

# MYANMAR

## National Health System Profile

### 1. TRENDS IN POLICY DEVELOPMENT

The Myanmar government formed a National Health Committee (NHC), the highest level policymaking body for health matters, under the chairmanship of the Prime Minister. This committee formulated a new National Health Policy in 1993 envisaging adoption of the HFA (Health For All) goal with primary health care as the main approach and provision for sufficient as well as efficient human resources for development of a national health care system, exploring and developing alternative health care financing systems, inter-sectoral coordination and collaboration, intensification and expansion of environmental health activities, promotion of physical medicine and health system research. Further, the policy envisaged enhancement of border areas and rural health development for all-round development. The role of NGOs and private sectors was also upgraded under the new policy.

The National Health Plan (1996-2001) was formulated in line with the second five-year, short-term economic plan for 1996-2001 which was formulated by the government. The prioritised health needs of the country, HFA targets and relevant component of the ninth general programme of work of the WHO were the key determinants in the formulation of the plan.

In regard to the poverty reduction strategy, the Government initiated many development plans, especially for the hard-to-reach areas, relevant to health and health systems such as the eradication of extreme poverty and hunger by 2015, which is the UN Millennium Development Goal (Goal 1). Since 1988 as many as 164 new bridges were constructed in the country. These bridges can expedite timely referral of ill cases as well as easy access to formal education from primary level up to university level. Transportation of goods across bridges will improve economic conditions of the community, especially the low-income groups. Education and income are directly or indirectly related to health and health system development. Therefore, the 164 new bridges can surely enhance health development in Myanmar.

The population of Myanmar is currently estimated at 55.4 millions and is expected to reach 60 millions by 2010. As a result there will be an increasing need to meet the increased demand for food. Additional food requirements will have to be met through crop extensions and land development. This will eradicate extreme poverty and hunger. During 1990-2004, 150 dams have been built to irrigate 20, 93,219 acres of agricultural land. Using 265 river water pumping stations, 2, 82,108 acres of new-sown areas of cropland have also been developed between 1995 and 2002. These dams and river water pumping systems can increase production of food, which will lead to poverty eradication, change in behaviour and lifestyle as also changes in climatic conditions.

Health is assigned priority in the national agenda. The Ministry of Health laid down the National Health Plan (2001-2006) under the guidance from the National Health Committee. Objectives of the National Health Plan (2001-2006) are:

- To implement the national objective of uplifting of health, fitness and educational standards of the entire nation.
- To implement the National Health Policy.
- To develop a new health system in keeping with the political, economic and social conditions.
- To strengthen rural health services.

In Myanmar, as in other countries, the role of indigenous medicine is now put on the forefront. The indigenous medicine plays an essential role in health care delivery system by offering the communities access to alternative choices.

To be in line with international health systems, the reproductive health project has now been established and the adolescent reproductive health has been given greater focus to alert them and give them a sense of ownership and involvement in the entire project.

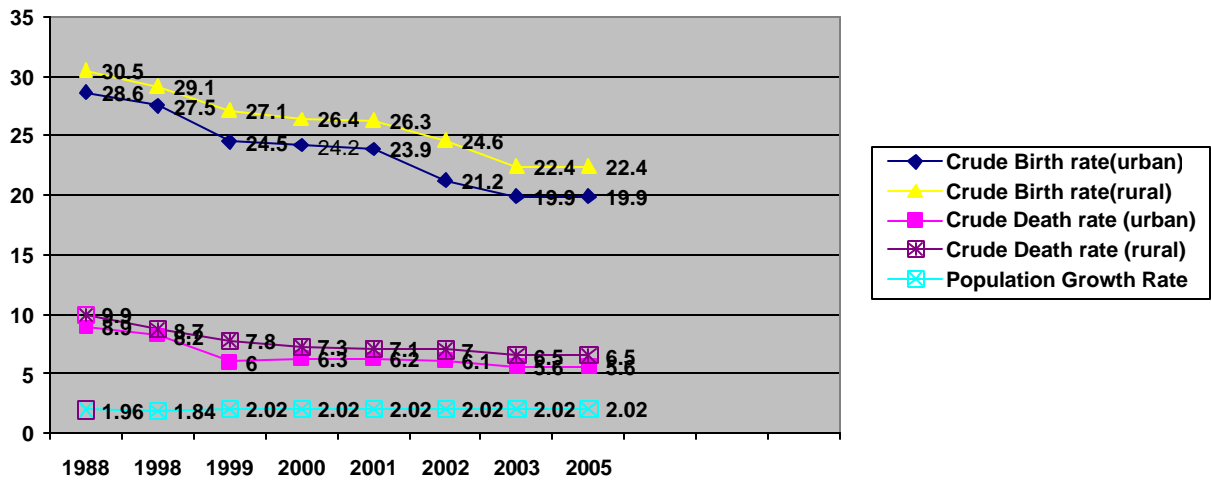
## **2. TRENDS IN SOCIO-ECONOMIC DEVELOPMENT**

### **2.1 Economic trends**

Myanmar is still a transitional economy as the economic reforms, began in 1988, toward a market-oriented economy, and is not complete. The reform measures encourage foreign investments, export diversification, import liberalisation, opening up of border trade and restructuring of wages and prices. Along with economic development, per capita income increased from 1,794 Kyats in 1999/2000 to 68,902 Kyats in 2001, and it is expected that GDP will rise significantly in the near future following development of communication systems and construction of new bridges, roads and rail lines. Since the enactment of Foreign Investment Law in November 1988, permitted total amount of foreign investment reached US \$7.750 billion at the end of March 2005 (Myanmar MDG Report 2005).

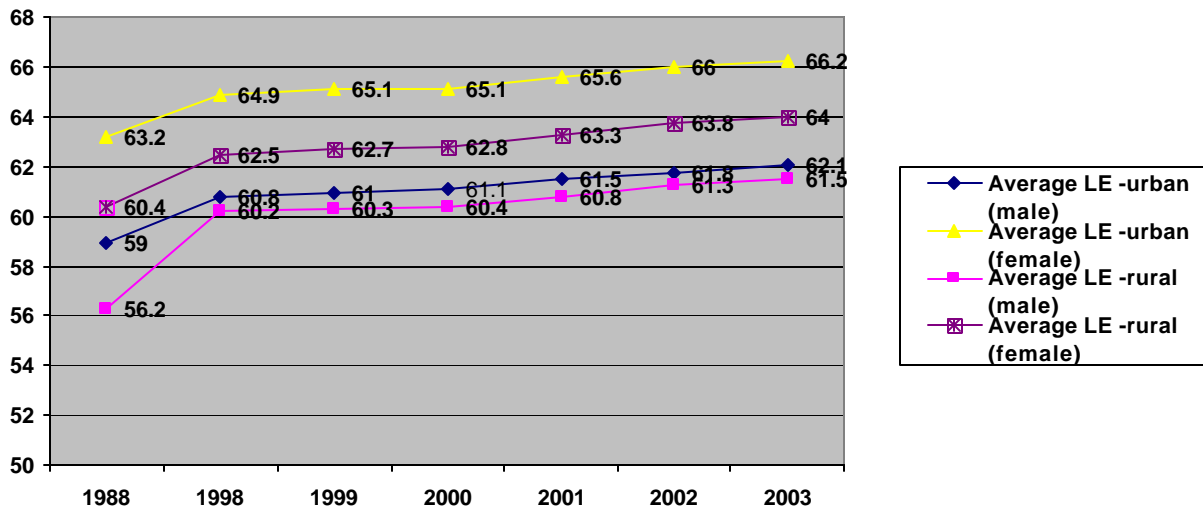
### **2.2 Demographic trends**

The population of Myanmar is estimated at 55.4 millions in 2005-06). The main source of demographic statistics depends primarily on the birth and death registration (vital statistics). Estimates for the subsequent periods are based on the 1983 Census as well as on the 1991 fertility survey on changes in the Myanmar population. Based on available data, the four main demographic indicators are: crude birth rate (CBR) per 1,000 populations - 19.7 (2005), crude death rate (CDR) per 1,000 populations - 5.3 (2004), annual population growth rate - 2.02% (2005-2006) and total fertility rate (TFR) - 2.3 (2005). The trend of population growth rate, CBR and CDR is shown in the figure here:

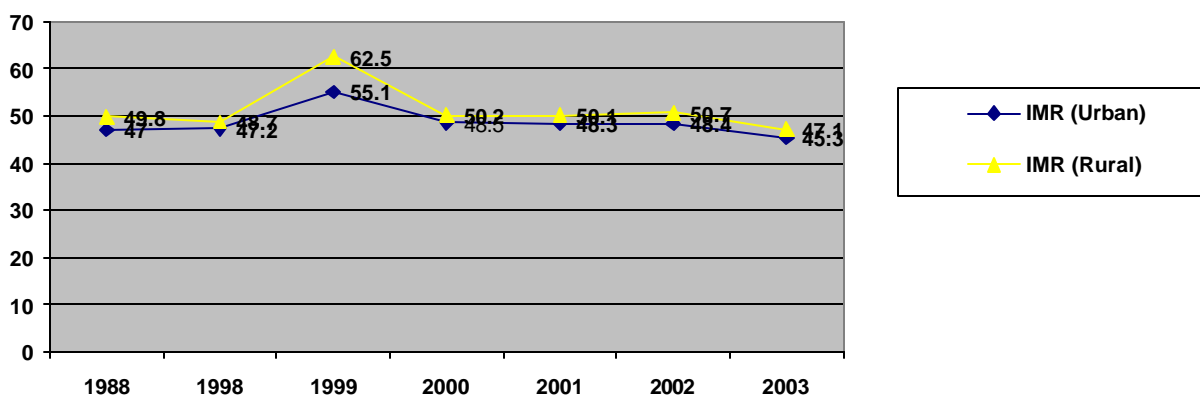


The population in the age group of 0-14 years was estimated at 32.63% in 2004-05, and those in the age groups of 15-59 and above 60 years were estimated at 59.15% and 8.22%, respectively in 2004-05. The population trend in Myanmar shows that the under15 population decreased from 38.77% in 1980-81 to 32.68% in 2002-03 over the years. At the same time, the population in the age group of 15-59 increased from 54.86% in 1980-81, to 59.27% in 2002-03 and again decreased to 59.15 in 2004-05, whereas the population aged 60 years or more increased from 6.37% in 1980-81 to 8.05% in 2002-03 to 8.22% in 2004-05.

The average life expectancy (LE) at birth in urban areas was 66.2 years for females and 62.1 years for males in 2003. In rural areas, it was 64.0 years for females and 61.5 years for males (2003). The trend in life expectancy at birth for males and females in urban and rural areas is shown in the figure below:



In 2003, the infant mortality rate (IMR) per 1,000 live births was 45.3 in urban areas and 47.1 in rural areas. The trend in IMR is shown in the figure below:



In 2005-06, about 30% of the population was urban with minimal internal migration.

### 2.3 Social trends

Myanmar believes that the human development is based on educational development. The national adult literacy rate was 94.1% in the year 2005

Primary education is compulsory and plans are underway to reduce dropout rates. School enrolment rate was 97.58% in 2005.

### 2.4 Food supply and nutritional status

In 2000, the prevalence of low birth weight babies (less than 2,500 grams) was 10% (APHS, 2004), while the prevalence of underweight children (under three years) was 5.5% (HMIS). The prevalence of underweight children under five years declined from 35.3% in 2000 to 31.8% in 2003 (MICS, Dept. of Health Planning).

Iodine deficiency disorders (IDDs) are on the verge of elimination in this country. Visible goitre rate among 6-11 year old school children dropped from 12% in 2000 to 5.5% in 2003-04 and approaching a target of less than 5%. The iron deficiency anaemia was 45% among the non-pregnant women in the reproductive age (2001), 26.4% in adolescent girls (2002) and 51% in pregnant women residing in hilly regions (2003).

### 2.5 Lifestyle and risk factors

The Global Youth Tobacco Survey, a school-based survey conducted in collaboration with the WHO and CDC, Atlanta, showed a declining trend in tobacco use among students belonging to grades 8 to 10. The sentinel prevalence survey conducted in sentinel townships also shows a declining trend in the prevalence of smoking, but there is a growing concern on the increasing trend of chewing of betel quid with tobacco.

A draft law on control of consumption of tobacco products has been drawn and is in the final stage of being enacted. It is a comprehensive law and includes a total ban on advertisements; prohibition

of sale to and by minors, prohibition of smoking in public places, health warnings on packaging and prohibition of sale of cigarettes in lose.

The government endeavoured to promote healthy lifestyles, especially by encouraging sports and exercises, together with a series of campaigns lunched against tobacco consumption. Youth-to-youth peer education on prevention of HIV/AIDS, prevention of alcohol and narcotic drugs use, is well established.

The School Health Programme aims at promoting better health standards amongst the entire students.

With the objective to enhance collaboration and coordination between health and education sectors on HIV/AIDS education activities in schools, coordination workshops were conducted in (8) states and divisions during 2004. These workshops were done through intra-sectoral efforts of the National AIDS Programme and School and Youth Health Project of Department of Health with support from the FHAM (Funds for HIV/AIDS in Myanmar). Township medical officers and township education officers from 142 townships attended these workshops and HIV/AIDS education and information were disseminated to nearly four million school children in 21,059 schools.

The New Health Care Project for Adolescent Youth is being implemented as a WHO- funded programme under the National Health Plan (2001-06). The School and Youth Health Project, in collaboration with the WHO, have recently initiated a process to develop an adolescent health strategic plan (2005-09).

### **3. HEALTH AND ENVIRONMENT**

#### **3.1 General protection of the environment**

The National Health Plan (2001-06) has four projects related to health and environment, namely prevention and control of environmental health hazards, occupational health and safety, prevention and control of agricultural hazards, air and water pollution control.

Awareness of the environmental health and issues such as impacts of urbanisation, air pollution, solid and hazardous waste disposal, traffic congestion, noise pollution and substandard housing, is increasing and steps to confront these hazards are under active consideration.

Air pollution results mainly from vehicle emission and so strict pollution checks are done at the time of vehicle registration and renewal. Industrial zones are being developed all over the country because air pollution is also due to industrial emissions. The Yangon City Development Committee manages to collect more than 80% of solid waste but some towns still face solid waste disposal problems.

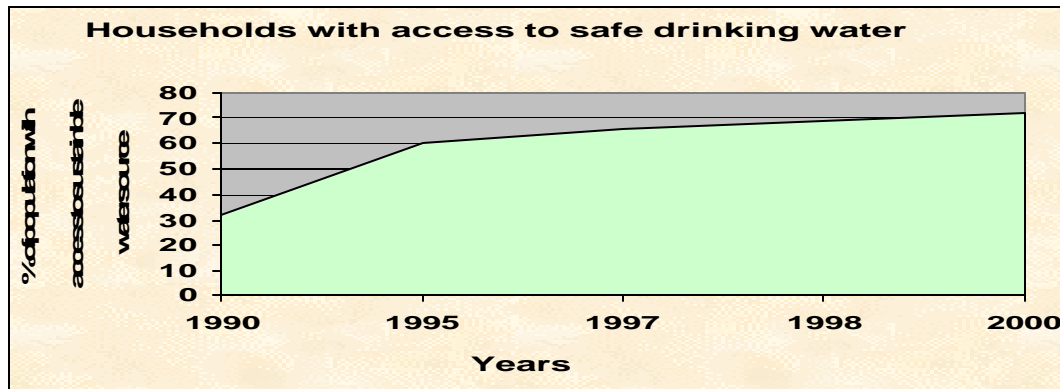
The occupational health division of the Department of Health takes the responsibility for occupational health problems at work sites.

### 3.2 Water supply and sanitation

About two-thirds of the population have easy access to improved water source with urban and rural coverage being 92.1% and 74.4%, respectively (MICS 2003 Survey). It increased from 32% in 1990 and 71.5% in 2000.

#### *Ensure environmental sustainability*

#### **Proportion of population with sustainable access to an improved water source**

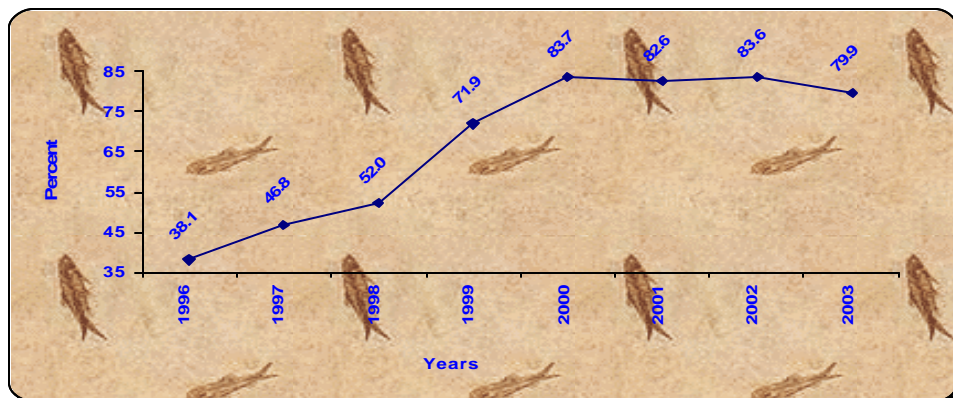


Source: Multiple Indicator Cluster Surveys, Department of Health Planning

To improve water quality, pot filters were successfully developed by ESD for removing arsenic from water. Moreover, small-scale water treatment plants for pond water in arsenic affected areas as well as for hospital water supply were installed.

In 2003 (National Sanitation Weekly Report), 83.0% of population had access to improved sanitation (rural - 81.0%, urban - 87.6%). The access to sanitary latrines has increased over the years, as shown in figure below:

#### **Proportion of people with access to improved sanitation (Sanitary Latrine coverage)**



Source: Routine Health Management Information System, DHP

## **4. HEALTH RESOURCES**

### **4.1 Human resources for health**

The available data reporting health personnel (2005-06) show a national total of 18,725 doctors, 1,870 dental surgeons, 19,922 nurses, 162 dental nurses, 1,771 health assistants, 2,908 lady health visitors, 16,699 midwives, 529 public health supervisors grade (1), 1,359 public health supervisors grade (2) and 889 traditional medical practitioners. The ratio of nurses to doctors is also below the optimum, but now, two nursing universities train skilled nurses under the Department of Medical Sciences.

In Myanmar, under the guidance of the Ministry of Health, the Department of Medical Sciences is taking the responsibility of producing all categories of human resources for health care services. They include medical doctors, dental surgeons and other allied health personnel such as paramedics, pharmacists, physiotherapists, radiologists etc. Training for basic health workers, who mainly take care of the health care delivery system in rural areas, are serving about 70% of the population of the country. National Education Promotion Special 4 years Plan (Health Sector) and Myanmar Vision 2030 - the long-term national development plan are activated by producing these health personnel. The Department of Traditional Medicine is also upgraded with well-qualified Traditional Medical Practitioners.

The Department of Medical Science has successfully increased the number of students to have effective learning opportunities with modern technologies. As part of the plan, a Medical Education Centre has been opened under the Department of Medical Science to conduct continuing medical education activities. Information Communication Technology (ICT) is also being used in continuing medical education as well as in undergraduate courses. A network system has already been set up to include Department of Medical Resource Centre, University of Medicine (1), New Yangon General Hospital and Yangon General Hospital, University of Medicine (2), North Okkalapa General Hospital, Magway General Hospital within the University of Medicine (Magway) and Mandalay General Hospital within the University of Medicine (Mandalay), respectively.

For providing comprehensive and quality health care to the community and for uplifting the health standard of the nation, it is crucial to have sufficient qualified health personnel. Human resources for health development of postgraduate medical education is one of the projects which is envisaged to produce adequate and qualified postgraduates in various discipline according to the needs of the National Health Plan (2001-06).

To ensure equity in health care and reduce discrepancy between different geographical areas, new medical universities have been opened in the Central and Upper Myanmar regions. Now there are four universities of medicine, two each for dental medicine and nursing, two universities of medical technology, two for pharmacy, one university of community health, and 43 training schools for nursing and related services.

## **4.2 Financial resources for health**

Main sources of finances for health care services are the government, private households, social security system, community contributions and external aid.

Total health expenditure as percentage of GDP was estimated at 2.8% in 2003. The government share was 19% and private share was 81%.

## **4.3 Physical infrastructure for health**

Health care delivery system comprised of 826 general hospitals including 19 specialist hospitals and 35 general hospitals with specialist services in 2005-06. In addition, 417 dispensaries, 86 primary and secondary health centres, 348 maternal and child health centres, 80 school health teams at urban areas and 1456 rural health centres provide health care services. Moreover, 14 traditional medicine hospitals and 237 traditional medicine clinics support health of the community by traditional ways. In 2003-04, total number of hospital bed was 33,683 and beds per 10,000 populations were 6.5.

Upgrading of hospitals at all levels is an integral part of the national health policy. According to this policy, expansion and upgrading of hospitals are done as and when necessary, with government support as well as with public contributions.

## **4.4 Essential drugs and other supplies**

The Myanmar Essential Drugs Project was launched in 1988 with the assistance of the WHO to obtain essential drugs easily and cheaply and to ensure that drugs reaching patients are safe, effective, acceptable and of good quality. The National Drug Formulary was published in June 1989.

The National Drug Law was adopted in 1993 to regulate, control and authorise importation of pharmaceuticals and vaccines into the country. Meeting for review and revision of the National Drug Policy was held in November 2001. A committee of experts formulated drug laws with regards to registration, procurement, storage, distribution and sale and production of drugs locally. The person responsible would ensure production of essential drugs locally and their supply to all health care facilities including rural sub health centres. Quality control activity is one of the important functions of essential drug project.

## **4.5 International partnership for health**

Myanmar has close cooperation with several organisations within the UN system such as the WHO, the UNICEF, the UNDP, the UNFPA etc, who have the main responsibility for technical assistance as well as supporting various health care activities. The UNDP, the UNHCR, the JICA, the OXFAM, the SCF etc. are also actively involved in health development activities. Inter-country joint activities like health exhibition and health activities at border areas were conducted between Myanmar and China, and Myanmar and Thailand.

## **5. DEVELOPMENT OF THE HEALTH SYSTEM**

### **5.1 Health policies and strategies**

The Government of Union of Myanmar has laid down social objectives “to uplift health, fitness and educational standards for the entire nation”. This is fulfilled by the National Health Policy. The National Health Policy was developed with the initiation and guidance of the National Health Committee in 1993. The National Health Policy places the HFA goal as the prime objective using primary health care approach. The National Health Policy is described here under:

- (1) To raise the level of health of the nation and promote the physical and mental well-being of the people with the objective of achieving HFA goal using the 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 resources for health locally in the context of the broad framework of a long-term health development plan.
- (4) To strictly abide by the rules and regulations mentioned in the drug laws and byelaws which are promulgated.
- (5) To augment the role of co-operative, joint ventures, private sector and non-governmental organisations in delivering health care in view of the changing economic system.
- (6) To explore and develop an 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 accordance 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 expansion of sports and physical education activities by encouraging community participation, supporting outstanding athletes and reviving traditional sports.
- (11) To encourage medical research activities not only on prevailing health problems but also giving due attention to carry out health system research.
- (12) To expand health service activities not only to rural areas but also to border regions so as to meet the overall health needs of the country.
- (13) To foresee any emerging health problems that would pose a threat to the health and well-being of the people so that preventive and curative measures can be initiated.
- (14) To reinforce the service and research activities of indigenous medicines to international levels and to involve in community health care activities.
- (15) To strengthen collaboration with other countries for national health development.

#### Millennium Development Goals (MDGs)

The progress made towards achievement of health related MDGs is given at Annex-2.

### **5.2 Inter-sectoral cooperation**

The meeting of the National Health Committee, which is the highest policymaking body in Myanmar under the chairmanship of the Prime Minister, is conducted regularly in every three months to make decisions on health matters. The committee is composed of ministers from health and other health-related departments, and ministries like the agriculture and irrigation, the national planning and economic development, education, sports, and the ministry of immigration and population among others. Cooperation with NGOs at all levels (up to the grass-root level), is well established for implementing the NHP. In order to strengthen inter-sectoral cooperation, the National Health Plan dissemination workshops are regularly conducted across regions.

### **5.3 Organisation of the health system**

With the commitment, guidance and support of the state, the health system is well organised to strengthen and expand health services through out the country including the remote areas. The state peace and development council and the cabinet supervise and provide guidance through the National Health Committee to the Health Ministry, the corner stone in the planning, organising, coordinating, financing and regulation in delivery of health care for entire population.

The Ministry of Health consists of seven departments-- the department of health planning, department of health, department of medical sciences, department of medical research (Lower Myanmar), department of medical research (Upper Myanmar), department of medical research (Central Myanmar) and department of traditional Medicines. The Department of health planning comprises planning division to systemically develop health plans, health information division to disseminate reliable health information, a health promotion division to promote adoption of healthy lifestyles, research and development division to research health related matters and coordination division to facilitate coordination with international organisations. The department of health has nine directors who are leading and managing the administration - planning, disease control, public health, medical care, nursing, food and drug control laboratory and occupational health under the supervision of the Director General and two Deputy Director Generals. The department of medical sciences is responsible for training and bringing out all categories of health personnel according to national needs. Biomedical research, toxicology research, research related to blood safety and haematology, researches related to traditional medicines and herbal plants, are conducted by the departments of medical research (Lower, Upper and Central Myanmar).



At the grass root level, the sub-health centres managed by midwives provide basic health care services, disease prevention and health promotion. Voluntary health workers, auxiliary midwives, trained traditional birth attendants and community health workers also support this effort. A rural health centre is formed by at least five sub-health centres and is managed by a health assistant. Every hospital is handled by doctors who are general practitioners, and specialist services are provided in district hospitals. Besides these, there are also station hospitals, township health departments, district health departments and state/divisional health departments to manage health and health related problems.

Recognising the growing importance of the needs to involve all relevant sectors at all administrative levels and to mobilise the community more effectively in health care activities, health committees are established at various administrative levels down to the wards and village tracts. Such a committee at each level is headed by a chairman and include heads of related government departments and representatives from social organisations as members. Heads of health departments are designated as secretaries of these committees.

#### **5.4 Managerial process**

The ministry of health provides broad guidelines based on the National Health Plan, which is divided into 12 broad programmes and 78 projects for managerial purposes. The central level facilitates the activities by providing with required technology and resources. Townships have the primary responsibility for planning and implementation of health care services. They also engage in monitoring and evaluation of these efforts and services. Evaluation has also been conducted at the state/division and central levels on half yearly basis since 2004 to ensure effective implementation of the managerial process for health.

#### **5.5. Health information system**

The national health management information system has been established to provide information for management at all levels, including planning, monitoring, evaluation and disease surveillance. The system uses a minimum essential data set. With the consensus of all project managers to improve the quality of data, it has been decentralised to various levels of the health infrastructure to facilitate the completeness and validity of the data collection.

Data collection is done from all available sources like hospitals as well as PHCs. It is designed as a user base for management, monitoring and evaluation in support of corrective action for better services, policy analysis and planning. Data collection tools, definition and procedures have also been standardised. It acts as a dynamic process according to the needs of the changing conditions. The ministry encourages the capacity building of health information staff and provides data processing equipments for development of online computerized information system to ensure rapid timely information.

The hospital information system covers 790 hospitals in 324 townships. The system is to strengthen the validity of hospital statistics to understand the leading causes and the magnitude of morbidity/mortality burden of hospitals for better management and planning of hospitals. This is well-developed system which enables computer assisted medical record system (CAMRS) with ICD-10

coding in some hospitals. According to the NHP (2001-06), 300 hospitals will be established in CAMRS at the end of 2006.

## **5.6 Community action**

Village health committees have been formed to support health improvement efforts at village level. Voluntary health workers have been trained to provide health care in their own community where health staffs do not live. There are many community efforts such as community cost-sharing, revolving drug fund, community contribution in hospitals and health centres and implementation of water and sanitation projects.

## **5.7 Emergency preparedness**

Natural disasters like earthquakes, floods, storms and strong winds are occasionally present in Myanmar. The country has a disaster response system with the involvement of all related government sectors. Migrating population and construction are also responsible for epidemics of communicable diseases and fire hazards. Training on disaster management is given to medical officers who live in disaster-prone areas. Road accidents are becoming a leading cause of morbidity and mortality in the country and trauma unit and orthopaedic services need to be strengthened.

## **5.8 Health research and technology**

During the National Health Plan (1996-01), a total of 423 research projects were accomplished. Of these, 276 projects were carried out solely supported by the government and 147 projects in joint support with the external funding agencies.

The department of medical research has been already established under the health ministry. Presently, the department of medical research has been expanded to the Lower, Upper and Central departments to strengthen the research activities. Health research policy board was formed in 1994 under the health ministry with the Director General of various health departments, Directors of medical universities and representatives of other related ministries. The board has laid down guidelines such as strengthening of research capability, promoting health system research, investing in communicable and non-communicable diseases and research findings applied in practices.

Regarding financial support, construction of the Diagnostics and Vaccine Research centre has been undertaken and funded. The Clinical Research Unit on HIV/AIDS has also been funded and established.

# **6: HEALTH SERVICES**

## **6.1. Health education and promotion**

In Myanmar, the status of health education has changed to a specific IEC project under the health system development programme. One of its major objectives is dissemination of health education down to the grass roots level. So, the health education bureau performs its countrywide health educational activities through the mass media. Training of basic health staff and voluntary health

workers is being strengthened at the under national level. National health programmes are supported with health education and promotion strategies and activities especially designed to be useful for the programme needs. For example, the national tobacco control programme was officially launched in 2000. Myanmar has been implementing tobacco control measures mostly through health education to the public via all forms of media and health talks. The health bureau provides health education and health promotional support to all health programmes, including those at schools, health facilities and outreach clinics.

NGOs and other professional organisations have joined with government agencies all around the country to improve health education.

## **6.2 Maternal and child health/family planning/adolescent health**

In Myanmar, mothers and children, who are the most vulnerable groups, constitute over 60 percent of the total population. Maternal and child health care services are provided both in urban and rural settings and it is also a crucial component of the national health plan.

Essential reproductive health care, including maternal and child health care, essential obstetric care, prevention and management of post-abortion complications, management of RTIs / STIs and adolescent reproductive health, have been implemented as one of the activities of the national health plan. Conventional maternal and child health care has been much strengthened through safe motherhood initiatives in women's rights approach.

Maternal care coverage is reasonably good with more than three-fourths of all pregnancies receiving antenatal care from trained personnel. Expanded programme on immunization, control of diarrhoeal and acute respiratory tract infection and other relevant programmes for promoting the health of children are well established all over the country even in far and remote border areas.

National NGOs such as the Myanmar Maternal and Child Welfare Association (MMCWA) play an important role in the provision of maternal and childcare services. Since the early 1990s, the WHO has been supporting family health care programme in Myanmar technically as well as financially with the biennial plan of action of the WHO. In addition, other United Nation agencies like the UNICEF, the UNFPA and the UNDP have provided special programmes concerning maternal and child health care services.

All these maternal and child health care activities are carried out within the context of the national health plan, under the guidance of the national health committee.

## **6.3 Immunisation**

The expanded programme on immunisation (EPI) is a priority programme of the health ministry. Launched since May 1978, this programme has been implemented in 104 townships. By 1997, almost all townships have been covered under this programme. From 1998 onwards, installation of solar powered refrigerators and crash programmes for very hard to reach and remote border areas made the EPI operational coverage for the whole country possible.

However, targets for 2000 were set for polio eradication and neo-natal tetanus elimination. Basic health staffs were busy with the national immunisation days, mopping up oral polio vaccine immunization activities and mass tetanus toxoid immunisation campaigns for reproductive age group of women. Therefore, the momentum for routine EPI activities was disturbed and some epidemic for measles occurred in some township. So, efforts are now being made for strengthening of routine EPI activities, more training to health personnel and effective cold chain system management. The main constraints for EPI as a whole are transport difficulties and maintaining an effective cold chain in remote areas.

Hepatitis B vaccine has been introduced into the EPI schedule.

#### **6.4 Prevention and control of locally endemic diseases**

Diseases under the national surveillance are diarrhoea, dysentery, food poisoning, typhoid, measles, diphtheria, whooping cough, neonatal tetanus, tetanus, meningitis, acute respiratory infection, viral hepatitis, rabies, anthrax, malaria, poisonous snake bite and tuberculosis, which are included in the routine health management information system. There is monthly routine data collection and reporting as well as outbreak report. In addition, some of the diseases like AFP need to admit zero reporting. Supervision, monitoring and technical support is provided by disease control team at central and state/divisional levels under the control of disease control division with the support of epidemiology unit.

##### *Iodine Deficiency Disorders (IDDs):*

Iodine deficiency is one of the most common causes of preventable brain damage among children. Endemic goitre was also found in the hilly, plain and delta regions, especially in those areas which experience floods every year. Myanmar is at risk of iodine deficiency, according to research studies. The health ministry started its iodine deficiency disorders control programme in 1968. Then the central committee for control of iodine deficiency disorders was formed in 1989 under the guidance of the national health committee.

##### *HIV/AIDS:*

It is estimated that 3, 38,911 people were living with HIV/AIDS in 2004. This was estimated in the workshop organised by the health ministry, the WHO, Geneva and UNAIDS in September 2004.

General objective of the national AIDS programme is to create awareness and perception of HIV/AIDS by promoting access to information and education leading to behavioural change and adoption of healthy life style.

##### *Leprosy:*

With the strong political commitment of the national health committee and enthusiastic efforts by the basic health services and leprosy control programme staff, leprosy was eliminated at the national level in January 2003, as declared officially at the third global alliance for elimination of leprosy meeting held in Yangon from 6-8 February 2003. The remaining registered cases of leprosy were 2,708 and prevalence rate was 0.49 per 10,000 population, total new cases detected were 3,756 and total number of cases cured were 3,807 at the end of 2004.

Leprosy is also locally endemic disease. Strategies used for leprosy elimination are as follows:

(1) Main issues

1. Cleaning of registers
2. Focused leprosy education programme
3. Transferring ownership to townships
4. Strengthening of the monitoring and supervision at township levels, and
5. Improving community participation and awareness building

(2) Supportive issues include:

1. Utilizing the HSR findings
2. Advocacy
3. Logistic support
4. Sentinel monitoring survey
5. Reallocation and refresher training of vertical staff for integration, and
6. Prevention of disability and rehabilitation.

*Malaria:*

Malaria is top priority disease in Myanmar. Long-term trend of malaria shows decreasing prevalence and mortality rate although there is slight increase in morbidity in the last three years. The number of epidemics has declined by 60 percent during the past five years. However, malaria is re-emerging due to migration, climate changes, ecological changes, drug resistance, insecticide resistant and change in the behaviour of vectors. Total number of malaria cases recorded in the routine health management information system were about 6, 48,654 with 2,368 deaths in 2003. Fourth national malaria week was carried out in June 2003 throughout the country to increase awareness of community regarding malaria prevention and control. 441 Microscope have been distributed to rural health centres where malaria problem is high.

Myanmar is having collaborative malaria control programme with neighbouring countries, including Thailand under the context of the **Roll Back Malaria (RBM)** control in the Mekong region.

Third round global fund proposal was successful and it will fill up the financial requirements of malaria prevention and control programme. Malarial control activities will prevent malaria epidemic and labour loss due to malaria. It will also lead to timely accomplishment of development activities and development of the country.

*Lymphatic Filariasis:*

Lymphatic filariasis is one of the national priority diseases in Myanmar since 1970. The magnitude of the problem is varied in states and divisions. It ranged from Microfilaraemic (Mf) rate 0 to over 10 percent. Magway, Sagaing (South), Mandalay and Rakhine had Mf rate of over 10 percent.

Night mass blood survey, treatment of the positive smear cases with DEC, mosquito control with community participation and health education and capacity building are being carried out with the specific objective of bringing down antigenaemia of lymphatic filariasis less than one per 1,000 population by 2020. The national filariasis control programme is being implemented phase by phase, and 201 townships are planned to be covered during the 2001-02 to 2005-06 budget years.

### *Hepatitis-B:*

Viral hepatitis caused by the virus hepatitis B, C and E causes various degree of health problems in Myanmar. Among these, viral hepatitis type B is hyper-endemic in Myanmar with a 12 percent carrier rate and 60-70 percent infection rate. The two main activities in the prevention and control of VH are screening and vaccination including hepatitis B vaccination into the routine childhood immunisation. Moreover, injection safety and proper waste disposal are also the effective interventions.

### *Tuberculosis:*

Directly observed treatment short course (DOTS) covered all 324 townships in 2003 and case detection rate increased up to 95 percent.

Strategies of the National Tuberculosis Programme (NTP) include:

1. Intensification of health education by using multi-media to increase community awareness about TB
2. BCG immunisation to all under one-year children.
3. Early case detection through direct sputum microscopy of chest symptomatic patients attending health services and also contact tracing.
4. Implementing directly observed treatment (DOT) up to the grass-root level.
5. Regular supervision and monitoring of NTP activities at all level.
6. Strengthening of the government and community partnership.
7. Capacity building, and
8. Promotion of operational research.

The DOTS strategy covered all townships by 2003 while simultaneously improving the quality of services.

## **6.5. Prevention, control and management of common diseases and injuries**

The case fatality rate (CFR) of ARI was 0.4 percent and diarrhoea was 0.1 percent. Thus, ARI, diarrhoea and malnutrition are being adequately managed. However, there are many weaknesses in accessing appropriate treatment:

- Inefficient hospital management and administration at different levels
- Delayed development of modern curative facilities and services compared to advances in medical science
- Insufficient drugs and equipment
- Shortage of manpower and technology
- Weakness in proper referral system
- Weakness in hospital waste management system
- Weakness in radiation protection system
- Weakness in proper drug storage system, and
- Weakness in proper medical recording and information system.

In Myanmar, about 70 percent of the population reside in rural areas. The government has drawn up a rural health development plan (2001-02 to 2005-06) in the national health plan and implemented to improve health service utilisation in rural areas.

Diabetes mellitus is listed number 13 in priority in the disease control programme under the national health plan. Diabetes is usually diagnosed late and there is still lack of awareness of the disease in the community. Facilities for early detection are lacking especially in rural areas where 70 percent of the people are residing. The following strategies are to be implemented to facilitate early diagnosis and treatment which would prevent complications. In addition provision of proper care and management could enable diabetic patients to lead a normal productive life. The strategies are:

- Health education to increase the awareness of diabetes mellitus and alter the life style and environmental factors in the general population and to prevent the development of diabetes in high-risk persons
- Early diagnosis and provide appropriate care in an integrated approach
- Production of educational manuals and give training to basic health workers
- Intra and inter-sectoral coordination with other programs and associations
- Community involvement by means of establishing diabetes association or clubs with aims to provide counselling and support for diabetic patients, and
- Information, education and communication.

Neoplasm was ninth leading cause of morbidity and the 11<sup>th</sup> leading causes of mortality as per the hospital statistic 2002. One-third of the new cases can be prevented with the combined efforts of government, NGOs and cancer charity organisations and the use of advanced clinical knowledge. Another one-third would be benefited from early diagnosis and effective treatment. The remaining patients who are incurable, can improve the quality of the life by palliative care and pain relief. Education of the public on health practices and change of unhealthy life style, capacity building of the manpower, maintenance and update of machine and equipments in three radiotherapy centres, epidemiology and clinical research to disseminate experiences , findings and advances to all health professions, are the key activities undertaken.

The current nutrition status shows that protein energy malnutrition among under-five children was 32 percent (MDG, Myanmar, 2005). The ultimate aim of the nutrition promotion activities is the “attainment of nutritional well-being of all citizens as part of the overall socio-economic development by means of health and nutrition activities together with the cooperative efforts by the food production sector.” Activities for prevention of protein energy malnutrition include growth monitoring and promotion for under-three children, community nutrition centres, village food bank and hospital based nutrition units. Efforts are also being made to educing the under five deaths due to pneumonia, diarrhoea and fever by improvement of skill of health staff, improvement of health system by supervision and monitoring, availability of essential drugs and ORS package, continuous medical education and improvement of communication participation, family behaviour and practices.

## **7. TRENDS IN HEALTH STATUS**

## **7.1. Life expectancy**

For the period 1988-2003, the life expectancy at birth increased from 59.0 years for males and 63.2 years for females (1988) in urban areas, where as in rural areas for same years was 56.2 years and 60.4 years for male and female respectively to 62.1 years for males and 66.2 years for females (2003) in urban areas, where as in rural areas for same years was 61.5 years and 64.0 years for male and female respectively in Myanmar. It may be due to the result of expanding health care delivery infrastructure, improved MCH care and specific programmes on immunisation (EPI), DOTS in TB by the national tuberculosis programme and some poverty alleviation programmes by NGOs (UNDP, MMCWA) etc.

## **7.2 Mortality**

The infant mortality rate for year 2003 was reported to be 50.. The maternal mortality ratio was 380 in 2002-03 and U5MR 66.7 per 1,000 live births in 2003. The CDR was 5.6 fir urban population and 6.5 per 1,000 populations in rural areas. As all the responsible personnel in the health sector are taking systematic measures to be able to provide health care services on a wider scale and performing their duties energetically and with good will, the mortality rate is declining fast.

## **7.3 Morbidity**

The leading causes of morbidity (2004) show other injuries of specified, unspecified and multiple body regions at 10.0 percent, diseases of respiratory system other than tuberculosis at 3.0 percent, single spontaneous delivery at 7.6 percent and malaria at 7.1 percent The vaccine preventable diseases have declined significantly since implementation of the EPI. Due to multi-drug therapy, leprosy has been eliminated by 2003. As a result of introducing short-term chemotherapy using DOTS, TB prevalence also declined. Polio morbidity has been reduced significantly after introducing NID including OPV annually for eight times. But protein energy malnutrition still remains a problem in the country but not a major problem.

## **7.4. Disability**

The prevalence of blindness in the ocular morbidity survey of 1998 was reported to be 0.6 percent and it was mostly due to cataract, glaucoma, trachoma and trauma. The main interventions are early detection and treatment.

## **8.1 Overall assessment and strategic issues**

According to the major health status indicators such as literacy rate, life expectancy, overall health status of the population has been improved.

Many policies which relate to health such as population policy, environmental policy have been laid down. New national health policies were developed.

The developments of health resources particularly human resources for health have also been developed with an aim to produce adequate and efficient health personnel for delivery of quality health care.

Community participation and political commitment also strengthened the health care delivery system. Private sector participation in health care provision increased considerably.

The per capita expenditure on health has increased. More funds are available for health due to improved economic situation.

Both modern and traditional system of medicine has been encouraged. Partnership with UN agencies, international organisation and bilateral agencies, both in financial and technical terms, were further strengthened.

## **8.2 Future vision**

Two main objectives of the health ministry have been derived from the national objectives of state peace and development council namely (i) to enable every citizen to attain full life expectancy and enjoy longevity of life, and (ii) to ensure that every citizen is free from disease.

## **8.3 Proposed strategies**

For ensuring equity for health, there are three strategies for implementation of health activities;

- (i) Widespread dissemination of health information and education
- (ii) Enhancing disease prevention activities
- (iii) Providing effective treatment for prevailing diseases.

Co-ordination of all multi-sectoral departments is necessary in implementing developmental projects all over the country. Only then the country can achieve the goals on time. With the aim of emerging a modern and developed nation, emphasis is being laid on health and fitness of the entire population.

The national health plans are designed to pay more attention to primary health care for the people and to ensure equity in access to health care. Community participation is to be encouraged to empower the community to take responsibility for their own health and to enable them to adopt healthy life styles.

The government is utilising the large sum of money in upgrading of the state and division hospitals, rural health development, opening hospitals and clinics with the intention to uplift the health standard in all states and divisions.

As 70 percent of the population resides in the rural areas, priority has been accorded to rural health development. The health needs are more pronounced in the rural areas. The national health policy which removed OTS policies, population and environment will form the basis for proposed strategies in future depending on changing situation.

## 8.4 Basic Health Indicators including the U.N. Millennium Development Goals

See Annex-1.

Annex-1

### Country reported Data for Basic Health Indicators including health related MDG Indicators

Indicator	Latest available data	Year	Source	Remarks
<b>POPULATION AND VITAL STATISTICS</b>				
Total population (in millions)	55.4	2005-06	10	Computed
Population density (persons per sq km)	82		10	
Sex ratio (males per 100 females)	101.1		10	
Population under 15 years (%)	33	2004-05	10	
Population 60 years and above (%)	8	2004-05	10	
Crude birth rate (per 1000 population)				
Urban	19.9	2003	10	
Rural	22.4	2003	10	
Crude death rate (per 1000 population)				
Urban	5.6	2003	10	
Rural	6.5	2003	10	
Annual population growth rate (%)	2.02	2005-06	<b>10</b>	
Total fertility rate (per woman)	2.3	2005	<b>10</b>	
Urban population (%)	30	2005-06	10	
<b>SOCIOECONOMIC SITUATION</b>				
Adult literacy rate (%)				
Total	91	1999-2000	2	
Male	91.4			
Female	90.6			
Prevalence of low birth weight (weight <2500 grams at birth) (%)	10	2000	11	

<b>Indicator</b>	<b>Latest available data</b>	<b>Year</b>	<b>Source</b>	<b>Remarks</b>
Prevalence of underweight (weight-for-age) in children <5 years of age (%)	31.8	2003	8	
<b>HEALTH SYSTEM</b>				
<b>INPUTS</b>				
<i>Facilities</i>				
Number of hospital beds	33,683	2003-04	2	
Population per hospital bed	1549			
Hospital beds per 10,000 population	6.5			
Number of health centres	1424			
<i>Human resources</i>				
Number of physicians	17476	2003-04	2	*Only for public sector
Population per physician	2985			
Physicians per 10,000 population	3.35			
Nurses per 10,000 population: Professional Nurses	4	2005-06	10	Computed
<i>Budgetary resources</i>				
Total expenditure on health (THE) as % of gross domestic product (GDP)	2.8	2003	12	
Public expenditure on Health (PHE) as % of total expenditure on health (THE)	19			
Private expenditure on health (Pvt.HE) as % of total expenditure on health (THE)	81			
Social security expenditure on health (SSHE) as % of public expenditure on health (PHE)	1.3			
<b>FUNCTIONS</b>				
Pregnant women attended by trained personnel during pregnancy (%)	66	2004	11	

Indicator	Latest available data	Year	Source	Remarks
Deliveries attended by trained personnel (%)	68	2003	8	
Contraceptive Prevalence (%)	37.0	2001	8	
Infants reaching their first birthday that have been fully immunised against diphtheria, tetanus, and whooping cough (%)	73	2005	13	
Infants reaching their first birthday that have been fully immunised against poliomyelitis (%)	73	2005	13	
Infants reaching their first birthday that have been fully immunised against measles (%)	72	2005	13	
Infants reaching their first birthday that have been fully immunised against tuberculosis (%)	76	2005	13	
<b>Environment</b>				
Population with access to improved water source (%)				
Total	79	2003	8	
Urban	92	2003	8	
Rural	74	2003	8	
Population with access to improved sanitation (%)				
Total	83	2003	8	
Urban	88		8	
Rural	81		8	
<b>OUTCOMES</b>				
Life expectancy at birth (years):				
Urban				
Male	61.5			
Female	65.6			
Rural		2001	1	
Male	60.8			
Female	63.3			

<b>Indicator</b>	<b>Latest available data</b>	<b>Year</b>	<b>Source</b>	<b>Remarks</b>
Infant mortality rate (per 1000 live births)	50	2003	8	
Maternal Mortality Ratio	380	2002-03	8	
Under-five mortality rate (per 1000 live births)	67	2003	8	
Out-of-pocket spending on health (OOPS) as % of private expenditure on health (PvtHE)	99.7	2003	12	
<b>GENDER EQUITY</b>				
Life expectancy at birth ratio (females as a % of males)				
Urban	106	2001	1	Computed
Rural	104			
Seats held in parliament (% of women)	6	2005	8	
Female share in employment (non-agricultural sector)	38.2	2002	8	
Adult literacy ratio (females as a % of males)	99.1	1999-2000		Computed
Primary school enrolment ratio (females as a % of males)	98.44	2004	8	
Secondary school enrolment ratio (females as a % of males)	95	2002-03	5	

Indicator	Latest available data	Year	Source	Remarks
<b>MDG HEALTH RELATED INDICATORS</b>				
G1.T2.I4 - Prevalence of underweight children (under-five years of age)	31.8	2003	8	
G1.T2.I5 - Proportion (%) of population below minimum level of dietary energy consumption	30.84	1997	8	
G4.T5.I13 – Under-five mortality rate (probability of dying between birth and age 5)	66.6	2003	8	
G4.T5.I14 – Infant mortality rate	49.7	2003	8	
G4.T5.I15 - Proportion (%) of 1 year-old children immunised for measles	72	2005	13	
G5.T6.I16 - Maternal mortality ratio	380	2002-03	8	
G5.T6.I17 - Proportion (%) of births attended by skilled health personnel	67.5	2003	8	
G6.T7.I18 - HIV prevalence among pregnant women aged 15-24 years (%)	1.20	2003	8	
G6.T7.I19 - Condom use in high risk population	55	2003	8	
G6.T8.I21a - Malaria death rate per 100,000 in children (0-4 years of age)	5.36	2002	8	
G6.T8.I21b-Malaria death rate per 100,000 (all ages)	4.7	2003	8	
G6.T8.I21c - Malaria prevalence rate per 100,000	13.5	2003	8	
G6.T8.I22a - Proportion (%) of population under 5 in malaria risk areas using insecticide-treated bed nets	11.98	2003	8	

Indicator	Latest available data	Year	Source	Remarks
G6.T8.I22b - Proportion (%) of population under 5 with fever being treated with anti-malarial drugs	10.3	2003	8	
G6.T8.I23a - Tuberculosis death rate per 100,000	18	2003	8	
G6.T8.I23b - Tuberculosis prevalence rate per 100,000	155	2003	8	
G6.T8.I24a - Proportion (%) of Smear-Positive Pulmonary Tuberculosis cases detected and put under directly observed treatment short course (DOTS)	83	2003	8	
G6.T8.I24b - Proportion (%) of Smear-Positive Pulmonary Tuberculosis cases detected cured under directly observed treatment short course (DOTS)	72	2003	8	
G7.T10.I30a - Proportion (%) of population with sustainable access to an improved water source, rural	74	2003	8	
G7.T10.I30b - Proportion (%) of population with sustainable access to an improved water source, urban	92	2003	8	
G7.T11.I31 - Proportion (%) of urban population with access to improved sanitation	88	2003	8	

**Sources:**

1. Statistical Year Book 2002, CSO, Ministry of National Planning & Economic Development
2. Ministry of Health, Health in Myanmar 2005
3. Country Health Profile 2004 (Draft), Ministry of Health, Government of the Union of Myanmar (MICS 2003)
4. The World Health Organisation, World Health Report 2005, WHO Geneva
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7. Fertility Reproductive Health Survey1997, Ministry of Immigration and Population, Yangon, Myanmar

8. Myanmar Millennium Development Goals Report 2005, Union of Myanmar, April 2005
9. National Mortality Survey 1999, Central Statistical Organisation, Ministry of National Planning & Economic Development, Myanmar 2002
10. Health in Myanmar, 2006, Ministry of Health, Myanmar
11. Annual Public Health Statistics. Report 2004
12. The World Health Organisation, World Health Report 2006, WHO Geneva
13. EPI Fact Sheet 2005, WHO- Regional Office for South-East Asia

## Millennium Development Goals (MDGs)

The progress made towards achievement of health related MDGs is given here:

### GOAL 1: ERADICATING EXTREME POVERTY AND HUNGER

**Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger**

Indicators	MDG target			
	1997	2000	2003	2015
4. Prevalence of underweight children under five years of age (%)*	38.6	35.3	31.8	19.3
5. Proportion of population below minimum level of dietary energy consumption (%)**	30.84			

Sources: \* Multiple Indicator Cluster Survey (MICS)

\*\* Ministry of Health

### Progress to date

#### *Prevalence of micronutrient deficiency (iodine, vitamin A, iron)*

Myanmar has identified protein energy malnutrition (PEM) and micronutrient deficiencies (iron deficiency anaemia, iodine deficiency disorders, and vitamin A deficiency) as its major nutritional problems. Interventions against these problems have always been targeted at the two most vulnerable age groups namely pregnant women and children below five years of age. Growth Monitoring and Promotion (GM/P) for under-3 children is the major PEM control activity taking place through the country. There are also nutrition rehabilitation activities in some selected urban and rural areas. Iron supplementation is the nation-wide programme against anaemia during pregnancy while supplementation for under-5 children and adolescent school girls is implemented in some selected areas. Universal salt iodization has been adopted for sustained elimination of iodine deficiency disorders while biannual supplementation with high potency vitamin A capsules from the major intervention against vitamin A deficiency. Under-nutrition among children has declined slowly over the last decade. There are steady improvements in iodine status of people and vitamin A status of children. Nevertheless, iron status of women and children has not changed significantly.

Average consumption of calories in 1997 was 92.5 percent of the recommended daily allowances (RDA). About 37 percent of household consumed calories at and above 100 percent of RDA and 30.84 percent consumed less than 80 percent of the RDA.

#### *Declining under-nutrition rate*

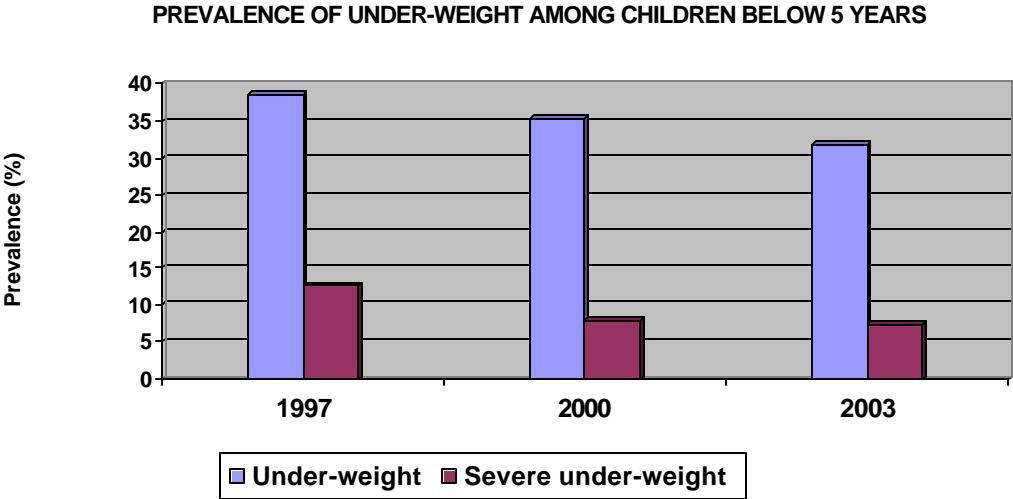
Prevalence of under-weight among children has declined slowly over the last decade. The National Nutrition Center of the Department of Health conducted nation-wide nutrition surveys every three years. Surveys conducted in 1988, 1991 and 1994 assessed the nutritional status of children below

three years of age because they were aimed at evaluating the impact of GM/P programme for this age group. The rate of under-nutrition among under-3 children declined as follows:

	1988	1991	1994
Under-weight (%)	42	37	31
Severe under-weight (%)	11.9	11.2	8.3

Source: National Nutrition Surveys, National Nutrition Center (NNC), Department of Health.

In 1997 nutritional assessment of children was integrated into the MICS of the Department of Health Planning. Since then the target group of the survey has changed to children below five years of age to make the data comparable internationally. Rate of under-nutrition among under-5 children declined as follows:



Source: Multiple Indicator Cluster Survey (2003), Department of Health Planning and NNC

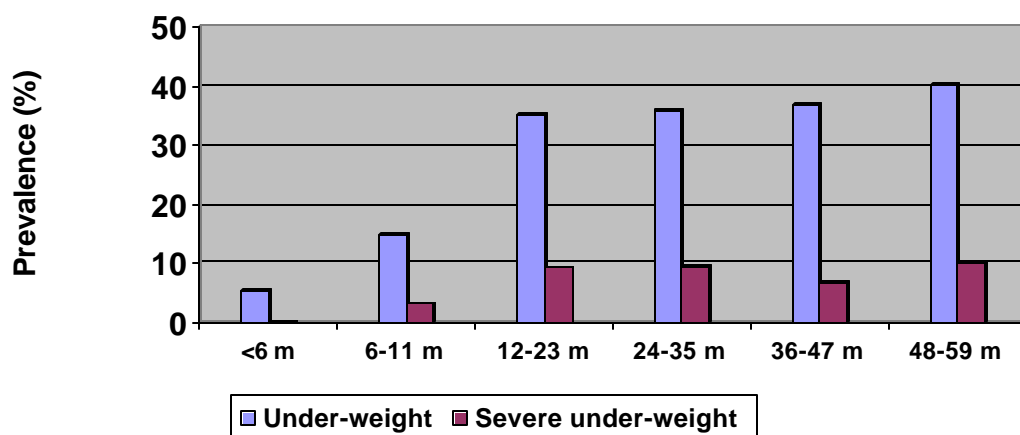
MICS 2003 indicated that there was no significant difference in the prevalence of under-weight between boys (31.1 percent) and girls (32.4 percent) but prevalence of under-weight among rural children was significantly higher than among their urban counterparts as shown in the following table.

	Urban	Rural
Under-weight (%)	25.3	33.5
Severe under-weight (%)	4.9	8.1

Source: Multiple Indicator Cluster Survey (2003), Department of Health Planning and NNC

MICS 2003 also showed that under-nutrition was rare among children below six months of age but markedly increased during the second half of infancy. Under-nutrition almost reached its peak in the second year of life after which it increased very slowly until 5 years as shown in the following figure.

### PREVALENCE OF UNDERWEIGHT CHILDREN BELOW 5 YEARS



Source: Multiple Indicator Cluster Survey (2003), Department of Health Planning and NNC

#### Maternal Education Level

Maternal education level is an important factor determining the nutrition status of under-5 children. MICS 2003 showed significant decrease in the prevalence of under-weight among children whose mothers attained secondary school level education.

	Maternal Education Level		
	Below Primary	Primary	Secondary
Under-weight (%)	36.9	34.0	26.1
Severe under-weight (%)	12.7	7.7	5.1

Source: Multiple Indicator Cluster Survey (2003), Department of Health Planning and NNC

#### Micronutrient deficiencies

##### Iodine Deficiency Disorders (IDD)

Myanmar has made a remarkable progress in its universal salt iodization programme which aims at virtual elimination of IDD by 2005. More than 86 percent of households were consuming iodide salt median urinary iodine excretion was 205 microgram g/liter in 2003-04. Prevalence of goitre has dramatically dropped from 33 percent in 1994 to 5.5 percent in 2004. Myanmar is optimistic that the status of IDD elimination will sustain beyond 2005 because of the following supporting factors:

- Strong political commitment,
- Systematic long term planning guided by a multidisciplinary committee for elimination of IDD chaired by the Minister of Health.
- Close cooperation between the two executive agencies namely the Department of Health of the MOH and Myanmar Salt and Marine Chemicals Enterprise of the Ministry of Mines, and
- Support from ministries and NGOs and the involvement of the private salt producers.

### *Vitamin A deficiency*

Vitamin A deficiency used to be a public problem among children in some townships of the central dry region and in a few peri-urban communities of Yangon city until late 1980s and expanded yearly until the whole country was covered in 1966. Since the beginning of the supplementation programme, emphasis has been put on proper communication between the central planners and the peripheral implementers. Effective dissemination of message from the peripheral workers to the people has led to high acceptance by the people. Coverage remarkably increased when vitamin A supplementation was integrated with polio vaccination on the National Immunization Days in 2000 through 2002. Prevalence of Bitot's spot (one of the ocular signs of vitamin A deficiency) among under-5 children declined from 0.6 percent in 1991 to 0.03 percent in 2000. There has been no nation-wide polio vaccination campaign since 2003. But, vitamin A coverage was kept high in 2003 when supplementation was done during the Nutrition Promotion Week campaign because of the support provided by local authorities, government departments, non-governmental organizations and the community. It is also important to increase public awareness of vitamin A supplementation through various means of information, education and communication in collaboration with the responsible organizations and NGOs.

### *Iron deficiency anaemia*

Anaemia has long been prevalent among women and children. Iron and folic acid supplementation is the single most important intervention which covers around 70 percent of pregnant women (MICS 2003). In spite of decades of intervention, haemoglobin status of pregnant women has not improved significantly. Irregular and inadequate supplies, ineffective distribution system and non-compliance by the mothers still exist as major constraints. Anaemia among under-5 children is as high as among pregnant women.

### **Challenges**

1. Food security at the household level is the major determining factor for nutritional status of under-5 children. Majority of under-nourished children belong to poor families residing at sub-urban communities and rural village. Income generating activities and job opportunities for urban dwellers and better access to agricultural land need to be created.
2. More than 50 percent of death among under-5 children is associated with malnutrition. Infections and malnutrition form a sinister alliance leading to high morbidity and mortality in this age group. Prevalence of vaccine-preventable diseases are declining but other infectious diseases, especially diarrhoeal diseases and acute respiratory infections are still major causes of illness and under-nutrition. Interventions aimed at healthy environment such as increased access to safe drinking water and sanitation, better personal hygiene with emphasis on proper hand washing practices, and reducing indoor air pollution need to be strengthened.
3. Maternal nutrition especially during pregnancy is the major determinant of foetal growth and development, and birth weight. Low birth weight incidence was around 24 percent in 1993 (National Nutrition Survey, NNC) and 12 percent in 2000 (Hospital records from States/Divisions). Weight gain during pregnancy is regularly monitored, appropriate nutrition education is provided and iron tablets are distributed to all pregnant women taking

antenatal care from midwives. Gut food taboos during pregnancy are quite common preventing women from taking various kinds of nutritious foods. Avoidance of nutritious foods continued during the lactating period making the mother as well as the suckling infant vulnerable to various micronutrients.

4. Breastfeeding rate is quite high (More than 90 percent) in Myanmar but exclusive breastfeeding before 6 months is still very low (less than 16 percent in MICS 2003). In many families, complementary foods given to infants are neither nutritionally adequate, nor safe. Proper infant and young child feeding practices need to be promoted and supported especially among families of uneducated mothers.
5. Maternal and child nutrition need to be improved through a stronger multi-sectoral approach in which all the relevant sectors including agriculture, fisheries, commerce, health, education, etc are actively involved and closely collaborated.

#### GOAL 4: REDUCE CHILD MORTALITY

##### TARGET 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate MDG target

Indicators	1990	1995	1998	1999	2003	2015
13. Under-five mortality rate (per 1,000 live births)	130 <sup>1</sup>	82.4 <sup>3</sup>		77.7 <sup>4</sup>	66.6 <sup>3</sup>	38.5
14. Infant mortality (per 1,000 live births)	98 <sup>2</sup>	55.4 <sup>3</sup>		55.1 <sup>3</sup>	49.7 <sup>3</sup>	28.3
15. Proportion of 1-year old <sup>5</sup> children immunized against measles	67.7		87		72 (2005)	

Source:

1. State of World Children, 2003, UNICEF.
2. Estimation of IMR in Myanmar, Department of Health Planning, 1991.
3. Over all and cause specific under-five mortality survey (DOH) 2002-03.
4. National mortality survey (CSO) 1999
5. Ministry of Health

#### Progress to Date

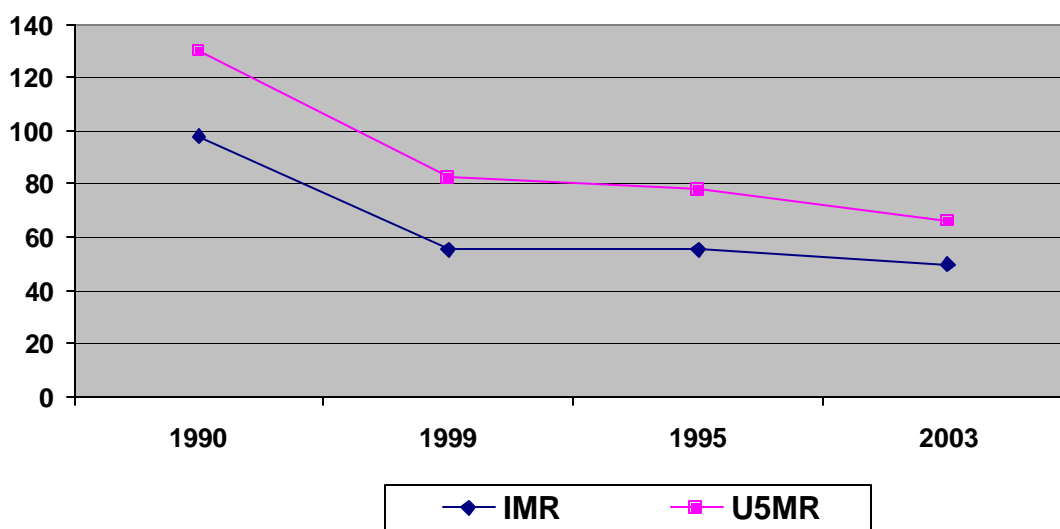
In Myanmar, according to National Health Plan, Ministry of Health (MOH) is implementing health programmes to promote the health status of the nation. For child health, the health projects, EPI, Nutrition, ARI and CDD were implemented in 1970s and 1980s. According to WHO concept of integration, ARI and CDD projects were integrated as Control of Diarrhoea and Respiratory Infections (CDRI) project. In 1998, IMCI strategy was adapted and introduced as Integrated Management of Maternal and Childhood Illness (IMMCI) strategy. Then, from 2001 onwards, in line with innovative life cycle approach, Women and Child Health Development project was launched by Department of Health.

For vital statistics, various departments and organizations such as Department of Health, UNFPA, UNICEF, and Central Statistical Organization collected data by various methods. Although vital rates vary with study design, method of data collection and coverage, all sources agree that Under-

Five Mortality Rate (U5MR) is on the descending trend. According to nation wide household survey by DOH it declines from 82.4 per 1000 live birth in 1995 to 66.6 per 1000 live birth in 2003. However, Infant Mortality Rate (IMR) is not markedly changed and it fluctuates between 49 and 55 per 1000 live births from 1990s to 2000s.

Reduction of U5MR is due to public health services such as improved access to primary health care services, EPI (BCG, DPT, Polio, measles, recently hepatitis B is introduced), CDD, ARI and vitamin A supplementation etc.

### U5MR and IMR



According to U5MR survey (2003), infant deaths contributes 73 percent of total under five deaths and high IMR is attributable to high rate of young infants deaths about 70 percent of infant deaths occurred in the first 3 months of life.

In the above study, it was also observed that U5MR varied among urban and rural area and also among different regions of the country (urban 37.3 & rural 72.5 per 1,000 live births; Delta 59.0 & Central Plan 76.8 per 1,000 live births).

### The leading causes of death for post neonatal children are:

SN	Diagnosis	(%)
1.	ARI	27.6
2.	Diarrhoea	17.6
3.	Brain Infections	17.1
4.	Malaria	7.6
5.	Beri Beri	7.1

6.	Septicaemia	5.7
7.	Acci. and Poi	2.0
8.	Unknown	8.4
9.	Other	6.6
<b>Total</b>		<b>100</b>

(n=590)

**For neonates the main causes of death are:**

SN	Diagnosis	(%)
1.	Pre-maturity	30.6
2.	Septicaemia	25.5
3.	Birth Asphyxia	24.5
4.	Unknown	11.7
5.	Brain Infections	4.3
6.	Congenital Anomaly	2.7
7.	Beri Beri	0.5
<b>Total</b>		<b>100</b>

(n=188)

### **Challenges and Adapting the Millennium Development Goals (MDGs) within the context of the National Plan**

#### *Rural Development*

In Myanmar, 70 percent of total population lives in the rural area. In spite of rural development plans, health status of the rural community still needs to be improved. This is due to difficult transport and communication, low education among women and slow development of mechanized farming.

The activities of Rural Development will be strengthened to meet the set objectives.

#### *Key family practices*

Due to traditional beliefs, health practices of the families in the rural area are not satisfactory. The examples are low rate of exclusive breastfeeding, low Oral Rehydration Solution (ORS) use rate and health care seeking from untrained persons.

To solve this problem, community based health activities (CBHA) will be strengthened and expanded to more townships in the near future.

### *Environmental Health*

Access to safe water supply and sanitary latrines are still low in both peri-urban and rural areas leading to high morbidity and mortality from gastrointestinal disease.

In future health programme cycle, the improvement of environmental health will be emphasized in collaboration with partner agencies.

#### *Primary health care coverage*

The target for primary health care coverage is to deploy one mid-wife in every village. Currently, a mid-wife has to cover 4 to 8 villages (5,000 to 10,000 populations).

To solve the problem, a category of voluntary health worker, Auxiliary Mid-Wife has been trained with the objective of improving maternal and new born health in the rural community for essential new born care and management of common childhood and diarrhoea.

### *Infectious Diseases*

Pneumonia, brain infection and septicaemia are still major contributors of death in children. From hospital data, H influenza is found to be the leading cause of meningitis in this country.

Introduction of Hib vaccine should be considered in routine EPI schedule.

In Myanmar, Measles vaccine was introduced in 1987, immunized at the age of 9 months and a concerted effort to improve coverage in border area has been made since 1993. Remarkable reduction of measles cases and deaths follows. Second opportunity of measles immunization (Mass Measles Campaign) for under 5 children done in 1995 and 1997. The vaccination coverage reached 67.7 percent in 1990. It can immunize the 87 percent of children under one year old in the year 1998. The strategies regarding reduction of measles mortality consist of improving routine immunization, second opportunity for measles immunization, integrated surveillance system and improve case management including vitamin A supplementation.

Second opportunity for 9 months to under 5 children (5.4) million of the whole country are immunized with Phase I, II and III during the year 2002, 2003 and 2004. It achieved 88 percent for year (I), 90 percent for year (II) and 80 percent for year (III). Extensive immunization on seven antigens of EPI in Myanmar is the best protection of the children under one year leading to decrease the IMR especially for the vaccine preventable disease mortality. The programme now reaches all 324 townships including hard-to-reach areas.

Reported measles cases in 1990 were 6,243 and case fatality rate was 1.2 percent. As a result measles cases decreased to only 1259 and case fatality rate was 0.8 percent in 2004. Most of the cases occurred in (5-9) age group. According to reported cases from 1996-2004 period of maximum transmission of measles appears to be from November to March. Mass Measles Campaigns should be conducted preferable during the period of low transmission. However, this period in Myanmar coincides with the rainy season, which makes operational activities in the field difficult.

Integrated surveillance is an active surveillance together with AFP and NNT. Myanmar has established an integrated surveillance system that includes measles surveillance where information for measles and other vaccine preventable diseases is used for immediate local action for control measures. All children with measles should be treated with two doses of vitamin A and special attention is given to provide vitamin A during measles outbreak investigations.

## GOAL 5: IMPROVING MATERNAL HEALTH

### TARGET 6: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

*Indicator 16: Maternal Mortality ratio (per 1,000 live births)*

Baseline	Current situation	Target 2015	Remarks
2.0 (1996)	1.5 (2003)	0.5	Routine HMIS
Urban 1 (1990)	1 (2001)	0.25	CSO
Rural 1.9 (1990)	1.8 (2001)	0.48	
2.32 (1994)	3.8 (2002-2003)	0.58	Survey MMS
Urban – 1.78		0.45	(National Mortality
Rural – 2.81		0.7	Survey, CSO-1999)
Total – 2.55		0.63	
(1999)			
1/1.9 (1990)	2.55 (2001)	0.25/0.475	WHO
2.3 (1995-2002)	3.6 (2000 adjusted)	0.575	UNICEF

*Source:* Ministry of Health

*Indicator 17. Proportion of births attended by skilled health personnel*

Indicators	1990	1991	1997	2001	2003
17. Proportion of births attended by skilled health personnel	50.8	46.3	56.4	57.0	67.5

*Source:* Fertility Reproductive Health Survey

Proportion of births attended by skilled health personnel is in increasing trend and also expected to achieve 2015 MDGs target.

### Progress to date

Based upon the survey findings, the Maternal Mortality Ratio was 178 in urban and 281 in rural per 100,000 live births (National Mortality Survey, CSO-1999). Regarding the proportion of births attended by skilled health personnel, HMIS reported as 40.1 percent in 2001 and 60 percent in 2004. As of 2003 December, 8,527 midwives and 28,872 Auxiliary Midwives (AMW) are providing maternal care throughout the nation. At present the ratio of midwifery skilled providers (including AMW) to village is 1:2 while the national target is at least one midwifery skilled person to every village. Thus, manpower production and allocation has been focused especially to rural and remote areas by enhancing the recruitment of Auxiliary midwives. During 2004, around 500 new AMW were trained to increase the strength of skilled birth attendants. At the same time institutional

delivery has also been enhanced among the community through upgrading and promoting of rural health centres and sub-centres with attachment of labour rooms.

### *Causes of maternal death*

It was shown that the highest cause of maternal deaths showed to be operative deliveries but did not represent to all operative deliveries as the patients usually come to the hospital in moribund state.

### **Adapting the Millennium Development Goals (MDGs) within the context of the National Plan**

In the light of Rural Health Development Scheme, health sector development was implemented throughout the nation. As the Nation's commitment to attaining MDG, special emphasis has put to implement the Making Pregnancy Safer initiative, as a high priority component of reproductive health strategy, which also included the introduction of Voluntary Counselling and Testing for prevention of mother to child transmission (PMCT) in routine AN Care. The collaboration between reproductive health programmes and other related key public programmes such as immunization (utilization of safe delivery kits, improving TT2), nutrition (management of anaemia in pregnancy, iron folic tablets, de worming in pregnancy), Malaria (prevention and management of malaria in pregnancy) has been strengthened. The five-year reproductive health strategic plan (2004-2008) was developed in progress with multi-sector support and contribution. Myanmar Reproductive Health Policy was formulated in 2002 and implemented at country level. Because of the reasons of urgency, impact and accessibility reproductive health has become a national concern.

At micro (sectoral) level, the causes of maternal and child morbidities and mortalities were analyzed and the appropriate action plans were developed and implemented. In improving maternal health, the action plan was designed to prevent maternal illness and serious deficiencies in the system in providing essential and comprehensive obstetrical care. Emphasis has been placed on antenatal care and the establishment of an infrastructure for basic obstetrical care for the management of pregnancy. As spelled out in the reproductive health policy, it has been arranged to screen for antenatal syphilis and detection of anaemia for every pregnant mother. Active management of third stage of labour

and the use of MgSO<sub>4</sub> in management of severe PET and Eclampsia has been introduced at appropriate operational levels.

### **Challenges**

The reproductive health programmes has obtained growing interest by donor agencies, decision-makers, and implementers. Better cooperation and coordination by national NGOs have been developed in line with the strong political commitment to ICPD goals and MDGs. Community involvement has also become the pivotal action in achieving the development goals. Since the nation's health system has been set up with a very strong infrastructure, implementation of new client-centered approach would be successful through better orientation of health workers. However, to certain extent cultural and policy may restraint some aspects of reproductive and sexual health services. These need to be executed tactfully. Financial and human resource constraints are also important issues requiring serious attention. Given the diversity of opinion among stakeholders, there is also a need for better cooperation and coordination among partners.

Key lessons learned during the past decade provide sound foundation for further improvement of the programme. Some of the evidence based lessons are as follows:

- Basic health staff are found to be in need of leadership and management skills
- Prioritization must be linked to Result Based Management
- Development of community ownership needs to be materialized
- Rights and gender basis in RH should be ensured
- Coordinated sustained resource commitment, which support developing country-led policy making should be considered

## **GOAL 6: COMBAT HIV, MALARIA AND OTHER DISEASES**

### **TARGET 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS**

<b>Indicator</b>	<b>1992</b>	<b>1995</b>	<b>2000</b>	<b>2003</b>
18. HIV prevalence among pregnant women aged 15-24 years (%)	2.71	1.96	2.78	1.20

*Source:* Ministry of Health

HIV prevalence among 15-24 year-old pregnant women is the percentage of pregnant women within the ages 15-24 whose blood samples test positive for HIV.

<b>Indicator</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
19. Contraceptive Prevalence Rate			
A. Condom use at last high-risk sex (%)	45.1	55	
B. Percentage of population aged 15-24 years with comprehensive correct knowledge of HIV/AIDS (%)		21	25

*Source:* Ministry of Health

<b>Indicator</b>	<b>PCFS</b>		<b>FRHS</b>	
	<b>1991</b>		<b>1997</b>	<b>2001</b>
19 C. Contraceptive Prevalence Rate (%)	16.8		32.6	37.0

19A. Proportion of male respondents of age 15-24 years who reported using condoms with their last non-regular partner, among those who reported to have had a non-regular sexual partner in the last 12 months.

19B. Percentage of respondents 15-24 years of age who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission or prevention.

## **Progress to Death**

*National Health Committee* was formed in 1989, it is a high level policy making committee chaired by the Secretary (1) of State Peace and Development Council with the Ministers from 14 concerned Ministers as members. The National Health Committee takes the leading role and gives policy guidelines for the effective and efficient implementation of national health programmes.

*National AIDS Committee* is formed to oversee and monitor the HIV/AIDS prevention and control activities over the whole country. The committee also gives necessary guidance to the capacity building as well as for undertaking research activities. There are 39 members, which comprises the Deputy Ministers, senior officials from the government side and chairperson from the selected NGOs.

Under the National AIDS committee, Working Committee is formed with the Directors-General from the concern departments, vice chairperson and secretaries from the same NGOs.

National AIDS committee is formed not only at the central level but also at the state/division/township levels.

With the technical assistance received from the UN agencies, the state/division and township levels NACs are working closely with the NGOs as well as the local community in the HIV/AIDS prevention and control activities.

### *Milestone of HIV/AIDS Prevention and Control in Myanmar*

- Ad hoc studies for HIV started in 1985.
- First HIV infected case was recorded in 1988.
- AIDS Control Programme started in 1989 with a short-term plan.
- National AIDS Committee established in 1989.
- First AIDS case reported in 1991.
- HIV Sentinel surveillance started in 1992.
- Prevention of mother-to-child transmission programme started in 2000.
- 100 percent condom use programme started in 2001.
- “ART for People Living with AIDS” started in the public sector in 2003.

### **Adapting the Millennium Development Goals (MDGs) within the context of the National Plan**

In Myanmar, National AIDS Programme has been addressing the stigma and discrimination issues by providing educational messages not only to general population but also to the targeted populations such as youths, out of school youths, mobile population, women, etc.

One of the remarkable events of awareness raising activities is the success of the “First Exhibition on HIV/AIDS Prevention and Control Activities” at the national level in Yangon during 3<sup>rd</sup> to 12<sup>th</sup> November 2003 and “The second Exhibition on HIV/AIDS Prevention and Control Activities” at national level in Mandalay during 16-20 October 2004. Eighty thousand individuals in Yangon and

sixty thousand individuals in Mandalay, from various walks of life, has visited these exhibitions. These successes not only reflect the existence of very high level of political commitments in the prevention and control of HIV/AIDS but also illustrate the achievement of high level of understanding and cooperation among the related Ministries, local and international NGOs, UN agencies that are collectively fighting the HIV/AIDS in Myanmar since they all participated in exhibition.

There are other activities carried out to combat the HIV/AIDS in the country. With the policy guidance laid down by the National Health Committee, National AIDS Committee has been closely monitoring and supervising the activities conducted by National AIDS Control Programme, under the Department of Health, Ministry of Health. These activities includes prevention of transmission through sexual mode within which 100 percent targeted condom promotion was an integral part (currently in 110 townships), prevention of HIV transmission among IDUs, prevention of mother to child transmission of HIV (PMCT) (currently in 36 townships), provision of care and support, screening of blood for HIV for the safe blood supply (currently in all hospitals up to township level), promotion of multi-sectoral collaboration and cooperation, special programmes activities, surveillance, supervision, monitoring and evaluation. Provision of care and support includes counselling, voluntary confidential counselling and testing, provision of antiretroviral therapy and treatment of opportunistic infections, and home care. These activities are being carried out not only by Ministry of Health but also in collaboration with other related Ministries such as, Ministry of Education, Ministry of labour and UN Agencies, NGOs and INGOs.

## **Challenges**

A cumulative total of 59,799 HIV-positive individuals (among blood donors and hospital patients) 8,921 AIDS patients, and 3,972 AIDS-related deaths were recorded by the National AIDS Programme during the period of 1988 to December 2004. The reports were from hospitals in different parts of the nation. Most of the AIDS patients and HIV-positive individuals detected were in the 20-40-year age group, with a male to female ratio of four to one.

The Ministry of Health, Myanmar and WHO Headquarters, UNAIDS and partners jointly held a workshop on 22-23 July 2004 for estimation of the number of people living with HIV and AIDS in the country. The group estimated that there were a total of 338,911 people living with HIV/AIDS at the end of 2004 in Myanmar.

The following trends have been observed from the HIV sentinel surveillance covering the period between 1992 and 2004. The surveillance involved primarily urban populations. The rates of prevalence in the low-risk groups (women attending antenatal clinics, new military recruits, and blood donors) have remained low. The prevalence among men attending STD clinics has also remained steady, but at a higher level. A decreasing trend was observed among IDUs at detoxification centres, but there was an increasing trend among Commercial Sex Workers (CSWs) attending the STD clinics in Yangon and Mandalay, the only two cities in which sentinel surveillance is conducted among CSWs. The prevalence of syphilis declined in both the low-and high-risk sentinel groups, which might have been due to the education campaign that included promotion and social marketing of condoms.

## GOAL 6: COMBAT HIV, MALARIA AND OTHER DISEASES

### TARGET 8: Have halted by 2015, and begun to reverse the incidence of malaria and other major diseases

*Indicator 21: Prevalence and Death rates associated with malaria in Myanmar (1990-2003)+*

<b>Malaria Indicator 21</b>	<b>1990</b>	<b>1991</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Deaths per 100,000 (0-4 yrs)	na	na	na	na	na	Na	5.90	5.65	7.46	7.68	5.14	5.68	5.36	
Deaths per 100,000 (all age)	12.6	12.6	11.2	9.8	9.9	8.4	7.5	6.3	6.7	7.6	5.5	5.5	5.1	4.7
Prevalence per 1000 (all age)	24.4	22.7	18.7	16.3	15.9	14.7	14.6	12.2	11.6	12.3	11.8	12.9	13.8	13.5

*Source:* Ministry of Health, na - not available

National targets for above indicators in year 2010 will be 2.6 deaths/100,000 in 0-4 years age group; 2.8 deaths per 100,000 in all age group and the prevalence rate of 5.9/1000 population.

*Indicator 22: Proportion of population in malaria risk areas using effective malaria prevention and treatment measure*

<b>Malaria</b>	<b>Area</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
% of pop. <5 year of age in all malaria risk areas using (ITN) (Insecticide Treated Nets)	Union	0.11	0.91	6.56	11.98
% of pop. <5 year of age in malaria risk areas with fever being treated with effective (T) (Antimalarial Drugs)	Union	18.9	23.6	11.5	10.3

*Source:* Ministry of Health

### Progress to Date

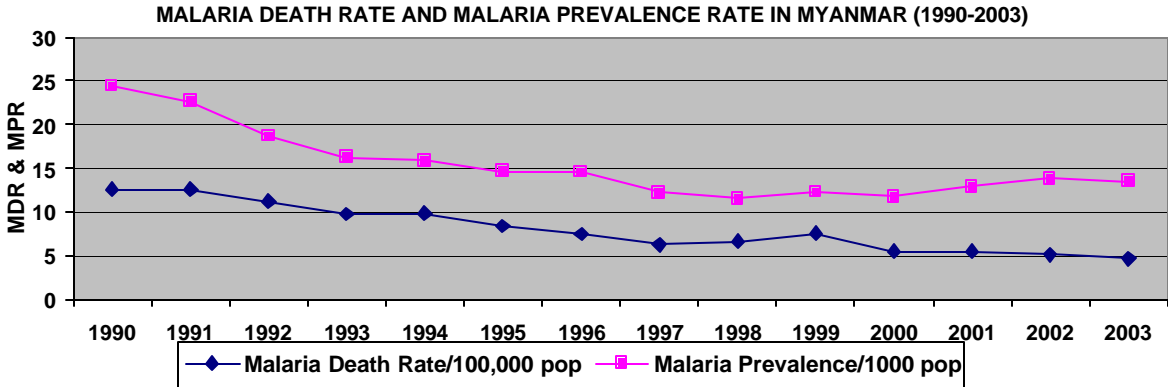
National Malaria Control Programme has been started since 1950. Pilot townships such as Iashio, Taunggyi Townships from Shan State were selected in 1953 for feasibility study of Malaria Eradication Programme by using DDT for indoor residual spray. With the great achievement gained from that programme and with expectation of eradication, it was changed in Malaria Eradication Programme in 1957. Although technically sound, the programme faced with operational failures, reduction in resources and other factors, it was converted again into Malaria Control programme in 1973. In 1978, the programme was integrated with other mosquito borne diseases such as dengue haemorrhagic fever, lymphatic filariasis, Japanese Encephalitis to form Vector Borne Diseases Control Programme. In 1993, "The Global Malaria Control Strategy",

which was declared at the Ministerial Conference on Malaria held in Amsterdam in October 1992, was adopted. Roll Back Malaria concept has been accepted by the programme.

Malaria is one of the priority diseases in Myanmar. About 70 percent of the populations are residing in malarious areas.

Malaria morbidity and mortality rate for 2 decades in Myanmar. About 70 percent of the populations are residing in malarious areas.

Malaria morbidity and mortality rate for 2 decades period were shown in graph. In the long-term trend, both malaria morbidity and mortality rates were declined. In 1988, morbidity rate and mortality rate were 24.5/1000 population and 10.4/100,000 population respectively. In year 2003 morbidity and mortality rate become 13/1000 population and 4.5/100,000 population respectively.



The highest malaria morbidity rate was seen in Chin State and Kayah State (>40 cases/1000 population) and the lowest malaria morbidity rate was seen in Mandalay Division, Yangon Division and Ayeyarwaddy Division. (<5 cases/1000 population)

The highest malaria mortality rate was seen in Kayah State (>12 deaths/100,000 population) followed by Kachin, Chin States and Tanintharyi Division (10-12 deaths/100,000 population). The lowest malaria mortality rate was seen in Ayeyarwaddy and Yangon Divisions.

Insecticides treated mosquito nets (ITN) utilization was promoted through IEC, distribution of bed nets and impregnation of existing nets. Priority is given to high malaria morbidity and mortality areas. Insecticide treated mosquito nets programme has been started since year 2000 in Kayah State. As a whole nation, proportion of <5 year of age in malaria risk areas using ITN was only 0.11 percent (base line) and increased up to 11.98 percent in year 2003.

Percent of population <5 year of age in malaria risk areas with fever being treated with effective treatment was 18.9 percent in year 2000 and declined up to 10.3 percent in year 2003. It doesn't mean decrease in service. It is due to reduction in malaria morbidity.

## **Adapting the Millennium Development Goals (MDGs) within the context of the National Plan Goal & Target**

National Malaria Control Programme Goal is to reduce 50 percent of malaria morbidity and mortality by the year 2010 based on 2000.

ITN target - To increase the coverage of ITNs from 213,600 households in 2003 to 1.48 million households by the year 2009.

### *Strategies to achieve goals*

Following strategies are established to achieve the goals.

- Information, Education and Communication regarding malaria causation prevention and control for increasing awareness of the community up to the grass root level
- Selection and sustainable preventive measures including vector control
- Prevention, early detection and containment of epidemics
- Early diagnosis and appropriate treatment
- Inter- sectoral collaboration with health related sectors
- Community involvement in malaria prevention and control activities
- Capacity building of different categories of health staff
- Field operation research

### *Main activities carried out to achieve the targets*

1. Promotion of insecticide treated bed nets
  - In year 2003, insecticide treated mosquito nets programme was implemented in selected villages of 35 priority townships in Myanmar. These townships have 583,371 households. Out of which 213,683 households have ITNs and ITN household coverage was 36.6 percent. In year 2005, additional 100,000 households will be covered by ITNs programme.
2. Early diagnosis and appropriate treatment
  - For early diagnosis of malaria, 600 microscopic facilities were established at the station hospitals and RHCs. About 434 thousand Rapid Diagnosis Test Kits were distributed up to sub-center level. New treatment policy on using Artemisinin based combination therapy (ACT) was started in 10 townships of Mandalay and 2 townships of Sagaing Division. Therapeutic efficacy testes were carried out at the sentinel sites. It is planned to monitor the counterfeit antimalaria drugs and ACT programme will be expanded.

### **Challenges**

1. Limited resources for improvement of coverage of activities and supervision, monitoring. Global Fund may be the one of the sources for scaling up the use of insecticide treated mosquito nets and its coverage. Human behaviour factors like regular and appropriate use of insecticides treated mosquito nets and its coverage. Human behaviour factors like regular and appropriate use of insecticides treated mosquito nets, carrying the bed nets when they go

to the forest for occupation reasons are also important factors for reduction of malaria morbidity and mortality.

2. Adherence of new antimalarial treatment policy-New Antimalarial Treatment Policy was adopted in September 2002 and started to use Artemisinin-based Combination Therapy for confirmed uncomplicated malaria Training, supportive supervision, adequate supply of RDT and ACT and involvement of private sector are key issues for successful implementation of new treatment policy.
3. Quality control of laboratory services need to strengthen and training of laboratory technicians is important for correct diagnosis leading to appropriate treatment.
4. Population migration due to socio economic reasons need to educate to carry the insecticides treated mosquito nets and appropriate use.
5. To solve the above challenges, improvement of the knowledge of the community on malaria causation, prevention and treatment seeking behaviour and changing their attitude/practices through community behaviour change communication is important.
6. Health infrastructure at the district level should be strengthened to manage the above challenges.

Indicators	1997	2000	2003
23. Prevalence and death rates associated with tuberculosis			
Tuberculosis Prevalence / 100,000*	103 (1994)	132	155
	SS+		
Tuberculosis Death rate / 100,000*	32.6 (1990)	34	18
	urban		
24. Proportion of tuberculosis cases detected and cured under directly observed treatment, short course.			
Proportion of Tuberculosis cases detected *	38 (1990)	51	83
Proportion of Tuberculosis cases cured #	61 (1994)	70	72
Proportion of Tuberculosis cases treated successfully #	78 (1994)	81	82

*Data Source:* \* World Health Organization, 2003, 2004. Global Tuberculosis Control – Surveillance, Planning, Financing. WHO Report 2003-2004 (Draft) Geneva.

# National Tuberculosis Programme, Department of Health, Ministry of Health, Annual Reports (2000-2003)

### Progress to Date

National Tuberculosis Programme (NTP) has been implemented since 1966. The vertical programme covers about one third of the country although its activities are integrated into primary health care services in 1978. NTP adopted the DOTS (Directly Observed Treatment Short Course)

strategy in 1997 and expansion phase took 7 years. The total area coverage achieved at the end of 2003.

It is estimated that about 100,000 tuberculosis cases develop yearly and half of them are infectious cases. According to the DOTS strategy expansion, the reported TB cases and deaths to NTP are increasing. The cure rate and treatment success rate of new sputum smear positive TB cases were 72 percent and 82 percent in 2003.

The baseline indicators to be uses in evaluation of Millennium Development Goal (MDG) are taken from the most reliable source.

### **Adapting the Millennium Development Goals (MDGs) within the context of the National Plan**

With high-level political commitment towards DOTS and external assistance, Myanmar is approaching WHO global targets despite of limited resources. Now that 100 percent DOTS coverage is achieved, NTP and the partners have to focus and enhancing quality of TB services nation-wise.

### **Challenges**

Sustainability of anti-TB drugs, Increasing drug resistances problem, TB/HIV co-infection, Accessibility for regular supervision, Delivery of efficient laboratory network.

*Indicator 28: Carbon dioxide emission (per capita) [Plus two figures of global atmospheric pollution: ozone depletion and the accumulation of global warming gases]*

Myanmar signed the United Nations Framework Convention on Climate Change (UNFCCC) in 1992 and ratified the convention in 1994. The Kyoto Protocol was acceded in 2003. The emission of CO<sub>2</sub> was first estimated in 1997 under the Asian Least Cost Greenhouse Gas Abatement Strategy (ALGAS) Project financed by the Asian Development Bank and the United Nations Environment Programme. CO<sub>2</sub> emission has yet to be updated. Although there has been some Methane emission originating from paddy fields, the contribution of Myanmar to global warming and climate change on the whole is negligible due to the large area of forest cover which acts as a carbon dioxide sink. The Status of Carbon dioxide emissions are as follows:

<b>Indicator</b>	<b>1992</b>	<b>1995</b>	<b>2000</b>	<b>2005</b>
Carbon dioxide emission (metric tons per capita)	1.8 (metric tons)	na	na	Na
Consumption of Ozone depleting CFCs (ODS tons)	54.3 (metric tons)	54.3 (metric tons)	54.3 (metric tons)	27.15* (metric tons)

\* *Target*

## **Ozone Depleting Substance**

Myanmar acceded to the Vienna Convention and Montreal Protocol in 1993. The consumption of Ozone Depleting Substance (ODS) particularly CFC 12 is only 54.3 metric tons per annum. The consumption of CFC has been frozen at this level over the past decade and will be reduced by fifty percent starting from 2005. The consumption of ODS is planned to be phased out in 2010 under the Ozone Country Programme.

## **Challenges**

Challenges are as follows:

- I. Mainstreaming environment in the development process,
- II. Institutional strengthening including enactment of National Environmental Protection Law and institutionalization of environmental standards,
- III. Reduction of rural and urban poverty,
- IV. Sustainable management of natural resources,
- V. Sustainable management of wastes including gaseous, liquid and solid wastes.
- VI. To educate and enhance public awareness.

## **GOAL 7: ENSURE ENVIRONMENTAL SUSTAINABILITY**

### **TARGET 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water**

*Indicator 29: Proportion of population with sustainable access to improved water*

*Source*

### **Progress to date**

As regards target 10 which is to halve the proportion of people without sustainable access to safe drinking water, the Ministry for Progress of Border Areas and National Races and Development Affairs has been carrying out programme for safe drinking water supply for the water scarce rural areas. The programme is to be carried out during the Third Short Term Five-Year Plan (2001/02 to 2005/06). Before the water supply programme commenced, there were 52010 villages of which 28785 villages had access to safe drinking water and 23,225 villages with lack of safe water supply. Out of 52,225 villages, 879 villages were without water supply, 9,166 villages had inadequate water supply and 13,180 villages were without safe drinking water supply. Hence, the government had laid down priority to implement water supply programme to these villages in various states and divisions.

During the plan period spanning 2001/02 to 2005/06, 504 villages out of 879 villages without water supply, 5,140 villages out of 9,166 villages with inadequate water supply, 6,000 villages out of 13,180 villages without safe drinking water will be accessed to safe drinking water supply. Thus, on completion of the programme 11,644 villages will have access to safe drinking water supply bringing the total number of villages with safe drinking water supply to 40,429.

While rural supply programme is carried out for the rural populace, urban water supply is also undertaken. Yangon City Development Committee (YCDC) and Mandalay City Development Committee (MCDC) are providing water supply to Yangon and Mandalay from surface water and ground water.

Surface water is developed from Gyobu reservoir, Phugyi Reservoir and Hlawga Reservoir and ground water extraction facility for Yangon is produced from YCDC tube wells and non-YCDC dug/tube wells. Existing water supply service is divided into three levels:

- I. Water source without pipeline network supply and beneficiaries access to the water source faucets.
- II. Water source with pipeline network supply and beneficiaries access the public faucets.
- III. Water source with pipeline network supply and beneficiaries can utilize from the in-house faucets.

Besides the YCDC and MCDC which are responsible for provision of Yangon and Mandalay water supply system, Department of Development Affairs carried out water supply for rural and urban towns. Public works under the Ministry of Construction is responsible for water supply to government buildings. Environmental and Sanitation Division under the Ministry of Health is implementing water supply system to health institutions and also undertaking Water Quality Surveillance and monitoring System Pilot Projects. Due to these efforts, the percent of total population with access to safe drinking water is 72 percent according to 2000 MICS data exceeding the year 2015 target of 66 percent. However, the quality of water and water supply facilities still need to improve. Programme for access to Safe Drinking Water as of MICS by the Ministry of Health is as follows: -

1990			2000			2015 Target		
Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
38%	30%	32%	89%	66%	72%	69%	65%	66%

**Target 11: By 2020, to have achieved a significant improvement in the lives of at least 100 million slum dwellers**

*Indicator 30: Proportion of people with access to improve sanitation*

Regarding proportion of people with access to improve sanitation, Myanmar also strives for safe disposal of human excreta in both urban and rural areas for improved sanitation. Since 1982, in collaboration with UNICEF, Sanitation Pilot Projects were launched in 13 townships in four geographical regions viz. dry zone, costal, hilly and delta. Success in Pilot Projects was very promising and thus the programme continued to apply throughout the country by implementing National Sanitation Programme through self-help basis beginning from 1996.

Annual national sanitation week initiated in 1998 are the most effective Advocacy Campaigns throughout the country and they bring about enormous success in boosting community awareness

and increasing sanitation coverage. Proportion of people with access to improve sanitation is 83 percent exceeding the year 2015 target of 68 percent. Programme for access to improve sanitation as of MICS by the Ministry of Health is as follows:

<b>1990</b>			<b>2000</b>			<b>2015 Target</b>		
Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
40%	35%	36%	87%	82%	83%	70%	67.5%	68%