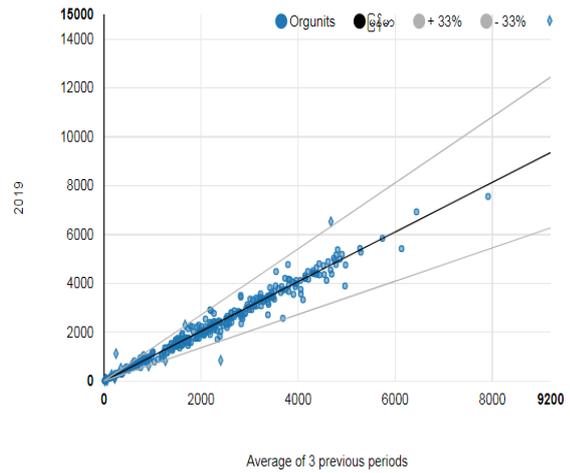
Figure 89. Consistency Over Time Total Events by Months of the Current year (2019) compared to Monthly Values of Previous two years (2017 & 2018)

ANC1 consistency over time



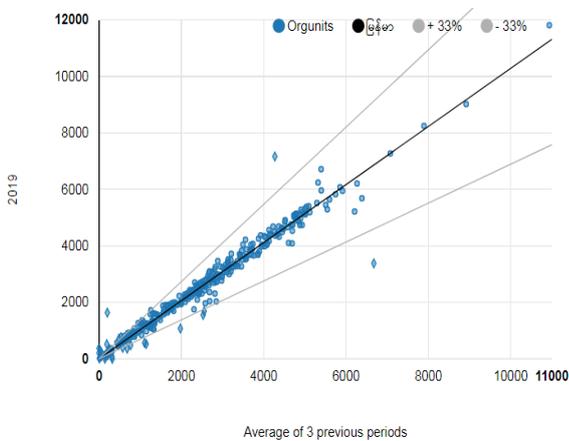
Unit	Current Period	Average	Ratio ①
မြန်မာ	888538	957433	0.928
မောင်တောမြို့နယ်	3754	8338	0.45
ဒဂုံမြို့သစ်တောင်ပိုင်းမြို့နယ်	3849	6425.3	0.599
စစ်တွေမြို့နယ်	8087	6497.3	1.245
ရွှေပြည်သာမြို့နယ်	7235	5641.3	1.283
ပိုင်းမော်မြို့နယ်	4448	3541.3	1.256
သယံဇာတမြို့နယ်	1426	2533.7	0.563
ပန်ဆန်းမြို့နယ်	1114	343.3	3.245
ဒေါပုံမြို့နယ်	631	1258.3	0.501
အလုံမြို့နယ်	420	747.7	0.562
ပန်းပဲတန်းမြို့နယ်	74	319.3	0.232

Delivery by SBA consistency over time

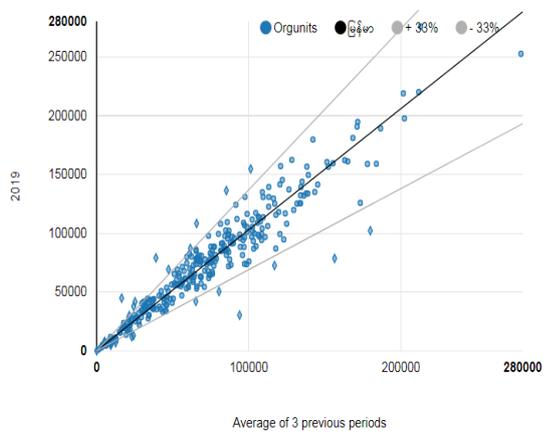


Unit	Current Period	Average	Ratio ①
မြန်မာ	739041	726384.7	1.017
လှိုင်သာယာမြို့နယ်	14758	9183.3	1.607
ရွှေပြည်သာမြို့နယ်	6527	4677	1.396
မောင်တောမြို့နယ်	844	2407	0.351
ပန်ဆန်းမြို့နယ်	1121	250.3	4.479
ဒဂုံမြို့သစ်အိမ်ကမ်းမြို့နယ်	2296	1672.7	1.373
သီပေါမြို့နယ်	824	1267	0.65
ဖလမ်းမြို့နယ်	617	921.7	0.669
မိုင်းယန်းမြို့နယ်	526	350	1.503
ဒဂုံမြို့နယ်	112	226.3	0.495
ခေါင်လန်မြို့နယ်	259	158	1.639

Penta3 consistency over time



OPD consistency over time



Unit	Current Period	Average	Ratio ❶	Unit	Current Period	Average	Ratio ❶
မြန်မာ	869819	846261.3	1.028	မြန်မာ	24119378	23409921.3	1.03
မောင်တောမြို့နယ်	3378	6675.3	0.506	ကျောက်ဆည်မြို့နယ်	102149	179882.7	0.568
စစ်တွေမြို့နယ်	7161	4271.3	1.677	စစ်တွေမြို့နယ်	78591	156418.3	0.502
ပန်ဆန်းမြို့နယ်	1634	201.7	8.101	မောင်တောမြို့နယ်	30297	93993	0.322
တာမွေမြို့နယ်	1552	2528.7	0.614	ပခုက္ကူမြို့နယ်	154773	101311	1.528
မင်္ဂလာတောင်ညွန့်မြို့နယ်	1072	1976	0.543	ဆားလင်းကြီးမြို့နယ်	136307	85279	1.598
လွိုင်မြို့နယ်	1684	2554	0.659	ဘူးသီးတောင်မြို့နယ်	72565	116954.3	0.62
စမ်းချောင်းမြို့နယ်	523	1146	0.456	ပင်လောင်းမြို့နယ်	108291	65721.3	1.648
ရန်ကင်းမြို့နယ်	563	1105.3	0.509	ဗန်းမောက်မြို့နယ်	79022	38992.3	2.027
ပန်ပိုင်မြို့နယ်	368			လွိုင်မြို့နယ်	50411	80472.7	0.626
အလပဲမြို့နယ်	357	683.3	0.522	ပန်ဆန်းမြို့နယ်	44776	16488.7	2.716

Figure 90. Consistency Over Time Townships with Inconsistent Variable Values comparing to National Average Line, 2019

2.c) Consistency between indicators/variables

Program indicators which have a predictable relationship are assessed to determine whether the expected relationship exists between those indicators. In other words, this process examines whether the observed relationship between the indicators, as shown in the reported data, is that which is expected.

The number of pregnant women received ANC and children received Penta-1 immunization were considered as related indicators and thus expected to be consistent. The ratio (Penta-1/ANC1) was found out to be 0.925 for 2018 and 1.005 for 2019 at national level. The results showed that these two indicators have less than ten percent variation in the recent two years.

In depth assessment by township level revealed that 19 townships in 2018 and 25 townships in 2019 were outside the +/-33 percent range of the national ratio (Figure 91).

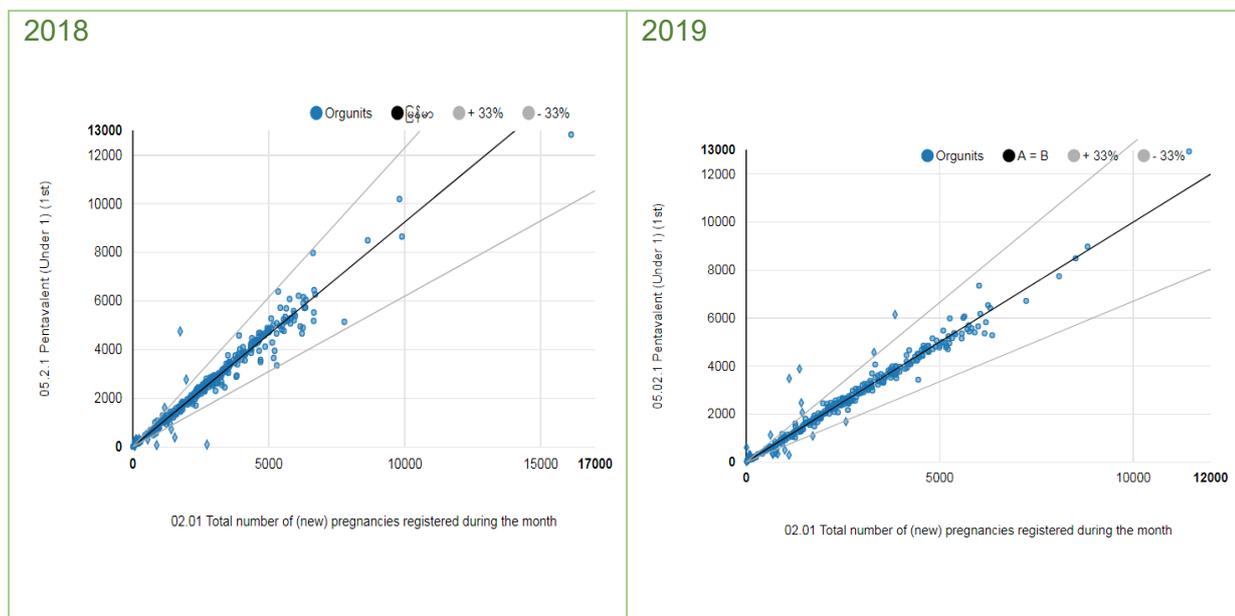


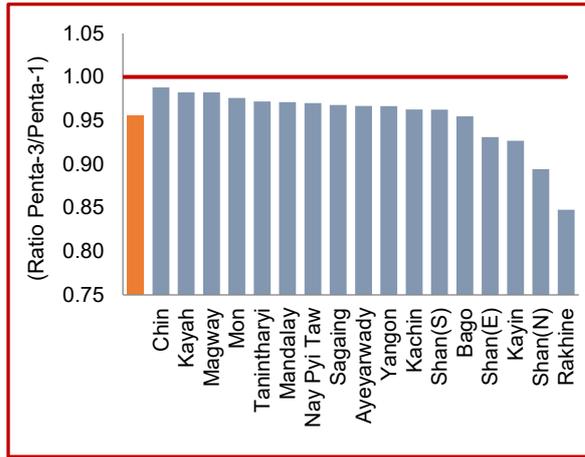
Figure 91. Consistency between variables: Penta1 and ANC1 by Townships, Myanmar 2018-2019

Applying the concept of consistency between variables, the dropout rate between Penta-1 and Penta-3 immunization coverage was assessed at state and region, and district levels. The consistency ratio of 1 is defined as no dropout between the two doses of vaccine.

At state and regional level the positive outlier, the consistency ratio of more than one, meaning that more Penta-3 vaccination than Penta-1 was seen in Magway Region, Nay Pyi Taw Territory and Kayah State in 2019 (Figure 92).

With district level assessment, the negative ratio was seen in townships of Tamu and Falam districts in 2018. The 17 out of 74 districts had negative threshold ranging from (-0.1 percent) to (-4.5 percent) in 2019. More than 40 percent dropout rate was seen in Laukkaing and Matman districts in 2018, and Hopan district in 2019 (Figure 93).

2018



2019

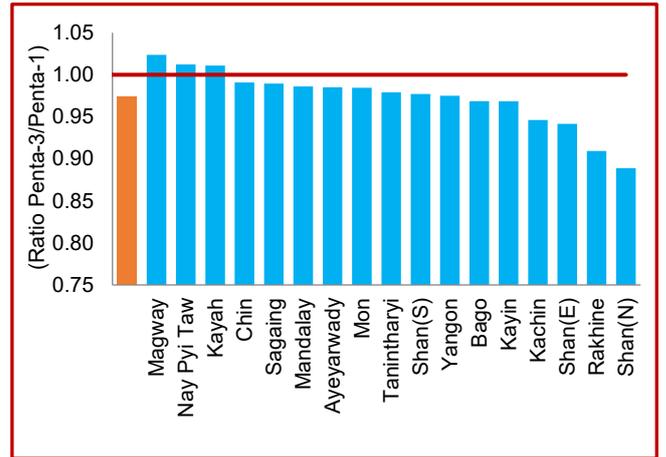
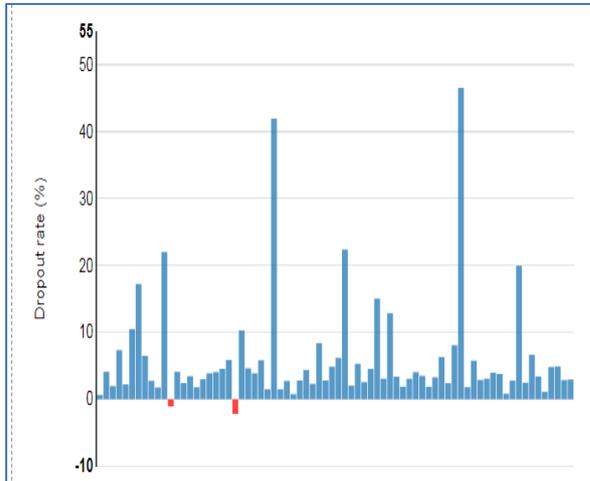
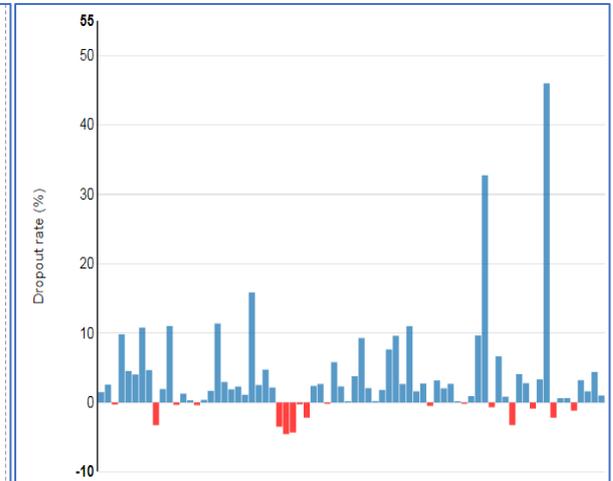


Figure 92. Consistency Ratio between Penta-1 and Penta-3 by States and Regions, 2018-2019

2018



2019



Districts with Negative Ratios in 2018

Districts with Negative Ratios in 2019

ဖလမ်းခရိုင်	-2.2%	မင်္ဂလာဒုံခရိုင်	-4.5%	မင်းဥဒဲခရိုင်	-2.1%	လင်းခင်းခရိုင်	-0.3%
တူမခရိုင်	-1.0%	မကွေးခရိုင်	-4.4%	ရန်ကင်း(အနောက်)ခရိုင်	-1.6%	တူမခရိုင်	-0.3%
		တောင်လဲခရိုင်	-3.9%	ဟင်္သာစင်ခရိုင်	-1.2%	ကသာခရိုင်	-0.3%
		သရက်ခရိုင်	-3.3%	ညောင်ဦးခရိုင်	-1.1%	မိုးဝယ်ခရိုင်	-0.2%
		ဂနံခရိုင်	-3.1%	ဒဂုံခရိုင်	-0.4%	မင်းတပ်ခရိုင်	-0.2%
		ဥတုခရိုင်	-2.2%	ပုသိမ်ခရိုင်	-0.3%		

Figure 93. Dropout Rate between Penta-1 and Pent-3 by Districts, 2018-2019

2.d) Consistency of reported and source data

One of the new activities of the updated data dictionary is the introduction of data consistency check (DCC) exercise as one of the routine activities at township level. The routine data checking activity has been introduced as a quarterly exercise since the first quarter of 2019. Every quarter, the central Health Information Division select suitable variables to be used for the exercise. At township level, one of the selected variables is randomly assigned to health center (MCH/UHC/SHU/RHC). Deploying the cross-checking methodology, the verification between reported value and the value recorded on the source documents of the health center is carried out for the selected variable. The findings are reported through the DQA data set on the DHIS2 platform.

In 2019, the percent of facilities conducted the DCC exercise increased from 44 percent in the first quarter to 66 percent in the last quarter (Table 12).

Table 12. Facility-level Metrics for Data Verification Process by Quarters in 2019, Myanmar

Despcription	Q1	Q2	Q3	Q4
Number of facilities expected to conduct routine DCC	2,661	2,661	2,661	2,661
Number of facilities conducted routine DCC	1,171	1,478	1,552	1,755
% of facilities conducted routine DCC	44.0	55.5	58.3	66.0

To assess the possible over or under reporting, the verification factor (VF) was computed as the ratio of the recounted number from source documents to the reported number from the HMIS. A VF more than 1 implies that there is under-reporting of events whereas the VF less than 1 would imply over-reporting in the HMIS for the verification period.

As shown in Table 13, the VF of the 20 selected variables ranged from 0.93 to 1.01². Only one variable “Number of injuries due to fall” showed VF more than 1 (under-reporting). The highest consistency was found for “Number of live births delivered by SBA” with the VF ratio of 0.996 (i.e. only 0.4 percent over-reporting) and the lowest consistency was found for three

² [http://apps.who.int/iris/bitstream/10665/259226/1/9789241512749-eng.pdf?ua=1#:~:text=Data%20verification%20compares%20the%20total,reporting%20system\)%20for%20selected%20indicators](http://apps.who.int/iris/bitstream/10665/259226/1/9789241512749-eng.pdf?ua=1#:~:text=Data%20verification%20compares%20the%20total,reporting%20system)%20for%20selected%20indicators). Final_Module 3_Data Verification and System Assessment_17129.pdf

variables “Number of pregnant women had 4 ANC visits”, “Number of PNC” and “Advocacy meeting for MRH” with the VF of 0.93 (i.e. 7 percent over-reporting).

Table 13. Results of Data Consistency Check Exercise, Myanmar, 2019

No.	Variables	Number reported in HMIS for the selected Quarter	Percent of reported data included in consistency check	Verification Factor
Primary Health Care-Outpatient service at the clinics				
1.	Number of new OPD patients	2,887,819	11.3	0.98
2.	Total number of OPD patients (Frequency of patients' visits (new + old))	5,602,984	10.2	0.96
Maternal and Reproductive Health				
3.	Total number of (new) pregnancies registered during the month	226,870	12.9	0.97
4.	Total number of mothers who received antenatal care 4 times or more	161,235	16.2	0.93
5.	Total number of newly registered postnatal mothers	144,020	9.9	0.93
Nutrition				
6.	Total number of villages/wards with qualified consumption of adequately iodized salt	30,579	21.4	0.97
Child Health				
7.	Total number of under 5 children with diarrhea	75,142	10.6	0.96
8.	Total number of under 5 children with suspected pneumonia who attend clinic	40,136	9.6	0.96
Immunization				
9.	Pentavalent (DTP-Hep B-Hib) 3rd dose	209,469	13.6	0.95
10.	Measles-Rubella (9 months)	212,613	16.6	0.97
11.	Td vaccine (pregnant mother) 2nd dose	216,795	17.4	0.94
Cardiovascular Disease				
12.	Number of patients with hypertension (new)	231,904	11.6	0.96
Injury Prevention				
13.	Number of Injured people due to traffic accidents	43,047	5.2	0.99
14.	Number of Injured people due to Fall	7,505	6.2	1.01

Table 13 (continue). Results of Data Consistency Check Exercise, Myanmar, 2019

No.	Variables	Number reported in HMIS for the selected Quarter	Percent of reported data included in consistency check	Verification Factor
	Births			
15.	Number of Live Births	211,711	14.7	0.96
16.	Number of Live Births delivered by mothers aged 15-19 years old	11,284	19.8	0.97
17.	Number of Live Births delivered by SBA	181,678	12.7	0.996
	Diabetes Mellitus			
18.	Test for Blood Glucose	520,394	11.0	0.96
	School Health			
19.	Number of schools examined (new)	2,297	84.8	0.98
	Health Literacy Promotion			
20.	Advocacy meeting in public to promote health education (MRH)	93,016	19.0	0.93

The total number of facilities conducted data verification exercise for the selected variables ranged from just over 100 to about 550 (Table 14). The percent of facilities with the exact match ranged from 75 to 95 percent across the selected variables. Over-reporting was found in 2 to 24 percent and under-reporting in less than 1 to 14 percent of the facilities participating DCC exercise.

Among the 20 selected variables, the lowest percent (less than 80 percent) of facilities with exact match between reported and source data was found for 4 variables: “Blood glucose testing”, “Number of patients with Hypertension”, “ANC 4 visits”, and “PNC”.

About 20 percent of facilities had over-reported for two variables: “Blood glucose testing” and “PNC”. More than 5 percent of facilities had under-reported for three variables: “Number of patients with Hypertension”, “MCV1 9 months”, and “Number of injuries due to traffic accidents”.

There is a need to assess the low level of participation of facilities in DCC exercise, an urgent need to explore the reasons for low consistency between reported and source data.

Table 14. Data Consistency Check by Facility, Myanmar, 2019

No.	Variables	Number (percent)					
		# of facilities conducted DCC	VF <0.9	0.9 < VF <1	VF= 1	1 > VF <1.1	VF >=1.1
Primary Health Care-Outpatient service at the clinics							
1.	Number of new OPD patients	556	37 (6.7%)	26 (4.7%)	476 (85.6%)	14 (2.5%)	3 (0.5%)
2.	Total number of OPD patients (Frequency of patients' visits (new + old))	466	25 (5.4%)	20 (4.3%)	412 (88.4%)	0	9 (1.9%)
Maternal and Reproductive Health							
3.	Total number of (new) pregnancies registered during the month	425	23 (5.4%)	13 (3.0%)	379 (89.2%)	0	10 (2.4%)
4.	Total number of mothers who received antenatal care 4 times or more	520	78 (15%)	23 (4.4%)	408 (78.5%)	4 (0.8%)	7 (1.3%)
5.	Total number of newly registered postnatal mothers	464	68 (14.7%)	23 (5.0%)	351 (75.5%)	4 (0.9%)	18 (3.9%)
Nutrition							
6.	Total number of villages/wards with qualified consumption of adequately iodized salt	366	27 (7.4%)	5 (1.4%)	327 (89.3%)	1 (0.3%)	6 (1.6%)
Child Health							
7.	Total number of under 5 children with diarrhea	386	27 (7.0%)	5 (1.3%)	336 (87.0%)	0	18 (4.7%)
8.	Total number of under 5 children with suspected pneumonia who attend clinic	199	14 (7.0%)	0	178 (89.5%)	1 (0.5%)	6 (3.0%)
Immunization							
9.	Pentavalent (DTP-Hep B-Hib) 3rd dose	440	39 (8.9%)	26 (5.9%)	366 (83.2%)	0	9 (2.0%)
10.	Measles-Rubella (9 months)	494	28 (5.7%)	25 (5.1%)	413 (83.5%)	26 (5.3%)	2 (0.4%)
11.	Td vaccine (pregnant mother) 2nd dose	546	43 (7.9%)	24 (4.4%)	471 (86.2%)	7 (1.3%)	1 (0.2%)

Table 14 (continue). Data Consistency Check by Facility, Myanmar, 2019

No.	Variables	Number (percent)					
		# of facilities conducted DCC	VF <0.9	0.9 < VF <1	VF= 1	1 > VF <1.1	VF >=1.1
Cardiovascular Disease							
12.	Number of patients with hypertension (new)	410	37 (9.0%)	20 (4.9%)	318 (77.6%)	0	35 (8.5%)
Injury Prevention							
13.	Number of Injured people due to traffic accidents	346	20 (5.8%)	1 (0.3%)	307 (88.7%)	1 (0.3%)	17 (4.9%)
14.	Number of Injured people due to Fall	150	5 (3.3%)	0	139 (92.7%)	0	6 (4.0%)
Births							
15.	Number of Live Births	458	28 (6.1%)	24 (5.2%)	396 (86.5%)	9 (2.0%)	1 (0.2%)
16.	Number of Live Births delivered by mothers aged 15-19 years old	395	21 (5.3%)	1 (0.3%)	360 (91.1%)	2 (0.5%)	11 (2.8%)
17.	Number of Live Births delivered by SBA	408	7 (1.7%)	11 (2.7%)	370 (90.7%)	13 (3.2%)	7 (1.7%)
Diabetes Mellitus							
18.	Test for Blood Glucose	451	46 (10.2%)	39 (8.6%)	346 (76.8%)	9 (2.0%)	11 (2.4%)
School Health							
19.	Number of schools examined (new)	114	4 (3.5%)	0	108 (94.7%)	1 (0.9%)	1 (0.9%)
Health Literacy Promotion							
20.	Advocacy meeting in public to promote health education (MRH)	352	46 (13.1%)	3 (0.9%)	291 (82.6%)	4 (1.1%)	8 (2.3%)
Minimum percent among 20 Data Items			1.7	0.0	75.5	0.0	0.2
Maximum percent among 20 Data Items			15.0	8.6	94.7	5.3	8.5

Annex: Progress in terms of SDG and WHO indicators

SDG and WHO Indicators, Union (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	85.7	86.3	88
Proportion of births attended by skilled health personnel	85.8	85.1	87.3
Percent coverage of postnatal care	92.1	91.5	66.2
Adolescent birth rate per (1,000 women aged 15-19 years)	19.2	19.8	19.4
Contraceptive Prevalence Rate (Modern Method)	67.2	69.3	71.1
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.1	2.3	2.7
Vitamin A supplementation coverage (6 to 59 months)	-	-	92.2
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	82.7	83.1	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	72.2
Early initiation of breastfeeding (% of live births)	81.5	81.3	74.3
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	91.7
Percentage of under 5 children receiving ORT	-	-	92.8
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	94.4	95.7	92.2
IPV	12.2	83.4	91.1
OPV (3 rd dose)	90.2	92.1	90.7
Pentavalent (3 rd dose)	90	92.1	90.9
PCV (3 rd dose)	89.2	91.9	90.8
Measles (18 Months)	80.9	-	-
MR (18 month)	-	88.2	80.7
Tetanus (Pregnant Women- 2 nd dose)	87.4	90.2	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	83.5
Japanese Encephalitis (JE)	-	89.8	84.4
Hepatitis B (at birth)	-	-	14.7

SDG and WHO Indicators, Union (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.05	0.02	0.02
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.4	3.6	3.5
Death Rate due to Vehicle Accident (per 100,000 population)	10.0	11.1	11.4
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.08	0.08
Death Rate due to suicides (per 100,000 population)	3.1	3.8	3.8
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	14	14	14.5
Infant Mortality Rate (per 1,000 LB)	11.3	11.5	11.6
Neonatal Mortality Rate (per 1,000 LB)	6.9	7.2	7.5
Stillbirth Rate (per 1,000 LB)	10.7	9.6	9.4
Maternal Mortality Ratio (per 100,000 LB)	108.5	98.5	102.6
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.08	0.10	0.12
Prevalence of depressive disorder (per 100,000 population)	0.05	0.07	0.07
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	252.3
TB mortality rate (per 100,000 population)	-	-	12.6
HIV test results for TB patients (%)	-	-	95.5
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	75.5
Environmental Sanitation Project			
Population with improved drinking-water (%)	83.9	84.9	86.2
Population using fly proof latrine (%)	78.3	80.4	80.1

SDG and WHO Indicators, Kachin State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	84.1	85.9	92.8
Proportion of births attended by skilled health personnel	80.8	85.0	87.8
Percent coverage of postnatal care	94.4	95	67.8
Adolescent birth rate per (1,000 women aged 15-19years)	20.7	21.9	22.2
Contraceptive Prevalence Rate (Modern Method)	61.5	59.2	59.8
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	1.8	2.2	2.5
Vitamin A supplementation coverage (6 to 59 months)	-	-	89.9
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	74.1	76.6	
Newborn Care Coverage (within 2 days of birth-%)			71.3
Early initiation of breastfeeding (% of livebirths)	70.5	72.5	69.4
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	96.2
Percentage of under 5 children receiving ORT	-	-	96.1
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	93.6	94	92.4
IPV	16.9	76.2	89
OPV (3 rd dose)	89.8	91.1	86.9
Pentavalent (3 rd dose)	89.5	91.3	87.4
PCV (3 rd dose)	88.1	91.1	87.4
Measles (18 Months)	78.1	-	-
MR (18 month)	-	87	81.5
Tetanus (Pregnant Women- 2 nd dose)	85	88.4	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	83.5
Japanese Encephalitis (JE)	-	89.5	84.3
Hepatitis B (at birth)	-	-	11.7

SDG and WHO Indicators, Kachin State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.26	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	7.2	7.2	6.1
Death Rate due to Vehicle Accident (per 100,000 population)	13.7	11.1	13.7
Injury Rate due to Suicidal attempt (per 1,000 population)	0.09	0.13	0.09
Death Rate due to suicides (per 100,000 population)	2.8	3.7	2.9
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	16.2	15.7	16.3
Infant Mortality Rate (per 1,000 LB)	12.2	12.5	12.7
Neonatal Mortality Rate (per 1,000 LB)	7.3	8.2	8.5
Stillbirth Rate (per 1,000 LB)	9.2	9.1	9.2
Maternal Mortality Ratio (per 100,000 LB)	50.4	108.7	81.2
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.07	0.06	0.12
Prevalence of depressive disorder (per 100,000 population)	0.01	0.02	0.04
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	382.2
TB mortality rate (per 100,000 population)	-	-	26.2
HIV test results for TB patients (%)	-	-	91.4
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	75.3
Environmental Sanitation Project			
Population with improved drinking-water (%)	86.4	90.6	88.7
Population using fly proof latrine (%)	88.4	86.3	85.3

SDG and WHO Indicators, Kayah State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	88.9	87.5	95.3
Proportion of births attended by skilled health personnel	80.0	82.2	91.3
Percent coverage of postnatal care	98.4	98.7	63.9
Adolescent birth rate per (1,000 women aged 15-19 years)	24.8	22.3	23.6
Contraceptive Prevalence Rate (Modern Method)	56.6	59.7	63
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.4	2.6	2.9
Vitamin A supplementation coverage (6 to 59 months)	-	-	101.5
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	92.1	92.9	
Newborn Care Coverage (within 2 days of birth-%)			70.4
Early initiation of breastfeeding (% of livebirths)	93.6	91.1	68.7
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	93.8
Percentage of under 5 children receiving ORT	-	-	99.3
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	98.4	82.7	76.1
IPV	15.7	89.7	95.1
OPV (3 rd dose)	97.2	95.1	94.9
Pentavalent (3 rd dose)	97.3	95.2	95
PCV (3 rd dose)	96.6	93.5	96.2
Measles (18 Months)	85.1	-	-
MR (18 month)	-	98.1	86.9
Tetanus (Pregnant Women- 2 nd dose)	86.8	92.4	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	89.1
Japanese Encephalitis (JE)	-	97.3	88.1
Hepatitis B (at birth)	-	-	7.7

SDG and WHO Indicators, Kayah State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	7.90	8.10	6.50
Death Rate due to Vehicle Accident (per 100,000 population)	9.80	11.80	13.10
Injury Rate due to Suicidal attempt (per 1,000 population)	0.08	0.06	0.05
Death Rate due to suicides (per 100,000 population)	3.90	4.80	4.40
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	23.9	20.3	22.9
Infant Mortality Rate (per 1,000 LB)	18.3	16.2	17.7
Neonatal Mortality Rate (per 1,000 LB)	11.1	9.7	11.5
Stillbirth Rate (per 1,000 LB)	13.2	12.3	12.4
Maternal Mortality Ratio (per 100,000 LB)	89.2	125.5	79.6
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.14	0.20	0.41
Prevalence of depressive disorder (per 100,000 population)	0.03	0.12	0.14
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	186.4
TB mortality rate (per 100,000 population)	-	-	11.2
HIV test results for TB patients (%)	-	-	98.7
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	100.0
Environmental Sanitation Project			
Population with improved drinking-water (%)	80.3	80.5	90.8
Population using fly proof latrine (%)	76.9	81.7	81.4

SDG and WHO Indicators, Kayin State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	84.4	88.5	89.9
Proportion of births attended by skilled health personnel	71.3	71.9	79.2
Percent coverage of postnatal care	90.2	90.5	65.1
Adolescent birth rate per (1,000 women aged 15-19 years)	24.5	26.3	29.9
Contraceptive Prevalence Rate (Modern Method)	43.2	45.6	49.2
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.2	2	3.6
Vitamin A supplementation coverage (6 to 59 months)	-	-	84.6
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	88.4	84.8	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	67.2
Early initiation of breastfeeding (% of livebirths)	89.3	87	68
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	93.9
Percentage of under 5 children receiving ORT	-	-	94.4
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	91.6	92.4	94.3
IPV	5.6	73.9	89.6
OPV (3 rd dose)	84.4	84.9	92.2
Pentavalent (3 rd dose)	84.4	84.9	92.6
PCV (3 rd dose)	83.5	84.3	92.8
Measles (18 Months)	75.5	-	-
MR (18 month)	-	83.4	85.2
Tetanus (Pregnant Women- 2 nd dose)	81.8	80.7	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	85.3
Japanese Encephalitis (JE)	-	85.2	89.8
Hepatitis B (at birth)	-	-	21

SDG and WHO Indicators, Kayin State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.06
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	5.0	5.1	4.9
Death Rate due to Vehicle Accident (per 100,000 population)	11.1	11.6	10.8
Injury Rate due to Suicidal attempt (per 1,000 population)	0.13	0.13	0.17
Death Rate due to suicides (per 100,000 population)	8.7	9.9	11.7
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	14.9	17	19.7
Infant Mortality Rate (per 1,000 LB)	11.8	14.3	15.5
Neonatal Mortality Rate (per 1,000 LB)	7.9	8.7	9.5
Stillbirth Rate (per 1,000 LB)	7	7.4	8.7
Maternal Mortality Ratio (per 100,000 LB)	106	123.2	104.4
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.12	0.1	0.1
Prevalence of depressive disorder (per 100,000 population)	0.14	0.11	0.09
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	331.8
TB mortality rate (per 100,000 population)	-	-	12.8
HIV test results for TB patients (%)	-	-	93.9
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	85.1
Environmental Sanitation Project			
Population with improved drinking-water (%)	83	83.8	88
Population using fly proof latrine (%)	77.4	76.7	78

SDG and WHO Indicators, Chin State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	85.9	83.6	86.2
Proportion of births attended by skilled health personnel	56.7	64.9	67.1
Percent coverage of postnatal care	90.7	93.2	65.6
Adolescent birth rate per (1,000 women aged 15-19 years)	20.3	23.2	25.1
Contraceptive Prevalence Rate (Modern Method)	30.1	31.2	32.9
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	1.3	2.3	3.2
Vitamin A supplementation coverage (6 to 59 months)	-	-	100.6
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	78.6	82.7	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	71.3
Early initiation of breastfeeding (% of livebirths)	91.7	95.6	86
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	98.3
Percentage of under 5 children receiving ORT	-	-	95.9
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	100.6	99.6	93.5
IPV	27.3	85.5	92.5
OPV (3 rd dose)	97.8	98.1	85.7
Pentavalent (3 rd dose)	97.2	97.8	91.3
PCV (3 rd dose)	97.1	97.9	91.3
Measles (18 Months)	93.2	-	-
MR (18 month)	-	95.3	71.3
Tetanus (Pregnant Women- 2 nd dose)	89.7	91.4	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	82
Japanese Encephalitis (JE)	-	95.5	90.4
Hepatitis B (at birth)	-	-	21

SDG and WHO Indicators, Chin State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.19	0.19	0.37
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.00	3.50	4.60
Death Rate due to Vehicle Accident (per 100,000 population)	5.00	8.40	9.80
Injury Rate due to Suicidal attempt (per 1,000 population)	0.06	0.10	0.06
Death Rate due to suicides (per 100,000 population)	4.40	4.50	3.30
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	28.2	31.4	24.8
Infant Mortality Rate (per 1,000 LB)	21.3	25.2	19.1
Neonatal Mortality Rate (per 1,000 LB)	11	14.9	10
Stillbirth Rate (per 1,000 LB)	16.3	18.3	15
Maternal Mortality Ratio (per 100,000 LB)	202.3	123.1	151.5
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.13	0.18	0.19
Prevalence of depressive disorder (per 100,000 population)	0.05	0.03	0.03
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	142.4
TB mortality rate (per 100,000 population)	-	-	5.5
HIV test results for TB patients (%)	-	-	99.4
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	73.3
Environmental Sanitation Project			
Population with improved drinking-water (%)	78.9	73.4	64.1
Population using fly proof latrine (%)	73	76.4	70.3

SDG and WHO Indicators, Sagaing Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	87.7	86.7	90.7
Proportion of births attended by skilled health personnel	83.2	85.5	87.1
Percent coverage of postnatal care	92.9	92.6	65.6
Adolescent birth rate per (1,000 women aged 15-19 years)	19.6	20	21
Contraceptive Prevalence Rate (Modern Method)	70.2	73.2	74.5
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.5	2.6	2.5
Vitamin A supplementation coverage (6 to 59 months)	-	-	97.7
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	82.6	78.9	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	73.5
Early initiation of breastfeeding (% of livebirths)	80.4	72.9	73.2
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	94.6
Percentage of under 5 children receiving ORT	-	-	94.1
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	95.6	99.7	96
IPV	5.2	93.4	94.6
OPV (3 rd dose)	93	95.3	94.3
Pentavalent (3 rd dose)	93	95.3	94.4
PCV (3 rd dose)	93.1	95.3	94.4
Measles (18 Months)	81.5	-	-
MR (18 month)	-	92.7	84
Tetanus (Pregnant Women- 2 nd dose)	88	93.3	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	85.8
Japanese Encephalitis (JE)	-	92.7	86.7
Hepatitis B (at birth)	-	-	18.7

SDG and WHO Indicators, Sagaing Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.11	0.04	0.05
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.9	4.2	4.1
Death Rate due to Vehicle Accident (per 100,000 population)	11.6	13.2	12.1
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.07	0.07
Death Rate due to suicides (per 100,000 population)	3.0	3.3	3.6
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	16.8	17.1	18
Infant Mortality Rate (per 1,000 LB)	13.9	14	14.7
Neonatal Mortality Rate (per 1,000 LB)	8	8.7	9.3
Stillbirth Rate (per 1,000 LB)	14.3	12.5	11.2
Maternal Mortality Ratio (per 100,000 LB)	85.3	100.3	79.4
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.09	0.13	0.13
Prevalence of depressive disorder (per 100,000 population)	0.04	0.04	0.05
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	179.8
TB mortality rate (per 100,000 population)	-	-	8.8
HIV test results for TB patients (%)	-	-	97.7
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	66.0
Environmental Sanitation Project			
Population with improved drinking-water (%)	84.5	84.6	85.7
Population using fly proof latrine (%)	81.7	84.4	86.2

SDG and WHO Indicators, Tanintharyi Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	87.6	87.6	89.5
Proportion of births attended by skilled health personnel	84.3	82.4	80.7
Percent coverage of postnatal care	86.9	92.9	63.8
Adolescent birth rate per (1,000 women aged 15-19 years)	22	26.3	27
Contraceptive Prevalence Rate (Modern Method)	59.5	65.4	68.1
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	1.3	1.1	1.6
Vitamin A supplementation coverage (6 to 59 months)	-	-	88.9
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	69.7	83.9	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	80.1
Early initiation of breastfeeding (% of livebirths)	69.7	85.6	86.6
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	95.8
Percentage of under 5 children receiving ORT	-	-	87.6
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	93.8	94.7	92.3
IPV	2.5	89.3	91.9
OPV (3 rd dose)	90.7	94.3	93.7
Pentavalent (3 rd dose)	90.6	94.2	93.7
PCV (3 rd dose)	90.3	94.2	93.6
Measles (18 Months)	84.2	-	-
MR (18 month)	-	90	83.6
Tetanus (Pregnant Women- 2 nd dose)	91.6	91.2	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	85.7
Japanese Encephalitis (JE)	-	93.3	87.5
Hepatitis B (at birth)	-	-	6.8

SDG and WHO Indicators, Tanintharyi Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.07	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	5.6	5.5	5.6
Death Rate due to Vehicle Accident (per 100,000 population)	11.5	11.0	14.1
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.08	0.1
Death Rate due to suicides (per 100,000 population)	5.0	5.6	6.3
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	10.8	12.1	10.1
Infant Mortality Rate (per 1,000 LB)	7.9	8.9	7.2
Neonatal Mortality Rate (per 1,000 LB)	4.6	5	4.3
Stillbirth Rate (per 1,000 LB)	8.1	8.9	8.5
Maternal Mortality Ratio (per 100,000 LB)	69.2	116.5	98.9
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.20	0.24	0.24
Prevalence of depressive disorder (per 100,000 population)	0.03	0.07	0.06
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	213.8
TB mortality rate (per 100,000 population)	-	-	8.6
HIV test results for TB patients (%)	-	-	93.5
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	74.1
Environmental Sanitation Project			
Population with improved drinking-water (%)	81.5	84.7	84.7
Population using fly proof latrine (%)	76.7	75.8	77.4

SDG and WHO Indicators, Bago Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	88.6	88.1	89.4
Proportion of births attended by skilled health personnel	82.0	84.9	86.3
Percent coverage of postnatal care	89.4	90.8	68.5
Adolescent birth rate per (1,000 women aged 15-19 years)	16.7	17.1	16.1
Contraceptive Prevalence Rate (Modern Method)	74.2	74.4	75.4
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.9	2.8	4
Vitamin A supplementation coverage (6 to 59 months)	-	-	93.3
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	75.2	81.5	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	69.8
Early initiation of breastfeeding (% of livebirths)	70.4	71.4	69.4
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	85.6
Percentage of under 5 children receiving ORT	-	-	93
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	97	96.9	96.8
IPV	0.9	91.4	92.7
OPV (3 rd dose)	91.1	92.4	91.6
Pentavalent (3 rd dose)	91	92.3	91.6
PCV (3 rd dose)	90.7	92.2	91.5
Measles (18 Months)	85.1	-	-
MR (18 month)	-	89.8	82.8
Tetanus (Pregnant Women- 2 nd dose)	91.1	93.3	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	87.4
Japanese Encephalitis (JE)	-	92.4	87
Hepatitis B (at birth)	-	-	26.1

SDG and WHO Indicators, Bago Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.3	3.3	3.4
Death Rate due to Vehicle Accident (per 100,000 population)	14.6	15.5	17.7
Injury Rate due to Suicidal attempt (per 1,000 population)	0.10	0.11	0.11
Death Rate due to suicides (per 100,000 population)	4.3	4.9	5.3
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	11.2	11.9	12.3
Infant Mortality Rate (per 1,000 LB)	9.1	9.9	9.7
Neonatal Mortality Rate (per 1,000 LB)	6.2	6.3	6.5
Stillbirth Rate (per 1,000 LB)	11.8	10.8	10.9
Maternal Mortality Ratio (per 100,000 LB)	119.5	104.9	113.4
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.10	0.11	0.12
Prevalence of depressive disorder (per 100,000 population)	0.08	0.09	0.09
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	249.9
TB mortality rate (per 100,000 population)	-	-	13.7
HIV test results for TB patients (%)	-	-	94.5
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	70.1
Environmental Sanitation Project			
Population with improved drinking-water (%)	85.4	88.9	87.6
Population using fly proof latrine (%)	78.3	79.6	78.9

SDG and WHO Indicators, Magway Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	83.9	84.3	89.4
Proportion of births attended by skilled health personnel	86.5	88.9	91.8
Percent coverage of postnatal care	97.9	95.6	66.4
Adolescent birth rate per (1,000 women aged 15-19 years)	13	13.4	11.5
Contraceptive Prevalence Rate (Modern Method)	67.3	69.2	70.3
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.1	2.1	2.4
Vitamin A supplementation coverage (6 to 59 months)	-	-	101.4
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	88.2	90.8	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	86.8
Early initiation of breastfeeding (% of livebirths)	89.9	90.6	90.9
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	79.1
Percentage of under 5 children receiving ORT	-	-	97.3
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	94.3	98.2	92.7
IPV	1.6	93.9	95.8
OPV (3 rd dose)	96.4	97.7	97.6
Pentavalent (3 rd dose)	93.1	97.7	97.6
PCV (3 rd dose)	92.9	97.6	97.6
Measles (18 Months)	88.4	-	-
MR (18 month)	-	92.3	89
Tetanus (Pregnant Women- 2 nd dose)	89.5	95.1	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	87.7
Japanese Encephalitis (JE)	-	94.2	90.5
Hepatitis B (at birth)	-	-	8.5

SDG and WHO Indicators, Magway Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.07	0.02	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	2.6	3.0	2.9
Death Rate due to Vehicle Accident (per 100,000 population)	9.5	10.0	10.8
Injury Rate due to Suicidal attempt (per 1,000 population)	0.05	0.06	0.05
Death Rate due to suicides (per 100,000 population)	2.6	2.9	3.0
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	14.7	14.4	15.1
Infant Mortality Rate (per 1,000 LB)	12.6	12	12.8
Neonatal Mortality Rate (per 1,000 LB)	7.2	7.4	8.1
Stillbirth Rate (per 1,000 LB)	13.8	11.2	11.2
Maternal Mortality Ratio (per 100,000 LB)	118	95	98.7
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.08	0.12	0.12
Prevalence of depressive disorder (per 100,000 population)	0.03	0.09	0.05
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	158.8
TB mortality rate (per 100,000 population)	-	-	9.7
HIV test results for TB patients (%)	-	-	97.4
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	74.8
Environmental Sanitation Project			
Population with improved drinking-water (%)	89	91.2	94
Population using fly proof latrine (%)	80.4	90.1	82.7

SDG and WHO Indicators, Mandalay Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	87.1	87.8	92.2
Proportion of births attended by skilled health personnel	90.2	92.5	97.0
Percent coverage of postnatal care	99.5	94.4	77.6
Adolescent birth rate per (1,000 women aged 15-19 years)	15.2	16.7	14.2
Contraceptive Prevalence Rate (Modern Method)	67.7	70.5	74.7
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2	1.8	2.4
Vitamin A supplementation coverage (6 to 59 months)	-	-	95.7
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	86.5	85.1	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	82.1
Early initiation of breastfeeding (% of livebirths)	86.9	85.1	86.3
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	88.1
Percentage of under 5 children receiving ORT	-	-	97.7
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	96	100.4	99.5
IPV	15.9	98.6	97.2
OPV (3 rd dose)	92.5	97.6	96.3
Pentavalent (3 rd dose)	92.7	97.6	96.3
PCV (3 rd dose)	91.4	97.6	96.3
Measles (18 Months)	82.5	-	-
MR (18 month)	-	94.3	86.4
Tetanus (Pregnant Women- 2 nd dose)	93.7	96.1	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	90.3
Japanese Encephalitis (JE)	-	95.2	89.9
Hepatitis B (at birth)	-	-	20.8

SDG and WHO Indicators, Mandalay Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.6	3.7	3.1
Death Rate due to Vehicle Accident (per 100,000 population)	11.1	13.2	11.1
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.06	0.08
Death Rate due to suicides (per 100,000 population)	2.3	3.3	2.6
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	12.2	11.9	13.7
Infant Mortality Rate (per 1,000 LB)	10	10	11.2
Neonatal Mortality Rate (per 1,000 LB)	6.2	6.3	7.2
Stillbirth Rate (per 1,000 LB)	8.6	7.8	7.4
Maternal Mortality Ratio (per 100,000 LB)	83.6	92.4	84.4
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.04	0.05	0.12
Prevalence of depressive disorder (per 100,000 population)	0.02	0.03	0.09
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	179.4
TB mortality rate (per 100,000 population)	-	-	10.9
HIV test results for TB patients (%)	-	-	96.4
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	78.6
Environmental Sanitation Project			
Population with improved drinking-water (%)	91.2	93.4	96.1
Population using fly proof latrine (%)	87	88.2	90.2

SDG and WHO Indicators, Mon State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	87.6	88.4	94.5
Proportion of births attended by skilled health personnel	90.8	91.9	92.3
Percent coverage of postnatal care	95.7	94.4	81.5
Adolescent birth rate per (1,000 women aged 15-19 years)	20.6	21.7	21.1
Contraceptive Prevalence Rate (Modern Method)	70	71.9	72.4
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2	2.3	2.2
Vitamin A supplementation coverage (6 to 59 months)	-	-	95.4
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	87.1	85.2	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	83.4
Early initiation of breastfeeding (% of livebirths)	86.2	84.4	83.6
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	98.3
Percentage of under 5 children receiving ORT	-	-	87.6
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	95.5	91.7	95.3
IPV	0.8	82.5	91.1
OPV (3 rd dose)	93.2	94.9	95.8
Pentavalent (3 rd dose)	93.2	94.9	95.8
PCV (3 rd dose)	93.2	94.9	95.7
Measles (18 Months)	85.4	-	-
MR (18 month)	-	95.5	86.2
Tetanus (Pregnant Women- 2 nd dose)	93.9	93.9	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	92.3
Japanese Encephalitis (JE)	-	93.6	89.1
Hepatitis B (at birth)	-	-	17.5

SDG and WHO Indicators, Mon State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.04	0.04	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	5.60	5.50	5.20
Death Rate due to Vehicle Accident (per 100,000 population)	17.20	18.10	19.50
Injury Rate due to Suicidal attempt (per 1,000 population)	0.06	0.10	0.08
Death Rate due to suicides (per 100,000 population)	3.80	4.50	4.00
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	12.5	11.3	10.8
Infant Mortality Rate (per 1,000 LB)	9.8	9.3	8.6
Neonatal Mortality Rate (per 1,000 LB)	6.5	6.6	5.8
Stillbirth Rate (per 1,000 LB)	7	5.9	5.7
Maternal Mortality Ratio (per 100,000 LB)	87.8	78.5	79.5
Mental Health Project			
Prevalence of psychosis (per 1,000 population)	0.05	0.04	0.09
Prevalence of depressive disorder (per 1,000 population)	0.04	0.04	0.04
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	269.9
TB mortality rate (per 100,000 population)	-	-	9.9
HIV test results for TB patients (%)	-	-	97.9
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	54.1
Environmental Sanitation Project			
Population with improved drinking-water (%)	85.8	86.9	90.6
Population using fly proof latrine (%)	83.8	85.5	86

SDG and WHO Indicators, Rakhine State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	80.1	87.2	85.8
Proportion of births attended by skilled health personnel	54.9	56.5	63.6
Percent coverage of postnatal care	82.8	78.9	69.5
Adolescent birth rate per (1,000 women aged 15-19 years)	15.3	16	18.6
Contraceptive Prevalence Rate (Modern Method)	62.4	61.8	60.9
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	0.75	0.97	1.4
Vitamin A supplementation coverage (6 to 59 months)	-	-	73.2
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	69.6	69.4	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	66.9
Early initiation of breastfeeding (% of livebirths)	61.6	61.6	64.3
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	93.3
Percentage of under 5 children receiving ORT	-	-	85.9
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	95	99.6	88.6
IPV	72.8	92.1	85
OPV (3 rd dose)	79.9	85	80.9
Pentavalent (3 rd dose)	79.2	85	81.1
PCV (3 rd dose)	77.2	84.7	80.9
Measles (18 Months)	71.1	-	-
MR (18 month)	-	73.1	67
Tetanus (Pregnant Women- 2 nd dose)	83	89	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	79.2
Japanese Encephalitis (JE)	-	79.3	75.5
Hepatitis B (at birth)	-	-	11.4

SDG and WHO Indicators, Rakhine State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.22	0.14	0.07
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	1.9	2.8	2.2
Death Rate due to Vehicle Accident (per 100,000 population)	4.7	6.4	5.7
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.09	0.09
Death Rate due to suicides (per 100,000 population)	3.9	4.6	4.7
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	11.8	12.3	13.5
Infant Mortality Rate (per 1,000 LB)	9.4	10	11.1
Neonatal Mortality Rate (per 1,000 LB)	4.8	5.1	6.3
Stillbirth Rate (per 1,000 LB)	10.8	11.2	11.7
Maternal Mortality Ratio (per 100,000 LB)	118.7	113.1	141.8
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.17	0.25	0.25
Prevalence of depressive disorder (per 100,000 population)	0.10	0.12	0.12
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	202.1
TB mortality rate (per 100,000 population)	-	-	4.6
HIV test results for TB patients (%)	-	-	88.9
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	40.7
Environmental Sanitation Project			
Population with improved drinking-water (%)	68.9	66.2	65.6
Population using fly proof latrine (%)	42.4	42.2	43.6

SDG and WHO Indicators, Yangon Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	85.2	85.7	78.1
Proportion of births attended by skilled health personnel	89.8	92.9	100.7
Percent coverage of postnatal care	90.2	89.6	43.8
Adolescent birth rate per (1,000 women aged 15-19 years)	10.6	10.3	8.6
Contraceptive Prevalence Rate (Modern Method)	72.6	74.7	77.6
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	1.2	1	1.2
Vitamin A supplementation coverage (6 to 59 months)	-	-	92.6
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	80.6	79.6	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	49
Early initiation of breastfeeding (% of livebirths)	82.7	78	53.5
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	92.9
Percentage of under 5 children receiving ORT	-	-	92
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	97.9	96.3	81.3
IPV	0.7	71.6	86.3
OPV (3 rd dose)	94.5	93.8	84.9
Pentavalent (3 rd dose)	94.5	93.8	84.9
PCV (3 rd dose)	94.2	93.8	84.9
Measles (18 Months)	84.2	-	-
MR (18 month)	-	89.5	73.9
Tetanus (Pregnant Women- 2 nd dose)	92.5	89.4	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	72
Japanese Encephalitis (JE)	-	91.1	76.7
Hepatitis B (at birth)	-	-	2.5

SDG and WHO Indicators, Yangon Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	1.5	1.7	1.7
Death Rate due to Vehicle Accident (per 100,000 population)	4.5	5.3	6.0
Injury Rate due to Suicidal attempt (per 1,000 population)	0.02	0.02	0.03
Death Rate due to suicides (per 100,000 population)	1.0	1.4	1.7
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	14.2	12.7	11.1
Infant Mortality Rate (per 1,000 LB)	11.2	10.7	9.2
Neonatal Mortality Rate (per 1,000 LB)	7.3	7.3	6.5
Stillbirth Rate (per 1,000 LB)	5.7	4.6	4.5
Maternal Mortality Ratio (per 100,000 LB)	112.7	75.4	89.3
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.06	0.04	0.12
Prevalence of depressive disorder (per 100,000 population)	0.05	0.05	0.07
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	463.8
TB mortality rate (per 100,000 population)	-	-	22.0
HIV test results for TB patients (%)	-	-	96.0
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	79.2
Environmental Sanitation Project			
Population with improved drinking-water (%)	93.2	88.7	94.2
Population using fly proof latrine (%)	89.4	90.8	92.1

SDG and WHO Indicators, Shan(South) State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	83.5	85.1	86.4
Proportion of births attended by skilled health personnel	71.3	72.1	76.3
Percent coverage of postnatal care	89.1	88.8	66.8
Adolescent birth rate per (1,000 women aged 15-19 years)	36.6	37.7	38
Contraceptive Prevalence Rate (Modern Method)	64.5	65.5	59.9
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	1.9	2.2	2.6
Vitamin A supplementation coverage (6 to 59 months)	-	-	96.5
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	90.6	89.6	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	76.1
Early initiation of breastfeeding (% of livebirths)	90.3	86.7	78.9
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	96
Percentage of under 5 children receiving ORT	-	-	98.3
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	91.9	92.1	94.6
IPV	13.1	76.5	95.5
OPV (3 rd dose)	86.9	88.6	92.3
Pentavalent (3 rd dose)	87.9	88.6	92.3
PCV (3 rd dose)	87.4	88.6	92.3
Measles (18 Months)	76.4	-	-
MR (18 month)	-	86.7	82.9
Tetanus (Pregnant Women- 2 nd dose)	85	88.5	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	83.2
Japanese Encephalitis (JE)	-	87.6	86
Hepatitis B (at birth)	-	-	25

SDG and WHO Indicators, Shan(South) State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.04	0.04	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	4.10	4.20	4.00
Death Rate due to Vehicle Accident (per 100,000 population)	8.90	10.00	11.90
Injury Rate due to Suicidal attempt (per 1,000 population)	0.07	0.11	0.11
Death Rate due to suicides (per 100,000 population)	4.10	6.50	6.20
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	12.8	11.6	14.5
Infant Mortality Rate (per 1,000 LB)	10.4	9.6	11.3
Neonatal Mortality Rate (per 1,000 LB)	6.5	6.6	7.3
Stillbirth Rate (per 1,000 LB)	13.7	12.1	12.1
Maternal Mortality Ratio (per 100,000 LB)	102.7	103.7	125.3
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.11	0.13	0.14
Prevalence of depressive disorder (per 100,000 population)	0.11	0.14	0.09
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	156.6
TB mortality rate (per 100,000 population)	-	-	7.0
HIV test results for TB patients (%)	-	-	96.0
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	87.4
Environmental Sanitation Project			
Population with improved drinking-water (%)	81.9	83.7	81.6
Population using fly proof latrine (%)	72.7	72.1	71.8

SDG and WHO Indicators, Shan(North) State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	77.8	75.3	77.9
Proportion of births attended by skilled health personnel	67.5	69.6	71.8
Percent coverage of postnatal care	80.1	80.9	62.9
Adolescent birth rate per (1,000 women aged 15-19 years)	39.2	37	40.5
Contraceptive Prevalence Rate (Modern Method)	60.8	59.5	64.8
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.7	3	3.2
Vitamin A supplementation coverage (6 to 59 months)	-	-	79.9
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	65	67	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	56.7
Early initiation of breastfeeding (% of livebirths)	62.2	62.6	57.3
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	93.8
Percentage of under 5 children receiving ORT	-	-	82
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	78.7	76.1	84.7
IPV	12	63.3	80
OPV (3 rd dose)	71.1	68.6	75.7
Pentavalent (3 rd dose)	71.3	68.9	76.3
PCV (3 rd dose)	69.6	68.3	75.4
Measles (18 Months)	58.9	-	-
MR (18 month)	-	63	62.3
Tetanus (Pregnant Women- 2 nd dose)	64.6	62.8	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	66.7
Japanese Encephalitis (JE)	-	65	64.2
Hepatitis B (at birth)	-	-	14.5

SDG and WHO Indicators, Shan(North) State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.05	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	5.50	6.00	6.20
Death Rate due to Vehicle Accident (per 100,000 population)	11.20	11.00	12.80
Injury Rate due to Suicidal attempt (per 1,000 population)	0.08	0.11	0.11
Death Rate due to suicides (per 100,000 population)	4.50	4.20	4.90
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	13.2	16.2	15.7
Infant Mortality Rate (per 1,000 LB)	10.7	12.7	12.1
Neonatal Mortality Rate (per 1,000 LB)	7.4	7.8	8
Stillbirth Rate (per 1,000 LB)	10.8	11.6	12.4
Maternal Mortality Ratio (per 100,000 LB)	120	95.1	130.5
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.05	0.07	0.10
Prevalence of depressive disorder (per 100,000 population)	0.02	0.05	0.13
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	272.0
TB mortality rate (per 100,000 population)	-	-	12.5
HIV test results for TB patients (%)	-	-	96.0
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	75.7
Environmental Sanitation Project			
Population with improved drinking-water (%)	72.1	74	80.5
Population using fly proof latrine (%)	65.7	70.9	67.6

SDG and WHO Indicators, Shan(East) State (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	78.6	76	73.8
Proportion of births attended by skilled health personnel	78.9	78.8	90.4
Percent coverage of postnatal care	90.4	92.5	73
Adolescent birth rate per (1,000 women aged 15-19 years)	38.8	41.2	41.9
Contraceptive Prevalence Rate (Modern Method)	67.7	63.8	65.5
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	0.67	1.7	2
Vitamin A supplementation coverage (6 to 59 months)	-	-	67.9
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	73.2	87.3	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	75.5
Early initiation of breastfeeding (% of livebirths)	71.7	86.1	75.6
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	81.3
Percentage of under 5 children receiving ORT	-	-	89
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	67.1	76.5	74.2
IPV	12.8	68.3	73.7
OPV (3 rd dose)	65.1	75.4	72.6
Pentavalent (3 rd dose)	65.5	75.7	72.6
PCV (3 rd dose)	64.2	75.2	72.5
Measles (18 Months)	55.5	-	-
MR (18 month)	-	70.7	64.6
Tetanus (Pregnant Women- 2 nd dose)	59.9	70.9	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	67.2
Japanese Encephalitis (JE)	-	70.1	71.7
Hepatitis B (at birth)	-	-	17.7

SDG and WHO Indicators, Shan(East) State (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	4.2	4.0	3.7
Death Rate due to Vehicle Accident (per 100,000 population)	5.9	7.3	7.2
Injury Rate due to Suicidal attempt (per 1,000 population)	0.04	0.07	0.04
Death Rate due to suicides (per 100,000 population)	2.2	4.6	2.1
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	11.9	12.2	13.4
Infant Mortality Rate (per 1,000 LB)	9.4	10.1	10.7
Neonatal Mortality Rate (per 1,000 LB)	5.5	6	6.6
Stillbirth Rate (per 1,000 LB)	6.6	8.1	9
Maternal Mortality Ratio (per 100,000 LB)	147	45.7	55.9
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.06	0.05	0.04
Prevalence of depressive disorder (per 100,000 population)	0.03	0.05	0.01
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	280.8
TB mortality rate (per 100,000 population)	-	-	11.2
HIV test results for TB patients (%)	-	-	92.5
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	83.3
Environmental Sanitation Project			
Population with improved drinking-water (%)	66.1	67.7	62
Population using fly proof latrine (%)	67.1	70	65.2

SDG and WHO Indicators, Ayeyarwady Region (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	89.7	88.8	93.3
Proportion of births attended by skilled health personnel	77.7	80.2	87.7
Percent coverage of postnatal care	95.3	94.6	75.3
Adolescent birth rate per (1,000 women aged 15-19 years)	20.5	20.1	17.7
Contraceptive Prevalence Rate (Modern Method)	68	74	77.1
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.7	3.1	3.5
Vitamin A supplementation coverage (6 to 59 months)	-	-	95.3
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	95.5	91.8	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	79.6
Early initiation of breastfeeding (% of livebirths)	92.8	97.7	81.7
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	92.2
Percentage of under 5 children receiving ORT	-	-	93.1
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	99	98.5	95.9
IPV	2.6	69.1	91
OPV (3 rd dose)	95.5	94.9	94.6
Pentavalent (3 rd dose)	95.5	95	94.6
PCV (3 rd dose)	94.4	94.9	94.6
Measles (18 Months)	86	-	-
MR (18 month)	-	92.3	84.9
Tetanus (Pregnant Women- 2 nd dose)	88.1	94.4	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	90
Japanese Encephalitis (JE)	-	93	87.8
Hepatitis B (at birth)	-	-	10

SDG and WHO Indicators, Ayeyarwady Region (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.05	0.02	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	2.20	2.70	2.50
Death Rate due to Vehicle Accident (per 100,000 population)	8.40	10.20	9.80
Injury Rate due to Suicidal attempt (per 1,000 population)	0.05	0.06	0.06
Death Rate due to suicides (per 100,000 population)	2.50	3.20	2.90
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	15.1	14.2	15.1
Infant Mortality Rate (per 1,000 LB)	12.2	11.7	12
Neonatal Mortality Rate (per 1,000 LB)	7	6.9	7.4
Stillbirth Rate (per 1,000 LB)	14.2	10.7	10
Maternal Mortality Ratio (per 100,000 LB)	158.2	105.5	122.6
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.06	0.05	0.07
Prevalence of depressive disorder (per 100,000 population)	0.04	0.07	0.11
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	227.3
TB mortality rate (per 100,000 population)	-	-	12.1
HIV test results for TB patients (%)	-	-	95.9
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	78.6
Environmental Sanitation Project			
Population with improved drinking-water (%)	73.6	76.8	74.6
Population using fly proof latrine (%)	71.5	72.8	72.1

SDG and WHO Indicators, Nay Pyi Taw Union Territory (2017-2019)

Indicators	2017	2018	2019
Maternal and Reproductive Health Program			
Percent coverage of antenatal care (ANC1)	82.4	90.3	91.1
Proportion of births attended by skilled health personnel	86.5	88.1	99.0
Percent coverage of postnatal care	91.6	98.6	43.5
Adolescent birth rate per (1,000 women aged 15-19 years)	16.2	20.8	17
Contraceptive Prevalence Rate (Modern Method)	76.1	73.5	77.2
Nutrition Promotion Program			
Incidence of low birth weight among newborns (%)	2.8	4	3.1
Vitamin A supplementation coverage (6 to 59 months)	-	-	89.2
Newborn and Child Health Development Program			
Newborn Care Coverage (within 3 days of birth -%)	91.4	97.4	-
Newborn Care Coverage (within 2 days of birth-%)	-	-	88.7
Early initiation of breastfeeding (% of livebirths)	91.2	101.6	94.8
Percentage of under 5 children receiving antibiotics treatment for suspected pneumonia	-	-	100.3
Percentage of under 5 children receiving ORT	-	-	98.4
Expanded Program on Immunization (Percent among target population)			
BCG (TB)	86.1	95.3	86.6
IPV	85.4	98.2	98.5
OPV (3 rd dose)	84.5	95.8	98.4
Pentavalent (3 rd dose)	84.6	95.8	98.4
PCV (3 rd dose)	84.4	95.8	98.4
Measles (18 Months)	81.7	-	-
MR (18 month)	-	87.4	90.2
Tetanus (Pregnant Women- 2 nd dose)	78.6	88.6	-
Tetanus Diphtheria (Pregnant Women- 2 nd dose)	-	-	82.5
Japanese Encephalitis (JE)	-	93.1	91.7
Hepatitis B (at birth)	-	-	15

SDG and WHO Indicators, Nay Pyi Taw Union Territory (2017-2019)

Indicators	2017	2018	2019
National Malaria Control Program			
Malaria Case Fatality Rate (CFR) (%)	0.00	0.00	0.00
Injury Prevention Project			
Injury Rate due to Vehicle Accident (per 1,000 population)	3.1	3.5	3.7
Death Rate due to Vehicle Accident (per 100,000 population)	14.8	17.6	17.0
Injury Rate due to Suicidal attempt (per 1,000 population)	0.13	0.09	0.07
Death Rate due to suicides (per 100,000 population)	2.9	5.3	3.6
Vital Statistics			
Under-five Mortality Rate (per 1,000 LB)	15.1	17.2	19
Infant Mortality Rate (per 1,000 LB)	12.8	14.7	15.9
Neonatal Mortality Rate (per 1,000 LB)	8.8	10.5	11.5
Stillbirth Rate (per 1,000 LB)	8.3	8.4	8.9
Maternal Mortality Ratio (per 100,000 LB)	84.9	113.4	119.7
Mental Health Project			
Prevalence of psychosis (per 100,000 population)	0.05	0.04	0.07
Prevalence of depressive disorder (per 100,000 population)	0.04	0.02	0.01
National TB Program			
Case notification rate (CNR) of Tuberculosis (per 100,000 population)	-	-	240.1
TB mortality rate (per 100,000 population)	-	-	15.1
HIV test results for TB patients (%)	-	-	95.7
HIV positive new and relapse TB patients on ART during TB treatment (%)	-	-	70.9
Environmental Sanitation Project			
Population with improved drinking-water (%)	94.6	96.8	95.9
Population using fly proof latrine (%)	92	92.1	89.4

Data sources for SDG and WHO Indicators

Maternal and Reproductive Health Program– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Proportion of births attended by skilled health personnel

Denominator - Vital Statistics Project, Public Health Statistics

Numerator - For state/regional data (2017 to 2018): Vital Statistics Project, Public Health Statistics

For state/regional data (2019) and union data (2017 to 2019): Vital Statistics Project and MRH Project, Public Health Statistics; and hospital report, Hospital Statistics

(may exceed 100 percent for state and regional disaggregation, 2019)

Nutrition Promotion Program– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Newborn and Child Health Development Program– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Expanded Program on Immunization– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

National Malaria Control Program– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Injury Prevention Project– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Vital Statistics– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

Mental Health Project– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports

National TB Program– National Tuberculosis Programme, Department of Public Health, Ministry of Health and Sports

Environmental Sanitation Project– Public Health Statistics, HMIS, Department of Public Health, Ministry of Health and Sports