

Ministry of Health  
The Republic of the Union of Myanmar



*HEALTH  
IN  
MYANMAR*

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## Foreword by H.E. Dr. Than Aung, m Union Minister for Health m

The concept of good health is shifting towards creating and maintaining good health and well-being, rather than only preventing and treating disease. Health is the hub of sustainable development: health is a factor of development, at the same time, development brings about better health. In this sense, greater synergies between health and other sectors will have huge impact on progressing health and well-being as well as sustainable development.



Nowadays, new technologies and opportunities for connectivity are emerging to improve health. Simultaneously, challenges such as new diseases, unplanned urbanization, disasters to mention a few, are threatening the health of people. Again, health is determined by social, economic, environmental and political factors. The actions required to tackle most of these determinants go beyond the capacity of ministries of health. Maximizing healthy lives could be the specific health goal in framing health in the post-2015 development agenda, in which the health sector would play a larger but far from exclusive role. Undeniably, strong linkage and interrelationship between health and other sectors become more than important in achieving the health goals. Consequently interventions from all sectors of society will be required to attain the better health at all stages of life.

In Myanmar, the Ministry of Health is the key player in promoting and maintaining health of the people while some ministries are also involving in improving health of the population by establishing social security scheme and producing medicines and therapeutic agents. Looking back, considerable achievements have been made in the health sector with the guidance and support of the State, altruistic efforts of health professional and work force and collaboration of national and international partners. Social and volunteer organizations in the country have invested much of their time and efforts to collaborate with the Ministry of Health. Taking in to consideration of their size, private health care providers are also playing an important role in health development of the country.

Further progress in health and well-being requires not only health system strengthening and financial protection but also policy coherence and shared solutions across multiple sectors. Unfailingly, the Ministry of Health will maintain the commitment to further its collaboration with various sectors to ensure achieving the Universal Health Coverage.

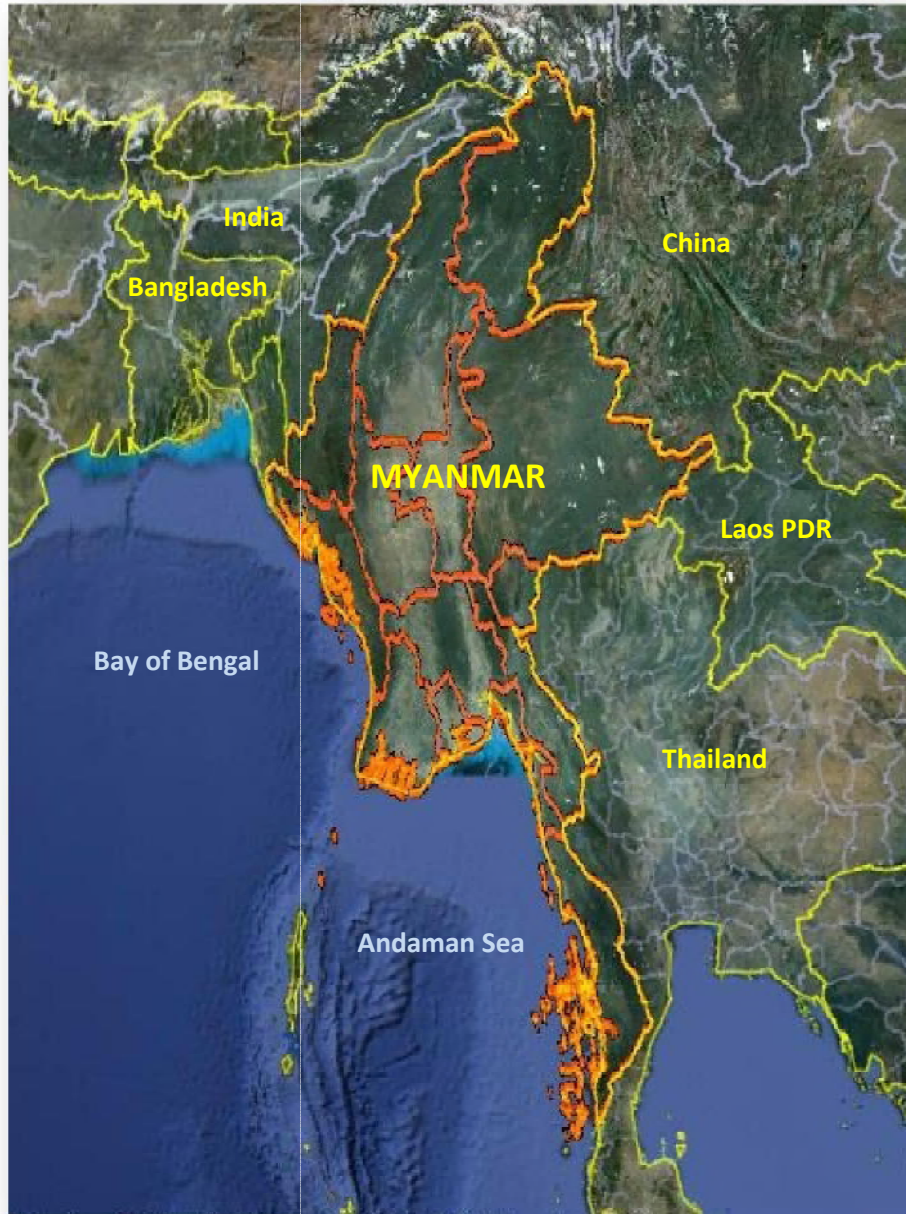
A handwritten signature in black ink, reading "Than Aung" with a long horizontal line extending to the right.

Dr. Than Aung m  
Union Minister for Health u

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# COUNTRY PROFILE



## Location

The Republic of the Union of Myanmar, located in South-East Asia, is bounded by Bangladesh, India, China, Laos and Thailand on the landward side, 1760 miles of the coast line is bounded on the west by the Bay of Bengal and on the south by the Andaman Sea. It stretches 2200 kilometers from north to south and 925 kilometers from east-west at its widest point. Myanmar covers an area of 676,578 square kilometers in which 653,508 square kilometers of land and 23,070 square kilometers of water. It lies between 09°32' N and 28°31' N latitudes and 92°10' E and 101°11' E longitudes. The length of contiguous frontier is 3,828 miles (6,129 kilometers), sharing 1,370 miles with China, 1,310 miles with Thailand, 832 miles with India, 1,687 miles with Bangladesh and 148 miles with Laos respectively.

## Geography

The country is divided administratively, into Nay Pyi Taw Council Territory and 14 States and Regions. It consists of 74 Districts, 330 Townships, 398 Towns, 3065 Wards, 13,619 Village Tracts and 64,134 Villages. The main features of the country are the delta region and the central plain surrounded by mountains. It falls into three well marked natural divisions, the western hills, the central belt and the Shan plateau on the east, with a continuation of this high land in the Tanintharyi. Three parallel chains of mountain ranges from north to south divide the country into three river systems, the Ayeyarwady, Sittaung and Thanlwin.

Myanmar has abundant natural resources including land, water, forest, coal, mineral and marine resources, and natural gas and petroleum. Great diversity exists between the regions due to the rugged terrain in the hilly north which makes communication extremely difficult. In the southern plains and swampy marshlands there are numerous rivers and tributaries of these rivers crisscross the land in many places. Mountain ranges of Myanmar create different climatic condition, rain forest that makes regular rainfall for the rice farmers and also acting as natural barrier which protects the mainland from typhoon and hurricane.

## Climate

Myanmar enjoys a tropical climate with three distinct seasons, summer, rainy and cold season. From March to mid-May are summer months; the rain falls from mid-May to the end of October and the cold season starts in November and ends at the end of February. Generally, Myanmar enjoys a tropical monsoon climate. However, climatic conditions differ widely from place to

place due to widely different topographical situations. Central Myanmar has an annual rainfall of less than 40 inches while the Rakhine coast gets about 200 inches. The average temperature experienced in the delta ranges between 22.3°C to 33.1°C, while in the dry zone, it is between 20°C and 34°C. The temperature is between 17°C and 30°C in hilly regions and even lower in Chin state ranging between 9.9°C and 24.2°C.

## Demography

The Republic of the Union of Myanmar conducted its most recent census in March/April 2014. This is more than 30 years after the last census in 1983. The provisional results indicate that the population of Myanmar on the 29<sup>th</sup> March 2014 was 51,419,420 persons. The population of Myanmar has steadily grown since the beginning of census taking in 1872, rising from 2.7 million persons, to 10.5 million in 1901, to 13.2 million in 1921, then to 28.9 in 1973, 35.3 million persons in 1983 and 51.4 million persons in 2014. The steady increase in population size over the period has policy implications for all sectors of the economy particularly those of education, health, employment and housing. The census results show that the population density in Myanmar is 76 persons per square kilometre. About 30 percent of the population resides in urban areas.

### Distribution of Population by State/Region and Sex

State/Region	Male	Female	Total	Proportion of Total Population
Union	24,821,176	26,598,244	51,419,420	100.00
Kachin	877,664	811,990	1,689,654	3.28
Kayah	143,461	143,277	286,738	0.56
Kayin	775,375	797,282	1,572,657	3.06
Chin	230,005	248,685	478,690	0.93
Sagaing	2,518,155	2,802,144	5,320,299	10.34
Tanintharyi	700,403	706,031	1,406,434	2.74
Bago	2,324,214	2,539,241	4,863,455	9.46
Magway	1,814,993	2,097,718	3,912,711	7.61
Mandalay	2,919,725	3,225,863	6,145,588	11.95
Mon	986,454	1,063,828	2,050,282	3.99
Rakhine	1,529,606	1,659,357	3,188,963	6.20
Yangon	3,517,486	3,837,589	7,355,075	14.30
Shan	2,908,259	2,907,125	5,815,384	11.31
Ayeyawady	3,010,195	3,164,928	6,175,123	12.01
Nay Pyi Taw	565,181	593,186	1,158,367	2.25

**Source:** Myanmar Population and Housing Census 2014, Provisional Results, Department of Population, Ministry of Immigration and Population

## People and Religion

The Republic of the Union of Myanmar is made up of (135) national races speaking over 100 languages and dialects. The major ethnic groups are Kachin (12 races), Kayah (9 races), Kayin (11 races), Chin (53 races), Bamar (9 races), Mon (1 race), Rakhine (7 races), Shan (33 races). Based on 1983 population census, about (89.4%) of the population mainly Bamar, Shan, Mon, Rakhine and some Kayin are Buddhists. The rest are Christians (4.9 %), Muslims (3.9%), Hindus (0.5 %) and Animists (1.2 %).

## Economy

With abundant natural resources, a strategic location in Southeast Asia, and a large and young population, Myanmar has a unique opportunity to lay the foundation for a brighter, more prosperous future. Myanmar is actively engaged in building a new, modern, peaceful, developed and democratic nation. Focusing on People Centered Development by reducing poverty and developing rural areas, it is necessary to strengthen systematic market economic system and to accelerate the pace of economic development. The economic policies of Myanmar are sustaining agriculture towards industrialization and all round development, balance and proportionate development among states and regions, inclusive growth for entire population and quality of statistics and statistical system. Following the adoption of market oriented economy from centralized economy the government has carried out liberal economic reforms to ensure participation of private sector in every sphere of economic activities.

### Gross Domestic Product (kyat in millions)

GDP	2006-07	2007-08	2008-09	2009-2010	2010-2011	2011-2012
Current Producers' Prices	16,852,758	23,336,113	29,233,288	33,894,039	39,846,694	46,307,888
Constant Producers' Prices	13,893,395 <sup>▲</sup>	15,559,413 <sup>▲</sup>	17,155,078 <sup>▲</sup>	18,964,940 <sup>▲</sup>	20,891,324 <sup>▲</sup>	42,000,876 <sup>▲</sup>
Growth (%)	13.1	12.0	10.3	10.6	10.2	5.6

**Source:** Statistical Yearbook 2011, Central Statistical Organization, Ministry of National Planning and Economic Development

▲ 2005-06 Constant Producers' Prices ▲ 2010-11 Constant Producers' Prices

## Social Development

Development of social sector has kept pace with economic development. Expansion of schools and institutes of higher education has been considerable especially in the Regions and States. Expenditures for health and education have raised considerably, equity and access to education and health and social services have been ensured all over the country.

With prevalence of tranquility, law and order in the border regions, social sector development can be expanded throughout the country. Twenty four special development regions have been designated in the whole country where health and education facilities are developed or upgraded along with other development activities. Some towns or villages in these regions have also been upgraded to sub-township level with development of infrastructure to ensure proper execution of administrative, economic and social functions.

## Poverty Lines and Poverty Incidence

Poverty Incidence is defined as the proportion of population of households with insufficient consumption expenditure to cover their food and non-food needs. It reduced during the year 2005 to 2010 which was shown in the following table.

**Poverty Incidence by Strata, 2005-2010 (%)**

	<b>Urban</b>	<b>Rural</b>	<b>Union</b>
<b>2010</b>	15.7	29.2	25.6
<b>2005</b>	21.5	35.8	32.1

Source: IHLCA Survey 2004-2005, IHLCA Survey 2009-2010



# MYANMAR HEALTH CARE SYSTEM

**M**yanmar health care system evolves with changing political and administrative system and relative roles played by the key providers are also changing although the Ministry of Health remains the major provider of comprehensive health care. It has a pluralistic mix of public and private system both in the financing and provision. Health care is organized and provided by public and private providers.

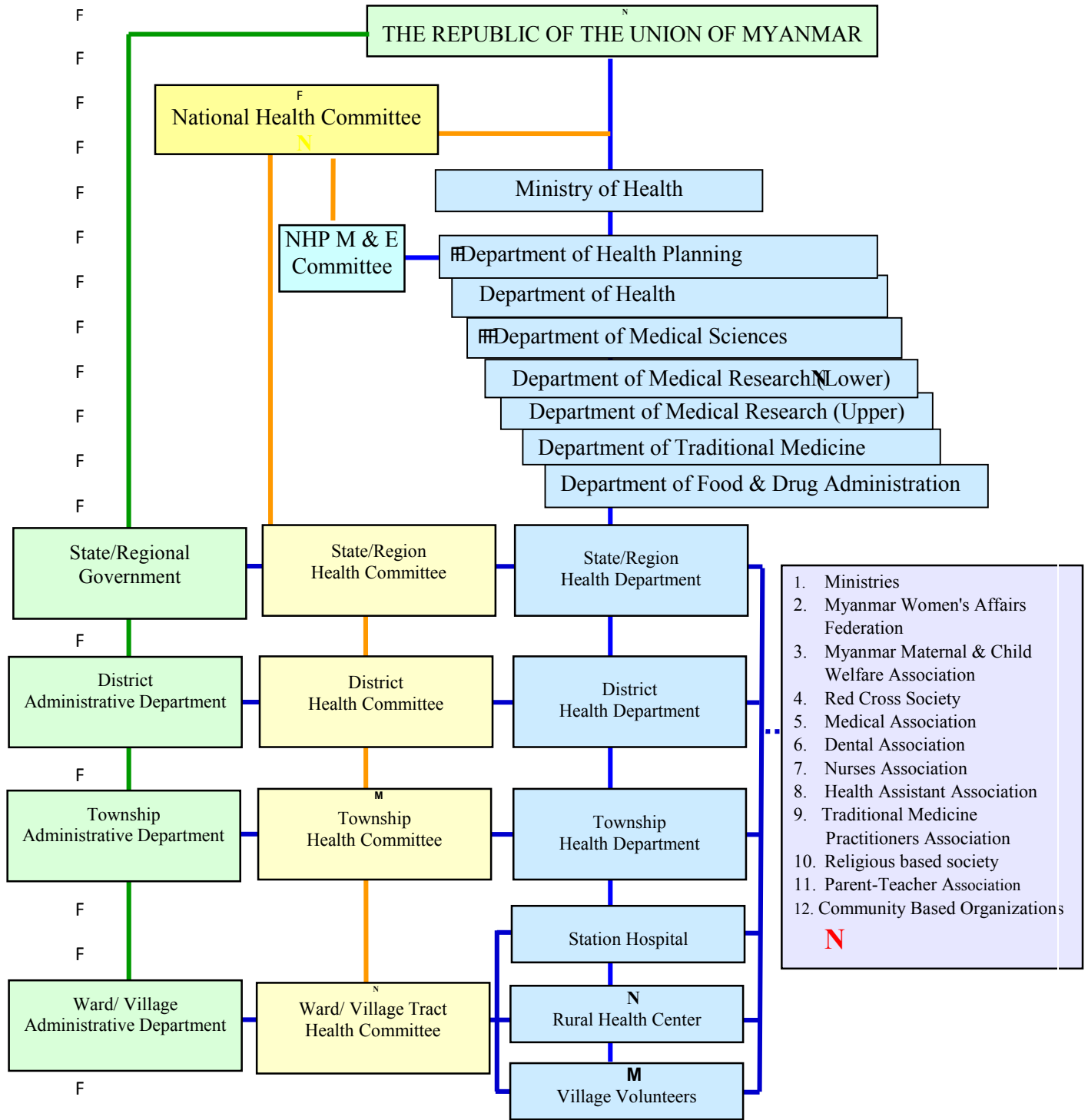
In implementing the objective of uplifting the health status of the entire nation, the Ministry of Health is taking the responsibility of providing comprehensive health care services covering activities for promoting health, preventing diseases, providing effective treatment and rehabilitation to raise the health status of the population. The Department of Health, one of (7) departments under the Ministry of Health plays a major role in providing comprehensive health care throughout the country including remote and hard to reach border areas. Some ministries are also providing health care for their employees and their families. They include Ministries of Defense, Railways, Mines, Industry, Energy, Home and Transport. Ministry of Labour has set up three general hospitals, two in Yangon and the other in Mandalay to render services to those entitled under the social security scheme. Ministry of Industry is running a Myanmar Pharmaceutical Factory and producing medicines and therapeutic agents to meet the domestic needs.

The private, for profit, sector is mainly providing ambulatory care though some providing institutional care has developed in Nay Pyi Taw, Yangon, Mandalay and some large cities in recent years. Funding and provision of care is fragmented. They are regulated in conformity with the provisions of the law relating to Private Health Care Services. General Practitioners' Section of the Myanmar Medical Association with its branches in townships provide these practitioners the opportunities to update and exchange their knowledge and experiences by holding seminars, talks and symposia on currently emerging issues and updated diagnostic and therapeutic measures. The Medical Association and its branches also provide a link between them and their counterparts in public sector so that private practitioners can also participate in public health care activities. The private, for non-profit, run by Community Based Organizations(CBOs) and Religious based society also provides ambulatory care though some providing institutional care and social health protection has developed in large cities and some townships.

One unique and important feature of Myanmar health system is the existence of traditional medicine along with allopathic medicine. Traditional medicine has been in existence since time immemorial and except for its waning period during colonial administration when allopathic medical practices had been introduced and flourishing it is well accepted and utilized by the people throughout the history. With encouragement of the State scientific ways of assessing the efficacy of therapeutic agents, nurturing of famous and rare medicinal plants, exploring, sustaining and propagation of treatises and practices can be accomplished. There are a total of 14 traditional hospitals run by the State in the country. Traditional medical practitioners have been trained at an Institute of Traditional Medicine and with the establishment of a new University of Traditional Medicine conferring a bachelor degree more competent practitioners can now be trained and utilized. As in the allopathic medicine there are quite a number of private traditional practitioners and they are licensed and regulated in accordance with the provisions of related laws.

In line with the National Health Policy NGOs such as Myanmar Maternal and Child Welfare Association, Myanmar Red Cross Society are also taking some share of service provision and their roles are also becoming important as the needs for collaboration in health become more prominent. Recognizing the growing importance of the needs to involve all relevant sectors at all administrative levels and to mobilize the community more effectively in health activities health committees had been established in various administrative levels down to the wards and village tracts.

## Organization of Health Service Delivery



## The Third Wave Reform Process

Since the present government was elected in March 2011, a series of far reaching reforms were introduced and undertaken. The First Wave Reform dealt with the introduction of a multiparty democratic system and the transition from the old to a new system, while the Second Wave Reform put emphasis on strategies for executive, economic, political and social reforms. The Third Wave reform, which is concerned with ensuring a solid foundation for a new democracy to take root and a higher living standard for people putting emphasis on things that will directly improve the wellbeing of the people.

The major instruments using for these reform processes are: Framework for Economic and Social Reform (FESR), National Comprehensive Development Plan (NCDP) including health sector and regular five years plans. FESR provided a reform bridge linking the ongoing programs of the government to the National Comprehensive Development Plan (Health Sector) (2011-2012 to 2030-2031), a 20-year long-term plan. This is not only the medium-term and longer-term plan, it also focuses on potential “quick wins” that will bring tangible and sustainable benefits to the population.

## Health Care Reforms on Uplifting the Health Standards

The Government of Myanmar is committed to improving access and quality of health as part of its reform agenda aimed at raising the overall level of social and economic development in the country.

Meeting on uplifting the health standard was held at the President Office on 31<sup>st</sup> January 2014. On the occasion, President U Thein Sein stressed that health care services would be implemented in cooperation with local people residing in regions and states. The President has called for stepping up efforts in decreasing infant and maternal mortality rate by promotion of health, prevention of diseases, detection of diseases as early as possible, provision of prompt and accurate treatment and rehabilitation. The President has also urged Ministry of Health and region/ state governments to coordinate each other to be able to reduce the infant mortality rate and the maternal mortality ratio as part of efforts for meeting the United Nations

Millennium Development Goals. He also called for making efforts for fighting the HIV and TB in the country.

Regarding the reforms of health sector, the President has urged to expand the organizational setup, to encourage skills and performance of staff and to ensure transparency in reforms, to establish the health insurance system and to formulate necessary rules and regulations for the food safety in the country. He also urged the staff of the Ministry of Health to make efforts for reforming the hospitals to become reliable health care facilities for the poor people as the government has already committed. He also stressed the need for reviewing the Myanmar Health Vision 2030 and to draft the national health development plan and regional health plan in line with the National Comprehensive Development Plan. In accordance with the guidance of the President, the following twelve Task Forces were formed by the Ministry of Health for the health sector development.

- (1) Task Force on Improving the Quality of Medical Care and Diagnostics
- (2) Task Force on Disease Control
- (3) Task Force on Public Health and Maternal and Child Health
- (4) Task Force on Universal Health Coverage
- (5) Task Force on Food and Drug Administration
- (6) Task Force on Traditional Medicine
- (7) Task Force on Health Research
- (8) Task Force on Human Resource Development for Health
- (9) Task Force on Private Health Sector Development
- (10) Task Force on Review and Revise of Health Policies
- (11) Task Force on Strengthening of Health Information System
- (12) Task Force on Promotion of Health Education

Organized by the respective task force, series of the technical consultations and discussions were done. Participants included the responsible officials from relevant departments of the Ministry of Health, retired health professionals, responsible person from the related departments and ministries, organizations and private sectors.

The Chairman of the National Health Committee, Vice President Dr. Sai Mauk Kham has urged on uplifting the health standard of Myanmar as part of the efforts for health care reforms and achieving better health outcome through efficient functioning of health care delivery system at the National Health Committee Meeting which was held on 29 April 2014 at the Ministry of Health in Nay Pyi Taw.



**The Chairman of the National Health Committee, Vice President Dr. Sai Mauk Kham, delivered an opening speech at National Health Committee Meeting (29-4-2014)**

According to the guidance of the Vice President and recommendations made by the meeting, the following (5) workshops were conducted and organized by the Ministry of Health for the health sector development.

- (1) Workshop on development of human resources for health (2-3 June 2014)
- (2) Workshop on improving quality of medical care (5-6 June 2014)
- (3) Workshop on promoting primary health care services (9-10 June 2014)

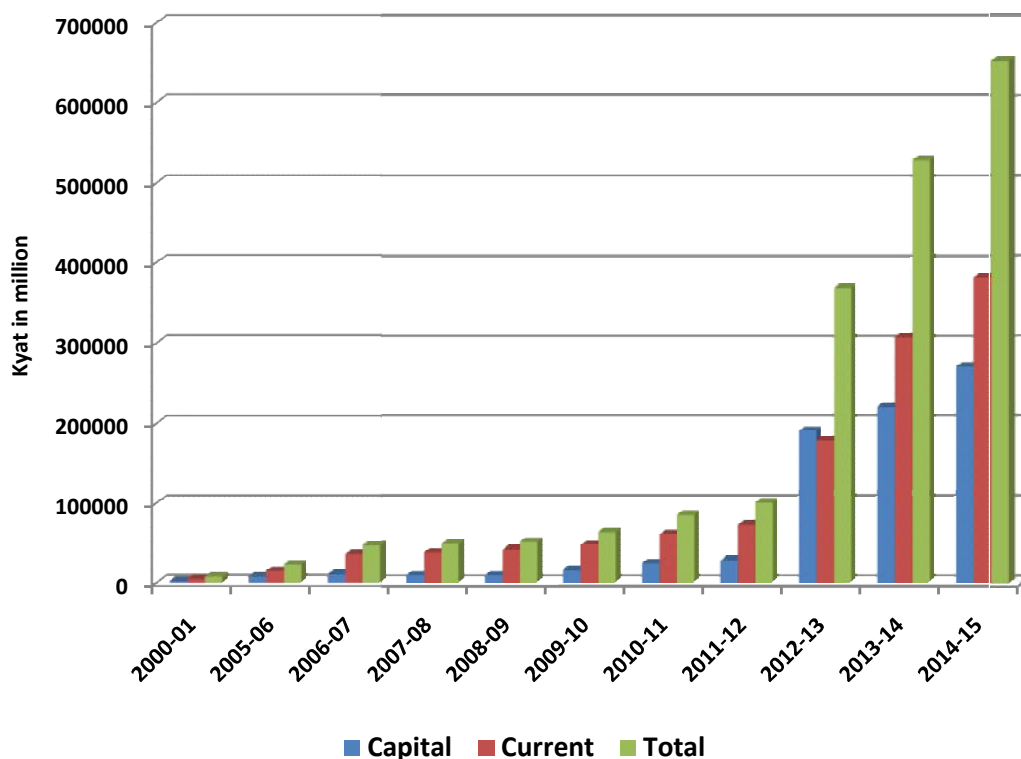
- (4) Workshop on health financing aiming towards universal health coverage (12-13 June 2014)
- (5) Workshop on restructuring and reorganization of health sector (30 June 2014 to 1 July 2014)

It is necessary to speed up the momentum in the health care sector in tandem with a rapid acceleration in political, economic and executive reforms without neglecting the promotion of the private sector. To strengthen the efficiency and equity in the health system, the health sector has being undertaken health sector reforms. Ministry of Health has conducted dissemination and coordination meetings for accelerating the third wave reform processes and measures that must be undertaken by health personnel at various levels of the ministry. Moreover, surveys on patient satisfactions and needs assessments were also conducted in States and Regions. The results of these studies will provide important inputs in the process of making a more responsive health system.

## Health Financing in Myanmar

The major sources of finance for health care services are the government, though there are other minor sources such as external aids, community contributions etc. Government has increased health spending on both current and capital yearly. Total government health expenditure increased from kyat 7,688 million in 2000-01 to kyat 652,745million (BE) in 2014-2015.

Government Health Expenditures (2000-01 to 2014-15)



Financial allocation to the health and education sector was increased in the fiscal year 2012-2013. The government share to the health sector as a percentage of general government expenditures for last five financial years were indicated in the following table.



**Government Health Expenditures as percentage of GDP and  
as percentage of General Government Expenditures**

<b>Financial Year</b>	<b>Government Health Expenditures as % of Gross Domestic Product</b>	<b>Government Health Expenditures as % of General Government Expenditures</b>
2010-11	0.20	1.03
2011-12	0.21	1.05
2012-13	0.76	2.82
2013-14	0.89	3.15
2014-15	0.99	3.38

Social security scheme was implemented in accordance with 1954 Social Security Act by the Ministry of Labour. According to the law, factories, workshops and enterprises that have over 5 employees whether State owned, private, foreign or joint ventures, must provide the insurance for their employees with social security cover. The contribution is tri-partite with 2.5% by the employer, 1.5% by the employee of the designated rate while the government contribution is in the form of capital investment. Insured workers under the scheme are provided free medical treatment, cash benefits and occupational injury benefit. To effectively implement this scheme, workers' hospitals, dispensaries, mobile medical units and branch offices have been established nation-wide. The 2012 Social Security Law was enacted on 31<sup>st</sup> August 2012. In this new Law, invalidity, old age pension benefit, survivors' benefit and unemployment benefit systems have been introduced based on international practice. In addition, social security housing plan for insured workers has also been introduced.

## Path to Universal Health Coverage in Myanmar

Myanmar aspires to achieve Universal Health Coverage (UHC) as part of its Vision 2030 for a healthier and more productive population. UHC would help achieve the twin goals of any health sector, i.e., improved health outcomes and reduced financial burden on the poor and vulnerable, due to health expenditures.

To achieve the goals and targets of strengthening the health systems towards the provision of equitable universal coverage, it is vital to focus on ways to improving health outcomes, enhancing the financial protection and ensuring the consumer satisfaction. Realizing the current critical challenges and to achieve the aspirational goals, the following nine strategic areas have been identified.

1. Identify the Essential Health Package ensuring access to comprehensive quality health services for all;
2. Enhance HRH Management through implementation of the Health Workforce Strategic Plan to address the current challenges hindering the equitable access to quality services;
3. Ensure the availability of quality, efficacious and low cost essential medicines, equipment and technologies including supply chain management and infrastructure at all level;
4. Enhance the effectiveness of Public Private Partnerships;
5. Develop alternative health financing methods and risk pooling mechanisms to expand the fiscal space for health in order to alleviate the catastrophic health care expenditure of the community and enhance financial protection;
6. Strengthen the community engagement in health service delivery and promotion;
7. Strengthen the evidence based information and comprehensive management Information system including non-public sector;
8. Review the existing Health Policies and adopt the necessary polices to address the current challenges for UHC;
9. Intensify the Governance and stewardship for attainment of UHC.

# HEALTH POLICY, LEGISLATION AND PLANS

## Health Policy

Policy guidelines for health service provision and development have also been provided in the Constitutions of different administrative period. The following are the policy guidelines related to health sector included in the Constitution of the Republic of the Union of Myanmar (2008).

### The Constitution of the Republic of the Union of Myanmar 2008

#### Article 28

The Union shall :

- (a) earnestly strive to improve education and health of the people;
- (b) enact the necessary law to enable National people to participate in matters of their education and health;

#### Article 32

The Union shall :

- (a) care for mothers and children, orphans, fallen Defence Services personnel's children, the aged and the disabled;

#### Article 351

Mothers, children and expectant women shall enjoy equal rights as prescribed by law.

#### Article 367

Every citizen shall, in accord with the health policy laid down by the Union, have the right to health care.

## National Health Policy 1993

The National Health Policy was developed with the initiation and guidance of the National Health Committee in 1993. The National Health Policy has placed the *Health For All* goal as a prime objective using Primary Health Care approach. The National Health Policy is designated as follows:

- 1 To raise the level of health of the country and promote the physical and mental well-being of the people with the objective of achieving "Health for all" goal, using primary health care approach.
- 2 To follow the guidelines of the population policy formulated in the country.
- 3 To produce sufficient as well as efficient human resource for health locally in the context of broad frame work of long term health development plan.
- 4 To strictly abide by the rules and regulations mentioned in the drug laws and by-laws which are promulgated in the country.
- 5 To augment the role of co-operative, joint ventures, private sectors and non-governmental organizations in delivering of health care in view of the changing economic system.
- 6 To explore and develop alternative health care financing system.
- 7 To implement health activities in close collaboration and also in an integrated manner with related ministries.
- 8 To promulgate new rules and regulations in accord with the prevailing health and health related conditions as and when necessary.
- 9 To intensify and expand environmental health activities including prevention and control of air and water pollution.
- 10 To promote national physical fitness through the expansion of sports and physical education activities by encouraging community participation, supporting outstanding athletes and reviving traditional sports.
- 11 To encourage conduct of medical research activities not only on prevailing health problems but also giving due attention in conducting health system research.
- 12 To expand the health service activities not only to rural but also to border areas so as to meet the overall health needs of the country.
- 13 To foresee any emerging health problem that poses a threat to the health and well-being of the people of Myanmar, so that preventive and curative measures can be initiated.
- 14 To reinforce the service and research activities of indigenous medicine to international level and to involve in community health care activities.
- 15 To strengthen collaboration with other countries for national health development.

## Health Legislation

Both nationally and internationally the field of public health and the execution of public health powers and services depend on public health law. In its early history public health and its legal regulations covered communicable disease prevention and environmental sanitation. It included some limited control of the disposal of human and other wastes, some concerns for water purity and the hygiene of housing, a limited interest in food and milk sanitation, some incipient school health controls, and very little else.

To protect health government told industry, business and people generally what to do and what not to do. Public health programmes seek to enhance public health not only by prohibiting harmful activities or conditions, but also by providing preventive and rehabilitative services to advance the health of the people. Instead of regulating, policing, and prohibiting unwholesome conduct or conditions, public health laws establishes services to create a more healthful environment and provides the facilities and trained professionals to prevent and treat disease, to educate people to protect themselves, and to improve their conditions.

As part of fulfilling the responsibility to improve and protect health of the citizens the government has enacted some health laws. Majority of current health laws are found to be related to the public health law promulgated in 1972. Existing health laws may be categorized as; health laws for promoting or protecting health of the people, health laws concerned with standard, quality and safety of care and laws relating to social organization.

## Health laws for promoting or protecting health of the people

<p><b>Public Health Law (1972)</b></p>	<p>It is concerned with protection of people's health by controlling the quality and cleanliness of food, drugs, environmental sanitation, epidemic diseases and regulation of private clinics.</p>
<p><b>Dental and Oral Medicine Council Law (1989) (Revised in 2011)</b></p>	<p>Provides basis for licensing and regulation in relation to practices of dental and oral medicine. Describes structure, duties and powers of oral medical council in dealing with regulatory measures.</p>
<p><b>Law relating to the Nurse and Midwife (1990) (Revised in 2002)</b></p>	<p>Provides basis for registration, licensing and regulation of nursing and midwifery practices and describes organization, duties and powers of the nurse and midwife council.</p>
<p><b>Myanmar Maternal and Child Welfare Association Law (1990) (Revised in 2010)</b></p>	<p>Describes structure, objectives, membership and formation, duties and powers of Central Council and its Executive Committee.</p>
<p><b>National Drug Law (1992)</b></p>	<p>Enacted to ensure access by the people safe and efficacious drugs. Describes requirement for licensing in relation to manufacturing, storage, distribution and sale of drugs. It also includes provisions on formation and authorization of Myanmar Food and Drug Board of Authority.</p>
<p><b>Narcotic Drugs and Psychotropic Substances Law (1993)</b></p>	<p>Related to control of drug abuse and describes measures to be taken against those breaking the law. Enacted to prevent danger of narcotic and psychotropic substances and to implement the provisions of United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances.</p> <p>Other objectives are to cooperate with state parties to the United Nations Convention, international and regional organizations in respect to the prevention of the danger of narcotic drugs and psychotropic substances. According to that law Central Committee for Drug Abuse Control (CCADC),</p>

	Working Committees, Sectors and Regional Committees were formed to carry out the designated tasks in accordance with provisions of the law. The law also describes procedures relating to registration, medication and deregistration of drug users.
<b>Prevention and Control of communicable Diseases Law (1995) (Revised in 2011)</b>	Describes functions and responsibilities of health personnel and citizens in relation to prevention and control of communicable diseases. It also describes measures to be taken in relation to environmental sanitation, reporting and control of outbreaks of epidemics and penalties for those failing to comply. The law also authorizes the Ministry of Health to issue rules and procedures when necessary with approval of the government.
<b>Traditional Drug Law (1996)</b>	Concerned with labeling, licensing and advertisement of traditional drugs to promote traditional medicine and drugs. It also aims to enable public to consume genuine quality, safe and efficacious drugs. The law also deals with registration and control of traditional drugs and formation of Board of Authority and its functions.
<b>Eye Donation Law (1996)</b>	Enacted to give extensive treatment to persons suffering from eye diseases who may regain sight by corneal transplantation. Describes establishment of National Eye Bank Committee and its functions and duties, and measures to be taken in the process of donation and transplantation.
<b>National Food Law (1997)</b>	Enacted to enable public to consume food of genuine quality, free from danger, to prevent public from consuming food that may cause danger or are injurious to health, to supervise production of controlled food systematically and to control and regulate the production, import, export, storage, distribution and sale of food systematically. The law also describes formation of Board of Authority and its functions and duties.

<p><b>Myanmar Medical Council Law (2000)</b></p>	<p>Enacted to enable public to enjoy qualified and effective health care assistance, to maintain and upgrade the qualification and standard of the health care assistance of medical practitioner, to enable studying and learning of the medical science of a high standard abreast of the times, to enable a continuous study of the development of the medical practitioners, to maintain and promote the dignity of the practitioners, to supervise the abiding and observing in conformity with the moral conduct and ethics of the medical practitioners. The law describes the formation, duties and powers of the Myanmar Medical Council and the rights of the members and that of executive committee, registration certificate of medical practitioners, medical practitioner license, duties and rights of registered medical practitioners and the medical practitioner license holders.</p>
<p><b>Traditional Medicine Council Law (2000)</b></p>	<p>Enacted to protect public health by applying any type of traditional medicine by the traditional medical practitioners collectively, to supervise traditional medical practitioners for causing abidance by their rules of conduct and discipline, to carry out modernization of traditional medicine in conformity with scientific method, to cooperate with the relevant government departments, organizations and international organization of traditional medicine. The law describes formation, duties and powers of the traditional medical council, registration as the traditional medical practitioners and duties and registration of the traditional medical practitioners.</p>
<p><b>Blood and Blood Products Law (2003)</b></p>	<p>Enacted to ensure availability of safe blood and blood products by the public. Describes measures to be taken in the process of collection and administration of blood and blood products and designation and authorization of personnel to oversee and undertake these procedures.</p>



<p><b>Body Organ Donation Law (2004)</b></p>	<p>Enacted to enable saving the life of the person who is required to undergo body organ transplant by application of body organ transplant extensively, to cause rehabilitation of disabled persons due to dysfunction of body organ through body organ donors, to enable to carry out research and educational measures relating to body organ transplant and to enable to increase the numbers of body organ donors and to cooperate and obtain assistance from government departments and organizations, international organizations, local and international NGOs and individuals in body organ transplant.</p>
<p><b>The Control of Smoking and Consumption of Tobacco Product Law (2006)</b></p>	<p>Enacted to convince the public that smoking and consumption of tobacco product can adversely affect health, to make them refrain from the use, to protect the public by creating tobacco smoke free environment, to make the public, including children and youth, lead a healthy life style by preventing them from smoking and consuming tobacco product, to raise the health status of the people through control of smoking and consumption of tobacco product and to implement measures in conformity with the international convention ratified to control smoking and consumption of tobacco product.</p>
<p><b>The Law Relating to Private Health Care Services (2007)</b></p>	<p>Enacted to develop private health care services in accordance with the national health policy, to enable private health care services to be carried out systematically as and integrated part in the national health care system, to enable utilizing the resources of private sector in providing health care to the public effectively, to provide choice of health care provider for the public by establishing public health care services and to ensure quality services are provided at fair cost with assurance of responsibility.</p>

## National Health Committee (NHC)

The National Health Committee (NHC) was formed on 28 December 1989 as part of the policy reforms. It is a high level inter-ministerial and policy making body concerning health matters. The National Health Committee takes the leadership role and gives guidance in implementing the health programmes systematically and efficiently. The high level policy making body is instrumental in providing the mechanism for intersectoral collaboration and co-ordination. It also provides guidance and direction for all health activities. The committee is reorganized in February 2014.

### Composition of National Health Committee

1.	Vice President, The Republic of the Union of Myanmar	Chairman
2.	Union Minister, Ministry of Health	Vice-Chairman
3.	Deputy Minister, Ministry of Home Affairs	Member
4.	Deputy Minister, Ministry of Border Affairs	Member
5.	Deputy Minister, Ministry of Information	Member
6.	Deputy Minister, Ministry of Immigration and Population	Member
7.	Deputy Minister, Ministry of Sports	Member
8.	Deputy Minister, Ministry of Education	Member
9.	Deputy Minister, Ministry of Health	Member
10.	Deputy Minister, Ministry of National Planning and Economic Development	Member
11.	Deputy Minister, Ministry of Labour, Employment and Social Security	Member
12.	Deputy Minister, Ministry of Social Welfare, Relief and Resettlement	Member
13.	Deputy Minister, Ministry of Science and Technology	Member
14.	Deputy Minister, Ministry of Environmental Conservation and Forestry	Member
15.	Council Member, Naypyitaw Council	Member
16.	President, Myanmar Red Cross Society	Member
17.	President, Myanmar Maternal and Child Welfare Association	Member
18.	Deputy Minister, Ministry of Health	Secretary
19.	Director General, Department of Health Planning, Ministry of Health	Joint Secretary

## Health Development Plans

Aiming towards the “Health for All Goal”, series of National Health Plans based on primary health care services have been systematically developed and implemented. The Ministry of Health has formulated four yearly People’s Health Plans starting from 1978. From 1991 onwards, successive National Health Plans have been formulated and implemented.

Considering the rapid changes in demographic, epidemiological and economic trends both nationally and globally, a long-term (30) years health development plan had been drawn up to meet the future health challenges. Myanmar Health Vision 2030 (2000-2001 to 2030-2031) was formulated during last decade and composed of (9) main areas: health policy and law; health promotion; health service provision; development of human resources for health; promotion of traditional medicine; development of health research; role of co-operative, joint ventures, private sectors and NGOs; partnership for health system development; and international collaboration. The expected benefits for the long-term visionary plan are as follows:

### Expected Benefits

Indicator	2001	2011	2021	2031
Life expectancy at birth	60 - 64	64 - 71	-	75 - 80
Infant Mortality Rate/1000 LB	59.7	40	30	22
Under five Mortality Rate/1000 LB	77.77	52	39	29
Maternal Mortality Ratio/1000 LB	2.55	1.7	1.3	0.9

## National Comprehensive Development Plan (Health Sector) (2010-11 to 2030-31)

As an integral component of the long-term visionary plan, the National Comprehensive Development Plan (NCDP) (Health Sector) (2010-2011 to 2030-2031) has been formulated based on changing situation. The formulation of the NCDP must link with related sectors as well as also link with the States and Regional Comprehensive Development Plans. This long term visionary plan with its objectives will be a guide on which further short-term national health plans are to be developed. So also it links with the Spatial Planning.

Aiming towards the health sector development, the following strategies has been being implemented.

- a. Health System Strengthening
  - Health Policy and Legislation
  - Universal Health Coverage
  - Strengthening of Health Information System
  - e-Health Development
  - Township Health System Development
- b. Disease Control Programme
  - National AIDS and Sexually Transmitted Disease Control
  - National Tuberculosis
  - Malaria Control
  - Lymphatic Filariasis Control
  - Dengue Hemorrhagic Fever Prevention and Control
  - Leprosy Elimination
  - Trachoma Control and Prevention of Blindness
  - Prevention and Control of Non-communicable Disease and other Related Conditions
- c. Public Health Programme
  - Basic Health Services
  - Maternal and Child Health
  - Adolescent Health
  - School Health
  - Nutrition Promotion
  - Food Safety
  - Pharmaceuticals, Medical Devices and Cosmetic Quality and Safety

- d. Curative Services Programme
  - Promoting Quality of Hospital Services
  - Expanding Health Care Coverage in Border Areas
  - Promoting Laboratory and Blood services
  - Provision of Essential Medicine
- e. Development of Myanmar Traditional Medicine Programme
  - Upgrading of the quality of teaching skills in traditional medicine
  - Expansion and Upgrading of traditional medicine clinics and hospitals
  - Supervision and monitoring of safe and quality assured traditional drugs manufacturing
  - Strengthening the capability of research in traditional medicine
  - Conservation of scarce medicinal plants and production of quality raw materials for traditional medicine drug factory
- f. Human Resources for Health Development Programme
  - Produce different categories of health professionals according to the human resources for health needs
  - Development of infrastructure, teaching/learning materials, technology, libraries, upgrading laboratories to meet the international standard
  - Regular review, revise and update of curricula for relevance to the changing trends in medical education
  - Strengthening of human resource information and research activities
- g. Promoting Health Research Programme
  - Conduct health research programme especially health policy and system research
  - Conduct research on emerging and reemerging communicable diseases
  - Conduct research on non-communicable diseases increasing with the changing life style
  - Implement research on the danger of environmental pollution
  - Conduct research activities concerned with traditional medicine
  - Explore technologies for the diagnosis, management and control of common diseases/conditions
  - Strengthen research capacity through development of infrastructure and manpower, and human resources development, necessary for effective health research
  - Dissemination of research findings through websites of Departments of Medical Research

## National Health Plan (2011-12 to 2015-2016)

Based on Primary Health Care approaches the Ministry of Health had formulated four yearly People's Health Plans from 1978 to 1990 followed by the National Health Plans from 1991-1992 to 2006-2011. These plans have been formulated within the frame work of National Development Plans for the corresponding period.

National Health Plan (2011-2016) in the same vein is to be formulated in relation to the fifth five year National Development Plan. It is also developed within the objective frame of the short term first five year period of the National Comprehensive Development Plan (NCDP) – Health Sector, a 20 year long term visionary plan.

With the ultimate aim of ensuring health and longevity for the citizens the following objectives have been adopted for developing programs for the health sector in ensuing five years covering the fiscal year 2011-2012 to 2015-2016.

- To ensure quality health services are accessible equitably to all citizens
- To enable the people to be aware and follow behaviors conducive to health
- To prevent and alleviate public health problems through measures encompassing preparedness and control activities
- To ensure quality health care for citizens by improving quality of curative services as a priority measure and strengthening measures for disability prevention and rehabilitation
- To provide valid and complete health information to end users using modern information and communication technologies
- To plan and train human resources for health as required according to types of health care services, in such a way to ensure balance and harmony between production and utilization
- To intensify measures for development of Traditional Medicine
- To make quality basic/essential medicines, vaccines and traditional medicine available adequately
- To take supervisory and control measures to ensure public can consume and use food, water and drink, medicines, cosmetics and household materials safely

- To promote in balance and harmoniously, basic research, applied research and health policy and health systems research and to ensure utilization as a priority measure
- To continuously review, assess and provide advice with a view to see existing health laws are practical, to making them relevant to changing situations and to developing new laws as required
- In addition to providing health services, to promote collaboration with local and international partners including health related organizations and private sector in accordance with policy, law and rules existing in the country for raising the health status of the people

Consequently, to achieve these objectives current National Health Plan (2011-2016) is developed around the following 11 program areas, taken into account prevailing health problems in the country, the need to realize the health related goals articulated in the UN Millennium Declaration, significance of strengthening the health systems and the growing importance of social, economic and environmental determinants of health. For each program area, objective and priority actions to be undertaken have also been identified.

### Program Areas

1. Controlling Communicable Diseases
2. Preventing, Controlling and Care of Non-Communicable Diseases and Conditions
3. Improving Health for Mothers, Neonates, Children, Adolescent and Elderly as a Life Cycle Approach
4. Improving Hospital Care
5. Traditional Medicine
6. Human Resources for Health
7. Promoting Health Research
8. Determinants of Health
9. Nutrition Promotion
10. Strengthening Health System
11. Expanding Health Care Coverage in Rural, Peri-Urban and Border Areas

# HEALTH INFRASTRUCTURE

## Objectives and Strategies

To realize one of the social objectives of “Uplifting health, fitness and education standards of the entire nation”, the Ministry of Health has laid down the following **Objectives**.

1. To enable every citizen to attain full life expectancy and enjoy longevity of life.
2. To ensure that every citizen is free from diseases.

To realize these objectives, all health activities are implemented in conformity with the following **Strategies**.

1. Widespread disseminations of health information and education to reach the rural areas.
2. Enhancing disease prevention activities.
3. Providing effective treatment of prevailing diseases.



## Ministry of Health

The Ministry of Health is the major organization responsible for providing comprehensive health care inclusive of promotive, preventive, curative and rehabilitative services to raise the health status of the country and people, utilizing the human, monetary and material resources in the most efficient ways.

The Ministry of Health (MoH) is headed by the Union Minister who is assisted by two Union Deputy Ministers. The Ministry has seven functioning departments to implement the activities according to the health policies to realize the objectives, each under a Director General. They are Department of Health, Department of Health Planning, Department of Medical Science, Department of Medical Research (Lower Myanmar), Department of Medical Research (Upper Myanmar), Department of Traditional Medicine and Department of Food and Drug Administration. All these departments are further divided according to their functions and responsibilities. Maximum community participation in health activities is encouraged. Collaboration with related departments and social organizations has been promoted by the ministry. Considering health sector as a whole, the MoH is strengthening the Public private partnership for health development. The ministry also has a close collaboration with other sectors to take into account issues that are beyond the scope and capacity of the health sector.



## Department of Health

The Department of Health is responsible for providing comprehensive health care services to the entire population in the country. Under the supervision of the Director General and Deputy Directors General, the following divisions are in operation; Administration, Planning, Public Health, Medical Care, Disease Control, Epidemiology, Law and Legislation, National Health Laboratory, Occupational Health, Nursing and Budget.

The public health division is responsible for primary health care and basic health services, nutrition promotion and research, environmental sanitation, maternal and child health services, school health services and health education. The medical care division is responsible for setting hospitals' specific goals and management of hospital services. The division also undertakes procurement, storage and distribution of medicines, medical instruments and equipment for all health institutions. Functions of the disease control division and Central Epidemiology Unit cover prevention and control of infectious diseases, disease surveillance, outbreak investigations and response and capacity building. Health education bureau is responsible for wide spread dissemination of health information and education. The National Health Laboratory is responsible for routine laboratory investigation, special lab-taskforce and public health work, training, research and quality assurance. Occupational health division takes the responsibility for health promotion in work places, environmental monitoring of work places and biological monitoring of exposed workers. The division is also providing health education on occupational hazards. Planning division is taking care of the organizational development of the health institutions under the Department of Health, either upgrading or setting new hospitals or rural health centers in align with the 5 years National Plans. Apart from this the planning division takes the role of capacity building of all levels of health staff under the Department of Health.



## Department of Health Planning

The Department of Health Planning comprises of (5) divisions: Planning Division; Health Information Division; Research and Development Division; E-Health Division; and Administration Division. In the context of the National Health Policy and with the need to provide comprehensive health services, it is essential that health plans are developed systematically on the basis of activity, time period, and locality and administrative level so that available resources in terms of human, monetary and material resources, are utilized most efficiently and distribution of resources and health benefits are equitable. In accordance with the changing situation, reviewing and revising the health policy has been undertaken. The availability of reliable statistics and information is a vital prerequisite in such an effort. The Department also compiles health data and disseminates health information. Health systems research has been conducted to facilitate in making health policy and formulation of the plans and programmes. e-Health division has been supporting the implementation of health services by using information and communication technology.



## Department of Medical Science

Human Resources for Health are the most important resources for successful implementation of National Health vision and mission. The Department of Medical Science is responsible for carrying out this duty of training & production of all categories of health personnel with the objective to appropriate mix of competent human resources for delivering the Quality Health Care services.

The Department has been divided into seven divisions which are Graduate Training Division, Postgraduate Training Division, Nursing Training Division, Planning and Statistics Division, Foreign Relation Division, Administrative & Budget Division and Medical Education Centre. The Department also has one Community field Training centre for practicing the community Medicine and Field Training.

Reviewing, revising and updating of educational programmes and supervision of training processes for Quality assurance, management of faculty development, infrastructure development and production of Qualified human Resource for health with the needs of the country are the major activities of the Department.



## Department of Traditional Medicine

Myanmar Traditional Medicine has been existing since time immemorial and providing health care services for Myanmar people and is regarded as invaluable National Heritage. Over 2000 years ago Myanmar has possessed and nurtured a civilization, high enough to set up city states and Traditional medicine had flourished significantly by a major part of Myanmar culture. It was chronicled that Myanmar traditional medicine has been considered to be prestigious in the earliest history of Myanmar such as Tagaung, Srikittira and Bagan periods which was about 600 BC. Myanmar Traditional Medicine is a broad, deep and delicate branch of science covering various basic medical knowledge, different treaties, a diverse array of therapies and potent medicines.

Traditional Medicine promotion office was established under the Department of Health in 1953. It was organized as a division in 1972 managed by an Assistant Director who was responsible for the development of the services under the technical guidance of the State Traditional Medicine Council. It became the focal point for all the activities related to traditional medicine. The Government upgraded the division to a separate Department in August 1989. It was reorganized and expanded in 1998, to provide comprehensive traditional medicine services through existing health care system in line with the National Health Plan. The other objectives of the department are to review and explore means to develop safe and efficacious new therapeutic agents and medicine and to produce competent traditional medicine practitioners.



## Department of Medical Research (Lower Myanmar)

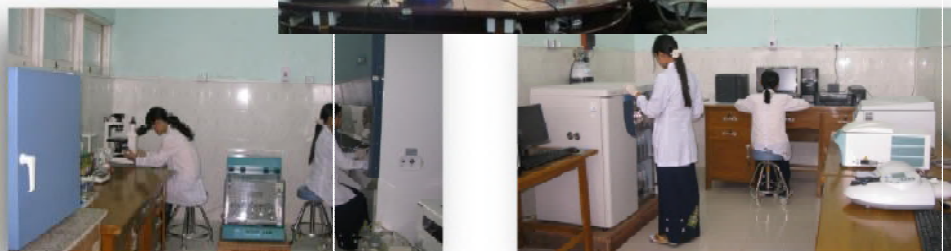
The Department of Medical Research (Lower Myanmar) comprises of 6 Research Centers made up of 25 Research Divisions, 10 Supporting Divisions and 11 Clinical Research Units striving to achieve it's vision, a healthier nation through application of research findings. In carrying out research on communicable diseases and enhancing technology development applicable in the diagnosis, management and control of communicable diseases, an advanced molecular laboratory for research on communicable diseases was established with the support of KOICA's (Korea International Cooperation Agency) Grant Aid Project (2011-2014). This project was implemented with the aim to strengthen laboratory research capacity on three major communicable diseases (malaria, viral hepatitis and tuberculosis), exchange of scientific knowledge on communicable diseases between scientists from both countries, to enhance future collaborations and to contribute to the improvement of effective management of communicable diseases and health care system for the people of Myanmar.



## Department of Medical Research (Upper Myanmar)

In view of promoting research activities in Upper Myanmar, Department of Medical Research (Upper Myanmar) was founded on 16th November 1999 in Mandalay and moved to the present location in March, 2001. In addition to routine health related research studies, the department has been assigned for identification and collection of novel plants and herbal products. Collection of medicinal plants from all over the country followed by growing and up-bringing of medicinal plants in the herbal gardens of the department and altogether more than 5000 plants of 942 species have been cultivated.

Currently ten research divisions and seven supportive divisions are functioning in the department. Establishment of “Common and Molecular Laboratory” has started in 2013 and it has already established in November 2014. Research areas covered are: communicable diseases like diarrhea and dysentery diseases, typhoid, Dengue Hemorrhagic Fever (DHF), human influenza, neonatal sepsis, malaria, tuberculosis, Human Immuno-deficiency Virus (HIV), non-communicable diseases such as cancer, hypertension, hypothyroidism, reproductive health research such as maternal thyroid function study, emergency contraception, social and health systems research such as health facility assessment for reproductive health commodities and services, traditional medicines research such as study on acute and sub-acute toxicity study and anti-inflammatory study of herbal products, efficacy of commercially available traditional drugs, vector bionomics, elderly health research and environmental health research. The Department also involved in promotion of medical education. Technical and research collaboration among research departments of both local and international institutions has been regularly practiced. By these various activities, Department of Medical Research (Upper Myanmar) is actively making its endeavors to promote the health research and health status of Myanmar.



## Department of Food and Drug Administration

Food and Drug Administration (FDA) was established under the Department of Health (DOH) in 1995, to take care of safety and quality of food, drugs, medical devices and cosmetics. It was upgraded to an independent Department under the Ministry of Health in April 2013. It has five divisions which are Food Control Division, Drug Control Division, Medical Device and Cosmetics Control Division, Laboratory Division and Administrative Division. It also has branch offices in Yangon and Mandalay. FDA activities have been expanded with establishment of branch offices in 12 States/Regions of the country and 4 border trade zones. FDA has also extended and strengthened the control activities of Regional / State/ District & Township Food & Drug Supervisory Committees.

To enable the public to have quality and safety of food, drugs, medical devices and cosmetics, FDA is implementing the tasks in accordance with guidance from the National Health Committee, Ministry of Health and Myanmar Food and Drug Board of Authority (MFDBA). Since there are Laws related to the food and drug, FDA has to enforce the National Drug Law 1992 and its provisions, National Food Law 1997 and Public Health Law 1972. FDA regularly notifies the public as well as State/Regional Food and Drug Supervisory Committees about alert news of counterfeit, illegal medicines, unsafe food and cosmetics.





# HEALTH SERVICES IN MYANMAR

Promoting health, preventing diseases, providing effective treatment and rehabilitating are the comprehensive health services provided by the Ministry of Health for health development of a country. Health plans had been formulated and implemented systematically both at the national and regional levels to see that available human, financial and material resources are most effectively and efficiently utilized to implement these services.

With the ultimate aim of ensuring health and longevity for the citizens, the basic health staff (BHS) down to the grassroots level are providing promotive, preventive, curative and rehabilitative services through Primary Health Care approach. Infrastructure for service delivery is based upon sub-rural health centre and rural health centre where Midwives, Lady Health Visitor and Health Assistant are assigned to provide primary health care services to the rural community.

Those who need special care are referred to Station Hospital, Township Hospital, District Hospital and to Specialist Hospital successively. At the State/Regional level, the State/Regional Health Department is responsible for State/Regional planning, coordination, training and technical support, close supervision, monitoring and evaluation of health services. At the peripheral level, i.e. the township level actual provision of health services to the community is undertaken.

The main areas of service delivery and support activities are presented here:

1. Health Service Delivery using Primary Health Care Strategy
2. Services for the Target Population Group
3. Promoting and Protecting Healthy Communities
4. Prevention, Control and Management of Communicable Diseases and Non-communicable Diseases



# Health Service Delivery





## Basic Health Services

Strengthening community based health work force is crucial for ensuring equity and access to basic health care services up to grass-root level. In Myanmar, Basic Health Staff are major community based health workforce responsible for providing comprehensive health care services. According to manpower of Rural Health Center (RHC), one Health Assistant (HA), one Lady Health Visitor (LHV), five Midwives (MWs) and five Public Health Supervisors Grade II (PHS II) must be present in each RHC but previously only one PHS II was assigned in each RHC. Main duties of PHS II are disease control activities and environmental sanitation but due to the shortage of PHS II, all health care activities especially in rural area are carried out by midwives. Therefore, midwives have to take responsibility for maternal and child health care as well as immunization, nutrition promotion and disease control activities. Due to the over work load, midwives cannot prioritize their activities so that maternal and child health care activities are affected to some extent. In order to reduce the work load of midwives and achieve Millennium Development Goals, deployment of PHS II in all vacant posts is mandatory. In January 2014, a total of 2986 Public Health Supervisors Grade II were posted at the vacant posts in all States and Regions of the country to take health care of the rural people in immunization, environmental sanitation and disease control activities. Trainings for PHS II are conducted by State and Regional Training Teams and training guidelines and necessary training tools are provided by respective programmes from Department of Health.

In Myanmar, there are 64,134 villages so that one health staff at one village cannot be accomplished yet. To attain sustainable development for improving health, community empowerment is a prerequisite. Community health volunteers are still one of the health workforce and some health activities still rely on them especially in emergency situation. With the aim to have one community health worker at one village, plan for training of Community Health Workers (CHWs) (2014-2015) was already approved. Not only increasing the quantity of health workforce, regular capacity building is provided to Basic Health Staff and volunteers

Continuous monitoring, supportive supervision and regular evaluation are crucial so that Basic Health Section from Public Health Division mainly support these activities through State/Regional Health Departments. At present, many INGOs, NGOs and CBOs (CSOs) are implementing health care activities as well as private sectors. Inputs, outputs and outcomes of

all health care activities must be included for accountability, equity and inclusiveness. For achieving this, workshop on development of continuous review mechanism was held in Naypyitaw as a first step and development of this mechanism will be come up in near future.



**Dr. Than Aung, Minister for Health, delivered an opening speech at Workshop on Evaluation of Community Health Care Programme at Central Level**



**Training of Trainers for CHWs Training in Rakhine State**

**Group work exercise on Management Effectiveness Programme**





## Curative Services

Curative services are provided by various categories of health institutions. There are General hospitals, Specialist hospitals, Teaching hospitals, Region/State hospitals, District hospitals, Township hospitals in urban area. Sub-township hospitals, Station hospitals, Rural Health Centres and Sub-Rural Health Centres are serving rural people by providing comprehensive health care services including public health services with available diagnostic facilities.

Station Hospitals including Sub-township Hospitals are basic medical units with essential curative elements such as general medical and surgical services and obstetric facilities. The population who are residing in rural area are covered by Station Hospitals. Township Hospitals are providing health care services including laboratory, dental and also major surgical procedures and acting as the first referral health institutions for those who require better care. Specialist services are well accessed at District and some 50 bedded Township Hospitals where high dependency units or intensive care unit with life saving facilities are available. More advanced secondary and tertiary health care services are provided at the Region/ State Level hospitals, Central and Teaching hospitals.

To ensure adequate coverage of hospital services in every Region and State, hospital upgrading project was planned and implemented. It also includes establishment of new hospitals in remote area and increasing hospital beds for those area with high population density especially the districts with rapid socioeconomic development.

Institution based health care quality is improved during last few years. Most of the central, teaching and Region/State hospitals are equipped with modern diagnostic and therapeutic facilities such as CT scans, MRI, linear accelerator, Digital X-rays etc. Majority of referral cases have accessed to high quality medical care services at district hospitals and above. More than 100 ambulances have been provided to public hospitals in 2014.

As a result of strengthening the hospitals by deployment of competent human resources and installation of modern diagnostic and therapeutic equipment, various sophisticated surgical and medical interventions like renal transplant, open heart surgery, cardiac catheterization, angiogram and plastic surgery of traumatically amputee limbs are performed in specialist hospitals.

In addition to structural coverage and functional quality, more patient centered, responsive and accountable curative services are provided by health staff. Regarding equity in health care, more grass root level centers such as RHCs, Sub-centers and Station hospitals are established, renovated and upgraded either for rural areas and border areas.

The health development and provision of medical care services for border area have been implemented since 1989 and up to December of 2013, 100 hospitals, 99 dispensaries, 123 rural health centres and 314 sub-rural health centres have been established and are now well functioning in co-operation with other related departments and ministries, particularly the Ministry of Border Affairs.

With partnership approach, provision by the Government and donation by private donors of hospital equipment and supplies have been a custom in almost all hospitals in Myanmar. Based on religious and social customs, Myanmar people are eager to provide assistance for social works. Local community and private donors have contributed for curative health service in terms of cash or fulfilling hospital needs including medical equipment. The Hospital Management Committees led by local administrative authority and members from related departments are organized and are then making coordinated effort to fulfill needs of the hospitals according to functional requirements.

Public hospitals throughout the country are stipulated to raise and establish trust fund to support the patients who are needed. Patients with emergency medical problems including emergency surgery, obstetric patients are now provided with essential medicines and medical items free of charge at the public hospitals.

**Supervision visit to  
Bawlake District hospital,  
Kayah State**



**Supervision visit to  
Tangyang Township Hospital  
in Shan State**

With the introduction of market economy and health sector reforms, the expansion and quality upgrading of private sector is essential for the quantity coverage and quality upgrading of health care services for the community.

Private health care services in Myanmar are now being regulated according to the Law relating to private health care services (2007) and its amendment law (2013). The Government formed the central body relating to private health care services in 2007 consisting of the Union Minister of the Ministry of Health as Chairman, the Deputy Minister for the Ministry of Health as Deputy Chairman, the Director General of the Department of Health as Secretary, Head of Union Minister's office as Joint secretary and 16 members. The central body formed supervisory committees relating to private health care services at the regional, state, District and township levels and assigned functions and duties. Therefore, the private health care services are now regulated by the central body and the different levels of the supervisory committees.

The central body issues the license for any private health care services other than the private general clinic service. The Regional and State supervisory committees issued the license for private general clinic service. Licensing mechanism is according to the law relating to the private health care services. A person desirous of establishing of any private health care services is needed to submit their application to the relevant township supervisory committee. The township supervisory committee, after scrutinizing the application, submit to the district supervisory committee and district supervisory committee submit to the region and state supervisory committee stage by stage together with remarks.

Each Regional and State supervisory committees is composed as the Minister for Social affairs from each Regional and State government as the chairman. Different level of administration plays the important role in regulation of private health care services.

Control and promotion of quality of private health care services will be done by suitable experts from the respective Departments under the Ministry of Health.

Upgrading of five hospitals in Yangon and Mandalay such as Mandalay Children Hospital, Mandalay General Hospital, Central Women Hospital-Mandalay, Yangon Children Hospital and Central Women Hospital-Yangon, is in process with the Grant aid support from Japanese Government. With the grant aid support from Japanese Government, upgrading of Lashio State Hospital in Shan State and Loikaw State Hospital in Kayah State will also be conducted. Preparatory survey team from JICA visited Myanmar in October, 2013 and the assessment study was done in Lashio State Hospital and Loikaw State Hospital to get the technical information of their needs.



## Monitoring of Pharmaceutical Sector



**Group Discussion for Pharmaceutical Sector**

Basic health service is one of the essential components of rural health development scheme. Access to health care for 70% of country population residing in rural areas has been improved through the expansion of the health infrastructure and health manpower in terms of basic health staff and voluntary health workers, i.e. community health workers and auxiliary midwives. Basic health staff are providing health care services in terms of maternal and child health care, nutrition promotion, school

health, environmental health, expanded programme of immunization and disease control activities, such as TB, Malaria, HIV/AIDS, Leprosy and other communicable diseases, including emergency response in case of disaster. They also have to collect data on health and health related sectors and to report monthly for monitoring, supervision and mid-year and yearly evaluation.

Now, most of the countries including Myanmar require doing the survey in pharmaceutical sector, and need to review pharmaceutical implementation plans and adjust the strategies and activities in areas where problems were identified according to survey results. Therefore, Monitoring of Pharmaceutical Sector Survey had been conducted by Myanmar Essential Medicines Project with financial support of WHO. The general objective of the survey is to monitor the access, quality and rational use of key medicines (15 items). The following indicators were monitored by this assessment.

- (a) Access is measured in terms of the availability of essential medicines.
- (b) Quality is represented by the presence of expired medicines on pharmacy shelves and adequacy of handling and conservation conditions of medicines.
- (c) Rational use of medicines is measured by examining prescribing and dispensing habits, implementation of key strategies such as Standard Treatment Guidelines (STGs) and Essential Medicines Lists (EMLs) at public health facilities.



### Key findings

Key medicines were more available in private drug outlets (76.33%) than the public health facility pharmacies. Regarding with quality of medicines, although no expired medicines were found in private outlets, 2.08% of expired medicines were found in public health facility pharmacies. However, on adequacy of conservation condition and handling in store rooms, national average score in public facility was higher (45.7%) than private outlets (19.5%), while in dispensing rooms, the score was (8.5) for public health facility and (6) for private outlets. Therefore, conservation condition and handling of medicines in both public and private pharmacies were not adequate.

Information on rational use of medicines in the public facilities showed that Essential Medicine List and Standard Treatment Guideline were present (85% and 90%), average number of medicines per prescription was considered to be adequate (3.65) and nearly 50% of medicines were prescribed by generic name. Adherence to Myanmar National List of Essential Medicine (MNLEM) and physicians prescribing habits was needed as (57.46%) were included in the MNLEM. On measuring the quality of care for common conditions, the prescribers followed the recommended treatment guidelines/protocols for pneumonia and respiratory tract infection cases but did not follow guidelines for diarrhea cases.

Other additional information stated that 75% of private drug outlets were dispensed by untrained staff and only 5% were dispensed by a pharmacist.

To overcome the weakness of pharmaceutical sector, it is needed to strengthen supply system management at all level public health facilities, to promote rational use of medicines and to do monitoring survey in other States and Regions to cover the whole country.

## Health System Strengthening

GAVI Board accepted the Myanmar Health System Strengthening (HSS) proposal by 2008 July. From that time onwards fund flow mechanisms were being scrutinized between GAVI and the Ministry of Health and finally after the new system of Financial Management Assessment in 2010, an Aide Memoire has been signed between CEO GAVI and Minister for Health in February 2011.

*The Goal of the Health System Strengthening Program in Myanmar* is to achieve improved service delivery of essential components of Immunization, MCH, Nutrition, and Environmental Health by strengthening programme coordination, health planning system, and human resource management and development in support of MDG goal 4 and 5 regarding MNCH, with reduction of maternal and under 5 child mortality between 1990 and 2015. This goal directly addresses the 3 main health system barriers, and responds to National Health Policy of Myanmar, whose main goals include health for all using a primary health care approach, production of sufficient as well as efficient human resources for health, and the expansion of health services to rural and to border areas so as to meet overall health needs of the population.



Following review of the system, it had revealed possible areas to explore for system analysis as Leadership and management capacities, Human resource planning and management, Financing and financial management, Health management information, Supplies and equipment management, Community Health and Inter and intra-sectoral coordination.

Health System Strengthening programme was initiated and expanded in phase approach, starting in 20 townships in 2012, expanded to new 40 townships in 2013, another 60 townships in 2014 and will be scaling up to cover 180 townships (55% of township coverage) all over Myanmar in 2015.

### **Key activities under Health System Strengthening program are:**

- Provision of free service package which will be generic platform for delivering a comprehensive package of health services to hard to reach areas/ villages where majority of population in Myanmar are residing, and services contain key primary health care components (MCH, EPI, Nutrition & Environmental Health, etc)

- Introduction of performance payment system (per-diem and daily allowance payment to group of Basic Health Staffs to deliver package service in hard to reach areas)
- Coordination meetings like annual planning meeting and quarterly review meetings for strengthening social mobilization
- Introduction of Coordinated Township Health Planning (CTHP) with standard guidelines, conduct surveys on data quality and service quality
- Piloting demand side financing initiatives like Hospital Equity Fund and Maternal and Child Health Voucher Scheme for the poor for promoting referral system
- Research and development of long term plan for human resources for health
- Supplies of medicines, equipment, transport vehicles (motorbikes) and even infrastructure at the hard to reach areas
- Recruitment and training of Auxiliary midwives and Community Health Workers, to strengthen establishing community health volunteer, in collaboration with units under Department of Health
- Capacity building of health providers on Health Systems Research, Leadership and Management, and Financial Management

Besides coordinating with stakeholders under Ministry of Health, Health System Strengthening program has been implemented in collaboration with WHO for technical assistance, monitoring and evaluation, reviews an assessment, with UNICEF for procurement of supplies and with MRCS for infrastructure construction. With objectives of reviewing and assessing the program implementation process, and the program's key outputs and outcomes and to provide policy recommendations for the ongoing Health System Strengthening program implementation, the performance assessment of GAVI-HSS interventions was jointly conducted by the two international experts and Myanmar team from the World Health Organization (WHO) country office and Ministry of Health between June and August 2013. Assessment concluded that the design of the GAVI-HSS Program is evidence-based and implementation is proceeding in the right direction. Outreach service, which is the vital program component that should be sustained and improved, as it contributed to increased coverage of key indicators. In line with current policy discourse on universal health coverage by the Government, the initial provision of free MNCH services to all pregnant women and under five children should be the entry point of the long march closer to universal health coverage.

**Provision of  
Free Service Package by BHS**





## Strengthening Capacity of Training Team

Human resource development for health is important for achieving the goals of Ministry of Health. Basic health staffs are the actual implementers in the field activities and building their capacity for delivering the quality health care services is very important for achieving our goals. Myanmar has committed to fulfill the Millennium Development Goals up to 2015 and then continues to achieve universal health coverage and healthy life long expectancy for our community. For this, Strengthening of health system and human resource development is essential to reach our goal.

Basic Health Staffs are the main implementers for health services in the field especially in rural area. Training is a vital component in the strengthening of the health system and it is the main way in which the quality of care done by health workers is maintained or improved. It is also the most important way of adapting the performance of health workers to meet the needs of the current situation or of some newly developing situation.

Among the health professionals, in-service training is generally accepted as a recognized channel for disseminating new knowledge to them, ensuring professional growth and competence, morale and work attitude. It needs to strengthen their capacity by giving quality need based in-service training using appropriate methodology and tools with effective training management.

Continuing education like in-service training should target all health workers, essential for the health sector reform and provide practice, knowledge, skills and positive attitude based on the needs at working sites. It also should reflect the health needs of the community and will lead to improvements in the quality of health care and ultimately to improvements in the health status of the community. Moreover, all health care providers should have equal opportunity for in-service trainings and these trainings should reflect the health needs of the community.

In Myanmar Health system, the training team members with their roles and responsibilities were already organized and established at all levels. The training teams at each level are responsible for conducting quality in-service training by using effective training management, training assessment, recording and reporting activities in more innovative approach. All of the training achievements should be applied up to performance of basic health staff to get effective and good health outcome for community.

Training Information System (TIS) is already established and also included in regular reporting mechanism of HMIS, with the aim of improving human resource development in health through equal chance of in-service training to all of the Basic health staffs as nation wised. Department of Health is now established to achieve the decentralization process, Regions and States with township training teams should analyze training information, mapping and giving feedback information to all level for planning of effective training program. By doing this we can improve the quality of in-service training and strengthen the capacity building of our BHS with clinical staff through reducing the duplication of training contents, saving the time, manpower and financial resources and can get improvement of coordination among training concerned section. Finally we can improve human resource for health to achieve the health for all goal with universal health coverage.



**Final Joint Coordination Committee meeting for  
JICA-BHS project at Naypyitaw (22-1-2014)**



# Services for the Target Population Group





## Maternal and Child Health

In Myanmar, emphasis has been placed and a lot of inputs have been invested for improving maternal and child health services. Under the leadership and guidance of the National Health Committee, the Ministry of Health has been planning and implementing the interventions to improve the health status of mothers, newborns and children. Recognizing the importance of universal access to reproductive health in achieving the Millennium Development Goals, the National Reproductive Health Policy was developed in 2002 supported by three consecutive Reproductive Health Strategic Plans.



For fulfillment of the **objective** - to improve the health status of mother and children including newborn by reducing maternal, neonatal and child mortality and morbidity, the following **core strategies** were laid down.

- Setting enabling environment;
- Improving information base for decision making;
- Strengthening health systems and capacity for delivery of reproductive health services;
- Improving community and family practices

The following activities were needed to be strengthened in order to achieve the Millennium Development Goals 4 and 5 regarding maternal, newborn and child health.

- Providing proper antenatal care
- Promoting skilled and institutional delivery and post natal care
- Expansion of post-abortion care and quality birth spacing services
- Ensuring Emergency Obstetric Care
- Providing Essential Newborn Care
- Strengthening adolescent reproductive health
- Promoting male involvement in reproductive health
- Focusing cervical cancer screening, early diagnosis and treatment
- Promoting referral system and community volunteers

As 70% of the country total populations reside in rural area, resources and interventions need to be centered to rural residing beneficiaries, who are mothers, newborn babies and under five children in rural area.

**1. Providing proper antenatal care**

Standard frequency of antenatal care for all pregnant mothers is at least four visits with quality care by skilled birth attendants and targeted antenatal care interventions need to be strengthened.

**2. Promoting skilled and institutional delivery and post natal care**

Immediate and effective skilled care before, during and after delivery can make the difference between life and death for both mother and newborn. The standard skill and attitude towards good postnatal care is mandatory in both facility-based and primary health care setting.

**3. Expansion of post-abortion care and quality birth spacing services**

To prevent unsafe abortion, quality birth spacing services plays a major important role and it needs to be expanded in all townships. Myanmar committed FP 2020 in 2013 November at Ethiopia to reduce unmet need for family planning and to increase contraceptive prevalence rate.

**4. Ensuring Emergency Obstetric and Newborn Care**

The majority of maternal mortality is found to be preventable. It points out that Emergency Obstetric Care facilities and activities including Comprehensive and Basic Emergency Obstetrics Care (CEmOC and BEmOC) are needed to be strengthened.



**5. Providing Essential Newborn Care**

Most of the under one deaths occur during newborn period. Essential newborn care is crucial requirement in reducing neonatal mortality.

**6. Strengthening Adolescent Reproductive Health**

In accordance with the changing social and economic policies, it calls for provision of special attention to 'young people' segment of the community, focusing on reproductive health within the present demographic and socio-economic context.



## 7. Male Involvement in Reproductive Health

Workshops on men's role in reproductive health, and information materials on men's role in the family and reproductive health have been developed and utilized.

## 8. Focusing Cervical Cancer screening, early diagnosis and treatment

Cervical cancer is one of the leading causes of all cancer related deaths in women between 40 to 60 years age group and it is the time to focus on screening and early diagnosis followed by treatment for cervical cancer.

## 9. Establishing Community Health Volunteer

The Ministry of Health aims to assign one midwife in one village. But there is scarcity of resources and DOH will train auxiliary midwife to assign them in the village with absence of midwife. Maternal and Child Health care will be improved by giving the trainings, refresher trainings, provision of supply, monitoring and supervision of health volunteer under the guidance and coordination of Township Medical Officer.

## 10. Promoting Referral System and Community Volunteers for mothers and children

It is a real challenge that limited access of the people to the Maternal and Child Health (MCH) services and information especially in rural remote areas. Delay referral of mothers and newborn need to be overcome by community based or innovative interventions. Volunteers namely: Maternal and Child Health Promoters (MCHPs) were developed at the community level to enhance community initiative for the maternal and child health promotion with defining their roles as "Bridging mothers to health care providers".

### Challenges

- Inadequate Health Work Force at different levels
- Over workload of BHS especially Midwives
- Infrastructure development (ambulance, communication tools, facilities)
- Regular and systematic Monitoring and supervision mechanism
- Reporting status
- Harmonization of data and activities
- Linkage of health service provision
- Less health expenditure
- Geographical and coverage gaps



## Maternal Health related Indicators

Indicators	1990	1995	2000	2001	2005	2006	2007	2008	2009	2010	2011	2012	2013	2015
Maternal Mortality Ratio (per 100,000 LB) Source: UN Estimation	520	380	300		230								200	130
Proportion of Skilled Birth Attendant (%) Source: HMIS MICS, IHLCA					57.9	63.5	64.1	67.0	64.4	64.8	67.1	67.9	72	80
Contraceptive Prevalence Rate (%) Source: FRHS MICS, IHLCA				37			41 (all) 38 (modern)		46	39.5				50
Adolescent Birth Rate(%) Source: FRHS				17.4			16.9							15
Antenatal Care Coverage (%) Source: HMIS, MICS, IHLCA					63.1	63.9	64.6	68.2	70.6	73	74.3	74.8	82	80
Unmet Need for Family Planning (%) Source: FRHS, IHLCA				19.1			17.7			24.2				10

HMIS - Health Management Information System

FRHS - Fertility and Reproductive Health Survey

MICS - Multiple Indicator Cluster Survey

IHLCA - Integrated Household Living Conditions Survey in Myanmar



## Women and Child Health Development

Women and Child Health Development section of the Department of Health has been implementing the interventions related to women and child health development including newborn health with the goal of achieving maternal and child health related MDGs. Although trends of under five mortality rates has been decreasing in Myanmar, there is a need to give concerted efforts to reach targets set in MDG 4, reducing under five mortality rates two third by 2015. With this regard and to increase average life expectancy in Myanmar, Ministry of Health has paid more attention for reducing child mortality rates especially for infant mortality rate. Hence, under five clinics have been opened up to sub rural health centers all over the country in which services for provision of health care for sick children, regular medical checkup for under five children, preventive activities such as promotion of personal hygiene, environmental sanitation, safe water supply, sanitary latrines, immunization, health education and communication for development, birth spacing counseling and provision of birth spacing services, regular growth monitoring for under five children have included. As focusing on newborn health care in the country, comprehensive review of newborn health was done in order to strengthen the existing neonatal health initiatives, facilitate strategic planning, implementation and refinement of direction and actions for newborn care. .

In addition, Newborn and Child Survival Forum has been held regularly with the purpose of (1) sharing information on newborn and child survival related issues including prioritization of interventions, establishment of database for all child survival research studies, and reports, identification of gaps.etc. (2) Involvement of all stakeholders and encouragement of collaboration through coordination and (3) linkage between Myanmar Newborn and Child Survival efforts and the international community and (4) resource mobilization. With this purpose, strengthening newborn care action in Myanmar was conducted through newborn and child survival forum with the objectives of dissemination of findings from the National Assessment of Newborn Health in Myanmar, collective development of solutions and innovative strategies to overcome bottlenecks and challenges identified for scaling up newborn health and development of a Newborn Health Action plan for Myanmar. In this workshop, Union Minister for Health delivered opening remarks in which minister highlighted that integration among multiple sections within the health sector with a coordinated health system approach is a main driver for the successful implementation of this action plan and all stakeholders need to align their contributions and harmonize their actions if the plan is to be successfully developed as well

as implemented. There were altogether 110 attendees, officials under Ministry of Health including professor and Head of the department of child health from Universities of Medicine, paediatricians, neonatologist, Obstetricians and Gynaecologists, responsible persons from states and regional and township health departments, UN agencies, INGOs, NGOs and CBOs, attended this forum.

Moreover, multi stakeholders meeting for addressing neonatal resuscitation in Myanmar was held through newborn and child survival forum with the aim of reviewing the global evidence on management of neonatal resuscitation and existing guidelines and plans for management of neonatal resuscitation in Myanmar and identification of the way forward to develop strategic micro plan for scaling up neonatal resuscitation. Dr Thein Thein Htay, Deputy Minister for Health delivered opening speech and pointed out that there is a need to scale up the intervention on neonatal resuscitation to reach every newborn who needs it. There are altogether 52 multi-stakeholders attending this meeting.



**Opening remarks by Deputy Minister for Health Dr Thein Thein Htay  
at opening ceremony of Newborn and Child Survival Forum: Multi Stakeholder meeting  
for addressing newborn resuscitation in Myanmar**

For not only implementation of interventions to be universal coverage but also improving quality of health care services for children, assessment of quality of care for children including newborn at township and station hospital levels was done in 40 township and station hospitals with main objective of to improve quality of care for children including newborn at township and station hospital levels and the specific objectives of to collect general hospital information about child care including newborn, to obtain baseline information on hospital support system,

to assess hospital care: Perspective of health worker, to assess hospital care: Perspective of caretakers, to explore quality of care for the children including at township and station hospital levels.

Additionally, there is no paediatrician in township and station hospitals to provide specialized care and need to provide health care for newborn and children by health care providers at these levels. Hence, standard treatment protocol on managing common newborn conditions has been developed to provide standard treatment care for newborn care. In addition to standard treatment protocol for newborn at township and station hospital level, standard operation procedure for managing emergency conditions of under five children at primary health care level was developed.

Every child has to be healthy physically, mentally, socially, emotionally and psychologically, and Early Childhood Care and development is very important to be healthy and well developed children. Therefore, orientation meeting on strengthening actions on Early Childhood Development was done with the concerned persons of multi-sectors for scaling up interventions for early childhood development, for development of action plan and sharing information on early childhood development.



### **Meeting on Strengthening Actions on Early Childhood Development**

During 2014, third cycle of strategic plan for newborn and child health development will be formulated with involvement of multi stakeholders and findings of nation-wide study on cause of under five deaths in Myanmar conducted during 2013 will be disseminated.

## Gender and Women's Health

Gender is a determinant of Health and also need to understand the role of Gender and Gender inequality as a determinant of Health. The Department of Health, Planning section conducted training on gender and health was done in the first six MEP townships during 2006-2007, in addition to two field testing townships. In 2008-2009, another 12 townships were given training on gender and health. During 2010 -2011, it was conducted in another 12 townships thus it was already implemented in a total of 32 townships. During January 2013, this activity was conducted in 6 townships. Gender and Health trainings were conducted using two modules developed within the 2006-2007 biennium. Module (1) was “Community Module” for Basic Health Staff (BHS), Module (2) was “Training Guide for Gender and Health at Community Level” and this is for facilitators (BHS) in using the module (1). In 2014, Refresher training was given to total (38) townships for Gender Mainstream in effective manner and also six townships were expanded. The ongoing trainings have been provided to Basic Health Staffs on concepts and related framework of gender and equity. The BHS from these townships were encouraged to use gender analysis tools and find out the gender differences existing their communities. Monitoring of BHS had been conducted after TOT at the townships so as to keep track on their training to the community and to know how they are applying gender modules in their life activities of service provision.

BHS and training team members from that townships can analyze their situation about the understanding of Gender , gender equity issues and can also be assessed. BHS able to look at any health care programmes in terms of gender equity issues, encourages fairness between men and women in obtaining health services. Experience sharing relating to gender was done amongst the townships. Effective methods of PLA were given for gender analysis and gender mainstreaming . It is also effective for further training and disseminating knowledge on gender in health in the communities.



**Gender and Health Training at Township**

## Adolescent and Youth Health

Globally, as in the Myanmar context, adolescence (10-19 years) and youth (15-24 years) are overlapping age groups. When combined, they form the group “young people”, covering the age range 10-24 years. Investing in the health and development of young people is an integral part of nation’s socio-economic development. Health sector has crucial role in provision of health services by developing multi-sectoral approach and will address the determinants that effect health and behavior of the adolescents. Ministry of Health contributes the continuum of care through progressive integration of activities for Adolescent and Youth Health and Development Program. This program will foster and strengthen linkages with other strategic plans on reproductive health, food and nutrition, mental health, accidents control, tobacco control, Drug and substance abuse control, locally endemic diseases (TB and malaria) and HIV/STIs.

The continuum of care approach will be supported across programs and creating a supportive and enabling environment like family and community, outreach services and adolescent and youth friendly health services to promote healthy lifestyle create opportunities to engage in healthy behaviors and reduce exposure to unhealthy conditions and behaviors. Department of Health already developed and disseminate National standards and guidelines of Adolescent and Youth Health on 2013 and quality youth friendly health services should be given at all health facilities in line with standards and guideline. Improving access of youth to information and skills, improving the physical and social environment of youth and use of services are set as main strategies.



**Stakeholder Meeting for Development of National Strategic Plan for Adolescent Health (2014-2018) at Naypyitaw**

## Elderly Care in Myanmar

The Fifty-eighth World Health Assembly adopted resolution WHA 58.16 “Strengthening active and healthy ageing” which recommended wide ranging actions for Member States and WHO. It suggested to develop, implement and evaluate policies and programs that promote health and ageing and the highest attainable standard of health and well-being for the older citizens.

Being a developing country in Asia, Myanmar is also facing the emerging issue of growing number of older people. Since most of the people in Myanmar are rural people, "Rural ageing" becomes an important issue. In Myanmar, older people are supported mainly by their families. With the changing social and economic conditions, care for the older people became the issue that goes beyond the respective family and health sector control. So, the Governmental organizations including Ministry of Health and Ministry of Social Welfare, Relief and Resettlement, NGOs like Myanmar Maternal and Child Welfare Association and some INGOs like Help Age Korea are cooperating and collaborating for the comprehensive care of older people in Myanmar.

With the aim to promote active and healthy ageing, the Ministry of Health implemented the elderly health care project in Myanmar since 1992-93. It was initiated in six townships and expanded in four to six townships yearly. Being an integral part of the primary health care, Health Care for the Elderly became one of the sub programs under the umbrella of Community Health Care program since National Health Plan (1993-1996). This programme is based on comprehensive health care; promotive, preventive, curative and rehabilitative care. By the end of year 2013, it has been implementing in 161 townships where the Township and Station Hospitals and Rural Health Centers open clinics for specific care of older people on every Wednesday.

Elderly Health care program aims to provide at least 20% of the ambulatory elderly with geriatric clinic services through primary health care approach in the project townships. It also encourages home based geriatric care through families, health volunteers and Non Governmental Organizations. So, advocacy and training of health staff, voluntary health workers, family members and community volunteers are major activities of the program.





Medical conditions that are mostly seen among elderly people in Myanmar are high blood pressure, chronic lung diseases, musculoskeletal problems, heart diseases and diabetes mellitus. In addition to general health care, oral care, eye care and advice for fall prevention are also included in the services provided at elderly clinics since those are the common problems of the older people. By screening at the elderly clinics, those who need cataract surgery, eye glasses and dental treatments could be referred to the respective township hospitals. For being active and healthy, life style modifications are also included in counseling the older people and are trained and encouraged to do regular physical exercises that are suitable for them.

Depending on the availabilities, health screening procedures for high blood pressure, diabetes, heart disease and other important ones like osteoporosis screening, cancer screening were done, appropriate treatment were initiated and encouraged them for regular follow up. Proper referral system was set up in elderly clinics for those who need further treatment at tertiary centers. Rehabilitative services were also provided to the people with mobility problems, joint problems and post stroke patients.

Nutritional counseling and health education to the patients as well as family care givers are the important functions of elderly clinics. It is noted that elderly clinics also serve as places for relieving loneliness as elderly people can meet each other and group recreational activities can also be initiated. For those older people who need social care or home-based care, the community volunteers, NGOs and INGOs are playing an important role.

Every year, 1<sup>st</sup> October is regarded as the International Day of Older Persons and the theme of this year's 24<sup>th</sup> commemorative day is "Leaving No One Behind: Promoting a Society for All".





# Promoting and Protecting Healthy Communities



# Healthy Work Places

## Promotion of Occupational Health and Prevention of Occupational Hazards and Diseases

Occupational Health Division has performed factory visits, workplace hazard assessment, ambient air quality monitoring and medical check-up to factory workers at General Heavy Industries under the Ministry of Industry and under the Ministry of Mine.

In collaboration with WHO, Occupational Health Division performed assessment of lead intoxication among lead acid battery workers, and health education on workers and exposed community at Metal Factory and Battery Factory in Yangon Region.

Occupational Health Division also investigated the industrial accidents and performed surveillance on acute poisoning cases all over the country.



**Lung Function Testing to the Worker**

## Environmental Monitoring Activities

Ambient air quality monitoring of Nay Pyi Taw and Yangon administrative areas had been implemented during 2013.

Occupational Health Division had performed the following activities, in collaboration with UNICEF and WHO,

- Awareness raising of the arsenic contamination and mitigation in drinking water sources and provision of safe water option in Bago Region and Ayeyarwady Region.
- In collaboration with Oral Health Unit, Occupational Health Division performed testing of fluoride content in drinking water sources, dental fluorosis case finding and treatment of dental fluorosis in Wet Let Township, Sagaing Region.
- Determination of mercury level in water sources and some persistent organic pollutants in ground water at some areas.
- Mercury free health service initiatives in health care facilities of private and government health care services in Yangon Region.

Occupational Health Division (OHD) has also performed investigation of some physical environmental baselines as a component of Environmental Impact Assessment in developmental activities.



**Ambient Air Quality Monitoring**



**Training on testing of fluoride content in drinking water sources at Wet Let Township**

### **Training and Awareness Raising**

Occupational Health Division provided,

- Training on occupational health and safety to medical officers, nurses and supervisors from various government factories all over the country and
- Occupational first aid to employers & factory workers of various government factories and private factories during 2013.



**Occupational First Aid Training to Workers**

### **Current Situation**

Occupational Health Division and Environmental Sanitation Division were combined and formed as Occupational and Environmental Health Division in 2014. Occupational and Environmental Health Division upgrades laboratory in Yangon office and can measure more parameters. The Division also has more reagent and portable test kits. Atomic Absorption Spectrophotometer (AAS), Gas Chromatography (GC), and Mass Chromatography with Gas Spectrophotometry were installed. The laboratory can measure water chemistry especially inorganic parameters and try to implement for testing of organic parameters. It can measure biomarkers such as lead content in urine and lead content in blood and try to measure other biomarkers. The division has a plan to install Inductive Couple Plasma (ICP) next year.



## Nutrition Promotion

The National Nutrition Centre (NNC) of the Department of Health has implemented Nutrition program area under National Health Plan covers two broad areas namely: Nutrition and Household Food Security. The ultimate aim of the nutrition program is "Attainment of nutritional well-being of all citizens as part of the overall social-economic development by means of health and nutrition activities together with the cooperative efforts by the food production sector".

To ensure that all citizens enjoy the nutritional state conducive to longevity and health by means of improving nutrient intake and household food security, NNC is implementing five major Nutritional problems with following specific objectives throughout the country:

1. To improve household food security
2. To promote nutritional status of the population by educating and practicing balanced diet
3. To prevent and manage properly under-nutrition, over-nutrition and diet-related chronic diseases
4. To observe periodically nutritional status under nutritional surveillance system
5. To strengthen nutritional infrastructure

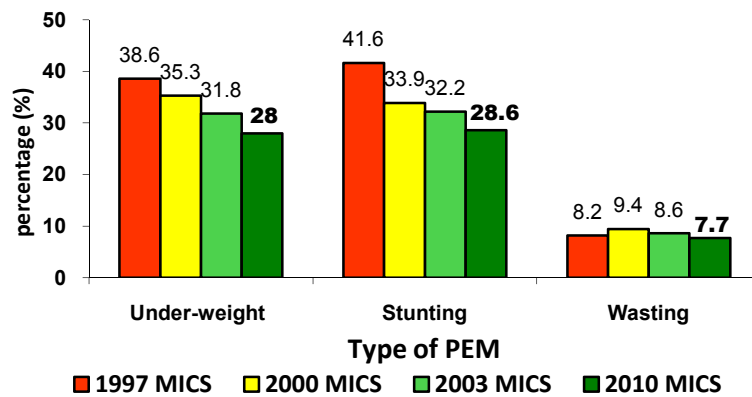
Myanmar has identified five nutrient deficiency states as its major nutritional problems. They include Protein Energy Malnutrition (PEM) and four micronutrient deficiencies, namely, Iodine Deficiency Disorders (IDD), Vitamin A Deficiency (VAD), Iron Deficiency Anaemia (IDA) and Vitamin B1 Deficiency (VBD). Most of the nutrition interventions are implemented in all townships throughout the country.

### Present Status, Activities and Interventions

#### 1. Control of Protein Energy Malnutrition (PEM)

According to Multiple Indicator Cluster Surveys (MICS), prevalence of under-weight among under-five children in 2010 was 28.0%; meanwhile, MDG goal for under-weight prevalence is 19.3% by 2015. Prevalence of stunting was 28.2% in 2010, and that of wasting was 7.7 % in 2010.

The rate of Low Birth Weight was 24% in 1994 (hospital based study) while 10% in 2014 and 7.9% in 2010 by community surveys (NNC, DOH) comparing to 8.6% in 2010 (MICS). Exclusive breastfeeding rate was increased from 16% in 2000 (IYCF survey, NNC) to 23.6% in 2010 (MICS).



#### Prevalence of PEM among Under-5 children

To control the Protein Energy Malnutrition (PEM), the National Nutritional Centre has been implementing following programmes and activities.

1. Growth Monitoring and Promotion (GMP) for children under five years was strengthened by providing instruments such as new Growth & Development Monitoring Charts, Baby Weighting Scale, Infant Scale, Salter Scale and Bathroom Scale for each and every midwife.
2. Community Nutrition Centre (CNC) for moderately malnourished children in urban areas.
3. Hospital Nutrition Unit (HNU) for severely malnourished children.
4. Community based Nutrition program comprising GMP, CNC and Village Food Bank (VFB) for malnourished children in rural areas.



**Growth Monitoring and Promotion of Under Five Children**

5. Strategy on Infant and Young Child Feeding in Myanmar was developed in 2003 and revised. Co-ordination meeting for review and revise of 5 year strategy for Infant and Young Child Feeding (2011-2016) was conducted in 2011 and has been endorsed.
6. Training workshops for pediatricians on management of severely malnourished children were conducted in 2004, 2007, 2010, 2011 and 2012.
7. Integrated Management of Acute Malnutrition (IMAM) guideline including Facility based and community based Management was revised in 2013 and finalized in 2014.
8. Module and Manual for community based Infant and Young Child Feeding (CIYCF) workshops was conducted and finalized in 2014.

## 2. Iodine Deficiency Disorders Elimination (IDDE)

According to surveys conducted by NNC, the proportion of household consuming iodated salt was 18.5% in 1994, 79.9% in 2000, 86% in 2003, 87% in 2007 and 91.5% in 2011. Percentage of household consuming adequately iodized salt was 65% in 2003, 73% in 2005 and 68.8% in 2011 based on rapid test kit result.

Universal Salt Iodization (USI) has been adopted as the single, long-term strategy for eliminating iodine deficiency disorders since 1997. Accordingly, the Ministry of Mines, in 1999, issued a regulation, which required that all factories licensed for production of salt for human and animal consumption only produced iodized salt with iodine level between 40 ppm and 60 ppm. In collaboration with the Ministry of Mines, the Ministry of Health is striving for virtual elimination of Iodine Deficiency Disorders; though still need to make more commitments.

Regional Government of Ayeyarwady and Yangon Regions were advocated on IDDE process by central advocacy team in 2014 and followed by coordination meetings with Township Medical Officers and Township Development Committee Members.

**Demonstration of Iodized Salt Testing by Titration Method**



### 3. Control of Iron Deficiency Anemia (IDA)

According to community surveys by NNC-DOH, the prevalence of anaemia was 45% among non pregnant women (2001), 26% among adolescence school girls (2002), 71% among pregnant women (2003), and 75% among under-five children (2005). The survey results by NNC (2003) indicated the prevalence of worm infestation as 30.8% among under-five children and 44.3% among pregnant mothers. The prevalence was more common in delta region and coastal region.

Iron Supplementation, integrated de-worming and nutrition education are main strategies for anaemia control in Myanmar. Iron folate tablets are distributed for pregnant women throughout the country (180 tablets in total per pregnant woman) and for adolescent school girls in (20) townships (biweekly iron supplementation). Starting from January 2006, integrated de-worming has been implemented all over the country twice a year for all children aged 2-9 years and once during pregnancy period after 1st trimester.

According to scientifically proven findings and its remarkable effect, since 2012, micronutrient sprinkle supplementation has been started for under-three children, giving daily for total 4 months per year in 23 townships.

### 4. Vitamin A Deficiency (VAD) Elimination

Vitamin A deficiency used to be a public health problem among Myanmar children during the early 1990s. However, prevalence of Bitot's spot among under five children has dropped rapidly from 0.6% in 1991, 0.38 % in 1994, and 0.23 % in 1997 to 0.03 % in 2000. Although clinically deficient children are hard to be found, sub-clinically deficient ones are still common. Assessment of serum vitamin A status of a sub-sample of children in the survey of 2000 indicated that all children in the rural community and 96% of urban children had normal serum vitamin A status while only 4% of the urban children had mild sub-clinical deficiency.



**Vitamin A Supplementation to Under Five Children**



In 2012, the National Nutrition Centre in collaboration with Department of Medical Research (Lower Myanmar) has assessed the status of vitamin A among under-five children in 15 townships countrywide. The result showed 38% of 6 months to 5 years children with low serum retinol.

Biannual supplementation with high potency Vitamin A capsule is the main strategy against vitamin A deficiency among under-five children to reduced morbidity and mortality rate and to enhance the growth of children. One dose of vitamin A (200,000 IU) is distributed for all lactating mothers within one month after delivery. At the same time, age specific dose of vitamin A capsules are distributed every six months for under-five children.

#### **5. Control of Vitamin B1 deficiency**

According to cause specific under five mortality survey (2003), Infantile Beri Beri is the fifth leading cause of death among children between 1-12 months (7.12%) in Myanmar. For children under-six months, deaths due to Beriberi were nearly 9%. The prevalence of Vitamin B1 deficiency was 6.8% among pregnant women and 4.4 % among lactating women (NNC, 2009).

Infantile BeriBeri surveillance has been started since May 2005 and control of Infantile BeriBeri project was initiated in June 2006. Vitamin B1 supplementation is distributed to all pregnant women starting from last month of pregnancy till 3 months after delivery. Injection B1 ampoules are distributed to hospitals for treatment of BeriBeri cases.

#### **6. Nutrition Promotion Month (NPM) Campaign**

By concerning public motivation and improving nutrition activities with integrated approach, Nutritional Promotion Week Campaign has been celebrated since 2003. But since 2009, it has been celebrating in whole month of August every year. So as in August of year 2013 and 2014, Nutrition Promotion Month was also celebrated. During which, varieties of nutrition promotion activities and all categories of nutrition interventions were conducted as a mass campaign all over the country with community participation. For more collaborative actions among partners, all the activities were carried out in multi-sectoral

approach. The agencies and organizations in the field of nutrition were invited to involve in Nutrition Promotion Month (NPM) activities in 2014.



**Union Minister for Health, H.E. Dr. Than Aung, delivered an Opening Speech at Nutrition Month Launching Ceremony 2014**



**Nutrition Education and Cooking Demonstration Activities in Nutrition Promotion Month**

## **7. Household Food Security (HHFS)**

Myanmar is self-sufficient in food production at national level. However, food is not secured at household level in some area in terms of low income, constraints in food production, transportation, poor knowledge in feeding practices and poor care-giving.

## 8. Nutrition Laboratory

Nutrition laboratory is concerned mainly for (1) Dietary and food analysis for Nutrient content (2) Biochemical analysis of nutritional assessment such as urinary iodine content. Nutrition laboratory was strengthened by procuring new laboratory machines and equipment and recruiting with laboratory technicians.

## 9. Training

Regarding Exclusive Breast Feeding and Young Child Feeding Practices, Timely warning (one component in Nutrition Surveillance System) and nutrition component in HMIS, monthly trainings have been conducted by Central NNC and State/Regions Nutrition Teams. To strengthen the Growth Monitoring and Promotion activities, refresher training on GMP was conducted to State and Regional level Nutrition team in 2014 and will be going on as multiplier course to all BHS in coming year 2015.

Collaborating with the Department of Medical Science, NNC has developed the Nutrition Manual for Midwifery and Nursing Diploma, by which it can also be applied for all basic health staffs.

## 10. National Nutrition Surveillance System

National Nutrition Surveillance Systems are composed of monthly food price and cost assessment, hospital nutritional deficiency cases, regular health management information system data collection, sentinel townships including timely warning surveillance and intervention system, yearly anthropometry and household food intake assessment in Region and State capital cities, regular food and nutrition survey and infantile BeriBeri surveillance systems. Since 2011-2012, National Nutrition Surveillance System has been strengthening year by year to cover all age groups and all geographical areas.

## 11. Over-nutrition and Obesity

National Nutrition Centre examined the body mass index (BMI) of 3828 fathers and 5504 mothers of under five children in the year 2000. It was found that 4.5% of mothers and 7.5% of fathers were over-weight (BMI 25 - 29.9), while 0.7% of fathers and 1.8% of mothers were obese (BMI  $\geq$  30). A more recent study done in 2009 (STEPS, 2009) revealed that among 7429 aged of 15 – 64, 25.4% were found to be overweight or obese, more female were overweight (30.3%, BMI > 25 kg/m<sup>2</sup>) and obese (8.4%, BMI > 30 kg/m<sup>2</sup>) than males.

### Major achievements during 2013 and 2014

- National Plan of Action for Food and Nutrition (2011-2015) was finalized in March, 2013 and detailed cost has been calculated and ongoing process for endorsement and implementation.
- Myanmar has signed to participate in Global Scaling Up Nutrition Movement on 15th May, 2013.
- Nutrition Promotion Month Activities were successfully carried out all over the country during August, 2013 and more activities were implemented together with related organizations in 2014.
- Continuous Supportive consultation for Sports Nutrition of Myanmar Athletes of 27<sup>th</sup> SEA Games and following sports matches.
- Guideline for Community Management of Acute Malnutrition was reviewed and revised in collaboration with all experts and the draft is being finalized in 2014.
- Food Based Dietary Guideline for Myanmar was reviewed and revised in September 2013 and the draft is being circulated among related sectors in 2014.
- Workshop on Revitalization of Community Based Nutrition Promotion Programme was carried out in 2013 in collaboration with all stakeholders in the programme.
- Exclusive breast feeding community based communication TOT training was given to all State/Region Nutrition Teams.
- SUN launching ceremony and work plan formulation was successfully conducted on 6th to 8th February 2014.
- For prevention of Birth Defects, National Strategies were formulated during 2014.
- Monitoring and Evaluation Workshop for the Scaling Up Nutrition Movement of Myanmar was conducted in May 2014.
- The Order of Marketing of Formulated Food for Infant and Young Child was officially pronounced by Ministry of Health on 24 July 2014 and Phase 1 training on Monitoring of the order had successfully finished in 2014.



# Tobacco Control Measures

## Global, Regional and National Problem of Tobacco

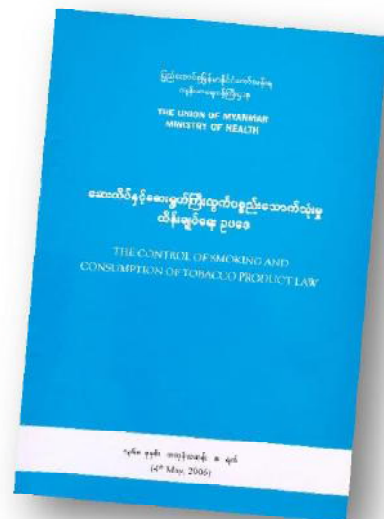
World Health Organization reported that 63% of all deaths around the world are caused by Non-Communicable Diseases, for which tobacco use is one of the greatest risk factors. It is estimated that there are more than a billion smokers (200 million females) in the world today. Annually, about 4.9 million people die due to tobacco related diseases where more than 600 thousands of deaths are due to exposure to environmental tobacco smoke (SHS). By 2020, tobacco will be the leading cause of death and disability globally.

In the South East Asia Region, about 250 million people are smoking and the same number of people is using smokeless tobacco. Every year, about 1.3 million die due to tobacco use in the Region.

In Myanmar, WHO NCD STEPS survey (2009) showed that about 22% of people (45% of men and 8% of women) are currently smoking, about 30% of people (51% of men and 16% of women) are currently using smokeless tobacco and 39% of people are exposing to environmental tobacco smoke in work places. According to Global Youth Tobacco survey (GYTS, 2011), about 7% of school youths (13% of boys and 0.5% of girls) were currently smoking cigarette while about 17% (28% of boys and 7% of girls) were currently using other tobacco products. Like the adult population, about 38% of them were also exposing to environmental tobacco smoke in public places.

## National Tobacco Control Programme, WHO FCTC and National Legislations

In Myanmar, National Tobacco Control Programme initiated in the year 2000 and implemented the health education and awareness raising activities. Recognizing the enormous premature mortality caused by tobacco use and adverse effects of tobacco on social, economic and environmental aspects, the Member States of the World Health Organization unanimously adopted the WHO Framework Convention on Tobacco Control (WHO FCTC) at the Fifty-Sixth World Health Assembly in May 2003. Myanmar had signed the WHO FCTC in October, 2003 and ratified in April, 2004. Myanmar is the 11th member country of the WHO FCTC.



Being the member country of the WHO FCTC, Myanmar has the responsibility to implement according to its' provisions. With the objectives of protecting and reducing the dangers of tobacco among the community and based on the provisions of the WHO FCTC, "The Control of Smoking and Consumption of Tobacco Product Law" was enacted in May, 2006 and it came into effect in May, 2007.

### **MPOWER strategies for implementing WHO FCTC**

For effective implementation of the WHO FCTC by the member States, WHO recommended the six MPOWER policies in the "WHO Report on the Global Tobacco Epidemic, 2008". The Myanmar Tobacco Control Programme has also been implementing its activities in line with those six policies, namely:

- Monitor tobacco use and prevention policies (M)
- Protect people from tobacco smoke (P)
- Offer help to quit tobacco (O)
- Warn about the dangers of tobacco (W)
- Enforce bans on tobacco advertising, promotion and sponsorship (E)
- Raise taxes on tobacco (R)

### **Monitoring tobacco use and prevention policies**

Myanmar has been participating in the Global Tobacco Surveillance System since 2001. The prevalence of tobacco use has been monitored through sentinel prevalence surveys, Global Youth Tobacco Surveys (GYTS), Global School Personnel Surveys (GSPS) and Global Health Profession Students Surveys (GHPSS) periodically. The increasing trend of smoking and smokeless tobacco use was found among school boys and adult males between 2007 and 2011. Myanmar men were noticed significantly as the most smokeless tobacco users in the South East Asia Region. The Ministry of Health made frequent warnings regarding the health risks of smokeless tobacco use in news papers and television channels, and conducted the health forums.

### **Protecting people from tobacco smoke**

In order to protect the community from exposure to secondhand smoke, the Law designated the no-smoking areas including public places, public transport, health facilities and educational institutions. In 2011, the President's office also made the direction that all governmental office buildings and compounds must be tobacco free. The Ministry of Health reminded the public on

no-smoking areas as defined in the law through news papers and television channels. In December, 2013, Myanmar hosted the 27th SEA Games. To be tobacco-free SEA Games, the Ministry of Health developed the guidelines and collaborated with the Ministry of Sports. The Ministry of Health also issued the two Notifications in March, 2014, defining the sinages of No-smoking area to be put at every smoke-free places defined by the law, and also defining the criteria for designated smoking area.



### Offering help to quit tobacco

The community-based cessation activities were started at pilot townships in 2004 in Myanmar. Since 2012, the health professionals were trained for counseling and assisting people for cessation of tobacco use in both community-based and institution-based settings. But, like other ASEAN countries, Nicotine Replacement Therapy (NRT) is still expensive and less accessible in Myanmar.

### Warning about the dangers of tobacco

With the purpose of advocating and raising awareness of all stakeholders including the community regarding the tobacco-related health problems and control measures, Myanmar has been celebrating the World No-Tobacco Day, both at Central and Regional/ State level every year since 2000. The World No-Tobacco Day 2013 was also celebrated on 31st of May, 2013 with the theme: "Tobacco Advertising, Promotion and Sponsorship", alerting the government and all stakeholders to be aware of the tobacco industries' tactics of attracting the people especially youths for testing cigarette smoking. The ceremony was followed by observing the mini-exhibition and distributing the IEC materials to the participants. Recognizing the strong commitment and great efforts on tobacco control, the World Health Organization presented the World No-Tobacco Day 2013 Award to the Union Minister for Health.

According to the WHO FCTC, the member countries should implement the textual and pictorial health warnings within three years of enforcement. According to the law, the Ministry of Health is responsible for defining the necessary health warnings. So, with the guidance of the Central Tobacco Control Committee, which is chaired by the Union Minister for Health, the tobacco control cell has been making efforts for developing and adopting the relevant health warnings. In collaboration with the Medical Universities and Hospitals, the sample photos were collected and submitted to the National Health Committee in July, 2013. It was followed by a series of activities including the assessment on community's perception on different kinds of health warnings, taking high resolution pictures at hospitals, designing and drafting the rules and regulations.

### **Banning tobacco advertising, promotion and sponsorship**

For preventing community especially the children and the youths from testing and starting the habit of smoking, the Law prohibits: sale of tobacco to and by minors, sale of tobacco products within the school compound and within 100 feet from the compound of the school, sale of cigarettes in loose forms and sale by vending machine. It also bans all forms of tobacco advertisements, promotion and sponsorship. Although the law prohibits all kinds of tobacco advertisements, various forms of advertising like vinyls, stickers, calendar, tissue box, ash tray, menu card, T-shirts, etc. and promotions are still made by the tobacco industries. The regular monitoring and reporting system from Townships to respective State/ Region and then to the Central level was established since July, 2013. The Ministry of Health also reported to the Government's office monthly since then.

### **Raising taxes on tobacco**

Tobacco poses a major challenge not only to health, but also to social and economic development and to environmental sustainability. Tobacco use is a major drain on the world's financial resources. Although it generates short term income, it has been estimated that tobacco costs the world over US \$ 2000 billion per year.

So, the WHO FCTC encourages the member countries to implement the effective price and tax measures. The Ministry of Health held the coordination workshops with the involvement of related sectors for raising tobacco taxes harmoniously. Previously, the commercial tax levied on cigarettes was 50 % of sales price, and was 10%, 20% and 25% on cheroots, cigars and smokeless tobacco respectively. Since April, 2012, it was increased to 100% on cigarettes and 50% on other tobacco products.



### **First step for controlling illicit trade**

Since illicit trade in tobacco products is a global problem and it increases the accessibility and affordability for tobacco products, undermines the tobacco control policies and severely burdens health systems, the control of illicit trade in tobacco products is one of the important obligations in WHO FCTC. The Protocol to eliminate illicit trade in tobacco products was adopted at the fifth Conference of the Parties (COP 5) to the WHO FCTC on 12 November, 2012 in Seoul, Republic of Korea. It is aimed at combating illegal trade in tobacco products through control of the supply chain and international cooperation. Myanmar has signed the protocol in January, 2013 as one of the 1st 12 signatories to the protocol.

### **Strengthening collaboration and law enforcement**

Since collaboration and cooperation of all stakeholders concerned is vital for the effective implementation of the tobacco control policies, multisectoral advocacy workshops including all States and Regions were conducted during October and November, 2013.

With the intersectoral discussions among Ministry of Health, Ministry of Trade, Ministry of Home Affairs and Ministry of Agriculture, the plan for effective implementation of National Tobacco Control Law was developed and submitted to Government's office in September, 2013. It was distributed to all State/Regional Governments and Naypyitaw Council by Ministry of Trade. The implementation status will have to be reported to the Government's office through the Central Tobacco Control Committee.

For effective implementation of National Tobacco Control Law, drafting the rule was started during December, 2013 and it is under way for discussion with the related Ministries and organizations.



## Ensuring Safer Food and Drug

The Department of Food and Drug Administration (FDA) has five divisions which are Food Control Division, Drug Control Division, Medical Device and Cosmetics Control Division, Laboratory Division and Administrative Division.

### Food Control Division

Food Control Division is one area of Department of Food and Drug Administration works. The activities are in line with policy guidelines from Ministry of Health, Myanmar Food and Drug Board of Authority and implemented according to National Food Law. Pre-market assessment is conducted for locally produced food and imported ones and also for exported food. FDA issues Health Recommendation for locally produced food, of which 736 numbers are issued for Bottled Drinking Water Establishments and 465 other food products with the approval of Central Food and Drug Board of Authority. The approved establishments have good manufacturing facilities in place and their products are to conform with safety and quality parameters. Some manufacturing facilities have international accreditation and got market access to international trade. There is more potential on international trade with the development of small and medium scales on agro-based sector and a need to give more attention to this sector. Imported food also needs to have import recommendation for trade license application and the imported consignments need to get Health Certificate before marketing. The safety and quality parameters assessment for both local and imported food are based on Codex Alimentarius Commission (joint FAO and WHO organization) guidelines. Department of FDA is now participating in developing Myanmar Food Standards together with concerned departments. Post-market assessment is one of the tasks performed regularly for safety of food which are marketed in domestic trade. New area is risk assessment on prioritized commodities. In 2014, we are conducting school food safety in whole nation with School Health Division, Department of Health and Department of Commerce and Consumer Affairs. This year the total of 2615 no. of marketed food samples have been collected and assessed accordingly. The violated ones are announced in newspapers and public media. Trainings for Food Inspectors are conducted two times this year and planning for industries also. Attending food and food related meetings and workshops in concerned departments and international forum for harmonizing and upgrading the existing works.



**Food Inspector Training**



### Drug Control Division

Drug control division has both pre and post market control activities. They are -

- (1) Marketing authorization for new products, Renewal Registration and variation of existing authorization
- (2) Quality control laboratory testing of Pharmaceuticals
- (3) Good manufacturing practice inspection and licensing of manufacturers.
- (4) Good Storage & Good distribution Practice Inspection of Importer.
- (5) Post market Surveillance
- (6) Adverse drug reaction monitoring
- (7) Training and Health Education to public

Currently there are about 186 drug importers and 17,900 drugs are registered at Myanmar FDA. Food and Drug Administration takes the enforcement and legal action to illegal drug Importers as well as Drug Sellers/ Pharmacies. During 2013, under the guidance of Drug Advisory Committee and Central Food and Drug Supervisory Committee, FDA issued 2506 drug registration certificates, 77 Drug importation Approval Certificates. It rejected 264 drugs for registration from the aspect of quality, safety and efficacy. The post market drug samples 254 have been tested in drug quality control laboratory during 2013. FDA also notified to public and health care professional for counterfeit and unregistered medicine as alert notice.

### Medical Device/ Cosmetics Division

Medical Device/Cosmetics control division has issued the notification and import recommendation for medical devices, acknowledgement of cosmetic notification and import recommendation for oral hygiene products. Moreover, FDA has been conducting the Good Manufacturing Practices inspection and issues Manufacturer License for disposable syringes & Certificate of Cosmetic manufacturer.

During 2014, FDA has issued 788 import recommendation for disposable medical devices, 163 notification of import recommendation for rapid diagnostic test kits, 19 notification of import recommendation for medical devices, one manufacturing license for disposable syringes, (844) acknowledgement of cosmetic notification, 135 import recommendation for oral hygiene products and 6 certificate of cosmetic manufacturer. The post market cosmetic samples 90 have been tested not only in cosmetic quality control laboratory but also by test kits as spot test during 2014.

### Laboratory Division

FDA has three main laboratories, one each in Yangon, Nay Pyi Taw and Mandalay. Food laboratory in Yangon is mainly responsible for quality and safety of local, import and export products. Drug laboratory in Nay Pyi Taw carries out quality assessment and efficacy of all imported drugs including post marketing samples according to United State Pharmacopoeia and British Pharmacopoeia. Water and alcohol beverages for import licensing and samples submitted for licensing of manufacturers are tested in food laboratory, Nay Pyi Taw. Post marketing samples of food and drugs are investigated in food and drug laboratories of Mandalay. Medical devices and Cosmetics are tested in Nay Pyi Taw laboratory. There is a plan for drug laboratory to upgrade into WHO prequalification standard. It is also planned for food laboratory to obtain accreditation laboratory (ISO 17025).

Laboratories are responsible for screening and identification of harmful substances and microorganisms in water and food according to standard guidelines (eg. CODEX and AOAC). Quality assurance of drugs, medical devices and cosmetics are performed according to United State Pharmacopoeia, British Pharmacopoeia and ASEAN Cosmetic Methods.

Mini-laboratory services were established at Muse 105 miles Border trade Zone(near the China border), Myawaddy Border trade Zone(near the Thailand border), Tachilake Border trade Zone(near the Thailand border) and Tamu Border trade Zone(near the India border) in 2013. Kawthaung, Myeik and Chin Shwe Haw border trade zone branches have been established in 2014. Mini-laboratories have also been set up at FDA offices in 12 States/Regions of the country. Mini-laboratories were established following international standards as per guidance of United State Pharmacopoeia and they can detect counterfeit and substandard drug in 42 items of drugs including anti-malaria, anti-tuberculosis, anti-microbial and some analgesics.

FDA closely collaborates and cooperates with other Ministries including Ministry of Commerce, Ministry of Home Affairs, Ministry of Information, Department of Custom and also with City Development Committees for control of imported food, drugs, medical devices and cosmetics. FDA also observes unqualified and unsafe food, drugs, medical devices and cosmetics in the markets for consumers.

#### The future missions of FDA are as follow.

- a. Development and implementation of Action strategy, policy, laws and regulations.
- b. Enforcement of law and regulation governing food, drugs, medical devices & cosmetics.
- c. Premarketing and post marketing surveillances of food, drugs, medical devices & cosmetic products.
- d. Strengthening food, drugs, medical devices & cosmetics quality assurance system including quality control.



# Controlling Communicable Diseases

Communicable diseases prevention and control is one of the priority tasks of Ministry of Health in achieving its objectives of enabling every citizen to attain full life expectancy and enjoy longevity of life and ensuring that every citizen is free from diseases.

The objective of the Communicable Disease Control Programme is to reduce morbidity and mortality from communicable diseases so as to eliminate them from arising as public health problems and to mitigate subsequent social and economic problems.

As emphasis has been given for control of communicable diseases, plans have been developed systematically for preventing and controlling diseases like malaria, tuberculosis, leprosy, filariasis, dengue haemorrhagic fever, water borne epidemic diseases - diarrhoea, dysentery, viral hepatitis- and other preventable diseases.

As in many other countries, AIDS, TB and Malaria primarily affect the working age. These three diseases are considered as a national concern and treated as a priority. The ministry has determined to tackle these diseases with the main objectives of reducing the morbidity and mortality related to them, of being no longer a public health problem, and of meeting the Millennium Development Goals.

Other communicable diseases and emerging communicable diseases that have regional importance are also tackled through activities encompassing surveillance and control.

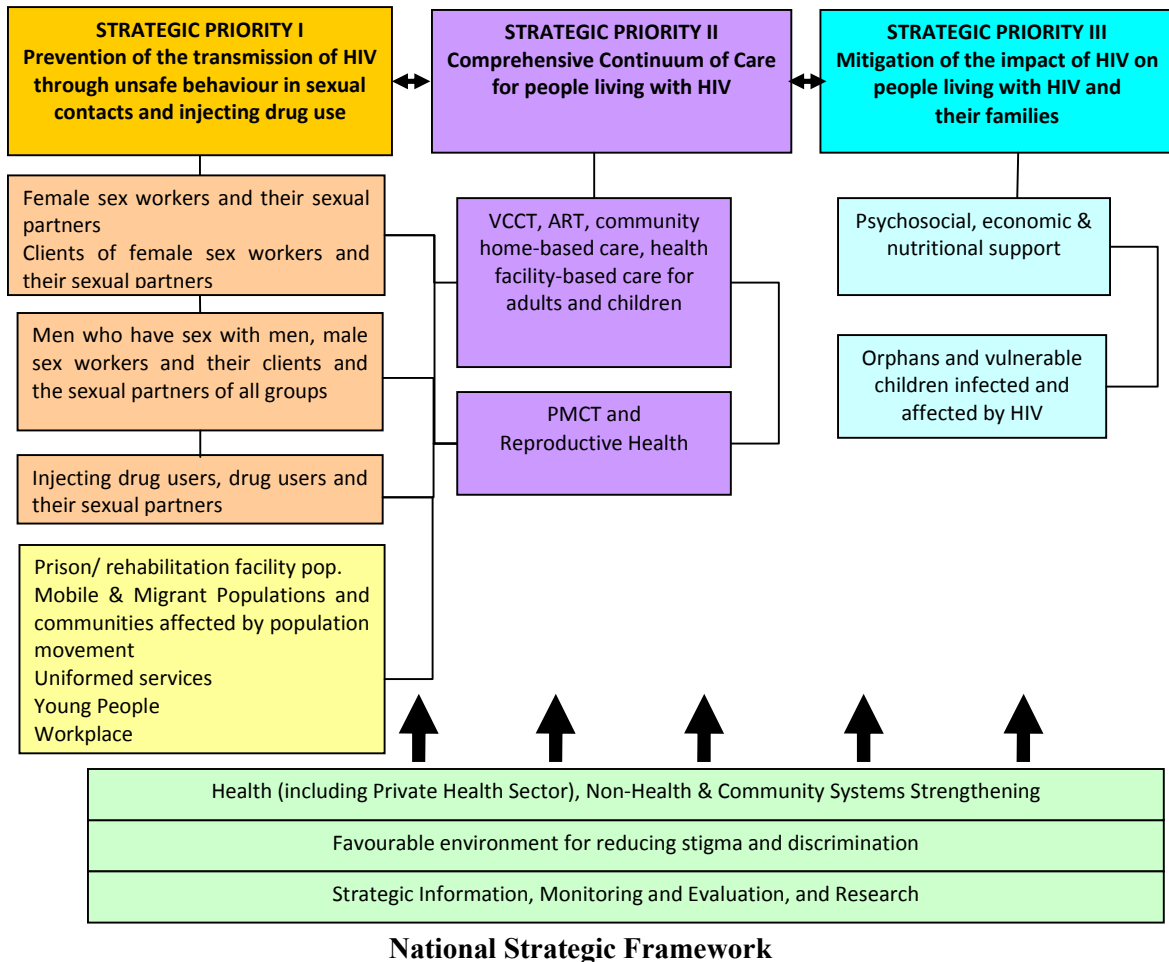
Under the Disease Control Division and with the support of Central Epidemiological Unit, supervision, monitoring and technical support are provided by disease control teams at central level and state/regional levels.



# Diseases of National Concern

## HIV/AIDS

HIV/AIDS prevention and care activities are being implemented in Myanmar as a national concern since 1989 with high political commitment. In accordance with Three ones principle: “**One HIV/AIDS Action Framework, One National Coordinating Authority and One Monitoring and Evaluation System**”, National response to HIV and AIDS is being implemented in the context of National Strategic Plan (2011-15) developed with the participatory inputs from all stakeholders, under the guidelines given by the multisectoral National AIDS committee which has been formed since 1989, and is monitored according to the National Monitoring and Evaluation Plan.



The National Strategic Plan (2011-2015) has a vision of achieving the HIV related MDG targets by 2015. It's main aims are to cut new infections by half of the estimated level of 2010; and to reduce HIV transmission and HIV-related morbidity, mortality, disability and social and economic impact.

A mid-term review was done in last part of 2013 and with agreement of all implementing partners, it was decided to extend one more year to be in line with Global Fund New Funding Model.

### **Current Activities of the National AIDS Programme**

The National Strategic Plan (2011-2015) has a vision of achieving the HIV related MDG targets by 2015. Its main aims are to cut new infections by half of the estimated level of 2010; and to reduce HIV transmission and HIV-related morbidity, mortality, disability and social and economic impact. National level dissemination workshop on NSP (2011-2015) was conducted in Nay Pyi Taw during June 2011 followed by State and Regional level dissemination workshops.

The following **major activities** are being implemented in accordance with 3 Strategic Priorities:

- Advocacy
- Awareness Raising on HIV/AIDS for various population groups
- Prevention of sexual transmission of HIV and AIDS
- Prevention of HIV transmission through injecting drug use
- Prevention of mother to child transmission of HIV
- Provision of safe blood supply
- Provision of care and support
- Enhancing the multi-sectoral collaboration and cooperation
- Special intervention programmes
  - cross border programme
  - TB/HIV programme
- Supervision, monitoring and evaluation are being implemented by National AIDS Programme

### **Achievement in Strategic Priority I**

As evidences have provided that the main mode of HIV transmission in the country is through heterosexual route, Myanmar has scaled up the implementation of 100% TCP programme which has been implemented since 2000. The Syndromic Management Training on STIs for BHS, Peer



Education and Awareness Raising activities are being conducted in project townships. There is increase access to condom with high condom use among risk groups has been achieved.

The progress was much more modest in scaling up of harm reduction services which are being implemented in (33) townships and Methadone Maintenance Therapy (MMT) which has started since 2005 has covered (35) Drug Dependence Treatment and Rehabilitation Centers in 2013 and nearly 7000 PWIDS are currently receiving MMT. The National AIDS Programme is working with the Ministry of Home Affairs to expand harm reduction programmes to new areas in need.

HIV/AIDS awareness for vulnerable population in workplaces and for mobile and migrant population, uniform services, institutionalized population are being conducted through multisectoral approach with related ministries: Ministry of Education, Ministry of Labour, Ministry of Social Welfare, Relief and Resettlement, Ministry of Information, Ministry of Rail Transportation, Ministry of Transport, Ministry of Industry, Ministry of Border Areas, Ministry of National Planning and Economic Development, Ministry of Defense, etc.

In order to reduce new infections among young people, HIV/AIDS prevention activities are being conducted with Ministry of Education and related programme under Ministry of Health such as School Health, Adolescent Health and NGOs both national and international. Workshop on development of communication messages and channels for HIV has been conducted with the aim to develop Myanmar HIV PMCT communication strategy and plan (2012-2016).

### **Achievements in Strategic Priority II**

In order to enhance access to comprehensive continuum of care for people living with HIV, special emphasis is given to scaling up of HIV counseling and testing (HCT) services including Voluntary Counseling and Confidential Testing which is one of the most important public health interventions. Workshop on reviewing and revising HTC guideline was conducted in Nay Pyi Taw followed by training of trainer and multiplier training courses to all health care providers.

In Myanmar ART provision started since 2005 and has covered 139 ART Centers/ sites including government hospitals and AIDS/STD clinics in public sectors. Through coordinated efforts of (15) implementing partners, about 75,000 AIDS patients have been treated for ART in June 2014. Based on updated revised WHO consolidated ART Guidelines (2013) the fourth edition of National guidelines for the clinical management of HIV infection (2014) was developed and planned to disseminate before end of 2014. According to the eligible criteria (CD4 count < 500) in the new guideline, the need for ART in Myanmar is estimated to be more than 120,000 in 2014. Myanmar has planned to scale up over 100,000 patient in 2015 and over 111,000 patient

by end of 2016. In order to achieve the ambitious scale up plan National AIDS Programme has started countrywide ART decentralization since 2013 and has a plan to cover over 100 townships at the end of 2015. The aims to decentralized ART sites are to expand area coverage, decongestion of loaded ART center and facilitate easy accessibility for community by reducing the travel time and costs.

For achievement of comprehensive continuum of care (CoC), framework has been developed since 2009 and nationwide comprehensive HIV/AIDS prevention and care activities including Community home based care for AIDS patients and their families are being implemented with involvement of Basic Health Staff, National NGOs, and communities including PLHIVs.

Since 2005, TB/HIV joint program has been initiated in coordination and collaboration with National TB Programme covering (236) townships in this year. With prevailing Intimate Partner Transmission and Feminization of epidemic, HIV transmission now seen more in low risk population groups globally, and Myanmar is no exception. Thus, 4 prongs of prevention of mother to child transmission of HIV (PMCT) are being initiated since 2001 and have covered 265 townships and 38 hospitals including State and Regional hospitals in 2014. Multidisciplinary State/Regional PMTCT Training teams were formed and conducted Advocacy meetings, Township trainings, community mobilization at township level. In order to achieve the global target of eliminating HIV transmission to new born and congenital syphilis, 4 prongs of PMCT has been conducted through coordinated efforts of National AIDS Programme and related programmes under Department of Health such as Reproductive Health, Women and Child Health Development Programmes, National NGOs such as Myanmar Women's Affairs Federation, Myanmar Maternal and Child Welfare Association, International NGOs and related Ministries such as Ministry of Social Welfare, Relief and Resettlement.

In order to minimize stigma and discrimination attitudes towards PLHIV (people living with HIV) and their families as well as to provide basic and correct information on HIV/AIDS, prevention, treatment, care and support activities are being implemented systematically for the community with special emphasis on men and women of reproductive age.

### **Achievements in Strategic Priority III**

For mitigation of the impact of HIV on people living with HIV and their families, formation of PLHIV networks are being made so as to coordinate in HIV/AIDS prevention, treatment and care activities as peer counselors for ART adherence in ART and to strengthen the pre-test, post-test, couple counseling and follow up of mother-baby pairs in PMCT hospitals. In the community psychosocial, economic and nutritional supports are being provided to PLHIVs and their families.

After conducting baseline situational analysis on orphans and vulnerable children (OVC) infected and affected by HIV in 3 selected townships, dissemination workshops on findings were done followed by counseling training to service providers and OVC working group was formed with implementing partners such as Department of Social Welfare, Department of Education, Planning and Training, Child Protection and HIV & Children Section of UNICEF.

For **Cross Cutting issues**, such as Health System Strengthening, Donor deferral system for Blood Safety Programme has been introduced with JICA support and National External Quality Assessment Scheme (NEQAS) of HIV testing has been established.

For **Favorable Environment** for reducing stigma and discrimination, strengthening of multisectoral coordination has been made and legal reform workshops with related ministries, such as Ministry of Home Affairs, Central Committee for Drug Abuse Control, Attorney General's Office and other related sectors has been conducted.

In order to enhance **Regional Coordination**, Cross Border HIV and AIDS prevention, treatment, care and support activities are being conducted with the neighboring countries as well as participating in ASEAN HIV/AIDS Work plan activities as a member country of ASEAN task force on AIDS.

#### **Strategic Information, Monitoring and Evaluation, and Research**

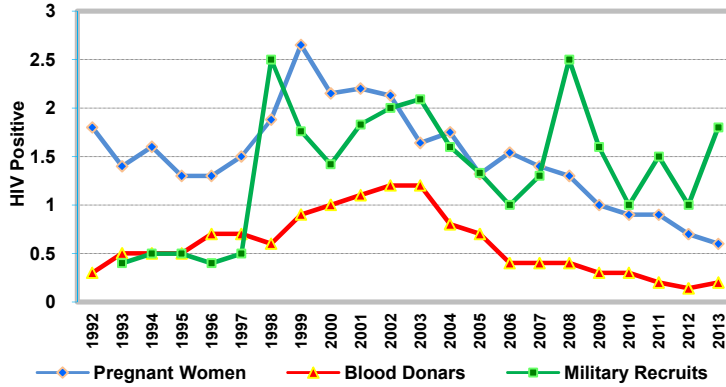
In order to provide strategic information to Technical and Strategy Group on HIV and Myanmar Country Coordinating Mechanism which was now changed into M-HSCC for planning and decision making, Strategic Information and Monitoring & Evaluation (SIM&E) working group chaired by National AIDS Programme with members comprising of representatives from Department of Health Planning, Department of Medical Research, UN agencies, and INGOs has been formed in early 2011. National M&E plan, finalized with inputs of the working group was approved by Ministry of Health and planned to conduct dissemination workshops followed by decentralized data collection with all implementing partners at State and Regional level on regular basis.

#### **Trends of HIV/AIDS in Myanmar**

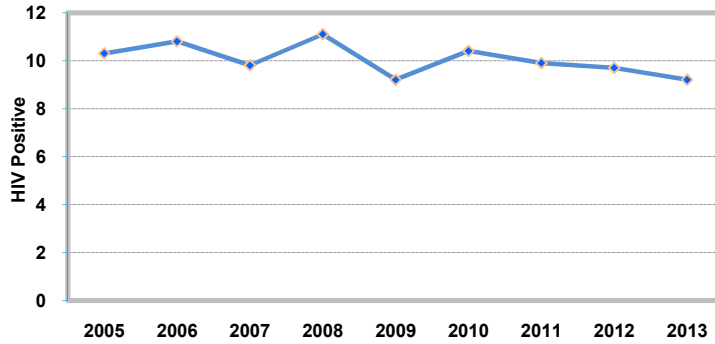
The active surveillance of HIV/AIDS has begun in Myanmar since 1985. The first comprehensive surveillance system was developed in 1992 and HIV sentinel sero-surveillance survey among target groups has been carried out since then. Trends analysis of the HIV sentinel surveillance data revealed that HIV prevalence levels among low risk populations in 2013 continued general decline observed since their peak in the late 1990s.

Newly diagnosed TB patients has begun one of the sentinel groups since 2005, and the HIV prevalence has been fluctuating round about 1% above and below the 10% level since then.

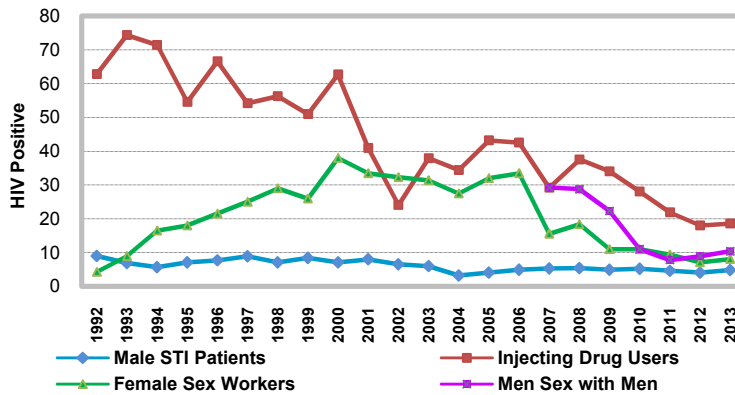
Among high risk populations, a slight increase was observed among Men who have sex with Men, Female Sex Workers and Injecting Drug Users in 2013 compared to 2012 round of HSS.



Trends of HIV prevalence among low risk sentinel population groups, HSS 1992-

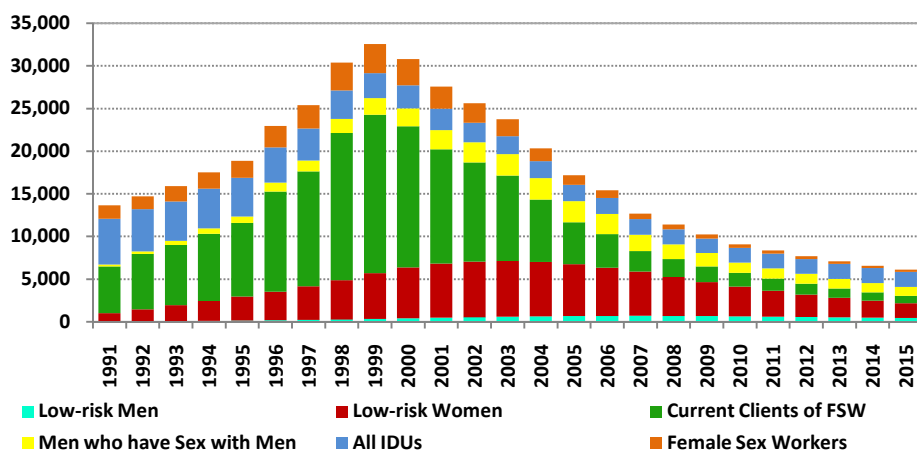


Trends of HIV prevalence among new TB patients, HSS 1992-2013



Trends of HIV prevalence among most at risk sentinel population groups, HSS 1992-2013

Since early 2010, NAP with the technical support from Strategic Information and M&E working group and inputs from implementing partners has developed Asia Epidemic Model spreadsheet for Myanmar. With the model, the distribution of new cases (incidence) of HIV among populations was estimated and projected. Myanmar has gained the advantages of the concerted efforts of all implementing partners; the incidence of HIV has been declined yearly following its peak in late 1990s. However, the new infection is leveling out after 2011 indicating the need to intensify the momentum of prevention and control measures as well as to provide interventions tailored to MSM, IDU and female partners of these Most at Risk Populations (MARPs).



**Distribution of incidence of HIV cases among population groups**

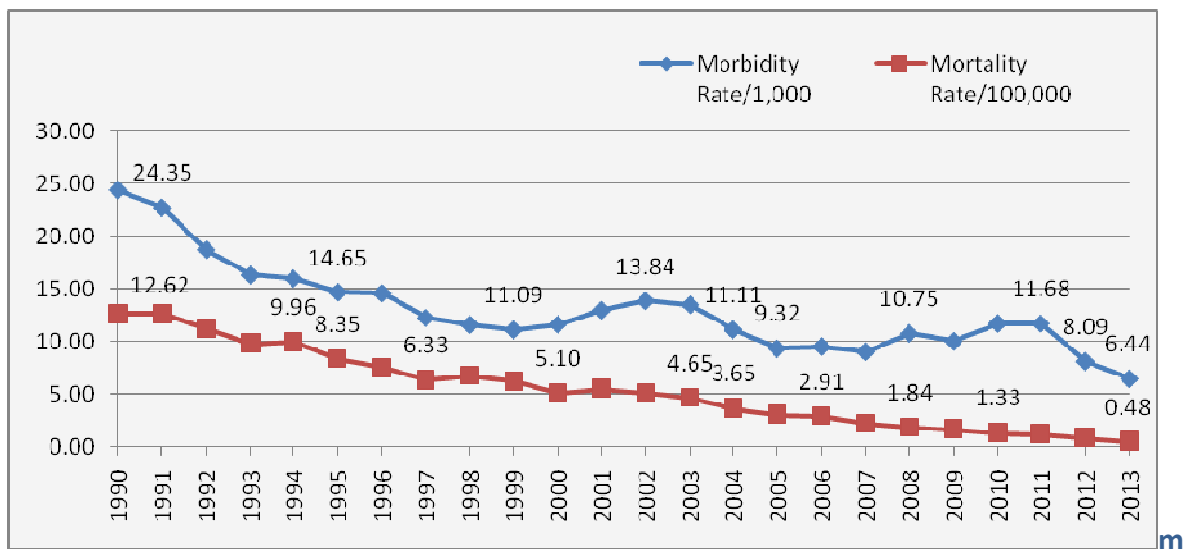
Globally 30 years has passed since AIDS was first reported and ten years since the landmark adoption of the 2001 declaration of commitment on HIV/AIDS at the United Nations Special Section on HIV/AIDS (UNGASS). In Myanmar, over 20 years has passed since the first reported case of HIV in 1988, but with limited resources various achievements have been gained with high political commitments also towards 2001 UNGASS declarations. Although Myanmar has successfully gained Global Fund Round 9 Grant for scaling up of activities in the coming years, the next NSP (2011-2015) need to be fully funded by both international and domestic sources for achievements of MDGs, Universal Access and getting to Three Zeros; Zero New HIV infections, Zero Stigma & Discrimination, and Zero Death.



**Training of HIV Counseling and Testing**

# Malariam

Malaria is one of the priority diseases in Myanmar. Malaria is endemic in 284 out of 330 townships in Myanmar. It is a remaining public health problem due to climatic and ecological changes; population migration that means migrants who seek economic opportunities in rural economic frontier areas and the economic development activities such as forestry, mining, plantations and road-building and development of multi-drug resistant *P. falciparum* parasite.



**Trend of Malaria Morbidity and Mortality Rates in Myanmar (1990-2013)**

Long-term trend shows decreasing malaria morbidity and mortality in Myanmar. Morbidity rate and mortality rate were 24.35/1000 population and 12.62/100000 population respectively in 1990 and 6.44/1000 population and 0.48/100,000 population respectively in 2013.

## Specific Objectives

1. To reduce malaria morbidity and mortality by 60% in 2016. (baseline 2009)
2. To contribute socioeconomic development and achievement of health related MDG in 2015.

## National Malaria Control Strategies

At Present, National Malaria Control Program is carrying out malaria control activities in line with the Global and National Malaria Control Strategies as following:

1. Prevention and control of Malaria by providing information, education and communication up to the grass root level
2. Prevention and control of malaria by promoting personal protective measures and/ or by introducing environmental measures as principle methods and application of chemical and biological methods in selected areas depending on local epidemiological condition and available resources
3. Prevention, early detection and containment of epidemics
4. Provision of early diagnosis and appropriate treatment (EDAT)
5. Strengthening of surveillance system in malaria morbidity, local transmission, case investigation and completeness of the data a part of health information system
6. To promote capacity building and programme management of malaria control programme (human, financial and technical)
7. To strengthen the partnership by means of intra and inter-sectoral cooperation and collaboration with public and private sectors, local and international non-governmental organizations, UN agencies and neighboring countries for resource generation
8. To intensify community participation, involvement and empowerment
9. To promote basic and applied field research

## Activities of Malaria Control Program

### 1. Information, Education and Communication

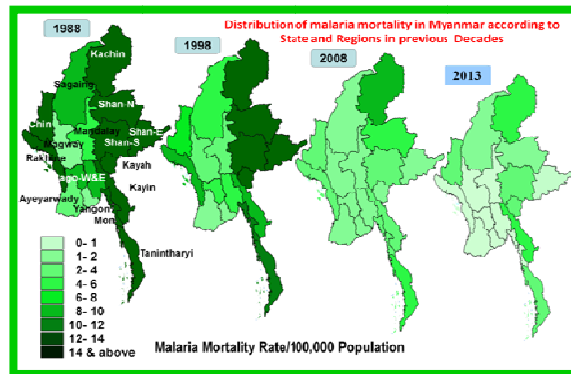
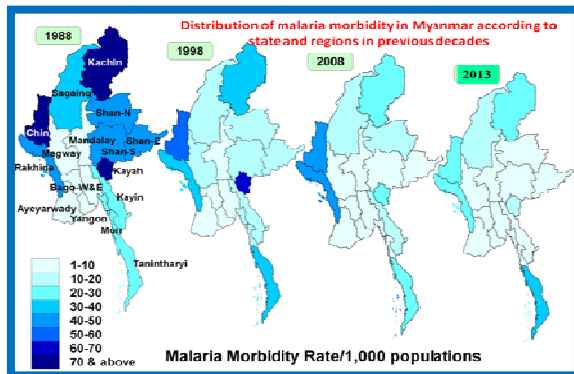
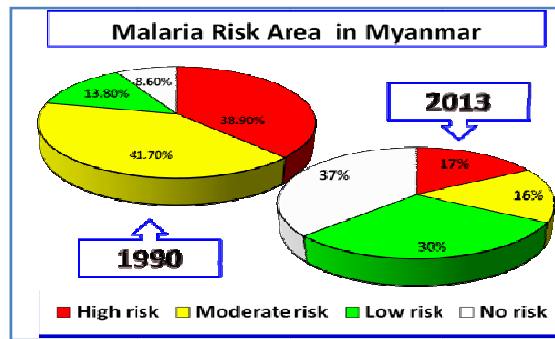
Dissemination of messages on malaria is carried out through various media channels with the emphasis on regular use of bed nets (if possible appropriate use of insecticide treated nets) and early (as soon as possible within 24 hours after onset of fever) seeking of quality diagnosis and appropriate treatment. Production and distribution of IEC materials is also carried out in different local languages for various ethnic groups and different target groups such as forest related travelers, pregnant women and general population. Advocacy activities are conducted to public and private sectors, NGOs, religious organizations and local authorities at different levels.

## 2. Preventive activities

### Stratification of Areas for Malaria Control

Malaria area Micro-stratification up to village level was done in 180 townships.

According to the ecological changes, distribution of malaria morbidity patterns and results from the micro-stratification, the highest risk areas for the malaria was about 38.90% in the 1990 was reduced to 17.00% in 2013. And the malaria free areas in the country were increased from 8.60% in 1990 to 37% in 2013. Package of malaria control activity has been given according to the result of risk area stratification that ensures the effective resource allocation. Validation on micro-stratification process was done by malariometric survey in some targeted townships.



### Insecticide Treated Mosquito Nets

Selective and sustainable preventive measures are carried out emphasizing on personal protection and environmental management. With limited resources, areas were prioritized for ITN Program either distribution of Long Lasting Insecticidal Nets (LLIN) or impregnation of existing nets. Altogether 788,866 LLINs were distributed and 638466 existing bed nets were impregnated in 2013.



### Epidemic preparedness and response

Ecological surveillance and community based surveillance were implemented together with early case detection and management and preventive measures like indoor residual spray (IRS) in development projects and impregnation of existing bed nets in epidemic prone areas.

One disastrous epidemic in 2001 was estimated to have caused nearly 1,000 deaths. However, the number of outbreaks decreased during last five years. No malaria outbreak was reported in 2007, 2012 and 2013.



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### 3. Early diagnosis and Appropriate treatment

According to the new anti-malarial treatment policy, case management with ACT (Artemisinin based combination therapy) was practiced in all 330 townships.

Total 887,969 and 1,587,745 fever cases were tested by RDT in 2012 and 2013 respectively. Among them, 294,173 and 275,559 P.f. Cases were treated with ACT (Coartem) and 159,482 and 136,135 P.v. cases were treated with Chloroquine in 2012 and 2013 respectively. Supervision and quality control of malaria microscopy was done in 103 malaria microscopic centers by laboratory technicians from Central and State/Regional VBDC team in 2013. Monitoring

therapeutic efficacy of anti-malarial drugs particularly ACTs in collaboration with DMR (Lower Myanmar) and DMR (Upper Myanmar). Quality assurances of RDT were also done in collaboration with DMR (Lower Myanmar). Malaria mobile teams and malaria voluntary health workers reached up to rural areas, hard-to reach and hardest to reach areas for improving access to quality diagnosis and effective treatment. Community based Malaria Control Program has been introduced and implemented in some selected townships of Eastern Shan State since 2006-2007 and expanded in total 182 townships. 3875 volunteers were trained in 2013.



#### 4. Capacity building

Different categories of health staff were trained on different technical areas in 2013.

- Refresher training on malaria microscopy was conducted for 63 malaria microscopists.
- Different categories of 6000 health care providers were trained especially on skill development of malaria cases management.
- 580 VBDC Staffs were trained on malaria prevention and control emphasize on preventive measures, vector control, case management (diagnosis and treatment), recording and reporting.

## Tuberculosis

Tuberculosis (TB) is still a major health problem in Myanmar. Myanmar belongs to the global list of 22 countries with the highest burden of TB, 27 countries with high MDR-TB problem and 41 countries with high TB/HIV problem.

WHO estimated that TB prevalence in 2013 was 473/100,000 population and TB mortality was 49/100,000 population. It is estimated that 230,000 new TB patients develop every year. According to the national TB prevalence survey conducted in 2009-2010, TB prevalence was higher in male than female, higher in urban than rural and higher in States than Regions. Prevalence of HIV sero-positive among new TB patients was 9.2% according to the sentinel surveillance conducted at 28 sites in 2013. Prevalence of multi-drug resistant TB (MDR-TB) was reported as 4.2% and increase to 5% among new TB patients in second and third nationwide drug-resistant TB surveys conducted in 2008 and 2013.

National Tuberculosis Programme (NTP) was established in 1966-1967. NTP is currently running with 14 Regional and State TB Centers with (101) TB teams at district and township levels. All townships in Myanmar have been covered with DOTS strategy since 2003 TB control activities are implementing at township level under the leadership of Township Medical Officer, through integration with primary health care.

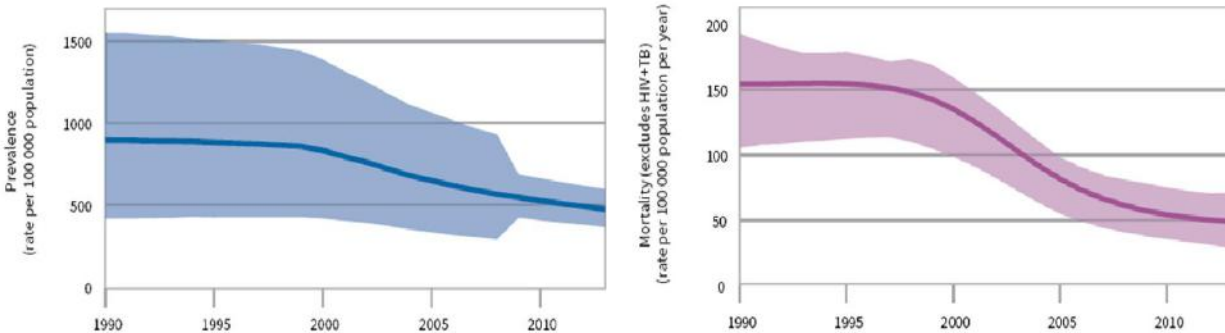
The overall goal of the NTP is to reduce morbidity, mortality and transmission of TB until it is no longer a public health problem, to prevent the development of drug resistant TB and to have halted by 2015 and begun to reverse the incidence of TB.

Specific objectives are set towards achieving the Millennium Development Goals (MDGs) by 2015 as follows:

- To reach and there after sustain the targets-achieving at least 90% case detection and successfully treat at least 90% of detected TB cases under DOTS, (MDGs, Goal 6, Target 6.c, Indicator 6.10)
- To reach the interim targets of halving TB deaths and prevalence by 2015 from the 1990 situation. (MDGs, Goal 6, Target 6.c, Indicator 6.9)

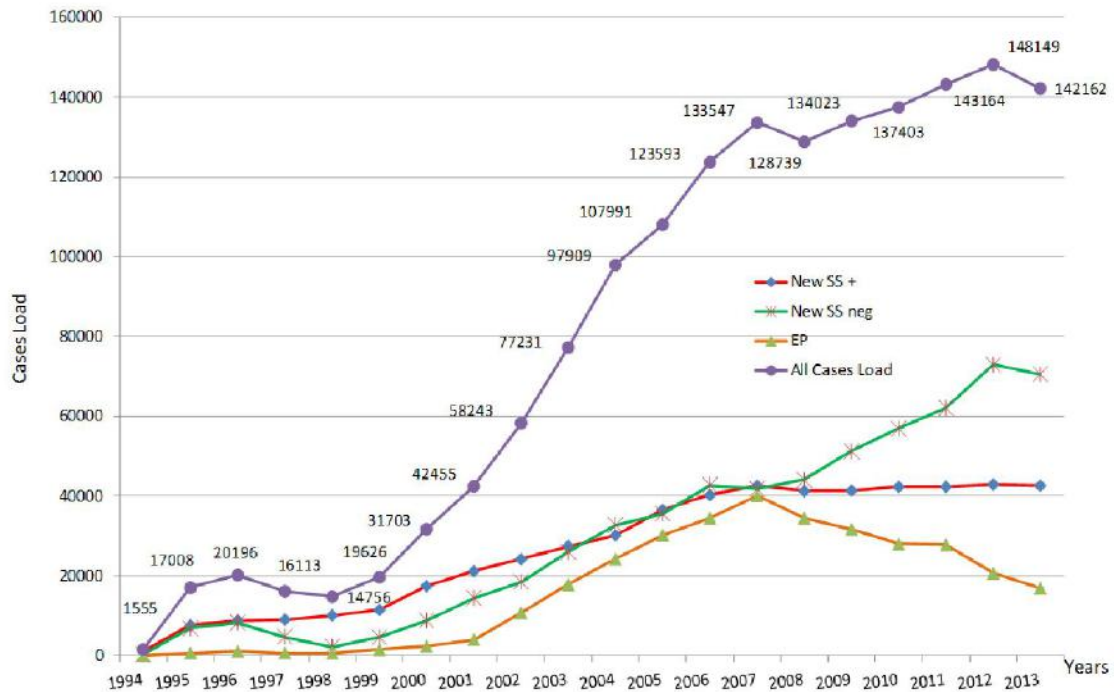
In 2013, totally 142,162 TB patients (all forms) were notified in Myanmar (Case Notification Rate of 297/100,000 population) in which 42,595 patients were new smear positive cases. NTP achieved case detection rate (CDR) of 78.7% and treatment success rate (TSR) of 85% in 2013.

### TB epidemiology, Myanmar (2013)



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### Trend of TB case notification (1994-2013)



On the other hand, NTP is implementing TB control activities in line with the National Strategic Plan (2011-2015). This strategy covers the following six principle components:

1. Pursue high quality DOTS expansion and enhancement
2. Address TB/HIV, MDR-TB and the needs of poor and vulnerable population
3. Contribute to health system strengthening based on primary health care
4. Engage all health care providers

5. Empower people with TB and communities through partnership
6. Enable and promote research

The government increases the budget for TB control gradually, especially for anti-TB drug procurement. TB patients have been treated with WHO recommended regimens using Fixed Dose Combination of first line anti-TB drugs (FDC) since 2004. NTP started to use patient kits in April, 2010 and also changed Category III regimen to be used the same as Category I regimen in 2011. Treatment for drug resistant TB started in 2009 and the second line drugs procurement using government budget started in 2013-2014 budget year. Government supported 2 million USD equivalent local currencies for the 600 drug resistant TB patients.

Apart from government support, NTP was also funded by Global Fund Round 9 Grant, in (2011-2012) as Phase I, which was followed by Global Fund, New Funding Model (NFM) (2013-2016) started in July 2013 and will secure anti-TB drugs until 2016.

NTP strategies are prioritized according to the background epidemiological situation in 2012. NTP prioritized to accelerate the TB case finding in 2013-2016. Active case finding (ACF) strategies have been improved by conducting initial home visits and contact tracing, by setting up sputum collection centers (SCC) in hard to reach areas and by performing active case finding activities using mobile team equipped with portable X-ray facility. The External Quality Assessment System (EQAS) was introduced in 2006 and 464 laboratories including private laboratories are under EQA in 2013 to ensure the quality of sputum microscopy.



**Active Case Finding Activities using Mobile Teams**

Childhood TB Management is improved by adopting WHO Rapid Advice on TB Treatment in Children (to use high dose 4 drugs regimen) and trained all TB township coordinators and informed pediatricians at Regional/State, District and Township level. However, some adjustment on WHO recommendations was made on treatment of TB in children under 8 years of age (not HIV sero-positive and/ or not suffering from severe forms of TB) will be treated using 3 drugs regimen excluding Ethambutol.

Second prioritized area is combating TB/HIV co-infection. National TB/HIV coordinating body has been formed since 2005 and reformed in 2012. Collaborative TB/HIV activities are carried out in collaboration with National AIDS Programme (NAP). The TB/HIV collaborative activities are implementing where NAP could provide Anti Retro viral Therapy (ART) and technical assistance is provided by WHO. Total 28 townships are implementing TB/HIV collaborative prevention and control activities. Nationwide TB/HIV scale up plan was developed and funded by government and Global Fund (NFM). Currently 136 townships are implementing the collaborative TB/HIV activities and all townships will be covered by 2016. In 2013, Isoniazid Preventive Therapy (IPT) was adopted as a policy for people living with HIV without active TB. TB/HIV sentinel surveillance is continuing under routine sentinel surveillance of NAP.

Third priority area is Programmatic Management of Drug Resistant TB (PMDT). It is one of the integral parts of Five Year National Strategic Plan (2011-2015). National Drug Resistant TB committee was formed in 2006. Standard Operation Procedure (SOP) for management of MDR-TB was reviewed and revised in 2013. DOTS-Plus Pilot Project (2009-2010) concluded with treatment success rate of 71.3% among 303 enrolled MDR-TB patients. Funding for MDR-TB management is secured till 2016. Myanmar PMDT initiated community based model (ambulatory) for uncomplicated cases in 2011 in 22 townships. Townships implementing PMDT is expanded up to 38 townships in 2013. NTP developed the PMDT scale up plan and coverage expanded up to 68 townships in 2014. According to the plan MDR-TB management will be expanded up to 108 townships by 2016. NTP could enrolled 2200 MDR-TB patients on second line anti-TB treatment.

All the TB control activities are based on the strong health infrastructure. Two MDR-TB hospitals, general hospitals and 330 township TB clinics and partners' TB clinics need to follow the infection control measures while dealing with TB, TB/HIV and MDR-TB.

For the diagnosis of TB, drug resistant TB, Bio-safety Level-3 (BSL-3) Laboratories are established in Yangon and Mandalay and they are functioning under proper maintenance. NTP is expanding

the culture facility to Taunggyi and it starts functioning in 2013. Laboratory expansion plan was developed in 2013, to expand the BSL-3 laboratory in 3 more laboratory in 2014 and 2015. NTP is developing the sputum specimen transportation system from periphery to 3 culture facilities for case detection of MDR-TB. The work load increases and man power in the TB laboratories are required to fill up to the full strength. NTP is implementing TB diagnosis with 65 iLED Fluorescent Microscopy at 65 districts.

As an innovative approach, new diagnostic tools were introduced in TB control activities. Rapid molecular test - GeneXpert test to diagnose TB and Rifampicin resistant TB was introduced in Myanmar since 2010. Two GeneXpert machines were installed at Upper Myanmar TB laboratory (Mandalay) and MGH (Mandalay General Hospital) in late 2011 with the support of PICT project (UNION). Up till now, altogether 27 machines have been using in

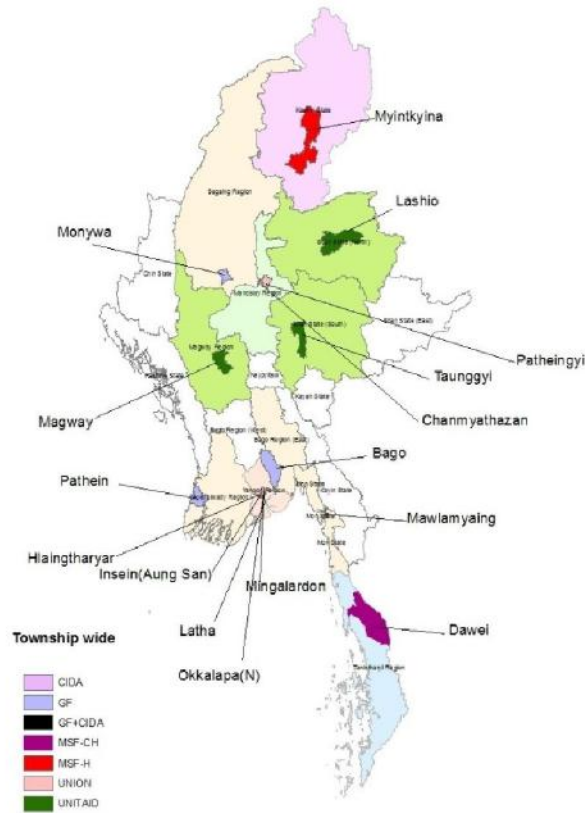


**GeneXpert Machine at NTRL**

Regional/State TB centers and selected district TB centers with the support of UNION, CIDA, Global Fund, USAID and UNITAID. In those laboratories confirmation is done by using either Line Probe Assay (LPA) or Liquid Culture (MGIT-Mycobacterium Growth Indicator Tube) and Drug Susceptibility Testing (DST).

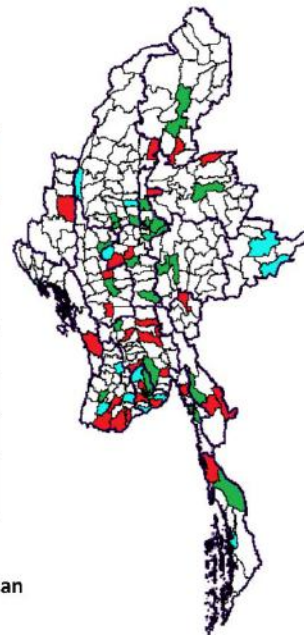
For the capacity building, NTP is carrying out various kinds of trainings at different levels covering laboratory aspect, data management, MDR-TB management and TB/HIV collaborative activities. NTP co-ordinates with national NGOs such as Myanmar Womens' Affairs Federation (MWAF), Myanmar Maternal and Child Welfare Association (MMCWA), Myanmar Medical Association (MMA), Myanmar Red Cross Society (MRCS) and Myanmar Health Assistant Association (MHAA) in DOTS implementation. International NGOs and Bilateral Agency co-operating with NTP are the UNION, Population Services International (PSI), International Organization for Migration (IOM), Pact Myanmar, Malteser, World Vision, Merlin, Asian Harm Reduction Network (AHRN), MSF (Holland), MSF (Switzerland), Cesvi, Family Health International (FHI-360), MEDECINS DU MONDE (MDM), Progetto, Medical Action Myanmar (MAM), Japan Anti-TB Association (JATA) and JICA (Major Infectious Disease Control Project (MIDCP).

## GeneXpert machines for rapid diagnosis of MTB and Rif-resistant



## Geographical coverage for MDR TB management

Year	Project Name	No. of townships	Cumulative
2009-2011	DPPP (DOTS Plus Pilot Project)	10	10
2011	PMDT (Programmatic Management of DR TB)	12	22
2012		16	38
2013		15	53
2014		15	68



Yangon, Mandalay, Sagaing, Magway, Shan (Lashio) and Shan (Taunggyi)



As an activity to know disease burden in hard to reach areas, NTP conducted active case finding using mobile teams in various Regions and States with the support of Global Fund. Health care services were provided by using mobile team activities aiming to detect missing and hidden TB cases, to provide proper treatment and to increase community awareness about TB.

Public-Private Mix (PPM) DOTS is implementing with MMA, PSI. Some Private Practitioners (PPs) use scheme I in which they educate about TB and refer Presumptive TB to diagnostic centers. Some PPs prefer to use Scheme II acting as DOT providers. PSI has organized the PPs and established the Sun Quality Clinics as DOT units, which is Scheme III. In 2013, PSI implemented PPM-DOTS using scheme III in 190 townships with 802 active PPs. MMA implemented PPM-DOTS in 116 townships with 1443 active PPs. Public-Public Mix DOTS was initiated at 4 general hospitals (New Yangon General Hospital, East Yangon General Hospital, West Yangon General Hospital and Thingungyun Sanpya General Hospital) in mid 2007, and expanded year by year. In 2013, NTP could work in collaboration with altogether (23) hospitals. Advocacy, communication and social mobilization (ACSM) activities play a role in TB control. With the guidance of Ministry of Health, ceremonies commemorating World TB Day are held on 24th March every year. Besides, Public Service Announcement (PSA), air campaign TV spot, communication materials and production of video clips were developed with Global Fund support. Public Service Announcement and air campaign TV spot were broadcasted through mass media channel like MRTV. Community-Based TB Care (CBTC) activity was introduced in 2011. All local NGOs and some INGOs take part in community TB care under the guidance and support of NTP. Workshop on evaluation of partners' contribution on CBTC was conducted in February 2013. The guideline for community based TB care was developed in 2013 using the pilot experience of NTP implemented in Pyinmana with the technical support of JICA (MIDCP).

NTP also conducted the TB control related impact assessment surveys and numbers of operational research in collaboration with Departments of Medical Research. Moreover, Tuberculosis Mortality Survey was successfully conducted at Kawkareik township of Kayin State and Padaung township of Bago Region in 2013. The dissemination of the research findings provides NTP's future direction of TB control activities and NTP effectively utilized the recommendations.

### Progress of National Tuberculosis Control Programme (Myanmar)

Indicators	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
DOTS Covered Population (%)	90	95	95	95	95	95	95	95	95	95	95	95	95
DOTS Covered Township (%)	80	95	100	100	100	100	100	100	100	100	100	100	100
Case Detection Rate (%)	61	70	73	81	95	86	89	90	95	76 <sup>#</sup>	77	78.2	78.7
Treatment Success Rate (%)	82	82	81	84	85	85	85	85	85	85	85	86	85

# Based on results of National TB Prevalence Survey, estimated new smear positive cases were changed to 170/100,000 for Yangon Region, and 105/100,000 for other States and Regions.



**Community Based TB Care at a Village,  
Pyinmana Township**



## Communicable Disease Prevention, Surveillance and Response

With the guidance from the Ministry of Health, the Central Epidemiology Unit (CEU), acts as the National Focal Point for the Communicable Disease Surveillance and Response in collaboration with related ministries, departments and organizations. National Surveillance System targets epidemic prone communicable diseases, Diseases Under National Surveillance (DUNS), emerging infectious diseases, climate related communicable diseases and vaccine preventable diseases in concept of inner ring and outer ring surveillance.

Preparedness and Response to emergence and re-emergence of infectious diseases including Ebola Virus Disease, H7N9 and MERS-CoVs and enhancing the international networking including animal health sector is essential for information sharing and capacity building. Field epidemiology training in collaboration with animal health sector, international and regional organizations such as ASEAN(Association of South East Asia Nations), ACMECS (The Ayeyawady - Chao Phraya - Mekong Economic Cooperation Strategy), MBDS(Mekong Basin Disease Surveillance Network) , GMS (Greater Mekong Sub-region), US CDC etc., is also essential for capacity building of health care personals.

Myanmar is striving to attain the polio eradication goal at the national level by strengthening Acute Flaccid Paralysis (AFP) surveillance system and intensifying routine immunization activities. Measles Elimination is also aimed to achieve in 2014 through strengthening of Case Based Measles Surveillance. In the mean time, the elimination status of maternal and neonatal tetanus accomplished in 2010 has been sustaining through the effective strategies. Other communicable diseases including rabies are targeting for reduction of morbidity and mortality by means of innovative strategies.

### I. Disaster Response Activities

#### Myanmar Health Team's Health Services Provision for Typhoon Haiyan affected population in the Republic of the Philippines

Typhoon Haiyan made landfall to central Philippines on 7<sup>th</sup> November 2013 with wind speed of 235 mph. National Disaster Risk Reduction Management Council (NDRRMC) of the Philippines reported 11 million people affected with 6,092 deaths and 27,665 injured. The storm's massive surge is blamed for much of the destruction and the typhoon also destroyed 48 hospitals and health centers across central Philippines.

Under the guidance from President of the Republic of the Union of Myanmar, U Thein Sein, support from National Disaster Management Central Committee; Ministry of Health formed Myanmar Health Team to provide health services to Typhoon Haiyan affected population in Philippines as friendship and humanitarian supports among ASEAN member states.

Myanmar Health Team was headed by His Excellency, Union Minister for Health, Dr. Than Aung and 9 teams members from Ministry of Health and Ministry of Defense. Myanmar Health Team provided curative, promotive and preventive care in the affected areas. Total 1342 patients have been treated at the mobile & fixed clinics.



***Myanmar Health Team provided humanitarian assistance to the Typhoon Haiyan affected population in Philippines***

Ministry of Health provided 143 items of medicines and medical equipments including two ECG machines and Ministry of Defense also supported 120 items of medicines and medical equipments to the affected areas. The total 263 items of donated medicines and medical equipment by Myanmar Health Team worth about 37,000 USD.

Myanmar Health Team also donated water purification powder packets for 5000 households for 7 days for safe drinking water and also demonstrated the usage of these water purification powders. The traditional balm “Tun Shwe Wah” had been provided to 1,342 patients attending the temporary clinics. Myanmar Health Team also provided the supports and donations for those needs for Laboratory services, Radiological Investigation during the community based health care services in disaster affected areas, also support and donated investigation costs and spectacles for the patients with poor vision and referral supports has been facilitated for patients suffered from cancer disease.

## II. International Networking for Capacity Building in Epidemiology

Epidemiology skills, knowledge, principle and cooperation at regional level is fundamental in responding to international public health events and ASEAN Plus 3 Field Epidemiology Training Network (FETN) which include ASEAN countries along with People's Republic of China, Japan and Republic of Korea is founded for improvement of field epidemiology training institutions in Continent of Asia. Myanmar acts as chairmanship for ASEAN Plus 3 FETN network and the meeting on ASEAN Plus Three FETN Meeting in Bagan on 2-3, September 2013 for strengthening of Field Epidemiology Training Program (FETP) in Region, experiences sharing among countries programs; information sharing and collaboration in implementation of IHR (2005), pandemic preparedness and response, EID surveillance and response, control of HIV, TB, Malaria, DHF, and research on communicable diseases among member states.

**ASEAN Plus Three Field Epidemiology  
Training Network Meeting in Bagan  
on 2-3, September 2013**



Central Epidemiology Unit acts as a focal point for FETP in Myanmar and networking with WHO, CDC, MBDS, TEPHINET, SAFETYNET, China CDC etc. and Field Epidemiology Training Program has been conducting since 2008 and total of 423 participants including doctors and BHS from the Ministry of Health and Veterinarian from Department of Livestock Breeding and Veterinary have been trained in Field Epidemiology during the period. This program built up the capacity especially on epidemiological skills and knowledge of the BHS on the application of field epidemiology in disease surveillance, outbreak investigation and epidemiology research in field as well as involvement in Rapid Response Team (RRT) members in 27<sup>th</sup> SEA Games.

### III. Surveillance and Response for Mass Gatherings

#### Health Care Activities for 27<sup>th</sup> SEA Games

Myanmar successfully held 27<sup>th</sup> SEA Games from (11-12-2013) to (22-12-2013) in Nay Pyi Taw, Yangon, Mandalay, and Ngwesaung. The leadership of Medical Committee Chairman, Union Minister for Health, HE Dr Than Aung, developed public health emergency plan well ahead of the Games which is effectively implemented before, during and after the games. The activities for inner ring and outer ring



surveillance included activation of Strategic Health Operation Center (SHOC); training and setting of medical and rapid response teams; environment sanitation activities, food and water safety measures, public health services, strengthening of surveillance and rapid response for prevention of major events during 27<sup>th</sup> SEA Games.

Health Committee released and distributed the health information for athletes and visitors on Seasonal Communicable Diseases Booklet, Five Keys to Safe Food, Seasonal Influenza, H7N9, MERS COV, Avian Influenza, The 3 Five, instructions to restaurant for food safety, prevention of food poisoning at airports, sport village, sport ground, hotel zone etc. to get health information and so how to handle and get help if something happened. The information are also uploaded in Ministry of Health and World Health Organization, Myanmar website for user friendly to the visitors and athletes.

Medical Committee collects, reports, analyzes and takes action for occurrence of diseases not only in athletes but also in visitors to get universal health care and surveillance during the Games. Total of 2178 patients are given health care during the games which includes 427 for injuries, 1129 for infectious diseases, 622 others. Soft tissues injuries and musculoskeletal pain are major causes among injuries; while acute respiratory infection and conjunctivitis are the most among infectious diseases. There was no major disease outbreak during the games.

#### Disease Surveillance and Response for 7<sup>th</sup> ASEAN Para Games

In continuation with the 27<sup>th</sup> SEA Games, Myanmar also hosted 7<sup>th</sup> ASEAN Para Games on 14<sup>th</sup> to 20<sup>th</sup> January 2014 in Nay Pyi Taw. The Ministry of Health in collaboration with related ministries took necessary steps in communicable disease prevention. No outbreak was occurred during the events because of effective communicable disease prevention and control.

### Prevention and control of communicable diseases during 3<sup>rd</sup> BIMSTEC Summit, 25<sup>th</sup> ASEAN Summit and related meeting

Myanmar hosted 3<sup>rd</sup> BIMSTEC Summit in Nay Pyi Taw from 1 March to 4 March 2014 and as being the ASEAN chairmanship for year 2014, Myanmar hosted 25<sup>th</sup> ASEAN Summit, the greatest ASEAN event of the year, was held in Nay Pyi Taw in 9<sup>th</sup> to 13<sup>th</sup> November 2014. Based on the experiences of 27<sup>th</sup> SEA Games and 7<sup>th</sup> Para Games, Ministry of Health in collaboration with related departments and health partners took necessary disease prevention and control measures during the summit. There was no outbreak during the events because of enhancing surveillance of communicable diseases including Ebola Virus Disease and other emerging infectious diseases.

### IV. Polio Eradication Activities

South East Asia Regional Certification mission on Polio-free Certification (SEA-RCCPE) visited Myanmar in 2013 and the mission visited Ministry of Health, Department of Health, Central Epidemiological Unit and health centers in township level to review AFP surveillance activities and implementation of immunization program in Myanmar. Myanmar achieved AFP surveillance target of 2 per 100,000 under 15 population in 2010, 2011 and 2012. The mission also reviewed Phase I laboratory containment activities.

After this mission to the countries in the SEAR region and the review of National Documentation on Certification of Polio Eradication of each country at the Seventh Meeting of Regional Commission on Certification of Polio Eradication, RCCPE certified that there has been cessation of wild polio virus transmission in the SEAR region for 3 consecutive years and polio free status of the South East Asia Region has been declared on 27 March 2014. His Excellency, Union Minister for Health attended Seventh Meeting of the South-East Asia Regional Certification Commission for Polio Eradication (SEA-RCCPE) in New Delhi, India on 26-27 March 2014 and received the Certificate on Polio Eradication and token of appreciation from the WHO SER Regional Director.

***Token of Appreciation from WHO to  
the Ministry of Health for Support to  
Polio Free Certification of South East Asia Region***



## Preparedness and Response on Ebola Virus Disease in Myanmar

The outbreak of Ebola Virus Disease (EVD) has been ongoing in West Africa since March 2014. And World Health Organization declared the EVD epidemic as Public Health Emergency of International Concern on 8.8.2014. Like other countries, Myanmar has been preparing its best to prevent EVD. With the stewardship of the President of the Republic of the Union of Myanmar, the Ministry of Health has been enhancing national preparedness and response capacity to prevent the spread of Ebola Virus Disease in Myanmar.

According to the guidance of the Chairman of the National Health Committee, Vice President, Dr. Sai Mauk Kham, the Ministry of Health has organized Steering Committee on EVD Prevention and Control together with the 7 sub-committees.



### **Supervisory Visit of Vice President, Dr. Sai Mauk Kham to the EVD Surveillance Activities at Yangon International Airport**

According to the recommendations of the Steering Committee, fever surveillance system has been well-established at the Points of Entry including Nay Pyi Taw, Yangon, Mandalay International Airports, Nyaung-U Airport, Yangon Port and the ground crossing points with the neighbouring countries. Surveillance system has been well-established down to the township level. And the surveillance system is sensitive enough to detect not only suspected cases but also rumors.



First suspected case of EVD was detected on 19th August 2014 at Yangon International Airport together with four close contacts and were referred to the designated hospital in Yangon, the Waibagi Infectious Disease Hospital for isolation of the cases and quarantine the contacts. The blood samples were sent to the reference laboratory in Hamburg, Germany through IATA recognized airline and tested negative for EVD. And based on the lessons from management of that a person under investigation (PUI) and contacts, Myanmar has been updating the preparedness plan.



**Dr. Win Myint, Deputy Minister for Health is chairing the Meeting of Sub-committee on Clinical Management**

Isolation facilities have been enhanced in three designated hospitals for treatment of EVD cases: 1000 bedded hospital in Nay Pyi Taw, Waibagi Infectious Disease Hospital in Yangon and Kandawnadi Infectious Disease Hospital in Mandalay. In order to enhance the case management capacity, the medicines and equipments for supportive treatments have also been procured at all the designated hospitals.

Myanmar has been strengthening international surveillance on EVD by sharing information, guidelines and participating in regional meetings, teleconferencing with WHO and video conferencing with ASEAN Plus Three Field Epidemiology Training Network. Weekly updates on Ebola preparedness and control activities also have been sharing with WHO.



**Dr. Thein Thein Htay, Deputy Minister for Health is chairing the Teleconference with World Health Organization on strengthening collaboration for EVD Surveillance and Response**

With the high political commitment, Department of Health has allotted emergency budget for EVD control. Four Infrared thermal scanners (total estimated cost of 141,414 US\$) and 340 Non-contact Thermometers (total estimated cost of 17,172 US\$) have been additionally procured for Points of Entry surveillance. MoH also planned to procure Personal Protective Equipments (total estimated cost of 196,700 US\$) and Air Transit Isolators for EVD control (total estimated cost of 83,565 US\$). WHO has supported 1000 copies of Infection control guidelines and Personal Protective Equipments for health care workers in Myanmar. Those Personal Protective Equipments have been distributed down to the township level.

For the effective risk communication on EVD, MoH has taken steps to communicate with media through media workshops, interviews and health alert information on mass media. MoH has developed official Facebook page named Myanmar CDC (<http://www.facebook.com/MyanmarCDC>) for disseminating information. Daily hotline for ebola information has been set up at the Department of Health for enhancing the responsiveness in risk communication.





## Expanded Programme on Immunization

Expanded Programme on Immunization has been delivered the immunization services to the targeted children of under one year old child and pregnant women. Currently total eight antigens have been providing to all yearly birth cohort in the country.

The National Immunization Strategies has been developed based on the framework reflected in the Global Vaccine Action Plan - GVAP (2011-2020), its mission being to improve health by achieving the full benefits of immunization regardless of where they are born, who they are, or where they live. The efforts has been made to accomplish the vision of Decade of Vaccine by delivering universal access to immunization. National immunization system and its functions focus to achieve the following objectives.

- (1) To maintain the country status of “free of poliomyelitis”
- (2) To achieve the regional elimination targets for Measles in 2020 and Congenital Rubella Syndrome control
- (3) To sustain the elimination status of Maternal and Neonatal tetanus elimination
- (3) To get vaccination coverage targets in every district and community
- (4) To introduce new vaccines and technologies
- (5) To contribute the effort in achieving the Millennium Development Goal 4 target of reducing child mortality

The five principles which are guiding the elaboration of GVAP ; the country ownership, shared responsibility and partnership, equity, integration, sustainability and innovation has been incorporated to the costed plan of EPI(comprehensive multiyear plan - 2012 to 2016).

### EPI in 2013-2014

#### **Strengthening National technical advisory body; National Committee for Immunization Practices**

Under guidance from Ministry of Health, the technical issues for National Immunization Programme have been advised by National Committee on Immunization in Practice (NCIP). The NCIP has been formed in 2009 and has been strengthened in 2012 by upgrading the members and developing its charter. The NCIP developed charter has been approved Ministry of Health.

Recently NCIP has advised policy and practice on vaccine preventable outbreak control, polio eradication and polio vaccination to travelers, hepatitis B control in Myanmar and new vaccine to be introduced into national immunization schedule.

### **Cross Border collaboration for joint Vaccine Preventable Disease outbreak control**

Myanmar is actively collaborating with the neighboring countries for health care activities .The vaccine preventable diseases trend has been monitoring with the regional network for rapid sharing the outbreak information for effective control measures. Identification of a child in China from Myanmar with vaccine-derived poliovirus in 2012 and the response activities further illustrated the importance of good communication and challenges across national and regional borders.

In order to foster relationships and facilitate local information sharing of disease surveillance and control efforts of polio and other vaccine preventable diseases (VPDs), the Government of Myanmar suggested a cross border meeting with neighboring countries and WHO's South-East Asia Regional Office organized a cross-border meeting with the participation of countries of the Greater Mekong Subregion (GMS) including Cambodia, China, Lao People's Democratic Republic, Myanmar, Thailand, and Viet Nam to identify high risk populations at border areas and activities to be initiated to mitigate the risk of importation and transmission, starting with polio. The recommendations were to enhance coordination mechanisms for data sharing on EPI surveillance and to synchronize activities whenever possible. The meeting was held in Bangkok, Thailand, from 23 to 25 July 2013. In addition to polio, experiences of measles and other VPD outbreaks were also discussed.



### **Post Introduction Evaluation of New Vaccine in Myanmar**

Following the introduction of pentavalent vaccine and Measles second dose in November 2012, EPI has conducted Post Introduction Evaluation in March 2014. The immunization expert from WHO Headquarters, Regional office, country office and UNICEF country office's participant visited to selected regions and States from 21-25 March 2014.

The team access to all level of EPI administration and concluded that Myanmar has successfully introduced the new vaccine into the immunization programme. Also the team debriefed to senior officials from Department of health and recommend areas to be strengthened.

### **Advocacy to local government to strengthen Immunization in Border and Hard to reach Areas**

In 2013 , the areas previously uncovered by routine immunization services and the areas where there was vulnerable population due to displacement and conflicts were paid attention by Central EPI.

A series of advocacy meetings had been conducted in capitals of Eastern Shan State, Kachin State and Northern Shan State for the leadership and commitment from stakeholders.

The advocacy meeting being focused to the local authority, the leaders of the self-administrative areas , special region (4) in Eastern Shan State, pockets areas in Kachin State and Northern Shan State had been planned to be reached by Central EPI and State Health Department by assigning Health Poverty Action as immunizers to cover routine immunization services with all antigens as routine services in 2014.

As the involvement of the community and stake holder is crucial for the immunization target, central EPI has conducted the advocacy meeting targeted to the Bengali population in IDP camps and villages in Rakhine State. The strong commitment of the stakeholders including religious leaders lead to more access to immunization services in Rakhine state where the services had been distorted after series of social riots in mid 2012.



**Advocacy Meeting to Local Government for Strengthening Immunization Services**

### Collaboration with the Partner Agencies and strengthening EPI workforce

According to the recognized reasons for left out or miss children for immunization , the most challenging issue is imbalance proportion among the immunizers and target beneficiaries, the children and pregnant women. EPI has been planning to increase the workforce for the skill care providers addition to current immunizers, midwives. Ministry of health has already approved the proposed plan to expand the immunizers by assigning the Public Health Supervisors Grade II as immunizers. Also the care providers from newly collaborated partners from local and international non government organizations has been trained the management and implementing skill for immunization services. There is significant impact to expand immunization services in critical areas in Rakhine, Kachin, Shan and Kayin States.

### Revitalization of Routine Immunization Services in Rakhine State

After Polio catch-up campaign in 2013 April and in September 2013 onwards , the uncovered areas by immunization services in 12 Townships in Rakhine State had planned to revitalize routine immunization services.

Among those townships with conflicts, Sittwe Township Health Department could start successfully pilot to resume immunization in most of the Bengali camps and Rakhine villages which are sandwiched between Bengali villages.

About 1000 under 2 children and 500 pregnant women had been covered by routine immunization services in Sittwe. Altogether 62500 under 2 year children and 31500 pregnant women from 12 Townships are going to be received all vaccines in routine immunization.



### Maintenance Campaign for Neonatal Tetanus Elimination

After a Lot quality Assurance Survey, World Health Organization has validated Myanmar as Maternal and neonatal Tetanus elimination 2010. The elimination status has to be maintained and EPI has conducted the desk review participated by related units for maternal and child health care. Also the review team was consisted of the representatives from school health team and officials from Ministry of Education since future activities would like to expand tetanus toxoid vaccine in the school based immunization programme. Following the desk review, 22 Townships from 7 States & Regions with Neonatal Tetanus Rate more than 0.1 had been

selected to boost the immunity by conducting 3 rounds of TT SIA in January, February and August 2014 , from 17<sup>th</sup> to the end of each month. About 1.4 millions of women of child-bearing age (15 years of age to 45 years of age) have being received 3 doses of TT through mass campaign.

### **Cold Chain Logistics Strategic Planning**

Cold chain is regarded as the vital part of Expanded Programme on Immunization. To strengthen the system concerning cold chain logistics, EPI had conducted a series of assessment and studies in 2011, 2012 and 2013.

The findings and recommendations were disseminated in Cold Chain Logistics Strategic Planning Workshop at Nay Pyi Taw, 1 to 5 April 2013. From the recommendations of the Workshop, being made on (8) of strategic areas, the cold chain logistics system of EPI is planned to be established as an international standardized system.

The cold chain capacity needed for planned news vaccines has been analyzed, in consultation jointly with EPI and international consultant.

The gap has been identified and Department of Health lead the cold chain expansion plan in line with the need already evaluated.

### **More new vaccine planned to be introduced**

As recommended from the National Committee for Immunization Practices (NCIP) meeting (1/2013) and (1/2014), Measles-Rubella (MR) Vaccine, Inactivated Polio Vaccine (IPV) and Pneumococcal Conjugate Vaccine has been prioritized as new vaccines to be introduced in National Immunization Programme in 2015-2016.

The proposals had been submitted to Government by Ministry of Health for cost sharing of Rubella containing MR vaccine and to Co-finance for Pneumococcal Conjugate Vaccines (PCV). The estimated amount for 5 years Government co-financing for two new vaccines is 6,490,600 US\$.

MR catch-up campaign for 9 months to 15 years old children which will be fully funded by GAVI Vaccine Alliance for Measles elimination and Congenital Rubella Syndrome (CRS) control in Myanmar and EPI is working closely with partners to conduct phase-wise campaign in January and February 2015.





## Sustaining Achievements

### Leprosy

Myanmar Leprosy Control Programme was launched in 1952. Partial integration with People's Health Plan started in 1977. In 1988, WHO recommended MDT service was started in six hyper-endemic regions (Yangon, Mandalay, lower Sagaing, Magway, Ayeyawady and Bago) and it was fully integrated into Basic Health Services in 1991. MDT services covered the whole country in 1995. Myanmar has achieved Leprosy Elimination Goal at the end of January 2003. It means that the registered prevalence rate per 10,000 population was less than one.

Before introduction of MDT services, registered prevalence rate was 54.3/10,000 in 1987. Prevalence rate was obviously reduced at the end of 2013 (0.45/10,000). Total registered cases at the end of 1987 were 204282 and it reduced significantly to 2721 at the end of 2013. A total of 289661 leprosy cases have been treated with MDT and cured since 1988.

After achieving elimination of leprosy, leprosy control activities have being sustained to reduce the burden due to leprosy. In 2010, National strategies for leprosy control were developed based on "Enhanced Global Strategy for Reducing the Disease Burden due to Leprosy (2011-2015) and National Guidelines (2011-2015) was also developed based on WHO Operational Guidelines (Updated).

Case finding activities and treatment with MDT are being carried out by Basic Health Staff with technical support of leprosy control staff. Dissemination of knowledge on leprosy is carried out through various medias with emphasis on early signs and symptoms, curability, availability of free-of-charge MDT drugs and prevention of disability by early diagnosis and treatment. Training on Leprosy Control for Newly Promoted Assistant Leprosy Inspectors was conducted in Yenathar Leprosy Hospital. Capacity building of Township Focal Persons for Leprosy Control were conducted in Sagaing, Magway, Ayeyarwady, Bago Regions and Chin, Rakhine, Shan State(East), Shan State(North).

Since achieving the leprosy elimination goal, the programme emphasized more on prevention of disability and rehabilitation. At the end of the year 2013, prevention of disability activities (POD) are being carried out in 147 townships with regular follow up case assessment, self care training and provision of necessary drugs, aids and services. Leprosy Control Programme has planned to



expand POD activities in the remaining townships of high disease burden areas (Yangon, Mandalay, Sagaing(lower), Ayeyarwaddy and Bago). In 2013, training on Prevention of Disability due to leprosy were conducted in 5 townships in Yangon Urban area and 10 townships in low disease burden areas (Kachin, Kayin, Kayah, Chin, Shan States and Tanintharyi Region).

Meeting on Strengthening Leprosy Control and Prevention was conducted in Nay Pyi Taw. According to the recommendation of this meeting, Technical Advisory Group (TAG) for leprosy control was formed and first TAG meeting was conducted in July, 2013.

### Activities implemented in 2013

- Sustaining political commitment
- Case finding and MDT services throughout the country
- Community awareness raising activities including printed and electronic medias
- Leprosy Awareness Campaign conducted in 6 pocket townships, Sagaing Region
- Meeting on Strengthening Leprosy Control and Prevention
- Technical Advisory Group(TAG) for leprosy control and first TAG meeting was conducted
- Meetings for planning, implementation and evaluation for Leprosy Control Activities
- Monitoring and Supervision at different level
- Capacity building of township focal persons for Leprosy Control
- Workshop on capacity building of health supervisor for leprosy control
- Training on Leprosy Control for Newly Appointed Team Leader
- Training on Leprosy Control for Newly Promoted Assistant Leprosy Inspectors
- Workshop on development of National CBR Guideline (Health Component) for Leprosy Affected Person
- Expansion of Prevention of Disability project in 10 townships
- Training on Prevention of Disability and self-care for BHS and baseline POD assessment in 10 expanded townships
- Training on Prevention of Disability for BHS in 5 urban townships
- Training on Prevention of Disability for BHS in 10 townships in Low disease burden areas
- Follow up assessments in previous POD townships
- Research activities mainly focused on strengthening participation of leprosy affected person in leprosy control services and reduction of Grade-2 disability among new cases

## Leprosy Situation

Indicators	2010	2011	2012	2012
Registered cases	2558	2542	2680	2721
Prevalence rate/ 10,000 population	0.42	0.41	0.43	0.45
New cases detected and treated	2947	3043	3013	2950
Cases release from treatment (during the year)	3155	2638	3006	2943
Cases of released from treatment (cumulative)	280556	283194	286718	289661



Self care training to leprosy affected person

## Trachoma Control and Prevention of Blindness

Trachoma Control and Prevention of Blindness project was launched in 1964. At that time, trachoma was major cause of blindness in Myanmar. With the concerted efforts of the program and support of Government, WHO, UNICEF and INGOs and National NGOs, active trachoma rate was reduced from 43% in 1964 to under 1% in 2000. As trachoma blindness was greatly reduced, cataract becomes main cause of blindness in the country. The Ministry of Health operates two Eye Care programs, Hospital Eye Care Services which concentrate on providing Eye Care Service to the patients at the hospitals and Trachoma Control and Prevention of Blindness Programme which performs mainly public health component of the national eye care service .

Blindness rate in all ages is 0.52 % and main causes of blindness are -

- Cataract 61 %
- Glaucoma 19 %
- Posterior segment diseases 8 %
- Trachoma 1.9 %
- Corneal opacity 1.3 %
- Trauma 2 %
- Others 6.8 %

Myanmar Prevention of Blindness project is trying the best to fight against avoidable blindness in line with the strategy laid down by WHO “Vision 2020, The Right to Sight : Elimination of avoidable blindness.” There are 20 secondary eye centers in Prevention of Blindness program at Mandalay, Magway, Sagging (lower part), Bago (east) and Ayarwaddy regions headed by ophthalmologists. The program is covering 20.85 million people in 81 townships of those regions and promoting to increase the Cataract Surgical Rate in Myanmar.



**School Eye Health Examination**

### National objective

- To reduce the blindness rate of all ages to less than 0.5%.
- Improving cataract surgical rate and quality of surgery.
- Making Primary Eye Care available to all BHS and to eliminate avoidable blindness.
- Promoting community participation in prevention of blindness.
- Provision of cataract surgical services at affordable price and free services to poor patients.
- Provision of outreach eye care services down to grass root level.

Type	Activities
Promotive to eliminate Trachoma and avoidable blindness (by Government)	<ul style="list-style-type: none"> <li>• Greening of Central Myanmar</li> <li>• Improving water supply</li> <li>• Primary Eye Care service is available for all level of community</li> </ul>
Preventive	<ul style="list-style-type: none"> <li>• Village and school eye health services by ophthalmologist and field staff for early diagnosis of eye diseases and timely referral</li> <li>• Tetracycline eye ointments for trachoma patients, trichiasis surgery at fields and secondary centers</li> </ul>
Curative	<ul style="list-style-type: none"> <li>• Medical and surgical eye care services at secondary eye centres and Fields and referral to tertiary center if necessary</li> <li>• Outreach cataract surgery</li> </ul>
Training	<ul style="list-style-type: none"> <li>• Primary Eye Care Training to basic and voluntary health workers and National NGOs</li> <li>• Training of Primary Eye Care and Ocular Emergency to medical doctors</li> </ul>
National Eye banks (Yangon and Mandalay)	<ul style="list-style-type: none"> <li>• Collection of donated cornea, quality control and distribution of corneal tissue</li> </ul>
Operational Research	<ul style="list-style-type: none"> <li>• Rapid assessments of avoidable blindness has been conducted in three districts (Monywa, Myingyan and Pyinmana) in 2013 for detection and management of eye problems</li> </ul>
Low cost Eye drop Production	<ul style="list-style-type: none"> <li>• Low cost eye drop production unit at Prevention of Blindness Programme Region (2) Meikhtila, supported by Christoffel-Blinden Mission</li> </ul>

In the year 2013, there were 29 mass outreach cataract surgeries in Township and rural areas with the partnership activities of many stakeholders, local NGOs, INGOs, and local donors.

Cataract surgery	41317
Glaucoma surgery	2970
Other major surgery	6180
Other minor surgery	15422
Trichiasis surgery	2496
No. of villages examined	2003
No. of population examined	1049816
No. of schools examined	1151
No. of students examined	138997

Major expected results are reduction of blindness rate less than 0.5 % and to control the prevalence rate of active trachoma (under 10 year of age) is less than 5 %. Finally the activities will support to achieve the goal of Vision 2020: The Right to sight, to eliminate the avoidable blindness by the year 2020.



**Outreached Mass Cataract Surgery**



**Prevention of Avoidable Childhood**



# Prevention and Control of Non-communicable Diseases

As Myanmar moves on the path of socioeconomic development and changing lifestyle, there is a shift in epidemiological transition towards non-communicable diseases. Myanmar is now facing double burden of diseases - Communicable Diseases & Non-Communicable Diseases.

### Myanmar response to NCD Burden

In National Health Plan (2011-2016), priorities actions has been developed with the aim to prevent, control and reduce disease, disability and premature deaths from chronic non-communicable diseases and conditions.

- Chronic non-communicable diseases/conditions with shared modifiable risk factors- tobacco use, unhealthy diet, physical inactivity, harmful use of alcohol
  - Cardiovascular disease
  - Diabetes Mellitus
  - Cancer
  - Chronic respiratory disorders
- Non-communicable diseases/conditions of public health importance
  - Accidents and injuries
  - Disabling conditions (Blindness, Deafness, Community based rehabilitation)
  - Mental Health
  - Substance abuse
  - Snake bite

The Program of prevention and control of NCDs in the country for 2013-2020 is based on WHO recommendations on the need for concerted and coordinated actions, improved integration into NCD control at the national level, based on the Political Declaration of the UN High-level Meeting on NCDs and the new policy of WHO/EURO "Health 2020". The main directions of this program implementation are aligned with the activities, envisaged in the National Health Sector Reform Program for 2013-2020.

The priority actions were as follows:

- Developing comprehensive national policy and plan for the prevention and control of major NCDs
- Establishing high level national multi-sectoral mechanisms for planning, guiding and monitoring
- Implementing cost-effectiveness approaches for the early detection of major NCDs
- Strengthen capacity of HRH for better case management and to help people to manage their own conditions better.

National STEPS Survey (2009) reported that the prevalence of currently smoke was 33.6% in males and 6.1% in females, the prevalence of hypertension was 31% in males and 29.3% in females, and prevalence of overweight (BMI  $\geq$  25 kg/m<sup>2</sup>) was 21.85% in males and 23.07% in females and obesity (BMI  $\geq$  30 kg/m<sup>2</sup>) was 4.3% in males and 8.4% in females among the sample population.

### Surveillance System

- STEP Surveys (2003-2004 Yangon Region, 2009-2010 National)
- Global Youth Tobacco Survey (GYTS) 2001, 2004, 2007
- Global School Personnel Survey (GSPS) 2001, 2007
- Global Health Professional Students Survey (GHPSS) 2006, 2009
- Myanmar Surveillance System for NCD still need to be established

### National Response to the NCD epidemic

- National Policy on NCDs
- Workshop for Package of Essential NCDs (PEN) intervention for Primary Health Care
- Regional Meeting on NCDs including Mental Health and Neurological Disorders
- Country Level Multisectoral Meeting on NCDs
- National Strategic Plan on DPAS (Draft)
- National Policy on Tobacco Control
- Control of Smoking and Consumption of Tobacco Product Law (2006)
- Specific Programme on Prevention and Control of NCDs in National Health Plan (2011-2016)

Of the two strategic pathways that are employed for prevention and control of NCDs, the “population approach” rather than the “high risk approach”, has been advocated. This particular approach aims at reducing the risk factor levels in the population as a whole through community action, in order to achieve mass benefit across a wide range of risks and cumulative societal benefits.

The national NCD strategic plan and its intervention strategies presents a way to operationalize existing knowledge in reducing the burden of Non-Communicable Diseases in Myanmar, while taking into account the national, social, cultural and economic context of the country. It integrates the various frameworks, strategies and action plans addressing specific risk factors and particular diseases into a holistic and definitive approach to NCD prevention and control. The Ministry of Health will continue to enhance smart partnerships with other relevant sectors and other stakeholders to further reinforce NCDs prevention and control programme and activities in Myanmar.



# MANAGING HEALTH WORK FORCE

## Quality Improvement for Medical Education

Under the leadership of the Ministry of Health, the Department of Medical Science is carrying out the responsible duty of training and production of all categories of health personnel in line with the objective to attain equitable health care for the whole population.

Considering the changes on demographic, epidemiological and socioeconomic trends both nationally and globally, it is imperative to produce efficient human resources for health for providing quality health care services to the entire population in the country. In addition, it is also crucial to produce competent human resources for health who are capable to keep abreast with the advanced global health standards. The appropriate mix of different categories of health professional is being produced by the 14 Universities and 46 Nursing and Midwifery Training Schools under the Department of Medical Science.

Post-graduate courses newly opened in 2015 academic year are as follows:

1. Diploma in Emergency Nursing
2. Master in Preventive and Tropical Medicine
3. Master in Hospital Administration and Health Management
4. Master in Emergency Medicine
5. Dr. Med Sc in Spine Surgery

From 2015 academic year, M.N.Sc General courses are changed to eight M.N.Sc special subjects according to respective specialty. They are:

1. Adult Health Nursing
2. Maternal Health Nursing
3. Child Health Nursing
4. Mental Health Nursing
5. Community Health Nursing
6. Administration and Management
7. Orthopedic Nursing
8. Critical Care Nursing

Currently, 39 doctorate courses, 12 PhD courses, 47 Master courses and 12 diploma Courses are being conducted in universities under the Department of Medical Science.

For capacity building, to train and produce qualified human resources for health, candidates from different disciplines have been selected and sent for oversea trainings in PhD, Master and Diploma courses and also for short term trainings. With close collaboration of Royal Colleges of UK, MRCP Part I & II, and PACES examinations, MRCS Part I & II, MRCPCH Part I & II, MRCOG Part I examinations have been held in Myanmar. Year by year, more and more candidates have finished in their RC membership or fellowship examinations.

The 5<sup>th</sup> BEmOC and ENC Hands on Training for Faculty Members of Nursing and Midwifery Training School is opened with (24) participants at Central Women Hospital, Yangon and Teaching and General Hospital, North Okkalapa, Yangon from August to November, 2014.

There were 46 Nursing and Midwifery training schools under the Department of Medical Science. The construction of new Nursing and Midwifery training schools will be in Nay Pyi Taw and Kalay, Sagaing region. They will be opened in the fiscal year 2015-2016 and the total number of nursing, midwifery and related schools will be increased up to fifty.

Before 2014, round about 30,000 nurses were received Nursing and Midwifery Diploma Certificate without any ceremony. In 2014, Nursing and Midwifery Diploma Certificate awardees have a chance to celebrate the first ever ceremony for being certificated.

In addition, Training Workshop on “Implementation of New Midwifery Curriculum (Emphasis on Midwifery Care Standard)” is going to be conducted soon in 2014 continuously with the intention of addressing Midwifery Care Standards. By this way, the capacity building of faculty members of Midwifery training schools will be improved.

To produce qualify Medical doctors, the 9th Medical Education Seminar had agreed to reduce the annual student intake to Medical Universities from 2400 to 1200 and to increase the study period from 6 years to 7 years. As a short term program, the student intake was reduced but for achieving the target of long term National development plan it is still needed to produce more doctors. So, Department of Medical Science establish the New Medical University in Taunggyi, Southern Shan State.

The new Medical University (Taunggyi) had been starting the plan from 2013-2014 budget year. There were three phases accompanied by fiscal year. The phase I of the construction project of University of Medicine (Taunggyi) has been started since January 2013. The eight buildings to be constructed during phase I, which are one Main building, two (3) storey Teaching buildings, two Lecture Theaters, one house for Rector, one registrar house and three apartments for Teaching Staff and other staff.

The number of students attending in Universities and Training Schools under Department of Medical Science as of November 2014 are as follows:

### Undergraduate

No.	University/ Training Schools	Number of Students
1.	University of Medicine(1), Yangon	3454
2.	University of Medicine, Mandalay	2881
3.	University of Medicine(2), Yangon	2945
4.	University of Medicine, Magway	1984
5.	University of Dental Medicine, Yangon	940
6.	University of Dental Medicine, Mandalay	744
7.	University of Pharmacy, Yangon	554
8.	University of Pharmacy, Mandalay	348
9.	University of Medical Technology, Yangon	551
10.	University of Medical Technology, Mandalay	426
11.	University of Nursing, Yangon	776
12.	University of Nursing, Mandalay	771
13.	University of Community Health, Magway	677
14.	Nursing Training Schools	4331
15.	Midwifery Training Schools	2436
16.	Lady Health Visitor Training School	-

### Postgraduate

No.	Courses type	Number of Courses	Candidate attending
1.	Diploma	11*	236
2.	Master	28	1292
3.	M.D.Sc	9	37
4.	Ph.D	8	63
5.	P.pharm	4	6
6.	Dr.Med.Sc	31	209
7.	Dr.D.Sc	7	17

\* One diploma course could not be opened as there was no student.

Health Manpower Production as of February 2014 are as follows:

### Undergraduate

No.	Degrees/ Certificates	Total Number of Production
1.	M.B,B.S	37154
2.	B.D.S	3695
3.	B.Pharm	2983
4.	B.Med.Tech	3091
5.	B.N.Sc	5320
6.	B.Comm.H	1613
7.	Nursing Diploma	27864
8.	Midwifery	34009
9.	L.H.V	4371

### Postgraduate

No.	Courses type	Graduates
1.	Diploma	2408
2.	Master	5374
3.	Ph.D.	148
4.	Dr.Med.Sc.	345
5.	Dr.D.Sc	19

### Health Manpower Training Oversea Postgraduate(1988 to 2014)

No.	Courses	Production Training
1.	Ph.D Course	58
2.	Master Course	79
3.	Diploma Course	15
Total		152

### Health Manpower Training Oversea Postgraduate in collaboration with Royal Colleges (1988 to 2014)

No.	Courses	Production Training
1.	MRCP	148
2.	MRCPCH	49
3.	MRCOG	45
4.	MRCS / FRCS	225
Total		467

## Human Resource Development in Traditional Medicine



Before 1976, the knowledge of Myanmar Traditional Medicine was handed down from one generation to another. In 1976, with the aim to improve the qualification of traditional medicine practitioners, the Institute of Traditional Medicine was established and systematic training programmes were introduced to train and produce competent Traditional Medicine Practitioners. A three year course including one year internship was conducted and Diploma in Traditional Medicine was conferred to successful candidates. The yearly intake of students is about 100. The institute had already produced 2187 diploma holders.

The University of Traditional Medicine was established in 2001. The curriculum was jointly developed by Myanmar Traditional Medicine Practitioners and medical educationists. It is a five year course including one year internship covering all four major systems (Nayas) of Traditional Medicine, basic sciences and basic medical sciences of western medicine. The degree conferred is Bachelor of Myanmar Traditional Medicine (B.M.T.M). The yearly intake is about 100 candidates. The University had already produced 1139 graduates. In the year 2012, the University opened Master of Myanmar Traditional Medicine course and Bachelor of Myanmar Traditional Medicine bridge course.

Basic concepts of Myanmar Traditional Medicine have been introduced to the curriculum of 3<sup>rd</sup> year M.B.,B.S medical students since 2003. A module, comprising 36 hours of teaching and learning sessions of traditional medicine was developed and assessment is done after completion of the course. A certificate was presented to all successful candidates and the main aim of the course is to familiarize medical students with Myanmar Traditional Medicine. This is the first of its kind where traditional medicine is integrated into western medicine teaching programme in the world. It gives opportunities for medical students to explore the concepts of traditional medicine and paves a venue for interested student to venture into the realms of Myanmar Traditional Medicine at a deeper level.

# EVIDENCE FOR DECISION

## Health Information Services

Health information is one of the six building blocks of Health System and which in turn plays a vital role for decision making as strong evidence. Health information services in Myanmar cover mainly for Public Health Services and Hospital Care Services.

Morbidity and mortality statistics in hospitals mainly depend on the quality of disease coding and thus, training of medical record technicians as well as medical doctors on ICD-10 (International Statistical Classification of Diseases and Related Health Problems 10th Revision) is very important for quality statistics. Two weeks ICD-10 training of medical record technicians and four days training of medical doctors, in-charge or supervisor of medical record department, were conducted in Nay Pyi Taw during 2013. In addition, 7 days ICD-10 trainings of medical doctors from 150 bedded and above hospitals were also carried out in November and December 2013 according to Country Roadmaps formulated from National Workshop on Commission on Information and Accountability for Women's and Children's Health (COIA) being held early in 2013. In 2014, 20 medical doctors and 30 medical record technicians from 100 bedded hospitals were trained on ICD-10 and CAMRS.

Follow-up data quality assessment on hospital statistics after trainings was performed in five hospitals in 2013, those were sending softcopy of ICD-10 coding in Hospital Report Form II to central. Overall data quality on ICD-10 coding was found to be 67.6% and need more refresher training as well as more close supervision on ICD-10 coding.



Medical record documentation was also checked along with ICD-10 coding assessment. The use of standardized format of MR-1 to MR-4 was assessed and the best use of standardized MR was revealed as MR-4 with 71.4%.



Data collection from private health sector (licensed private hospitals) was started at January 2013 to figure out the whole picture of nation-wide data. Orientation training on private health sector data collection was conducted for two days with the collaboration of private hospital association; manual was also distributed. Moreover, the two batches of basic medical record training was conducted; one in Yangon and one in Mandalay during January and March 2014. Medical superintendents, medical officers, in-charges/supervisors of medical record department and medical record technicians were actively participated in those training.



For quality improvement of public health statistics, understanding of data definition and application of indicators in real time situation are essential for basic

health staff. Trainings of BHS on HMIS data set and data dictionary were provided to 1348 basic health staff from 22 townships in 2013 and 876 basic health staff from 13 townships in 2014.



Training of trainers approach for BHS training on HMIS at Region/State level was conducted according to country roadmaps of COIA; it covers 8 regions and states. Altogether 290 township training team members from 124 townships of 8 regions and states attended and actively participated.



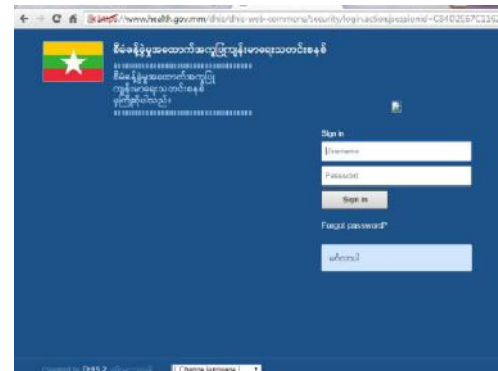


Evaluation is one of the most important processes in management cycle and therefore, evaluation on HMIS was carried out in all states and regions as well as in central. Workshop on health related Millennium Development Goals was held in Nay Pyi Taw on 21<sup>st</sup> August, 2013.



As Hospital information System is now implementing development of electronic medical record system, the software used in public hospitals has been upgrading. This software is not only to be used for health care statistics but also meant to be used for continuation of medical care for the patients.

In the same way, HMIS is now trying to implement e-HMIS by using DHIS-2, which is the web application to be used in public health information system, for more convenient and easy way to get less erroneous and timely data. Training of trainers on DHIS-2 was carried out in Nay Pyi Taw with the participation of statisticians from all Regions and States and basic health staff from two pilot townships. In September and October 2014, basic health staff from each reporting unit of two pilot townships; Patheingyi and Nyaunglaybin, were provided DHIS-2 training. The URL for electronic public health information system - <https://www.health.gov.mm/dhis/> is now ready for official launch and it will be functioning from January 2015.



# Health Research

**The Department of Medical Research (Lower Myanmar)** has two remarkable events during the year 2014 in support of collaborative research to intensify knowledge management and networking. The launching of the triple website viz: Department e-government website, Central Biomedical Library website and Ethics Review Committee website could enhance further strengthening of health



research information system in Myanmar. Secondly, the Advanced Molecular Research Centre (Communicable Diseases Research Laboratory) built by Korea International Cooperation Agency (KOICA) has initiated the operations of Biosafety Level 2 + laboratory by means of trained researchers to improve molecular-based diagnostic methods for Tuberculosis, Malaria and Viral Hepatitis as well as for technology transfer for further research capacity building.

Under the guidance of Ministry of Health, DMR-LM participated in third wave activities in form of hosting training workshops on Global Burden of disease, malaria modeling, cancer registry, data quality assurance and good clinical practice etc. As a key component for the Universal Health Coverage, there has been a nation-wide survey that covered 166 public health care facilities and 35 private hospitals from 132 townships to assess the service availability and readiness in the context of maternal, new-born and child health being supported technically and financially by WHO Country Office. Bottlenecks in health systems were identified in the community-based emergency referral system for maternal, newborn and child health in hard-to-reach areas in Ayeyarwaddy Region. Multi level co-ordination was the main factor for success of this mechanism.

Therapeutic efficacy studies coupled with K 13 molecular sequencing in monitoring Artemisinin Combination Treatment (ACT) sensitivity approved that the resistance has not yet emerged at Myanmar - Bangladesh border. Regular monitoring of ACT efficacy is critical for timely action and National Malaria Treatment Guidelines. As an input for the Dengue Population Genetics Program, scientists from DMR-LM contributed 500 Dengue Haemorrhagic Fever (DHF) cases and 500 Dengue Fever (DF) cases. The hospital-based surveillance of rotavirus diarrhea found the significant change in genotype combination in 2014 as G9 P [8] compared to previous years which may serve as the valuable information for the future vaccination program in Myanmar.

Under the **Department of Medical Research (Upper Myanmar)**, ten research divisions and seven supportive divisions are functioning at present.

Establishment of “Common and Molecular Laboratory” has started in 2013 and it has already established in November 2014. It is equipped with machines and equipment for pathological, biochemical, immunological, cell culture and molecular biological techniques



including modern machines like genetic sequencers, real-time Polymerase Chain Reaction (RT-PCR) machines, nucleocounter and high speed amino acid analyzer. Now training of above mentioned techniques is underway within the limit of available human resources. Not only the existing machines are being arranged to be more useful, new modern machines like Fourier-Transform Infra-Red Spectrophotometer (FT-IR) have installed and have been started to be used in research works.

Research areas covered are: communicable diseases like diarrhea and dysentery diseases, typhoid, Dengue Hemorrhagic Fever (DHF), human influenza, neonatal sepsis, malaria, tuberculosis, Human Immuno-deficiency Virus (HIV), non-communicable diseases such as cancer, hypertension, hypothyroidism, reproductive health research such as maternal thyroid function study, emergency contraception, social and health systems research such as health facility assessment for reproductive health commodities and services, traditional medicines research such as study on acute and sub-acute toxicity study and anti-inflammatory study of herbal products, efficacy of commercially available traditional drugs, vector bionomics, elderly health research and environmental health research.

Besides, Department of Medical Research (Upper Myanmar) also involved in promotion of medical education by helping medical and paramedical universities under Ministry of Health and universities of other ministries by conducting workshops, practical demonstrations, presentations, technical assistance and sharing of resources.

Technical and research collaboration among research departments of both local and international institutions has been regularly practiced. Locally, Department of Medical Research (Upper Myanmar) is mainly collaborating with University of Traditional Medicine and other universities in Mandalay. Internationally, Japan Universities and Korea Universities are main collaborators. Collaborative works involved betel chewing related oral cancer, human influenza virus, malaria research and technical development.

Research findings are shared to other departments for better implementation of health services by the national programs of department of health. Presentations on findings are also made in health seminars, medical conferences, workshops and capacity building trainings.

By these various activities, Department of Medical Research (Upper Myanmar) actively making its endeavors to promote the health research and health status of Myanmar.

**Department of Traditional Medicine** has been conducting research and development works. It has Research and Development (R&D) Division which is responsible for the scientific research works and development tasks. Research section is conducting scientific investigations for traditional and herbal medicines done by basic and applied scientists. Various developmental tasks such as ancient literature surveys and traditional medicine health educations done by traditional medical practitioners are the responsibilities of development section. There is also a research unit with basic laboratory facilities in the University of Traditional Medicine, Mandalay. Scientific research projects were also being conducted as necessary. The general objective is to increase the capabilities of research and development functions of the Department of Traditional Medicine and that of the specific objectives are to increase human resources of scientific researchers and traditional medicine professionals, to upgrade the abilities and skills of mentioned human resources, and to facilitate the laboratory equipment, chemicals and traditional medicine health education aids.



# TRADITIONAL MEDICINE

With the aim to extend the health care services for both rural and urban areas, health care by Myanmar Traditional services is provided through out Myanmar. Myanmar traditional medicine has flourished over thousands of years and has become a distinct entity. With the aim to extend the scope of health care services by traditional medicine, three (100) bedded Traditional Medicine hospitals in Yangon, Mandalay and Naypyitaw; six (50) bedded Traditional Medicine hospitals in Monywa, Myitkyinar, Magway, Mawlamyine, Bago and Ayetharyar (TaungGyi); eight (16) bedded Traditional Medicine hospitals in Lwaikaw, Baran, Harkar, Minkon, Sittway, Myite, Pyi and Pathain; and total number of 254 Traditional Medicine clinics are providing health care services all over the country.

## Provision of Traditional Medicine Kits

Provision of Traditional Medicine Kits for emergency use is one of the special achievements of traditional medicine in Primary Health Care with the objectives of making essential traditional medicines easily accessible for rural people especially in hard to reach areas and minimizing the cost of treatment for minor illnesses. The provision of traditional medicine kits is effective and beneficial to the rural dwellers. It also supports and uplifts the health status of the people of Myanmar in context of primary health care. At the end of 2013, 26297 Traditional Medicine Kits were distributed to all States and Regions.

## Manufacturing of Traditional Medicine

Traditional Medicines have been manufactured by both public and private sectors. The Department of Traditional Medicine is responsible for manufacturing in the public sector and owns two pharmaceutical factories. Medicines are produced according to the national formulary and Good Manufacturing Practice (GMP) standards. These two factories manufacture twenty one kinds of Traditional Medicine powders which are provided free of charge to be dispensed in public Traditional Medicine facilities, and the factories also produce 12 kinds of Traditional Medicine drugs in tablet form for commercial purpose.

The private Traditional Medicine industry is also developing and undertaking mass production of potent and registered medicines according to the GMP standard. Some private industries are now exporting traditional medicines to neighbouring countries. Due to the encouragement and

assistance of the government and the manufacturing of standardized traditional medicine under GMP, public trust and consumption of TM have greatly been enhanced.

## **Traditional Medicine Laws**

### **Traditional Medicine Council Law**

The Myanmar Indigenous Medicine Act was enacted in 1953. The State Traditional Medicine Council, a leading body responsible for all the matters relating to traditional medicine, was formed according to that law. In the year 2000, the Myanmar Indigenous Medicine Act was replaced by the Traditional Medicine Council Law. One of the objectives of the law is 'to supervise traditional medicine practitioners for abidance by the rule of conduct and discipline.' In the middle of year 2014 there are about 7000 number of registered traditional medicine practitioners.

### **Traditional Medicine Drug Law**

The Government has promulgated the Traditional Medicine Drug Law in 1996, in order to supervise systematically the production and sale of traditional medicine in the country. One of the objectives of the law is "to enable the public to consume genuine quality, safe and efficacious traditional drugs'. According to the law, all the traditional medicine drugs produced in the country have to be registered and the manufacturers must have license to produce their products. Manufacturing of traditional medicine drugs must follow the good manufacturing practice. The department also supervises and monitors the advertisement of traditional medicine drugs. There are 12712 numbers of registered traditional medicine drugs and manufacturing license are 2578 numbers in the middle of year 2014.

### **Myanmar Traditional Medicine Practitioners Association**

Myanmar Traditional Medicine Practitioners Association has been established in 2002 after unification of various TM groups of different disciplines. The objectives of the association are to: provide consolidated efforts and contribution of TM practitioners in implementation of National Health Plan; provide community health care through TM approaches; do research and strive for the development of TM; conserve the endangered species of medicinal plants and animals while revitalizing the almost extinct TM textbooks and therapies and uplift of the dignity of TM profession and practitioners. The most important missions are to conduct continuing TM education programs, to provide quality services and to encourage the development of evidence based TM through systematic research.

### Traditional Medicine Practitioners Conference

In order to promote the development of Myanmar Traditional Medicine, Myanmar Traditional Medicine Practitioners Conferences has been held annually since the year 2000. Traditional medicine practitioners from various parts of the country gathered and exchanged their knowledge at the conference, new policies and objectives are proposed, discussed and also reiterated the unity of TM healers for perpetuation and propagation of Myanmar Traditional Medicine. 14<sup>th</sup> Myanmar Traditional Medicine Practitioners' Conference was successfully held in December 2013 at Nay Pyi Taw.

**Chairman of the National Health Committee,  
The Vice President, Dr. Sai Mauk Kham,  
delivered an Inaugural Speech at 14<sup>th</sup> Myanmar  
Traditional Medicine Practitioners' Conference**



### Harmonization of Traditional Medicine Standards among ASEAN member states

The Inter-sessional Meeting on ASEAN Traditional Medicines and Health Supplements Scientific Committee (ATSC) and Task Force on Regulatory Framework Meetings were held from 11-15 March, 2013 in Nay Pyi Taw, Myanmar and was attended by delegates from Burnei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, Viet Nam and representatives from ASEAN Alliance of Health Supplements Associations(AAHS) and ASEAN Alliance of Traditional Medicine Industry (AATMI).

The 19th Meeting of the Traditional Medicine and Health supplements product working group (TMHS PWG) and its related meeting were held from 24-29 June, 2013 in Bagan, Myanmar and was attended by delegates from Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Myanmar, the Philippines, Singapore, Thailand, Viet Nam and representatives from ASEAN Alliance of Health Supplements Associations(AAHS) and ASEAN Alliance of Traditional Medicine Industry (AATMI).

### Meetings of ASEAN Task Force on Traditional Medicine and ASEAN Traditional Medicine Conference



**Dr. Than Aung, Minister for Health, delivered an opening speech at the 5th meeting of ASEAN Task Force on Traditional Medicine**

The 4<sup>th</sup> ASEAN Task Force on Traditional Medicine (ATFTM) meeting was held from 8-10 October, 2013 in Yangon, Myanmar. The 5<sup>th</sup> meeting of ASEAN Task Force on Traditional Medicine (ATFTM) was held from 12-13 August, 2014 in Yangon, Myanmar. The 5<sup>th</sup> ASEAN Traditional Medicine Conference was held from 8-10 August, 2014, Yangon, Myanmar and was attended by delegates from all ASEAN member countries and delegates from Japan, Korea and China.





# HEALTH STATISTICS

## Vital Statistics

Health Index	1988	1999	2006	2007	2008	2009	2010	2011
Crude Birth Rate (per 1,000 population)								
- Urban	28.6	24.5	19.0	18.4	14.0	15.3	15.4	15.8
- Rural	30.5	27.1	21.5	21.2	16.1	16.6	16.6	17.2
Crude Death Rate (per 1,000 population)								
- Urban	8.9	6.0	5.3	5.3	7.6	5.1	5.2	5.1
- Rural	9.9	7.8	6.3	5.9	8.7	5.8	6.1	6.0
Infant Mortality Rate (per 1,000 live births)								
- Urban	47.0	55.1 <sup>▲</sup>	44.9	43.4	28.2	25.7	25.6	25.9
- Rural	49.8	62.5 <sup>▲</sup>	46.9	46.3	30.0	27.8	27.8	27.4
U5 Mortality Rate (per 1,000 live births)								
- Union	-	77.77 <sup>▲</sup>	66.22	64.25	40.73	36.53	34.91	33.93
- Urban	72.9	65.12 <sup>▲</sup>	64.15	62.10	39.80	36.15	34.43	33.55
- Rural	-	85.16 <sup>▲</sup>	67.03	65.02	41.08	36.69	35.11	34.38
Maternal Mortality Ratio (per 1,000 live births)								
- Union	-	2.5 <sup>▲</sup>	1.16	1.13	1.48	1.41	1.42	1.41
- Urban	1.0	1.8 <sup>▲</sup>	0.96	0.94	1.23	1.13	1.12	1.14
- Rural	1.9	2.8 <sup>▲</sup>	1.41	1.36	1.57	1.52	1.54	1.52
Population Growth Rate	1.96	2.02	2.02	1.75	1.52	1.29	1.10	1.01
Average Life Expectancy								
- Urban (Male)	59.0	61.0	62.9	64.0	65.1	65.5	65.8	65.92
(Female)	63.2	65.1	67.3	69.0	70.5	70.7	70.8	70.89
- Rural (Male)	56.2	60.3	62.5	63.2	63.9	64.1	64.3	64.45
(Female)	60.4	62.7	65.4	67.1	67.4	67.5	67.8	67.88

**Source:** Central Statistical Organization(CSO), Ministry of National Planning and Economic Development, 2011

<sup>▲</sup> National Mortality Survey, CSO, 1999

## Health Manpower Development

Health Manpower	1988-89	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14*
Total No. of Doctors	12268	23740	24536	26435	28077	29832	31542
- Public	4377	9583	9728	10450	11675	12800	13099
- Co-operative & Private	7891	14157	14808	15985	16402	17032	18443
Dental Surgeon	857	2092	2308	2562	2770	3011	3219
- Public	328	777	703	756	774	802	782
- Co-operative & Private	529	1315	1605	1806	1996	2209	2437
Nurses	8349	22885	24242	25644	26928	28254	29532
Dental Nurses	96	244	262	287	316	344	357
Health Assistants	1238	1822	1845	1883	1893	2013	2062
Lady Health Visitors	1557	3238	3278	3344	3371	3397	3467
Midwives	8121	18543	19051	19556	20044	20617	21435
Health Supervisor (1)	487	529	529	541	612	677	652
Health Supervisor (2)	674	1484	1645	2080	1718	1850	4998
Traditional Medicine Practitioners							
- Public	290	950	890	890	885	875	1048
- Private	2500	5397	5737	5737	5867	5979	5915

\* Provisional actual

## Health Facilities Development

Health Facilities	1988-89	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
Hospitals (Public Sector)	631	846	871	924	987	1010	1056
Ministry of Health	617	820	844	897	921	944	988
Other Ministries	14	26	27	27	66	66	68
Total No. of Hospital Beds	25309	38249	39060	43789	54503	55305	56748
No. of Primary and Secondary Health Centers	64	86	86	86	87	87	87
No. of Maternal and Child Health Centers	348	348	348	348	348	348	348
No. of Rural Health Centers	1337	1481	1504	1558	1565	1635	1684
No. of School Health Teams	80	80	80	80	80	80	80
No. of Traditional Medicine Hospitals	2	14	14	14	14	16	16
No. of Traditional Medicine Clinics	89	237	237	237	237	237	243

## Government Health Expenditures

	1988-89	2009-10	2010-11	2011-12 (PA)	2012-13 (RE)
Health Expenditure (Million Kyats)					
- Current	347.1	47275	60096	69244	191371
- Capital	117.0	16521	26451	26708	251832
<b>Total</b>	<b>464.1</b>	<b>63796</b>	<b>86547</b>	<b>95952</b>	<b>443203</b>
Per Capita Health Expenditure (Kyats)	11.8	1078.9	1447.8	1589.0	7268.5

\* *Provisional actual*

### Government Health Expenditures by Providers (2008-2009 to 2011-2012)

Providers (%)	2008-09	2009-10	2010-11	2011-12
- Hospitals	70.33	67.89	69.39	69.80
- Ambulatory health care	17.54	17.01	14.43	14.63
- Retail sale and medical goods	3.84	3.79	3.45	3.86
- Provision and Administration of Public health programs	2.00	2.51	1.50	1.65
- General health administration	0.51	0.50	2.46	3.14
- Health related services	1.98	1.82	1.81	2.23
- Rest of the world	3.80	6.48	6.96	4.69

### Single Leading Causes of Morbidity (2012)

Sr. No.	Causes	Percentage(%)
1	Other injuries of specified, unspecified and multiple body regions	10.0
2	Other complications of pregnancy and delivery	6.9
3	Single spontaneous delivery*	6.0
4	Diarrhoea and gastroenteritis of presumed infectious origin	5.8
5	Other viral diseases	3.8
6	Other pregnancies with abortive outcome	2.6
7	Gastritis and duodenitis	2.4
8	Malaria	2.4
9	Cataract and other disorders of lens	2.4
10	Other acute upper respiratory infections	2.0
11	Pneumonia	1.8
12	Other conditions originating in the perinatal period	1.7
13	Toxic effects of substances chiefly nonmedicinal as to source	1.6
14	Fractures of other limb bones	1.5
15	Disease of appendix	1.5
	All other causes	47.6
	<b>Total</b>	<b>100.0</b>

(\*) Based on International Statistical Classification of Diseases and Related Health Problems (ICD-10) coding, the condition to be used for single-condition morbidity analysis is the main condition treated or investigated during the relevant episode of health care. As such single spontaneous delivery came out as the most frequent condition being provided treatment or investigation during the episode of health care.

### Single Leading Causes of Mortality (2012)

Sr. No.	Causes	Percentage(%)
1	Human immunodeficiency virus [HIV] disease	6.6
2	Septicaemia	6.1
3	Other injuries of specified, unspecified and multiple body regions	5.4
4	Slow fetal growth, fetal malnutrition and disorders related to short gestation and low birth weight	4.6
5	Other diseases of liver	4.0
6	Other diseases of the respiratory system	3.7
7	Intrauterine hypoxia and birth asphyxia	3.4
8	Heart failure	3.3
9	Respiratory tuberculosis	3.2
10	Intracranial haemorrhage	2.9
11	Other heart diseases	2.8
12	Intracranial injury	2.7
13	Malaria	2.6
14	Pneumonia	2.6
15	Stroke, not specified as haemorrhage or infarction	2.5
	All other causes	43.6
	<b>Total</b>	<b>100.0</b>

## Universities and Training Schools under Department of Medical Science

Sr. No.	University/ Training Schools	Degree/ Diploma/ Certificate Conferred
1.	University of Medicine (1), Yangon	M.B.,B.S Dip.Med.Sc Dip EM(Emergency Medicine) M.Med.Sc,Ph.D,Dr.Med.Sc
2.	University of Medicine, Mandalay	M.B.,B.S Dip.Med.Sc M.Med.Sc, Ph.D, Dr.Med.Sc
3.	University of Medicine (2), Yangon	M.B.,B.S Dip.Med.Sc M.Med.Sc, Ph.D, Dr.Med.Sc
4.	University of Medicine, Magway	M.B.,B.S,M.Med.Sc,Ph.D Dip. Med.Sc
5.	University of Public Health, Yangon	Dip.Med.Sc( Hospital Administration ) Dip.Med.Ed(Medical Education) MPH M.Med.Sc (Hospital Administration and Health Management ) Ph.D
6.	University of Dental Medicine, Yangon	B.D.S, Dip D.Sc M.D.Sc, Dr.D.Sc,Ph.D Diploma in Dental Technology
7.	University of Dental Medicine, Mandalay	B.D.S, Dip.D.Sc,M.D.Sc
8.	University of Pharmacy, Yangon	B.Pharm, M.Pharm, Ph.D
9.	University of Pharmacy, Mandalay	B.Pharm, M.Pharm, Ph.D
10.	University of Medical Technology, Yangon	B.Med.Tech., M.Med.Tech

Sr. No.	University/ Training Schools	Degree/ Diploma/ Certificate Conferred
11.	University of Medical Technology, Mandalay	B.Med.Tech., M.Med.Tech.
12.	University of Nursing, Yangon	B.N.Sc, M.N.Sc Diploma in Emergency Nursing Diploma Specialty Nursing (Dental, EENT, Mental Health, Paediatrics, Critical Care, Orthopaedics)
13.	University of Nursing, Mandalay	B.N.Sc, M.N.Sc Diploma Specialty Nursing (Mental Health, Paediatrics, Critical Care, Orthopaedics)
14.	University of Community Health, Magway	B.Comm.H
15.	Nursing Training Schools	Diploma
16.	Midwifery Training Schools	Diploma
17.	Lady Health Visitor Training School	Certificate
18.	Nursing Field Training School	-
19.	Domiciliary Midwifery Training School	-

### University under Department of Traditional Medicine

Sr. No.	University	Degree
1.	University of Traditional Medicine, Mandalay	B.M.T.M
		M.M.T.M



## International Non-Governmental Organizations working in Myanmar

1. Association of Medical Doctors of Asia (AMDA)
2. Action Contre La faim (ACF)
3. Adventist Development and Relief Agency (ADRA)
4. Aide Medicale International (AMI)
5. Association of Freancosis-Xavier Bagnoud (AFXB)
6. Artsen Zonder Genzen (AZG) MSF-Holland
7. Asian Harm Reduction Network (AHRN)
8. The International HIV/AIDS Alliance
9. AIDS Health Care Foundation
10. American Refugee Committee (ARC International)
11. Burnet Institute Australia
12. CARE Myanmar
13. Cooperation and Sviluppo onlus (CESVI)
14. Cambodia Trust Fund
15. Clinton Health Access Initiative
16. Community Partners International (CPI)
17. East Meets West Foundation
18. Foundation Merieux
19. FHI 360
20. Groupe De Recherche et D'échanges Technologiques (GRET in Myanmar)
21. Humanitarian Services International (HSI)
22. Health Poverty Action
23. International Rescue Committee(IRC)
24. International Organization Migration (IOM)
25. International Union against TB and Lung Diseases (IUATLD)
26. Ipas
27. Institute Pasteur
28. Japan Heart
29. Japanese Organization for International Cooperation in Family Planning (JOICFP)
30. Jhpiego
31. Japan International Cooperation Organization (JIMCO)
32. Latter Day Saint Charities, USA
33. Malteser (Germany)
34. Marie Stopes International (MSI)
35. Medecines du Monde (MDM)
36. Medecins Sans Frontieres- Swizerland (MSF-CH)

37. Merlin
38. Malaria Consortium
39. Myanmar Family Clinical and Garden (MFCG)
40. Medical Action Myanmar
41. Management Sciences for Health (MSH)
42. Mercy Corps
43. Pact Myanmar
44. Path
45. Partners International Solidarity Organization
46. PH-Japan
47. Plan Myanmar
48. Population Services International (PSI)
49. Progetto Continenti
50. Relief International
51. Reproductive and Child Health Alliance (RACHA)
52. Save the Children (UK)
53. Save the Children (US)
54. Save the Children (Japan)
55. Terre des homes (TDH)
56. World Concern Myanmar
57. World Vision Myanmar

### **National Non-Governmental Organizations working in Myanmar**

1. Myanmar Women's Affairs Federation (MWAFF)
2. Myanmar Maternal and Child Welfare Association (MMCWA)
3. Myanmar Red Cross Society
4. Myanmar Academy of Medical Science
5. Myanmar Medical Association (MMA)
6. Myanmar Medical Council
7. Myanmar Traditional Medicine Council
8. Myanmar Traditional Medicine Practitioners Association
9. Myanmar Dental Association (MDA)
10. Myanmar Dental Council
11. Myanmar Nurses Association (MNA)
12. Myanmar Nurses Council
13. Myanmar Health Assistant Association
14. Myanmar Anti-narcotic Association

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