



Ministry of Health
The Republic of the Union of Myanmar



Public Health Statistics 2012

Department of Health Planning in collaboration with Department of Health
May 2014, Nay Pyi Taw, Myanmar
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May 2014

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PREFACE

As information is the life-blood of any planning and management process, Health Information Division, Department of Health Planning, has been exploring precious information on public health since 1996 with the collaboration of Department of Health. This public health information system is standardized by the use of minimal essential data sets and data dictionary for all BHS.

In order to make compactable with the changing epidemiology of diseases and priorities, Health Management Information System updated the data dictionary for two times, in 2005 and in 2012 respectively. Only after pretesting of the new data dictionary in two townships with the consensus of the project managers and BHS on data definition, central level meeting was conducted for consensus of State/ Region Health Directors. This annual public health statistics is the very first result of data collection using the newly revised data dictionary.

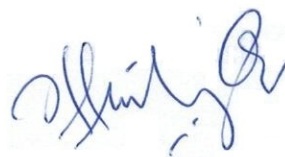
Like in other revisions of data dictionary, all BHS have to record the data immediately after each and every health care service. Prevention of deafness, Training Information and Health Care Financing are newly introduced projects to be part of routine Health Information System. Regarding the report forms, there are mainly three form; Form 1 for monthly use, Form 2 for quarterly use and 3 for annual use. Then, the forms are split into (A) and (B); the former for individual use and the latter for institutional use.

The main theme of the new data dictionary is “Practice it, Record it, Report it and Use it”. And this data as well as information is meant to use not only at central or State/ Region level but also to individual level.

To make sure that the data definitions are standardized and consistent, the new data dictionaries were distributed to all public health staff. In addition, training of trainers was conducted for all States/ Regions and trainings of all BHS in some townships. The quality of data is very much depending on the knowledge, attitude and practice of all health staff. Moreover, field monitoring and feedback by the supervisors plays a vital role.

This annual public health statistics report was produced as a result of all health staff who understood, valued and practiced well on each items of data sets and worth every health service given to the public and the effort of all supervisors, statisticians and expert technicians working on public health information system.

I would like to acknowledge everyone who involved from data collection process to information transmission process for their hard works. And I am sure that this newly revised data dictionary and data sets would be more useful and helpful to all decision makers, project managers and all other users to some extent.



Dr. Htun Naing Oo
Director General
Department of Health Planning

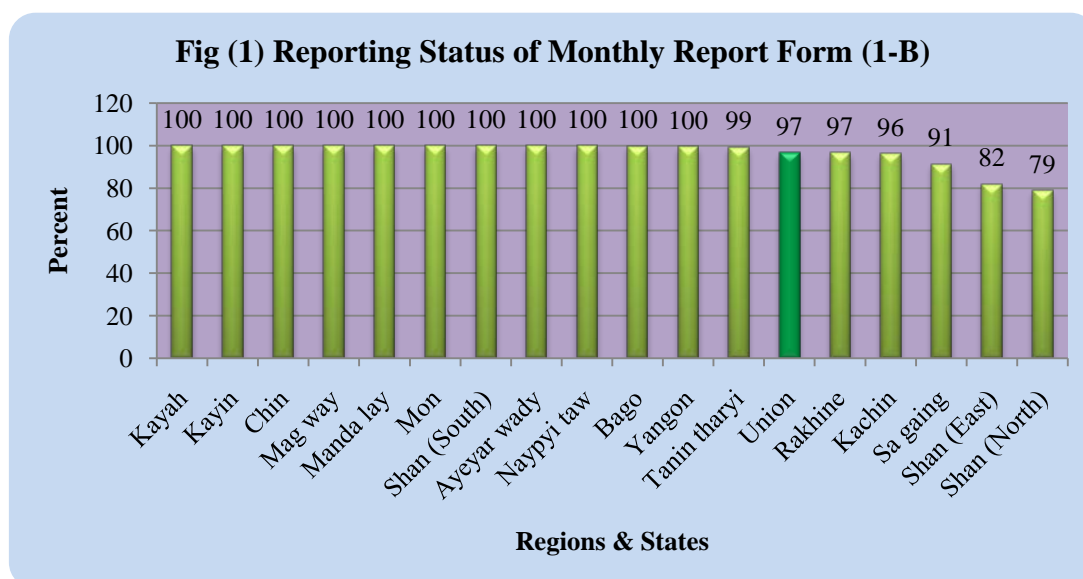
ABBREVIATIONS

AIDS/ STI	Acquired Immune Deficiency Syndrome/ Sexually Transmitted Infection
AMW	Auxiliary Midwife
ANC	Ante-natal Care
ARI	Acute Respiratory Infection
BCG	Bacille Calmette-Guerin
BHS	Basic Health Staff
CEU	Central Epidemiological Unit
CHW	Community Health Worker
DHF	Dengue Hemorrhagic Fever
DPT	Diphtheria Pertussis Tetanus
ES	Environmental Sanitation
HA	Health Assistant
HE	Health Education
HMIS	Health Management Information System
LB	Live Birth
LHV	Lady Health Visitor
MCH	Maternal and Child Health
MO	Medical Officer
MW	Midwife
ORT	Oral Rehydration Therapy
PHS	Public Health Supervisor
SMO	Station Medical Officer
TB	Tuberculosis
THN	Township Health Nurse
THO	Township Health Officer
TMO	Township Medical Officer
TT	Tetanus Toxoid
TTBA	Trained Traditional Birth Attendance
WCHD	Women and Child Health Development

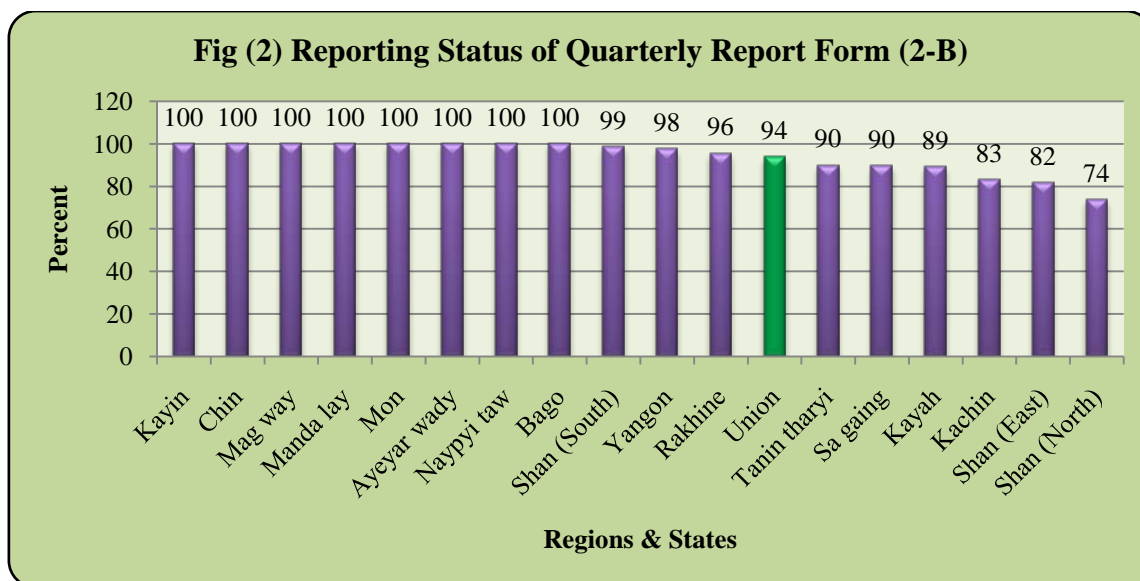
PUBLIC HEALTH INFORMATION SYSTEM

Reporting Status of Public Health Report Forms and Distribution of Basic Health Staff & Voluntary Health Workers

According to newly revised data set and data dictionary, the report forms used in public health information system are mainly divided into three types: monthly report form (1-A/B), quarterly report forms (2-A/B) and annual report form (3-A/B).

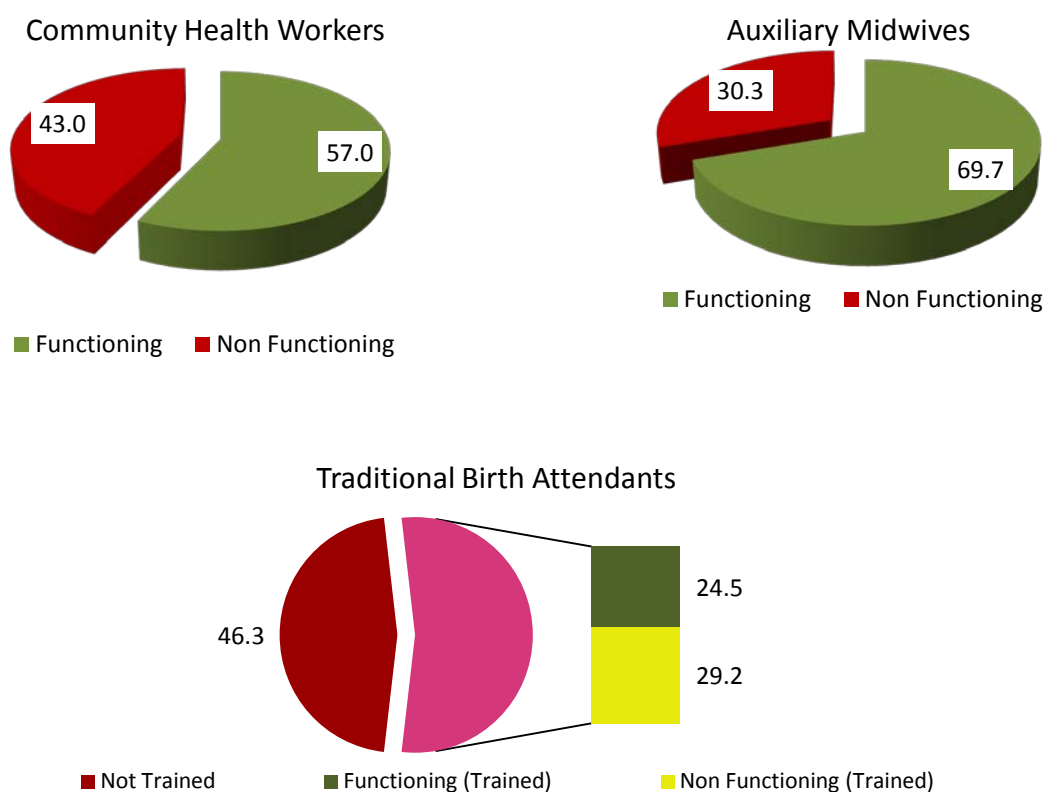


Regarding on the reporting status of Monthly Report Form (1-B), nearly two third of the states/ regions got cent percent reporting. Out of 17 states/ regions, Shan (North) had the lowest reporting percent in 2012 (79 percent). Sagaing and Kachin were also below union level reporting. Overall reporting status of the monthly report forms of the country was found to be 97 percent for the year 2012. (Fig. 1)















On viewing the reporting status of Quarterly Report Form (2-B), 8 out of 17 states/regions had 100% completeness. Like in Monthly Reporting status, Shan (North) and Shan (East) had the lowest reporting and also, Kachin and Kayah states got less than 90 percent reporting. In addition, Sagaing and Tanintharyi were also below union. (Fig. 2)

Fig (3) Percent Distribution of Functioning and Non-functioning Trained Voluntary Health Workers



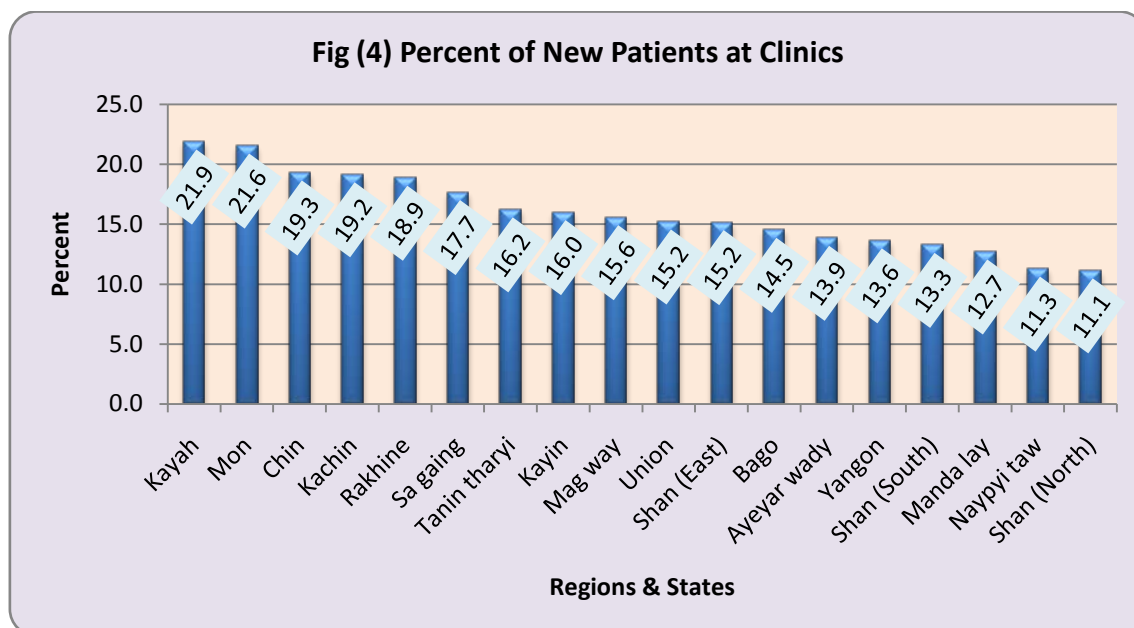
In the above figure, more than half of the trained voluntary health workers were functioning. Among them, most of the auxiliary midwives (69.7%) were functioning with 30.3% drop-out. Additionally, only 24.5% of traditional birth attendants were trained and functioning.

Table (1) Distribution of appointed Health Manpower at Township Level

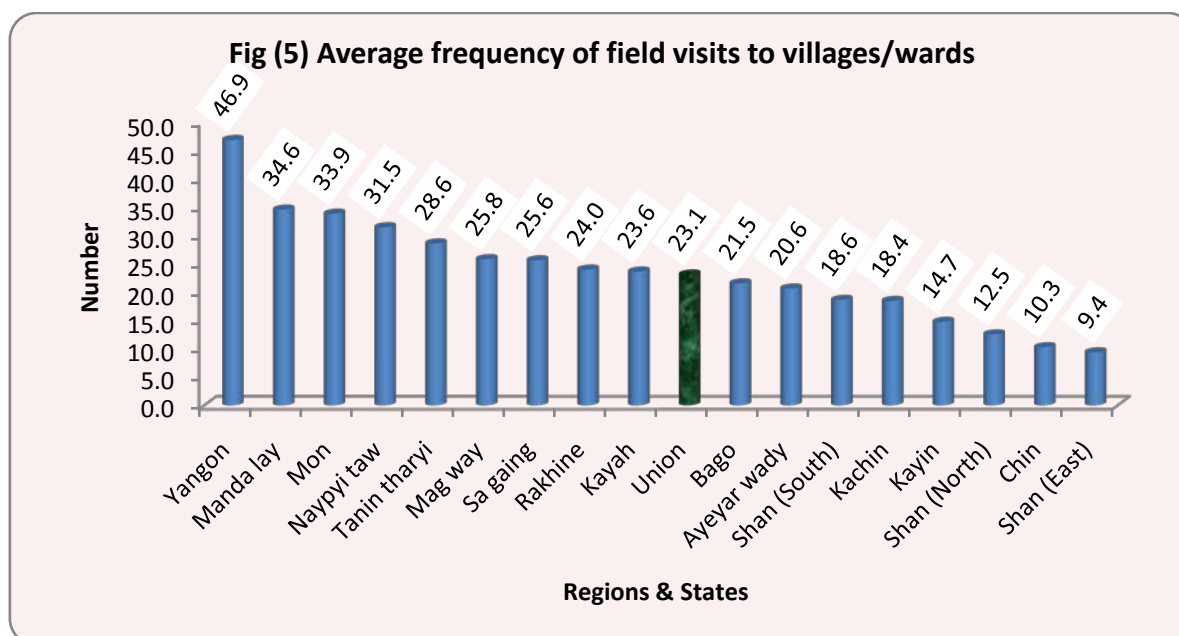
No	Title	Appointed Percent
1	Medical Superintendent	 55.6
2	TMO/ THO/ SMO	 79.3
3	MO	 47.7
4	Disease Control MO	 76.3
5	Dental Surgeon	 78.1
6	THN	 79.4
7	HA	 91.8
8	LHV	 96.1
9	Nurse	 53.2
10	Disease Control Staff	 80.0
11	MW	 90.0
12	PHS I & II	 60.2

I. COMMUNITY HEALTH CARE SERVICES

1. Primary Medical Care and Referral of Patients



Percent of new patients at clinics reflects the utilization of primary health care services by public given by basic health staff. According to above figure, overall percent of general clinic attendances for union was found to be 15.2% with highest percent in Kayah and Mon States (21.9 and 21.6 respectively) and lowest percent in Shan (North) and Naypyitaw Union Territory (11.1 and 11.3 percent each).



The average frequency of field visits to villages/ wards shows the field performance of BHS in preventive and curative medical services. During the year 2012, the average frequency was found to be 23.2 for the whole country. Nearly two-third of the 17

States/ Regions was above the union level and Yangon stood the highest place with 46.9 times of field visits to villages and wards. Shan (East) had the lowest value with only 9.4 visits. (Fig 5)

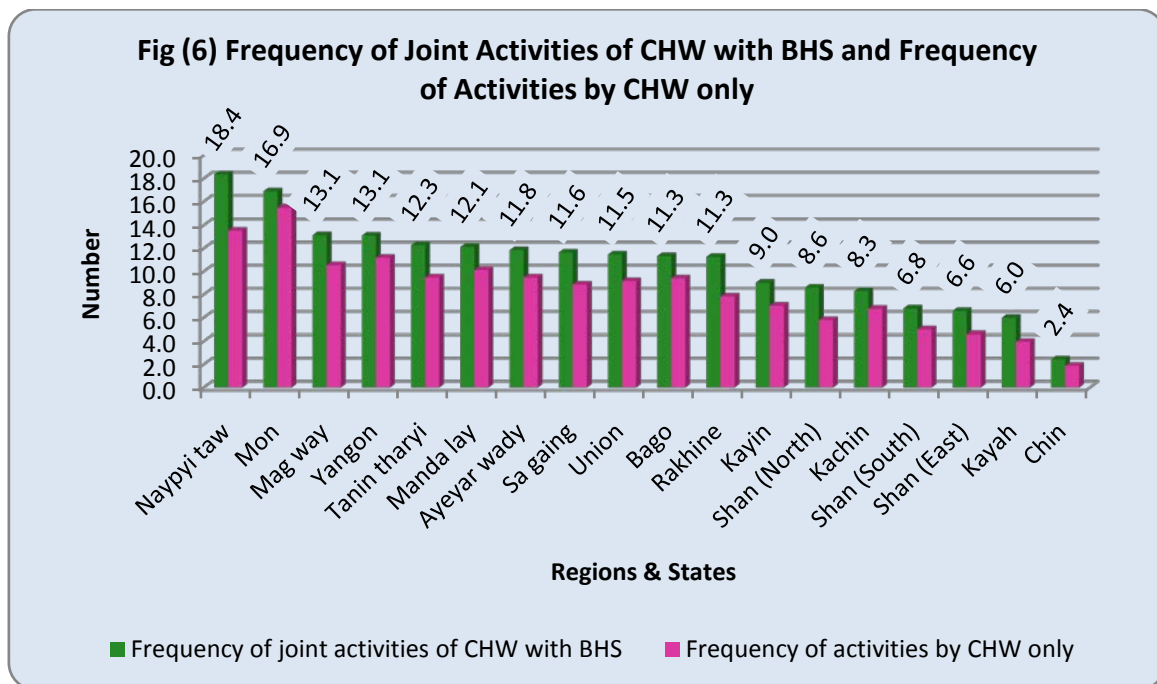


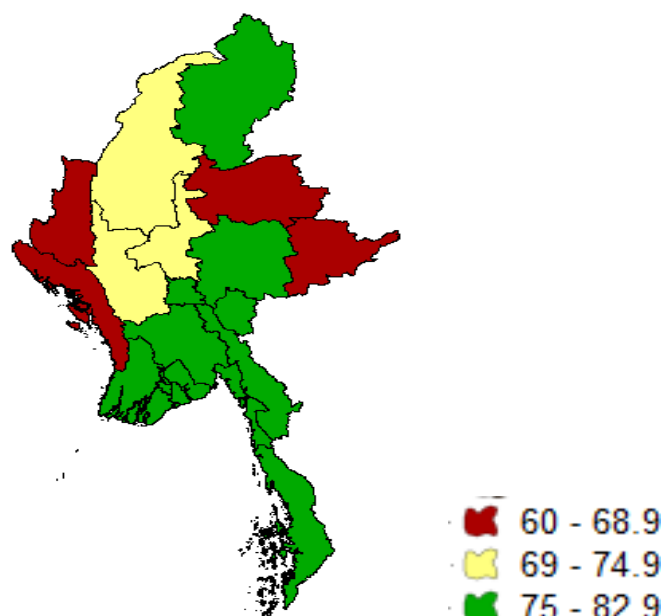
Figure (6) shows frequency of joint activities of community health workers with BHS and that of activities carried out by community health workers only. The frequency of joint activities was greatest in Naypyitaw (18.4) and Mon State (16.9) and smallest in Chin State (2.4). Likewise, the activities by CHW were found to be highest in Mon State and Naypyitaw and lowest in Chin State.

Table (2) Indicators for Primary Medical Care and Referral of Patients

Primary Medical Care & Referral Project (2012)							
	Activities of Basic Health Staff					Activities of Community Health Worker	
Regions and States	% of new patients at the clinic	Avg. number of visits by each patient	Avg. number of field visits to villages/wards	Total number of attendances during field visits	% of patients referred to higher levels	Avg. number of joint activities with BHS (Freq:)	Avg. number of activities carried out by CHW
Kachin	19.2	1.5	18.7	170814	0.8	8.3	6.8
Kayah	21.9	1.5	23.6	50658	0.7	6.0	4.0
Kayin	16.0	1.7	14.7	130938	0.6	9.0	7.0
Chin	19.3	1.5	10.3	44144	0.5	2.4	1.9
Sagaing	17.7	1.6	25.6	766962	0.8	11.6	8.9
Tanintharyi	16.2	1.5	31.6	149423	0.8	12.3	9.5
Bago	14.5	1.6	21.5	714750	0.6	11.3	9.4
Magway	15.6	1.6	25.8	688715	0.6	13.1	10.5
Mandalay	12.7	1.7	34.6	941582	0.7	12.1	10.1
Mon	21.6	1.6	33.9	242297	0.6	16.9	15.5
Rakhine	18.9	1.4	24.0	470011	0.7	11.3	7.8
Yangon	13.6	1.8	46.9	1199139	0.6	13.1	11.2
Shan (S)	13.3	1.7	18.6	307024	0.6	6.8	5.0
Shan (N)	11.1	1.6	12.5	156185	0.8	8.6	5.8
Shan (E)	15.2	1.6	9.4	65560	0.7	6.6	4.6
Ayeyarwaddy	13.9	1.6	20.6	989629	0.7	11.8	9.5
Naypyitaw	11.3	1.5	31.5	145499	0.7	18.4	13.5
Union	15.2	1.6	23.2	7233330	0.7	11.5	9.2

2. Maternal, Newborn and Child Health Care

Fig (7) Percent of Antenatal Care Coverage by Regions and States



The antenatal care coverage for the year 2012 was described in Fig (7). Out of 17 States/ Regions, seven were below 75% coverage. Among them, Shan (North), Shan (East), Chin and Rakhine States were between 60-68.9%.

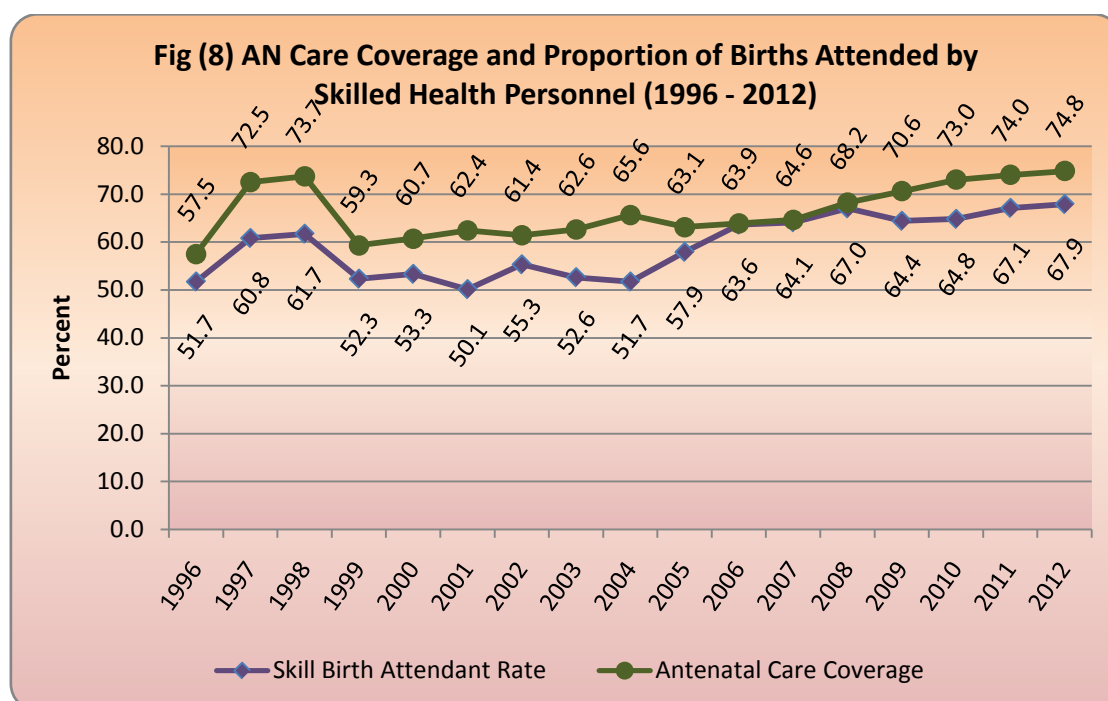
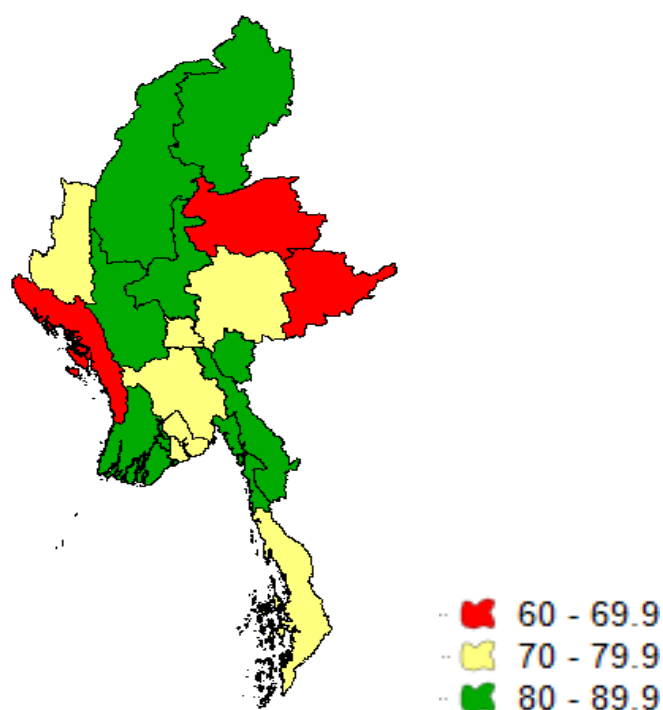


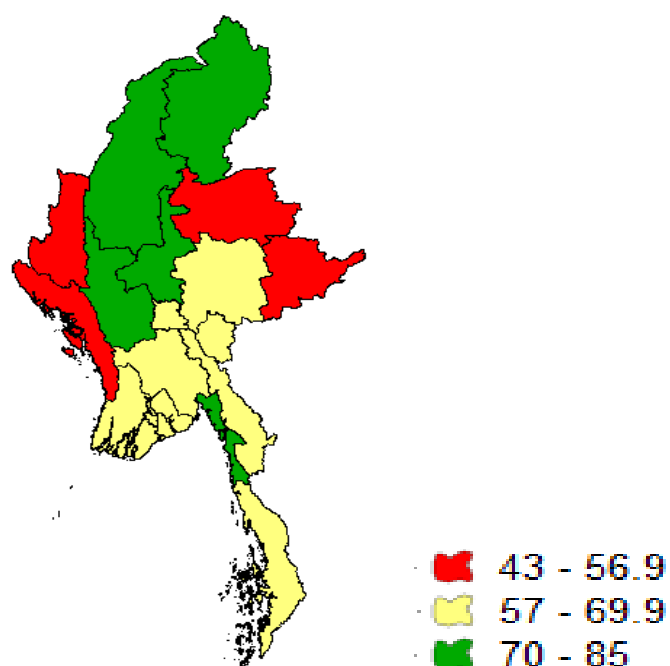
Figure (8) shows the trend in the coverage of antenatal care and proportion of births attended by skilled health personnel. And it increased during the year 2009 and 2012.

Fig (9) Percent of Postnatal Care Coverage by Regions and States



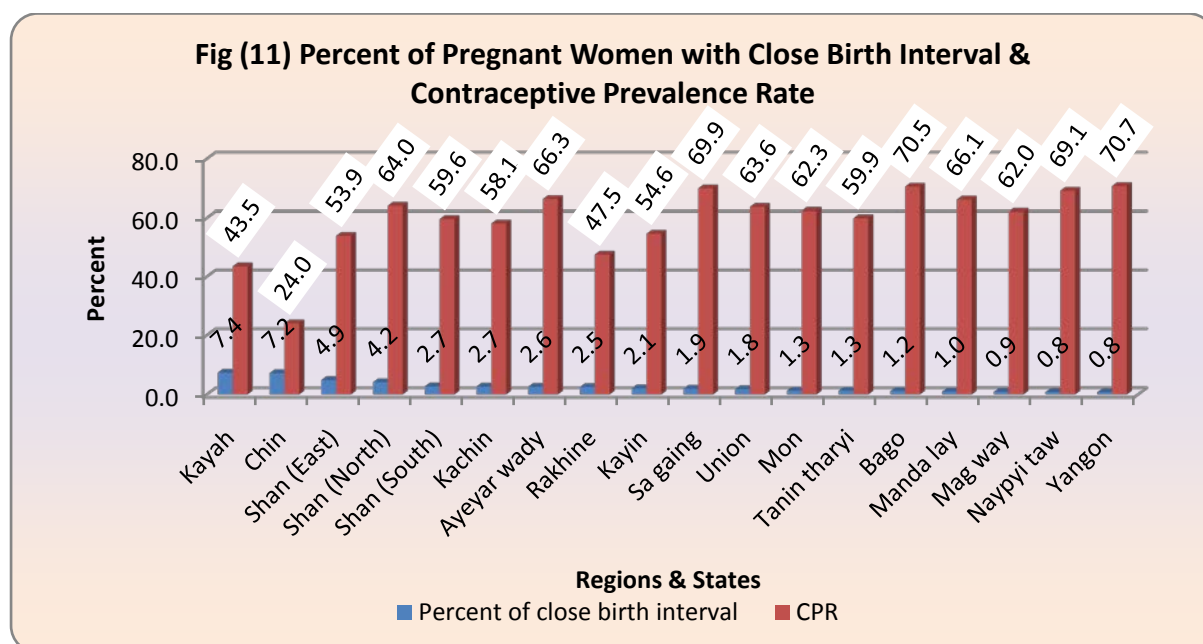
In the above figure, lowest postnatal care coverage (60 - 70 percent) was also found in Shan (North), Shan (East) and Rakhine States. Postnatal care coverage for the whole country was 79.7 percent for the year 2012.

Fig (10) Percent of Pregnant Mothers with ANC 4 times or more

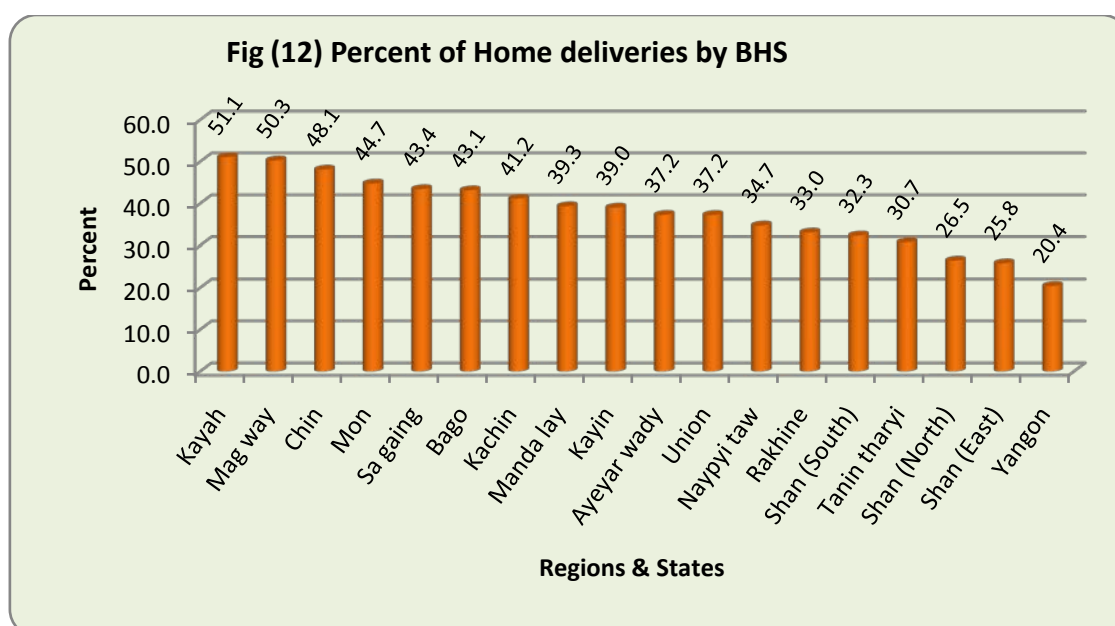


Regarding on percent of pregnant mothers with ANC 4 times or more in any period of gestation, Mon, Magway, Mandalay, Sagaing and Kachin were between 70 and 85

percent coverage. (Fig 10) The percent of pregnant mother with ANC 4 times or more for union was 66.9 in 2012.

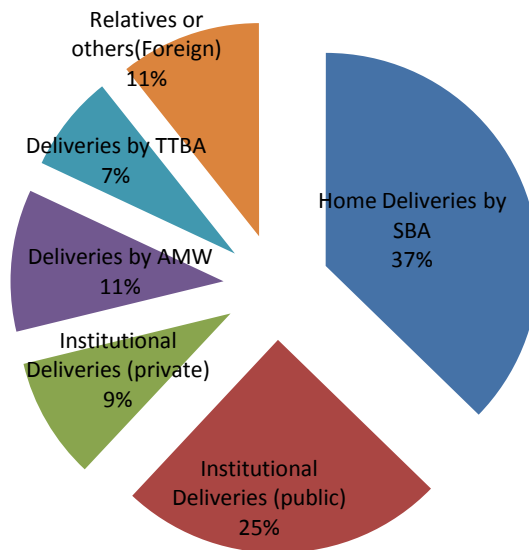


In accordance with the above figure, percentage of pregnant women with close birth interval was highest in Kayah and Chin States (7.4% & 7.2%) and at the same time, contraceptive prevalence rate was lowest in Chin and Kayah States (24.0% & 43.5%). (Fig 11)



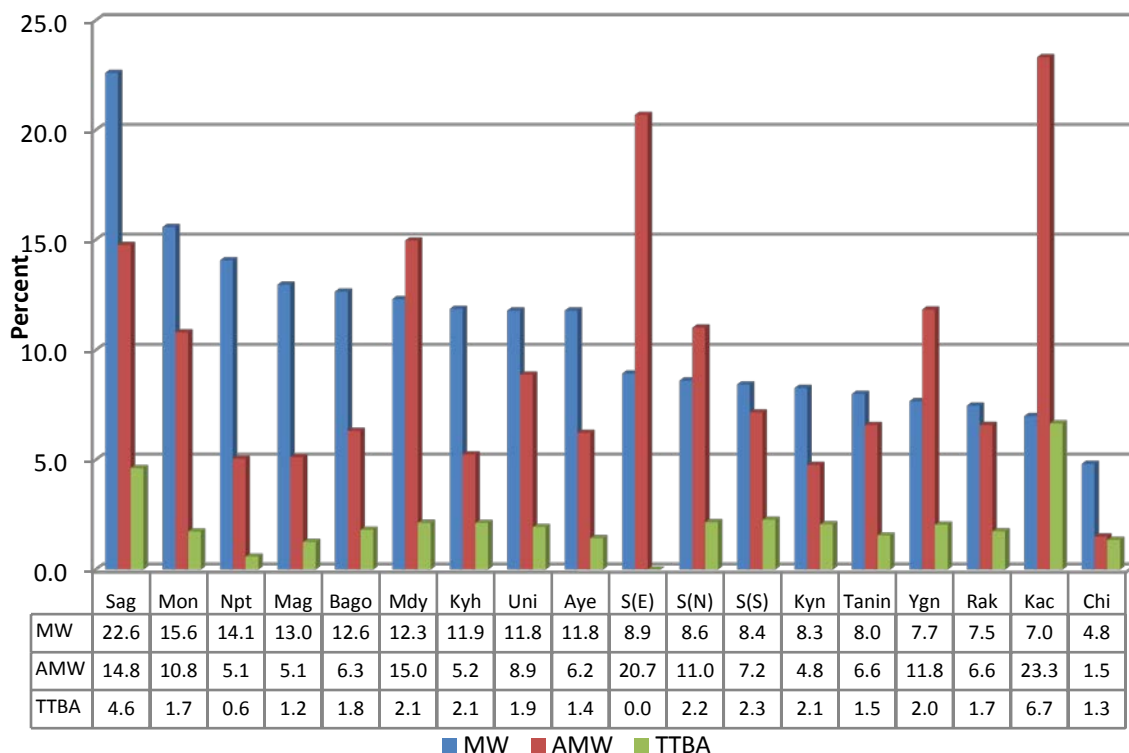
According to figure (12), Kayah State and Magway Region had the maximum percent of home delivery by BHS. For the whole country, home delivery by BHS was 37.2 percent.

Fig (13) Percent of Delivery by different Birth Attendants

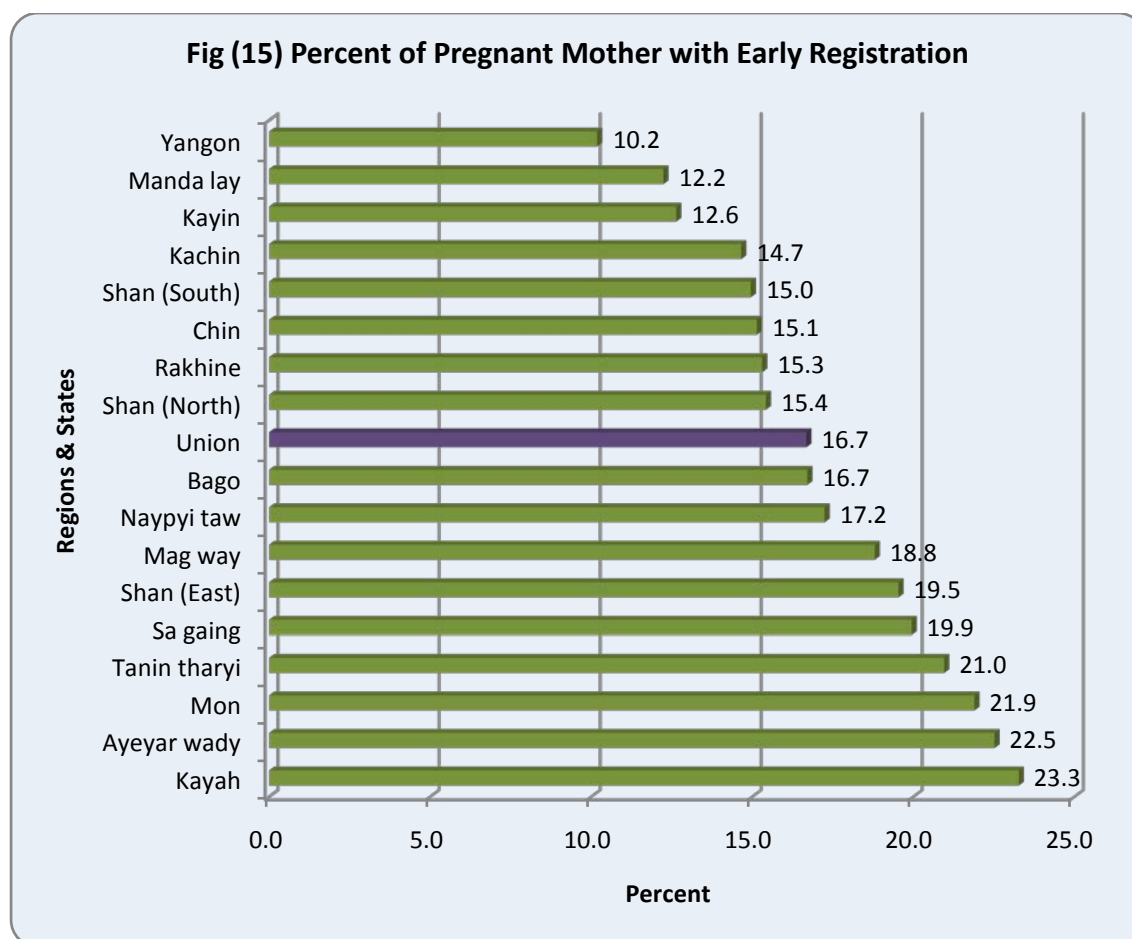


Above figure shows percent distribution of deliveries by different birth attendants and home deliveries attended by skilled birth attendants occupied largest parts of total deliveries with 37 percent.

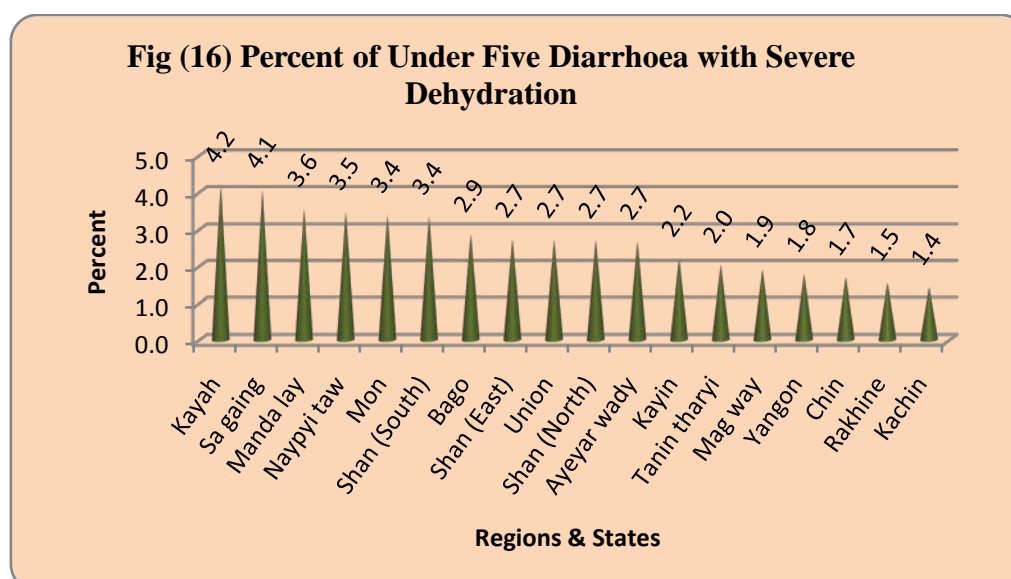
Fig (14) Referral Rate by MW, AMW and TTBA



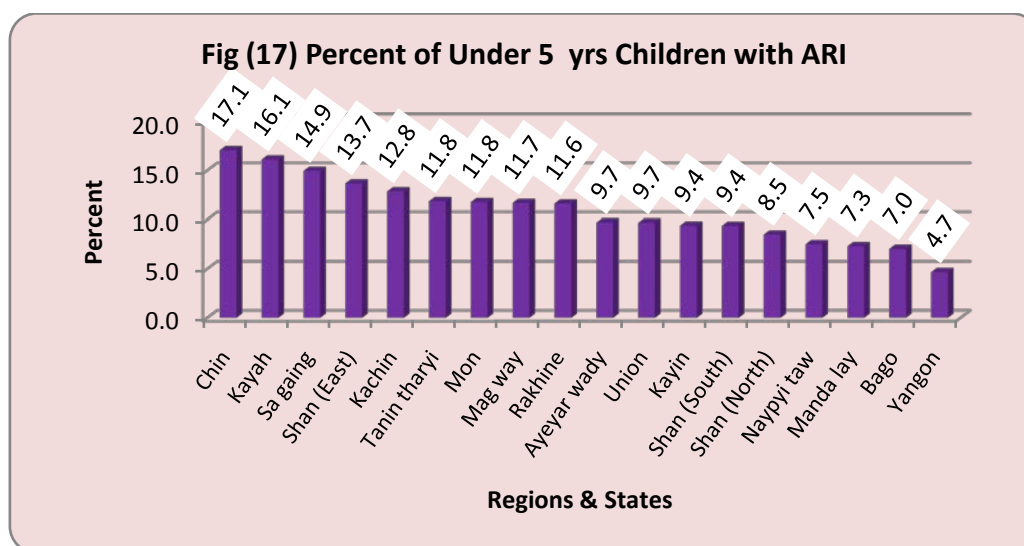
The referral rates of MW, AMW and TTBA were shown in the above figure (14). Referral rate by MW was highest in Sagaing where referral rate by AMW and TTBA was highest in Kachin.



In figure (15), percent of pregnant mothers with early registration around 12 weeks of gestation was described. Among 17 States/ Regions, Kayah, Ayeyarwady and Mon stood at first, second and third highest places with 23.3, 22.5 and 21.9 percent accordingly. Yangon, Mandalay and Kayin got lowest coverage with 10.2, 12.2 and 12.6 percent each and this might be due to registration of pregnant mother in private health care sector.

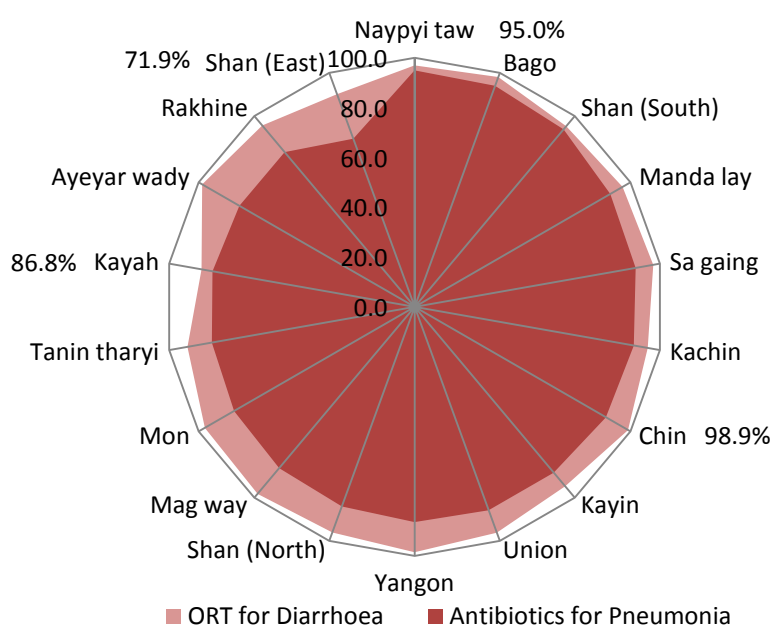


The above figure showed that the percent of under five diarrhea with severe dehydration was highest in Kayah and Sagaing with 4.2 and 4.1 percent.

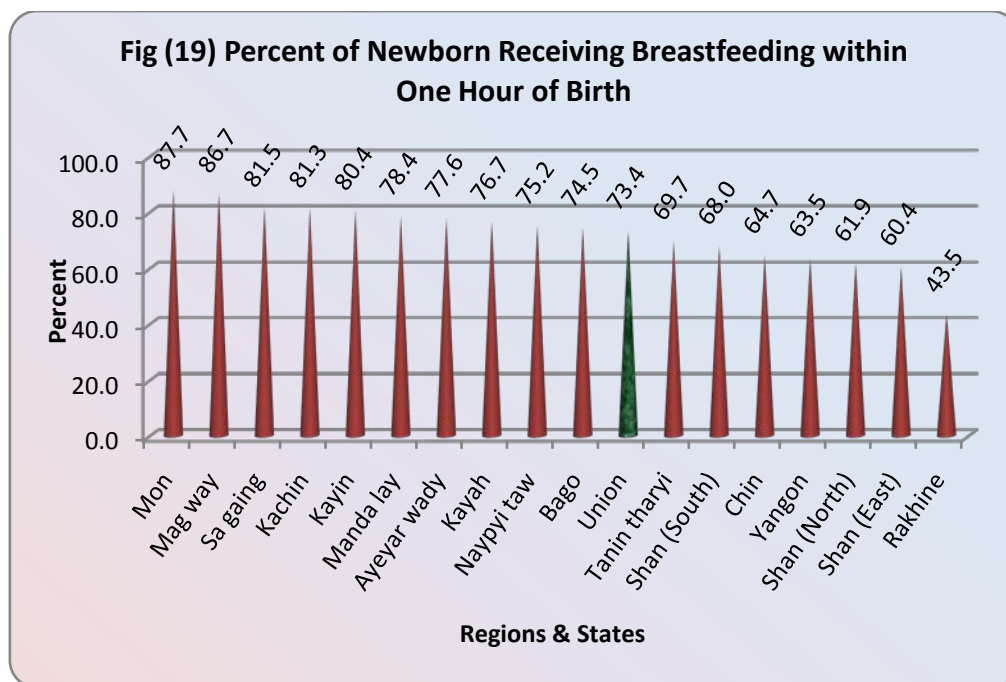


Acute respiratory infection is one of the common childhood diseases and its occurrence in under five years population is illustrated in the above figure. The highest percent of ARI cases was found in Chin and Kayah States (17.1 and 16.1 percent) and lowest in Yangon (4.7 percent).

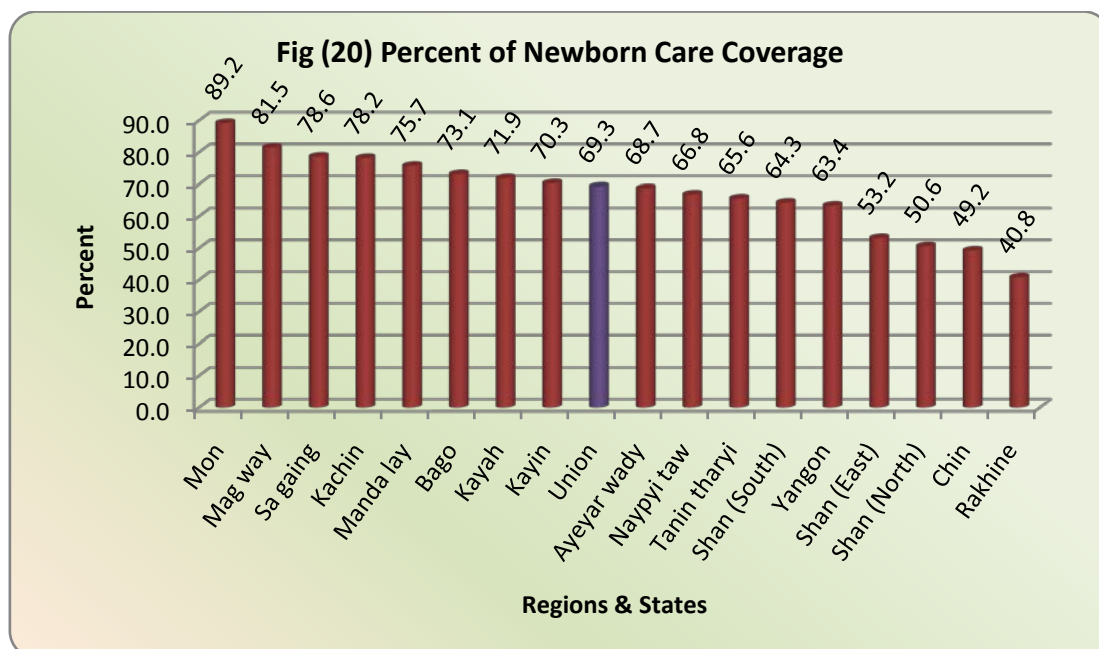
Fig (18) Percent of Under Five Patients with ORT for Diarrhoea and Antibiotics for Pneumonia



Concerning on treatment of common childhood diseases, Naypyitaw had the best coverage (95.0%) of antibiotics for pneumonia and Shan (East) had the least (71.9%). The coverage of ORT for diarrhea cases was best seen in Chin State with 98.9 percent while Kayah had only 86.8 percent coverage at the last place. (Fig 18)



In figure (19), Mon, Magway and Sagaing had got first, second and third largest percent of newborn receiving breastfeeding within one hour after birth showing 87.7, 86.7 and 81.5 percent respectively. Among all of these states and regions, Rakhine had obviously low coverage with 43.5 percent. As for the whole country, the coverage was 73.4 percent.



The newborn care coverage of all States and Regions was illustrated in above figure. For the year 2012, Mon and Magway possessed the best coverage of newborn care with 89.2 and 81.5 percent. However, Rakhine, Chin, Shan (North) and Shan (East)

had less than 60 percent coverage. The union coverage for newborn care was found to be 69.3 percent.

Table (3) Indicators for Maternal and Child Health Activities by BHS

Maternal, Newborn and Child Health Care (2012)									
Maternal and Child Health Activities by BHS									
Regions and States	% coverage of antenatal care*	% of pregnant women with close birth interval	Avg. frequency of antenatal visits	% of home deliveries by BHS	Proportion of deliveries by BHS at hospitals and delivery rooms	% of those who received ANC 4 times or more**	% coverage of postnatal care	Avg. frequency of visit for postnatal care	% of mothers referred to higher levels (during pregnancy, delivery and postnatal period)
Kachin	79.5	2.7	3.6	41.2	17.5	71.7	86.2	4.0	7.0
Kayah	81.6	7.4	4.1	51.1	5.6	60.3	86.4	3.3	11.9
Kayin	80.0	2.1	3.3	39.0	23.6	65.7	83.5	3.6	8.3
Chin	68.7	7.2	3.6	48.1	6.8	43.6	76.2	2.3	4.8
Sagaing	70.0	1.9	4.1	43.4	22.9	75.4	85.2	4.4	22.6
Tanintharyi	81.5	1.3	3.3	30.7	17.7	60.3	78.2	3.4	8.0
Bago	77.3	1.2	3.3	43.1	15.4	58.6	79.4	3.5	12.6
Magway	74.0	0.9	4.1	50.3	8.5	81.3	86.3	4.2	13.0
Mandalay	72.8	1.0	3.9	39.3	11.9	77.1	86.7	4.1	12.3
Mon	79.4	1.3	3.9	44.7	27.7	83.2	88.6	5.0	15.6
Rakhine	62.1	2.5	3.2	33.0	3.0	45.5	64.5	2.0	7.5
Yangon	79.2	0.8	3.5	20.4	18.7	66.5	75.3	3.7	7.7
Shan (S)	77.4	2.7	3.3	32.3	11.5	57.6	70.8	2.9	8.4
Shan (N)	68.3	4.2	3.0	26.5	18.6	51.1	61.7	2.5	8.6
Shan (E)	65.5	4.9	3.3	25.8	23.5	53.9	67.4	2.4	8.9
Ayeyarwaddy	77.9	2.6	3.3	37.2	15.5	66.7	81.7	3.3	11.8
Naypyitaw	80.3	0.8	3.0	34.7	9.1	69.3	77.0	2.9	14.1
Union	74.8	1.8	3.6	37.2	15.3	66.9	79.7	3.6	11.8

$$\text{*% coverage of ANC} = \frac{\text{Registered AN (New)}}{\text{Total No. of Estimated Pregnancy}} \times 100$$

$$\text{**% of those who received ANC 4 times or more} = \frac{\text{At least ANC 4 visits received among deliveries by BHS and Others}}{\text{Total Deliveries}} \times 100$$

**Table (4) Indicators for Maternal and Child Health Activities by
AMWs and TTBA**

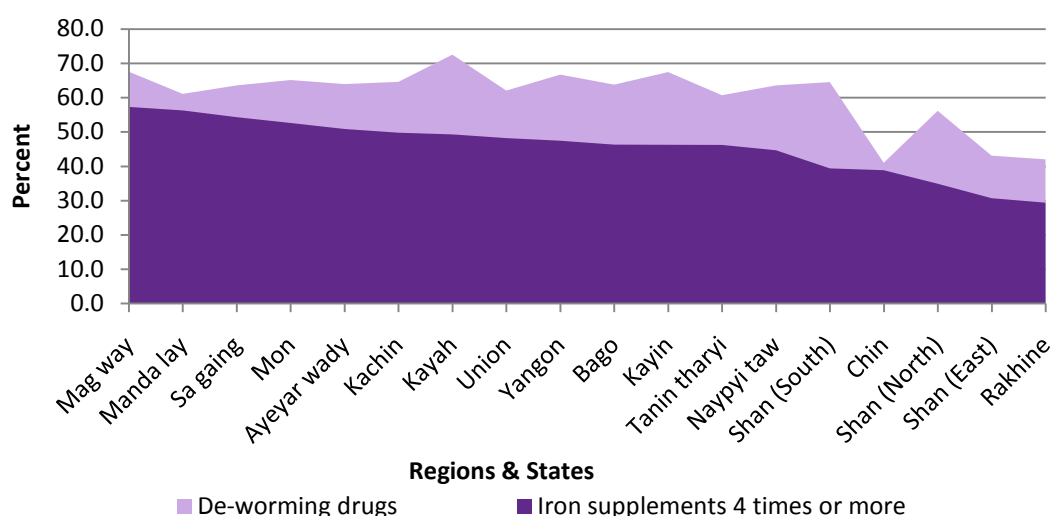
Maternal, Newborn and Child Health Care (2012)				
Regions and States	Activities by AMWs		Activities by TTBA	
	% of home deliveries by AMW	% of mothers referred to higher levels (during pregnancy, delivery and postnatal period)	% of home deliveries by TTBA	% of mothers referred to higher levels (during childbirth)
Kachin	8.2	23.3	4.4	6.7
Kayah	10.8	5.2	7.3	2.1
Kayin	15.9	4.8	15.7	2.1
Chin	18.1	1.5	4.9	1.3
Sagaing	12.1	14.8	3.1	4.6
Tanintharyi	12.1	6.6	3.3	1.5
Bago	10.5	6.3	11.2	1.8
Magway	18.4	5.1	6.9	1.2
Mandalay	10.2	15.0	3.9	2.1
Mon	4.7	10.8	3.5	1.7
Rakhine	7.3	6.6	16.1	1.7
Yangon	4.5	11.8	4.7	2.0
Shan (S)	13.7	7.2	5.5	2.3
Shan (N)	8.4	11.0	2.2	2.2
Shan (E)	0.3	20.7	0.1	0.0
Ayeyarwaddy	13.5	6.2	12.6	1.4
Naypyitaw	15.0	5.1	5.5	0.6
Union	10.8	8.9	7.3	1.9

Table (5) Indicators for Child Health Activities

Maternal, Newborn and Child Health Care (2012)								
Regions and States	Total numbers of under 5 children who received treatment from health staff (at clinics/health facilities and during field visits)	% of under 5 children with severe dehydration	% of under-5 children receiving ORT	% of under-5 children receiving ARI treatment	% of under-5 children receiving antibiotics treatment for pneumonia	% of under 5 children who are referred to higher level	% of newborn receiving breastfeeding within one hour of birth	% of newborn care coverage
Kachin	53313	1.4	95.0	12.8	89.4	0.9	81.3	78.2
Kayah	12874	4.2	86.8	16.1	82.4	1.4	76.7	71.9
Kayin	56060	2.2	94.0	9.4	86.8	0.9	80.4	70.3
Chin	24927	1.7	98.9	17.1	88.7	0.6	64.7	49.2
Sagaing	170385	4.1	97.3	14.9	90.1	1.9	81.5	78.6
Tanintharyi	38318	2.0	92.6	11.8	82.6	1.7	69.7	65.6
Bago	106689	2.9	98.2	7.0	94.5	0.9	74.5	73.1
Magway	104879	1.9	98.0	11.7	84.5	1.2	86.7	81.5
Mandalay	117889	3.6	96.4	7.3	90.7	1.8	78.4	75.7
Mon	77428	3.4	97.2	11.8	83.6	1.3	87.7	89.2
Rakhine	95941	1.5	95.1	11.6	81.1	1.3	43.5	40.8
Yangon	93068	1.8	98.4	4.7	86.3	1.2	63.5	63.4
Shan (S)	55154	3.4	94.7	9.4	93.1	1.5	68.0	64.3
Shan (N)	46348	2.7	96.3	8.5	85.2	1.0	61.9	50.6
Shan (E)	23293	2.7	90.9	13.7	71.9	1.2	60.4	53.2
Ayeyarwaddy	159097	2.7	98.4	9.7	81.2	1.5	77.6	68.7
Naypyitaw	18726	3.5	97.0	7.5	95.0	1.7	75.2	66.8
Union	1254389	2.7	96.4	9.7	86.8	1.4	73.4	69.3

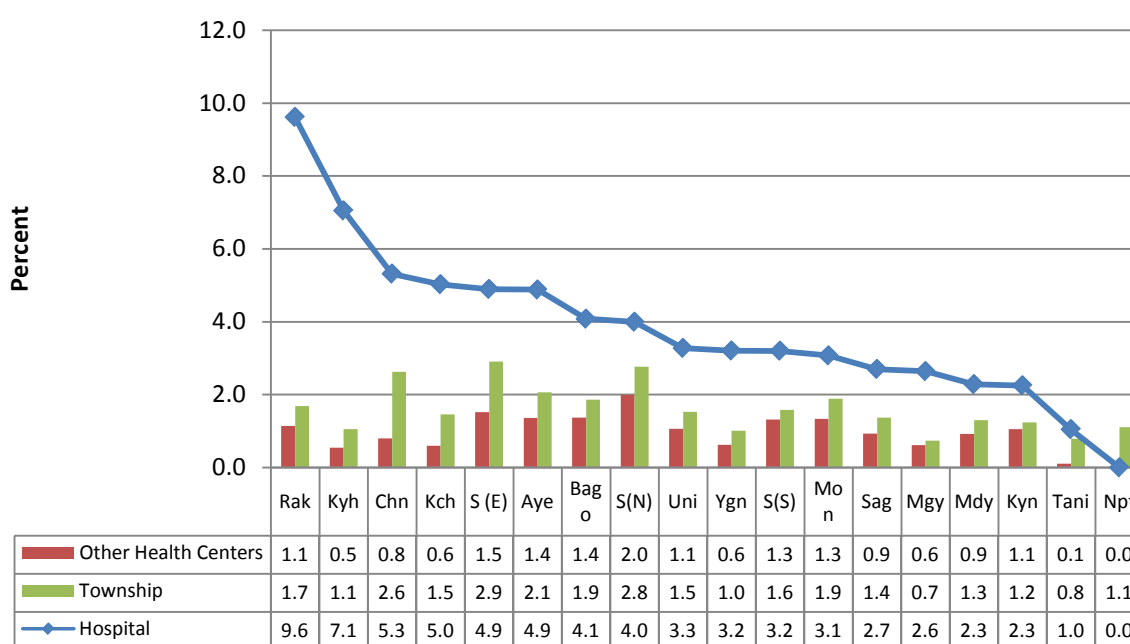
3. Nutrition Promotion Programme

Fig (21) Percent of Pregnant Mothers with De-worming and Iron Supplement 4 times or more



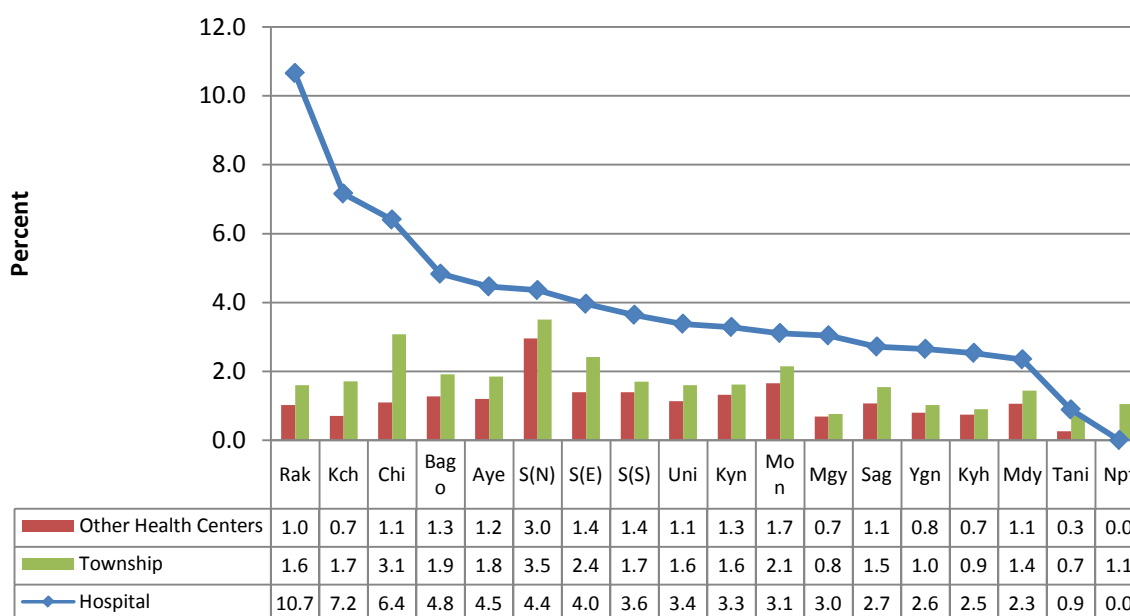
Iron deficiency anemia is common in pregnant mothers and so as to prevent anemia, nutrition promotion program support de-worming drugs as well as iron tablets to pregnant mothers. In figure (21), Kayah and Chin States had maximum and minimum percent of pregnant mothers with de-worming drugs. In addition, Magway and Rakhine also had the highest and lowest percent of pregnant mothers with iron supplements 4 times or more.

Fig (22) Percent of Male Low Birth Weight Born in Different Health Facilities



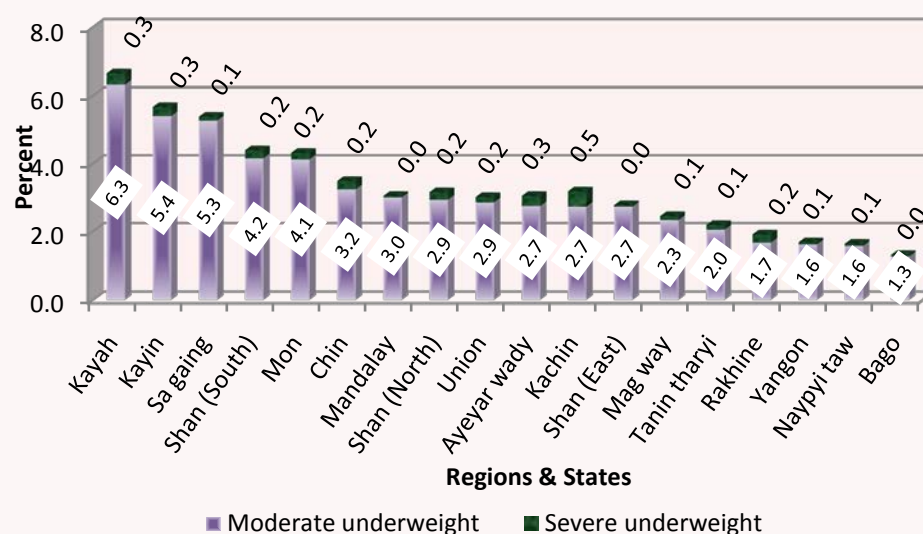
By the year 2012, highest percent of male low birth weight born in hospital was seen in Rakhine (9.6 percent) and those born in other health centers was seen in Shan (North) (2 percent). In Shan (East), percent of male low birth weight born in township was higher (2.9 %) than other states and regions. (Fig 22)

Fig (23) Percent of Female Low Birth Weight Born in Different Health Facilities

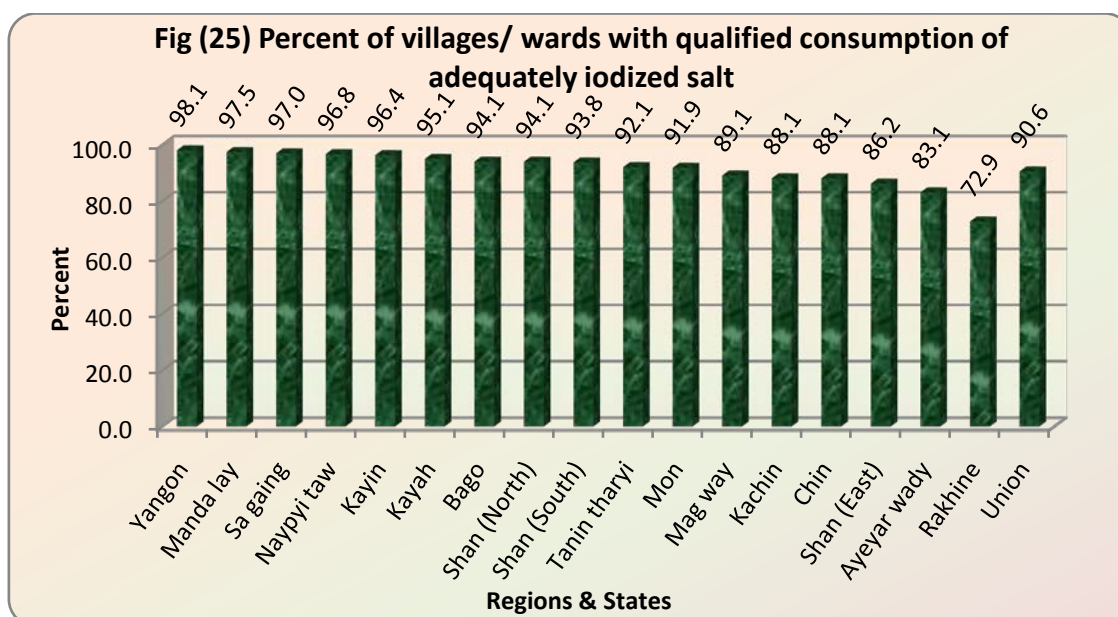


Like male low birth weight, highest percent of female low birth weight born in hospital was also seen in Rakhine (10.7 percent) and those born in other health centers and the whole township was seen in Shan (North) (3 and 3.5 percent). (Fig 23)

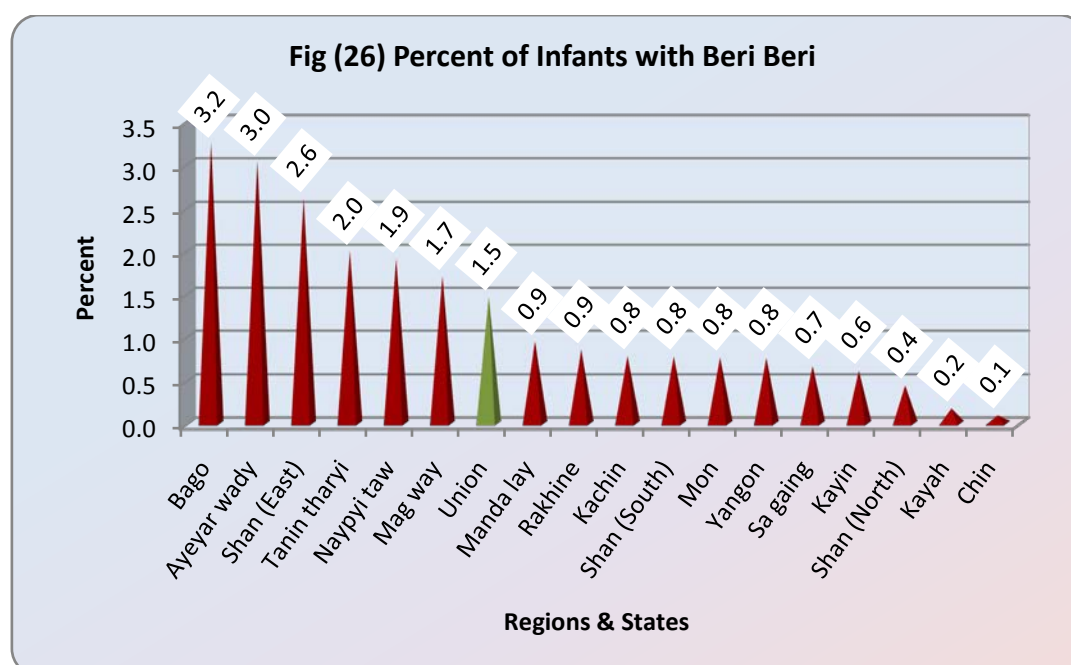
Fig (24) Percent of Under 5 with Moderate and Severe Underweight



According to above figure (24), most of under five with moderate underweight were found to be in Kayah State and severe underweight in Kachin State.



For assessment of consumption of adequate iodine in cooking salt, BHS have to test the amount of iodine in salt with field test kit and a household is assumed to be consumed adequate iodine if the salt contains more than 15 ppm iodine. Lowest consumption of iodine was found in Rakhine State (72.9%) and it was highest in Yangon (98.1%). (Fig 25)



The above figure shows percent of infants with beri beri was uppermost in Bago Region (3.2 %) and lowest in Chin State (0.1 %). The infantile beri beri percent was 1.5 percent for the whole country in 2012.

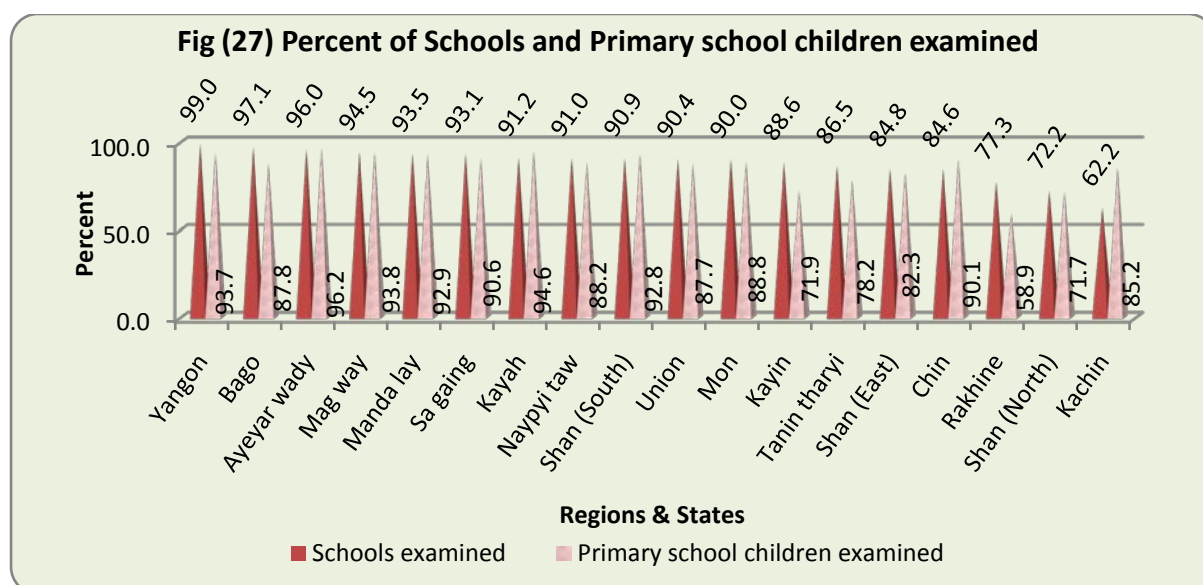
Table (6) Indicators for Growth Monitoring

i Nutrition Development Services (2012)										
Regions and States	% of newborns with LBW (hospital) (M)	% of newborns with LBW (hospital) (F)	% of newborns with LBW (other health centre) (M)	% of newborns with LBW (other health centre) (F)	% of newborns with LBW (township) (M)	% of newborns with LBW (township) (F)	% of infants with beriberi	% of pregnant women receiving de-worming drugs	% of post-natal mothers who received iron supplements 3 times or below during pregnancy	% of post-natal mothers who received iron supplements 4 times or more during pregnancy
Kachin	5.0	7.2	0.6	0.7	1.5	1.7	0.8	64.6	12.9	49.8
Kayah	7.1	2.5	0.5	0.7	1.1	0.9	0.2	72.5	18.3	49.3
Kayin	2.3	3.3	1.1	1.3	1.2	1.6	0.6	67.4	18.8	46.2
Chin	5.3	6.4	0.8	1.1	2.6	3.1	0.1	41.0	18.2	38.8
Sagaing	2.7	2.7	0.9	1.1	1.4	1.5	0.7	63.1	10.2	53.9
Tanintharyi	1.0	0.9	0.1	0.3	0.8	0.7	2.0	60.7	10.1	46.2
Bago	4.1	4.8	1.4	1.3	1.9	1.9	3.2	64.4	15.7	46.7
Magway	2.6	3.0	0.6	0.7	0.7	0.8	1.7	67.5	9.2	57.3
Mandalay	2.3	2.3	0.9	1.1	1.3	1.4	0.9	61.1	8.3	56.3
Mon	3.1	3.1	1.3	1.7	1.9	2.1	0.8	65.1	10.2	52.6
Rakhine	9.6	10.7	1.1	1.0	1.7	1.6	0.9	42.0	20.4	29.4
Yangon	3.2	2.6	0.6	0.8	1.0	1.0	0.8	66.7	9.1	47.4
Shan (S)	3.2	3.6	1.3	1.4	1.6	1.7	0.8	64.5	21.4	39.4
Shan (N)	4.0	4.4	2.0	3.0	2.8	3.5	0.4	56.1	16.2	34.9
Shan (E)	4.9	4.0	1.5	1.4	2.9	2.4	2.6	43.1	10.3	30.7
Ayeyarwaddy	4.9	4.5	1.4	1.2	2.1	1.8	3.0	63.9	13.1	50.8
Naypyitaw	0.0	0.0	0.0	0.0	1.1	1.1	1.9	63.5	18.6	44.7
Union	3.3	3.4	1.1	1.1	1.5	1.6	1.5	62.0	12.7	48.2

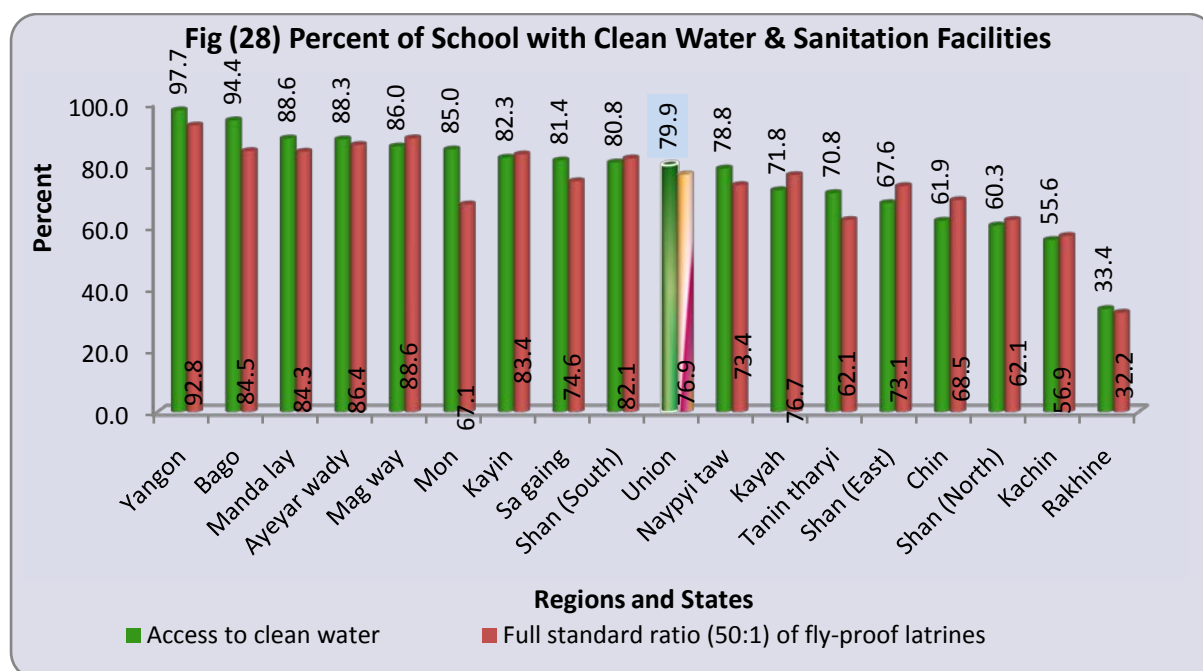
Table (6) Indicators for Growth Monitoring

ii Nutrition Development Services (2012)											
Regions and States	% of pregnant mothers who received B1 supplements	% of post-natal mothers who received B1 supplements	% of breastfeeding mothers who received B1 supplements	% of post-natal mothers who received vitamin A supplements	% of under-5 children with moderate underweight	% of under-5 children with severe underweight	% of under-5 children with underweight	Avg number of under-nourished children receiving Growth Monitoring and Promotion per month	% of under-nourished children receiving Growth Monitoring and Promotion per month	% of villages/ wards with qualified consumption of adequately iodized salt (township review)	% of village/wards with unqualified consumption of adequately iodized salt (township review)
Kachin	47.6	59.1	56.4	61.4	2.7	0.5	3.2	208	5.5	88.1	11.9
Kayah	43.6	60.2	56.2	64.8	6.3	0.3	6.6	74	2.9	95.1	4.9
Kayin	45.5	54.9	59.6	56.2	5.4	0.3	5.7	372	3.9	96.4	3.6
Chin	29.3	27.4	27.3	34.5	3.2	0.2	3.5	55	2.4	88.1	11.9
Sagaing	52.1	62.1	62.9	64.4	5.3	0.1	5.4	1862	7.4	97.0	3.0
Tanintharyi	46.3	52.0	55.6	52.9	2.0	0.1	2.2	200	5.9	92.1	7.9
Bago	48.0	57.3	63.4	61.8	1.3	0.0	1.3	207	3.2	94.1	5.9
Magway	52.8	59.5	62.8	63.1	2.3	0.1	2.4	537	4.4	89.1	10.9
Mandalay	48.9	55.2	58.2	59.5	3.0	0.0	3.0	626	5.0	97.5	2.5
Mon	50.7	59.2	62.4	58.8	4.1	0.2	4.3	1021	11.0	91.9	8.1
Rakhine	34.7	32.4	34.7	38.6	1.7	0.2	1.9	206	4.1	72.9	27.1
Yangon	43.7	44.5	45.3	51.9	1.6	0.1	1.7	596	6.4	98.1	1.9
Shan (S)	39.7	47.1	47.1	57.4	4.2	0.2	4.4	449	5.0	93.8	6.2
Shan (N)	34.1	39.9	37.8	43.3	2.9	0.2	3.2	202	4.1	94.1	5.9
Shan (E)	30.4	33.7	27.5	39.9	2.7	0.0	2.8	67	4.4	86.2	13.8
Ayeyarwaddy	48.6	55.1	60.2	60.3	2.7	0.3	3.0	881	3.9	83.1	16.9
Naypyitaw	45.0	52.1	55.5	62.0	1.6	0.1	1.7	39	3.1	96.8	3.2
Union	46.1	52.3	54.7	56.9	2.9	0.2	3.0	7611	5.4	90.6	9.4

4. School Health Services

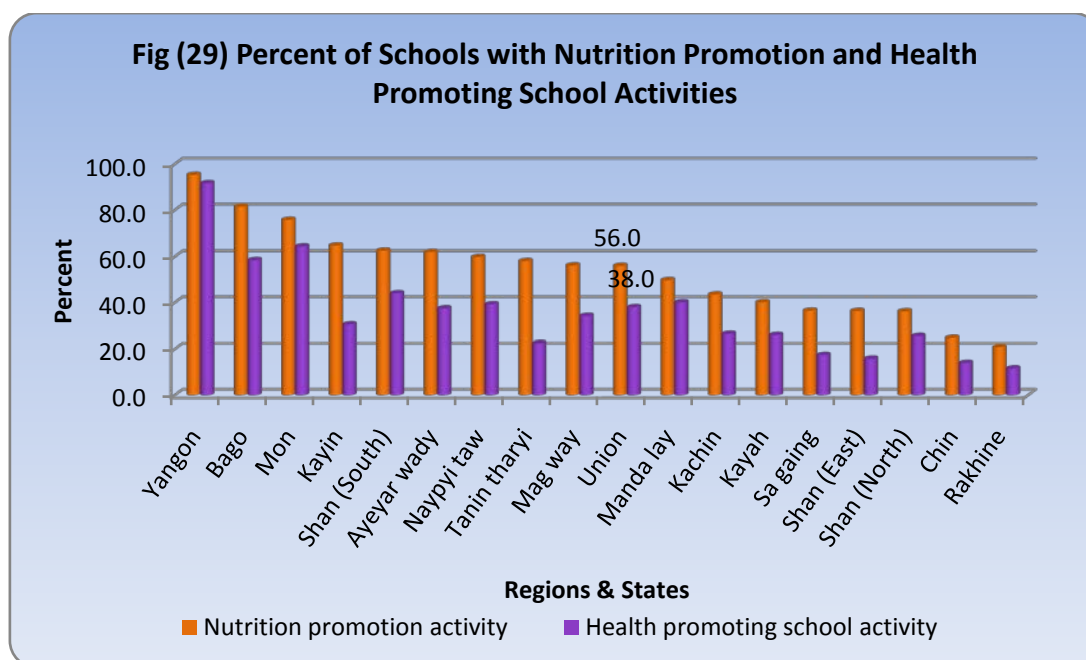


School health services are important for children of school going age to prevent from some communicable diseases and to promote the nutrition status. Figure (27) shows 90.4 percent of schools in whole country was examined and nearly all schools in Yangon Region (99.0%) were examined and provided by school health services in 2012. Kachin had only 62.2 percent of schools examined for school health services. Among these examined schools, 96.2 percent of primary school children were examined in Ayeyarwady which shows the highest coverage and 58.9 percent in Rakhine shows the lowest.



Regarding to new operational definition, the standard ratio of fly-proof latrines was changed as 50:1 ratio and the best coverage for this indicator was seen in Yangon

Region with 92.8 percent and least in Rakhine State with only 32.2. Similarly, Yangon had the largest coverage (97.7%) on access to clean water in schools and Rakhine got 33.4 percent coverage only. (Fig 28)



According to the above figure (29), Yangon was visibly high in percent coverage of both in nutrition promotion activities and health promoting school activities. At the same time, Rakhine possesses the last place in descending order in both indicators. The union figure for percent of schools with nutrition promotion activities was 56.0 percent and health promoting school activities was 38.0 percent in 2012.

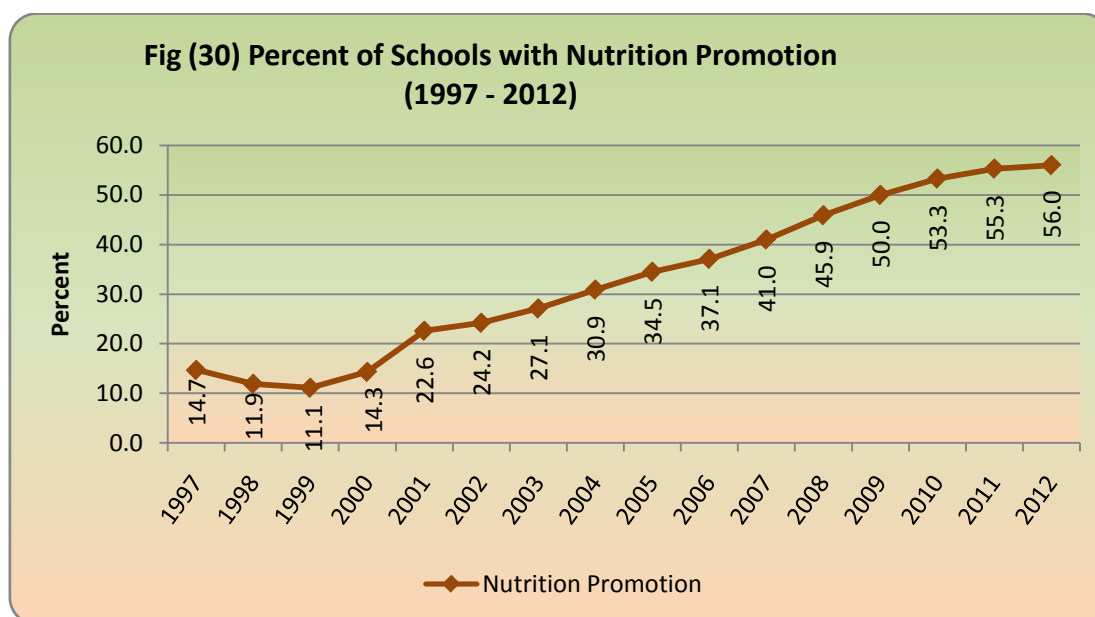


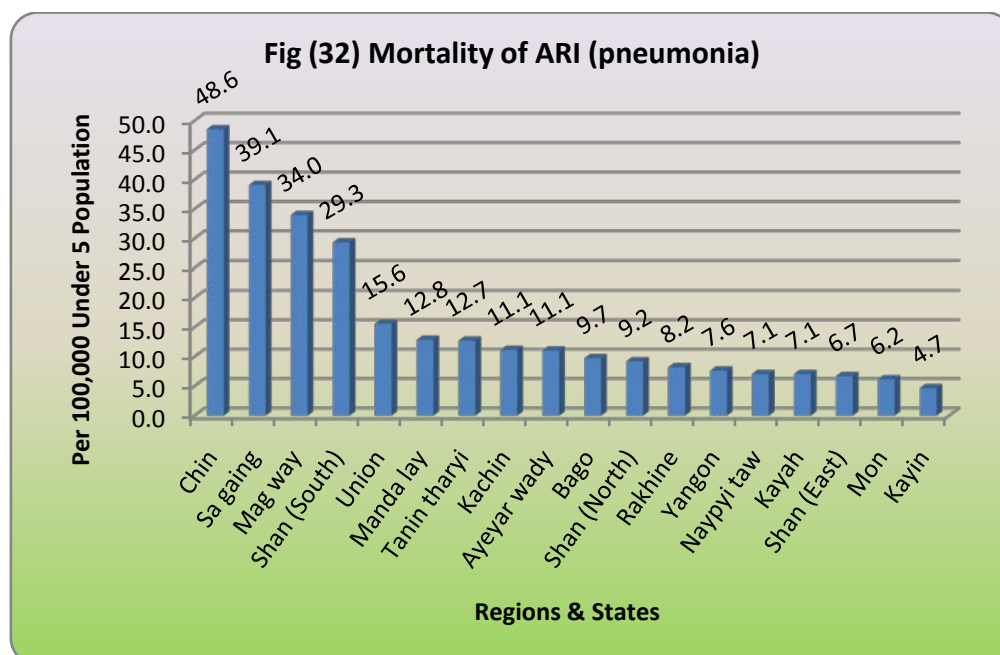
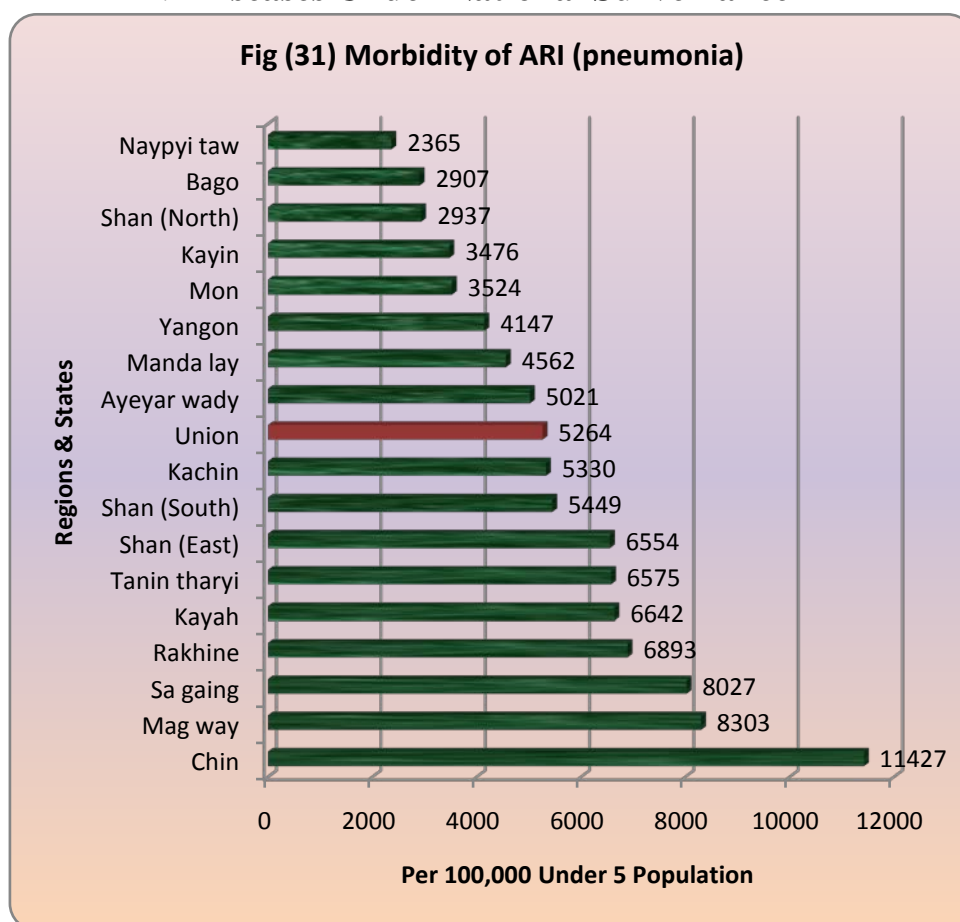
Figure (30) shows the coverage of schools with nutrition promotion activities and it has been increasing since 1999 up to 2012.

Table (7) Indicators for School Health Activities

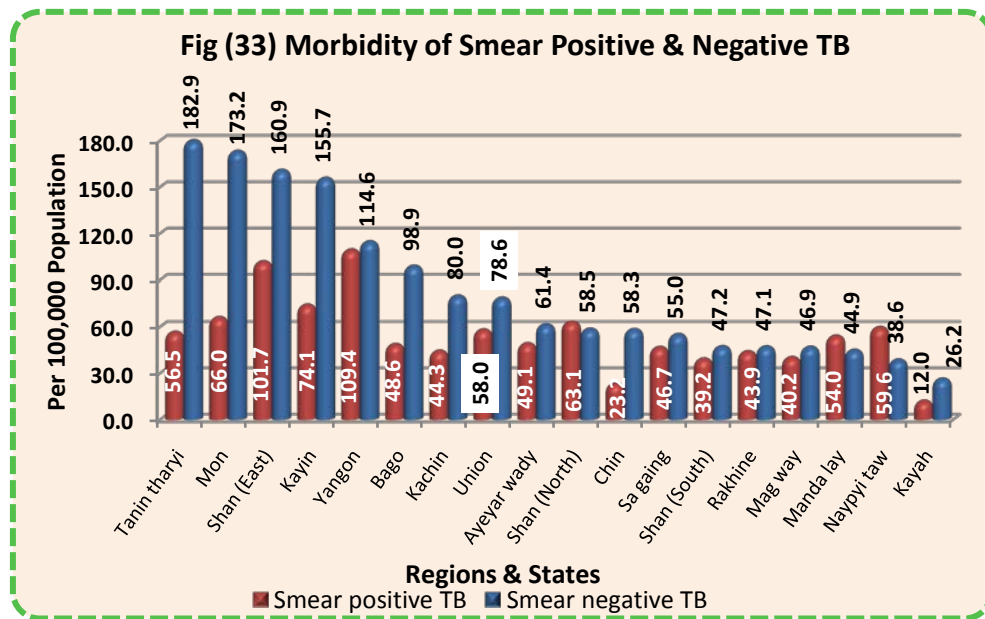
School Health (2012)						
Regions and States	% of schools examined for school health care	% of schools with the full standard ratio (50:1) of fly-proof latrines	% of schools with access to clean water	% of schools with nutritional promotion activities	% of primary school children receiving school medical examinations	% of schools with health promoting school activities
Kachin	62.2	56.9	55.6	43.5	85.2	26.5
Kayah	91.2	76.7	71.8	40.2	94.6	25.9
Kayin	88.6	83.4	82.3	64.8	71.9	30.5
Chin	84.6	68.5	61.9	24.7	90.1	14.0
Sagaing	93.1	74.6	81.4	36.5	90.6	17.4
Tanintharyi	86.5	62.1	70.8	58.1	78.2	22.5
Bago	97.1	84.5	94.4	81.5	87.8	58.5
Magway	94.5	88.6	86.0	56.2	93.8	34.2
Mandalay	93.5	84.3	88.6	49.8	92.9	40.1
Mon	90.0	67.1	85.0	76.0	88.8	64.4
Rakhine	77.3	32.2	33.4	20.8	58.9	11.6
Yangon	99.0	92.8	97.7	95.3	93.7	91.7
Shan (S)	90.9	82.1	80.8	62.6	92.8	44.0
Shan (N)	72.2	62.1	60.3	36.2	71.7	25.5
Shan (E)	84.8	73.1	67.6	36.4	82.3	15.9
Ayeyarwaddy	96.0	86.4	88.3	62.0	96.2	37.5
Naypyitaw	91.0	73.4	78.8	59.8	88.2	39.2
Union	90.4	76.9	79.9	56.0	87.7	38.0

II. DISEASE CONTROL SERVICES

1. Diseases Under National Surveillance



The above figures (31) and (32) show the morbidity and mortality of ARI (pneumonia) in under 5 population of different states and regions. The remarkably high cases and deaths of ARI were occurred in Chin State.



The burden of TB in the community was collected by BHS according to their jurisdiction areas. In 2012, Kayah had the fewest number of both smear positive and smear negative TB while Tanintharyi had the highest cases of smear negative TB and Yangon got the highest smear positive TB cases. Although smear positive cases were fewer than negative cases in all states and regions, Shan (North), Mandalay and Naypyitaw had more smear positive cases.

Table (8) Indicators for Morbidity and Mortality of Diseases Under National Surveillance

i Epidemiological Surveillance and Response (2012)												
Regions and States	Diarrhoea		Dysentery		Food poisoning		Enteric Fever		Measles		Diphtheria	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(3)	(2)	(3)	(2)
Kachin	916.3	0.4	280.5	0.00	24.2	0.1	9.2	0.00	1.3	0.0	0.0	0.0
Kayah	1388.0	6.7	362.9	0.00	10.1	0.4	5.2	0.00	0.0	0.0	0.0	0.0
Kayin	907.5	0.0	203.2	0.00	17.1	0.1	2.3	0.00	0.6	0.0	0.0	0.0
Chin	1803.1	5.4	520.9	0.21	15.5	0.8	34.5	0.00	1.7	0.0	0.0	0.0
Sagaing	846.9	0.9	234.1	0.00	11.0	0.1	12.7	0.08	8.9	0.0	0.0	0.0
Tanintharyi	862.3	0.3	251.2	0.08	41.5	0.5	2.6	0.00	46.4	0.0	0.0	0.0
Bago	549.0	0.2	162.7	0.00	11.3	0.2	10.3	0.00	6.9	0.0	0.2	0.0
Magway	724.9	0.4	276.8	0.00	8.1	0.1	7.1	0.00	94.8	0.0	0.0	0.0
Mandalay	574.5	0.1	174.4	0.00	9.8	0.1	11.1	0.00	29.9	1.2	1.2	1.2
Mon	755.3	0.2	146.5	0.00	8.1	0.3	10.6	0.00	0.0	0.0	0.0	0.0
Rakhine	1150.4	0.4	421.1	0.03	17.2	0.2	17.6	0.03	0.3	0.0	0.0	0.0
Yangon	255.0	0.4	66.4	0.00	5.4	0.0	0.4	0.00	53.5	1.6	0.7	0.2
Shan (S)	672.4	1.1	200.4	0.00	11.2	1.0	5.2	0.00	6.2	3.8	0.0	0.0
Shan (N)	697.0	1.4	164.2	0.05	15.2	0.9	8.6	0.00	6.8	0.0	1.5	0.0
Shan (E)	1015.1	0.5	279.6	0.00	15.3	0.2	2.9	0.00	5.0	0.0	0.0	0.0
Ayeyarwaddy	523.8	0.3	206.7	0.00	10.0	0.1	9.1	0.03	43.7	1.0	0.3	0.0
Naypyitaw	476.4	0.2	110.7	0.00	70.2	0.2	1.5	0.00	42.4	0.0	0.0	0.0
Union	670.5	0.5	205.2	0.01	13.0	0.2	8.6	0.01	27.4	0.6	0.4	0.2

- (1) Number of cases per 100,000 Population
 (2) Number of deaths per 100,000 Population
 (3) For vaccine preventable diseases and ARI, number of cases per 100,000 under five years children are mentioned in the table

ii Epidemiological Surveillance and Response (2012)												
Regions and States	Whooping cough		Neonatal tetanus		Tetanus		Meningitis		ARI		Viral Hepatitis	
	(3)	(2)	(4)	(2)	(1)	(2)	(1)	(2)	(1)	(2) *	(1)	(2)
Kachin	0.0	0.0	0.0	0.0	0.3	0.1	3.4	0.3	5329.8	11.1	11.4	0.3
Kayah	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	6642.2	7.1	6.7	0.0
Kayin	0.0	0.0	0.0	0.0	0.3	0.0	1.8	0.2	3476.1	4.7	13.6	0.1
Chin	3.3	0.0	0.0	0.0	0.0	0.0	2.5	0.2	11426.7	48.6	23.0	1.0
Sagaing	0.0	0.0	2.3	1.1	0.7	0.2	3.4	0.2	8026.9	39.1	25.4	0.1
Tanintharyi	0.0	0.0	3.7	0.0	0.2	0.1	7.3	0.2	6575.3	12.7	9.7	0.1
Bago	0.5	0.0	3.5	1.2	0.5	0.1	5.8	0.3	2906.9	9.7	13.8	0.3
Magway	0.0	0.0	1.4	0.0	0.3	0.0	0.7	0.0	8303.2	34.0	6.3	0.0
Mandalay	1.4	1.2	3.9	2.9	0.2	0.0	1.9	0.0	4561.7	12.8	15.2	0.2
Mon	0.0	0.0	0.0	0.0	0.3	0.0	2.1	0.3	3524.0	6.2	8.5	0.2
Rakhine	0.0	0.0	0.0	0.0	0.5	0.0	0.8	0.1	6892.6	8.2	15.2	0.1
Yangon	0.2	0.0	2.0	1.0	0.0	0.0	1.5	0.0	4146.5	7.6	3.6	0.0
Shan (S)	0.5	0.0	5.2	5.2	0.3	0.1	1.9	0.1	5448.6	29.3	13.9	0.2
Shan (N)	0.0	0.0	3.4	0.0	0.2	0.1	9.2	0.4	2936.7	9.2	20.3	0.2
Shan (E)	0.0	0.0	10.5	0.0	0.0	0.0	4.5	0.0	6554.3	6.7	7.1	0.0
Ayeyarwaddy	0.2	0.0	1.8	1.8	0.3	0.0	1.3	0.1	5021.2	11.1	11.3	0.1
Naypyitaw	0.0	0.0	5.4	0.0	0.3	0.0	1.9	0.0	2364.8	7.1	7.2	0.1
Union	0.3	0.1	2.3	1.2	0.3	0.1	2.7	0.1	5264.2	15.6	12.7	0.1

(1) Number of cases per 100,000 Population

(2) Number of deaths per 100,000 Population

(2) * Number of deaths per 100,000 Population under five years children

(3) For vaccine preventable diseases and ARI, number of cases per 100,000 under five years children are mentioned in the table

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

iii

Epidemiological Surveillance and Response (2012)

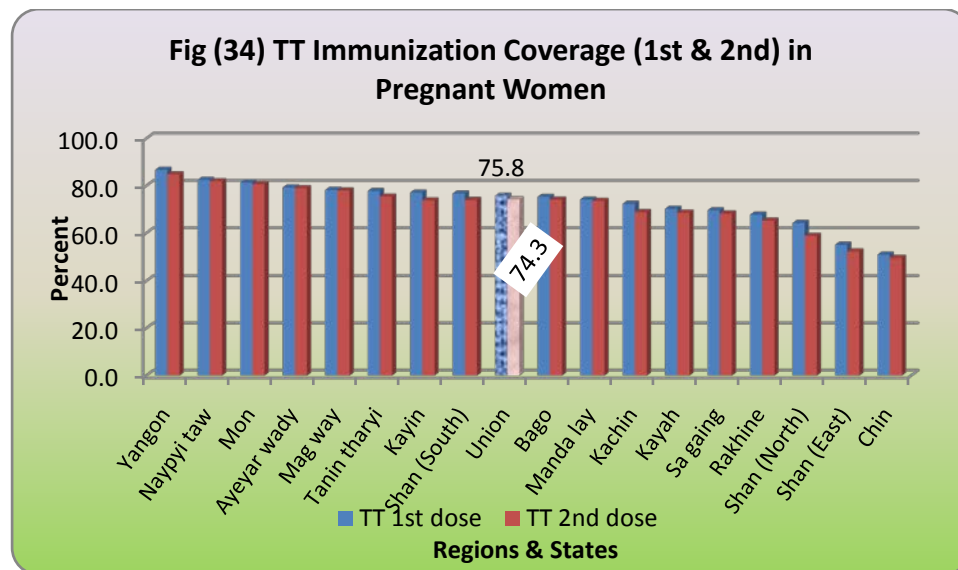
Regions and States	Rabies		Malaria		Snake bite poisonous		TB: Sputum +ve		Retreated TB Patients		TB: Sputum -ve		TB: Extra-pulmonary		Anthrax	
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Kachin	0.3	0.3	2374.2	3.8	0.8	0.1	44.3	1.0	7.0	0.4	80.0	1.9	58.6	0.2	0.1	0.0
Kayah	0.0	0.0	1858.6	0.7	10.5	0.4	12.0	0.0	1.1	0.0	26.2	0.7	5.6	0.0	0.0	0.0
Kayin	0.2	0.2	970.0	1.4	9.7	0.8	74.1	0.1	5.3	0.0	155.7	0.1	8.4	0.0	0.0	0.0
Chin	0.0	0.0	2613.6	1.9	6.5	0.4	23.2	0.4	8.1	0.0	58.3	0.6	78.5	0.0	0.0	0.0
Sagaing	0.4	0.4	1085.6	1.6	29.8	1.7	46.7	0.3	6.5	0.0	55.0	0.4	36.0	0.1	0.2	0.0
Tanintharyi	0.2	0.2	2166.9	1.2	3.3	0.2	56.5	0.2	22.4	0.2	182.9	1.2	88.0	0.5	0.0	0.0
Bago	0.9	0.9	484.5	0.6	35.6	1.7	48.6	0.5	8.0	0.2	98.9	0.9	13.0	0.1	0.0	0.0
Magway	0.8	0.8	322.1	0.1	39.7	2.9	40.2	0.4	5.8	0.0	46.9	0.4	35.5	0.1	0.0	0.0
Mandalay	0.6	0.6	279.5	0.1	28.5	1.6	54.0	0.4	10.3	0.1	44.9	0.3	42.6	0.1	0.4	0.0
Mon	0.5	0.5	362.2	0.6	10.1	0.7	66.0	0.8	17.0	0.2	173.2	1.8	18.7	0.1	0.0	0.0
Rakhine	0.2	0.2	1752.8	0.6	1.1	0.1	43.9	0.7	5.9	0.1	47.1	0.5	16.8	0.1	0.2	0.0
Yangon	0.1	0.1	25.4	0.0	8.9	0.7	109.4	0.6	23.6	0.2	114.6	0.6	36.4	0.1	0.0	0.0
Shan (S)	0.0	0.0	845.3	1.5	5.3	0.1	39.2	0.6	7.5	0.1	47.2	0.4	21.9	0.2	0.0	0.0
Shan (N)	0.0	0.0	934.6	1.1	0.7	0.0	63.1	0.1	15.5	0.1	58.5	0.3	70.1	0.0	0.0	0.0
Shan (E)	0.0	0.0	209.5	0.0	3.8	0.0	101.7	0.7	12.6	0.0	160.9	0.2	37.6	0.0	0.0	0.0
Ayeyarwaddy	0.3	0.3	361.3	0.6	13.3	3.4	49.1	0.4	7.6	0.1	61.4	0.6	28.5	0.1	0.0	0.0
Naypyitaw	0.6	0.6	250.3	0.1	22.3	0.7	59.6	0.0	5.3	0.0	38.6	0.2	36.9	0.1	0.0	0.0
Union	0.4	0.4	686.0	0.7	18.3	1.4	58.0	0.5	10.6	0.1	78.6	0.6	33.7	0.1	0.1	0.0

(1) Number of cases per 100,000 Population

(2) Number of deaths per 100,000 Population

(3) For vaccine preventable diseases and ARI, number of cases per 100,000 under five years children are mentioned in the table

2. Expanded Programme on Immunization



On viewing the coverage of TT first and second dose in pregnant women, Yangon, Naypyitaw and Mon had more than 80 percent coverage in two doses and Chin State stood in latest place for both TT doses. Overall coverage was found to be 75.8 percent for TT1 and 74.3 percent for TT2. (Fig 34)

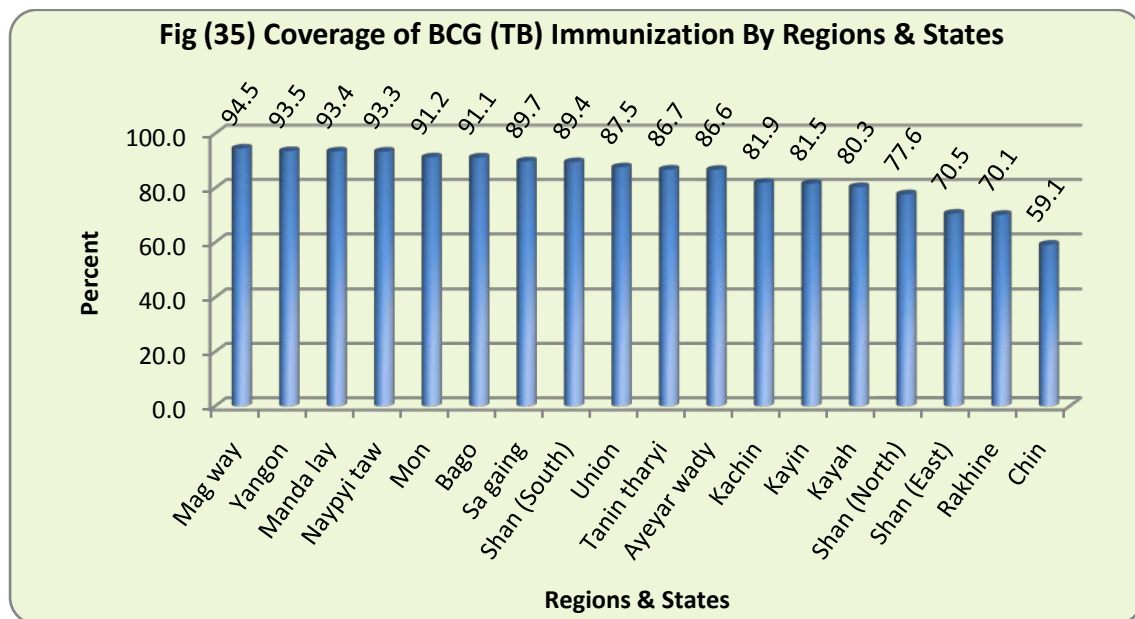


Fig (36) Coverage of DPT 3rd and Polio 3rd Doses Immunization

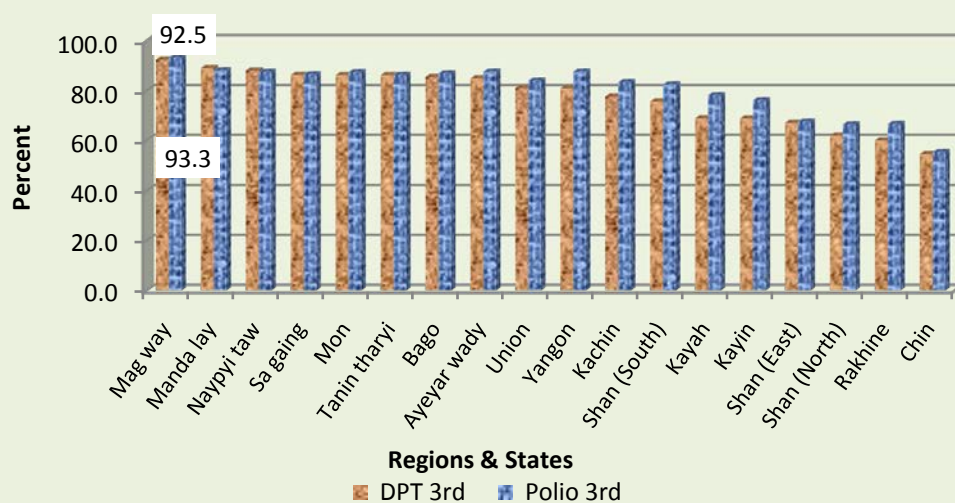
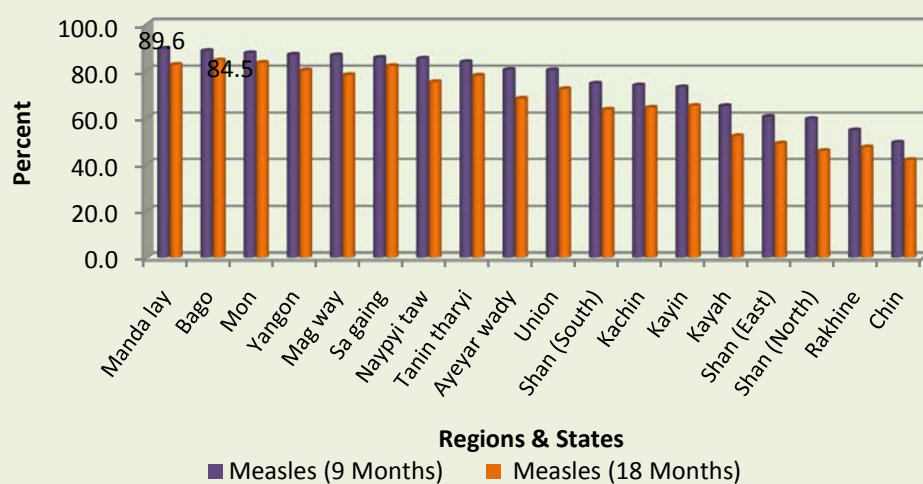
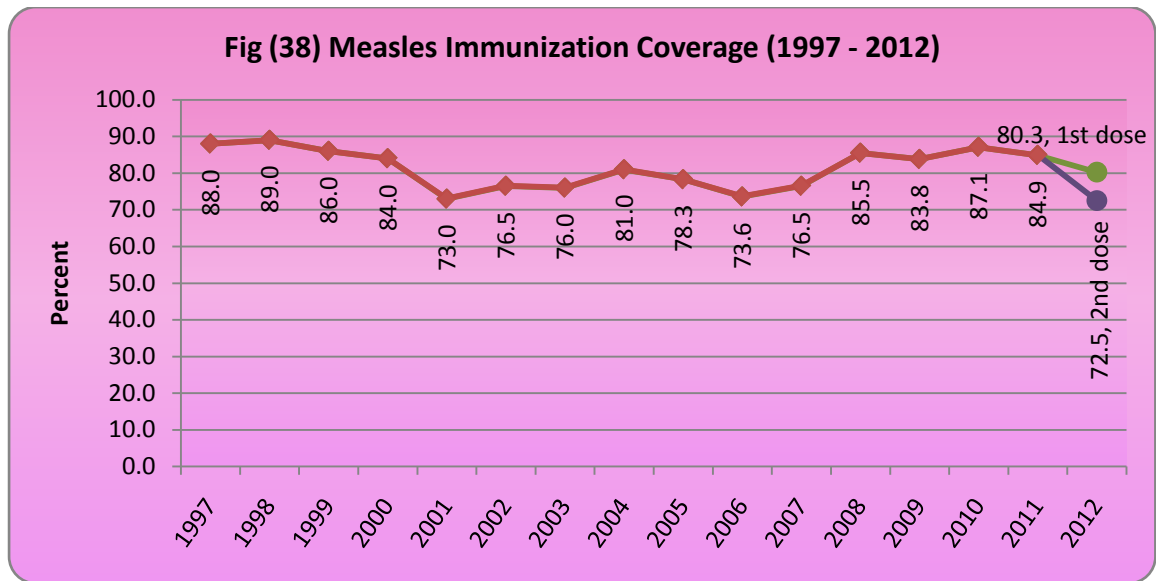


Figure (35) and (36) demonstrate child immunization coverage on BCG, DPT 3rd and Polio 3rd doses. Chin State stood behind other states and regions in all these doses. Magway was at first place of BCG coverage (94.5%) as well as both DPT 3rd (92.5%) and Polio 3rd coverage (93.3%).

Fig (37) Coverage of Measles 1st and 2nd Doses Immunization



Although Mandalay had the finest coverage of Measles 1st dose (89.6%), Bago possessed the best coverage in 2nd dose (84.5%). Chin State was poor in coverage of both Measles doses. (Fig 37)



From 1997 to 2011, immunization against measles in under one year old children was collected only one dose. In 2012, the immunization was collected for first dose in 9 months of age and second dose in 18 months of age. However, both of the coverage in 2012 was fewer than previous four years. (Fig 38)

Table (9) Indicators for Immunization Coverage

Expanded Programme on Immunization (2012)																	
Regions and States	BCG Coverage (%)	DPT Coverage (%)			Polio Coverage (%)			Hepatitis B Coverage (%)			Measles Coverage (%)		Pentavalent coverage (%) *			TT Coverage (%)	
	TB	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	9 Months	18 Months	1 st Dose	2 nd Dose	3 rd Dose	1 st Dose	2 nd Dose
Kachin	81.9	71.5	73.5	77.7	81.6	76.2	83.4	13.7	11.1	14.7	74.0	64.4	12.9	0.0	0.0	72.4	68.9
Kayah	80.3	60.6	67.0	68.9	78.9	76.8	78.2	0.0	0.0	0.0	65.2	52.2	14.0	0.0	0.0	70.3	68.7
Kayin	81.5	58.7	64.8	68.9	79.7	72.3	76.2	14.5	7.5	10.1	73.2	65.2	4.8	0.0	0.0	77.1	73.8
Chin	59.1	49.9	52.3	54.5	58.6	56.0	55.3	16.0	8.5	9.9	49.3	41.9	9.6	0.0	0.0	50.9	49.5
Sagaing	89.7	74.4	79.1	86.4	88.6	79.3	86.6	0.9	7.0	11.5	85.7	82.1	17.8	0.0	0.0	69.6	68.3
Tanintharyi	86.7	73.8	81.7	86.3	84.8	82.3	86.4	14.1	7.4	11.2	83.8	78.0	5.4	0.0	0.0	77.8	75.4
Bago	91.1	76.2	82.9	85.6	89.9	84.6	87.0	3.8	7.1	9.9	88.6	84.5	14.9	0.0	0.0	75.3	74.1
Magway	94.5	79.8	87.8	92.5	91.0	87.1	93.3	3.5	6.7	9.4	86.8	78.2	12.9	0.0	0.0	78.2	78.0
Mandalay	93.4	80.2	86.3	89.1	92.0	82.7	88.2	18.7	7.3	14.7	89.6	82.6	18.9	0.0	0.0	74.2	73.6
Mon	91.2	75.4	82.4	86.3	90.1	82.7	87.5	16.8	7.2	11.5	87.7	83.5	0.0	0.0	0.0	81.4	80.7
Rakhine	70.1	59.1	59.0	60.0	70.1	66.8	66.6	7.9	1.7	3.1	54.6	47.3	5.9	0.0	0.0	67.8	65.3
Yangon	93.5	78.0	81.5	81.0	90.3	85.0	87.7	17.0	11.2	16.3	87.0	80.2	14.5	0.0	0.0	86.8	84.9
Shan (S)	89.4	68.3	73.3	75.7	87.5	81.6	82.5	13.5	9.7	6.2	74.8	63.6	11.0	0.2	0.0	76.7	74.0
Shan (N)	77.6	55.2	59.8	62.0	72.4	66.5	66.5	12.4	6.2	7.9	59.5	45.8	0.0	0.0	0.0	64.3	58.8
Shan (E)	70.5	59.2	62.6	67.1	67.8	63.8	67.6	8.2	6.5	8.6	60.5	49.0	0.0	0.0	0.0	55.0	52.2
Ayeyarwaddy	86.6	74.7	80.7	85.0	86.2	84.7	87.7	7.7	6.4	7.2	80.4	68.3	5.6	0.5	0.0	79.3	79.0
Naypyitaw	93.3	74.6	81.2	88.1	91.6	83.7	87.6	20.2	7.3	11.3	85.3	75.5	1.0	0.0	0.0	82.5	81.9
Union	87.5	72.7	77.9	81.1	85.8	80.4	84.0	10.6	7.3	10.4	80.3	72.5	10.7	0.1	0.0	75.8	74.3

*Pentavalent Immunization was started at November 2012

3. Zoonotic Diseases Control

Fig (39) Reported cases of Dog bites

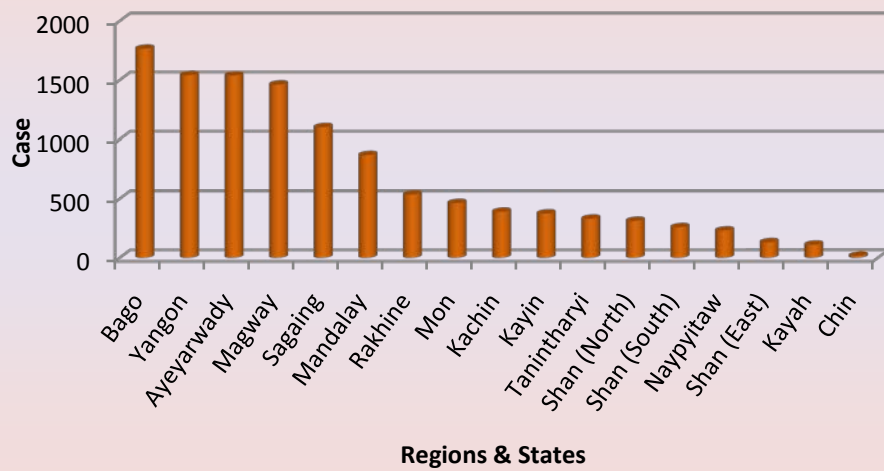
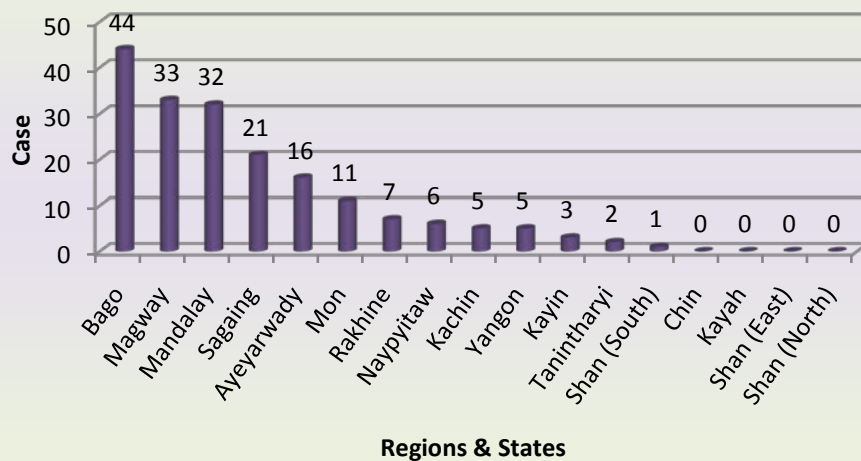


Fig (40) Reported cases of Rabies



The above figures show the reported cases of dog bites and rabies in different states and regions. Bago had the highest reported number of both dog bites and rabies in 2012. Moreover, Yangon and Ayeeyarwady also had more than 1500 cases of dog bite patients and Magway and Mandalay comprised more than 30 cases of rabies.

Table (10) Indicators for Zoonotic Diseases

Zoonotic Diseases Control (2012)				
Regions and States	Number of dog bite patients	Number of rabid dog bite patients	Number of persons received for rabies vaccines	Number of leptospirosis patients
Kachin	389	9	62	0
Kayah	110	5	45	0
Kayin	374	3	202	0
Chin	17	0	0	0
Sagaing	1100	107	223	1
Tanintharyi	330	29	104	8
Bago	1764	80	168	2
Magway	1461	69	109	1
Mandalay	869	71	163	0
Mon	463	23	66	1
Rakhine	536	7	41	0
Yangon	1542	13	430	1
Shan (S)	258	9	37	0
Shan (N)	312	4	76	0
Shan (E)	131	0	0	0
Ayeyarwaddy	1538	19	55	0
Naypyitaw	230	7	13	1
Union	11424	455	1794	15

4. Tuberculosis Control Programme

Fig (41) Percent Distribution of TB Cases by Age Groups

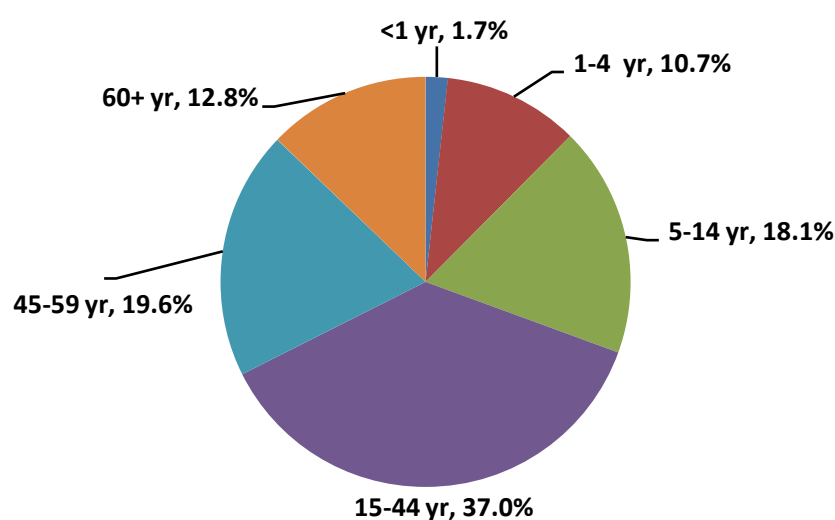
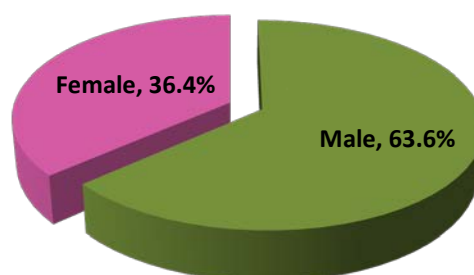
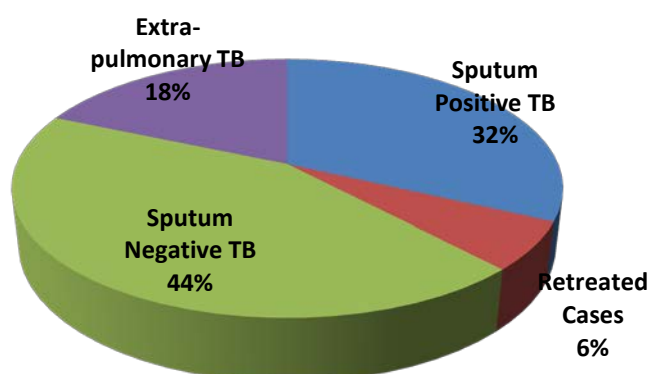


Fig (42) Percent Distribution of TB Cases by Gender



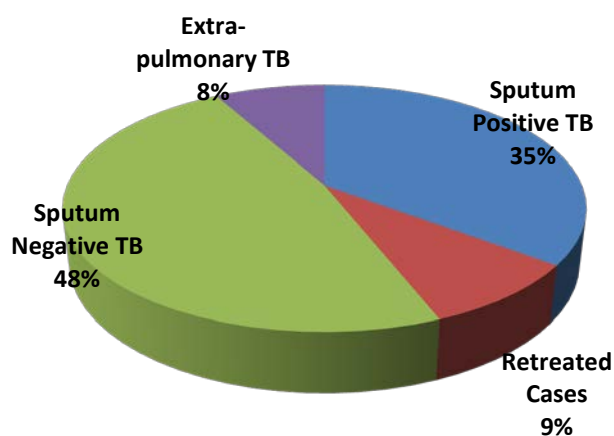
In 2012, morbidity of tuberculosis was found to be highest in productive age group (15-44 years) (37.0%) and second highest in age group between (45-59 years) (19.6%) and males were occupying nearly two-third of all TB cases. (Fig 41 & 42)

Fig (43) Percent of Different Categories of TB cases in 2012



On viewing the categories of TB cases, sputum negative TB cases were more common occupying 44 percent of total TB cases. (Fig 43)

Fig (44) Percent of Different Categories of TB Deaths in 2012



At the same time, nearly half of TB deaths was due to sputum negative followed by sputum positive TB.

Table (11) Indicator for Tuberculosis Control Activity

Tuberculosis Control (2012)	
Regions and States	New Sputum smear-positive pulmonary TB patients: case detection rate (%)
Kachin	43.7
Kayah	19.3
Kayin	56.1
Chin	14.5
Sagaing	27.0
Tanintharyi	44.0
Bago	69.0
Magway	35.0
Mandalay	32.3
Mon	45.9
Rakhine	35.5
Yangon	68.8
Shan (S)	30.6
Shan (N)	34.8
Shan (E)	65.4
Ayeyarwaddy	52.0
Naypyitaw	62.1
Union	47.5

5. Leprosy Elimination Activities

Fig (45) New case detection rate of leprosy

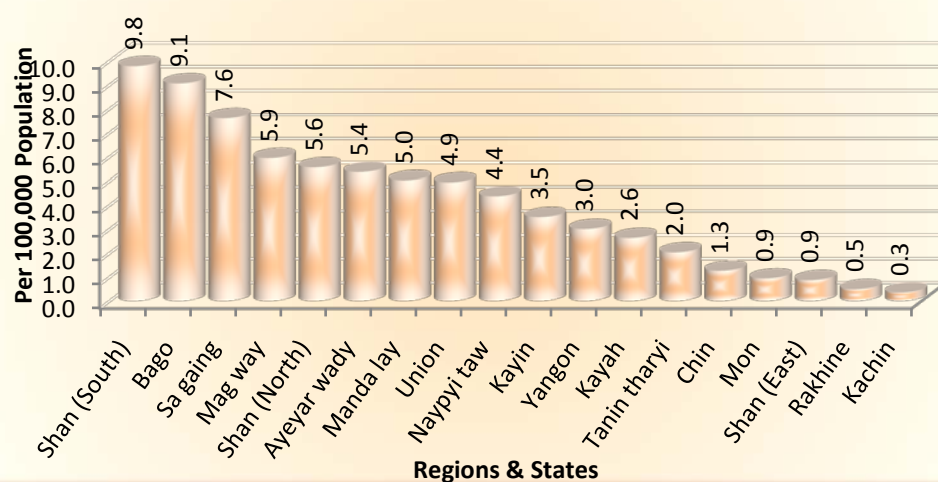


Fig (46) Percent of Under 15, Female and Disability Grade 2 Among New Leprosy Patients

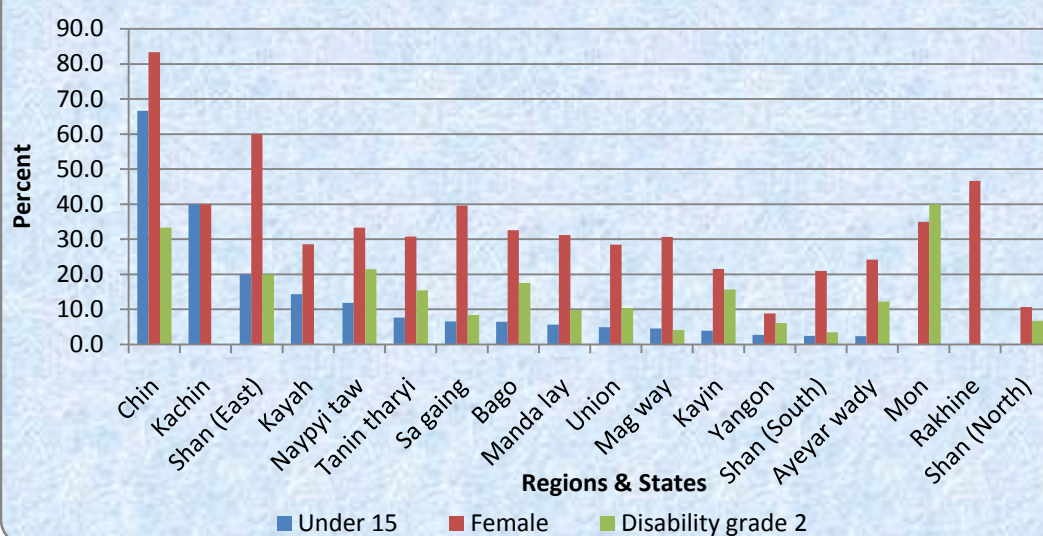
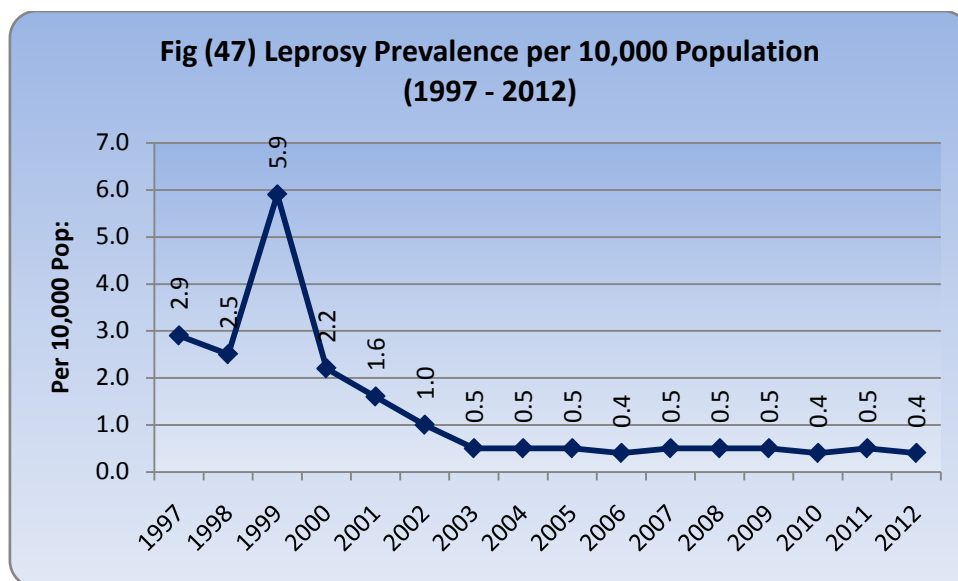


Figure (45) shows new case detection rate of leprosy was greatest in Shan (South) and Bago. Moreover, percents of under 15 years patients and female patients were highest in Chin State where majority of disability grade 2 among new leprosy patients was found in Mon State. (Fig 46)



The above figure shows the prevalence of leprosy per 10,000 population from 1997 to 2012. The prevalence rate is abruptly decreased in between 1999 and 2000. Then, it becomes quite steady from 2003 to 2012 with 0.4 or 0.5 per 10,000 population.

Table (12) Indicators for Leprosy Elimination Activities

Leprosy Elimination Activities (2012)							
Regions and States	New case detection rate (per 100000 pop)	% of new under-15 patients	% of new female patients	% of new patients with disability grade 2	No. of those who released from treatment after completing the standard therapy (RFT case)	Number of defaulters	Leprosy Prevalence Rate per 10000 pop
Kachin	0.3	40.0	40.0	0.0	4	0	0.0
Kayah	2.6	14.3	28.6	0.0	10	0	0.1
Kayin	3.5	3.9	21.6	15.7	34	2	0.2
Chin	1.3	66.7	83.3	33.3	3	3	0.1
Sagaing	7.6	6.6	39.6	8.4	363	6	0.7
Tanintharyi	2.0	7.7	30.8	15.4	19	0	0.1
Bago	9.1	6.5	32.6	17.6	452	11	0.8
Magway	5.9	4.6	30.7	4.1	185	2	0.6
Mandalay	5.0	5.6	31.2	9.8	228	2	0.4
Mon	0.9	0.0	35.0	40.0	17	1	0.1
Rakhine	0.5	0.0	46.7	0.0	7	0	0.0
Yangon	3.0	2.8	8.8	6.1	108	1	0.2
Shan (S)	9.8	2.5	21.0	3.5	149	0	0.7
Shan (N)	5.6	0.0	10.7	6.8	28	12	0.3
Shan (E)	0.9	20.0	60.0	20.0	13	0	0.1
Ayeyarwaddy	5.4	2.4	24.2	12.2	310	5	0.4
Naypyitaw	4.4	11.9	33.3	21.4	57	0	0.4
Union	4.9	4.9	28.5	10.4	1987	45	0.4

6. AIDS/ STI Prevention and Control Services

Fig (48) Genital Ulcer Detection Rate by States & Regions

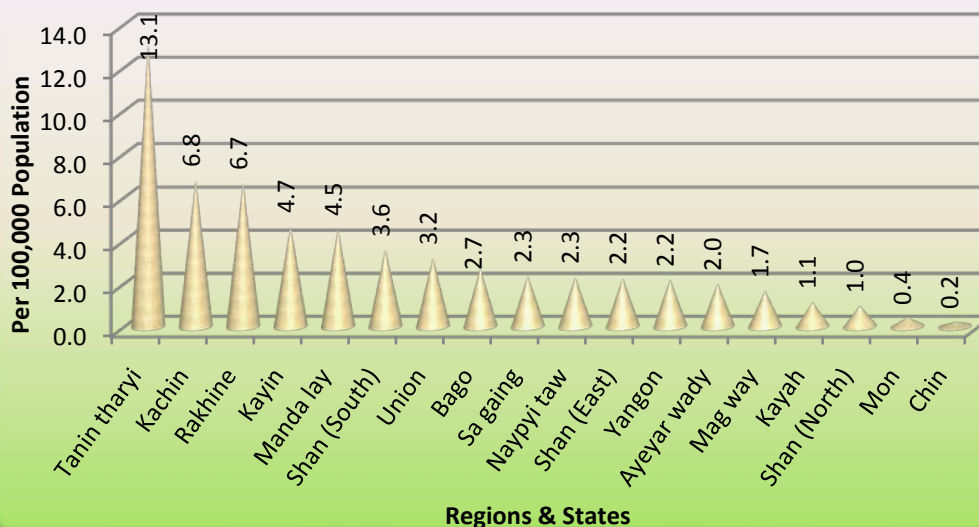
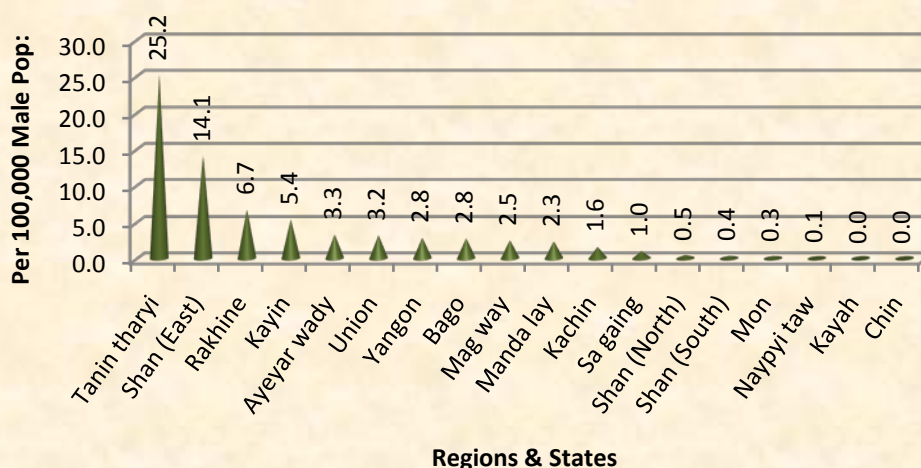


Fig (49) Genital Discharge Rate by States & Regions



According to the above figures (48 & 49), Tanintharyi had the highest rate of both genital ulcer detection rate (13.1%) and genital discharge rate (25.2%). At the same time, Chin got the lowest rate of both indicators (0.2% of genital ulcer detection rate & no genital discharge rate). Kayah also had no case of genital discharged male patient in 2012.

Table (13) Indicators for Sexually Transmitted Infection Control Activities

AIDS/ STI Prevention and Control (2012)				
Regions and States	VDRL test positive rate in primigravida	Genital ulcer detection rate	Genital discharge rate (male)	Percentage of STI among outpatients
Kachin	0.18	6.8	1.6	0.0
Kayah	0.00	1.1	0.0	0.0
Kayin	0.10	4.7	5.4	0.1
Chin	0.00	0.2	0.0	0.0
Sagaing	0.62	2.3	1.0	0.0
Tanintharyi	0.69	13.1	25.2	0.4
Bago	2.70	2.7	2.8	0.1
Magway	0.07	1.7	2.5	0.0
Mandalay	0.12	4.5	2.3	0.2
Mon	0.44	0.4	0.3	0.0
Rakhine	8.21	6.7	6.7	0.0
Yangon	1.29	2.2	2.8	0.1
Shan (S)	0.21	3.6	0.4	0.0
Shan (N)	0.12	1.0	0.5	0.0
Shan (E)	0.00	2.2	14.1	0.1
Ayeyarwaddy	0.63	2.0	3.3	0.1
Naypyitaw	0.11	2.3	0.1	0.0
Union	0.82	3.2	3.2	0.1

7. Malaria Control Services

Fig (50) Percent of Malaria Among Out-patients and In-patients

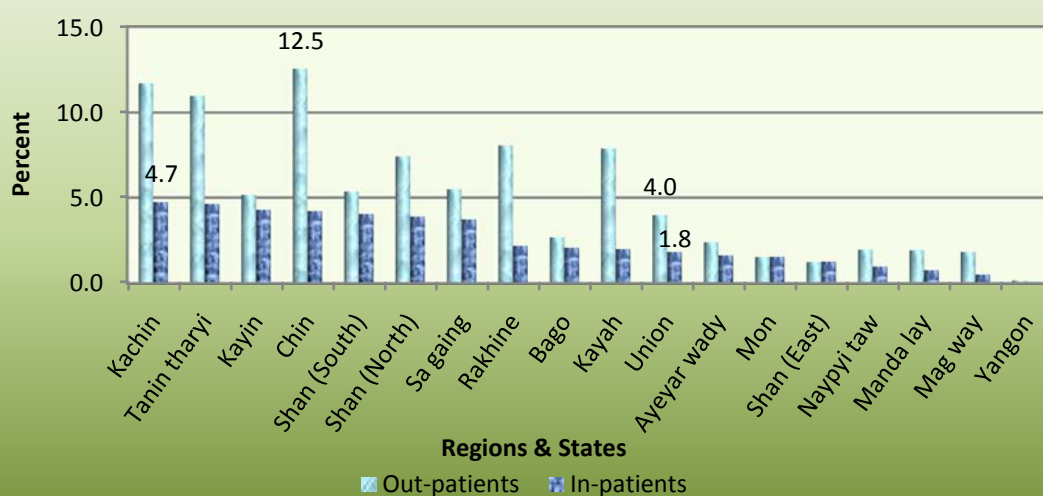
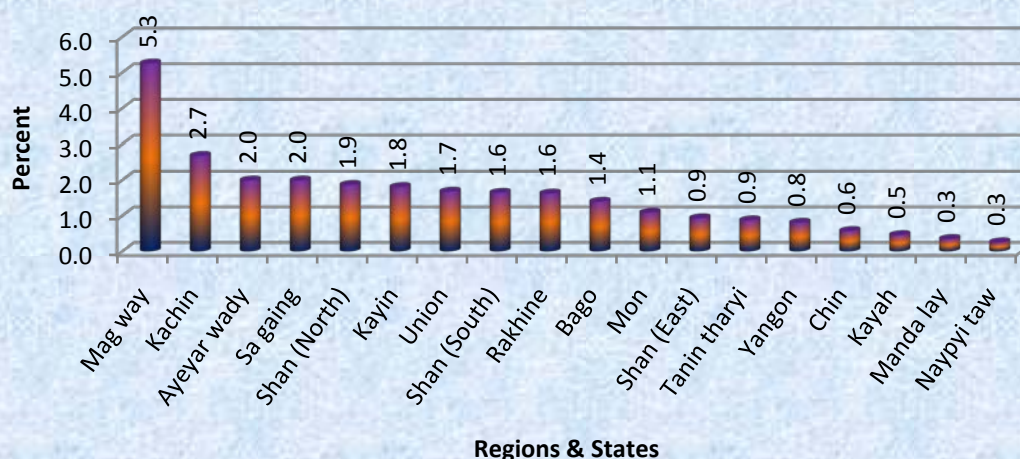


Fig (51) Case Fatality Rate of Malaria by States & Regions

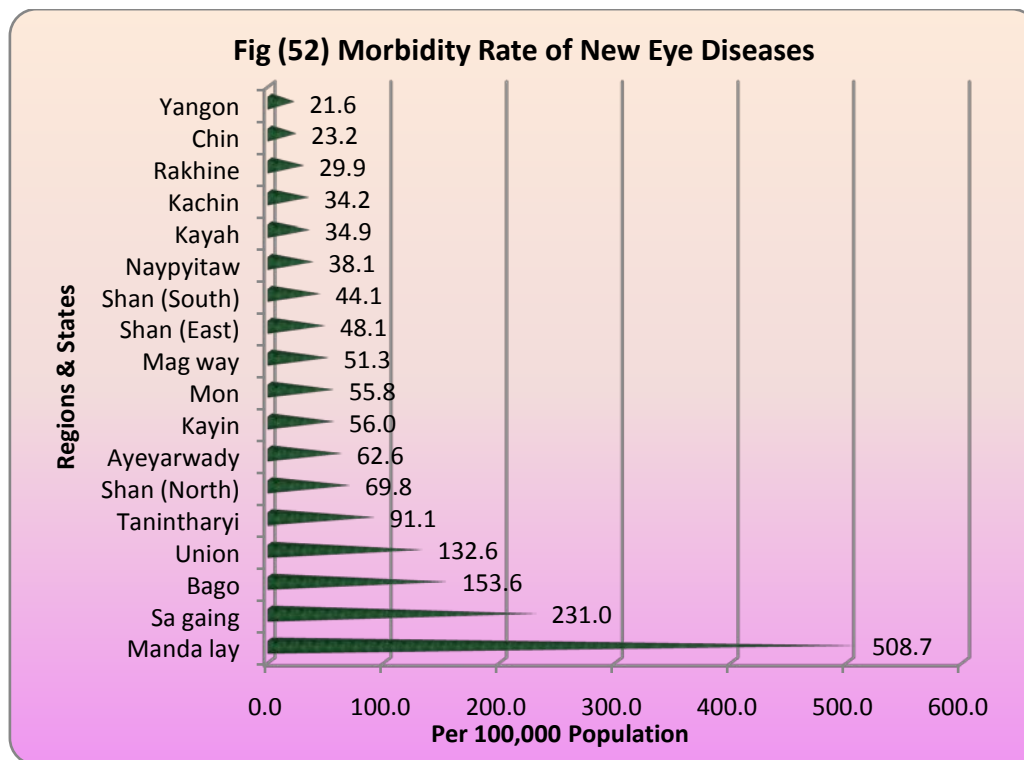


Malaria is one of the endemic diseases in Myanmar; and during 2012, Chin State had the highest percent of malaria cases among out-patients (12.5%) and Kachin had the maximum percent among in-patients. However, case fatality rate of malaria among in-patients was elevated in Magway Region (5.3%) due to Tilin Township (23.5%).

Table (14) Indicators for Malaria

Institutional based Malaria (2012)			
Regions and States	% of malaria among outpatients	% of hospitalized patients with malaria	% of in-patients deaths among those with malaria (Case Fatality Rate)
Kachin	11.68	4.73	2.68
Kayah	7.89	2.02	0.45
Kayin	5.17	4.28	1.80
Chin	12.53	4.21	0.57
Sagaing	5.45	3.72	1.99
Tanintharyi	10.98	4.63	0.87
Bago	2.70	2.09	1.39
Magway	1.84	0.51	5.25
Mandalay	1.93	0.77	0.35
Mon	1.55	1.56	1.08
Rakhine	8.07	2.21	1.62
Yangon	0.16	0.09	0.80
Shan (S)	5.36	4.04	1.64
Shan (N)	7.42	3.89	1.86
Shan (E)	1.25	1.27	0.93
Ayeyarwaddy	2.41	1.64	1.99
Naypyitaw	1.98	0.98	0.25
Union	3.97	1.84	1.67

8. Trachoma Control and Prevention of Blindness



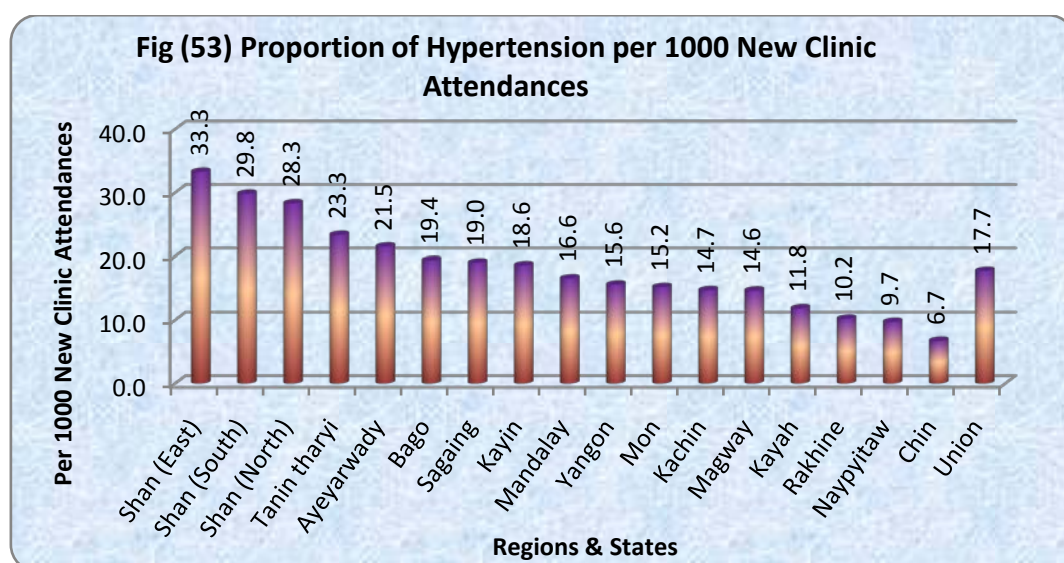
In above figure, 14 out of 17 states and regions were below union level in morbidity rate of new eye diseases and obviously high rate was found in Mandalay Region and subsequently Sagaing.

Table (15) Indicators for Prevention of Blindness

Trachoma Control and Prevention of Blindness (2012)				
Regions and States	Morbidity rate of new eye diseases (per 100,000 population)	Percent of infectious trachoma (under-10 year population)	Percent of blindness or loss of eyesight (general population)	Morbidity rate of ophthalmia neonatorum in newborn infants (per 1000 livebirths)
Kachin	34.2	0.0028	0.0015	0.3
Kayah	34.9	0.0072	0.0026	0.0
Kayin	56.0	0.0007	0.0003	0.0
Chin	23.2	0.0000	0.0004	0.0
Sagaing	231.0	0.0093	0.0047	0.1
Tanintharyi	91.1	0.0008	0.0057	0.0
Bago	153.6	0.0007	0.0098	0.2
Magway	51.3	0.0006	0.0040	0.1
Mandalay	508.7	0.0013	0.0099	0.1
Mon	55.8	0.0000	0.0016	0.0
Rakhine	29.9	0.0003	0.0014	0.1
Yangon	21.6	0.0004	0.0007	0.1
Shan (S)	44.1	0.0012	0.0015	0.0
Shan (N)	69.8	0.0003	0.0011	0.0
Shan (E)	48.1	0.0000	0.0003	0.1
Ayeyarwaddy	62.6	0.0000	0.0094	0.1
Naypyitaw	38.1	0.0000	0.0011	0.1
Union	132.6	0.0015	0.0048	0.1

III. NON-COMMUNICABLE DISEASES

1. Prevention of Cardiovascular Diseases



According to figure (53), reported hypertension per 1000 new clinic attendances was greatest in Shan (East) (33.3) and smallest in Chin (6.7) while union level was 17.7 per 1000 new clinic attendances.

Table (16) Indicators for Prevention of Cardiovascular Disease

Detection of Cardiovascular Diseases and risk behaviors (2012)		
Regions and States	Proportion of hypertension per 1000 above 15 years population	Prevalence of current smoker per 1000 above 15 years population
Kachin	3.2	109.7
Kayah	2.9	93.5
Kayin	3.4	116.3
Chin	1.5	126.5
Sagaing	3.7	65.9
Tanintharyi	4.4	138.2
Bago	3.3	118.2
Magway	2.6	110.2
Mandalay	2.4	105.1
Mon	3.8	148.3
Rakhine	2.3	240.3
Yangon	2.6	103.6
Shan (S)	4.6	184.6
Shan (N)	3.6	88.6
Shan (E)	5.3	193.0
Ayeyarwaddy	3.4	122.0
Naypyitaw	1.3	128.0
Union	3.1	120.5

2. Accident and Injury Prevention

Fig (54) Morbidity Rate of Accidents and Injuries (2012)

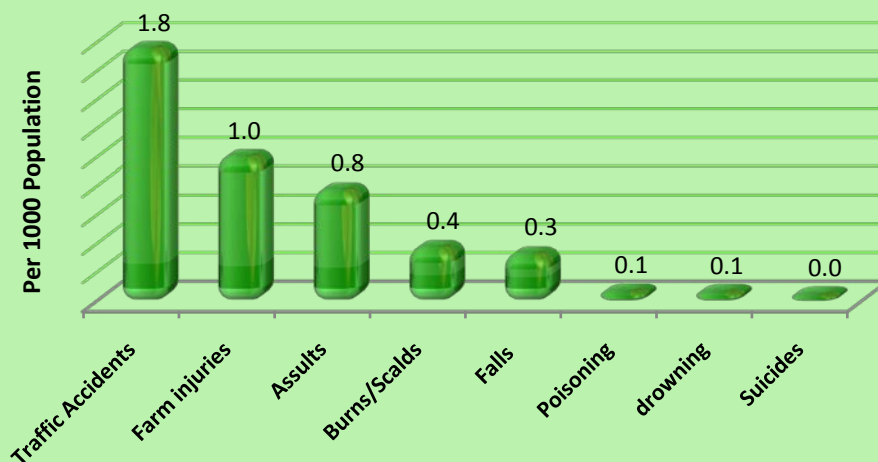
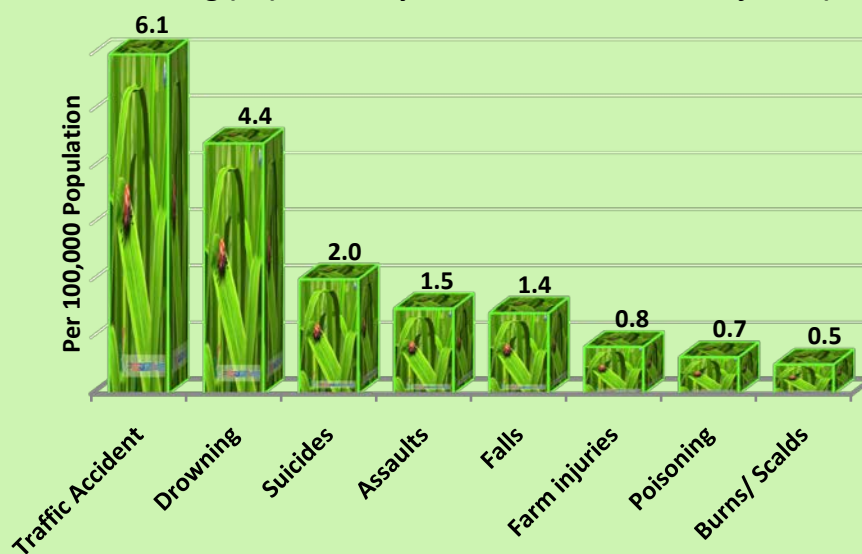


Fig (55) Mortality Rate of Accidents and Injuries (2012)



According to the above figures, morbidity and mortality due to road traffic accidents were leading cause of accidents and injuries in Myanmar. After that, farm injury and assault stood at second and third leading causes of morbidity as well as drowning and suicides as second and third leading causes of deaths due to accidents and injuries.

Table (17) Indicators for Prevention of Accidents and Injuries

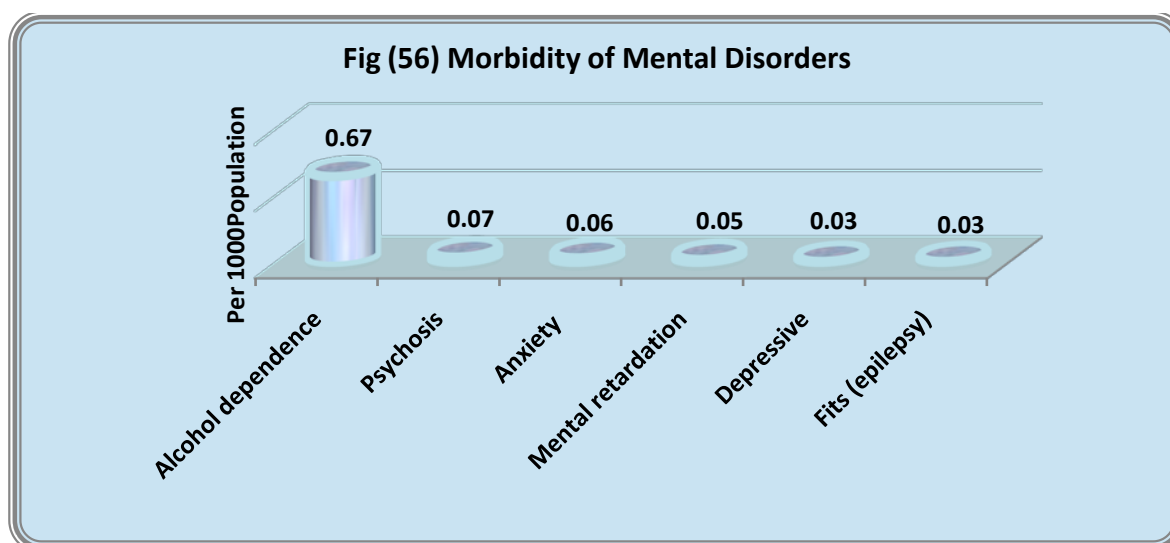
i Prevention of Accident and Injury (2012)									
Regions and States	Road Traffic Accident		Farm injuries		Poisoning		Fall from height		
	(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)	
Kachin	3.59	10.26	1.65	1.73	0.11	0.55	0.43	2.08	
Kayah	1.24	5.25	1.25	3.75	0.06	0.37	0.19	2.62	
Kayin	2.47	4.38	1.23	0.55	0.06	0.34	0.43	1.85	
Chin	1.60	6.47	0.94	0.42	0.03	0.21	0.54	2.51	
Sagaing	2.25	7.49	1.68	1.25	0.05	0.54	0.43	1.99	
Tanintharyi	2.35	4.98	1.16	1.79	0.06	0.70	0.42	1.71	
Bago	1.80	8.68	1.09	1.02	0.10	1.21	0.40	1.44	
Magway	1.12	4.53	1.27	0.76	0.04	0.44	0.41	2.66	
Mandalay	2.26	10.09	0.85	1.16	0.08	0.44	0.31	1.88	
Mon	2.76	9.80	0.85	0.51	0.06	1.03	0.42	1.45	
Rakhine	0.63	1.97	0.96	0.94	0.04	0.58	0.29	0.61	
Yangon	0.87	3.38	0.27	0.08	0.04	0.30	0.11	0.41	
Shan (S)	2.37	4.93	1.58	0.93	0.11	1.61	0.56	2.00	
Shan (N)	3.75	6.42	1.02	1.08	0.08	1.02	0.32	1.02	
Shan (E)	3.10	5.86	1.91	0.34	0.11	0.86	0.49	0.52	
Ayeyarwaddy	0.79	3.17	0.66	0.37	0.03	0.61	0.18	0.82	
Naypyitaw	1.55	7.89	0.78	0.93	0.07	0.42	0.35	0.83	
Union	(3)	1.76	6.06	1.01	0.83	0.06	0.65	0.33	1.43
	(4)	83625	2884	47885	397	2945	310	15620	682

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

ii Prevention of Accident and Injury (2012)									
Regions and States		Burns/ Scalds		Drowning		Suicide		Assault	
		(1)	(2)	(1)	(2)	(1)	(2)	(1)	(2)
Kachin		0.43	0.28	0.07	5.62	0.07	1.73	0.82	2.29
Kayah		0.31	0.37	0.07	5.25	0.01	0.75	0.14	0.75
Kayin		0.49	0.27	0.09	5.69	0.07	4.38	0.66	1.10
Chin		0.33	2.09	0.05	3.76	0.02	1.88	0.51	2.09
Sagaing		0.59	1.54	0.05	4.11	0.06	2.22	0.72	1.56
Tanintharyi		0.38	0.70	0.12	7.46	0.04	2.88	0.59	1.40
Bago		0.42	0.25	0.07	5.69	0.05	2.57	1.19	2.11
Magway		0.38	0.52	0.03	2.29	0.03	1.53	0.46	1.38
Mandalay		0.32	0.35	0.03	2.64	0.04	2.25	0.99	1.27
Mon		0.45	0.84	0.10	8.03	0.04	3.17	0.56	1.59
Rakhine		0.44	0.45	0.09	5.38	0.04	2.16	0.67	3.51
Yangon		0.13	0.10	0.04	3.07	0.02	0.81	1.14	0.70
Shan (S)		0.50	0.39	0.04	3.03	0.05	2.74	0.45	1.12
Shan (N)		0.33	0.59	0.03	2.53	0.04	2.26	0.41	0.75
Shan (E)		0.35	0.17	0.05	2.93	0.04	2.59	0.42	0.86
Ayeyarwaddy		0.32	0.40	0.08	6.50	0.02	1.12	0.59	1.14
Naypyitaw		0.25	0.52	0.04	3.53	0.07	3.11	1.00	3.01
Union	(3)	0.37	0.52	0.06	4.43	0.04	2.02	0.77	1.50
	(4)	17715	249	2871	2110	1940	962	36854	716

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

3. Mental Health

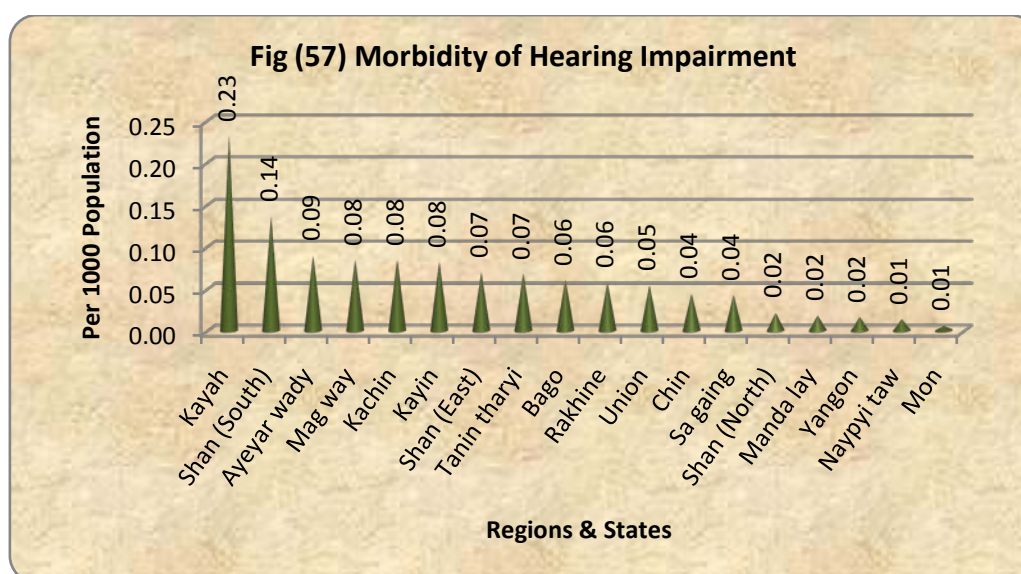


Mental health is one of the integrated programs in HMIS and BHS have to collect the common mental health problems in community. Out of six problems, alcohol dependence was commonest in 2012. (Fig 56)

Table (18) Indicators for Mental Health

Mental Health (2012)						
Regions and States	Per 1000 Population					
	Psychosis	Depression	Anxiety Neurosis	Alcoholic Dependence	Epilepsy	Mental retardation
Kachin	0.05	0.03	0.06	0.48	0.03	0.05
Kayah	0.14	0.02	0.01	1.36	0.05	0.15
Kayin	0.10	0.07	0.11	0.54	0.03	0.05
Chin	0.15	0.02	0.04	0.39	0.04	0.06
Sagaing	0.07	0.03	0.07	0.51	0.04	0.06
Tanintharyi	0.15	0.06	0.03	0.44	0.05	0.08
Bago	0.05	0.04	0.05	0.49	0.03	0.05
Magway	0.09	0.03	0.04	1.02	0.03	0.07
Mandalay	0.05	0.02	0.09	0.86	0.02	0.04
Mon	0.04	0.01	0.02	0.20	0.02	0.02
Rakhine	0.17	0.10	0.16	0.60	0.05	0.07
Yangon	0.03	0.02	0.02	0.28	0.01	0.02
Shan (S)	0.06	0.06	0.18	4.05	0.10	0.09
Shan (N)	0.04	0.02	0.02	0.57	0.04	0.04
Shan (E)	0.02	0.04	0.11	0.31	0.11	0.02
Ayeyarwaddy	0.05	0.02	0.02	0.24	0.03	0.04
Naypyitaw	0.03	0.02	0.02	0.20	0.01	0.02
Union	0.07	0.03	0.06	0.67	0.03	0.05

4. Prevention of Hearing Impairment

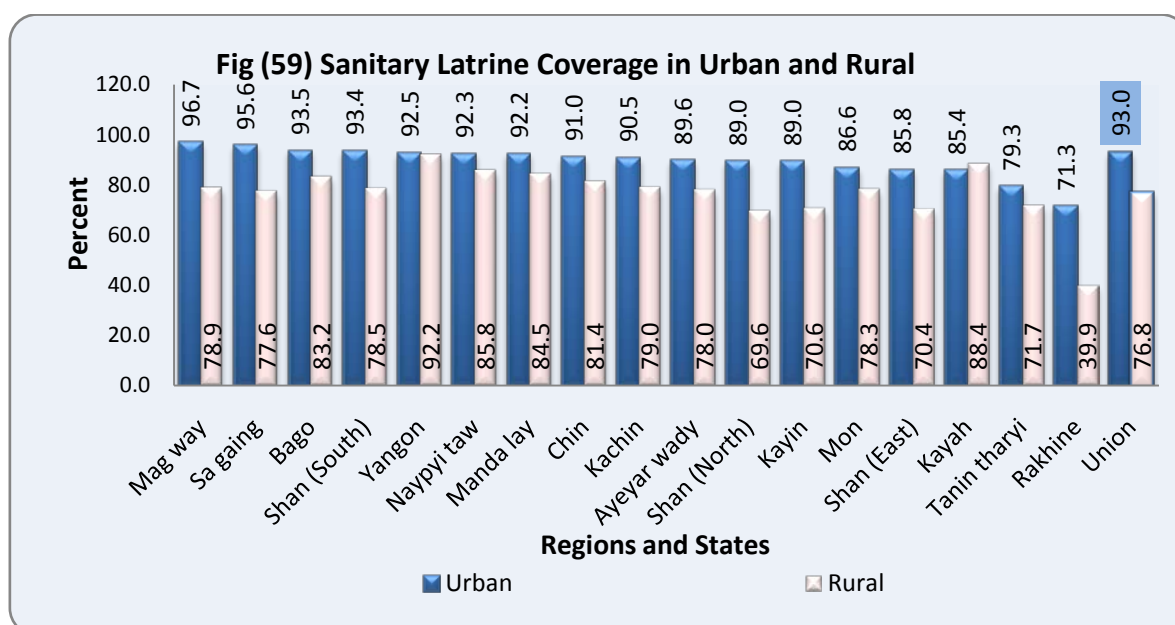
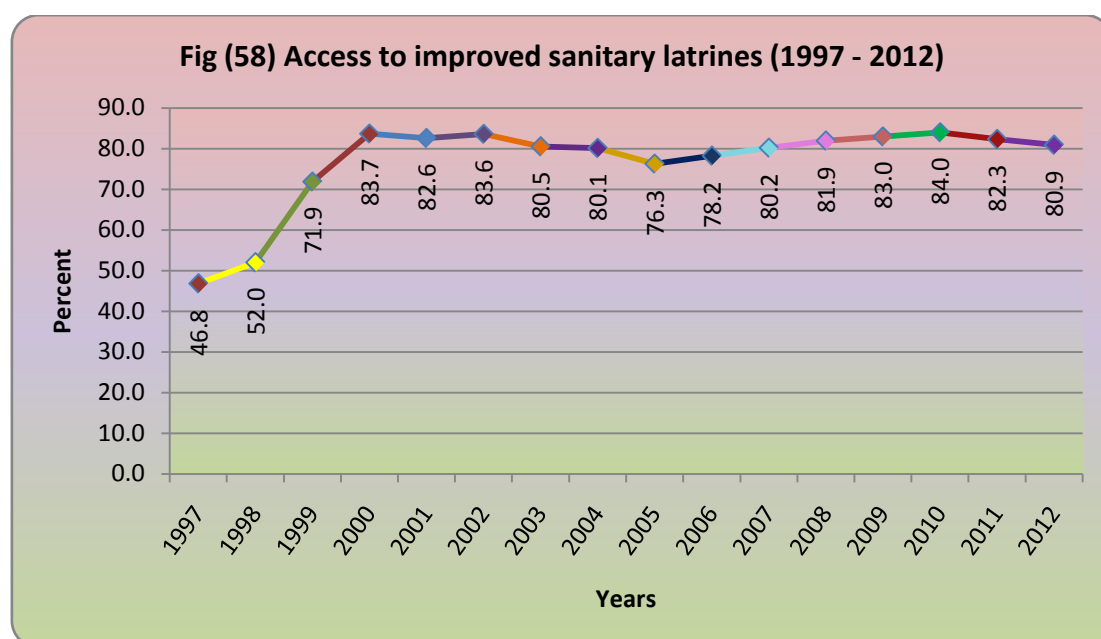


The above figure shows that in 2012, Kayah had the greatest problem of hearing impairment as compared to other states and regions and Mon and Naypyitaw had got the least number of hearing impairment.

Table (19) Indicators for Prevention and Control of Hearing Impairment

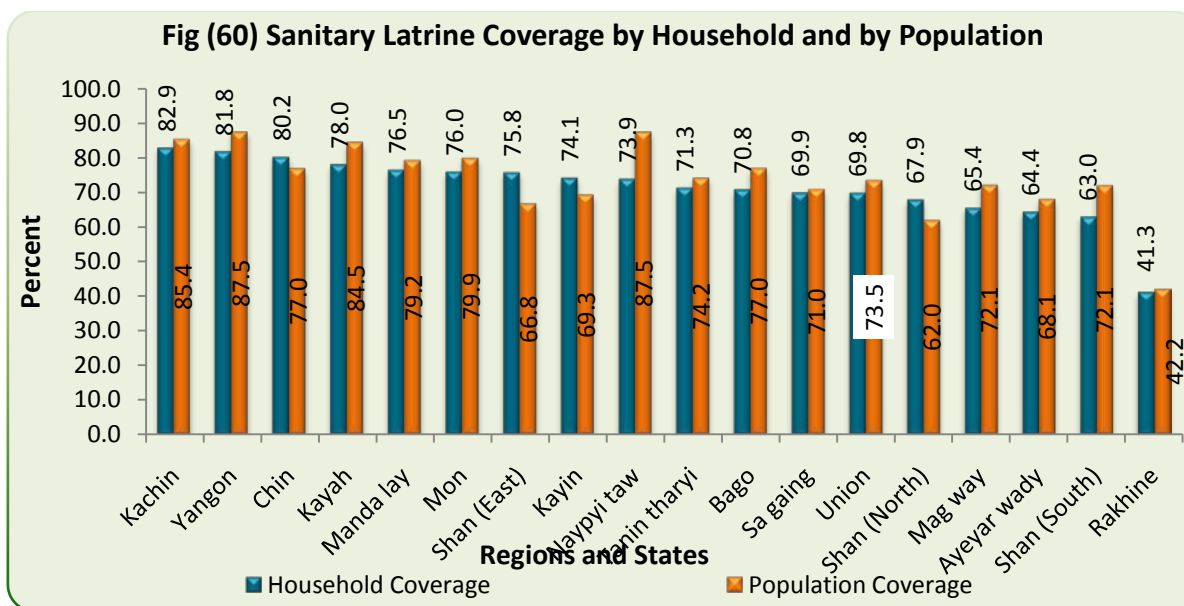
Prevention and Control of Hearing Impairment (2012)			
Regions and States	Morbidity rate of congenital hearing defect (per 1000 livebirths)	Morbidity rate of chronic ear discharges (per 1000 population)	Morbidity rate of hearing impairment (per 1000 population)
Kachin	0.20	0.02	0.08
Kayah	0.86	0.24	0.23
Kayin	0.00	0.02	0.08
Chin	0.28	0.04	0.04
Sagaing	0.24	0.03	0.04
Tanintharyi	0.00	0.02	0.07
Bago	0.53	0.03	0.06
Magway	0.10	0.03	0.08
Mandalay	0.06	0.01	0.02
Mon	0.00	0.01	0.01
Rakhine	0.48	0.05	0.06
Yangon	0.02	0.00	0.02
Shan (S)	0.10	0.01	0.14
Shan (N)	0.00	0.02	0.02
Shan (E)	0.00	0.05	0.07
Ayeyarwaddy	0.07	0.02	0.09
Naypyitaw	0.00	0.01	0.01
Union	0.16	0.02	0.05

IV. ENVIRONMENTAL HEALTH SERVICES



$$\frac{\text{Total no. of fly proof latrines built in an area} \times 6}{\text{Total population in that area}} \times 100$$

The above figures show sanitary latrine coverage of the whole population as well as urban and rural population in the year 2012. The formula for computing these indicators was described below the figures. The union sanitary latrine coverage in urban was 93.0 percent and rural was 76.8 percent in 2012.

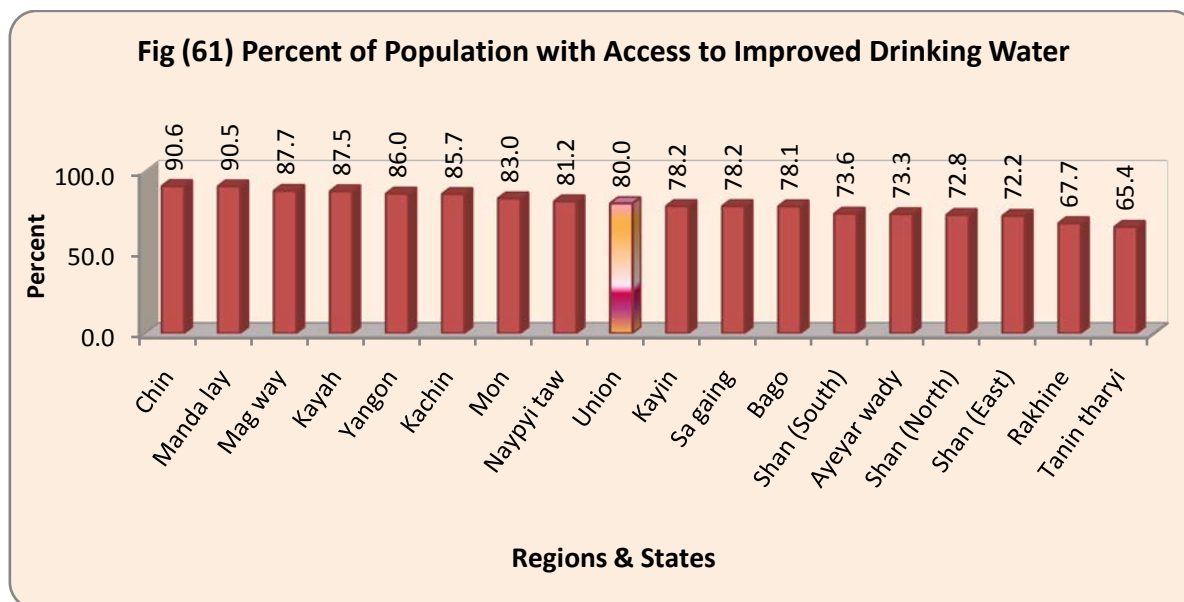


Total no. of fly proof latrines built in an area

x 100

Total no. of households/ population in that area

The above figure represents a different point of view in computing the sanitary latrine coverage. The union sanitary latrine coverage by households was 70.0 percent and by population was 73.5 percent.



Access to improved drinking water is one of the important indicators in environmental sanitation program and union percent of population with access to improved drinking water was 80.0 and the best coverage was seen in Chin State (90.6 percent).

Table (20) Indicators for Environmental Sanitation

Environmental Sanitation (2012)			
Regions and States	Access to improved sanitary latrines (%)		
	Union	Urban	Rural
Kachin	82.0	90.5	79.0
Kayah	87.5	85.4	88.4
Kayin	73.1	89.0	70.6
Chin	83.1	91.0	81.4
Sagaing	80.3	95.6	77.6
Tanintharyi	73.4	79.3	71.7
Bago	85.0	93.5	83.2
Magway	81.5	96.7	78.9
Mandalay	86.7	92.2	84.5
Mon	80.2	86.6	78.3
Rakhine	44.6	71.3	39.9
Yangon	92.4	92.5	92.2
Shan (S)	82.0	93.4	78.5
Shan (N)	73.9	89.0	69.6
Shan (E)	83.1	85.8	70.4
Ayeyarwaddy	79.5	89.6	78.0
Naypyitaw	87.5	92.3	85.8
Union	80.9	93.0	76.8

V. HEALTH EDUCATION ACTIVITIES

Fig (62) Advocacy Meetings in Township per Month and by BHS per Year

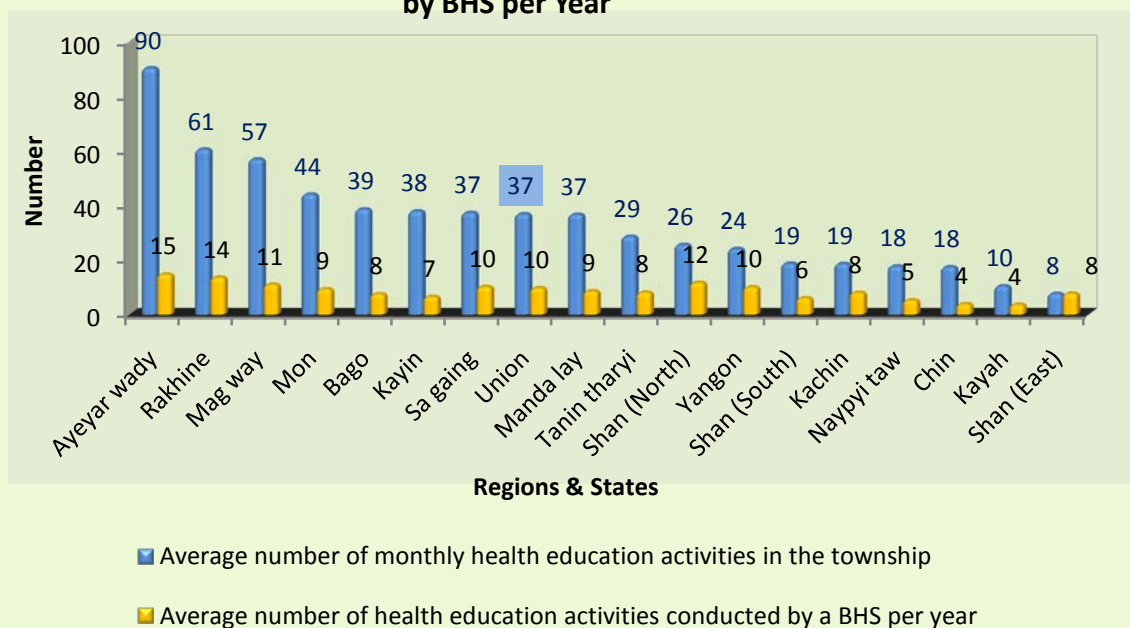
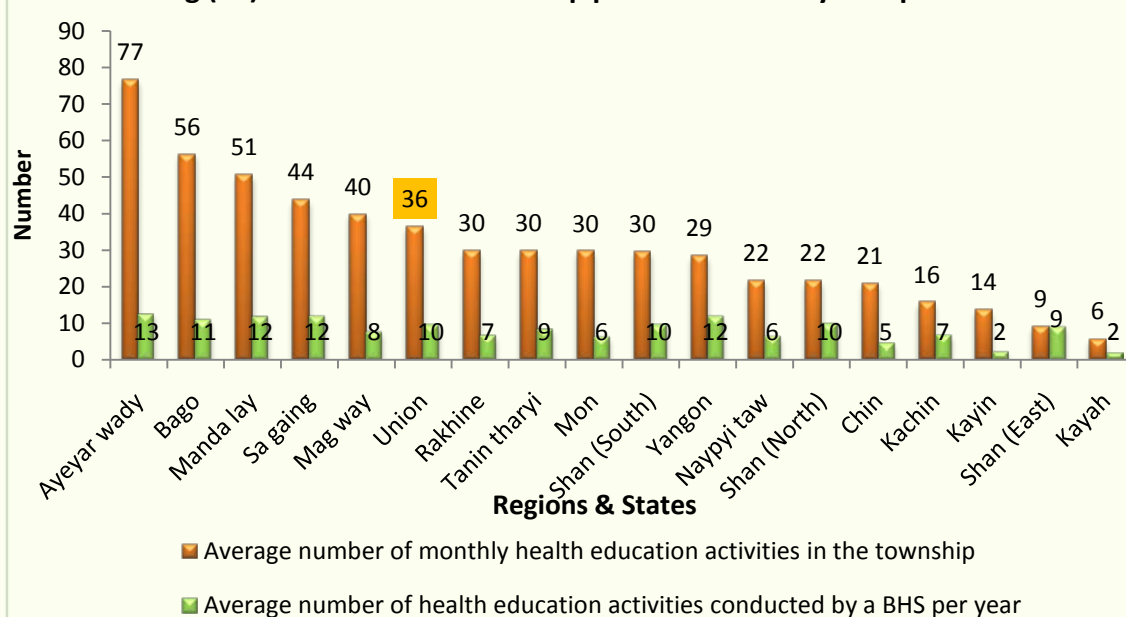


Fig (63) Public Talks in Township per Month and by BHS per Year



Regarding on health education activities, Ayeyarwady had the best health educating activities with 90 advocacies and 77 public talks per months in one township as well as 15 advocacies and 13 public talks by one BHS per year.

Table (21) Indicators for Health Education

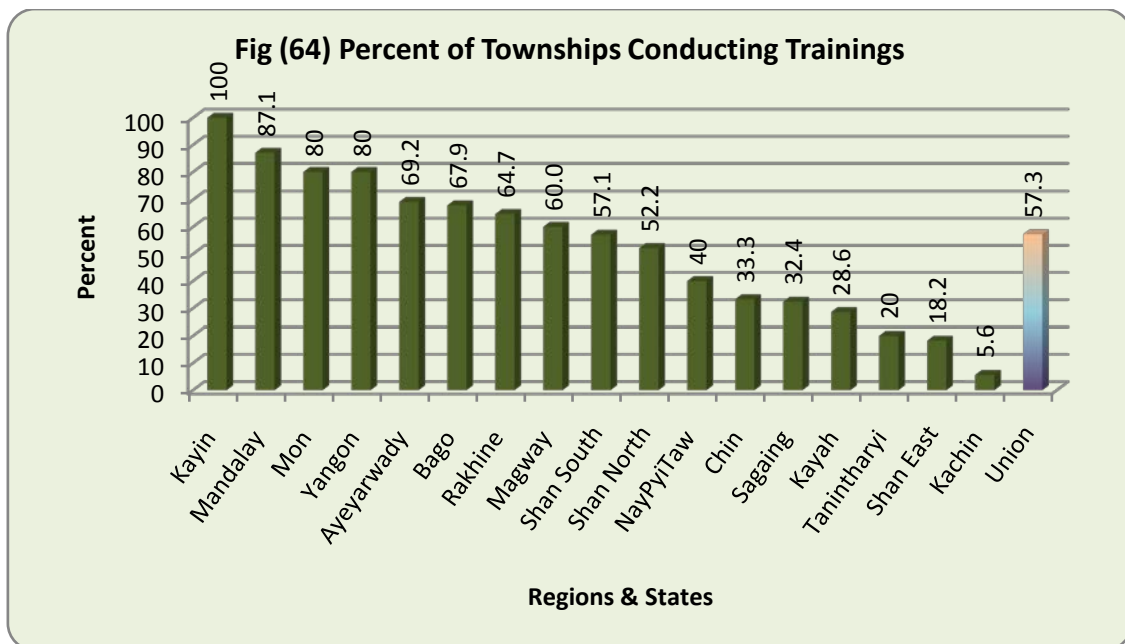
Health Education Services (2012)								
Regions and States	Advocacy Meeting		Exhibitions and Contests		Public Talks		Production/Distribution of IEC materials	
	Average number of monthly health education activities in the township	Average number of health education activities conducted by a basic health staff per year	Average number of monthly health education activities in the township	Average number of health education activities conducted by a basic health staff per year	Average number of monthly health education activities in the township	Average number of health education activities conducted by a basic health staff per year	Average number of monthly health education activities in the township	Average number of health education activities conducted by a basic health staff per year
Kachin	18.7	8.1	1.2	0.5	15.8	6.9	5.3	2.3
Kayah	10.5	3.7	0.1	0.0	5.7	2.0	1.0	0.4
Kayin	38.0	6.6	0.8	0.1	13.7	2.4	4.8	0.8
Chin	17.5	3.9	0.0	0.0	20.9	4.7	1.1	0.2
Sagaing	37.5	10.2	0.2	0.1	43.9	12.0	7.3	2.0
Tanintharyi	28.7	8.2	3.3	0.9	29.9	8.5	8.1	2.3
Bago	38.7	7.6	0.2	0.0	56.3	11.0	14.3	2.8
Magway	56.9	11.1	0.5	0.1	39.8	7.8	11.4	2.2
Mandalay	36.8	8.6	0.7	0.2	50.6	11.9	7.3	1.7
Mon	44.2	9.4	0.3	0.1	29.8	6.3	13.1	2.8
Rakhine	60.5	13.7	1.1	0.3	29.9	6.8	7.5	1.7
Yangon	24.2	10.1	0.8	0.3	28.5	11.9	9.4	3.9
Shan (S)	18.8	6.1	0.2	0.1	29.6	9.6	8.0	2.6
Shan (N)	25.7	11.8	0.6	0.3	21.7	9.9	6.0	2.7
Shan (E)	7.7	7.8	0.0	0.0	9.0	9.1	3.7	3.7
Ayeyarwaddy	90.4	14.8	0.6	0.1	76.8	12.6	13.6	2.2
Naypyitaw	17.8	5.3	0.3	0.1	21.8	6.5	4.4	1.3
Union	37.0	9.8	0.6	0.2	36.4	9.6	8.5	2.2

VI. TRAINING INFORMATION

Capacity building of health workforce is essential at all levels; training on various health topics at township level were conducted as project activities by various projects.

Table (22) Training Implementation at Township Level in 2012

Region and State	No. of Township	Training Conducting Township	Percent
Kachin	18	1	5.6
Kayah	7	2	28.6
Kayin	7	7	100
Chin	9	3	33.3
Sagaing	37	12	32.4
Tanintharyi	10	2	20
Bago	28	19	67.9
Magway	25	15	60.0
Mandalay	31	27	87.1
Mon	10	8	80
Rakhine	17	11	64.7
Yangon	45	36	80
Shan South	21	12	57.1
Shan North	23	12	52.2
Shan East	11	2	18.2
Ayeyarwady	26	18	69.2
NayPyiTaw	5	2	40
Union	330	189	57.3



According to the above figure, Kayin State had conducted trainings on different topics in all of the townships and only 57.3 percent of 330 townships in Myanmar had got trainings in 2012.

Fig (65) Participation of Trainers from Different Levels

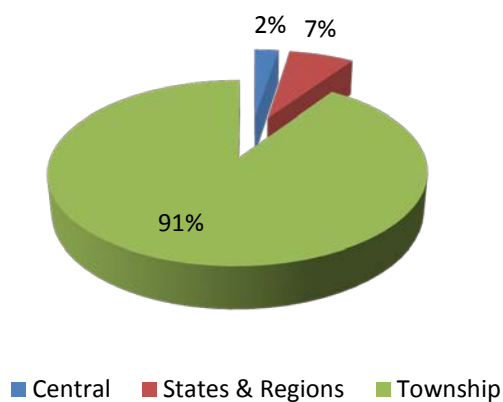
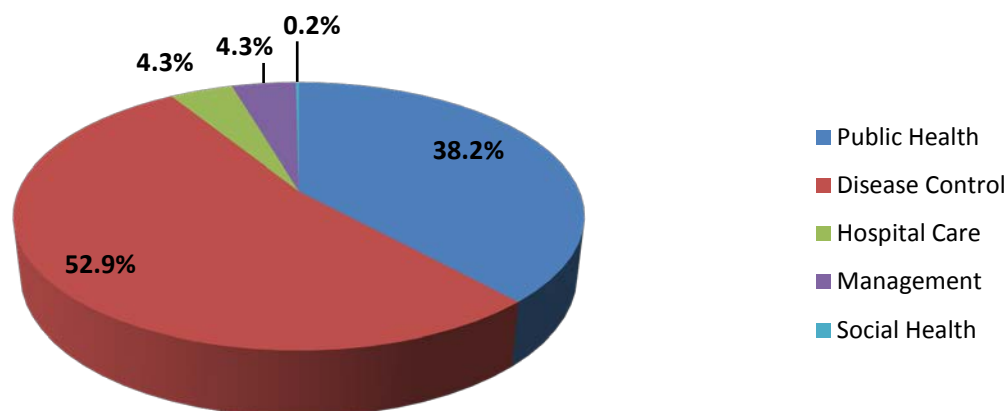


Fig (66) Percent Distribution of Different Training Topics Conducted at Township Level



The above figures show that most of the trainers were from township level (90.6%) who attended at TOT trainings and the trainings were focusing mostly in disease control (52.9%) and largely in public health section (38.2%).

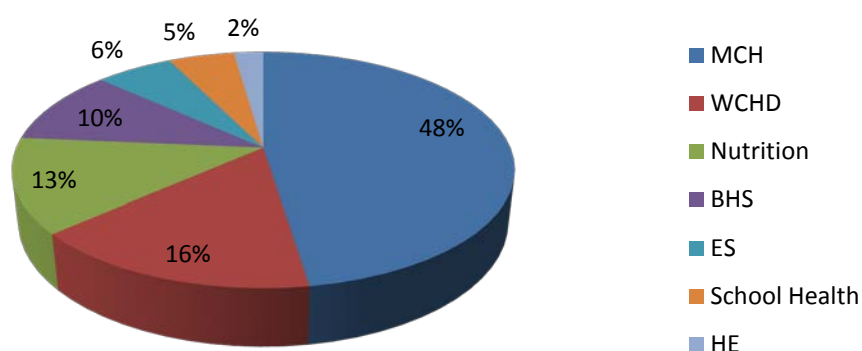
Table (23) Frequency of Training in Various Areas

States & Regions	Public Health	Disease Control	Hospital Care	Management	Social Health
Kachin	4	0	0	0	0
Kayah	2	3	0	0	0
Kayin	35	41	2	2	1
Chin	7	14	0	0	0
Sagaing	39	32	6	5	0
Tanintharyi	4	5	1	1	0
Bago	47	92	5	3	0
Magway	43	48	3	3	0
Mandalay	54	102	9	7	1
Mon	30	62	3	3	0
Rakhine	26	32	0	3	0
Yangon	115	159	20	16	0
Shan(S)	46	40	6	4	1
Shan(N)	33	60	1	3	0
Shan(E)	7	15	0	2	0
Ayeyarwaddy	77	79	8	13	0
Naypyitaw	3	8	0	0	0

Table (24) Frequency of Training of Various Sections in Public Health Area

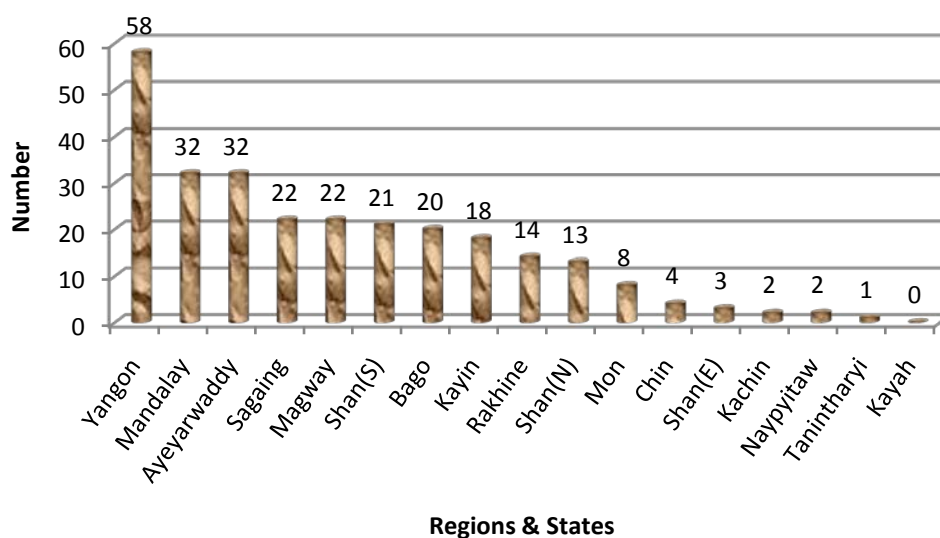
States & Regions	MCH	WCHD	Nutrition	School Health	HE	ES	BHS
Kachin	2	0	0	0	0	0	2
Kayah	0	1	1	0	0	0	0
Kayin	18	6	6	2	0	1	2
Chin	4	1	1	0	0	0	1
Sagaing	22	9	5	3	0	0	0
Tanintharyi	1	1	1	0	0	0	1
Bago	20	6	4	1	1	4	11
Magway	22	7	4	0	0	5	5
Mandalay	32	8	6	2	0	0	6
Mon	8	5	8	5	0	3	1
Rakhine	14	3	6	0	0	1	2
Yangon	58	14	10	10	6	8	9
Shan(S)	21	14	3	0	1	1	6
Shan(N)	13	4	7	2	1	2	4
Shan(E)	3	3	0	1	0	0	0
Ayeyarwaddy	32	9	11	3	4	9	9
Naypyitaw	2	0	1	0	0	0	0

Fig (67) Percent Distribution of Different Sections in Public Health Training



On focusing public health section, trainings on maternal and child health topic was occupying nearly half of the trainings (48%) followed by trainings on women and child health development (16%).

Fig (68) MCH Trainings by States & Regions in 2012

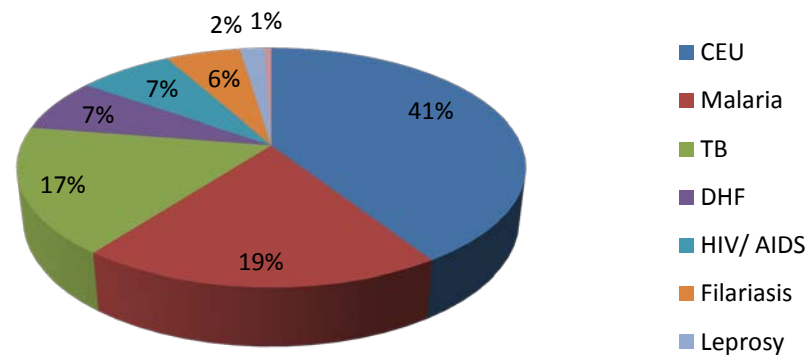


Regarding MCH trainings, they were mostly conducted in Yangon, Mandalay and Ayeyarwady but Kayah had no MCH training in 2012 at all. Likewise, MCH trainings should be conducted more in Tanintharyi, Naypyitaw and Kachin.

Table (25) Frequency of Training of Various Sections in Disease Control Area

States & Regions	CEU	Malaria	DHF	Filariasis	TB	HIV/ AIDS	Leprosy	Trachom a
Kayah	1	0	0	0	1	1	0	0
Kayin	11	11	3	2	11	2	0	1
Chin	7	5	0	0	2	0	0	0
Sagaing	11	4	7	1	4	3	2	0
Tanintharyi	1	4	0	0	0	0	0	0
Bago	36	18	3	8	21	5	1	0
Magway	17	8	7	0	12	3	0	1
Mandalay	45	24	5	0	19	7	2	0
Mon	25	16	6	2	5	8	0	0
Rakhine	13	13	0	0	5	1	0	0
Yangon	67	7	15	26	26	11	6	1
Shan(S)	13	15	1	0	8	3	0	0
Shan(N)	27	16	1	0	12	3	1	0
Shan(E)	7	3	2	0	2	1	0	0
Ayeyarwaddy	37	9	7	6	8	9	3	0
Naypyitaw	6	1	0	0	0	0	0	1

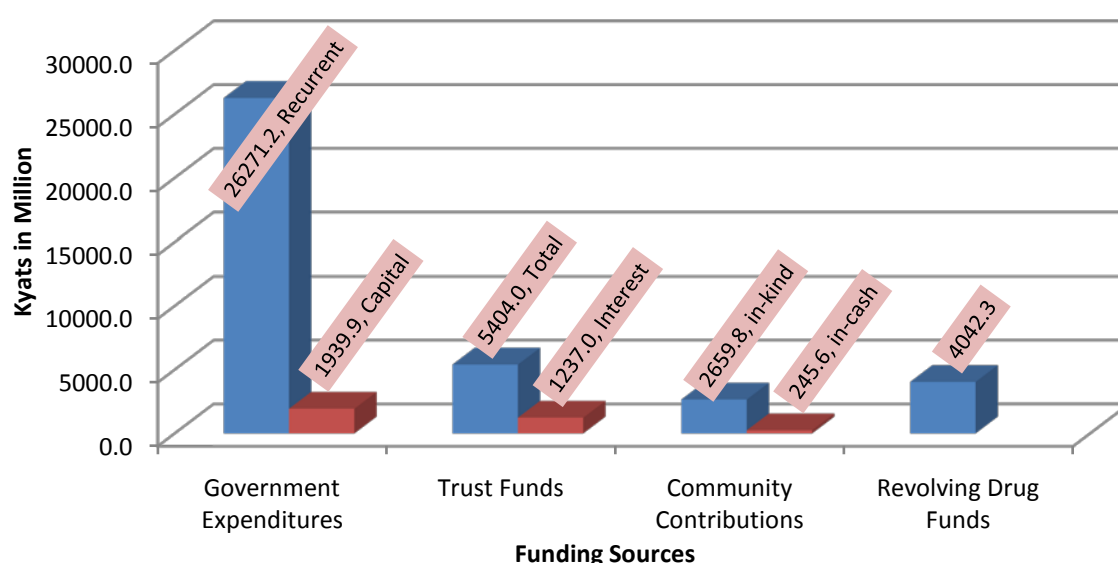
Fig (69) Percent Distribution of Different Sections in Disease Control Training



On focusing disease control section, trainings on disease control and surveillance was occupying the largest portion (41%) of all trainings. Trainings on Malaria and TB also possessed the huge percent (19% & 17%).

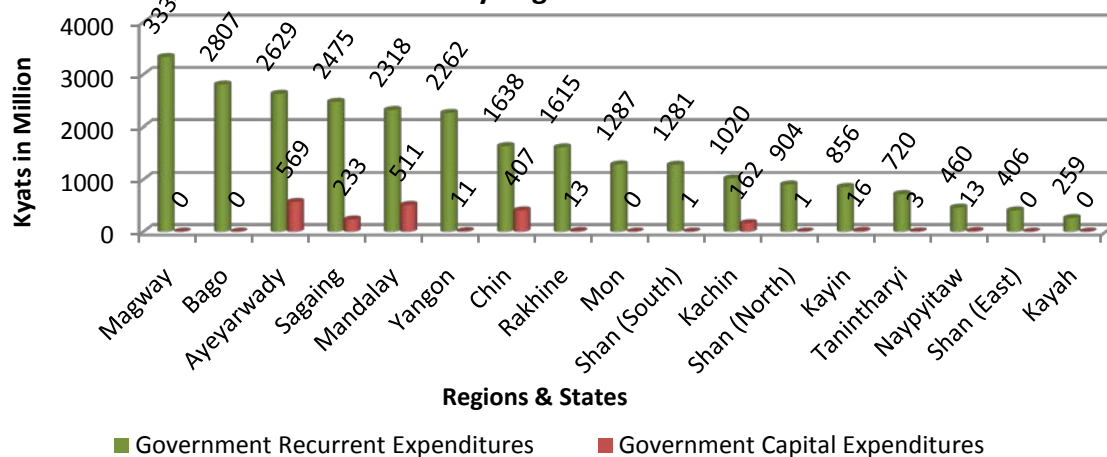
VII. HEALTH CARE FINANCING

Fig (70) Health Care Financing from Different Sources



Health care financing program is one of the newly integrated programs in HMIS in 2012. The financial supports from different sources were collected at township level once a year. The expenditures on state and regional level hospitals and central hospitals are not included in those figures. In 2012, most of the financial support came from government expenditures.

Fig (71) Government Recurrent and Capital Expenditures by Regions & States



Government health expenditures in township level were shown in above graph.

VIII. TOWNSHIP LEVEL ANALYSIS

Maternal Health Services

For assessing maternal health service coverage in 2012, the following indicators were used to calculate summary measure (Maternal health index); and the level of measures for each indicator were defined to high, middle and low coverage as described in Table(26). The summary measure (Maternal Health Index) was standardized by converting into 1 if all maternal health indicators had been achieved to high level. Distribution of maternal health service coverage was explored by means of maternal health index among regions/states, Fig (72).

- Antenatal care coverage (%)
- Proportion of births attended by Skilled Health Personnel (%)
- Postnatal care coverage (%)
- TT2 coverage (%)
- Still-birth ratio (per 1000 LBs)
- Abortion rate (%)
- Maternal mortality ratio (per 1000 LBs)

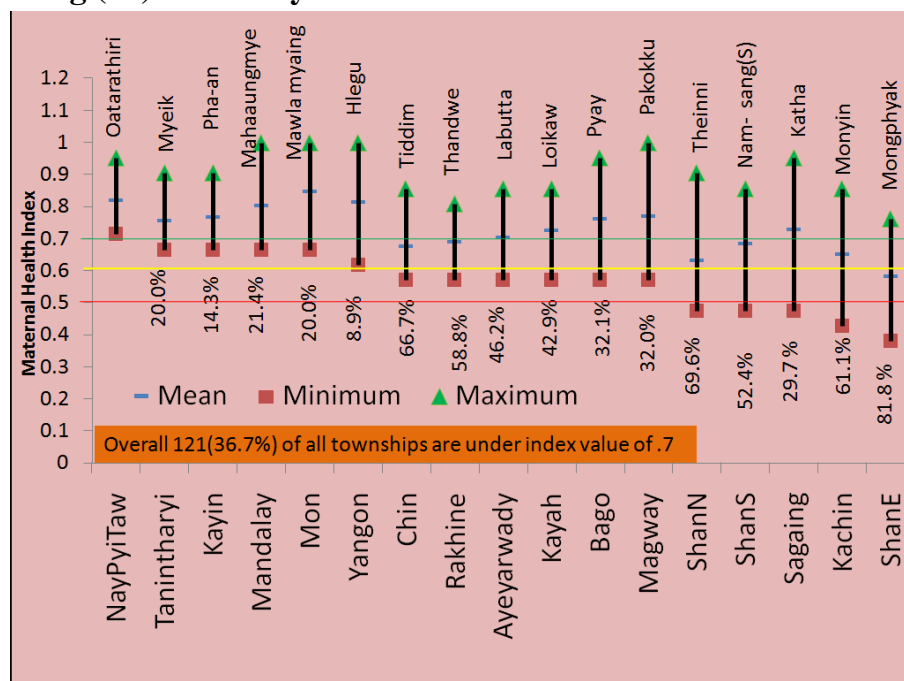
Table (26) Level of measures for maternal health indicators

Indicators	High level	Middle level	Low level
Antenatal Care Coverage (%)	>75%	50-75%	<50%
Proportion of births attended by Skilled Health Personnel (%)	>75%	50-75%	<50%
Postnatal Care Coverage (%)	>75%	50-75%	<50%
TT2 Coverage (%)	>75%	50-75%	<50%
Still-birth ratio(per 1000 LBs)	< 10	10-20	>20
Abortion rate (%)	<2	2-4	>4
Reported Maternal mortality ratio (per 1000 LBs)	0.1-0.99999	1-1.5	Zero, >1.5

Distribution of Maternal Health Index by Regions/States (Fig 72) showed that 121 townships (36.7%) out of 330 townships were under index value of (0.7). In Shan(E) state, (81.8%) of townships in Shan(E) state were under Index (0.7) and Mongphyak township showed highest maternal service coverage. Oatarathiri Township in Nay Pyi Taw Union Territory, Myeik Township in Tanintharyi Region, Pha-an Township in Kayin State; etc. showed highest maternal service coverage in their respective region and states. Only (8.9%) of townships in Yangon region were under Index (0.7); and showed high maternal service coverage among regions and States. The first priority

townships (under index 0.5) were seen in Sagaing Region, Shan and Kachin States. Hlegu in Yangon Region, Pakokku in Magway Region, Mawlamyaing in Mon State, MahaAungMye Township in Mandalay Region got Index(1).

Fig (72) Summary Measures of Maternal Health Services



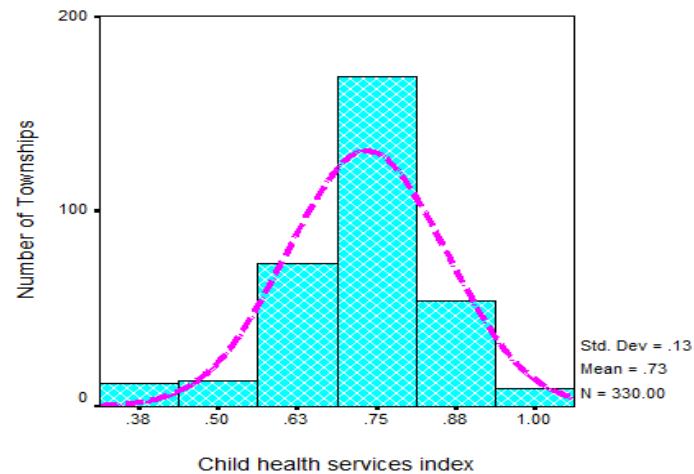
Child Health Services

Neonatal care coverage, ORT utilization rate, percent of antibiotics treatment in ARI case, measles immunization coverage, low birth weight, early neonatal death rate and under five mortality rate were used to assess coverage of child health services. Summary Measure (Child Health Index) was calculated based on level of measures of child health indicators described in Table (27).

Table (27) Level of measures for child health service indicators

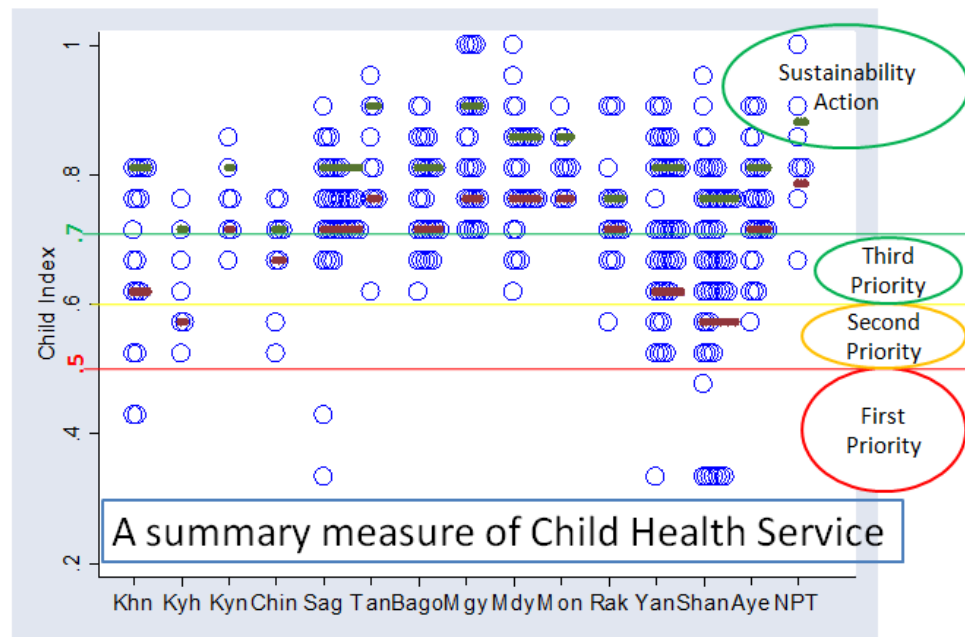
Indicators	High level	Middle level	Low level
Neonatal Care Coverage (%)	>75%	50-75%	<50%
ORT utilization rate (%)	>75%	50-75%	<50%
Antibiotics treatment coverage in ARI case (%)	>75%	50-75%	<50%
Measles Immunization Coverage (%)	>75%	50-75%	<50%
Low Birth Weight (%)	Up to 1%	1.01-2%	Zero reporting, >2%
Early Neonatal Death Rate (per 1000 LBs)	Up to 3	3.01-6	Zero reporting, >6
Under Five Mortality Rate(per 1000 LBs)	Up to 10	10.01-20	Zero reporting, >20

Fig (73) Distribution of quality of child health services



The above figure (73) explores the distribution of quality of child health services; obviously seen as 169(51%) townships were on average; (Mean \pm SD; 0.73 \pm 0.13).

Fig (74) Summary Measures of Child Health Services



The above figure reflected inequity between Regions and States, one blue circle represents one township in each region/state; Kachin State, Sagaing Region, Yangon Region and Shan State had first priority townships for child health services. Most of the townships (above Index 0.7) needed sustainability action. Name of priority townships for Maternal Health, Child Health as well as both Maternal and Child health were described in Table (30). The number of townships for priority action (Table 28) and number of townships needed priority action in both maternal and child

health by regions/states (Table 29) were also explored for reducing maternal and child mortality towards MDG.

Table (28) Number of Priority Townships for Maternal Health and Child Health

Priority Level	Maternal Health	Child Health
First (less than Index 0.5)	7	13
Second (between 0.5 and 0.6)	31	23
Third (between 0.6 and 0.7)	83	62
Total	121	98

**Table (29) Number of Priority Townships for Both Maternal and Child Health
by Regions and States**

Regions and States	Number of Priority Townships for Both Maternal and Child Health
Kachin	7
Kayah	3
Chin	2
Sgaing	4
Bago	2
Rakhine	3
Yangon	4
Shan(S)	6
Shan(N)	13
Shan(E)	7
Ayeyarwady	5
Total	56

Table (30) Name of Priority Townships for Maternal and Child Health by Regions and States

Kachin State

Priority Level	Maternal Health	Child Health
First	Sumprabum	Hsotlaw
		Sumprabum
Second	Hsotlaw	Chiphwe
	Chiphwe	Naungmoon
	Machanbaw	
	Ingyanyan	
	Tanaing	
	Momauk	
Third	Khaunglanphoo	Machanbaw
	Putao	Bhamo
	Mansi	Ingyanyan
	Shwegu	Tanaing
		Khaunglanphoo
Townships	11	9

Kayah State

Priority Level	Maternal Health	Child Health
First		
Second	Shardaw	Meisi
		Bawlakhe
		Shardaw
Third	Parsaung	Parsaung
	Meisi	Dimawso
Townships	3	5

Kayin State

Priority Level	Maternal Health	Child Health
First		
Second		
Third	Pharpon	Kawkareik
Townships	1	1

Chin State

Priority Level	Maternal Health	Child Health
First		
Second	Kanpalet	Tonzaung
	Tonzaung	Kanpalet
Third	Haka	Falam
	Thantlang	Matupi
	Mindat	
	Paletwa	
Townships	6	4

Sagaing Region

Priority Level	Maternal Health	Child Health
First	Nanyun	Leshi
		Nanyun
Second	Leshi	
	Lahe	
Third	Mawlaik	Monywa
	Kani	Kanbalu
	Depayin	Butalin
	Pinlebu	Pinlebu

Priority Level	Maternal Health	Child Health
Third	Hkamti	
	Salingyi	
	Myinmu	
	Kambalu	
Townships	11	6

Tanintharyi Region

Priority Level	Maternal Health	Child Health
First		
Second		
Third	Lounglon	Dawei
	Kyunsu	
Townships	2	1

Bago Region

	Maternal Health		Child Health	
Priority Level	East	West	East	West
First				
Second		Paukkhaung		
		Monyo		
Third	Yaedashe	Zigone	Shwedaung	Nattalin
	Kyaukkyi	Tharyarwaddy	Oatwin	Okpo
	Kawa	Thegon	Kawa	
		Nattalin	Htantapin	
Townships	9		6	

Magway Region

Priority Level	Maternal Health	Child Health
First		-
Second	Natmauk	-
Third	Yesagyo	-
	Htilin	-
	Thayet	-
	Saw	-
	Aunglan	-
	Saytottara	-
	Myaing	-
Townships	8	-

Mandalay Region

Priority Level	Maternal Health	Child Health
First		
Second		
Third	Pyigyidagun	Sinku
	Thabeikkyin	Kyaukse
	Meiktila	Mogok
	Wundwin	Pyin Oo Lwin
	Madaya	
	Tada U	
Townships	6	4

Mon State

Priority Level	Maternal Health	Child Health
First		-
Second		-
Third	Thaton	-
	Paung	-
Townships	2	-

Rakhine State

Priority Level	Maternal Health	Child Health
First		
Second	Buthidaung	Myauk U
	Taungup	
Third	Maungdaw	Maungdaw
	Myauk U	Taungup
	Yathedaung	Sittway
	Gwa	
	An	
	Yanbye	
	Kyauktaw	
	Mannaung	
Townships	10	4

Yangon Region

Priority Level	Maternal Health	Child Health
First		Cocogyun
Second		Seikkan
		Dagon Myothit (Seikkan)
		Latha
		Mayangon
		North Okkalapa
		Insein
		Kamayut
Third	North Okkalapa	Dagon
	Latha	Lanmadaw
	Dagon Myothit(Seikkan)	Padedan
	Cocogyun	Dala
		Thanlyin
		Thingangyun
		Dagon Myothit(South)
		Botahtaung
		Dawbon
		Sangyoung
		Shwepyitha
		Tamway
Townships	4	20

Shan (South)

Priority Level	Maternal Health	Child Health
First	Mongkai	
Second	Mineshu	Mongkai
	Kehis	Kehis
	Maukme`	Hsihseng
Third	Ywarngan	Mineshu
	Hsihseng	Maukme`
	Kunhing	Minepan
	Minepan	
	Phekon	
	Mone`	
	Le`char	
Townships	11	6

Shan (North)

Priority Level	Maternal Health	Child Health
First	Manton	Kongyan
		Minemaw
		Naphang
		Pansan(Pankhan)
		Panwine
		Manton
Second	Minemaw	Hsipaw
	Naphang	Mongmit
	Pansan(Pankhan)	Lashio

Priority Level	Maternal Health	Child Health
Second	Panwine	
	Lashio	
	Hsipaw	
	Namkham	
	Mineye`	
Third	Kongyan	Laukine
	Kunlon	Mineye`
	Laukine	Tantyan
	Tantyan	Kukai
	Namsan (N)	Mabane
	Momeik	Muse
	Mabane	Namtu
Townships	16	16

Shan (East)

Priority Level	Maternal Health	Child Health
First	Makman	Makman
	Minekat	Minelar
	Minepyin	
Second	Minelar	Mineyan
Third	Kengtung	Minesat
	Minetung	Tachileik
	Minesat	Minepyin
	Mineyan	Minekat
	Mineyaung	Minephyat
		Mineyaung
Townships	9	9

Ayeyarwady Region

Priority Level	Maternal Health	Child Health
First		
Second	Kyangin	Nyaungdon
	Yekyi	
	Ngaputaw	
Third	Pantanaw	Bogale
	Bogale	Ngaputaw
	Pathein	Pantanaw
	Kyaiklatt	Yekyi
	Danubyu	Pathein
	Ingapu	
	Hinthada	
	Kyonpyaw	
	Kyaungon	
Townships	12	6