

The Government of the Union of Myanmar

Ministry of Health



**Annual Public Health Statistics Report
(2007)**

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Preface

This mutually contributed report, the Annual Public Health Statistics Report 2007, is published by Department of Health Planning (DHP) in collaboration with Department of Health (DOH), Ministry of Health. It covers not only all-inclusive statistics of the process of the health care delivery system but also reveals the outcomes of public health activities executed within one year period of 2007 start of January to end of December. The entire public health statistics is as of Health Management Information System (HMIS) which ideally sustaining management cultures that both recognize and use quantitative methods in support of decision making processes with essential minimum data sets. HMIS in Myanmar is jointly run by DHP and DOH representing fundamental health projects under the National Health Plan.

To coordinate activities between health services to help effective referral patterns and avoid unnecessary duplication of costly services, setting up priorities for the allocation of health care resources, the health information is very crucial. As the demand of more reliable and timely health information is evident HMIS endeavors to convince enhanced facets of data collection, compilation, processing, analysis and publication. This very fundamental job is commenced by the Basic Health Staffs from the Rural and Sub-Rural Health Centers at the primary health care units. The monthly reports from them and also from staffs at the township health departments are compiled and cleaned under the supervision of township medical officers, the most responsible persons at the township level. In hierarchal order, health personnel from Districts, States/Divisions Health Departments and Information Division from DHP carve up the responsibility of compiling, processing, analyzing and publishing of data.

The Department of Health Planning has developed and distributed Data Dictionary for the Health Indicators and conducted training of trainers, multiplier and strengthening trainings to facilitate advancement of the quality of Public Health Statistics. DHP feeds quarterly reports to respective project managers and allow for the feedbacks in return. It is

also unworkable to accomplish this essential task without the support of departments from Ministries, UN Agencies, National and International NGOs and Private Organizations.

To conclude, we would like to convey our heartfelt gratitude to each and every one contributed to HMIS and realization of this imperative report. For the improvement of the report in the future, we truly appreciate and welcome any constructive comments and suggestions.

Dr. Phone Myint
Deputy Director General
Department of Health Planning

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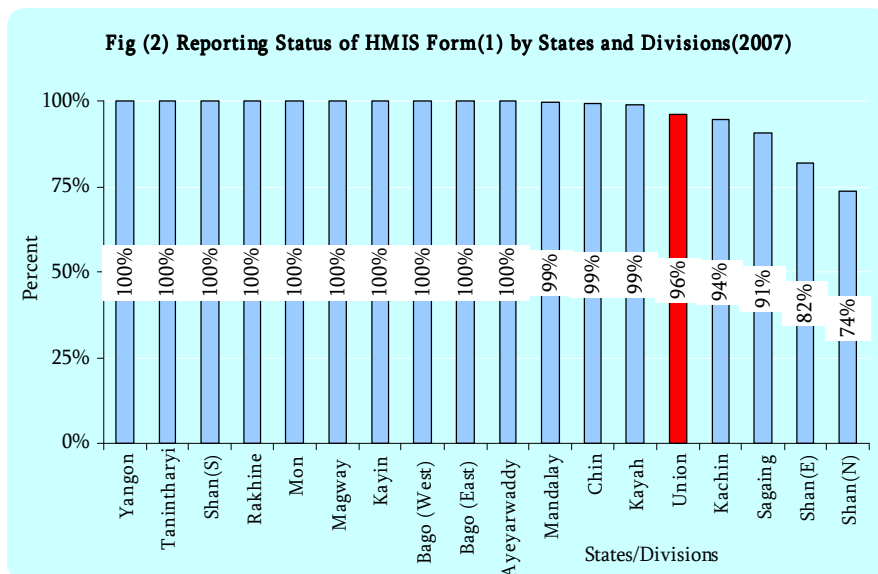
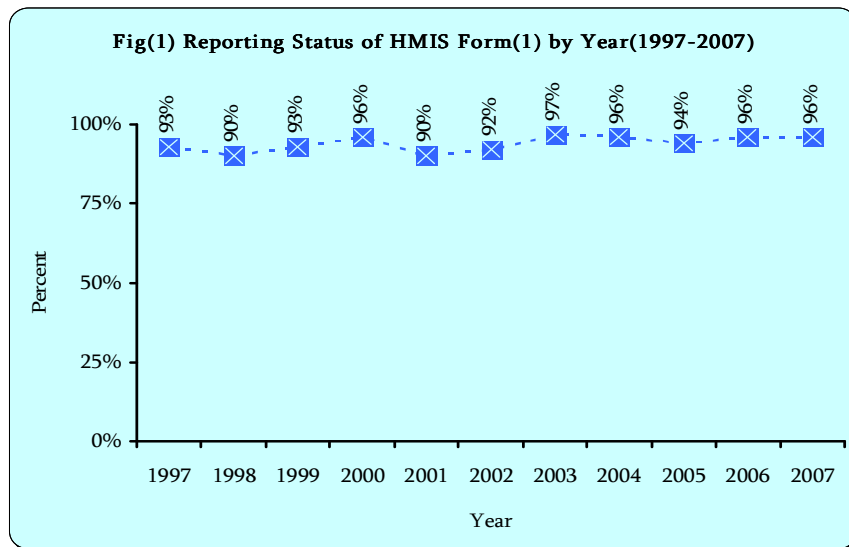
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REPORTING STATUS OF PUBLIC HEALTH INFORMATION

Most of the public health indicators and impact indicators are calculating and computing on the regularity and completeness of the reports, it is crucial to present the reporting status. Figure (1) demonstrates the trend in reporting rate of HMIS monthly report form (1) from the year 1997 to 2007. Highest rate is seen in 2003 (97%) and lowest in 1998 and 2001 (90%). Reporting rate of year 2007 was 96% same as in 2006 also.

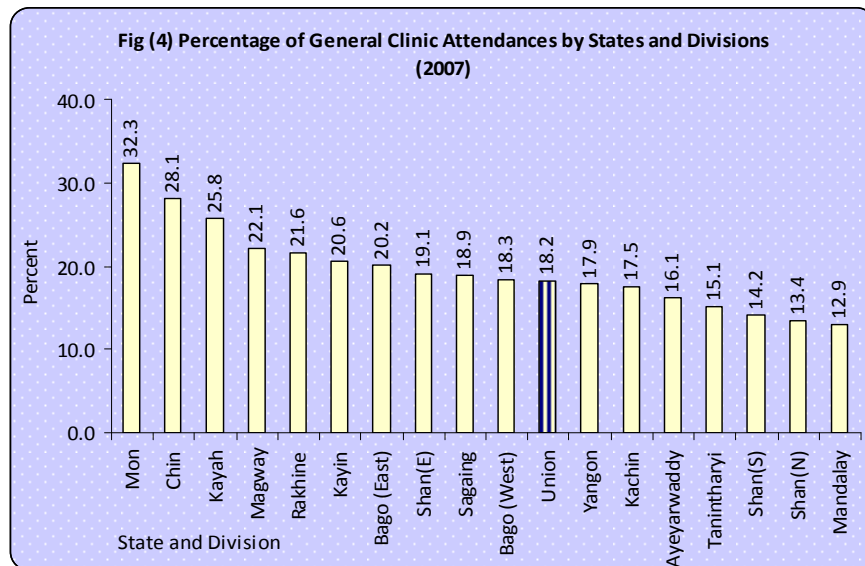
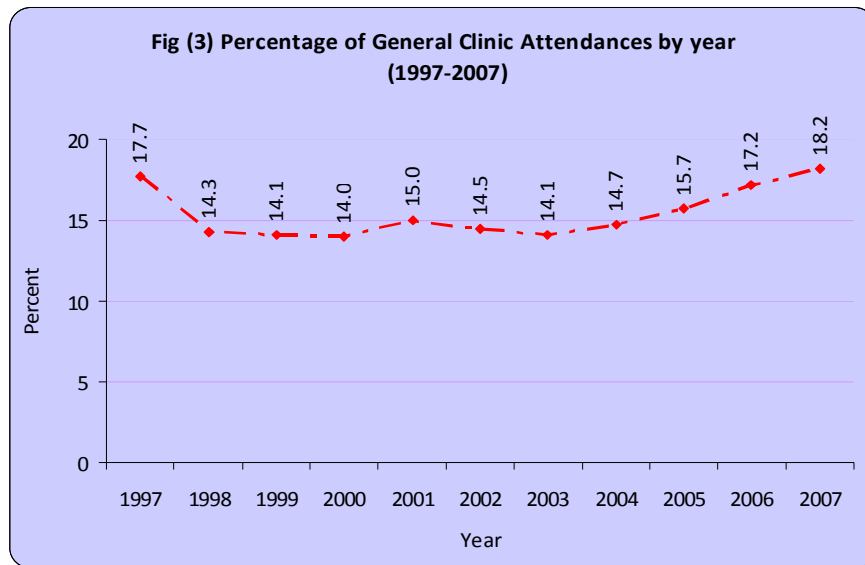
The reporting status by States / Divisions was presented in Figure (2) Ten States and Divisions (Yangon, Tanintharyi, Shan (South), Rakhine, Mon, Magway, Kayin, Bago (West), Bago (East) and Ayeyarwaddy) have achieved 100% whereas Shan (East) and Shan (North) with lowest reporting status of less than 90%.



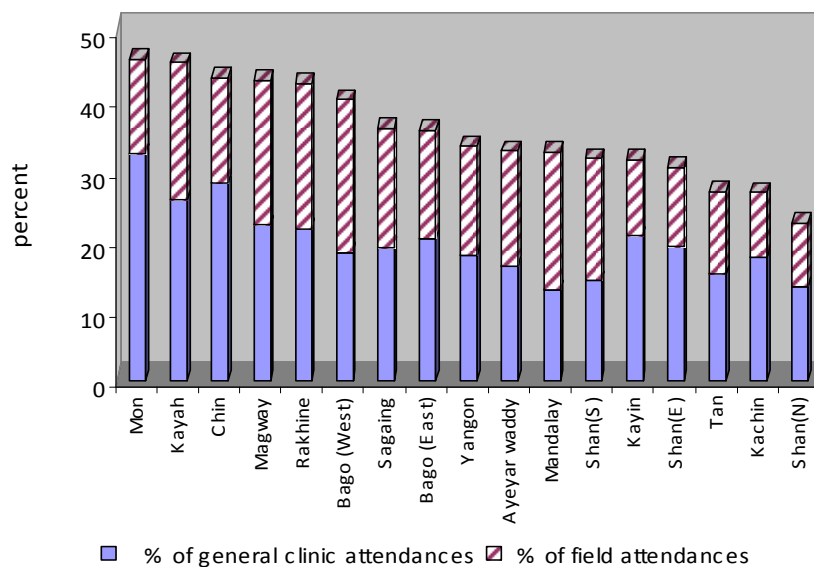
I. COMMUNITY HEALTH CARE SERVICES

1.1 Primary Medical Care and Referral of Patients

All over the country, Primary Medical Care and Referral Services are provided to communities by health workers. Consequently, percentage of general clinic attendances is taken as an indicator of receiving Primary Medical Care (PMC) and referral services. As shown in Figure (3), the trend of the indicator was uphill from 14% in 1998 to 18.2% in 2007. However, it still needs to gear up the services to meet the target of 50%. Among the States and Divisions those situated below the Union level were Yangon, Kachin, Ayeyarwaddy, Tanintharyi, Shan (South), Shan (North) and Mandalay.



Fig(5) Percentage of general clinic attendances and field attendances by S tates and Divisions (2007)



Consistent with public health reports, 16.8% of total population received PMC and referral services during the field visits of Basic Health Staff (BHS) (Table – I). Therefore, field visits of BHS are crucial in providing PMC and referral services. Figure (6) shows the trend of BHS field visits from 1997 to 2007. It is found that frequency of field visits was more or less same in each year. Among the States and Divisions, those stand under the Union level are Ayeyarwaddy, Tanintharyi, Kayah, Shan (South), Kayin, Shan (East), Shan (North) and Chin Figure (7). It is also found that 0.6% of general clinic and field attendances were referred to higher level (Table – 1).

Fig (6) Average frequency of field visits to village/ward (1997-2007)

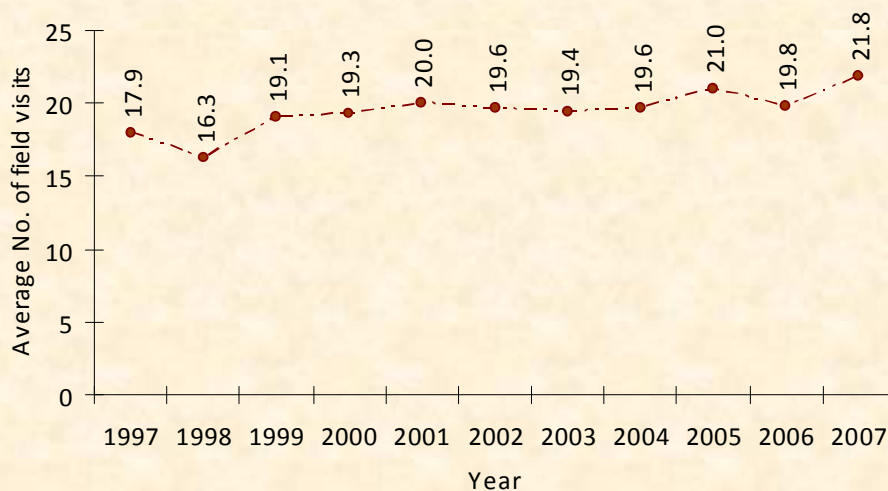


Fig (7) Average frequency of field visits to village/ward by States and Divisions (2007)

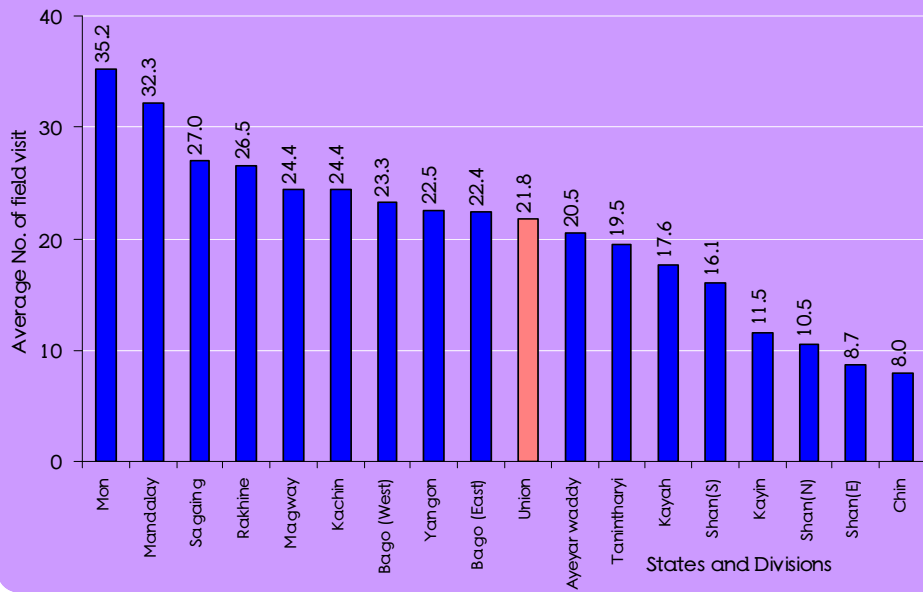


Table (1) Primary Medical Care and Referral (2007)

States and Divisions	Activities of Basic Health Staff					Activities of Community Health Worker		
	% of Pop under jurisdiction of BHS attended general clinics	Avg freq: of gen: clinic attendances by a patient	% of clinic attendance during field visits	Avg freq: of field visits to villages/wards	% of referral out of total attendances	Avg no. of joint activities with BHS	Avg no. of Env: sanitation activities with local people	Avg no. of participation in mass health education activities
Kachin	17.5	1.5	9.3	24.4	0.8	5.7	3.3	3.8
Kayah	25.8	1.6	19.5	17.6	0.4	1.5	0.9	0.7
Kayin	20.6	1.7	11.0	11.5	0.7	5.1	2.5	2.8
Chin	28.1	1.7	15.1	8.0	0.3	2.1	1.8	1.2
Sagaing	18.9	1.6	17.0	27.0	0.7	8.1	4.5	4.7
Tanintharyi	15.1	1.5	11.8	19.5	0.8	4.6	2.9	3.3
Bago (East)	20.2	1.7	15.5	22.4	0.5	7.5	4.5	4.8
Bago (West)	18.3	1.7	21.7	23.3	0.5	5.2	3.6	3.4
Magway	22.1	1.7	20.6	24.4	0.5	8.0	5.0	4.7
Mandalay	12.9	1.7	19.7	32.3	0.5	7.1	4.5	4.9
Mon	32.3	1.7	13.6	35.2	0.7	9.7	7.5	7.2
Rakhine	21.6	1.4	20.8	26.5	0.6	9.8	4.6	5.0
Yangon	17.9	1.9	15.5	22.5	0.5	7.3	5.2	4.6
Shan (South)	14.2	1.7	17.5	16.1	0.5	4.3	2.2	2.9
Shan (North)	13.4	1.5	9.1	10.5	0.6	4.3	2.8	2.6
Shan (East)	19.1	1.7	11.3	8.7	0.8	2.5	1.8	1.8
Ayeyarwaddy	16.1	1.7	16.3	20.5	0.5	6.9	4.2	4.5
Union	18.2	1.6	16.8	21.8	0.6	6.9	4.2	4.3
	{5509955}	{9074700}	{8363343}	{1394211}	{98778}	{187890}	{113728}	{118016}
Norm	50	2	25	10	2	10	10	12

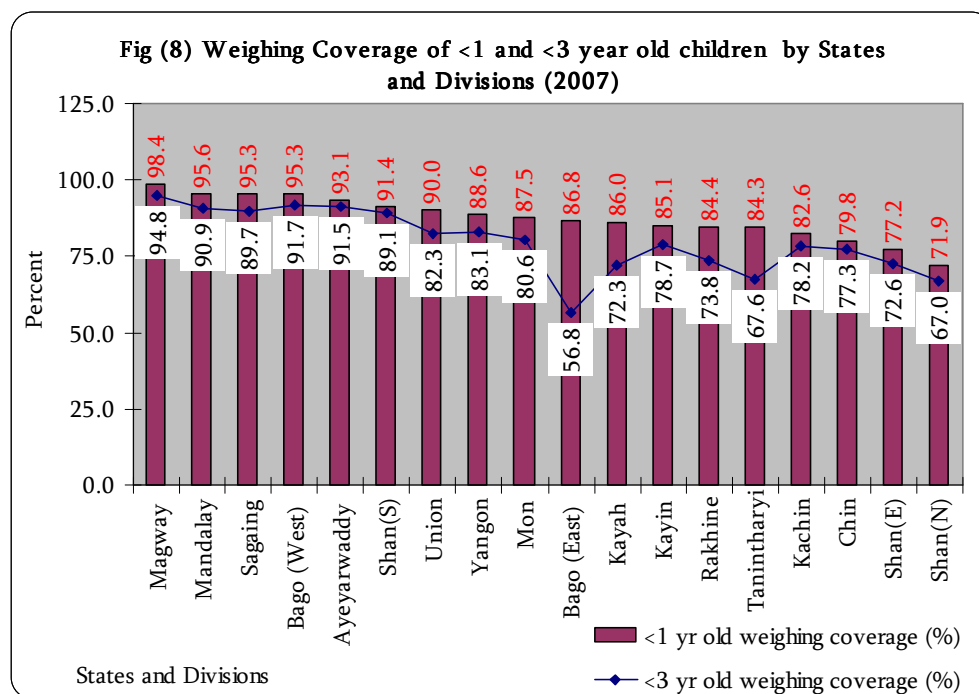
Note: Total Number = { }

1.2 Nutrition Development

It is well-known that growth monitoring is one of the important activities of BHS for monitoring the nutritional status of under three year old children. Seeing that BHS is overstrained with many health activities, only under one year old children and 1-3 year old children from the nutrition surveillance areas are weighed monthly and quarterly respectively.

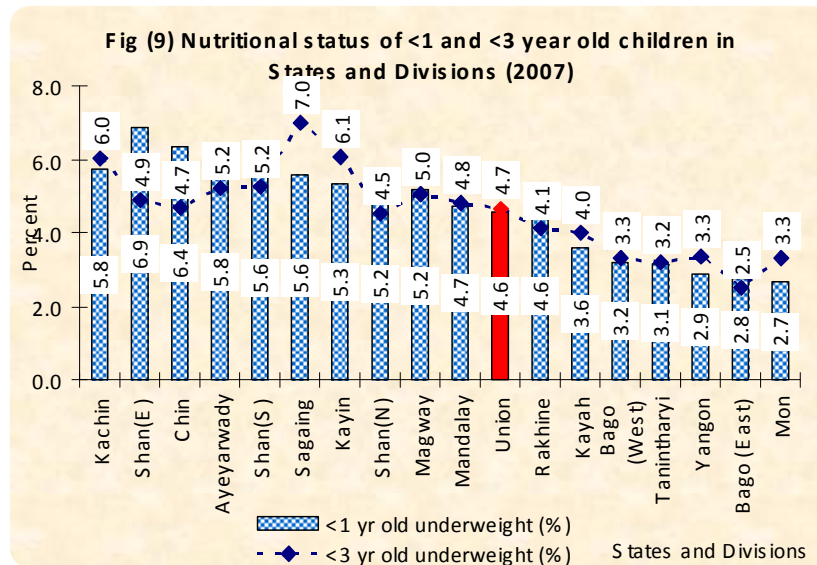
Growth monitoring of under three years old children were conducted only 27.3% of the whole under three children population in the country (Table – 2). Ninety percent of under one year old children were weighed monthly and 82.3% of under three years old children were weighed quarterly in nutritional surveillance areas in 2007.

Figure (8) depicts weighing coverage of under 1 year and under 3 years' old children by States and Divisions. Magway achieved highest weighing coverage both in under 1 year and under 3 years i.e. 98.4% and 94.8%, and Shan (North) attained lowest weighing coverage of under 1 year and 3 years old children i.e. 71.9% and 67%. Those States and Divisions which carried out below the Union level were Shan (North), Shan (East), Chin, Kachin, Tanintharyi, Rakhine, Kayin, Kayah, Bago (East), Mon, and Yangon.



Nutritional Status of under one and three year old children in the States and Divisions in 2007 was shown in Figure (9). The prevalence of mild underweight children in the nutrition surveillance areas (mostly residents village of midwives) under 3 years was 4.7% and under one year was 4.6% for the Union. Among the States and Divisions, Shan (East) was with highest percentage of underweight children under 1 year i.e. 6.9% and highest percentage of

underweight children under three years was found in Sagaing 7.0%. Mon had lowest percentage of underweight children younger than one year old i.e. 2.7% and Bago (East) had lowest percentage 2.5% of under weight children under three years. Severe underweight in under three years children was present in Chin State 1.3% (Table – 2). In all States and Divisions, Kachin, Shan (East), Chin, Ayeyarwady, Shan (South), Sagaing, Kayin, Shan (North), Magway and Mandalay had higher percent of under one underweight children than the Union level.



Fig(10) Scatter distribution of States and Divisions according to Under 3 weighing coverage and Under 3 underweight children (2007)



(Kc = Kachin, Kay = Kayah, Ky = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy = Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

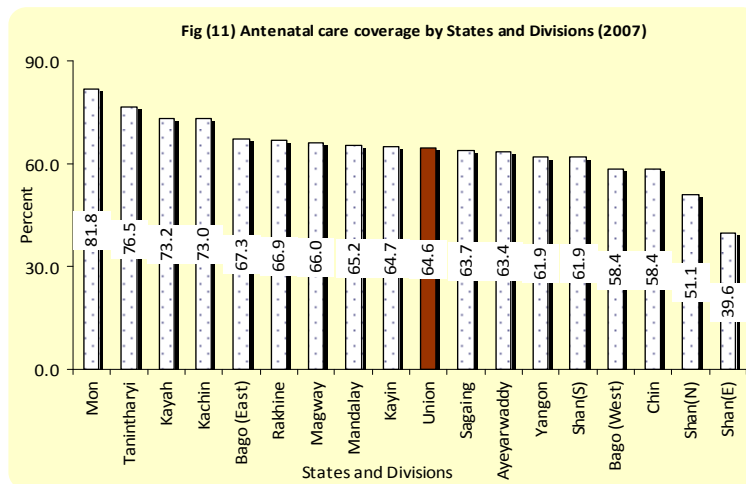
Table (2) Nutrition Development Services (2007)						
States and Divisions	Within nutrition surveillance area		Within nutrition surveillance area			Within jurisdiction of Midwife
	Under one year old		Under Three years old			
	Weighing coverage in percent	Under weight in percent	Weighing coverage in percent	Mild under weight in percent	Severe under weight in percent	Growth Monitoring coverage in percentage within jurisdiction of midwife
Kachin	82.6	5.8	78.2	6.0	0.7	29.0
Kayah	86.0	3.6	72.3	4.0	0.4	62.4
Kayin	85.1	5.3	78.7	6.1	0.8	24.3
Chin	79.8	6.4	77.3	4.7	1.3	56.2
Sagaing	95.3	5.6	89.7	7.0	0.3	33.9
Tanintharyi	84.3	3.1	67.6	3.2	0.5	29.7
Bago (East)	86.8	2.8	56.8	2.5	0.2	22.8
Bago (West)	95.3	3.2	91.7	3.3	0.3	34.1
Magway	98.4	5.2	94.8	5.0	0.3	36.4
Mandalay	95.6	4.7	90.9	4.8	0.4	23.2
Mon	87.5	2.7	80.6	3.3	0.4	23.7
Rakhine	84.4	4.6	73.8	4.1	0.8	24.7
Yangon	88.6	2.9	83.1	3.3	0.4	25.7
Shan (South)	91.4	5.6	89.1	5.2	0.6	23.2
Shan (North)	71.9	5.2	67.0	4.5	0.6	17.3
Shan (East)	77.2	6.9	72.6	4.9	0.3	22.6
Ayeyarwady	93.1	5.8	91.5	5.2	0.7	26.3
Union	90.0	4.6	82.3	4.7	0.5	27.3

Data Source from Midwives

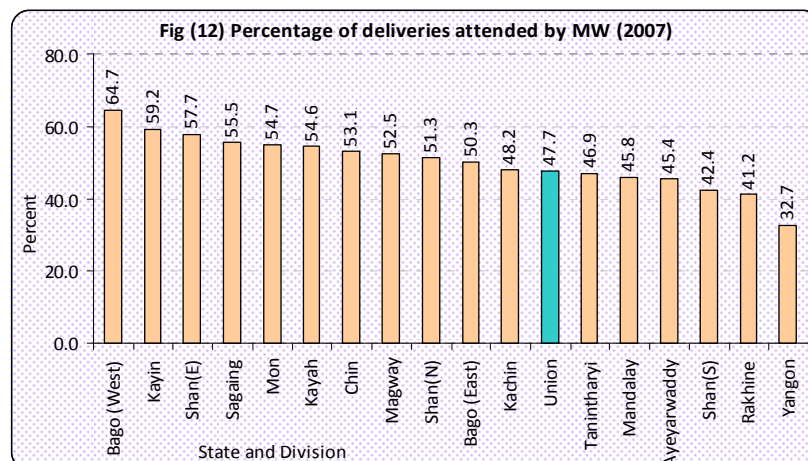
Total Number of children weighed by MW in her jurisdiction = 322,460 (< 1 year)
551,422 (1-3 year)
Total number of < 3 year children in the jurisdiction of MW = 3,207,100

1.3 Maternal, Newborn and Child Health Care

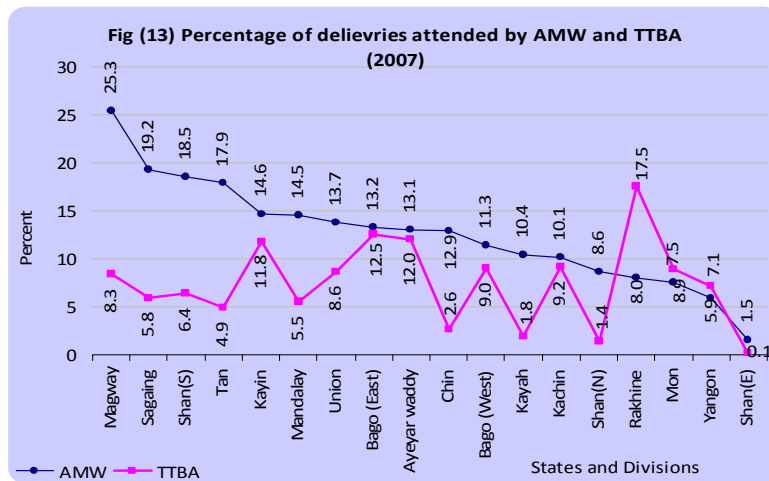
With the aim of improving family health, maternal and child health care services are provided by midwives (MWs), auxiliary midwives (AMWs) and Trained Traditional Birth Attendants (TTBAs). Figure (11) shows antenatal care coverage in the States and Divisions. It was found that Sagaing, Ayeyarwaddy, Yangon, Shan (South), Bago (West), Chin, Shan (East) and Shan (North) have lower antenatal care coverage than the Union level.



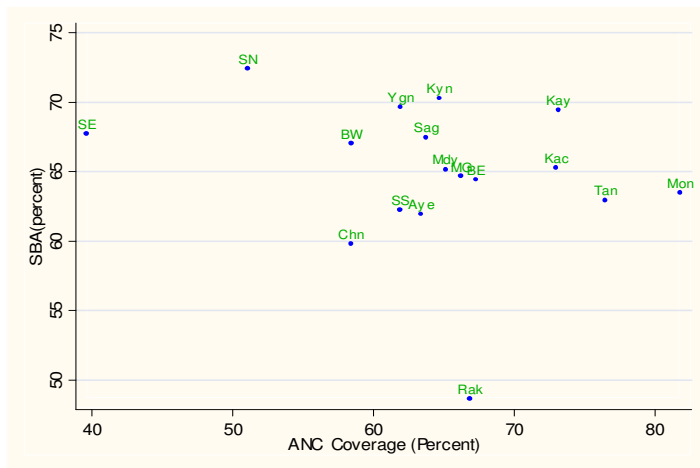
It was found that the Union level percentage of deliveries attended by MWs Figure (12) was beyond the Union Norm i.e. 47.7%. Those States and Divisions which cannot achieve Union level are Tanintharyi, Rakhine, Shan (South) and Ayeyarwaddy. In Mandalay and Yangon, most of the deliveries occurred in the hospitals and only few of them were delivered by midwives.



Deliveries attended by AMW and TTBA were described in Figure (13). Number of deliveries attended by AMWs was highest in Magway and number of deliveries attended by TTBA is highest in Rakhine.



Fig(14) Scatter distribution of States and Divisions according to ANC coverage and



proportion of births Attended by skilled health personnel (2007)

(Kac = Kachin, Kay = Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy =Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

Fig(15) Percentage of deliveries by BHS, AMW and TTBA by States and Divisions(2007)

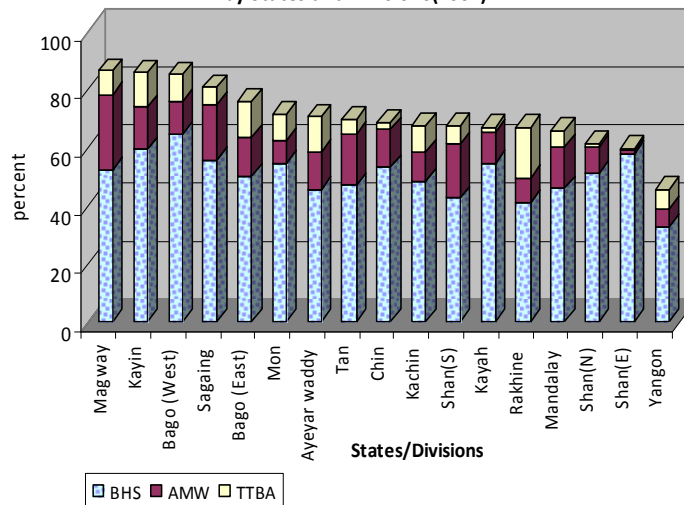
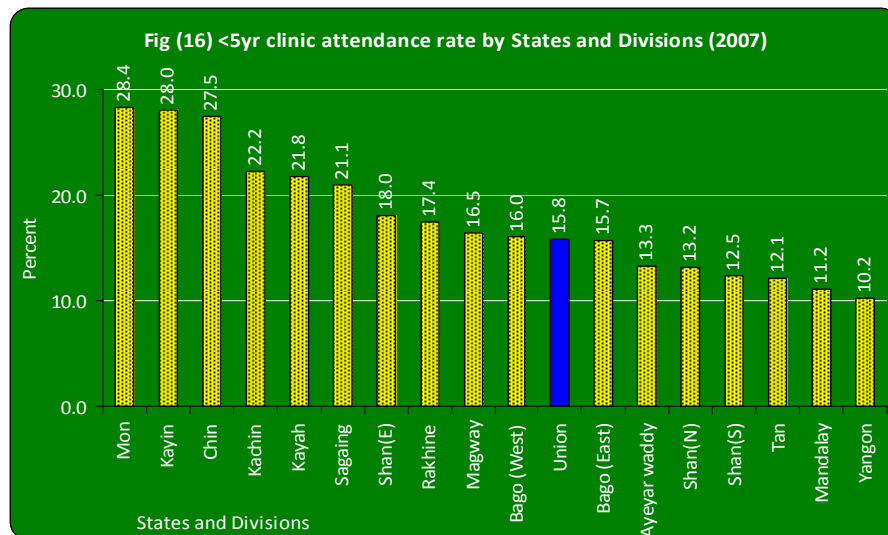


Figure (16) portrays <5 year clinic attendance rate by all States and Divisions. Mon had the highest rate of total <5 year clinic attendance i.e. 28.4% among States and Divisions where as Kayin and Chin had second and third highest.



All of the States and Divisions had more than 90% of ORT use except Kayah, Mandalay, Shan (East), Shan (North) and Shan South. Kayah had highest percent of Diarrhoea with severe dehydration in under five years old children and second lowest rate of ORT use. It indicated that more health education and practice was needed in Kayah.

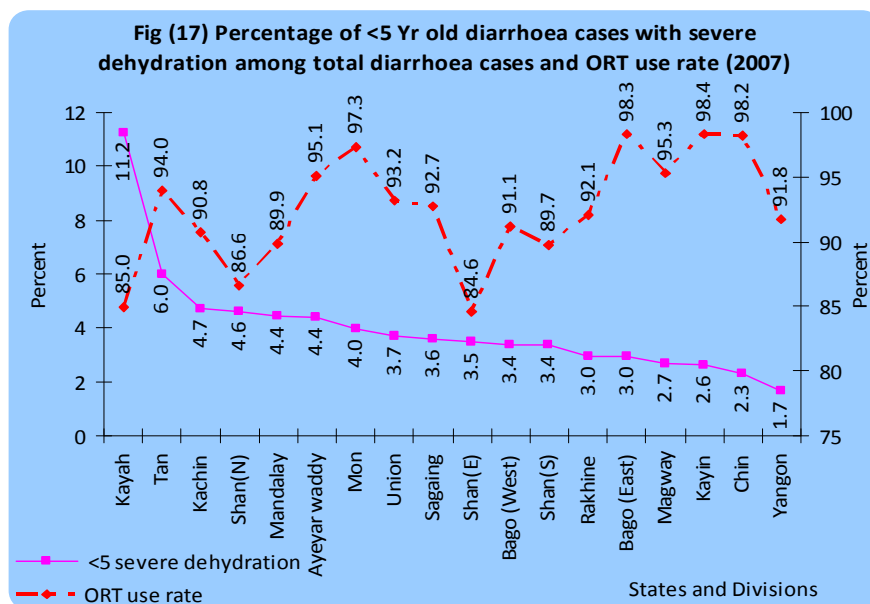


Table (3-a) Maternal, Newborn and Child Health Care (2007)

States and Divisions	Maternal and Child Health Activities by BHS								
	AN Care Coverage (%)	Avg: freq: of AN care to a preg: mother	% of preg: mothers with short birth interval	% of deliveries attended by a MW	% of deliveries at RHC delivery room	% of newborn with low birth weight	% of Perinatal mortalities out of total deliveries	Avg. freq: of PN care per delivery	% of Referral among (AN + Delivery + PN) mothers
Kachin	73.0	2.9	3.4	48.2	1.8	1.8	3.1	4.7	4.5
Kayah	73.2	3.5	4.6	54.6	2.0	1.1	1.9	3.1	4.4
Kayin	64.7	2.7	2.1	59.2	4.6	1.1	1.1	3.9	6.2
Chin	58.4	3.6	2.8	53.1	1.2	0.4	0.7	4.4	3.5
Sagaing	63.7	3.3	1.4	55.5	1.2	1.0	1.7	5.4	7.0
Tanintharyi	76.5	2.8	1.7	46.9	0.6	1.4	1.1	6.2	4.5
Bago (East)	67.3	3.0	0.9	50.2	1.5	1.3	2.0	5.7	4.9
Bago (West)	58.4	3.2	0.2	64.7	0.3	1.1	1.7	4.8	8.4
Magway	66.0	3.9	0.7	52.5	0.6	0.9	1.4	5.2	5.9
Mandalay	65.2	3.2	0.9	45.8	1.0	0.9	1.2	5.4	5.3
Mon	81.8	3.1	1.2	54.7	2.6	2.1	1.6	7.2	7.8
Rakhine	66.6	2.8	2.2	41.2	0.4	1.3	0.9	4.1	4.3
Yangon	61.9	3.0	0.7	32.7	1.2	1.4	0.9	7.6	4.8
Shan (South)	61.9	3.1	2.1	42.4	1.0	1.6	2.0	4.8	5.1
Shan (North)	51.1	2.7	4.6	51.3	4.4	1.9	1.6	4.7	6.2
Shan (East)	39.6	3.3	2.8	57.7	4.3	1.3	1.9	3.2	9.4
Ayeyarwady	63.4	3.0	0.6	45.4	1.3	1.5	2.5	5.4	5.3
Union	64.6	3.1	1.3	47.7	1.3	1.3	1.6	5.4	5.7
Norm	80	4	3	40	20	15	-	6	2
Total Number	901623	2828146	11621	404270	11112	5036	13440	2180056	51011

Table (3-a) Maternal, Newborn and Child Health Care (2007)

States and Divisions	Maternal and Child Health Activities by AMWs			Maternal and Child Health Activities by TTBA	
	Home Delivery Rate	% of new-born with low birth weight	% of referral among (AN + Delv. + PN) mothers	Home Delivery Rate	% of referral cases (during delivery)
Kachin	10.1	1.8	15.6	9.2	1.3
Kayah	10.4	6.4	4.4	1.8	6.7
Kayin	14.6	1.0	7.6	11.8	1.1
Chin	12.9	0.4	3.9	2.6	1.9
Sagaing	19.2	0.8	7.7	5.8	6.0
Tanintharyi	17.9	0.3	4.6	4.9	3.1
Bago (East)	13.2	0.6	4.5	12.5	2.9
Bago (West)	11.3	1.9	5.2	9.0	4.2
Magway	25.3	0.8	7.2	8.3	1.7
Mandalay	14.5	2.3	6.3	5.5	2.8
Mon	7.5	1.3	8.4	8.9	5.1
Rakhine	8.0	2.6	4.8	17.5	1.8
Yangon	5.9	1.9	9.5	7.1	3.3
Shan (South)	18.5	1.1	7.7	6.4	4.2
Shan (North)	8.6	1.8	13.3	1.4	18.9
Shan (East)	1.5	1.9	20.9	0.1	0.0
Ayeyarwaddy	13.1	1.0	4.5	12.0	1.8
Union	13.7	1.2	6.7	8.6	2.8
Total Number	116260	1283	9642	72828	2032

Table (3-b) Maternal, Newborn and Child Health Care (2007)

States and Divisions	% of < 5 yr old children who attended clinics	% of <5 yr old children with diarrhoea who suffer severe dehydration	% of < 5 yr old children with diarrhoea who received ORT	% of < 5 yr old children with ARI symptoms who attended clinics	% of < 5 yr old children with pneumonia	% of < 5 yr old children referred to higher levels
Kachin	22.2	4.7	90.8	6.3	0.4	0.8
Kayah	21.8	11.2	85.0	7.5	1.0	1.2
Kayin	28.0	2.6	98.4	4.9	0.4	0.8
Chin	27.5	2.3	98.2	9.0	0.8	0.2
Sagaing	21.1	3.6	92.7	5.5	0.3	1.2
Tanintharyi	12.1	6.0	94.0	4.0	0.3	1.6
Bago (East)	15.7	3.0	98.3	3.4	0.2	1.2
Bago (West)	16.0	3.4	91.1	3.8	0.2	1.2
Magway	16.5	2.7	95.3	5.1	0.2	1.1
Mandalay	11.2	4.4	89.9	2.5	0.2	1.5
Mon	28.4	4.0	97.3	4.7	0.2	1.9
Rakhine	17.4	3.0	92.1	4.4	0.2	1.2
Yangon	10.2	1.7	91.8	2.7	0.1	1.2
Shan (South)	12.5	3.4	89.7	3.7	0.2	1.1
Shan (North)	13.2	4.6	86.6	3.5	0.2	0.8
Shan (East)	18.0	3.5	84.6	5.7	0.3	1.4
Ayeyarwaddy	13.3	4.4	95.1	3.6	0.2	1.1
Union	15.8	3.7	93.2	4.0	0.2	1.2
Norm			80.0			

Note: Total number of under five children 5,481,647
 Total number of under five children with severe dehydration 4,845
 Total number of under five children with diarrhoea 130,436
 Total number of under five children with ARI reported by MW 219,377

1.4 School Health

Examination of schools is one of the main functions of school health services teams. On the other hand, there are townships without school health teams and have to allocate BHS to cover this activity. Hence, the school Health examination coverage ranged from 61.6% to 96.4% among all States and Divisions. Chin had the lowest coverage and Yangon had achieved the highest. Coverage of school with sanitary latrine was highest in Yangon (86.7%) and lowest in Rakhine (35.9%). Concerning nutrition promotion schools, Yangon achieved the highest coverage and the bottom is Chin. Regarding safe water supply. Accessibility of improved water supply is lowest in schools of Rakhine and Kayah.

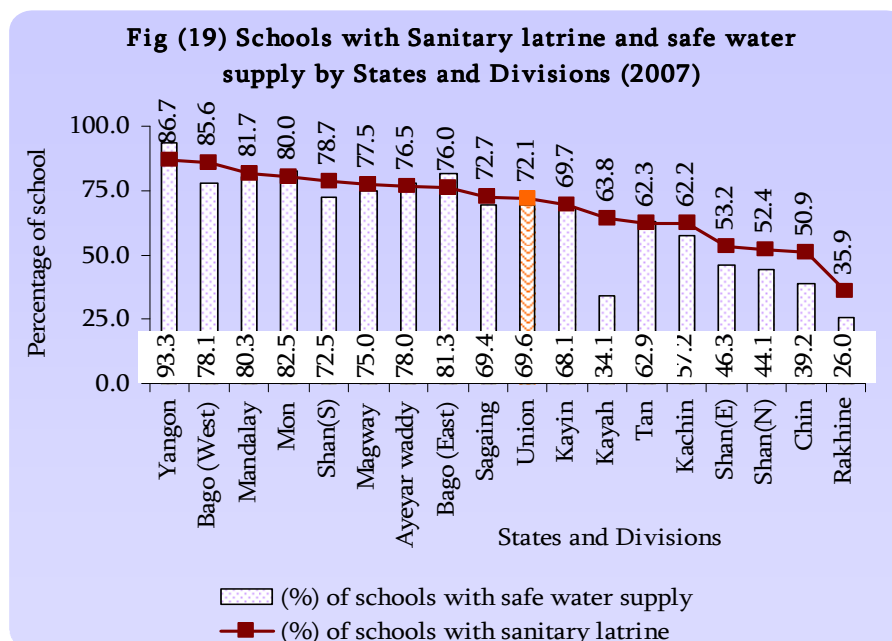
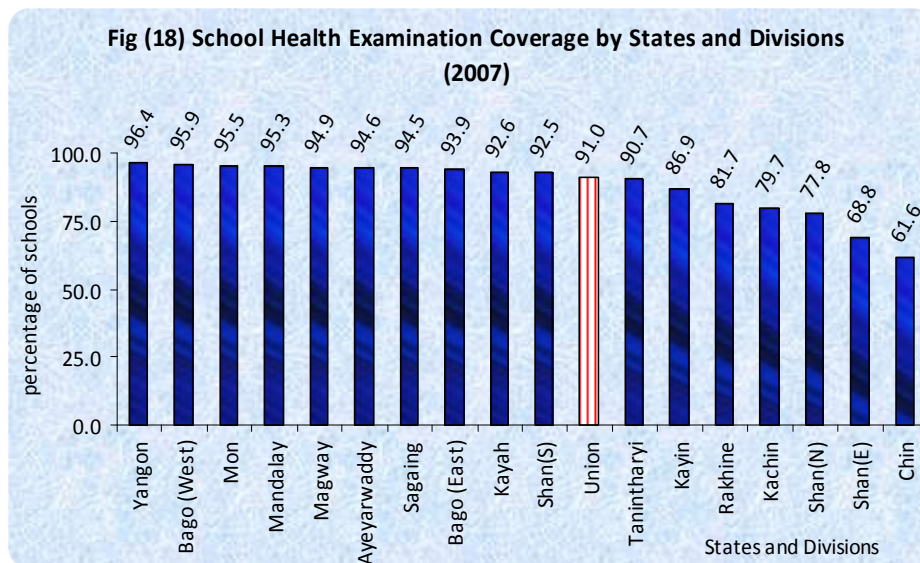


Table (4) School Health (2007)							
States and Divisions	% of schools undergo school health examination	(%) of schools with sanitary latrines	(%) of schools with safe water supply	(%) of schools with nutrition promotion activities	(%) of students examined	(%) of health promoting schools	(%) of Aedes free schools
Kachin	79.7	62.2	57.2	39.7	49.8	20.1	23.9
Kayah	92.6	63.8	34.1	29.7	86.0	15.1	9.5
Kayin	86.9	69.7	68.1	49.5	64.7	13.6	24.0
Chin	61.6	50.9	39.2	3.7	49.4	1.6	5.8
Sagaing	94.5	72.7	69.4	29.6	79.3	21.7	26.1
Tanintharyi	90.7	62.3	62.9	53.5	73.4	24.3	3.1
Bago (East)	93.9	76.0	81.3	62.7	73.7	26.0	41.1
Bago (West)	95.9	85.6	78.1	40.9	79.3	23.6	25.0
Magway	94.9	77.5	75.0	38.6	73.8	23.4	35.6
Mandalay	95.3	81.7	80.3	30.3	75.8	26.1	46.8
Mon	95.5	80.0	82.5	77.3	79.9	52.8	71.4
Rakhine	81.7	35.9	26.0	12.0	57.5	2.2	2.8
Yangon	96.4	86.7	93.3	69.3	76.8	61.3	79.4
Shan (South)	92.5	78.7	72.5	53.3	72.8	35.5	34.6
Shan (North)	77.8	52.4	44.1	26.3	68.5	12.3	20.7
Shan (East)	68.8	53.2	46.3	22.7	70.3	16.3	21.4
Ayeyarwady	94.6	76.5	78.0	48.3	76.8	28.1	47.3
Union	91.0	72.1	69.6	41.0	73.2	25.5	35.5

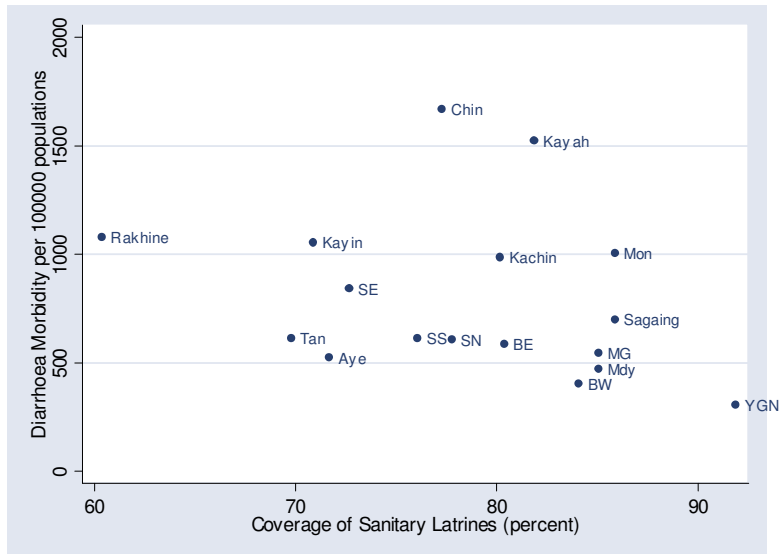
Total number of school examined all over the country	=	35,746
Total number of students examined all over the country	=	5,541,617
Total number of schools all over the country	=	39,295
Total number of students all over the country	=	7,567,993

II. DISEASE CONTROL SERVICES

2.1 Epidemiological Surveillance and Response

Among the 17 Diseases Under National Surveillance (DUNS) System, diarrhoea, dysentery and ARI are the three commonest diseases.

Fig (20) Morbidity of Diarrhoea and Coverage of Sanitary Latrine by States and Divisions (2007)



(Kac = Kachin, Kay =Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy = Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

The above scattered distribution represents States and Divisions regarding Morbidity of Diarrhoea per 100, 000 populations and coverage of sanitary latrines. High diarrhoea morbidity was seen in Kayah, Kayin, Chin, Mon and Rakhine which had moderate sanitary latrines coverage except Rakhine. Yangon, Bago (West) and Mandalay had low diarrhoea morbidity with high sanitary latrine coverage. Overall, it was found that all States and Divisions which had higher sanitary latrine coverage experience low diarrhoea morbidity.

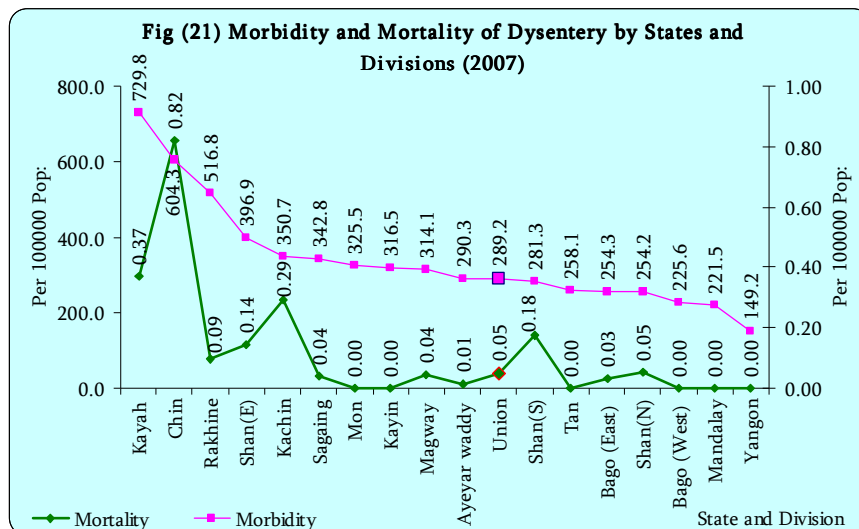


Figure (21) depicts the morbidity and mortality of Dysentery by States and Divisions. Kayah had highest morbidity and Chin had the highest mortality with Dysentery and Yangon had the lowest in both. Regarding to ARI, one of the highest morbidity in DUNS, morbidity was the highest in Chin Figure (22) and the lowest in Mandalay. The ARI mortality was the highest in Sagaing and the lowest in Rakhine. Figure (23) shows that Chin had highest morbidity of ARI and Diarrhoea with second highest occurrence of Malaria.

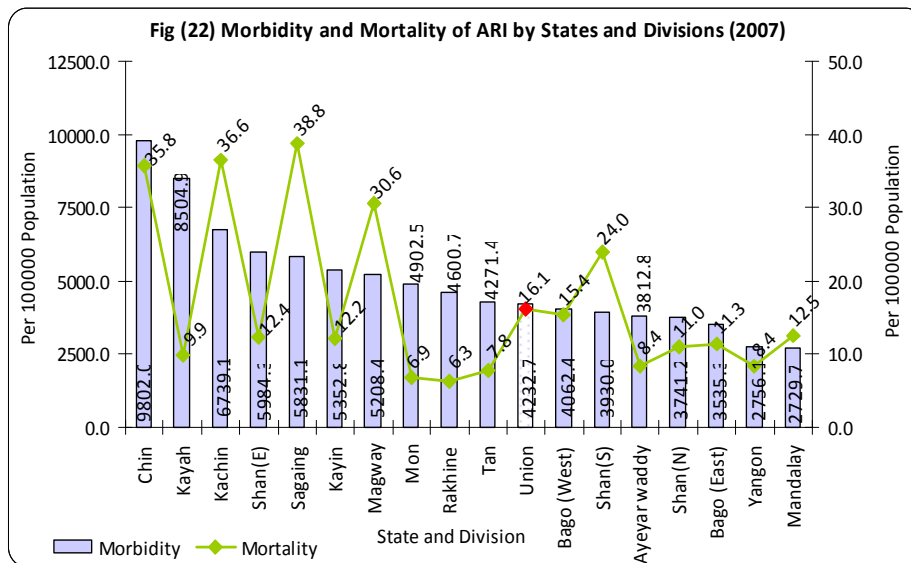
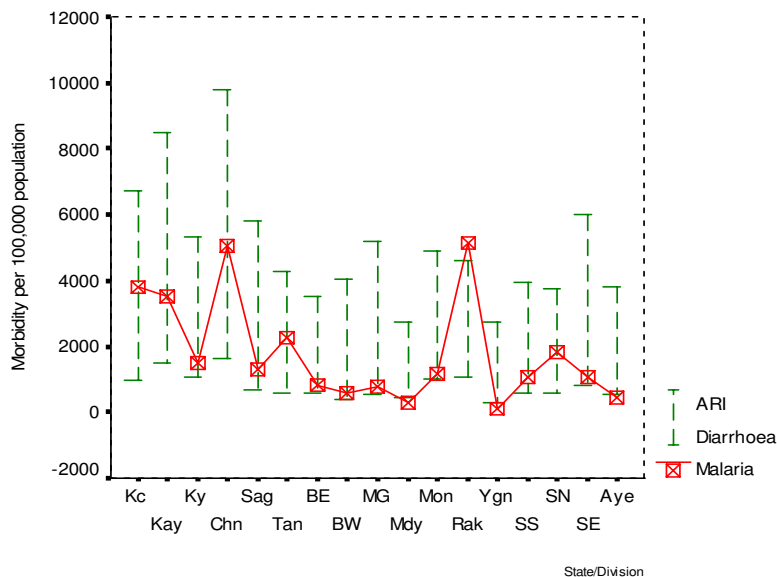


Fig (23) Top 3 Morbidity of diseases under national surveillance (2007)



(Kac = Kachin, Kay = Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy = Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

Table - (5) Epidemiological Surveillance and Response (2007)												
States and Divisions	Diarrhoea		Dysentery		Food poisoning		Enteric Fever		Measles		Diphtheria	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(3)	(2)	(3)	(2)
Kachin	983.5	32	350.7	4	25.5	4	4.5	0	3.2	0	0.00	0
Kayah	1520.8	39	729.8	1	11.6	1	2.2	0	0.0	0	0.00	0
Kayin	1050.9	8	316.5	0	21.1	2	4.9	0	55.1	0	0.00	0
Chin	1666.2	32	604.3	4	9.6	4	73.5	4	0.0	0	0.00	0
Sagaing	697.6	55	342.8	2	8.1	7	12.8	0	16.5	1	0.00	0
Tanintharyi	608.6	25	258.1	0	46.6	9	3.8	0	16.2	0	0.00	0
Bago (East)	583.4	12	254.3	1	9.1	10	6.6	0	37.1	3	0.00	0
Bago (West)	401.7	11	225.6	0	12.2	11	11.4	1	114.0	4	0.44	0
Magway	542.3	16	314.1	2	3.4	0	5.7	1	5.0	0	0.00	0
Mandalay	469.0	39	221.5	0	8.3	9	10.0	5	9.4	0	0.00	0
Mon	1001.8	12	325.5	0	11.7	3	1.9	0	3.2	0	0.00	0
Rakhine	1076.7	72	516.8	3	14.1	8	9.1	2	54.3	2	0.48	0
Yangon	304.3	8	149.2	0	4.1	6	1.9	1	21.3	1	0.17	1
Shan (South)	609.1	52	281.3	4	10.8	9	8.2	2	27.4	0	0.00	0
Shan (North)	604.5	30	254.2	1	12.3	4	10.8	1	0.0	0	0.00	0
Shan (East)	838.2	1	396.9	1	14.8	0	7.3	0	9.9	0	4.95	1
Ayeyarwady	521.6	44	290.3	1	9.4	12	7.3	5	4.4	0	0.13	1
Union	620.6	488	289.2	24	10.7	99	8.1	22	21.4	11	0.16	3

(1) Number of cases per 100,000 Population

(2) Total number of death

(1)* Total number of cases

(2)* Number of deaths per 100,000 Population

(3) For vaccine preventable diseases and ARI, number of cases per 100,000 <5 yr children are mentioned in the table

(4) For Neonatal Tetanus, number of cases per 100,000 live birth are mentioned in the table

Table - (5) Epidemiological Surveillance and Response (2007)												
States and Divisions	Whooping cough		Neonatal tetanus		Tetanus		Meningitis		ARI		Viral Hepatitis	
	(3)	(2)	(4)	(2)	(1)	(2)	(1)	(2)	(1)	(2)*	(1)	(2)
Kachin	3.9	0	7.6	1	0.9	1	8.4	0	6739.1	36.6	18.1	6
Kayah	13.2	0	0.0	0	0.0	0	0.4	0	8504.9	9.9	10.1	0
Kayin	0.0	0	4.8	1	0.6	3	1.3	0	5352.8	12.2	21.1	3
Chin	6.5	0	0.0	0	0.4	1	1.6	1	9802.0	35.8	29.9	2
Sagaing	2.8	0	5.8	0	1.3	19	3.4	11	5831.1	38.8	15.5	12
Tanintharyi	0.0	0	6.4	0	0.3	0	1.1	3	4271.4	7.8	14.0	7
Bago (East)	0.5	0	3.6	0	0.8	4	1.0	4	3535.3	11.3	13.5	11
Bago (West)	0.9	0	9.4	1	0.7	2	4.5	2	4062.4	15.4	11.6	4
Magway	0.0	0	1.2	1	0.4	7	0.3	0	5208.4	30.6	5.9	4
Mandalay	0.8	0	8.4	5	0.7	6	4.1	11	2729.7	12.5	12.6	11
Mon	0.5	0	0.0	0	0.4	0	0.3	1	4902.5	6.9	13.1	0
Rakhine	0.0	0	6.1	4	0.4	6	0.9	1	4600.7	6.3	6.8	1
Yangon	0.3	0	0.0	0	0.0	1	0.4	5	2756.1	8.4	4.8	6
Shan (South)	0.0	0	8.5	1	0.2	2	0.8	3	3930.0	24.0	12.6	6
Shan (North)	0.0	0	4.5	1	0.4	2	0.5	1	3741.2	11.0	21.4	5
Shan (East)	0.0	0	23.9	0	0.4	0	1.9	0	5984.3	12.4	12.9	0
Ayeyarwady	0.3	0	2.7	0	0.8	11	3.6	3	3812.8	8.4	13.6	10
Union	0.8	0	4.7	15	0.6	65	2.3	46	4232.7	16.1	12.1	88

(1) Number of cases per 100,000 Population

(2) Total number of death

(1)* Total number of cases

(2)* Number of deaths per 100,000 Population

(3) For vaccine preventable diseases and ARI, number of cases per 100,000 <5 yr children are mentioned in the table

(4) For Neonatal Tetanus, number of cases per 100,000 live birth are mentioned in the table

Table - (5) Epidemiological Surveillance and Response (2007)												
States and Divisions	Rabies		Malaria		Snake bite poisonous		TB: Sputum +ve		TB: Sputum -ve		TB: Extrapulmonary	
	(1)	(2)	(1)	(2)*	(1) *	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Kachin	0.3	4	3806.2	12.2	15	0	88.2	2	84.9	1	93.3	1
Kayah	0.7	2	3504.0	3.0	10	0	51.5	1	29.9	0	27.6	0
Kayin	0.5	6	1484.4	2.1	102	3	79.9	0	116.9	0	91.3	0
Chin	0.0	0	5049.5	4.9	26	1	26.6	2	41.4	0	77.2	0
Sagaing	0.8	39	1324.3	2.6	1535	90	57.6	1	41.8	4	60.3	1
Tanintharyi	0.4	7	2263.5	4.9	30	3	44.5	11	73.8	5	100.4	1
Bago (East)	0.9	29	816.9	1.8	554	65	62.8	13	62.7	36	53.5	8
Bago (West)	0.4	10	592.9	1.8	1190	51	75.7	31	91.0	50	50.5	2
Magway	0.5	22	761.4	1.7	1990	176	53.3	18	52.0	11	71.1	7
Mandalay	0.8	57	288.9	1.0	2552	130	49.8	43	42.4	45	51.9	17
Mon	0.7	14	1172.7	2.3	165	11	85.6	17	110.8	17	73.5	2
Rakhine	0.1	2	5162.4	2.5	31	1	53.5	2	79.3	4	51.1	1
Yangon	0.3	17	96.1	0.7	478	60	163.2	31	146.4	47	103.5	17
Shan (South)	0.1	3	1050.5	3.1	132	5	33.0	3	31.4	4	39.7	3
Shan (North)	0.0	0	1857.6	6.4	24	0	36.1	1	58.1	3	51.7	1
Shan (East)	0.1	1	1088.4	0.4	25	0	83.0	0	66.0	1	70.0	0
Ayeyarwady	0.3	22	433.1	1.2	905	152	78.8	32	63.4	17	41.3	3
Union	0.5	235	1192.0	2.3	9764	748	72.2	208	71.2	245	63.3	64

(1) Number of cases per 100,000 Population

(2) Total number of death

(1)* Total number of cases

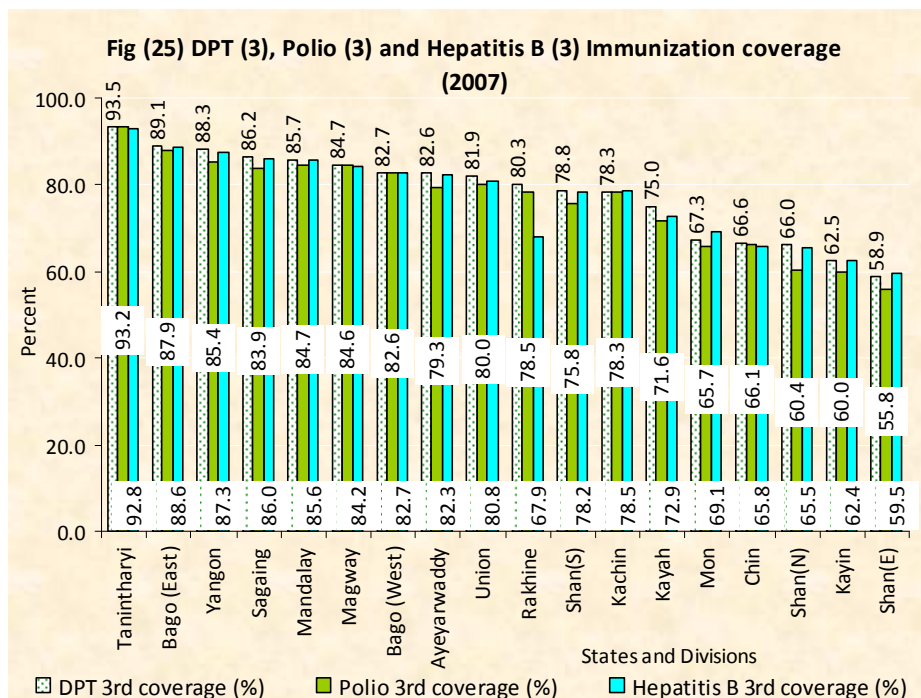
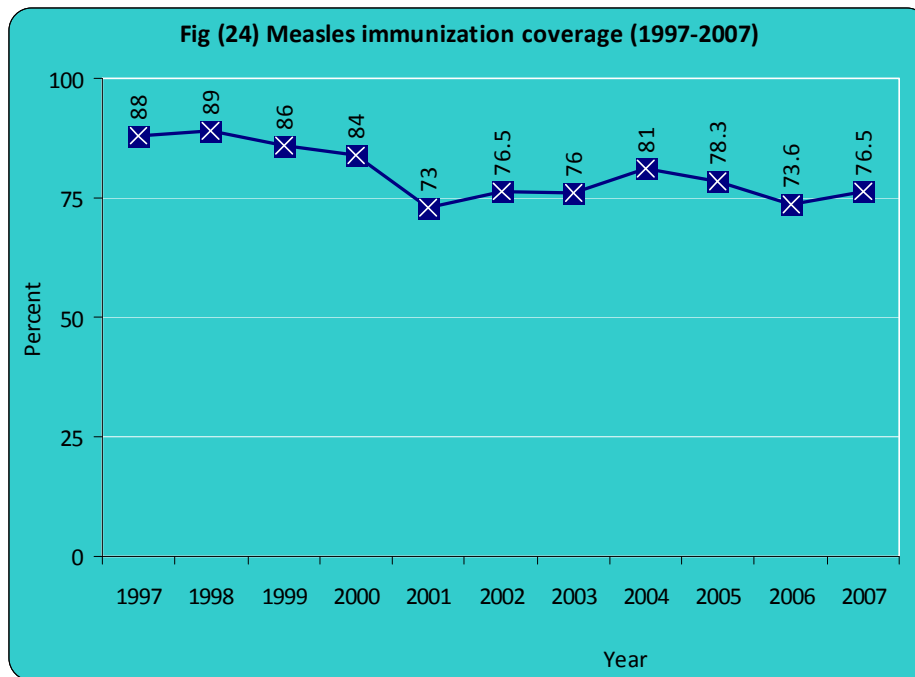
(2)* Number of deaths per 100,000 Population

(3) For vaccine preventable diseases and ARI, number of cases per 100,000 <5 yr children are mentioned in the table

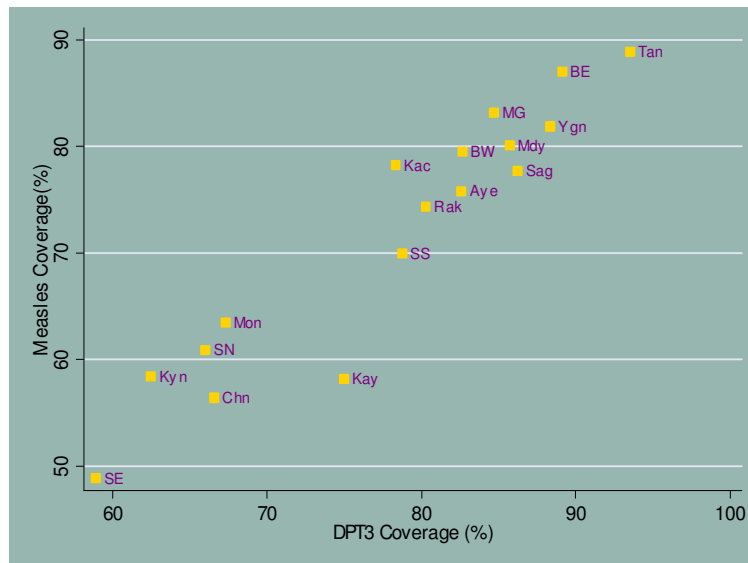
(4) For Neonatal Tetanus, number of cases per 100,000 live birth are mentioned in the table

2.2 Expanded Programme on Immunization

Expanded Program on Immunization is one of the important programmes under the National Health Plan (NHP), which prevents common childhood diseases. Figure (24) shows the trend of Measles immunization coverage all over the country from 1997 to 2007 and measles immunization coverage trend in fluctuating around 75%

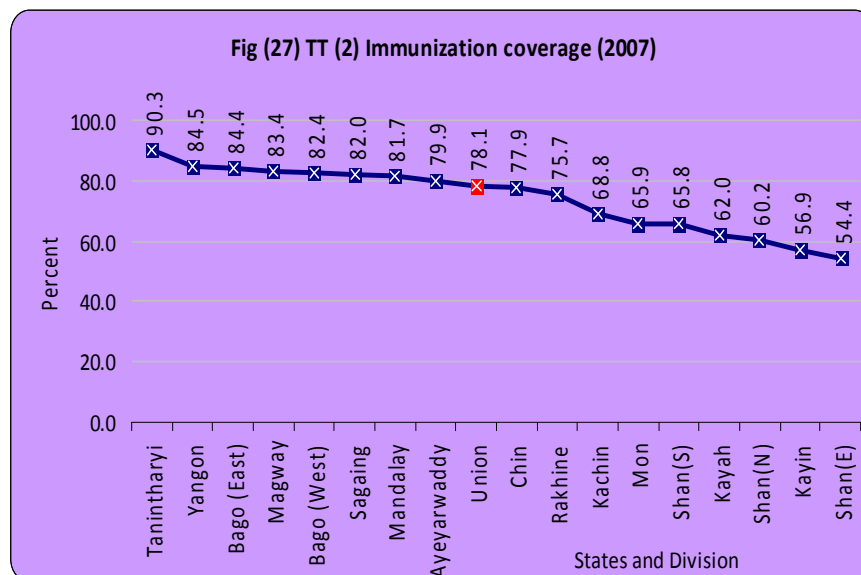


Fig(26) Scatter distribution of States and Divisions according to DPT3 Coverage and Measles Coverage (2007)

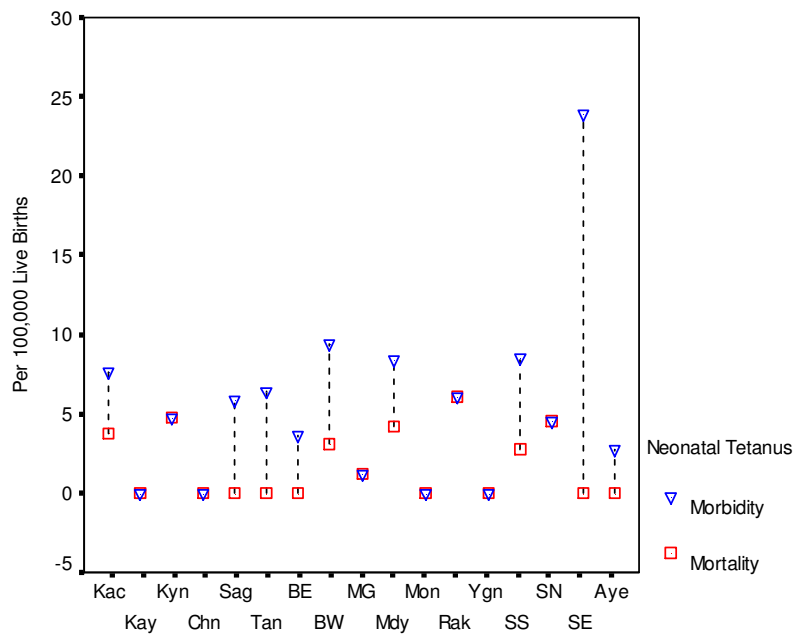


(Kac = Kachin, Kay = Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy= Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

Immunization coverage for DPT-3, Polio-3 and Hepatitis B-3 are shown in Figure (25) unexpectedly, the Polio – 3 coverage was lower than that of DPT – 3 in Figure (25). It was found that Kachin, Kayah, Kayin, Chin, Mon, Rakhine, Shan (East), Shan (North) and Shan (South) had lower DTP-3, Polio-3 and Hepatitis B-3 coverage than Union level and also was in TT2 immunization coverage Figure (27).



Fig(28) Morbidity and Mortality of vaccine preventable disease (Neonatal Tetanus) in 2007



(Kac = Kachin, Kay = Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy= Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

In general, immunization coverage is lower in states compared to divisions and vaccine preventable diseases are also more prevalence in states.

Table (6) Expanded Programme on Immunization (2007)													
States and Divisions	DPT Coverage (%)			Polio Coverage (%)			Hepatitis B Coverage (%)			BCG	Measles	TT Coverage (%)	
	1 st Dose	2 nd Dose	3 rd Dose	1 st Dose	2 nd Dose	3 rd Dose	1 st Dose	2 nd Dose	3 rd Dose	Coverage (%)	Coverage (%)	1 st Dose	2 nd Dose
Kachin	85.4	82.7	78.3	86.0	83.5	78.3	86.0	83.3	78.5	85.4	78.3	73.6	68.8
Kayah	77.2	75.2	75.0	74.9	73.0	71.6	73.7	75.6	72.9	73.9	58.2	62.1	62.0
Kayin	67.5	65.1	62.5	65.0	62.1	60.0	68.2	65.1	62.4	67.5	58.4	58.3	56.9
Chin	68.9	70.7	66.6	68.1	70.0	66.1	68.4	70.3	65.8	67.7	56.4	69.5	77.9
Sagaing	87.3	87.4	86.2	83.4	83.5	83.9	87.0	87.0	86.0	87.7	77.7	83.6	82.0
Tanintharyi	95.6	94.5	93.5	94.9	93.8	93.2	95.0	94.5	92.8	95.8	88.9	91.7	90.3
Bago (East)	89.5	89.1	89.1	89.5	89.0	87.9	89.1	89.1	88.6	89.5	87.0	85.4	84.4
Bago (West)	84.1	84.0	82.7	84.1	84.0	82.6	84.0	84.0	82.7	84.7	79.5	82.2	82.4
Magway	86.6	86.0	84.7	86.5	85.2	84.6	86.6	85.4	84.2	86.6	83.2	84.1	83.4
Mandalay	86.4	86.3	85.7	85.5	85.0	84.7	88.7	86.0	85.6	86.3	80.1	82.4	81.7
Mon	70.1	68.6	67.3	68.4	67.0	65.7	70.0	70.0	69.1	69.9	63.5	67.3	65.9
Rakhine	84.9	82.3	80.3	81.4	78.6	78.5	75.9	72.2	67.9	84.2	74.4	78.0	75.7
Yangon	92.3	90.1	88.3	88.3	86.1	85.4	91.1	89.2	87.3	92.5	81.9	87.4	84.5
Shan (South)	84.3	81.1	78.8	80.5	78.2	75.8	82.3	80.1	78.2	83.5	70.0	70.8	65.8
Shan (North)	72.2	69.3	66.0	66.3	63.4	60.4	70.8	68.7	65.5	71.9	60.9	62.7	60.2
Shan (East)	61.0	60.4	58.9	58.0	57.4	55.8	58.4	60.2	59.5	60.0	48.9	56.0	54.4
Ayeyar - wady	85.4	84.2	82.6	81.3	79.6	79.3	86.5	83.6	82.3	86.5	75.8	81.5	79.9
Union	84.6	83.4	81.9	82.2	80.9	80.0	84.0	82.4	80.8	84.7	76.5	79.7	78.1

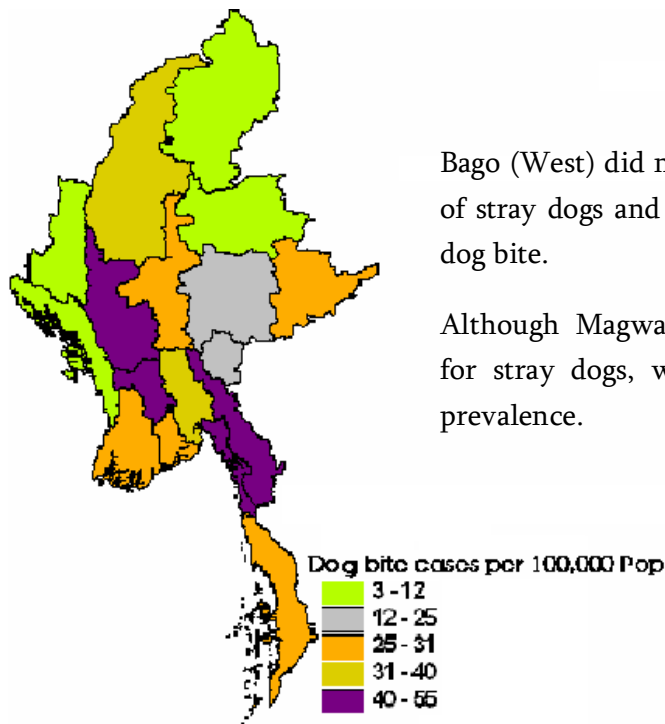
Total Number of under one children = 1,107,498

Total Number of pregnant mothers = 1,402,735

2.3 Zoonotic Diseases Control Services

Nowadays, dog-bite is becoming an important public health problem in Myanmar. Figure (29) demonstrates prevalence of dog-bite and Figure (30) shows frequency of organized control of stray dogs in the communities. States and Divisions which had higher prevalence of dog-bite were Kayin, Bago (West), Magway, and Mon while frequency of organized control of stray dogs were lower in Kayah, Chin, Sagaing, Tanintharyi, Bago (East), Bago (West), Mon, Rakhine, Shan (East), Shan (North), Shan (South) and Ayeyarwaddy. Kachin, Kayah, Kayin, Chin, Tanintharyi, Bago (East), Bago (West), Mon, Yangon, Shan (East) and Shan (South), Ayeyarwaddy reported zero morbidity for leptospirosis (Table – 7).

Fig (29) Prevalence of dog bite by States and Divisions (2007)



Bago (West) did not perform activity for control of stray dogs and which had high prevalence of dog bite.

Although Magway conducted control activities for stray dogs, which still had high dog bite prevalence.

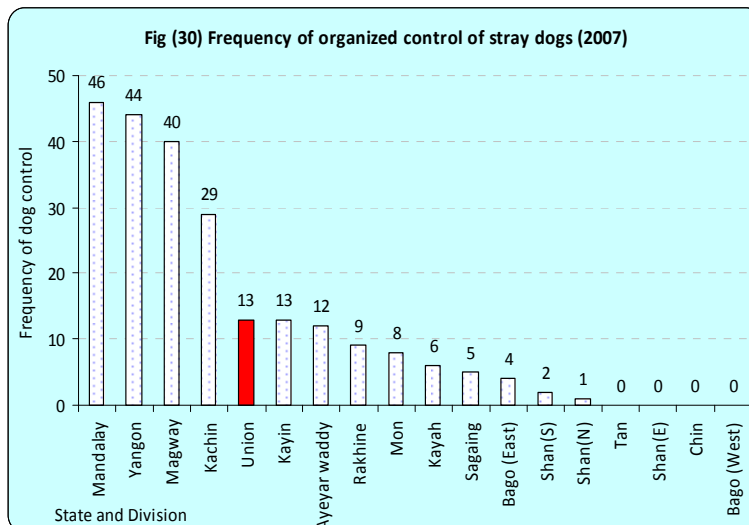


Table (7) Zoonotic Diseases Control (2007)

States and Divisions	1. Number of dog bite cases	2. Number of Anthrax cases	3. Number of leptospirosis cases	4. Number of organized control of stray dogs
Kachin	74	0	0	29
Kayah	67	0	0	6
Kayin	608	4	0	13
Chin	15	0	0	0
Sagaing	2069	17	10	5
Tanintharyi	498	0	0	0
Bago (East)	1235	1	0	4
Bago (West)	1227	0	0	0
Magway	1971	9	1	40
Mandalay	1931	27	10	46
Mon	1115	3	0	8
Rakhine	389	10	4	9
Yangon	1602	0	0	44
Shan (South)	320	0	0	2
Shan (North)	243	0	2	1
Shan (East)	195	0	0	0
Ayeyarwady	2191	9	5	12
Union	15750	80	32	219

2.4 Tuberculosis Control Services

In controlling Tuberculosis, the case detection rate in year 2007 ranged 34% to 118% in all States and Divisions Figure (31). Lower case detection rate was occurred in Chin, Shan (South) and Shan (North).

Fig (31) Tuberculosis Case Detection Rate by States and Divisions

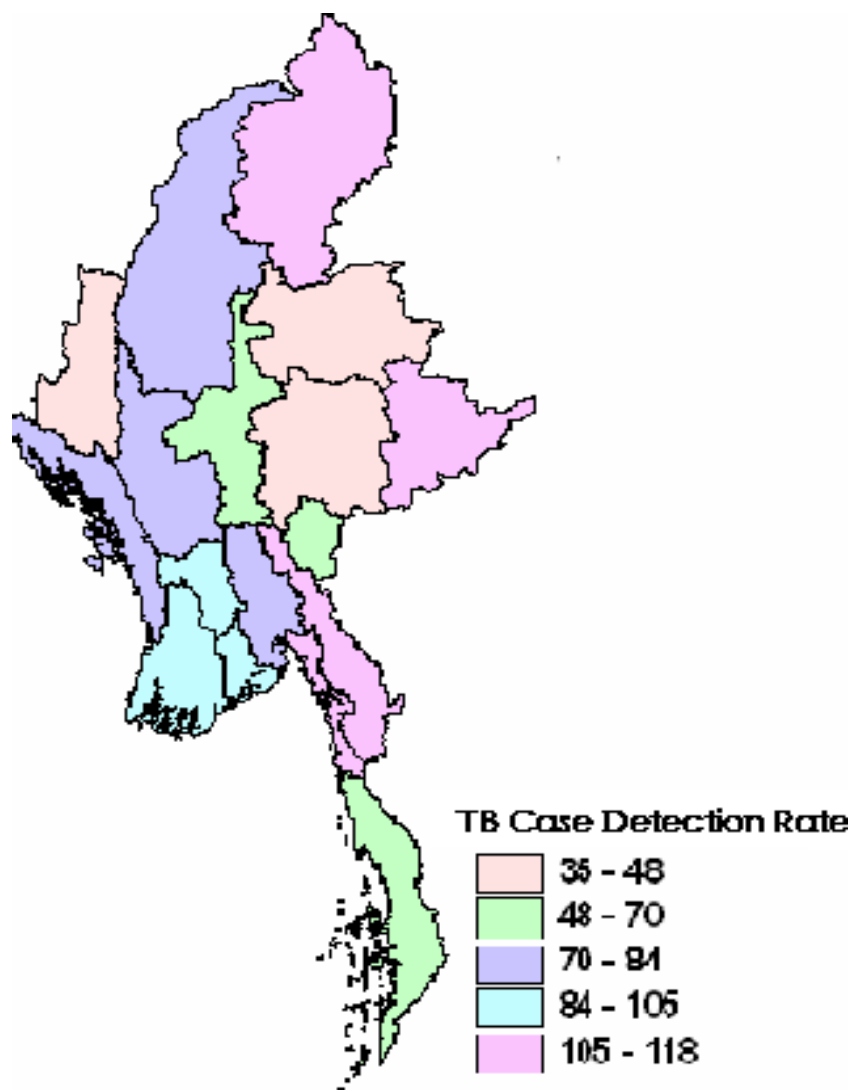
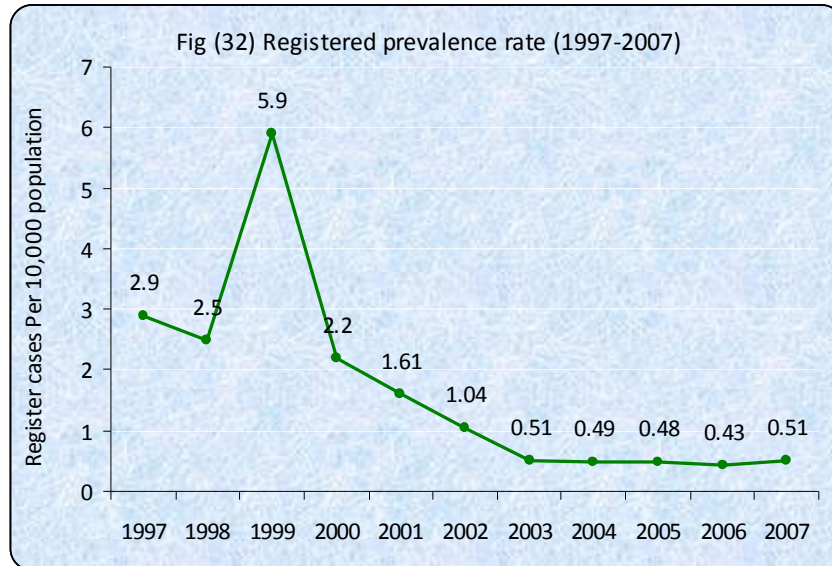


Table (8) Tuberculosis Control (2007)

States and Divisions	TB Case Detection Rate (%)
Kachin	117.55
Kayah	68.68
Kayin	106.47
Chin	35.23
Sagaing	76.75
Tanintharyi	59.39
Bago (East)	83.77
Bago (West)	100.91
Magway	70.76
Mandalay	69.87
Mon	114.10
Rakhine	70.99
Yangon	95.98
Shan (South)	43.96
Shan (North)	48.15
Shan (East)	110.71
Ayeyarwady	105.87
Union	89.70

2.5 Leprosy Elimination Activities

In registered prevalence rate of leprosy from 1997 to 2007, the trend decreases gradually 2000 onwards while the highest prevalence was observed in 1999 which coincides with National Leprosy Elimination Campaign. A rapid decline was from 2000 to 2003 and the prevalence stayed below the elimination level till 2007.



Mainstream of new leprosy cases were found in Sagaing, Bago (West), Bago (East), Shan (South) and Magway whereas the highest was in Sagaing and lowest in Rakhine Figure (33). Mandalay, Ayeyarwaddy, Mon, Shan (North), Yangon, Tanintharyi, Shan (East), Kayah, Kachin, Chin and Rakhine have lower case detection rate than the Union level.

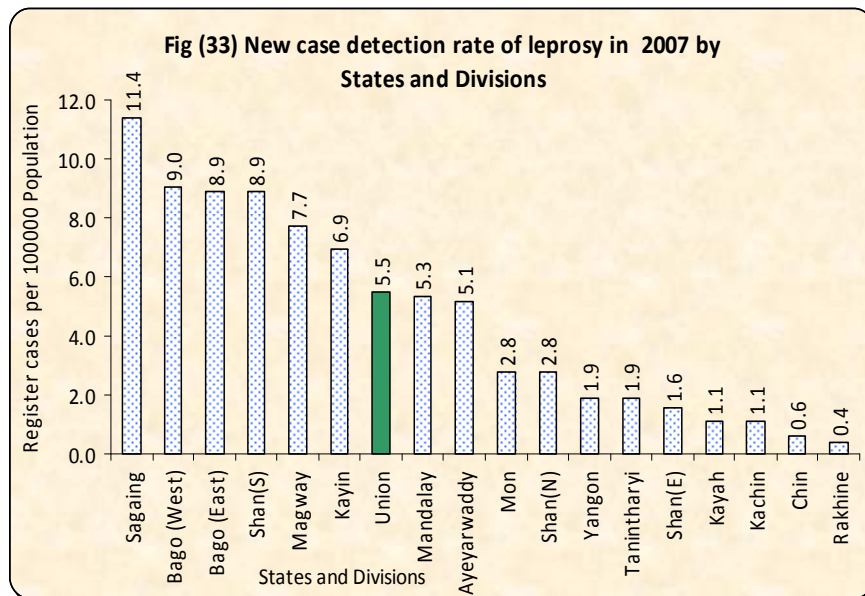
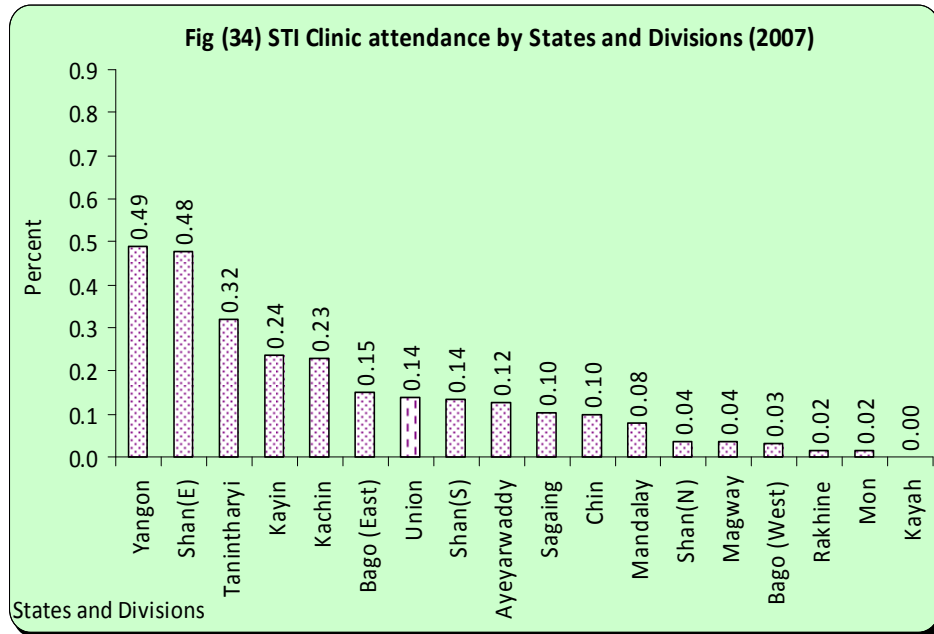


Table (9) Leprosy Elimination Activities (2007)

States and Divisions	Registered Leprosy cases per 10000 Pop: in December	New case detection rate per 100000 Population	No: of cases released from treatment	Percentage of Disability Grade 2 among new cases	Prevalence Detection Ratio
Kachin	0.12	1.10	21	0.00	1.13
Kayah	0.11	1.12	0	0.00	1.00
Kayin	0.64	6.94	71	11.96	0.92
Chin	0.08	0.61	1	0.00	1.33
Sagaing	0.92	11.41	486	3.58	0.80
Tanintharyi	0.38	1.88	20	0.00	2.03
Bago (East)	0.67	8.89	345	11.70	0.75
Bago (West)	0.90	9.04	211	2.45	1.00
Magway	0.84	7.75	226	4.06	1.09
Mandalay	0.48	5.31	431	9.46	0.90
Mon	0.24	2.80	69	12.28	0.86
Rakhine	0.09	0.38	10	0.00	2.50
Yangon	0.24	1.88	125	17.76	1.25
Shan (South)	0.80	8.88	161	1.99	0.90
Shan (North)	0.27	2.76	66	0.00	0.96
Shan (East)	0.30	1.58	12	0.00	1.91
Ayeyarwaddy	0.48	5.15	336	4.96	0.93
Union	0.51	5.48	2591	6.11	0.94

2.6 AIDS/STI Prevention and Control Services

STI clinic attendance rate was the highest in Yangon and Shan (East) and Tanintharyi while lowest rate was found in Kayah.



VDRL positive rate in Primigravida was highest in Kachin, Rakhine, Ayeyarwaddy, Bago (East), Chin, and Yangon (Figure - 35).

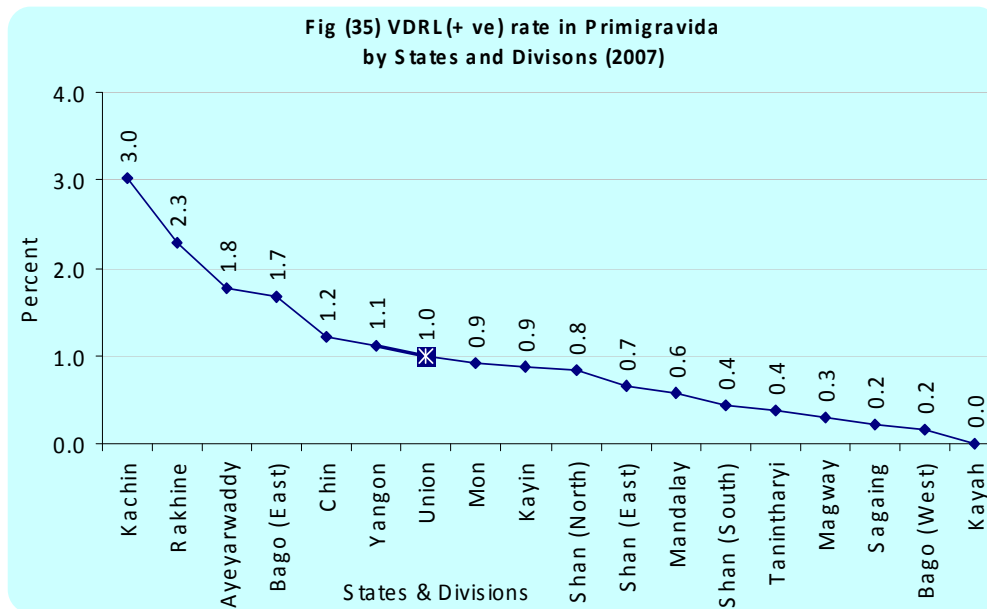


Table (10) AIDS/ STI Prevention and Control (2007)

States and Divisions	VDRL(+ ve) rate in Primigravida (%)	Genital Ulcer Rate (per 100,000 Pop:)	Urethral discharge rate (male) (per 100,000 Pop:)	New STI Patient rate (%)
Kachin	3.03	14.65	7.47	0.45
Kayah	0.00	15.68	9.33	0.25
Kayin	0.88	20.96	25.79	0.48
Chin	1.20	14.13	18.64	0.36
Sagaing	0.22	4.81	2.40	0.22
Tanintharyi	0.38	26.65	16.27	1.69
Bago (East)	1.67	10.28	3.06	0.20
Bago (West)	0.15	4.03	1.46	0.07
Magway	0.30	3.31	1.57	0.07
Mandalay	0.58	6.23	4.36	0.30
Mon	0.91	12.95	5.30	0.18
Rakhine	2.28	3.48	2.63	0.10
Yangon	1.11	7.48	5.69	0.75
Shan (South)	0.43	11.80	8.66	0.47
Shan (North)	0.84	5.68	2.46	0.24
Shan (East)	0.65	22.51	47.47	1.34
Ayeyarwady	1.77	7.32	6.75	0.22
Union	0.99	8.24	6.03	0.33

2.7 Malaria Control Services

Figures (36 & 37) show the percentage of Malaria cases among OPD patients and percentage of Case Fatality rate among inpatients. The highest morbidity and case fatality rate was in Rakhine State. Urban areas such as Yangon and Mandalay had lower malaria case morbidity.

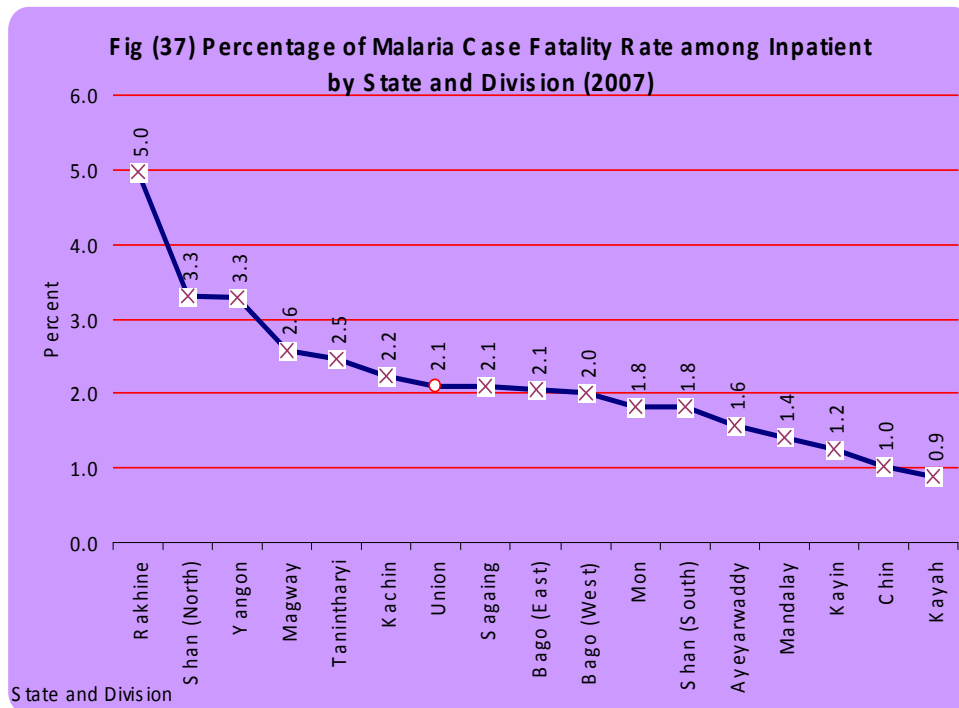
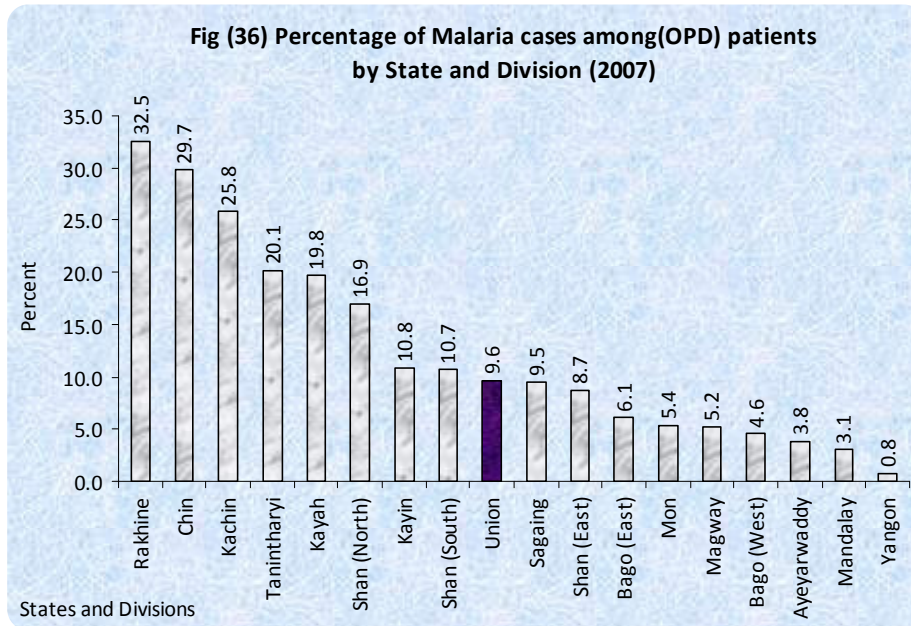
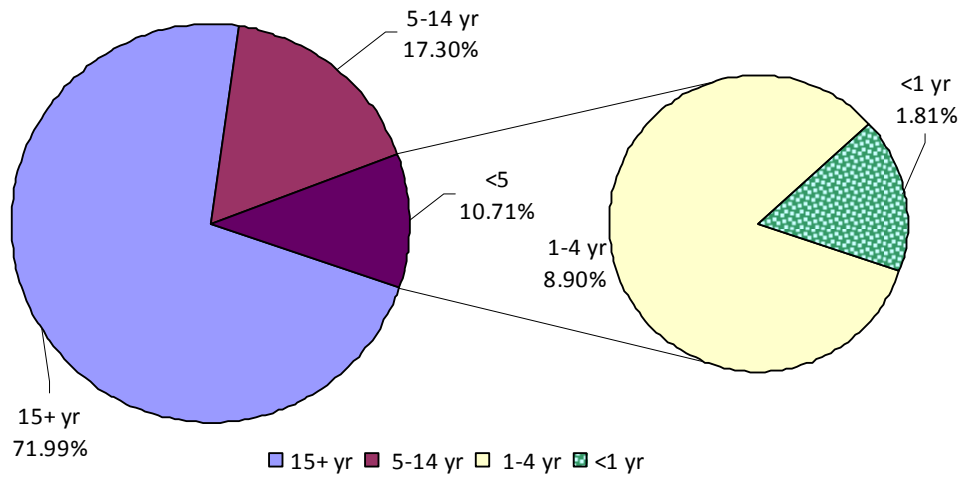
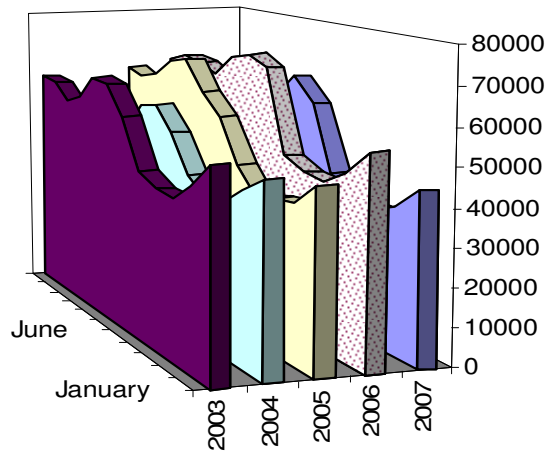


Fig.(38) Malaria cases by age group (2007)



This figure shows age distribution of malaria cases. 10.71% of malaria cases were under five year children and out of those 1.81% were infants.

Fig(39) Distribution of Malaria Cases by year and month, January-2003 to December-2007



This figure represents the seasonal distribution of malaria cases as well as trend by year 2003 to 2007. Malaria cases occurred mostly in July, August and there is decreasing trend from 2003 to 2007.

Table - 11 Malaria Morbidity and Mortality (2007)

States and Divisions	% of Malaria cases among overall out patients	Case Fatality Rate (Inpatient) (%)
Kachin	25.82	2.23
Kayah	19.76	0.88
Kayin	10.81	1.25
Chin	29.74	1.02
Sagaing	9.49	2.09
Tanintharyi	20.13	2.47
Bago (East)	6.11	2.06
Bago (West)	4.55	2.01
Magway	5.24	2.58
Mandalay	3.08	1.41
Mon	5.37	1.83
Rakhine	32.54	4.98
Yangon	0.81	3.30
Shan (South)	10.72	1.82
Shan (North)	16.93	3.31
Shan (East)	8.71	0.83
Ayeyarwady	3.82	1.57
Union	9.62	2.14

2.8 Trachoma Control and Prevention of Blindness

New cases of Eye diseases per 100, 000 populations showed highest in Sagaing and it was as a result of inclusion of data from specialist tour and trachoma control and prevention of blindness centres (Figure -40).

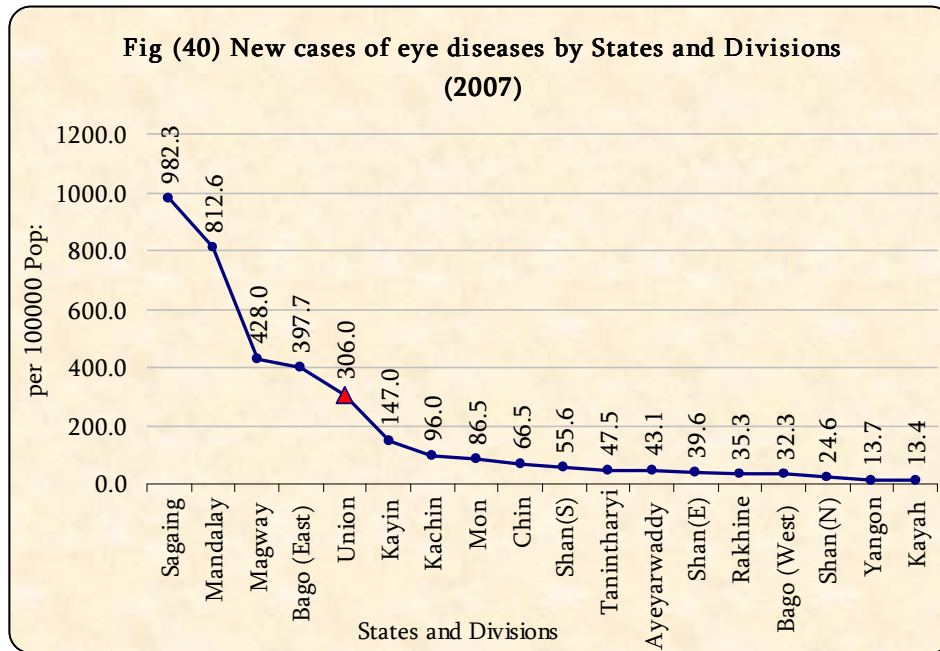
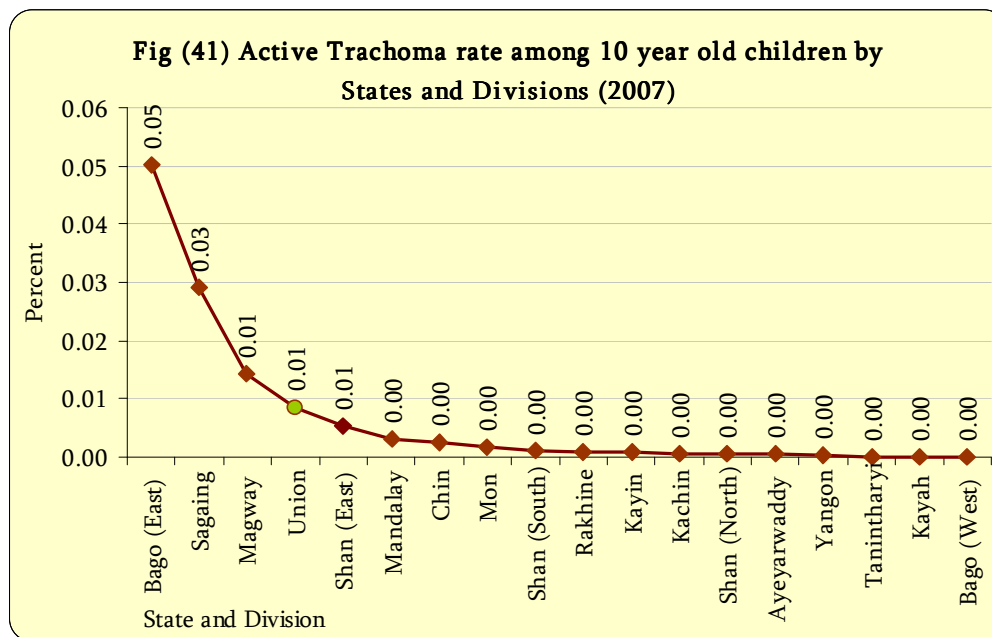


Figure (41) shows active trachoma rate in 2007 by States and Divisions. The majority of active trachoma cases among 10 years old were found in Bago (East).



In percentage of people with blindness among population, the highest number of blind people was found in Sagaing. (Figure -42).

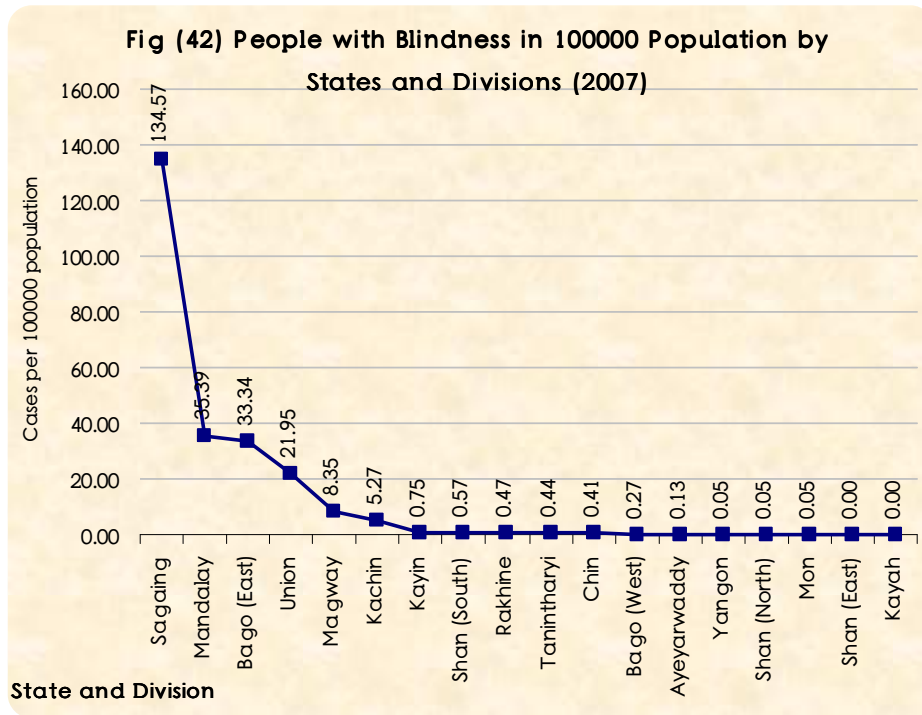


Table - (12) Trachoma Control and Prevention of Blindness (2007)

States and Divisions	1. New cases of eye diseases per 100,000 Pop:	2. Active trachoma rate among 10 year old children (%)	3. People with blindness per 100000 population	4. New cases of ophthalmia neonatorum per 1000 Live Birth
Kachin	96.00	0.00	5.27	0.04
Kayah	13.44	0.00	0.00	0.00
Kayin	146.96	0.00	0.75	0.05
Chin	66.17	0.00	0.41	0.20
Sagaing	982.30	0.03	134.57	0.08
Tanintharyi	47.55	0.00	0.44	0.00
Bago (East)	397.71	0.05	33.34	0.09
Bago (West)	32.35	0.00	0.27	0.13
Magway	428.00	0.01	8.35	0.05
Mandalay	812.61	0.00	35.39	0.21
Mon	86.45	0.00	0.05	0.26
Rakhine	35.29	0.00	0.47	0.17
Yangon	13.65	0.00	0.05	0.14
Shan (South)	55.64	0.00	0.57	0.26
Shan (North)	24.55	0.00	0.05	0.05
Shan (East)	39.58	0.01	0.00	0.00
Ayeyarwady	43.10	0.00	0.13	0.07
Union	305.96	0.01	21.95	0.12

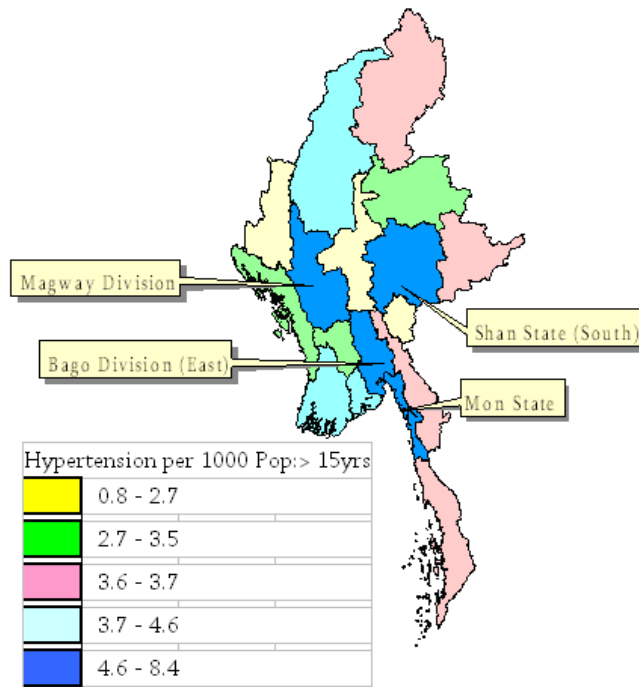
Note : Data obtained from Basic Health Workers who made diagnosis in the community

III. HOSPITAL CARE SERVICES

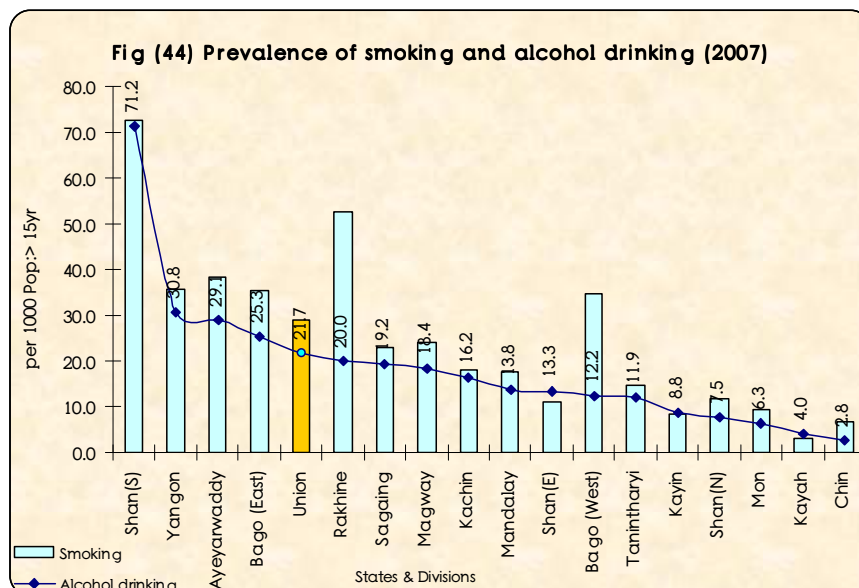
3.1 Cardiovascular Diseases Control

Reported prevalence of hypertension for year 2007 according to HMIS was higher in Bago (East), Magway, Mon and Shan (South) Figure (43).

Fig (43) Prevalence of hypertension By States and Divisions (2007)

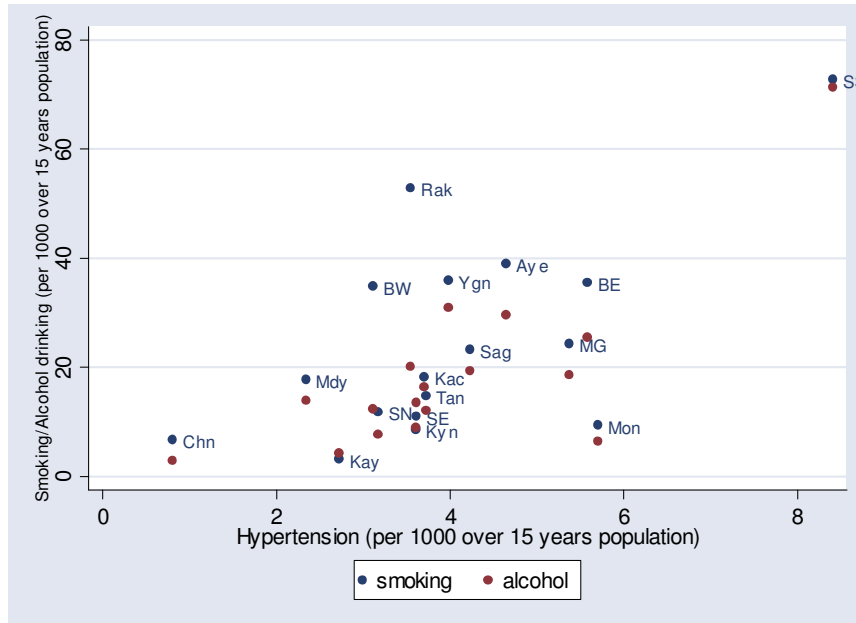


In figure (44), prevalence of smoking at Union level is 29.2% which is 1% higher than last year data.



Prevalence of smoking is highest in Shan (South), second highest in Rakhine and third highest in Bago (West) while alcohol consumption is also highest in Shan (South).

Fig(45) Scatter distribution of States and Divisions according to smoking, alcohol drinking and Hypertension (2007)



(Kac = Kachin, Kay = Kayah, Kyn = Kayin, Chn = Chin, Sag = Sagaing, Tan = Tanintharyi, BE = Bago(E), BW = Bago(W), MG = Magway, Mdy= Mandalay, Rak = Rakhine, Ygn = Yangon, SS = Shan(S), SN = Shan(N), SE = Shan(E), Aye = Ayeyarwady)

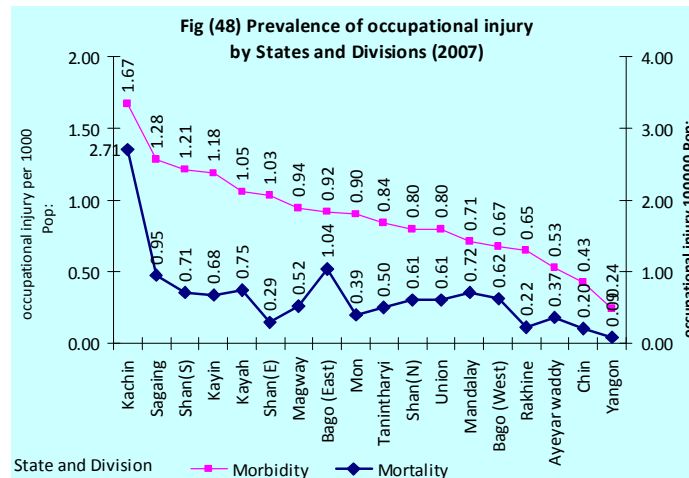
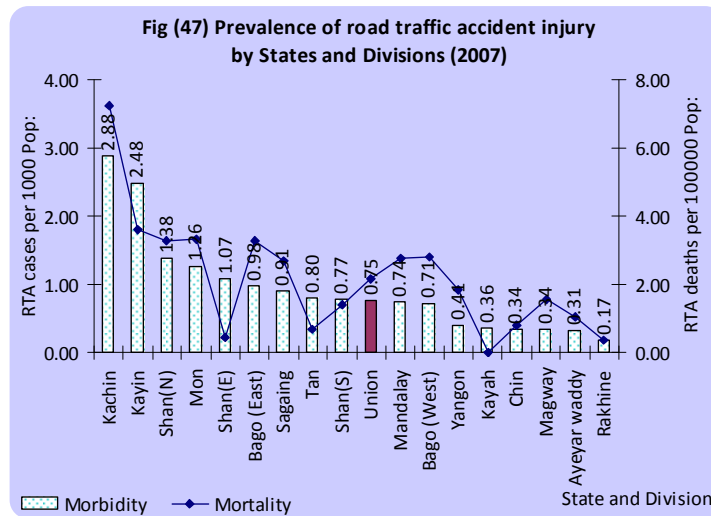
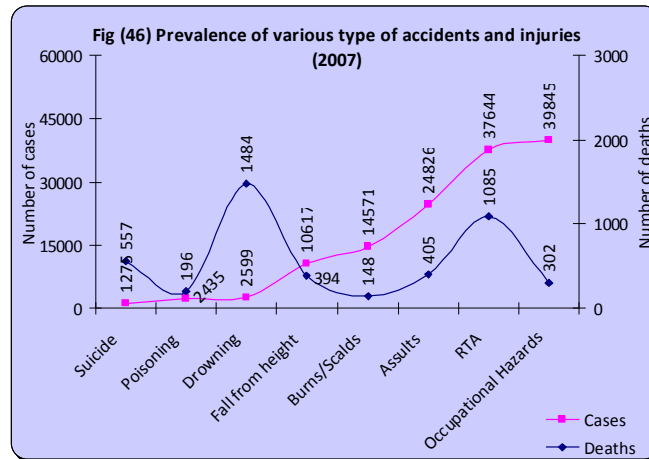
Table (13) Detection of Cardiovascular Diseases and risk behaviors (2007)			
States and Divisions	1. Number of hypertension cases per 1000 Pop:> 15 yrs	2. Number of smokers per 1000 Pop:> 15 yrs	3. Number of drinkers per 1000 Pop:> 15 yrs
Kachin	3.7	18.1	16.2
Kayah *	2.7	3.0	4.0
Kayin	3.6	8.4	8.8
Chin *	0.8	6.5	2.8
Sagaing	4.2	23.1	19.2
Tanintharyi	3.7	14.6	11.9
Bago (East)	5.6	35.4	25.3
Bago (West)	3.1	34.7	12.2
Magway	5.4	24.2	18.4
Mandalay	2.4	17.6	13.8
Mon	5.7	9.2	6.3
Rakhine	3.6	52.7	20.0
Yangon	4.0	35.8	30.8
Shan (South)	8.4	72.6	71.2
Shan (North)	3.2	11.6	7.5
Shan (East)	3.6	10.9	13.3
Ayeyarwaddy	4.6	38.4	29.1
Union	4.2	29.2	21.7

Note : Data is obtained from health facilities where midwives are asking history of risk behaviours and taking blood pressure

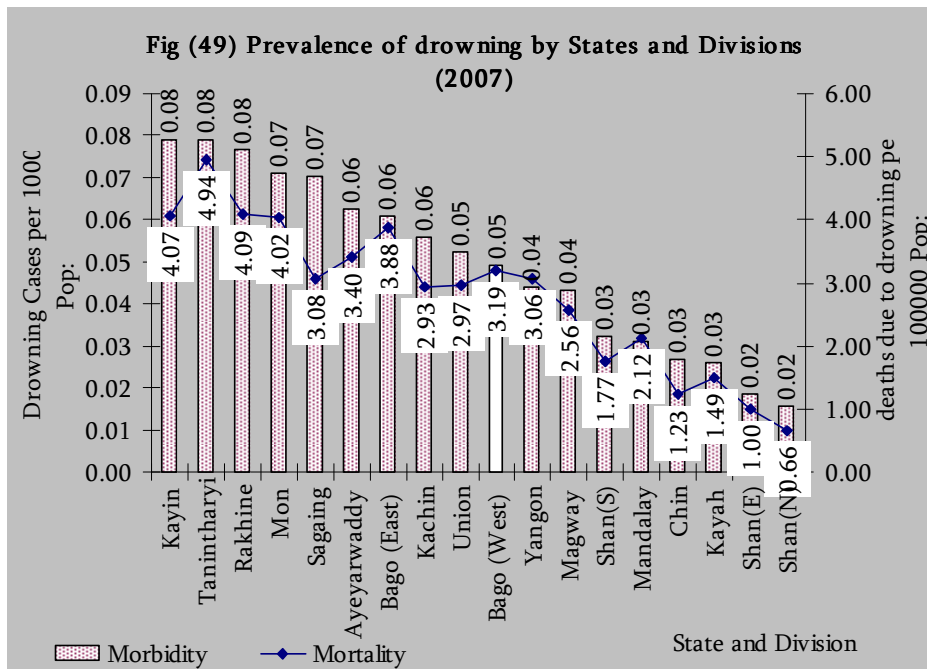
* Returns received are not adequate

3.2 Accident and Injury Prevention

Figures (46 – 49) show the different patterns of injury in the country. Commonest injuries occurred in the communities were occupational, road traffic injuries and assaults whereas high mortality was in drowning and road traffic injuries.



According to Figure (47), higher prevalence of RTA injuries is in Kachin, Kayin, Shan (North) and Mon and also was high mortality due to RTA in these areas. Prevalence of Occupational injury was highest both Morbidity and Mortality in Kachin and lowest both in Yangon Figure (48). In drowning prevalence, the morbidity and mortality is higher in coastal regions such as Tanintharyi, Rakhine, Kayin, Mon and Ayeeyarwaddy Figure (49).



Fig(50) Cases and Deaths of different types of injury in highest occurrence States and Divisions (2007)

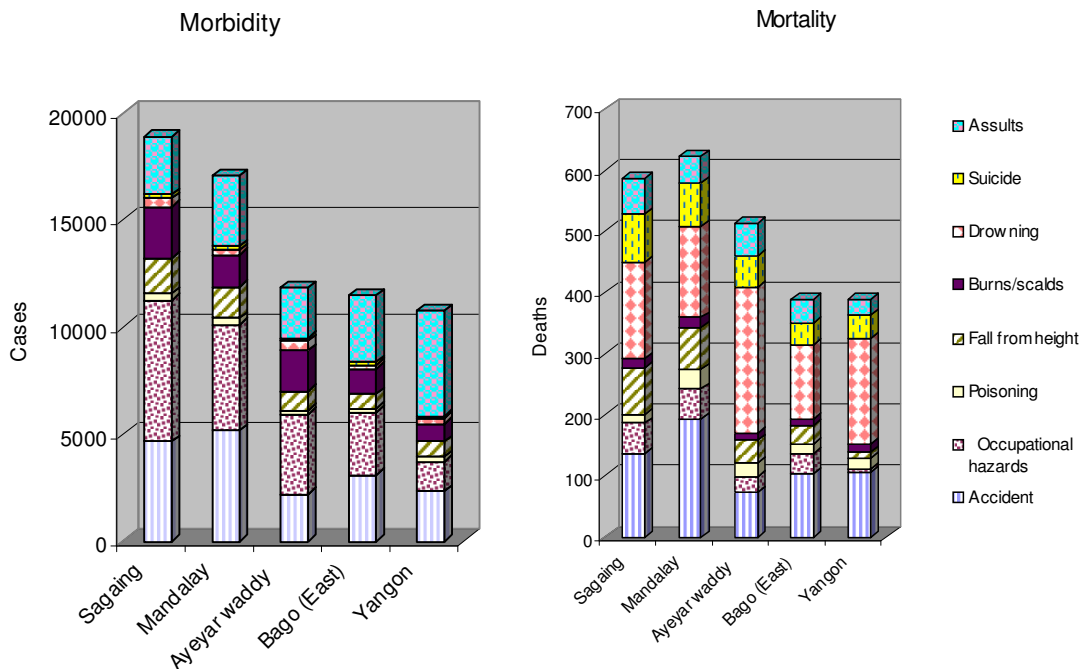


Table - (14) Prevention of Accident and Injury (2007)

States and Divisions	Road Traffic Accident injury		Occupational injury		Poisoning		Fall from height		Thermal injury		Drowning		Suicide		Assault	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Kachin	2.9	7.2	1.7	2.7	0.1	0.3	0.3	1.5	0.3	0.2	0.1	2.9	0.0	1.1	0.6	1.0
Kayah	0.4	0.0	1.1	0.7	0.0	0.0	0.1	0.4	0.1	0.4	0.0	1.5	0.0	0.7	0.0	0.0
Kayin	2.5	3.6	1.2	0.7	0.1	0.4	0.5	1.1	0.4	0.5	0.1	4.1	0.1	2.9	0.7	0.5
Chin	0.3	0.8	0.4	0.2	0.0	0.2	0.3	0.8	0.1	0.0	0.0	1.2	0.0	1.0	0.2	0.2
Sagaing	0.9	2.7	1.3	1.0	0.1	0.3	0.3	1.5	0.5	0.3	0.1	3.1	0.0	1.5	0.5	1.1
Tanintharyi	0.8	0.7	0.8	0.5	0.0	0.4	0.2	0.6	0.2	0.4	0.1	4.9	0.0	1.8	0.3	1.6
Bago (East)	1.0	3.3	0.9	1.0	0.1	0.5	0.2	1.0	0.4	0.3	0.1	3.9	0.0	1.1	1.0	1.2
Bago (West)	0.7	2.8	0.7	0.6	0.1	1.0	0.2	0.7	0.3	0.2	0.0	3.2	0.0	1.7	0.8	2.0
Magway	0.3	1.6	0.9	0.5	0.0	0.3	0.2	1.3	0.3	0.4	0.0	2.6	0.0	1.2	0.3	0.8
Mandalay	0.7	2.8	0.7	0.7	0.0	0.5	0.2	1.0	0.2	0.2	0.0	2.1	0.0	1.0	0.5	0.6
Mon	1.3	3.3	0.9	0.4	0.0	0.5	0.3	0.8	0.4	0.5	0.1	4.0	0.0	1.1	0.4	0.4
Rakhine	0.2	0.4	0.6	0.2	0.1	0.3	0.2	0.3	0.3	0.3	0.1	4.1	0.0	1.3	0.4	1.1
Yangon	0.4	1.8	0.2	0.1	0.0	0.3	0.1	0.2	0.2	0.2	0.0	3.1	0.0	0.7	0.9	0.5
Shan (South)	0.8	1.4	1.2	0.7	0.1	0.6	0.2	0.8	0.3	0.3	0.0	1.8	0.0	1.3	0.3	0.3
Shan (North)	1.4	3.3	0.8	0.6	0.0	0.4	0.2	0.3	0.2	0.5	0.0	0.7	0.0	0.5	0.2	0.1
Shan (East)	1.1	0.4	1.0	0.3	0.0	0.0	0.2	0.0	0.2	0.4	0.0	1.0	0.0	1.0	0.2	0.6
Ayeyarwady	0.3	1.0	0.5	0.4	0.0	0.3	0.1	0.5	0.3	0.2	0.1	3.4	0.0	0.7	0.3	0.8
Union (3)	0.8	2.2	0.8	0.6	0.0	0.4	0.2	0.8	0.3	0.3	0.1	3.0	0.0	1.1	0.5	0.8
Union (4)	37644	1085	39845	302	2435	196	10617	394	14571	148	2599	1484	1275	557	24826	405

- (1) Morbidity rate per 1000 Population
- (2) Mortality rate per 100,000 Population
- (3) Rate for Union
- (4) Actual number for Union

3.3 Mental Health

Data for six mental and neurological disorders: Psychosis, Depression, Anxiety, Alcohol Use Disorder, Epilepsy and Mental Retardation were presented in Table (15). In Figure (51), alcohol use disorder was depicted as commonest and observed high number of cases in Magway, Sagaing, Bago (East) and Mandalay. According to the Health management Information System (HMIS), the reported data are from community based public health facilities and excludes data from some specialist hospitals.

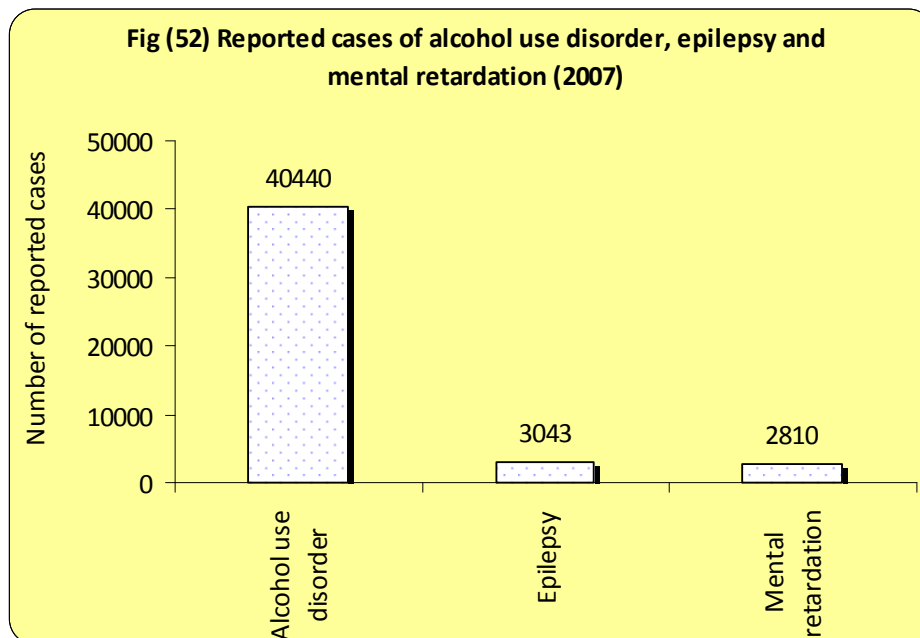
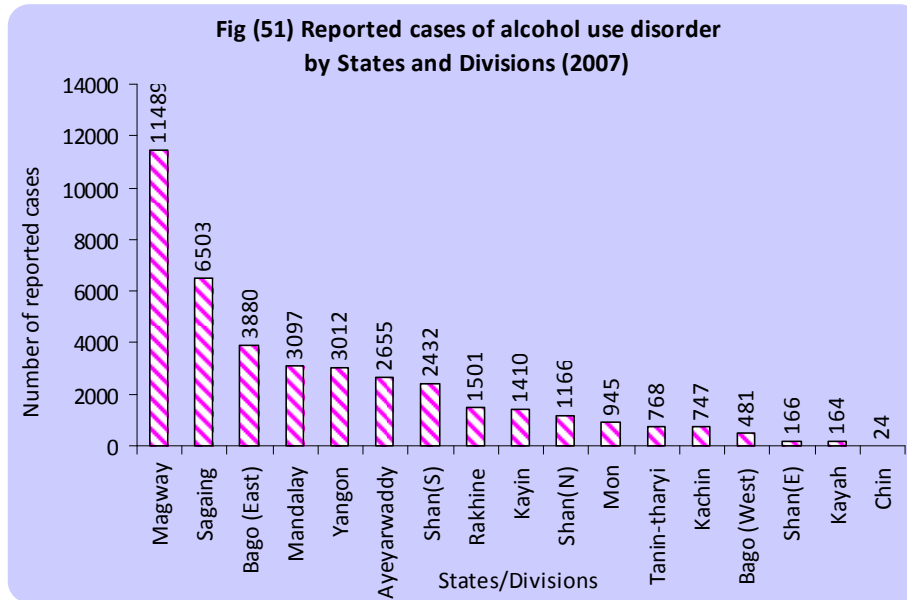


Table (15) Detection of Mental illness (2007)						
States and Divisions	Number of reported cases					
	1. Psychosis	2. Depression	3. Anxiety Neurosis	4. Alcohol use disorder	5. Epilepsy	6. Mental retardation
Kachin	264	47	61	747	70	86
Kayah	14	0	63	164	2	3
Kayin	151	149	160	1410	114	71
Chin	60	21	7	24	15	29
Sagaing	1254	745	786	6503	418	350
Tanintharyi	263	259	123	768	67	75
Bago (East)	310	266	326	3880	140	159
Bago (West)	169	95	119	481	40	87
Magway	720	555	733	11489	293	504
Mandalay	392	264	231	3097	133	207
Mon	162	96	148	945	61	47
Rakhine	407	572	444	1501	127	233
Yangon	340	672	797	3012	200	326
Shan (South)	299	373	386	2432	151	289
Shan (North)	76	34	74	1166	53	50
Shan (East)	15	51	64	166	46	14
Ayeyarwaddy	879	277	461	2655	1113	280
Union	5775	4476	4983	40440	3043	2810

Note : Midwives made diagnosis by taking history from friends and neighbors.

IV. ENVIRONMENTAL HEALTH SERVICES

4.1 Community Sanitation

As a reflection of regular National Sanitation Week Campaigns, access to improved sanitary latrine had markedly increased from 1997 to 2007 and it became stable around 80 % beyond 2000. Among the States and Divisions, access to improved sanitary latrines was highest in Yangon (91.9%) and Lowest in Rakhine (60.1%).

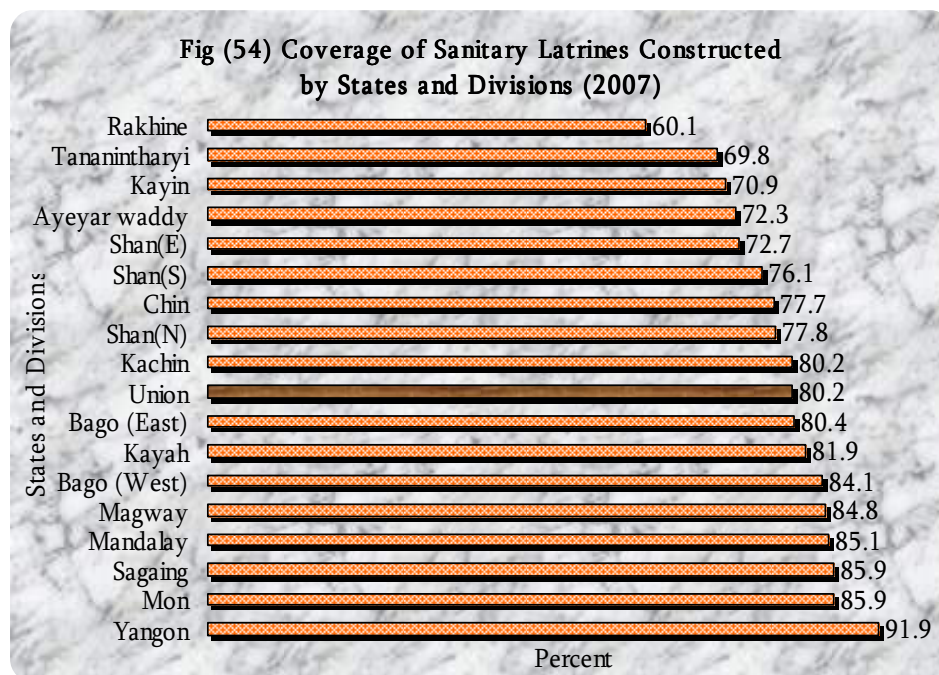
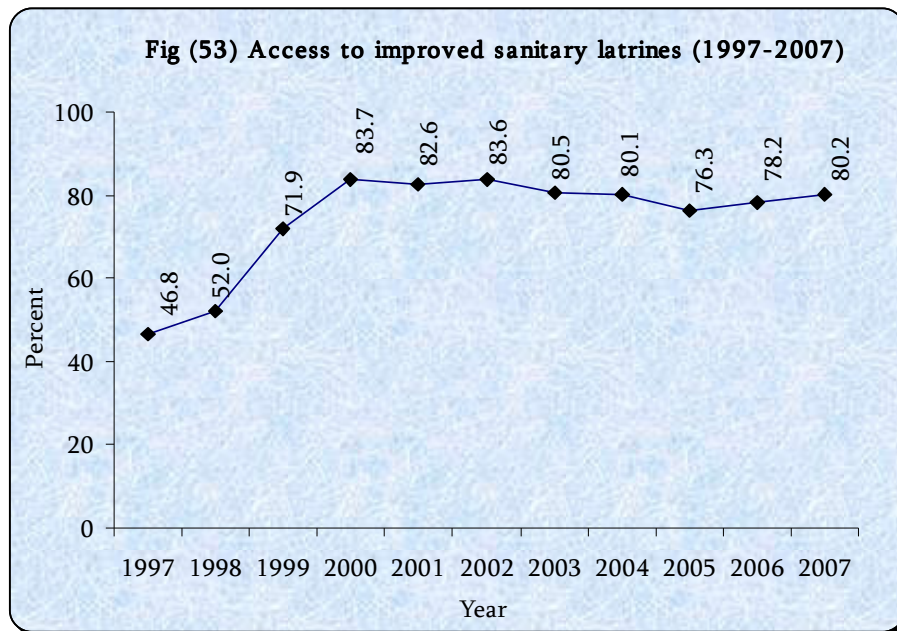


Table (16) Environmental Sanitation (2007)

States and Divisions	Freq: of mass Environmental Sanitation activities done per ward and village in a year	Access to improved sanitary latrines (%)			Freq: of food stalls inspection in a year
		Union	Urban	Rural	
Kachin	2.86	80.18	78.41	81.45	2100
Kayah	0.59	81.85	91.18	76.99	36
Kayin	2.09	70.91	80.61	69.21	463
Chin	0.88	77.30	83.17	76.51	61
Sagaing	3.03	85.93	92.38	84.76	1960
Tanintharyi	5.77	69.79	72.26	68.93	2604
Bago (East)	4.25	80.43	82.80	79.86	1497
Bago (West)	2.93	84.15	82.72	84.46	2036
Magway	4.03	85.07	84.98	85.09	2304
Mandalay	3.43	85.05	90.94	83.68	3494
Mon	12.13	85.95	89.70	84.76	5874
Rakhine	2.95	60.35	70.43	58.42	2853
Yangon	3.95	91.93	95.65	85.01	5138
Shan (South)	1.23	76.09	84.34	73.91	832
Shan (North)	0.95	77.83	79.70	77.47	1305
Shan (East)	0.70	72.74	90.02	68.65	424
Ayeyarwaddy	2.45	71.72	74.84	71.20	4263
Union	2.92	80.22	87.35	78.03	37244

V. HEALTH EDUCATION SERVICES

The Health Education Services were provided to the community with the concept to promote the health status of the country and to strengthen supportive environment for adoption of healthy life style. The four areas of health education activities were family health care, disease related health problems, immunization and environmental sanitation. In each township, 309 health education activities were done monthly whilst the commonest activity performed by BHS was discussion on immunization.

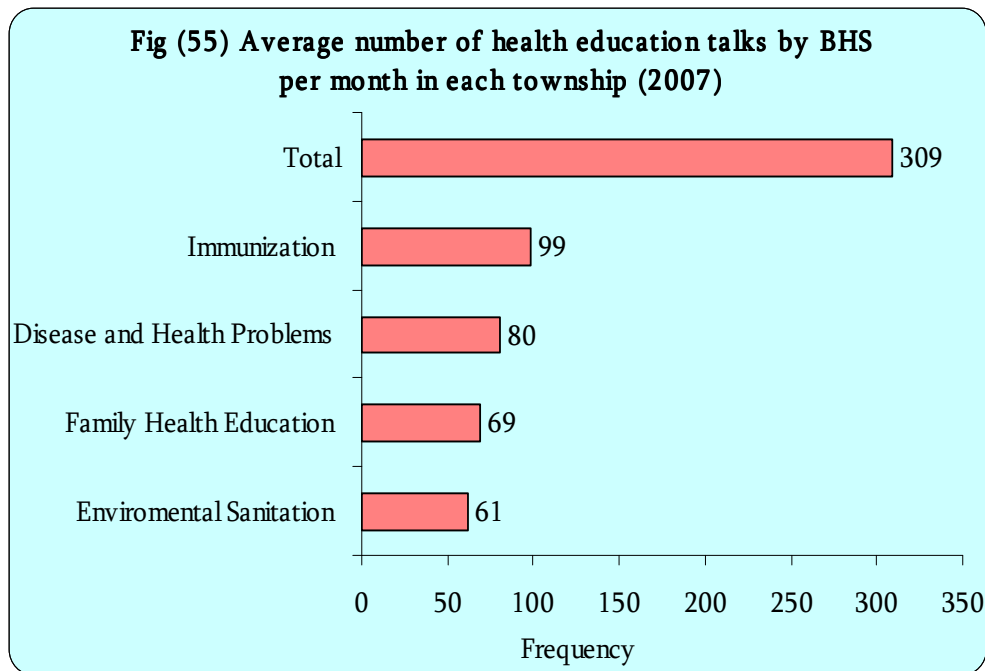


Table (17) Health Education (2007)

States and Divisions	Family Health		Immunization		Disease and Health Problem		Environmental Sanitation	
	Average number of talk per month	Average number of talk per BHS	Average number of talk per month	Average number of talk per BHS	Average number of talk per month	Average number of talk per BHS	Average number of talk per month	Average number of talk per BHS
Kachin	53.6	21.5	59.5	23.8	50.8	20.4	41.7	16.7
Kayah	6.6	2.7	13.5	5.6	7.0	2.9	4.3	1.8
Kayin	43.5	8.3	70.9	13.4	56.1	10.6	50.5	9.6
Chin	25.0	4.8	23.1	4.4	17.9	3.4	26.3	5.0
Sagaing	53.8	13.5	92.5	23.2	73.5	18.4	48.6	12.2
Tanintharyi	63.4	14.6	84.9	19.6	72.2	16.7	62.9	14.5
Bago (East)	117.5	22.4	136.2	25.9	107.4	20.4	89.8	17.1
Bago (West)	90.9	17.9	111.4	21.9	100.0	19.6	81.6	16.0
Magway	56.4	10.4	139.0	25.6	82.9	15.3	71.6	13.2
Mandalay	79.7	16.6	131.9	27.4	111.2	23.1	77.1	16.0
Mon	148.8	26.6	141.2	25.3	180.4	32.3	160.1	28.7
Rakhine	91.4	19.7	139.0	30.0	127.1	27.4	73.0	15.7
Yangon	64.8	26.5	63.8	26.1	69.3	28.3	48.7	19.9
Shan (South)	68.0	24.0	93.9	33.1	72.1	25.4	41.4	14.6
Shan (North)	30.5	14.2	39.5	18.3	29.5	13.7	21.0	9.7
Shan (East)	20.5	10.8	24.5	12.9	25.8	13.6	16.7	8.8
Ayeyarwaddy	118.8	17.3	197.9	28.9	124.7	18.2	117.2	17.1
Union	68.7	16.9	98.6	24.3	80.4	19.8	61.4	15.1

ABBREVIATIONS

AIDS/STI	=	Acquired Immune Deficiency Syndrome/ Sexually Transmitted Infection
HMIS	=	Health Management Information System
MW	=	Midwife
AMW	=	Auxiliary Midwife
TTBA	=	Trained Traditional Birth Attendant
ORT	=	Oral Rehydration Therapy
DPT	=	Diphtheria, Pertussis, Tetanus
TT	=	Tetanus Toxoid
OPD	=	Out Patient Department
BHS	=	Basic Health Staff
NHP	=	National Health Plan
AN	=	Antenatal
RHC	=	Rural Health Center
PN	=	Postnatal
ARI	=	Acute Respiratory Tract Infection
BCG	=	Bacillus Calmette Guerin
RTA	=	Road Traffic Accident
TB	=	Tuberculosis
S/D	=	States and Divisions