FIVE-YEAR STRATEGIC PLAN
FOR
CHILD HEALTH DEVELOPMENT
IN MYANMAR
(2010-2014)
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<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>AMW</td>
<td>Auxiliary Midwife</td>
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<td>ARI</td>
<td>Acute Respiratory Infections</td>
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<tr>
<td>BCC</td>
<td>Behavior Change Communication</td>
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<td>BFHD</td>
<td>Baby Friendly Home delivery</td>
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<tr>
<td>BFHI</td>
<td>Baby Friendly Hospital Initiative</td>
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<tr>
<td>CAH</td>
<td>Child and Adolescent Health</td>
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<tr>
<td>CBHA</td>
<td>Community Based Healthcare Association</td>
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<tr>
<td>CEU</td>
<td>Central Epidemiological Unit</td>
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<tr>
<td>CHD</td>
<td>Child Health Development</td>
</tr>
<tr>
<td>CHW</td>
<td>Community Health Worker</td>
</tr>
<tr>
<td>CSO</td>
<td>Central Statistical Organization</td>
</tr>
<tr>
<td>DHF</td>
<td>Dengue Haemorrhagic Fever</td>
</tr>
<tr>
<td>DHP</td>
<td>Department of Health Planning</td>
</tr>
<tr>
<td>DOH</td>
<td>Department of Health</td>
</tr>
<tr>
<td>DPT</td>
<td>Diphtheria Tetanus Pertussis</td>
</tr>
<tr>
<td>ENC</td>
<td>Essential Newborn Care</td>
</tr>
<tr>
<td>EPI</td>
<td>Expanded Program for Immunization</td>
</tr>
<tr>
<td>FRHS</td>
<td>Fertility and Reproductive Health Survey</td>
</tr>
<tr>
<td>GAVI</td>
<td>Global Alliance for Vaccines and Immunization</td>
</tr>
</tbody>
</table>
| GAVI/HSS     | Global Alliance for Vaccines and Immunization Health System
<p>| HiB          | Haemophilus influenza B                           |
| HIV          | Human Immune Deficiency Virus                     |
| HMIS         | Health Management Information System              |
| ICPD         | International Conference on Population Development|
| IEC          | Information Education and Communication           |
| IMCI         | Integrated Management of Childhood Illnesses     |</p>
<table>
<thead>
<tr>
<th>Acronym</th>
<th>Definition</th>
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<tbody>
<tr>
<td>IMMCI</td>
<td>Integrated Management of Maternal and Childhood Illnesses</td>
</tr>
<tr>
<td>INGO</td>
<td>International Non Governmental Organization</td>
</tr>
<tr>
<td>LB</td>
<td>Livebirths</td>
</tr>
<tr>
<td>LBW</td>
<td>Low Birthweight</td>
</tr>
<tr>
<td>MCH</td>
<td>Maternal and Child Health</td>
</tr>
<tr>
<td>MDG</td>
<td>Millennium Development Goal</td>
</tr>
<tr>
<td>MICS</td>
<td>Multiple Indicator Cluster Survey</td>
</tr>
<tr>
<td>MOH</td>
<td>Ministry of Health</td>
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<tr>
<td>MOU</td>
<td>Memorandum of Understanding</td>
</tr>
<tr>
<td>NGO</td>
<td>Non Governmental Organization</td>
</tr>
<tr>
<td>NNC</td>
<td>National Nutrition Center</td>
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<tr>
<td>ORS</td>
<td>Oral Rehydration Solution</td>
</tr>
<tr>
<td>ORT</td>
<td>Oral Rehydration Therapy</td>
</tr>
<tr>
<td>PHC</td>
<td>Primary Health Care</td>
</tr>
<tr>
<td>PMCT</td>
<td>Prevention of Mother to Child Transmission</td>
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<tr>
<td>PSI</td>
<td>Population Services International</td>
</tr>
<tr>
<td>RH</td>
<td>Reproductive Health</td>
</tr>
<tr>
<td>SBA</td>
<td>Skilled Birth Attendants</td>
</tr>
<tr>
<td>SOP</td>
<td>Standard Operating Procedure</td>
</tr>
<tr>
<td>TBA</td>
<td>Traditional Birth Attendant</td>
</tr>
<tr>
<td>TMO</td>
<td>Township Medical Officer</td>
</tr>
<tr>
<td>TT</td>
<td>Tetanus Toxoid</td>
</tr>
<tr>
<td>U5MR</td>
<td>Under-five mortality rate</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNICEF</td>
<td>United Nations Children's Fund</td>
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<tr>
<td>UNDP</td>
<td>United Nations Development Program</td>
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<tr>
<td>UNFPA</td>
<td>United Nations Population Fund</td>
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<tr>
<td>WATSAN</td>
<td>Water and Sanitation</td>
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<tr>
<td>WCHD</td>
<td>Women and Child Health Development</td>
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<td>WHO</td>
<td>World Health Organization</td>
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1. Executive Summary

This child health strategy (2010-2014) document is prepared as a guidance for achieving MDG 4 to reduce under-five mortality by two thirds of the level in 1990 by the end of 2015 in Myanmar. The strategy was prepared through a consultative process using a process comprising of several steps:

(a) short program review by 60 participants from national, and other levels including townships, INGOs, national NGOs and UN in September 2009.

(b) bilateral discussions of WHO and UNICEF with concerned counterparts in Department of Health (DOH) and key partners (national and international) for consensus building in October 2009.

(c) strategic plan development workshop with 70 participants, international experts and academia organized jointly by DOH, UNICEF and WHO in October 2009.

(d) draft strategic plan development by Ministry of Health (MOH), WHO and UNICEF incorporating literature review.

(e) peer review of the draft with revisions and

(f) a consensus meeting.

The goal of this strategy is to reduce the under-fives mortality to 43/1,000 live births, infant mortality to 35/1,000 live births and neonatal mortality to 16/1,000 live births by 2015. The salient targets established by the strategy to achieve the above mentioned goals are:

(a) 80% of all newborns receive the community based Essential Newborn Care package.

(b) 80% of all low birth weight infants receive extra care during the newborn period.

(c) 60% of the families practice hand washing and provide appropriate feeding for children 0-23 months of age.

(d) 60% of infants 0-6 months are exclusively breastfed.

(e) 50% of the acutely malnourished children (uncomplicated moderate and severe malnutrition) are treated adequately.
(f) 90% of children with acute diarrhoea are treated with Oral Rehydration Therapy (ORT), including Oral Rehydration Solution (ORS) where indicated, and continued feeding and

(g) At least 70% of suspected pneumonia is treated with antibiotics recommended by the program.

This strategy recognizes the importance of linkage with other sections under Department of Health for synergy and maximization of resources. These include:

(1) Maternal and Child Health section for maternal and newborn care as well as birth spacing
(2) National Nutrition Center for Infant and Young Child Feeding, food supplementation
(3) Vector Borne Disease Control Unit for prevention and treatment of malaria in children under the age of five years
(4) Expanded Programme for Immunization (EPI) unit for vaccine preventable diseases
(5) HIV/AIDS unit for prevention of mother to child transmission
(6) Water and Sanitation (WATSAN)
(7) Medical care division for BFHI/BFHD
(8) National Tuberculosis Program
(9) Dengue Haemorrhagic Fever Unit

Key strategic documents or planning documents have been prepared by these sections/units to guide their work for the next four to five years. Key elements contributed by these sections/units are considered important to contribute to improve child health and this strategy is supportive of all efforts made by them to reduce neonatal, infant and child mortality. The present child health development plan envisages close collaboration with these sections/units in its pursuit for achieving MDG 4.

The main thrust areas as the way forward for child health to reach the MDG 4 include:

(a) Essential Newborn Care comprising of home visits for newborn care, inclusion of neonate in IMCI and regular child death review at all levels including audits in health facilities and hospitals
(b) Community case management of pneumonia and diarrhoea through BHS
(c) Referral care for sick newborns and children in hospitals
(d) Community capacity development/behavior change communication for 5 key community practices to empower the families in child care and promote early and appropriate care seeking during illnesses.

The implementation would be based on three scenarios:

(1) low coverage areas comprising of townships with DPT3 coverage of less than 75%,
(2) medium coverage areas with DPT3 coverage of 75-94% and
(3) high coverage areas comprising of DPT3 coverage of 95% or more.

Packages of interventions suitable for each of the above scenarios will be developed including the minimum package for scenario 'A' for low coverage, intermediate package for scenario 'B' and comprehensive package for townships with high coverage.

The strategy will be implemented using three delivery channels to cover continuum of care across the health system:

(1) Family oriented self care supported mostly by BHS and some family oriented self care supported by community health workers/ volunteers
(2) Population oriented schedulable /outreach services and
(3) Individual oriented clinical care in health centers and hospitals

The child health strategy recommends amongst other policy shifts:

(a) enhance one coordination mechanism through national child health committee and child survival forum
(b) define uniform technical standards to be followed by all the partners
(c) strengthen one monitoring and evaluation system using core indicators
(d) undertake costing of the package which tags impact with cost for making a strong investment case
(e) address diversity and equity and stress on quality assessment and quality improvement of the program through ongoing efforts.

Capacity development including human resource development, a strong and efficient system for procurement and logistics of supply and unified system for monitoring and evaluation are key elements of the strategy. The emphasis of this strategy is to remove the current bottlenecks to achieve wider coverage and improved quality in the program.
While this strategy would be used as a framework, implementation would be done through rolling plans at the national level and integrated microplanning at the sub national level. The rolling plans will base on the information and periodic review while the microplans would base on the local data and information. Thus this strategy envisages a strong link between evidence and information with planning and program development. This strategic plan does not include activity planning or implementation planning which will be undertaken as a part of rolling/biennium plan development.

The next steps consist of:
(a) approval and dissemination of the strategy,
(b) costing of the strategic plan,
(c) development of rolling plans for implementation and
(d) advocacy for mobilization of additional resources required for the child health program.

Costing of this plan will be jointly undertaken by Department of Health, WHO and UNICEF and will be developed following the dissemination.

This plan needs to be reviewed after three years of implementation for mid-course correction.
Figure 1: Map of Myanmar
2. Background

2.1 Topography and administrative divisions of Myanmar

Myanmar is a country with 676,578 square kilometers area which has borders with the Republic of India and People’s Republic of Bangladesh on its west, People’s Republic of China on the north and north east, Lao Peoples’ Democratic Republic and the Kingdom of Thailand in the south and south east. The topography of the country is quite varied comprising of hilly areas, plains, coastal areas and deltas on the Andaman Sea in the south and the Bay of Bengal in the west. The terrain is hilly in the north, west and east, coastal lowlands and the central valley region (Please refer to the map for details). The states of Shan, Chin, Kachin, Kayin and Kayah are in the north and eastern part of the country. The terrain in many areas in these states is hilly. The central plains comprise of divisions of Mandalay, Sagaing and Magway while Yangon, Bago and Ayeyarwady are in the delta region. Mon and Rakhine States and Tanintharyi Divisions are located in the coastal areas.

The country is divided administratively into 14 States and Divisions, 67 districts 330 townships, 64 subtownships, 2891 wards, 13,698 village tracts and 64,817 villages. There are three major rivers in the country. Natural resources comprise of land, water, forest, minerals, coal, natural gas and petroleum and marine resources. The climate is predominantly tropical with three distinct seasons (summer, rainy and cold).

2.2 Demographic situation

The population of Union of Myanmar is estimated to be 58.38 million in 2008-09 with a population growth rate of about 1.52% annually. The sex ratio was 98.91 males per 100 females in 2008-09 (Source: Health in Myanmar 2010). Rural population is nearly 70% of the total population in the country while the rest of the population is in the urban and periurban areas. About 60% of the population of the country comprises of women and children and the estimated population of children under the age of 5 years was 6.6 million which is about 11.7% of the total population (Source: Statistical Year Book 2007 CSO).
The population density varies between 15 per square kilometers (Chin state) and 666 per square kilometers (Yangon division) with the average population density of 86 per square kilometers in the country. There are 135 national groups who speak more than 100 different languages and dialects. The major ethnic groups are Bamar, Chin, Kachin, Kayah, Kayin, Mon, Rakhine and Shan. The large majority of the people are Buddhist, while the rest are Christian, Hindu and Muslims.

2.3 Socioeconomic development

For economic development, top priority has been accorded to agriculture. Encouragement for the development of the industrial sector has been provided since 1995. In order to support and encourage small and medium industry throughout the country a total of 19 industrial zones have been established by the government in the states and divisions. The government of Union of Myanmar has also carried out liberal economic reforms to ensure participation of the private sector in every sphere of economic activity as a part of economic reforms. The gross domestic product showed a favorable growth rate between 1998-2005 from 5.8% in 1998-1999 to 13.1% in 2006-2007 (Source: Statistical Year Book 2007, CSO).

The development of social sector has kept pace with economic development. The adult literacy rates increased from 79.7% in 1988 to 94.1% in 2005. The school enrolment was 67.1% in 1988 and it increased to 97.58% in 2005 (Source: Health in Myanmar, 2010). Continuous efforts have been made by the government to ensure equity and access to health, education and social services.

2.4 Health Care System in Myanmar

In the Union of Myanmar, Ministry of Health is the main organization responsible for provision of health. In the country, the cabinet is guided by the state peace and development council. Similar mechanism is also established at the state/division level, district level, township level and ward/village level. The national policy, is guided by the National Health Committee which was constituted in 1989 as a part of health sector reforms in the country. The National Health Committee is a high level inter ministerial and policy making body with a high level leadership role to provide guidance in
implementing the health programs efficiently and systematically. The composition of National Health Committee is included in the Annexure. It provides mechanism for intersectoral coordination and collaboration. Under the guidance of National Health Committee, various committees are established at all administrative levels in the country to provide guidance and direction for all health care activities and programs. For the monitoring and evaluation purpose, National Health Plan Monitoring and Evaluation Committee has been formed at the central level with built-in monitoring and evaluation process at State/Division and Township level.

Department of Health is one of 7 departments under the Ministry of Health. It plays a major role in providing comprehensive health care throughout the country including remote and hard to reach border areas. In addition, there are some ministries that provide health care (mainly curative) for their employees and families. Ministry of Industry is running a Myanmar Pharmaceutical Factory and producing medicines and therapeutic agents to meet the domestic needs. The private, for profit, sector is mainly providing ambulatory care though some of them are also providing institutional services in Yangon, Mandalay and some large cities in recent years. They are regulated in conformity with the provisions of the law (The law relating to private health care services, 2007) relating to Private Health Care Services. There are some opportunities for updating the knowledge of private health care providers and Myanmar Medical Association is a link between the private health care providers and the public health providers in the country to encourage their participation in the public health activities. It undertakes numerous ongoing continuing medical education activities.

One unique and important feature of Myanmar health system is the existence of traditional medicine along with modern system of medicine (allopathic medicine). It is fairly well accepted and utilized by the people. The state encourages the scientific evaluation of therapeutic practices in traditional health system. A University confers the degree in traditional medicine and there are 14 hospitals for traditional medicine run by the state. The practitioners of traditional medicine are recognized by the state in accordance with the provisions of related laws (Traditional Medicine Council Law, 2000).

In line with the National Health Policy, NGOs such as Myanmar Maternal and Child Welfare Association (Myanmar Maternal and Child Welfare Association Law, 1990) and Myanmar Red Cross Society are also taking share of service provision and their roles are becoming important as the needs for collaboration in health become
more prominent. They have an important role in intersectoral collaboration and enhancing community participation. Their work is facilitated by the health committee at every level. The head of the health department is the secretary of the committee at each level (Figure 2).
Figure 2: Organization of the public healthcare delivery system
2.5 Department of Health

In the Department of Health under the supervision of the Director General and Deputy Directors General, there are Directors who are leading and managing the following divisions:

(a) Administration
(b) Planning
(c) Public Health
(d) Medical Care
(e) National Health Laboratory
(f) Disease Control
(g) Food and Drug Administration
(h) Occupational Health
(i) Nursing
(j) Account
(k) Health Education Bureau

Sustained collaboration would be required with the concerned divisions during the scaling up of child health strategy e.g. EPI, Malaria, DHF, Tuberculosis, and HIV/AIDS in disease control, human resources in nursing, Health Education Bureau.

In addition to DOH, the work of other departments also contributes substantially to child health and development e.g. Department of Health Planning (for health information), Departments of Medical Research (for operational research), Department of Medical Sciences (for human resource development) and Department of Traditional Medicine.

Maternal and Child Health is the responsibility of a Deputy Director General of the division of Public Health in Department Of Health. Besides the Division of Public Health, the other departments in the Ministry of Health have an important stake in child health and development. Within the Department of Health, the key stakeholders for child health include:

(a) Reproductive Health
(b) EPI
(c) Nutrition
(d) Primary Health Care services and Basic Health Services
(e) Malaria
(f) Central Epidemiological Unit
(g) HIV/AIDS
(h) WATSAN
(i) BFHI
(j) Health Education Bureau
(k) TB
(l) DHF

To ensure continuum of care ongoing collaboration amongst all the stakeholders would be necessary.

2.6 Health legislation

There are several legal provisions in the national health policy that are connected with child health development. Public Health Law (1972) is concerned with protection of peoples' health by controlling the quality and cleanliness of food, drugs, environmental sanitation, epidemic diseases and regulation of private clinics. Myanmar Maternal and Child Welfare Association (1990) describes the structure, objectives, membership and formation, duties and powers of Central Council of this national NGO and its executive committee. National Drug Law (1972) was enacted to ensure access by the people to safe and efficacious drugs. The law relating to private health care services (2007) was enacted to develop private health care services in accordance with the national health policy to enable private health services to be carried out systematically as an integrated part in the national health care system to enable utilizing the resources of private sector in providing health care to the public effectively to provide choice of health care provider for the public by establishing public health care services and to ensure that quality services are provided at fair cost with assurance of responsibility in the private sector.
2.7 Policies relating to child health

Myanmar Health Vision 2030

Considering the rapid changes in demographic, epidemiological and economic trends both nationally and globally, a long-term (30 years) health development plan (Myanmar Health Vision 2030) has been drawn up to meet any future health challenges. The plan is developed within the broad framework of the national objectives i.e. political, economic and social objectives of the country. This long term visionary plan with its objectives will be a guide on which further short-term national health plans are to be developed (Box 1).
Box 1: Myanmar Health Vision 2030

Objectives: Myanmar Health Vision 2030

1. To uplift the health status of the people.
2. To make communicable diseases no longer public health problems, aiming towards total eradication or elimination and also to reduce the magnitude of other health problems.
3. To foresee emerging and potential health problems and make necessary arrangements for the control.
4. To ensure universal coverage of health services for the entire nation.
5. To train and produce all categories of human resources for health within the country.
6. To modernize Myanmar Traditional Medicine and to encourage more extensive utilization.
7. To develop medical research and health research up to the international standard.
8. To ensure availability in sufficient quantity of quality essential medicine and traditional medicine within the country.
9. To develop a health system in keeping with changing political, economic, social and environmental situation and changing technology.

Key indicators have been articulated for Myanmar Health Vision 2030. These are summarized in Table 1.

Table 1: Key indicators articulated for Myanmar Health Vision 2030

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Existing (2001-2002)</th>
<th>2011</th>
<th>2021</th>
<th>2031</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life expectancy at birth</td>
<td>60-64</td>
<td></td>
<td></td>
<td>75-80</td>
</tr>
<tr>
<td>Infant Mortality Rate/1,000 LB</td>
<td>59.7</td>
<td>40</td>
<td>30</td>
<td>22</td>
</tr>
<tr>
<td>Under-five Mortality Rate/1,000 LB</td>
<td>77.8</td>
<td>52</td>
<td>39</td>
<td>29</td>
</tr>
<tr>
<td>Maternal Mortality Ratio/1,000 LB</td>
<td>2.55</td>
<td>1.7</td>
<td>1.3</td>
<td>0.9</td>
</tr>
</tbody>
</table>
The Government of Union of Myanmar promulgated the Child Law on 14th July 1993, Pursuant to the Child Health Law of 1993, the convention of the rights of children and the National Health Policy.

Laws and regulations that are important for child health have been established in a number of areas, including: commitment to the UN Human Rights Conventions (Article 3); Marketing of Products for Infant and Young Child feeding (Code of Marketing of Breast Milk Substitutes is in the process of finalization).

Myanmar, as a signatory of the World Summit Declaration, Development and Protection of Children has been engaged in relentless efforts to develop and promote health care within the framework of the National Health Plan (1996-2001). The Under-five Mortality Rate (U5MR) is recognized as a sensitive measure of the status of child health, and information on the causes of death of children aged less than five years reflects the impact of health and related interventions. Since neonatal deaths constitute about one third of all infant deaths, the current National Health Plan (2006-2011) has given a high priority to new born health care.

Several strategic plans have been prepared to facilitate the implementation of the national policy. National strategic plans have been prepared for Reproductive Health (2004-2008, 2009-2013), Child Health (2005-2009), the plan for 2010-2014 is being prepared, Adolescent Health and Development (2009-2013), the National Plan of Action on Food and Nutrition, strategic plan for malaria and action plans for EPI and strategic plan for HIV/AIDS.

Recognizing the importance of continuum of care, efforts are being made to integrate various programs and projects. These include Women and Child Health Development project (WCHD), Integrated Management of Childhood Illnesses (IMCI/CHD), Adolescent Health (CAH), Essential Newborn Care (ENC), Baby Friendly Hospital Initiative (BFHI), Baby Friendly Home Delivery (BFHD), Reproductive Health (RH), Nutrition, EPI, Malaria, TB, PMCT, and WATSAN.

Laws and policies on vital registration have been formally adopted. However, birth and death registration has fallen off since village development committee secretaries have not been present at the village level and have therefore not been available to record births and deaths systematically. There is no information on how old children are when birth registration takes place and it is generally believed that many newborn births and deaths have gone unrecorded.
Standards and guidelines

An essential drug list is available and includes all essential child health drugs.

Planning and management

Planning is done annually at Central, State/Division and Township level. Annual performance reviews for WCHD are conducted at the central level with related programs, projects, sections and partners. Available HMIS and MICS data are reviewed and plans made for strengthening implementation. Monitoring and supervision is conducted at State and Divisional level by Divisional Health Directors or State Health Directors and State and Divisional Health Training Teams and at Township level by Township Medical Officers (TMOs) and Township Training Team. In addition to periodic reviews, BHS are responsible for regular supervision of community volunteers while TMOs and Township Training Team’s members are responsible for supervising BHS.

2.8 Partnerships in child health

Besides the partnership with WHO (IMCI/CHD), UNICEF (WCHD), UNFPA (Reproductive Health), UNDP (child health services in border area townships), there are other important international NGOs who are partners in child health development in Myanmar. These partnerships are summarized in Table 2.
Table 2: Partnerships with INGOs in Child Health and Development

<table>
<thead>
<tr>
<th>INGO</th>
<th>Coverage</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save the Children</td>
<td>Magway Division- two townships Yangon Division- two townships Ayeyarwady Division- two townships</td>
<td>Community based child survival programs</td>
</tr>
<tr>
<td>PSI</td>
<td>152 townships</td>
<td>Management of pneumonia by doctors Social marketing of ORS (low osmolarity ORS and 10 zinc tablets)</td>
</tr>
<tr>
<td>Merlin</td>
<td>Ayeyarwady Division- one township Chin State- one township Sagaing Division- one township</td>
<td>WCHD package including CBHA package</td>
</tr>
<tr>
<td>Community Development Association</td>
<td>Yangon Division- 10 townships Mandalay Division- 10 townships</td>
<td>Neonatal resuscitation training Clean water facilities</td>
</tr>
</tbody>
</table>

2.9 Health Financing

The per capita expense on health by the government is summarized in Table 3. It has increased from 11.8 Kyats in 1988 to 848.5 Kyats in 2007.

Table 3: Government health expenditure for health (Source: Health in Myanmar, 2010)

<table>
<thead>
<tr>
<th>Health Expenditure (Kyats in million)</th>
<th>1988-89</th>
<th>2006-07</th>
<th>2007-08</th>
<th>2008-09</th>
</tr>
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<tbody>
<tr>
<td>Current</td>
<td>347.1</td>
<td>36497.3</td>
<td>38414.2</td>
<td>41490.8</td>
</tr>
<tr>
<td>Capital</td>
<td>117.0</td>
<td>10717.6</td>
<td>10371.3</td>
<td>10184.1</td>
</tr>
<tr>
<td>Total</td>
<td>464.1</td>
<td>47214.9</td>
<td>48785.5</td>
<td>51674.9</td>
</tr>
<tr>
<td>Per Capita Health Expenditure</td>
<td>11.8</td>
<td>835.4</td>
<td>848.4</td>
<td>885.2</td>
</tr>
</tbody>
</table>
According to the study on Health Care Financing Methods and Access to Health Care in Myanmar done by Department of Health Planning MOH (2007), 72.2% of the households received their outpatient health services from private sector, 18% resorted to self care or buying the medicines from drug store and 5.5% used the services from the public sector. Only 3.2% got their outpatient care from Traditional Medicine hospitals and clinics while 1.2% received care from non profit hospital/clinic. In contrast, while 72% patients received inpatient care in public sector hospitals/clinics only, 28% went to the private sector or non profit sector.

The study also mentioned that the source of government financing was 9.8% in 1998 which increased to 11.2% in 2001. The total out of pocket expenses comprised of 87.7%. It is estimated that about 80% of the outpatient expenses and 60-66% of inpatient expenses were borne by use of savings, borrowings or sale of assets. This is likely to be catastrophic especially for the poor (catastrophic expenditure is considered when the expenditure for medical care costs exceed 40% of the non food expenditures).

2.10 Human Resources for Child Health

The situation of human resources is summarized in Table 4. The ratio of doctors to nurses is nearly one. In 2010, there are 52 MCH officers in the country posted at the state/divisional level to plan monitor and supervise all the maternal and child health care activities. The task of coordination of MCH work at the township level is that of TMO. Although there are several different categories of supervisors (Township Health Assistant, Township Health Nurse, Health Assistant 1, Health Assistant and Lady Health Visitor), their total number appear inadequate for effective supervision of a large number of Midwives, Auxiliary Midwives (AMWs) and Volunteer Health Workers (VHWs). As of 2009-2010, 19,051 midwives are providing maternal care throughout the nation (Source: Health in Myanmar, 2010). The availability of one Skilled Birth Attendant (SBA) (doctors, nurses, lady health visitors, midwives) per village is ideal. Under the guidance of midwives, AMWs and TBAs will support maternal and newborn health services with a limited package of activities.
Table 4: Human resources for health
(Source: Health in Myanmar, 2010)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total No. of Doctors</td>
<td>12268</td>
<td>18584</td>
<td>20501</td>
<td>21799</td>
<td>23740</td>
<td>26016</td>
</tr>
<tr>
<td>-Public</td>
<td>4377</td>
<td>6941</td>
<td>7250</td>
<td>7976</td>
<td>9583</td>
<td>11158</td>
</tr>
<tr>
<td>-Cooperative &amp; Private</td>
<td>7891</td>
<td>11643</td>
<td>13251</td>
<td>13823</td>
<td>14157</td>
<td>14858</td>
</tr>
<tr>
<td>Nurses</td>
<td>8349</td>
<td>19776</td>
<td>21075</td>
<td>22027</td>
<td>22885</td>
<td>23746</td>
</tr>
<tr>
<td>Health Assistants</td>
<td>1238</td>
<td>1771</td>
<td>1778</td>
<td>1788</td>
<td>1822</td>
<td>1845</td>
</tr>
<tr>
<td>Lady Health Visitors</td>
<td>1557</td>
<td>3025</td>
<td>3137</td>
<td>3197</td>
<td>3238</td>
<td>3305</td>
</tr>
<tr>
<td>Midwives</td>
<td>8121</td>
<td>16745</td>
<td>17703</td>
<td>18098</td>
<td>18543</td>
<td>19051</td>
</tr>
<tr>
<td>Health Supervisor (1)</td>
<td>487</td>
<td>529</td>
<td>529</td>
<td>529</td>
<td>529</td>
<td>529</td>
</tr>
<tr>
<td>Health Supervisor (2)</td>
<td>674</td>
<td>1359</td>
<td>1394</td>
<td>1444</td>
<td>1484</td>
<td>1645</td>
</tr>
</tbody>
</table>

* Provisional actual

Table 5 shows Health Facilities Development between 1988 to 2009-2010.

Table 5: Health Facilities Development
(Source: Health in Myanmar, 2010)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Government Hospitals</td>
<td>631</td>
<td>826</td>
<td>832</td>
<td>839</td>
<td>846</td>
<td>884</td>
</tr>
<tr>
<td>Total No. of Hospital Beds</td>
<td>25309</td>
<td>34920</td>
<td>35544</td>
<td>36949</td>
<td>38249</td>
<td>39719</td>
</tr>
<tr>
<td>No. of Primary and Secondary Health Centers</td>
<td>64</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>86</td>
<td>86</td>
</tr>
<tr>
<td>No. of Maternal and Child Health Centers</td>
<td>348</td>
<td>348</td>
<td>348</td>
<td>348</td>
<td>348</td>
<td>348</td>
</tr>
<tr>
<td>No. of Rural Health Centers</td>
<td>1337</td>
<td>1456</td>
<td>1463</td>
<td>1473</td>
<td>1481</td>
<td>1504</td>
</tr>
</tbody>
</table>
2.11 Programs and projects for child health development

Program for child health development in Myanmar is being implemented by the Ministry of Health (different divisions and units) and the various partners. Projects include Women and Child Health Development project (WCHD) currently being implemented in 149 townships during 2001 to 2009. This project was preceded by Integrated Management of Maternal and Childhood Illnesses (IMMCI) between 1998-2000. Programs which may influence child survival and development include, IMCI (CHD) in 13 townships; Essential Newborn Care Program; Reproductive Health project (RH); Nutrition, BFHI and BFHD; PMCT; CEU; EPI; Malaria; DHF; TB; WATSAN.

National Tuberculosis program started treating childhood TB in 1999 and Standard Operation Procedure for management of TB in children was developed and published in 2007 and disseminated to paediatrician from Upper and Lower Myanmar, to TMOs and Township TB coordinators in 325 townships in 2008. The paediatric formula to treat childhood TB has been used since 2008.

There is no doubt that all these programs/projects are designed to contribute to continuum of care and efforts are being made towards progressive integration. However, the focus on key interventions that impact on neonatal mortality and under-five mortality is not getting the attention it deserves. Also it is still needed to achieve country wide coverage. There are considerable overlaps and insufficient coordination, an inadequate focus on family and community practices and lack of application of uniform standards of activities.

3. Situation analysis

3.1 Trends and mortality rates in neonatal period, infancy and under five children

In the ten years period preceding the 2006 FRHS, under-five mortality declined from 83.7/1,000 live births (1996) to 76.1/1,000 live births (2006) and Infant Mortality Rate declined from 70.3/1,000 live births (1996) to 68.3/1,000 live births. The rapid decline in under-five mortality rates and infant mortality rates between 1990 and 1996 has
decelerated subsequently (Figure 3). The neonatal mortality rates for 1990 are not available.

In the eight years period preceding the 2002-2003, Department Of Health and UNICEF, Cause Specific Under-five Mortality Survey, under five mortality declined from 82.4/1,000 live births (1995) to 66.1/1,000 live births (2002-2003) and Infant Mortality Rate declined from 55.4/1,000 live births (1995) to 49.7/1,000 live births (2002-2003).

There are large variations in mortality rates amongst regions and divisions. The child mortality rates are substantially higher in the rural areas as compared to urban areas. The rates are higher amongst the uneducated and in children who are from families in the lowest socio economic quintile.

**Trends in Child Mortality Relative to MDG-4 in Myanmar**

![Trends in Child Mortality Relative to MDG-4 in Myanmar](image)

Figure 3: Trends in child mortality relative to MDG 4

Although national surveys are conducted periodically, the data from the latest national survey is not available for the last many years. It is therefore difficult to assess the impact of coverage on mortality. Also it is not desirable to compare data from different sources because of the differences in sampling and other factors.
It is clear that the rates for infant and under-five mortality have been declining during the last two decades although the rates of decline may be slowing down during the decade 2001-2010 as compared to the period between 1981-1990 and between 1991-2000.

3.2 Cause specific mortality in children under five years of age

A nationwide study was carried out by the Department of Health in 2002-2003 with the support of UNICEF. The main causes of death were identified and categorized in the neonates (less than 28 days age) and above 28 days up to five years of age. The study was carried out in 126,000 households in 120 townships. About 73% of all under-five deaths occurred in infancy (0-11 months age), and 27% in 1-4 year age group. During infancy, 34% of the deaths occurred in the neonatal period. Amongst the deaths in the neonates, more than two thirds occurred during the first seven days after birth of the baby (Source: DOH/ UNICEF - Overall and cause specific under-five mortality survey 2002-2003). The study showed that most of the deaths occurred within 3-4 days of the onset of the first signs of illness but there was delay in care seeking because of failure of recognition of the seriousness of illness. About 89.9% of the neonatal deaths occurred in home delivered babies in the rural areas and in 75.8% of the babies delivered at home in the urban areas. Neonatal deaths were two times more common if the baby was delivered by a voluntary worker or a TBA as compared to a midwife or a doctor.
Table 6: Causes of death in children under five years age

<table>
<thead>
<tr>
<th>Cause</th>
<th>Neonates (less than 28 days age)</th>
<th>Above 28 days and less than 5 years age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prematurity</td>
<td>30.9%</td>
<td></td>
</tr>
<tr>
<td>Birth asphyxia</td>
<td>24.5%</td>
<td></td>
</tr>
<tr>
<td>Sepsis</td>
<td>25.5% (includes pneumonia)</td>
<td>5.8%</td>
</tr>
<tr>
<td>Pneumonia</td>
<td></td>
<td>27.6%</td>
</tr>
<tr>
<td>Diarrhoea</td>
<td></td>
<td>17.6%</td>
</tr>
<tr>
<td>Brain infections</td>
<td></td>
<td>17.1%</td>
</tr>
<tr>
<td>Malaria</td>
<td></td>
<td>7.6%</td>
</tr>
<tr>
<td>Beriberi</td>
<td></td>
<td>7.1%</td>
</tr>
<tr>
<td>Others</td>
<td>19.1%</td>
<td>17.2%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

Note: The cause of death was estimated by verbal autopsy

More than 90% of the deaths during the post neonatal period were attributed to single causation. Most of the deaths investigated by verbal autopsy (85.5%) occurred at home. Malnutrition was considered to be a direct cause of death only in 1.0% of all deaths investigated but it was a contributing factor in vast majority of deaths. Beriberi was a cause of death in 7.1% while this disease is preventable and easily treatable once it is recognized. There were regional differences. Maximum deaths occurred in the central plains.

3.3 Morbidity in children under five years of age

The pattern of morbidity from hospital statistics is not an accurate reflection of the morbidity since only a small proportion of children who are sick are treated in the public sector hospitals. Malnutrition is also not included in the morbidity statistics since this is not often considered a primary condition for which the child is brought for treatment in the hospitals. The causes of morbidity in the hospitals are summarized in Table 7.
Table 7: Causes of under-five morbidity treated in hospital

<table>
<thead>
<tr>
<th>Cause</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diarrhoea and gastroenteritis of presumed infectious origin</td>
<td>16.9%</td>
</tr>
<tr>
<td>Unspecified Acute Lower Respiratory Infection</td>
<td>10.1%</td>
</tr>
<tr>
<td>Pneumonia, organism unspecified</td>
<td>9.1%</td>
</tr>
<tr>
<td>Neonatal Jaundice</td>
<td>8.9%</td>
</tr>
<tr>
<td>Dengue Haemorrhagic Fever</td>
<td>6.3%</td>
</tr>
<tr>
<td>Viral Infection, unspecified</td>
<td>5.5%</td>
</tr>
<tr>
<td>Unspecified malaria</td>
<td>4.0%</td>
</tr>
<tr>
<td>Beri Beri</td>
<td>2.3%</td>
</tr>
<tr>
<td>Febrile convulsions</td>
<td>1.9%</td>
</tr>
<tr>
<td>Birth Asphyxia, unspecified</td>
<td>1.7%</td>
</tr>
<tr>
<td>Fever, unspecified</td>
<td>1.6%</td>
</tr>
<tr>
<td>Convulsion, not elsewhere classified</td>
<td>1.5%</td>
</tr>
<tr>
<td>Injury of eyes and orbit</td>
<td>1.2%</td>
</tr>
<tr>
<td>Bronchopneumonia</td>
<td>1.1%</td>
</tr>
<tr>
<td>Primary Respiratory TB</td>
<td>1.0%</td>
</tr>
<tr>
<td>Other Causes</td>
<td>26.9%</td>
</tr>
</tbody>
</table>

(Source: Annual Statistics Report, 2007, DHP)

3.4 Malnutrition in children under five years of age

The national trends in malnutrition are available for under-five children between 1997-2003. There has been only a marginal decline in the prevalence of underweight children. While the rates for stunting declined during the period 1997-2000, there was no change in wasting. This indicates that there has been no major change in the quantity, quality and frequency of feeding during 1997-2003. It is also a reflection of some success in communicable disease control program. The findings of MICS are summarized in Table 8.

Table 8: Nutritional status of under-five children (Source: MICS)

<table>
<thead>
<tr>
<th>Nutritional status</th>
<th>1997 (MICS)</th>
<th>2000 (MICS)</th>
<th>2003 (MICS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Undernutrition</td>
<td>38.6%</td>
<td>35.3%</td>
<td>31.8%</td>
</tr>
<tr>
<td>Stunting</td>
<td>41.6%</td>
<td>33.9%</td>
<td>32.2%</td>
</tr>
<tr>
<td>Wasting</td>
<td>8.2%</td>
<td>9.4%</td>
<td>8.6%</td>
</tr>
</tbody>
</table>

The estimates reflected in UNICEF State of World’s Children 2009 which is
based on the consensus amongst several partners on malnutrition, wasting and stunting match the above mentioned data from MICS.

The incidence of low birth weight (LBW) is difficult to estimate since a large proportion of infants are delivered at home and they are frequently not weighed soon after birth. The estimates vary from 6.9% (Source: WHO post training assessment in two divisions, 2007) to 10% (Community based study on 3,000 consecutive babies born in Yangon Division). The incidence of low birth weight may be higher since low birth weight infants are a common cause of deaths in neonates.

In 2004 according to NNC, the prevalence of anaemia in children less than five years of age was 75%. The highest prevalence was in 6-23 months age group. Since 2004 deworming programs for children more than 24 months of age have been carried out, the prevalence of anaemia may have declined in comparison to the figures quoted above. The impact of these efforts on the prevalence of anaemia will be known after assessment.

It is recognized that the child survival (especially neonatal survival) is strongly influenced by the events before delivery, during delivery and after delivery. The details of the situation with reference to above mentioned events in Myanmar are given in the draft Reproductive Health Strategy (2009-2013).

4. Status of coverage

4.1 Newborn services

The proportion of mothers initiating breastfeeding within one hour of birth remained low at 35% before launching BFHI/BFHD program but it has improved substantially after the initiative (Source: Feeding Practices Survey, NNC, DOH, 2004) to 65%. During the period of 2001-2007, about 2.37 million clean delivery kits were distributed for ensuring clean delivery practices at the time of birth. A study in 5 townships of two divisions showed that clean delivery kits were used in 51.7% of births (Source: WHO post training assessment in two divisions, 2007). Tube and mask devices have also been widely distributed for improving the management of birth asphyxia in the townships where WCHD and ENC program are implemented. The coverage with post natal visits within two days after birth continues to be low. The information on observing signs of illness, care and advice in the post natal period e.g. temperature control, the
practice of rapidly drying the baby soon after birth etc is not available to assess quality of the delivery of essential newborn care. While some information is available on quality of care, more efforts are required since this is proposed to be a key intervention in improving child survival.

4.2 Nutrition

Sixty three point six percent of babies were reported to be exclusively breastfed in the first six months of life (Source: WHO post training assessment in two divisions, 2007). However this survey was carried out in selected townships. Predominant feeding (with water) is still commonly practiced 74% (Source: Feeding Practices Survey, 2004). These variations in coverage could be related to the definition of exclusive breastfeeding and also whether the coverage estimates are based on national coverage data.

The national rate of appropriate complementary feeding (solid and semi-solid foods) and breastfeeding for infants 6-7 months of age is 63% in 2007 which is an improvement from 53% reported in 2003 (Source: MICS, 2003). It should be considered as imperfect indicator since it does not measure quantity, quality or frequency of feeding.

Ninety three percent of children over six months received a dose of vitamin A in the previous six months. This rate has been sustained from the previous DOH survey. Vitamin A has been distributed twice yearly in March and September (Source: NNC, DOH, 2007).

Ninety five percent of children 6 -11 years were estimated to live in households using adequately iodized salt in 2008 March, a rate that is changed from that estimated in 2006 at around 60%.

4.3 Expanded Program for Immunization

Expanded program for immunization (EPI) has logged remarkable success since its inception in 1978, when BCG and DTP vaccines were introduced for children under one year and two doses of tetanus toxoid vaccine for pregnant women. Measles and Polio vaccines were introduced in 1987. Hepatitis B vaccine was added by phases from 2003 covering the whole country in 2005. A mass measles vaccination campaign was carried out in 2007. Myanmar has received GAVI support since 2004 and with funding support
from GAVI, an additional window in the form of health system strengthening has opened with GAVI/HSS support. Measles immunization coverage has increased steadily over time. The coverage with measles vaccine was 81% in 2007. There were variations in regional coverage rates. In 2007, 86% of children 12-23 months were estimated to have received all vaccines.

From 1990 to 2008, routine immunization coverage of all vaccines; BCG, DPT3, OPV3, Measles1 and TT2 are steadily increased from 70% onwards and trends of vaccine preventable diseases: Diphtheria and Pertussis, Poliomyelitis, Measles and Neonatal tetanus declined (Source: Myanmar 2008 EPI Fact Sheet, WHO). The routine data on immunization coverage rates has been validated through surveys. An estimated 91% newborns were protected for neonatal tetanus through two doses of tetanus toxoid during pregnancy. Despite good coverage with EPI vaccines, there are townships and pockets even in periurban communities with unsatisfactory coverage. These are proposed to be covered through the adoption of Reach Every Community approach (REC).

4.4 Treatment of diarrhoea and pneumonia

Oral rehydration therapy is the first line treatment for watery diarrhoea with or without dehydration. The proportion of children with diarrhoea who received oral rehydration therapy (ORT) was 51% (Source: Periodic Review II, 2009). Facility-based reports estimated that 51% of cases of diarrhoea treated at facilities received ORS for watery diarrhoea. The proportion of self treatment was 17% (Source: FRHS, 2007). The new formula ORS and zinc supplementation in the treatment of diarrhoea become popular as WCHD and PSI have introduced new formular ORS and zinc supplementation in the treatment of diarrhoea. This program has been initiated in WCHD project townships.

Information on the treatment of pneumonia is inadequate. Care seeking for suspected pneumonia was estimated in State of World’s Children report (2009) at 66% but it is not clear what proportion received appropriate antibiotics for the treatment of pneumonia.
4.5 HIV/AIDS

HIV and Children

Prevention of Mother to Child Transmission of HIV

The National AIDS Programme, Department of Health, has launched Prevention of Mother to Child Transmission of HIV, linking the routine maternal and child health services, since 2001 with the support of UNICEF and UNFPA. It has now covered (39) General Hospitals including State and Divisional hospitals and (200) townships in 2010. Activities for four Prongs of Prevention of mother to child transmission of HIV (PMCT): Prong I: Primary prevention activities for men and women of reproductive age, Prong II: prevention of unwanted pregnancy in HIV positive women, Prong III: voluntary confidential counseling and testing and ARV prophylaxis for HIV positive pregnant women and Prong IV: ART treatment, care and support for HIV positive pregnant women and family are being conducted through intra-sectoral coordination with Reproductive Health, Women and Child Health Development, Adolescent Health section of Department of Health and inter-sectoral coordination with various stakeholders including National NGOs.

Multidisciplinary State/Divisional PMCT Training teams have been formed and Advocacy meetings, Township trainings, community mobilization are being conducted in programme townships. Package of PMCT activities includes: Voluntary Counseling and Confidential HIV Testing for pregnant women attending AN care, Spouse Testing, provision of prophylactic ARV to HIV positive pregnant women from 24 week of pregnancy, counseling for infant feeding, provision of cotrimoxazole prophylaxis to babies born from HIV infected mothers since 6 week of age, follow up HIV testing for infants at 9 months and 18 months of age.

For early detection of HIV infection in children, training of trainers on conducting PCR test using Dried Blood Spot has been conducted for (17) state and divisional hospitals. Aiming to improve counseling, HIV testing and tracing the follow up cases after discharged from hospitals, involvement of PLHIVs in PMCT activities has been encouraged by providing training to PLHIV network in (10) townships. Moreover with the support of UNITAID, the National AIDS Programme is planning to provide the continuum of care for HIV infected pregnant women, their children and spouses by providing ART and home based care.
Concerning **treatment of Pediatric AIDS**, care and support for children living with HIV/AIDS, National Guidelines for the Clinical Management of HIV infection in children has been developed in 2004 and revised in 2006. The provision of ART to child HIV patients has been conducted since 2005 and has now covered (23) General Hospitals including State and Divisional hospitals. Currently, (433) child HIV patients are receiving ART from Public General Hospitals.

### 4.6. Tuberculosis

National TB program started treating childhood TB in 1999 and Standard Operation Procedure for management of TB in children was developed and published in 2007 and disseminated to paediatricians from Upper and Lower Myanmar to TMOs and Township TB coordinators in 325 townships in 2008, The paediatric formula to treat childhood TB has been used since then, Anti-TB treatment is provided to children with TB in all 325 townships and also who seek treatment at the clinics of private practitioners collaborating with National TB Program under Myanmar Medical Association and PSI. It was reported approximately 4,500 children in (0-4 years) aged groups are registered and treated in 2008.
4.6 Malaria

National Malaria Control Programme has been started since 1951 as pilot projects in Lashio, Taunggyi township from Shan state, Sittwe in Rakhine state and Mawlamying in Mon state. Malaria Eradication was started in 1957 and it was changed to Malaria Control Programme in 1973. In 1978, the programme was integrated with other Vector Borne Diseases such as Dengue Hemorrhagic Fever, Filariasis and Japanese Encephalities to form Vector Borne Diseases Control Programme.

Data on Malaria Morbidity and Mortality of under 5 Year children and pregnant mother has been collected since 1970’s. The data are collected from township monthly and compiled the data and send to State / Division and then reported to Central VBDC. According to the Annual Reports on 2008, Malaria Morbidity and Mortality of Under 5 Year children are as follows:

- Total No; of OPD Under 5 Year children – 805488
  (show up at health facilities)
- Total No; of OPD Under 5 Malaria (confirmed and probable) cases - 47986
- % of Under 5 Year children OPD cases among total OPD cases – 5.96%
- Total No; of Inpatient Under 5 Year children – 96135
- Total No; of Under 5 Malaria confirmed cases Inpatients 6701
- % of Inpatient Under 5 Year children - 6.97%
- No; of Under 5 Year children death due to Malaria Inpatients -137
- CFR (%) – 2.04%

Activities carried out for prevention and Control of Malaria in relation to Under 5 Year children.

1. Early Diagnosis of OPD and IP Malaria patients with good quality RDT and malaria microscopy and treated with ACT (with Pediatric formulation)
2. Distribution of LLIN and Impregnation of existing nets in high malaria risk areas covering Under 5 year children too.
3. Health Education on malaria to mothers and School children are also practiced by primary health care approach.
Achievement of MDG 6 in 2008, according to the MDG goal 6, Target 8, Indicator 22.a and 22.b.

Indicator 22 a - % of Under 5 Year children population using Insecticide treated nets = 8.5% in all risk area and 20.7 % in high risk groups.

Indicator 22 b - % of under 5 year Population in Malaria Risk areas with fever being treated with effective treatment = 47.5%.

4.7 Dengue Hemorrhagic Fever

DHF is high morbidity and mortality for under15 year. Especially in under 5 and 5-9 year age group. About 6.3 % of cause of under five morbidity is dengue. Early diagnosis of Dengue is crucial in prevention developing of dengue shock syndrome. Most of the case is diagnosed clinically by Pediatricians and Township Medical Officer. The Dengue NS1 Ag rapid test is for the diagnosis of early acute dengue infection. Rapid Diagnosis Test for Dengue antibody IgG /IgM is intended to use to aid in the presumptive diagnosis between primary and secondary infection. For that reason priority Township hospital should be equipped with diagnostic test for confirmation of DHF.

4.8 IMCI/IMMCI/WCHD

Myanmar started implementation of IMMCI (the Integrated Management of Maternal and Childhood Illness) in 1998 with the objective of reducing under five mortality rate to below 70 per 1,000 live births and maternal mortality to 100 per 100,000 live births by year 2001.

The IMMCI strategy is based on WHO-IMCI with addition of a maternal component, based on findings (1995) that consequences of maternal malnutrition and complications during pregnancy and delivery contributed 15% to the under five mortality. It was supported by UNICEF.

There were 322 IMMCI townships trained when the programme was changed into Women and Child Health Development (WCHD) program in 2001. There are four packages; Newborn Health Development, Child Health Development, Adolescent Health
Development and Women Health Development and continued to be supported by UNICEF. It has covered 149 townships during 2001 to 2009.

However, IMCI original package continued to be implemented by WHO support from 2004-2005 biennium. Five townships were covered in 2004-2005, four townships in 2006-2007, four in 2008-2009 coming to a total of 13 IMCI townships.

5. Strengths and Weaknesses

5.1 Policy

Strengths

Myanmar promulgated child health law in 1993; it has made commitment to the UN Human Rights Conventions (Article 3); Marketing of Products for Infant and Young Child Feeding (Code of Marketing of Breast Milk Substitutes is in process); Myanmar is a signatory to the World Summit for Children.

Five year strategic plans have been developed and implemented. The national policy has adopted continuum of care as the way forward for child health development in accordance with ICPD Cairo 1994. Various projects have implemented maternal and child health. Mechanisms have been established for annual reviews and annual planning for implementation of the projects.

Weaknesses

The various components have been implemented in the form of projects supported by the government and the partners. These do not cover all the townships. There have been gaps in the continuum of care as the project e.g. essential care of newborn. This is partly responsible for slow decline in neonatal mortality. There is fragmentation and considerable overlaps resulting from implementation of different projects in different areas in the country. There is continued insufficient coverage of interventions relating to treatment of pneumonia and diarrhoea since the access to treatment which is provided in the form of individual clinical care in the health facilities and hospitals is limited. Even though interventions are available for prevention of malnutrition, diarrhoea and
pneumonia e.g. exclusive breastfeeding during the first six months of life, it is not prioritized in behavior change communication as a part of family and community care.

5.2 Human resource development

Strengths

In-service training has been done for staff through WCHD project in 149 townships and IMMCI training in all townships. Since 2006, Basic Health Staff have been trained comprehensively for Essential Newborn Care in 33 townships. These training courses have also been included in the pre-service training programs of doctors, nurses, paramedical students and midwives (for Essential Newborn Care). In general, the training of the doctors and nurses is fairly adequate although there are some technical gaps. Large numbers of health care providers have received some in-service trainings.

Weaknesses

The weaknesses in human resources include
(a) staff shortages
(b) staff deployment
(c) staff motivation
(d) staff accountability
(e) capacity of training institutions and
(f) capacity of supervisors to provide supportive supervision.

The in-service training does not cover all the townships in the country and there is no consistency in the training provided by different partners. The training material and the packages used also vary considerably. The training is not based on needs assessment. Follow up visits/follow up after visit or supportive supervision has been done for less than 30% of the staff trained. There are gaps in the training e.g. essential neonatal care. Since the training material is not integrated, staff receives fragmented training with considerable overlaps. The weakness is maximal amongst community based providers. The time devoted to some training is insufficient and during the training a large number of subjects
are covered in a short period of time. As a result of this the health workers are not skilled or competent in practicing the skills and they have low motivation to practice such a large number of interventions.

5.3 Health systems

Strengths

For delivery of health care in the country, hospitals and health centers have been established at different levels. The last delivery point by fixed facility is sub rural health center. Basic and essential supplies are generally available including vaccines and ORS.

Weaknesses

Drugs and supplies – injection gentamycin for the management of newborn sepsis, and ciprofloxacin for the management of dysentery – are not yet available at Rural Health Centers and Sub-Rural Health Centers. Access to services continues to be a problem in many areas; supportive supervision and referral care are weak.

5.4 Behavior change communication - family and community practices

Strengths

The MMCWA (a national NGO) has presence everywhere in the country including the villages and the village tracts with volunteers exceeding one million countrywide. IEC materials for BCC have been developed.

Weaknesses

National strategy for BCC for children should be developed even though the role of preventive interventions in improving child survival through improvement of family and community practices is established based on evidence. There are too many messages
that are confusing with considerable overlap. The key family and community practices and when to seek care are not prioritized in the current program as Community Based Health Activities (CBHA) has been implemented in some selected townships. Private health care providers and informal providers who charge for services provided are popular but they provide predominantly curative care of variable quality. The interpersonal communication skills of the health care providers are also weak.

5.5 Monitoring and evaluation

Strengths

National surveys (FRHS, MICS and surveys by EPI, Nutrition, WCHD and RH projects) are carried out periodically. Information disaggregated by State/Division and region is available. HMIS data is collected and used for planning. Indicators are available to track progress on vaccine coverage, vitamin A coverage, nutritional status, antenatal coverage etc.

Weaknesses

Although national surveys are carried out, the information is outdated to make an assessment of mortality trends and coverage for planning and programming. It is necessary to have valid, reliable, timely and representative data and information for planning and implementation of child health program. A major weakness in the program is that though a lot of data is collected at different levels, it is not converted into information. There are some weaknesses in routine HMIS data collection and needs improvement in some areas. Routine population-based data and information are not available for township level planning. Assessment of quality of data needs to be strengthened.

It is also necessary to strengthen vital registration system not only in coverage but also in completeness and timeliness. It is also better to have more reliable data collection system such as establishment of sample vital registration system or rapid household surveys in order to compensate the weaknesses of routine data collection system. Approaches for identifying and reaching high risk populations within districts are only
used by the EPI program. Similar approaches are not yet used by other child health technical areas to improve coverage of interventions.

6. Guiding Principles for child health strategy

- Investing in the health and development of children is an integral part of national socio economic development. This is recognized and highlighted in the key policy and plan documents of the Union of Myanmar. The strategy takes into consideration the rights of children and is based on the principle of equity.
- The focus of this strategy is on essential care of newborn, promotion of exclusive breastfeeding up to 6 months and additional complementary feeding between 6-9 months of age, as well as extending treatment of diarrhoea and pneumonia widely through adoption of community based approaches through BHS.
- The plan is intended to foster and strengthen linkages with similar strategic plans on reproductive health, food and nutrition, expanded program for immunizations, water and sanitation, malaria, TB, DHF, HIV/AIDS. Coordination during implementation of child health strategy will be undertaken. This would help to strengthen the continuum of care.
- The continuum of care approach will be supported across programs and levels of care through adoption of delivery mechanisms like family and community, outreach services and individual clinical care.
- The package is to be implemented using a scenario based approach on the epidemiological considerations and readiness of different regions, divisions and townships. It recognizes the variations in coverage in different parts of the country.

7. Goals

To attain better quality of life for people in the Union of Myanmar by improving child health through contribution to achievement of MDG 4 which aims to reduce by two thirds, between 1990 and 2015, the under-five mortality rate.
8. **Objectives**

- To accelerate and scale up the implementation of key child health interventions with maximal impact on mortality through a focus on child health in the prevention and treatment of diseases and achieve national coverage.
- To collaborate with reproductive health, EPI, nutrition and control of communicable disease programs to strengthen the health system for implementing continuum of care using a life course approach at all levels of health care.
- To engage with all concerned partners for bringing about behavior change aimed at increasing the demand matched with quality of health care to contribute to reduction of mortality and promotion of child development.
- To strengthen the delivery of child health services through outreach and schedulable services and individual care of sick children in health facilities and hospitals.
- To adopt the strategy of nationwide implementation through joint planning and more equitable distribution of resources and scaling up so that maximal mortality reductions can be achieved during the next five years to reach MDG.

9. **Targets for achieving the objectives**

9.1 **Impact targets (to be achieved by 2015)**

- Reduce the Under-five Mortality Rate to 43/1,000 live births
- Reduce Infant Mortality Rate to 35/1,000 live births
- Reduce Neonatal Mortality Rate to 16/1,000 live births
9.2 Coverage targets

- Proportion of newborn babies who received postnatal visit for essential newborn care at least two times within first week of life 80% (neonatal mortality reduction)
- Proportion of LBW detected who received multiple home visits for extra care 80% (neonatal mortality reduction)
- Proportion of infants born who received breastfeeding within first hour of birth 80% (neonatal mortality reduction)
- Proportion of infants who were exclusively breastfed from birth up to 6 months of age 60% (infant mortality reduction)
- Proportion of infants who received breastfeeding and appropriate complementary feeding between 6-9 months of age 80% (infant mortality reduction)
- Proportion of children under five with severe acute malnutrition who received treatment according to national policy 50% (under-five mortality reduction)
- Proportion of children 6-59 months age who received vitamin A in the preceding 6 months 95% (under-five mortality reduction)
- Proportion of children with diarrhoea under five years who were treated correctly with ORS and zinc (90% for care seeking, 90% for ORT, 70% for ORS and 40% for ORS and zinc) (under-five mortality reduction)
- The proportion of children with pneumonia who were treated correctly with antibiotics recommended by the national program, 90% care seeking for pneumonia and 70% for correct treatment with antibiotics (under-five mortality reduction)

The above coverage targets do not include other important targets to be achieved through collaboration with program on reproductive health, EPI, malaria, HIV/AIDS, water, TB, DHF and sanitation, nutrition etc. The targets are articulated in national strategy documents and national plans developed by the concerned programs. Some of the above targets will be achieved through collaboration with NNC.

Household surveys as well as data from HMIS would be sources for monitoring the above coverage targets.
10. **Priority Interventions/intervention packages for child health development**

Achievement of MDG 4 is possible through participation in continuum of care at all levels of care throughout the life cycle starting from pregnancy up to five years of age. The child health strategy will focus on specific child health interventions/intervention packages. In addition, it recommends participation in other components of continuum of care (RH including birth spacing, EPI, nutrition, malaria, HIV/AIDS, BFHI, water and sanitation, CHEB, TB, DHF etc.).

The child health focus will be needed through the application of key interventions/intervention packages that are selected carefully on the basis of:

(a) information relating to common diseases responsible for maximum mortality
(b) evidence for effectiveness of intervention/intervention package
(c) cost of intervention/intervention package
(d) feasibility of application of the intervention widely within the delivery mechanisms available
(e) acceptance by the community culturally and socially and
(f) equity i.e. the interventions/intervention packages can be provided through greater equity without excluding the poor and the needy.

Specific child survival interventions/intervention packages that will be considered include:

- Essential Newborn Care
- Three postnatal visits during the first week of life for providing ENC
- Identification and extra care for low birth weight babies
- Extend the coverage for prevention and treatment of major killer diseases like diarrhoea, and pneumonia to the community
- Strengthen of referral care of sick newborn and children in hospitals
- Expand the coverage and sustain exclusive breastfeeding for infants up to 6 months of age and breastfeeding and complementary feeding (quality, quantity and frequency) between 6-9 months age
- Intensify the implementation of program for treatment of acute moderate and severe malnutrition
The above interventions do not include others included under continuum of care that would help in the reduction of mortality in children under five years of age since these are covered by other strategies.

11. Delivery mechanisms for interventions/intervention packages

It is proposed to use three major delivery channels for providing continuum of care across the health systems.

(a) family and community level
(b) outreach services using schedulable components and
(c) individual clinical care at the rural health centers, station hospitals, township hospitals, district hospitals, state and divisional level hospitals and central level hospitals

The currently successful interventions will be used as basic building blocks on which others will be added based on the readiness of the health systems. International and local NGOs could also take part in providing service delivery at the family and community level, as well as in supporting outreach services.

Where there are hard to reach areas or poor accessibility of health facilities, interventions and intervention packages should be delivered through community based services provided by BHS. When community based services by community health volunteers or community health workers are implemented, it is need to get the approval from the Ministry of Health. These include early initiation and exclusive breast feeding for infants less than 6 months of age, promotion of frequent handwashing, use of clean water for drinking purposes, treatment of mild diarrhoea by ORT and zinc sulphate, provision of essential newborn care and treatment of community acquired pneumonia by amoxicillin through BHS. The success of this would require bringing about improvements in family and community practices, training of BHS and community health workers/volunteers, support for provision of necessary equipment and supplies, supervision and motivation in terms of financial or other incentives.

The experience with EPI, vitamin A supplementation, deworming, insecticide treated bed nets has shown that outreach programs can be organized to provide outreach schedulable services. These services offer the advantage of combining the
delivery of several interventions at one time but it requires planning, logistics, training, supervision and monitoring.

Facility based services (preventive and curative) will continue to be the core of the health system. These are most effective where the health system is well developed and the health facilities (primary and referral) are accessible and utilized by the people. Development and application of standards and standard operation procedures and strengthening of referral system would contribute to a greater impact from clinical services provided by the health facilities.

The interventions and intervention packages for child health development and their application are summarized in Table 9 (a).

Table 9 (a): Key Interventions under child health strategic plan by Service Delivery Mode

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Home / Community Based Services</th>
<th>Individual oriented clinical services</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Family Oriented community based services</td>
<td>Population oriented schedulable services</td>
</tr>
<tr>
<td><strong>New Born Interventions</strong></td>
<td></td>
<td></td>
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<tr>
<td>Tetanus immunization during pregnancy</td>
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<td></td>
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<tr>
<td>Hand washing by mothers/caretaker</td>
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<tr>
<td>Home visits in post natal period</td>
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<tr>
<td>Early and exclusive breastfeeding</td>
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<tr>
<td>Cord care</td>
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<tr>
<td>Protect from hypothermia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identification and care of LBW infants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Early recognition of newborn sickness and referral</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exclusive breastfeeding for infants up to 6 months</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promote play and communication activities</td>
<td></td>
<td></td>
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<tr>
<td>Resuscitation of asphyxiated newborns</td>
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<td></td>
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<tr>
<td>Management of neonatal infections</td>
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</tbody>
</table>
The above interventions/intervention packages have proven efficacy. They have been recommended in referenced journals Lancet, BMJ, and Cochrane reviews. It is important to establish their effectiveness through scaling up and achieving national coverage.

While all these interventions/intervention packages need to be scaled up in order to achieve MDG 4, the pace of scaling up would depend on the country capacity to remove the bottlenecks. Effective implementation would require

(a) behavior change
(b) infrastructure
(c) human resources and
(d) uninterrupted supplies and commodities.

Adoption of a scenario based approach which is guided by present coverage, readiness for effective uptake of interventions/intervention packages will help to implement quick wins to achieve the expected results.

Some of the interventions can be immediately scaled up e.g. early and exclusive breast feeding, Essential Newborn Care, handwashing, micronutrient supplementation, An intervention like emergency obstetric care would require considerable investments in infrastructure, human resources, equipment and training. It will take time before achieving national coverage.
12. **Scenario based approach for achieving national coverage**

A scenario based approach will be used to implement the simplest package based on the readiness of geographical areas and the coverage. Stratification based on mortality rates would be the most helpful criteria or the level of coverage could be used but in the absence of baseline information, EPI coverage for DPT3 would be used as a surrogate. Based on EPI coverage, it is proposed to include the basic package in the townships where the coverage of less than 75% as a Scenario 'A'. In these townships, due to inadequate health infrastructure the maximal focus during the first two years would be on the package which is proposed for implementation through family and community efforts. Support would be continued for implementing outreach efforts and the individual clinical care. The distribution of townships to be selected is shown in the graphic format. Through microplanning, villages and village tracts identified through coverage data will be the focus for maximizing the results of efforts made quickly. This approach has been used by malaria program and EPI program.

Scenario 'B' would comprise of townships with DPT3 coverage of 75 - 94%. The emphasis here would be on family and community practices and outreach schedulable services. The package of interventions will be developed accordingly. The existing delivery channels would be used for individual clinical care without interruption.

Scenario 'C' would be the townships where coverage with DPT3 is 95% or more. Here all the three delivery mechanisms will be universalized. The coverage with DPT3 in the townships under EPI program is shown in the illustration below.

There are 82 **CRASH** areas which are pockets of very low coverage or areas with difficult access or mobile population in spite of high overall DPT3 coverage for the townships. These pockets should be considered under scenario 'A' as shown in the illustration below. The composition of the package is summarized in Table 9 (b).
Five-Year Strategic Plan for Child Health Development in Myanmar (2010-2014)

Hard to Reach Areas in EPI Implementation [2009]

- Hard to Reach Area (82) Townships

- State [8] - Townships (64)
- Division [5] - Townships (18)
### Table 9 (b): Key Interventions under child health strategic plan by Scenario

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Scenario A</th>
<th>Scenario B</th>
<th>Scenario C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Newborn Interventions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tetanus immunization during pregnancy</td>
<td></td>
<td></td>
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<tr>
<td>Hand washing by mothers/care taker</td>
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<tr>
<td>Home visits in post natal period</td>
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<td></td>
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<tr>
<td>Early and exclusive breastfeeding</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cord care</td>
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<td></td>
<td></td>
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<tr>
<td>Protect from hypothermia</td>
<td></td>
<td></td>
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<tr>
<td>Identification and care of LBW infants</td>
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<tr>
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<tr>
<td>Exclusive breastfeeding for infants up to 6 months</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Promote play and communication activities</td>
<td></td>
<td></td>
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<tr>
<td>Resuscitation of asphyxiated newborns</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Management of neonatal infections</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Child Health Interventions</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Therapeutic feeding of severely malnourished children</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regular deworming</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of Anemia</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>ORT/zinc for diarrhoea</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treat pneumonia with antibiotics</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Vitamin A - Treatment for measles</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malaria treatment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Measles vaccination</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Antibiotic for dysentery</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment of severe pneumonia</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Management of complicated severe acute malnutrition</td>
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<td></td>
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</tr>
</tbody>
</table>

The intervention packages used in Scenario 'A' will be implemented in Scenario 'B' and Scenario 'C'. Similarly all the intervention packages recommended for Scenario 'A' and Scenario 'B' will also be used in Scenario 'C'.

It is recognized that even in poorly accessible areas there are some outreach services as well as facilities for providing individualized clinical care. These will be continued although additional efforts and resources would be expanded according to readiness of the health systems.
13. **Key indicators for child health to reach MDG 4**

The choice of indicators has to be carefully considered to include those that are simple to assess and can be validated. The indicators, aligned largely to the countdown indicators, reflect coverage targets of the program and match the key interventions short listed in this strategy (Table 10).

**Table 10: Key indicators for child health to reach MDG 4**

<table>
<thead>
<tr>
<th>Sr</th>
<th>Indicator</th>
<th>Numerator</th>
<th>Denominator</th>
<th>Method of assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Early initiation of breastfeeding</td>
<td>Number of women with a live birth in the $X$ years prior to the survey who put the newborn to the breast within one hour of birth</td>
<td>Total number of women with a live birth in the $X$ years prior to the survey</td>
<td>Household survey, records of birth attendant</td>
</tr>
<tr>
<td>2.</td>
<td>At least two postnatal visits during the first week for Essential Newborn Care</td>
<td>Number of babies born outside of a health facility during the last one year who received at least two postnatal checks during the first week of life</td>
<td>Total number of live born babies born outside of a health facility during the preceding one year</td>
<td>Household survey, records of health care providers</td>
</tr>
<tr>
<td>3.</td>
<td>Handwashing</td>
<td>Number of mothers/care takers of children 0-59 months age who washed their hands at least two times with soap and water the previous day</td>
<td>Number of mothers/caretakers of children 0-59 months of age</td>
<td>Household survey</td>
</tr>
<tr>
<td>4.</td>
<td>Exclusive breastfeeding (0-6 months)</td>
<td>Number of infants 0-5 months who are exclusively breastfed</td>
<td>Total number of infants 0-5 months surveyed</td>
<td>Household survey</td>
</tr>
<tr>
<td>5.</td>
<td>Breastfeeding plus complementary feeding aged 6-9 months</td>
<td>Number of infants aged 6-9 months who are breastfed and receive complementary food</td>
<td>Total number of infants aged 6-9 months surveyed</td>
<td>Household survey</td>
</tr>
<tr>
<td>6.</td>
<td>Oral rehydration and continued feeding</td>
<td>Number of children aged 0-59 months with diarrhoea in the two weeks prior to the survey receiving oral rehydration therapy and continued feeding</td>
<td>Total number of children aged 0-59 months with diarrhoea in the two weeks prior to the survey</td>
<td>Household survey, records of health facilities and health care providers</td>
</tr>
<tr>
<td>7.</td>
<td>Care seeking for pneumonia</td>
<td>Number of children aged 0-59 months with suspected pneumonia in the 2 weeks prior to the survey who were taken to an appropriate health provider</td>
<td>Total number of children aged 0-59 months with suspected pneumonia in the 2 weeks prior to the survey</td>
<td>Household survey</td>
</tr>
<tr>
<td>8.</td>
<td>Antibiotic treatments for pneumonia</td>
<td>Number of children aged 0-59 months with suspected pneumonia in the 2 weeks prior to the survey receiving antibiotics</td>
<td>Total number of children aged 0-59 months with suspected pneumonia in the 2 weeks prior to the survey</td>
<td>Household survey, records of health care providers and health facilities</td>
</tr>
<tr>
<td>9.</td>
<td>Extra care of low birth weight</td>
<td>Number of low birth weight infants in the preceding month who received extra care at home</td>
<td>Number of low birth weight infants recognized</td>
<td>Household survey, records of health care providers</td>
</tr>
</tbody>
</table>
14.  Policy and program for child health development

14.1  Effective and sustained coordination

Coordination mechanisms have already been established by the Government of the Union of Myanmar. Provisions are made by the Government for effective coordination at all levels. These need to be strengthened. Child Survival Forum under the National Health Committee with specific Terms of Reference (Annex 2) should provide strong consistent and sustained leadership to accelerate child survival efforts and to achieve MDG 4 by 2015. This would also involve coordination for mobilizing additional resources for interventions on child health to achieve MDG 4 from UN partners, multilateral and bilateral partners including International NGOs. Greater coordination is required amongst the partners in health department e.g. Women and Child Health Development, Reproductive Health, Nutrition, EPI, Malaria, HIV/AIDS, CHEB, WATSAN, TB, DHF and BFHI etc that contribute to continuum of care. Coordination will need to be strengthened at various levels i.e. national, state and division, district, township, wards/village tracts and within villages. Coordination will also be required between government, private sector, NGOs and informal sector. It is recognized that private and informal sectors are the main source of provision of health care especially curative care. They should be supported with effective oversight mechanisms.

Following terms of reference may be considered for the national committee for child health development:

- To ensure the presence of unified plan, coordinating mechanism and monitoring strategy for improving child survival.

- To advocate the goals, policy and strategy of CHD program to reach MDG 4 among partners (National and International).

- To recommend the national standards like training manuals and standard operation procedures to implement CHD program.

- To recommend strategies to scale up high impact interventions including improving efficiency and effectiveness.
• To review the implementation status annually to give necessary guidance for
development of rolling plans.

• To coordinate in order to ensure consistency among various partners in the
programs and projects to implement key child interventions within the frame
work of National strategic plan for CHD.

• To promote equity in the distribution of resources and to increase national
coverage.

Similar terms of reference should be developed for application at state/divisional,
district and township levels.

14.2 Define common standards for uniform application by all partners

The national policy of continuum of care for child health development is very
sound and provides an overarching mechanism through broad based partnerships.
However, the contribution towards child health becomes complex with the risk of
overlaps and fragmentation.

To overcome the above problems, it is important to develop and implement
uniform standards for key interventions that will contribute to the achievement of MDG 4
targets to be implemented by all partners at all levels. The application of standards and
standard operating procedures (SOPs) would help to ensure uniformity between different
projects and programs on child health development and at the same time help to remove
the overlaps between them which leads to duplication and wastage of resources. The
standards and SOPs are required to provide the basis of sustained partnerships at all
levels. The application of standards and SOPs should be the pre requisite for partnerships
and MOUs at all level.

The development of standards and SOPs would contribute to the following:

• Attain consistency in the development of training materials and packages as
well as training programs in the preservice and in-service settings.

• Ensure uniformity in the quality of drugs, commodities and supplies at
different levels.
- Uniform application of indicators within a common monitoring and evaluation framework.
- Standardize prioritized key family and community practices as a part of behavior change communication.
- Contribute to the efforts towards quality assessment and quality improvements.

The development of standards is not required since these are already developed although they may be available in a fragmented manner with different programs and projects. Work will be required for laying down the standards for application in family and community as well as outreach settings. Similarly standards may be needed for norms of service delivery at different levels of health facilities e.g. rural health centers, station hospitals, township hospitals and district hospitals.

The development of standards can be done in a phased manner starting with the simplest package which is focused on key interventions in children up to five years age. Other standards should be adopted according to other strategic plans.

14.3 Address diversity and inequity

Diversity refers to cultural and language differences while inequity requires a pro-poor strategy. This strategy aims to accelerate and sustain the implementation of an essential package for child survival. Its objective is to achieve universal coverage with priority interventions in the Union of Myanmar to reach MDG 4. It strives for reaching the poor people more effectively i.e. those who are in the lowest quintile, people who do not have access at present and where the coverage is poor and mortality rates are high. Its aim is to increase the equity in coverage for child survival.

The principle to be adopted would be to achieve national coverage for the key interventions/intervention packages by 2015. There are variations in coverage as well as mortality in different regions and states. The coverage is low and mortality rates high in the lowest quintile of the population as compared to the highest quintile. Even within the states and regions there are variations. Stratification would be done by township. It is recognized that there are variations within the townships. These will be addressed through micro planning.
The principle in scenario based approach would be to implement the basic package of interventions in scenario where the coverage with DPT3 is low, an intermediate package in areas where the coverage are better and a complete package where the coverage is high. Simple interventions if implemented widely are likely to create the greatest improvements in child survival. The population can be stratified according to mortality, risk factors, epidemiology of diseases, poverty or access to the health system. The adoption of the scenario based approach would be guided by the readiness of the health system to implement the package. In other areas where the coverage is better, further efforts are needed to accelerate further reductions in mortality and improvements in coverage.

14.4 Develop a case for investment on child health and development

There is a compelling case for increasing investment on child health and development for achieving MDG 4. Despite steady progress in Myanmar, many core indicators are still lagging behind with poor outcomes with an estimated 93,000 deaths under the age of five years and 36,000 neonatal deaths every year. Myanmar spends 38 International Dollars per capita per year on health with only 13.6 % as government expenditure and 86.4 % as private spending \{Source: World Health Statistics, 2007 and Myanmar National Health Accounts, 2002-2005\}.

Health financing in Myanmar has ensured equity for improving health outcomes by providing access to population whose needs and vulnerability are higher. The equity in financing to allocate funds for priority conditions amongst donors and partners also need to be addressed. Inequity reflected as poor access, long waiting times, staff absences and stock outs drive the poor people to private health providers who provide predominantly curative care of variable quality.

This strategy makes a strong case for costing of the strategic plan, advocacy for mobilizing additional resources, investments in priority interventions that would contribute to maximal impact on coverage and mortality through universal coverage and reduce the high out of pocket expenses.

Costing has not been done in the present five year strategic plan. It is to be done in a systematic way to convince the government, partners and stakeholders to mobilize the additional resources needed. As a prelude to costing a strategic analysis has been
completed. Costed will be disseminated through child survival forum meeting with all stakeholders.

14.5 Single uniform system for monitoring and evaluation

A single uniform system for monitoring and evaluation is required with inclusion of carefully selected indicators for the package of interventions that has maximal impact on child mortality. Partners and stakeholders will be involved in the single monitoring and evaluation framework so that data is broad based. This would also contribute to use of assessment that would be comparable amongst the different stakeholders and partners. The number of indicators will be minimal based on the targets articulated in this strategy. The program will progressively strengthen the quality completeness and timeliness of the reporting system. The data collected at different levels of the system will be converted into information and used for strengthening of the program through regular review process. All deaths in children (including neonatal deaths) will be reviewed to take actions that remove the bottlenecks that contributed to the death. Family retained records will be used to strengthen family practices and community participation. At the same time it would contribute to better quality local data. The information consolidated at the township level will be used for micro planning. Checklists will be strengthened and used in supportive supervision to reinforce the capacity and for quality assessment and quality improvement in the program. The efforts of strengthening of the health information system on child health would be supplemented by carrying out rapid household and health facility surveys on an annual basis and national surveys (FRHS, MICS etc) at three to five years interval to help in validating the HMIS data and to assist in the planning process. The information from HMIS and surveys will be utilized during the annual reviews or mid term reviews to develop rolling plans. To assess trends, few townships data from HMIS may be selected based on completeness, timeliness and reliability of routine reporting. The proposed monitoring and evaluation framework would strive for continued improvements and strengthening so that this information can be adopted increasingly in the program for planning and program development.
14.6 Technical shift in policy on access to treatment of priority diseases and Essential Newborn Care

Prominent causes responsible for mortality in children under the age of five years include:

(a) pneumonia
(b) diarrhoea
(c) neonatal sepsis

Associated conditions that need to be tackled to reduce the high mortality are low birth weight/prematurity and severe undernutrition.

Although not a major cause of death, neonatal tetanus is easily preventable through administration of tetanus toxoid during pregnancy and infantile beriberi can be effectively managed through prevention with vitamin B1 and early recognition and treatment. In areas where malaria is endemic, program for promotion of use of insecticide treated nets and early as well as complete treatment with recommended antimalaria drugs is already being implemented. It is to be noted that community health volunteers are permitted to prescribe and dispense artemesinin combination treatment for falciparum malaria.

No policy shifts would be required for promotion of exclusive breastfeeding for infants 0-6 months of age, breastfeeding and appropriate complementary feeding between 6-9 months of age, oral rehydration therapy, zinc and micronutrient supplements.

The reduction in mortality due to pneumonia would require early care seeking for children who have cough and fast breathing for the administration of complete treatment as recommended in the national guideline. Pilot implementation of community case management of pneumonia through community health workers has been initiated in one township. Based on result of review and evaluation of this activity, the access will be facilitated substantially by allowing the expansion of this activity to other areas where hard to reach areas and poor accessibility to health facilities with approval from the Ministry of Health.

No policy shifts would be required in the treatment of diarrhoea except that WHO recommended ORS and zinc supplementation should be scaled up in the program. It will be increased in poor coverage scenario once readiness for implementation has been established.
Regarding the treatment of neonatal sepsis, the policy decision would be more difficult since it involves administration of injectable antibiotics. To start with this would be introduced in scenario C i.e. where the coverage are high.

15. Health system strengthening

15.1 Training and capacity development in human resources

In order to achieve the MDG 4, BHS will need to be trained to be more skilful in order to

(a) strengthen essential newborn care,
(b) undertake treatment of pneumonia and diarrhoea in the community and
(c) participate in strengthening of key family and community practices.

Moreover, training conducted by other related projects and programs such as RH, Nutrition, WATSAN, PMCT, TB, Malaria, DHF, CEU should be strengthened by concerned division/project/program in order to reduce under five mortality as the continuum of care.

The training materials must be in a simple format avoiding technical details but emphasis will be required on development of skills and competencies. Consequently the training package should contain a lot of illustrations and graphics with as little written text as is possible. The training should be interactive with lots of opportunities for hands on practice. This should be done through hands on training. The training should be done in the form of short training courses that are designed to build the skills in blocks.

Since there will be several partners, consistency in training materials and training methodology should be ensured. Training plans should be developed to make it more systematic and organized. Data base for training should be developed. This data base will help in tracking the progress in training. If possible, each health care provider should be provided with a card and information recorded to indicate the training received. The data base on training would help in the monitoring of the program.

This strategy recommends the adoption of a scenario based approach. This would be successful if the training materials/training packages and training program are adjusted to facilitate the implementation of scenario based approach that uses appropriate delivery mechanisms.
In the in-service training program, the skills and motivation of the supervisors need to be enhanced considerably and enabling conditions provided to facilitate their travel as well as incentives to keep them motivated. The supervision to be effective should be supportive in which problem identification and problem solving should be the focus. Mechanisms for follow up after training and supportive supervision should be strengthened progressively.

15.2 Procurement and logistics

The specific requirements for child health program are minimal in terms of the range of drugs and supplies required. Minimal needs of the program for child health program (which does not include drugs/supplies that are needed for continuum of services) include the following:

- Cotrimoxazole or amoxicillin for pneumonia
- ORS for diarrhoea
- Zinc for diarrhoea
- Iron and folic acid for anaemia (Paediatric formulation)
- Paracetamol for fever
- Vitamin A
- Albendazole for deworming (Paediatric formulation)
- Clean delivery kits
- Newborn weighing scales – color coded
- Family retained record
- Injection ampicillin
- Injection gentamycin
- Injection Benzyl penicillin
- Ciproflaxacin(Paediatric formulation)
- Vitamin B1
- Thermometer
- Respiratory timer
- Tube and mask device
- Paediatric ART drugs
- Anti-TB drugs for childhood TB
• Antimalarial drugs
• Supplies and equipment for DHF

There is a need to provide with the medicines, supplies and commodities simple guidance on their correct use. Standard equipment needs to be provided for facility-based referral care.

While the achievement of MDG 4 will largely depend on the uninterrupted supply of above mentioned drugs and supplies, it is recognized that success will ultimately be determined by availability of drugs and supplies needed for provision of continuum of care. For greater efficiency, it is advisable to use an integrated approach in supplies and logistics system to avoid any duplication and wastage.

A commodity survey and a mapping of the commodities should be considered in order to make an assessment of the needs with special reference to the drugs, supplies and commodities required for strengthening of family and community practices and delivery of schedulable services. This should be done disaggregated according to scenario. For scenario, the mapping of the commodities for health facilities and hospitals will be required to provide effective referral support.

The success of child health program depends on an uninterrupted supply of drugs and supplies needed. To prevent supply interruptions, microplanning, forecasting of needs, maintenance of adequate buffer stocks matched by efficient periodic supplies are required.

Unification of procurement across different partners, reductions of delays in customs clearance, use of common standards for procurement to be enforced by different partners, central procurement to ensure quality and to effect economy are needed. Appropriate reporting systems are required for efficient procurement and logistics.

The procurement and logistics as well as supply management systems are different for different programs and projects. These systems need to be coordinated better. The storage facilities at various levels should be upgraded and efforts made to coordinate the logistics to prevent wastefulness. It is recognized that a large proportion of drugs and supplies are made from the private sector. This will need to be regulated to ensure that the quality standards are maintained. Since the basic medicines and supplies are needed at below the township level, logistics and supplies management will need maximum emphasis at that level. This is a challenge because of numerous problems relating to access and difficult terrain in some districts, divisions and regions of the country.
15.3 Referral system to manage severe and complicated problems

Reduction of mortality in children under the age of five years would require a two way referral system to provide timely treatment to children who suffer from severe diseases. The awareness of danger signs of illnesses that require prompt referral has to be increased so that delay in care seeking can be minimized. Even after the recognition of danger signs, the delay in utilizing the referral services occurs due to several bottlenecks. The family may require financial support, transport arrangements might be needed and also support needed to the other members of the family while the mothers/caretakers are in the hospital. Development of local community-based Health Emergency Funding should be encouraged. Local resources should be mobilized as much as possible through local health committees. The health workers should be aware of the range of services available in the hospital/health center in the vicinity. Referral system should be strengthened by providing necessary arrangement such as referral cards, transportation, providing the funds for referral and honoring the referrals made by providing preference to the sick children referred. Review of referrals should be done regularly in order to reinforce the need for strengthening of referral system. To the extent possible, the health worker should accompany the patient during transport. This would help to increase the confidence of the family and also enable the provision of first aid during transfer.

Consequent upon scaling up of implementation of IMCI and other newborn and child health interventions referral of severely sick newborn and child health is likely to increase. Such sick newborns and children who are referred to hospitals and those with severe malnutrition need good quality treatment and care which depends on trained doctors, nurses and availability of necessary medicines and equipment. Necessary arrangements made to train health care providers in hospitals and necessary medicines and equipments would be supplied, It is planned to periodically assess quality of care in hospitals in order to assure that newborns and children are managed well in these hospitals.
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Annex 1

NATIONAL HEALTH COMMITTEE

1. Secretary (1) State Peace and Development Council Chairman
2. Minister, Ministry of Health Member
3. Minister, Ministry of National Planning and Economic Development Member
4. Minister, Ministry of Home Affairs Member
5. Minister, Ministry of Progress of border areas and National Areas and Development affairs Member
6. Minister, Ministry of Social Welfare, Relief and Resettlement Member
7. Minister, Ministry of Science and technology Member
8. Minister, Ministry of Education Member
9. Minister, Ministry of Sports Member
10. Minister, Ministry of Immigration and Population Member
11. Mayor, Nay Pyi Taw Member
12. Director, Director of Medical Services, Ministry of Defense Member
13. Deputy Minister, Ministry of Health Member
14. Director General, Department of Health Planning, Ministry of Health Member
Annex 2

Child Survival Forum
Terms of Reference

1. Serve as a forum for information sharing on child survival interventions, coverage, updates and all other issues related to Child Health Development.
2. Involve stakeholders and facilitate partnership through coordination led by Ministry of Health.
4. Finding ways to improve community mobilization for child survival.
5. Identify gaps and develop the mechanisms to improve countdown indicators and other data for child survival.
6. Provide monitoring and evaluation guidelines/reporting for child survival program.
7. Link Myanmar child survival efforts to the International forums.
8. Raise awareness on child survival and advocate generating or sharing resources at all levels.