

REVITALIZING PRIMARY HEALTH CARE

COUNTRY EXPERIENCE:

MALDIVES

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1. BACKGROUND

Maldives is an island nation of about 1197 islands, with a total population of 298,842 (Census, 2005) living in 194 islands. Urban population consists of 35%, while the rest live in small islands. Population under 15 is 33% and 15-59 year age group consists of 61%. The Government of Maldives is committed in providing the best possible level of health care to its citizens and attaches a high priority to the health and wellbeing by dedicating a major component of its government budget to health care.

Maldives have made important gains in providing primary health care to its population since accepting the Alma Ata Declaration 1978. The health status of the population had improved significantly in the last decade. All health indicators had shown steady improvement. Major communicable diseases such as malaria and vaccine preventable childhood diseases are eliminated. Prevalence of tuberculosis and HIV are low, and some diseases like filarial and leprosy have reached the regional elimination targets.

Health indicators like Infant mortality rate, maternal mortality rate and under 5 mortality rates have decreased over the last decade, with an increase in life expectancy at birth for both sexes. Uniquely for a country which is geographically dispersed, Maldives achieved a credible record of sustaining 98% vaccine coverage over the last 5 years.

Maldives still faces the challenge of emerging communicable diseases of public health concern like dengue fever and scrub typhus. Maldives is also burdened with high prevalence of malnutrition and some communicable diseases like diarrhea and ARI is still continuing to cause significant morbidity among children and adults. Similarly, chronic non-communicable diseases have emerged as the main cause of mortality in the country, which includes cardiovascular diseases, diabetes, hypertension, cancer and accidents and injuries leading to death and disability.

2. PRESENT STATUS OF PHC

People of this island nation had achieved several gains in the area of health since adopting the Alma Ata Declaration. Access to Primary Health Care (PHC) has been the target that the Maldivian health sector constantly strives to achieve. Presently there are larger and smaller gains in the area of PHC. Similarly, there are areas where

more work and input needs to be added in order to achieve the targets set at national and international level. The statistical table of present status of PHC, initiation of activities, its scope and outcomes are described in annex 1 and 2.

Eight Elements

2.1 Health Education

Ensuring that people have appropriate knowledge and behaviors to protect and promote their health is one of the main policy goals of the health system. Health education and health promotion has played a significant role in improving the health status of the Maldivian population and fostering healthy living. Usefulness of health education in bringing about behavior change is a proven fact all over the world.

Health education has taken different forms, namely through IEC materials, mass media, one-on-one counseling etc. An evaluation study done by the Ministry of Health, Maldives regarding the use of IEC materials indicated that it is an important resource for disseminating information and also that it contains enough and adequate information for people to utilize effectively.

Health education programs continued to deal in different aspects of health in all aspects, especially in all areas of primary health care. Health promotion activities include, launching of IEC project on reproductive health, conducted workshops and capacity building on food safety and hygiene, water and sanitation, health and hygiene for school children and controlling smoking with initiation of anti-tobacco campaign. In addition, a comprehensive health promotion plan was developed.

Health Master Plan 2006-2015, emphasizes health education activities targeted at child and adolescent health, reproductive and maternal health promotion, chronic non-communicable and communicable disease prevention, healthy aging and disability prevention, promotion of community partnerships and health protection.

2.2 Nutrition

The Government of Maldives recognises the importance of improving nutrition among its population as a way of capitalising on its future human resource. Maldives has witnessed rapid gains in a number of key social indicators. From the beginning primary health care had included both maternal and child nutrition. However,

malnutrition and micronutrient deficiency persists in the Maldives at an unacceptably high level with potentially negative effects on the growth and development.

Ministry of Health had started several initiatives and programmes to address issues of nutrition. These include iron supplementation of pregnant women, growth monitoring of children, promotion of iodised salt and mass de-worming and Vitamin A supplementation of school children. In addition, National Nutrition Programs and 3 to 5 year National Nutrition Strategic Plans are developed with inter-sectoral consultations to achieve national targets. Maldives developed its first comprehensive national nutrition plan of action 1997-2000. And the second national nutrition strategic plan developed for 2002-2007.

Since 2002, series of activities were planned based on life-cycle approach that embraced other vulnerable groups like school age children, adolescents and older adults. Activities included improved growth monitoring and promotion; monitoring nutritional status of under-5 children, instituting community-based programs through positive deviance-hearth approach.

2.3 Maternal and child health

Maldives have achieved significant advances in the area of maternal and child health. These include reducing maternal and infant mortality rate and increasing access to maternal and child health and family planning activities. Delivery and access to services have expanded, where number of health care facilities providing these services increased along with availability of competent human resource. Special attention is being paid to Adolescent Sexual and Reproductive Health (ASRH) focusing on both men and women and reproductive age girls and boys.

The commitment of the Ministry of Health in providing services of a Gynecologist at atoll level is a tremendous achievement. Improvements have been made in the coverage and quality of maternal and child health services, which includes antenatal care coverage and births attended by skilled professionals. Institutional deliveries have reached more than 80% in the country, which could be one of the reasons for reduced maternal and infant mortality rates.

Although several achievements have been seen in this area, there are areas which need special attention and focus. A trend towards high levels of anemia and malnutrition is seen among pregnant women and women of reproductive age group. There is also an unmet need for contraception and non-compliance, inadequate

knowledge regarding STD's and limited services for infertility and reproductive organ cancers.

2.4 Water and sanitation

The government gives high priority for the protection of the scarce water resources and has made a firm commitment to the achievement of the goal of safe water for the entire population. The government has committed to halve, by the year 2015, the proportion of people without access to safe drinking water and basic sanitation.

Access to safe water and improved sanitation means of excreta disposal are agreed as a universal need and is understood that these are important for sustainable development of Maldives. Therefore strategies are aimed towards the complete and equitable provision of safe water and sanitation to the population of Maldives.

Activities initiate in this front included, provision of drinking water and sanitation services for the urban population, increasing rainwater storage capacity, introduction of water desalination plants and establishment of public sewerage system. Since the year 2004 water, sanitation and environmental health has been mandated to Ministry of Environment Energy and Water. However, at atoll level checking water quality, sanitation is monitored by the hospital and/or health centre.

2.5 Immunization

Government of Maldives gives high priority, strong commitment and support to immunize children and women. This is highlighted by the fact that all vaccines and related immunization supplies used in the national EPI (Expanded Program of Immunization) program are funded by the government and procured through UNICEF. EPI program was officially launched in 1985 and since then Maldives have achieved and maintained high immunization coverage of children less than one year of age. As a consequently the incidence of vaccine-preventable diseases has dramatically decreased.

Maldives has seen high vaccination coverage which was confirmed in a Multi-Indicator Cluster Survey (2001) indicating 85.4% of fully immunized children of under one of age. Maldives achieved polio-free status in 2000 as no indigenous polio case was reported since 1978. Hepatitis B vaccine and MMR was introduced in the national immunization schedule in the year 1993 and 2007 respectively. Maldives also conducted an MR supplementary immunization activity in the year 2005-2006.

There have been set-backs over the years, measles outbreaks have been occurring every five years. There were 1395 reported cases of measles in the last outbreak that occurred in 2005. Maldives been an island nation, EPI activities for remote islands are conducted through an out reach plan with 4 contacts and one at birth. The EPI review conducted in the year 2006 indicated a revision of current immunization schedule to make it more suitable to Maldives' context.

2.6 Control of locally endemic diseases

Maldives have had its share of locally endemic diseases. Major communicable diseases such as Malaria and vaccine preventable childhood diseases have been eliminated. Leprosy has reached the regional elimination target this was achieved by streamlining leprosy control by integrating contact tracing, case management and monitoring of activities. Similarly Filaria has also reached the regional elimination target. Likewise, control of TB has also made significant progress following the introduction of DOTS, active case finding and management of diagnosed cases using standard protocol, and strengthening diagnostic facilities at atoll level. Maldives achieved year 2000 targets for TB control in the year 1996. And although mortality rate from TB decreased, morbidity remains a concern.

Diarrheal diseases and Acute Respiratory Infections (ARI) are still a major concern. Although mortality due to diarrhea and ARI are low, it is continuing to cause significant morbidity to children and adults. This could be linked to inadequate access to safe water and sanitation facilities especially at rural level. Similarly, Dengue fever has emerged as a major communicable disease of public health concern causing significant morbidity and mortality among the population. Control of breeding places of aedes mosquitoes, health education for communities and capacity building of health care professionals, adoption and sensitization of health care professionals to dengue management guidelines are major steps taken towards control of Dengue fever.

HIV incidence and prevalence rates remain low. However, with increase rate of drug abuse and evidence of injectable drug use among this population, it still remains a threat to the local community. National HIV/AIDS strategic plan addresses these issues of concern and gives high priority in health education of adolescents and also other target groups.

2.7 Treatment of common illness and injuries

Maldives have focused on prevention and public health aspects of health services. Access to primary health care at island level has been one of the main contributing factors to achieve the positive impacts. Similarly, high level of literacy among the population and community involvement in different areas of health especially in preventive and promotive health has contributed to proper implementation of health education activities.

Treatment for common illnesses like diarrhea and ARI are available at island level. Health education is given to household caregivers in making home preparation of ORS as well as preparation of ORS packets. They are also taught identification and recognition of dehydration and early signs of ARI. Health seeking behavior is common due to the mass health education activities carried within the communities. Similarly, treatment for minor injuries is available at island level.

The challenge remains in providing health services to islands with smaller populations. With the availability of health infrastructure, Health sector had committed in providing a General practitioner to all islands with a population of 500 however, it is difficult to sustain this service due to recruitment of expatriate workforce and high turn over. Provision of these services in Islands with population less than 500 is through primary health care workers. Both Family Health Workers (FHW) who are trained to give health education and treat minor ailments like fever, minor injuries and Community Health Workers (CHW) who are trained at a higher level to give the same services. It is again a challenge to sustain the services due to the limited number of people in that community.

Health sector is piloting different initiatives to sustain these services as well as increasing incentives for those working at this level. National level planning will be one way of sustaining a cost-effective health service delivery.

2.8 Essential drugs

Access to medicines is a major concern in this island nation. Pharmaceutical services in Maldives operate on a fully corporate basis by the private sector. Due to the remoteness and the number of people living in these islands operation of private pharmacies at this level is not viable. Maldives Food and Drug Authority (MFDA) under the Ministry of Health (previously pharmaceutical section) is mandated to regulate drug prices and monitor these services.

Provision of essential drugs to its population is a commitment by the government of Maldives. A comprehensive list of essential drugs is prepared by MFDA, however, a limited amount of drugs are procured and sent to health care institutions. These drugs include, drugs used in emergency situations including obstetric emergencies, antibiotics and other essential drugs needed for common diseases at primary or first contact level.

Improving access to essential drugs is one of the targets that the Ministry of Health is aiming to achieve by establishing social and private health insurance scheme and establishing welfare/social security nets for the poor and unemployed until universal health insurance is established. Similarly, providing essential medicines in all inhabited islands is another target that the Maldives is aiming to achieve by strengthening public-private partnership and community participation.

Statistical Table for 8 Elements of PHC

Indicator	1980	1990	1995	2000	2005
1. Health Education					
2. Nutrition					
• % children underweight			44	30 (2001)	21
• % of children born with low birth weight			20		12
• % children stunted			33	25 (2001)	17
• % children wasting			17	13 (2001)	13
• Initiation of Breast feeding at birth				96.5%	
• Exclusive breastfeeding for 6months				10.4% (2001)	
• Vitamin A deficiency '000 children	47 (1983)				
• Vitamin A deficiency among children					5%
• Vitamin A deficiency among women					17%
• Anemia among women					51%
• Women underweight (BMI below 18.5)					23%
3. Maternal & Child Health					
• ANC Coverage (K4)			85%	98%	91%
• % birth attended by trained personnel			95%		
• % birth attended by skilled birth attendants					92%
• Maternal Mortality Rate / 100,000 live births	500 (1981)	400 (1991)	258.73 (1997)	75.27	72.49
• Infant Mortality Rate / '000 live births	95 (1981)	38 (1991)	32	21	12

• Under 5 Mortality Rate / '000 live births	137 (1981)	55 (1991)		30	16
• Contraceptive user / prevalence rate			15%	18.9%	
• Contraceptive prevalence rate for modern methods			17%	32%	
4. Water & Sanitation					
• % population with access to improved water					76 %
• Urban households with access to safe drinking water			100%	100% (2001)	100%
• Rural household with access to safe drinking water				72% (2001)	
• Access to sanitary means of excreta disposal		22%		40%	80.5 %
• % population with access to basic sanitation				80%	
• Urban households with sanitary means of excreta disposal			99%	100% (2001)	100%
• Rural households with sanitary means of excreta disposal				77% (2001)	
5. Immunization					
• DPT 3		98% (1992)	99%	98%	98%
• Measles		98% (1992)	94%	99%	98%
• BCG		99% (1992)	99%	98%	98%
• Polio3		98% (1992)	94%	98%	97%
• Tetanus (<i>Women in childbearing age</i>)		95%	96%	96%	92% (5 th)

		(1992)			dose)
• Hepatitis B 3				96%	98%
6. Control of locally endemic diseases					
• DOTS coverage				100%	100%
• Proportion of smear positive pulmonary TB cases cured under DOTS (cure rate)			97%	94%	100%
• TB prevalence rate '000 (sputum positive)		1.15 (1991)	0.4	0.1	0.14
• TB prevalence rate '000 (sputum negative)		1.84 (1991)	0.26	0.12	0.16
• Leprosy prevalence rate '000		1 (1991)	0.3	0.78	0.04
• Cumulative total of HIV/AIDS cases				11	
• Dengue Fever					
7. Treatment of common illnesses & injuries					
• Prevalence of diarrheal diseases '000		64.4 (1991)	65	30.02	79.06
• Prevalence of ARI			70%	22% (2001)	20%
• Prevalence of Injuries					
8. Essential drugs					
• % of population with access to medicines					79%
• Number of pharmacies per 10,000 population			4 (96)	5 (146)	

Activities Initiated, Scope, Scale and Outcome of these activities

Health Education

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
1998 - Launched IEC project on reproductive health			
Workshops on food safety and hygiene to restaurateurs and developed video clips	Improve personnel hygiene of waiters & cleanliness of food preparation	Started at central level & phased-out to atolls	Introduction of self-service @ restaurants
1999 - Comprehensive health promotion plan develop and finalized	To promote community participation in reproductive health	Focused country wide	
Health and hygiene activities initiated in all schools	To develop pilot healthy school	Focused country wide	All schools established focal points for school health
Conducted a survey among government employees to identify smoking trends.	To initiate activities for controlling smoking		
2000 - Launched the South East Asia Anti-Tobacco (SEAAAT) flame			

Nutrition

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
1999 - National Nutrition Program developed with inter-sectoral consultation and			

implemented the program			
1999 - Conducted pilot deworming activities at atolls	Initiate de-worming for primary school children	Started as pilot, to phase out @ all schools	Mass de- worming in school health program
A survey conducted on prevalence of Vitamin A deficiency	Vitamin A supplementation in school health program	Initiate @ all primary school level	1999 - all primary school children get 2 doses of vitamin A

Maternal and Child Health

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Introduced Home Based Mothers Record Card (HBMRC)	Accessibility of information for future strategic use	Country wide	
All pregnant mothers to receive 4 ANC check-ups	Early detection of high-risk cases and reduce maternal morbidity and mortality	Improved access in terms of reduced travel time and distance	Early detection and identification of high-risk cases
Promoting institutional deliveries and Strengthening essential obstetric care	Capacity building in order to conduct all deliveries by trained personnel	Development of midwifery and reproductive health guidelines, recruitment of gynecologist & nurse midwives at atoll level, general practitioners and nurse midwives at island level	Decrease maternal morbidity and mortality rates
Inquiry in to Maternal death	To identify causes of maternal death and implement corrective actions	All maternal deaths reviewed and implement corrective actions	Maternal death review committee established

Availability of family planning services and guidelines on FP	Increase awareness and use of family planning methods	Availability of all forms of FP services at central and regional level, all methods except sterilization at atoll level and non-invasive FP methods at island level	Increase use of FP methods especially modern FP methods, decrease in fertility rate & standard guideline on FP available at all levels
Address special needs of women & Male motivation and participation in Maternal health	Early detection and treatment of STIs/RTIs	Country wide	Availability of diagnostic facilities and capacity building at all level
Promotion of exclusive breast feeding practices	Decrease infant morbidity and mortality rate and improve nutritional status of children	Establish baby friendly hospital initiative in government hospitals & production and dissemination of IEC materials on breastfeeding	Increase in the percentage of mothers who exclusively breastfeed their children & 6 hospitals declared baby friendly status
Implementation of IMCI strategy	To manage childhood illnesses using an integrated approach	Country wide	Early detection and management of childhood illnesses

Water and sanitation

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Maldives Water & Sanitation Authority established in 1973	provision of clean water, sewerage and sanitation services to all islands of Maldives		
Male' Water and Sewerage	provision of drinking water and	Achieved 100%	Reduction of waterborne

Company (MWSC) established in 1995	sanitation service for the urban population in Male' and Villingili		diseases
Rainwater storage capacity and rainwater collection initiative available to the community in the islands		Population dependent on rain water in 1998 – 45% (rural) 9% (Urban)	Reduction of waterborne diseases in the urban as well as the rural areas
Desalination plant introduced in 1998 with a capacity of 200m ³ /day. Present capacity is 4000m ³ /day to all households in Male' & Villingili		1998 - 59% 2001 - 76.1% Presently – 100%	
1980 - work began to provide universal access to sanitation for the population of Male'		All households of Male' & Villingili are connected to a public sewerage system Sanitation coverage of 100% for Male' 1998 – 42.5% rural population had access to adequate improved sanitation services	Since 1990 diarrhea cases reduced from 65 per 1000 population to 35 per 1000 population in 2000

Immunization

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
1985 – Official launch of EPI program	To reduce vaccine preventable diseases	Country wide	Maintained high immunization coverage of

			children less than one year of age
1993 – Hepatitis B vaccine introduced in the national immunization schedule	To reduce vaccine preventable diseases	Country wide	
1998 – A criterion of fully immunization included as entry criteria for nursery school enrolment	To reduce vaccine preventable diseases	Country wide	High coverage and sustainability of high immunization coverage
Conducted national and supplemental immunization days	Aimed at catching up on cases that missed immunization & completing immunization by vaccine rounds	Country wide	Coverage rate increased

Control of locally endemic diseases

<i>Activities Initiated</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Standardization of management and treatment of TB cases	Reduce TB incidence and prevalence rate	Distribution of DOTS guideline to all health care institutions	100% DOTS coverage
Intensified case detection and case management	Reduce TB incidence and prevalence rate	Diagnostic facilities capacity building made available at all atoll level health facilities and health centres & established mechanism for referral of smears from island level to higher centres	Increase case detection

Adoption of a surveillance system for Leprosy cases at each level of PHC system	Early detection, notification and management of leprosy cases	Diagnostic facilities made available at atoll level, capacity building in early identification targeted to island level and Health education to public for early detection and treatment	Reached regional elimination targets
Case detection, prevention, treatment, care and counseling services and advocacy for HIV/AIDS cases	Timely reporting, identification of high-risk cases	Diagnostic facilities and capacity building made available at atoll level, availability of treatment drugs, create awareness of HIV/AIDS among general population, Availability of Voluntary Counseling & Testing (VCT) sites with trained counselors at all levels	98% public aware of HIV/AIDS VCT services and 100% confidentiality maintained 100% screening of blood and blood products maintained
Regulation for control of mosquito breeding places formulated and enforced	Control of vector-borne disease	Identification of high-risk areas for vector control, Malaria screening conducted at port health and provision of prophylaxis for locals travelling abroad.	Achieved malaria free status, although dengue continues to be a public health concern case fatality reduced, and reached regional elimination targets for Filaria.
Early diagnosis and proper management of DH/DHF cases	To reduce mortality and morbidity due to DF/DHF	Diagnostic facilities available at atoll and health centre level, case management	Dengue continues to be a public health concern case fatality reduced.

		guidelines distributed to all health care facilities and capacity building conducted	
Improved infection control practices	Reduce cross and hospital acquired infections and protection of health care providers and receivers	Availability of Personal Protective Equipments (PPE) at all health care institutions, health care workers trained in universal precautions, infection control practices, prevention and transmission of infections and availability of infection control guidelines at all health care institutions	PPE available at all health care institutions

Treatment of common illnesses and injuries

<i>Initiated Activities</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Promotion of personal hygiene and sanitation	Reduce diarrheal diseases	Country wide	Reduction in number of diarrheal cases & morbidity and mortality due to diarrhea
Home management of diarrhea and ARI	Early initiation of diarrheal treatment and reduce morbidity and mortality due to diarrhea	Country wide	Increased home management and early treatment & reduction in morbidity and mortality due to diarrhea and ARI
Exclusive breast feeding increased from 4 months to	For prevention and control of diarrhea	Country wide	Reduction in morbidity and mortality due to diarrhea

6months			
Provision of water and sanitation facilities	Reduce water borne diarrheal diseases	Started in Male' urban region and phased out to atoll level	100% achievement in Male' urban region and improved facilities at atoll level & reduction in morbidity and mortality due to diarrhea
Development and use of guidelines for treatment of diarrheal diseases	Early management and reduce diarrheal diseases	Country wide	Rational use of drugs used for diarrheal diseases
Use of WHO protocol for standardized case management in ARI	Early management and standardization of ARI cases	Country wide	Reduction in morbidity trends of ARI, % of complications due to ARI decreased and regulated the use of antibiotics
Strengthening capacity for ARI management	Early management of ARI	Country wide	Availability of equipments and capacity built for ARI management available at Health centre level

Essential drugs

<i>Initiated Activities</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Promotion of rational use of drugs	Reduce drug resistance	List of essential drugs drawn and updated regularly and prescribers trained in area of rational use of drugs	Updated essential drug list available at all health care institutions

Quality control of drugs	Maintenance of the quality of drugs that are imported in to the country	Standard list of approved drugs, suppliers and guidelines available to all importers, All drugs monitored at ports of entry, storage sites and drug outlets.	Drugs available within the country are imported from pre-determined pharmacies and quality maintained
Procurement of drugs, vaccines and other essential drugs	Accessibility of essential drugs to all population	Availability of essential drugs at health centres in islands where pharmacies are not set-up, Encourage opening of community pharmacies and availability of all emergency drugs at all health care institutions	Emergency drugs available at all health care institutions for immediate use
Procurement of essential equipments to all health care facilities according to the level of service provided	Improve availability of essential equipments for service delivery	Availability of essential equipments at all health care institutions according to the level of service provided and essential equipments available for emergency management	Essential equipments available at all health care institutions

3 OTHER ELEMENTS OF PHC

3.1 Non-communicable diseases (NCD)

Although Maldives has been able to control communicable diseases, the country is facing double burden of disease, both emerging and re-emerging communicable diseases and chronic non-communicable diseases associated with lifestyle change, high-risk behavior within the community and development.

Non-communicable diseases have emerged as the leading cause of mortality and morbidity with an increase trend in cardiovascular and renal diseases, diabetes and cancer and added to this burden is the growing issue of accidents and injuries. The problem of Thalassaemia continues to be a major health concern.

During the past 10years the number of accidents and injuries due to fire, falls, drowning and road traffic accidents have increased. Although numerous measures have been taken like conducting awareness programs, enforcing new regulations and installing traffic lights, more coordination is needed between concerned authorities to bring about an impact.

During the past years, health promotion activities have been integrated to control and reduce NCD's and emphasis has been given on preventive programs to promote healthy lifestyles and reduce high-risk behaviors. Provision of essential curative services for early detection and management of NCD's are available at health care institutions according to the level of service provided.

3.2 Occupational Health and Safety

Occupational health and safety is a major concern within the country. There is no clear mandate for Ministry of Health being the overall arching body for occupational health and safety issues. Similarly, Health Master Plan 2006 – 2015 does not address this issue.

However, issues related to occupational and health and safety within the sector is being addressed. Health care workers in direct contact with service receivers are being immunized on hepatitis B vaccination; work place needle stick injury protocol has being developed at central level. Health care waste management and infection

control guidelines are being developed and implemented at central level, which is to be phased out to atoll level.

3.3 Mental Health and Rehabilitation

Since 2001 with the theme on mental health for world health day, mental health and rehabilitation services are given considerable importance. It is a growing concern which needs to be addressed at primary health care level.

Services of psychiatrists are available at central level, and initiating the same services at atoll level is mandated by the Ministry of Health. Community mental health coordinators are being trained to work with island communities. Lack of qualified human resource especially nationals have been the main hindrance in implementing services related to mental health.

3.4 Oro-Dental Health

Oro-dental health is a growing concern among the whole population, especially among school age children. With the local tradition of chewing nuts and the older population using tobacco leaves, detection of oral cancers though less common are seen among Maldivian population.

Well established dental services are available at central level. Dental services for minor dental problems have been established at regional level. There is a growing need to conduct dental camps for early identification, treatment and management of dental problems

Non-Communicable Diseases

<i>Initiated Activities</i>	<i>Scope of the Activity</i>	<i>Scale of the Activity</i>	<i>Outcome</i>
Established National Thalassaemia Centre Coordinated thalassaemia activities with Society for Health Education (SHE) an NGO	Development of a focused institution for managing thalassaemia Further expansion of screening facilities	Provision of free services for all thalassaemia cases. Complete screening of target populations and Screening to conduct through mobile teams as facilities are available at central level only	Regular registration, management and counseling for thalassaemia children & families through out their life-span. 87% of 15-25yr population screened by yr 2000.
Prenatal diagnosis and Medical Termination of pregnancy (MTP) approved as policy decisions	To reduce the number of thalassaemia majors and disability due to thalassaemia	Advocacy for prenatal screening and awareness to all population	
Laboratory, blood bank facilities upgraded and provision of standard treatment	Early screening, detection and availability of treatment	HLA typing at central level and osmotic fragility test for atoll level. Blood screening for hepatitis C	
IEC materials developed for all NCD's	To increase awareness among general population	Country-wide awareness programs	
Establishing NCD clinics at all levels of health care	Early detection of CVD's, diabetes and renal diseases	Establishment of NCD clinics at atoll level	Diabetic clinic established at central level and NCD clinics established at atoll level
Maintenance of National Registries	Information management	National registry for diabetes and cancer	Established national register at central level.
Management, treatment and care of NCD's	Early detection, intervention and management of complications	Training of health care providers, availability of diagnostic and treatment facilities and establish cath-lab at central level	Health care providers trained in management of diabetes. Haemodialysis facility available at central level.

4 TRANSLATING THE VALUES OF PHC INTO POLICY AND ACTIONS

4.1 Universal access to care and coverage on the basis of need and commitment to health equity as part of development oriented to social justice

Health policy of the government of Maldives is committed to ensure access to primary health care to all citizens in an equitable manner at an affordable price. Under the policy objective to enable equitable access to comprehensive primary health care, through provision of preventive, diagnostic, curative services and rehabilitation and medicines for common diseases and health conditions, the government had committed to;

- Make available a health facility providing comprehensive primary health care at island level.
- Make available Primary Health Care (PHC) and Skilled Birth Attendants (SBA) at island level.
- Make available means of transport for emergency referrals.
- Make available a mechanism for medical evaluation and retrieval of emergency cases.
- Make available a health insurance scheme covering 70% of population by 2010 and 100% by 2015.
- Sustain welfare assistance for health till universal coverage is achieved
- Make available access to essential medicines at affordable prices by establishing pharmacies with private and community participation at island level.
- Take initiative in resource mobilization activities in order to increase investment in health.
- Lobby for an increase in government annual budget allocation to health

4.2 Community participation

All major positive achievements in health indicators over the last 30 years had been accomplished with unlimited support from the community to the health sector. Building partnerships in health services is another policy goal which addresses the

importance of expanding and improving service delivery. Government has committed to;

- Establish partnerships with NGOs and private sector through joint planning for implementing public health services
- Develop partnership/networks with community groups / clubs / committees for social mobilization of health
- Promote local and foreign investment in health care delivery with adequate safe guards.
- Establishment of networks of institutions and NGO's and community based organizations.
- Developing a “community participation policy”

4.3 Inter-sectoral actions for health

Inter-sectoral coordination with public, private and NGOs outside the health sector have been a commitment of Ministry of Health in improving the services provided to its population. Efforts are made to utilize inter-sectoral co-operation in planning and implementation of health services across the country.

Participation of other sectors in promoting and protecting health has been significant. This fact is evident from the school health program which is governed by the Ministry of Education. Similarly, mosquito and other vector control and environmental hygiene activities are greatly supported by public and different NGO's.

4.4 Information, Research and Evidence for Management

Ministry of Health has made considerable efforts to strengthen the health information system. Health information is important for evidence-based, policy level decision making. These efforts materialized the vital registration system, conducted surveys and built-up analytical and interpretation of data capability at central level.

Efforts are also made in decentralizing health information by training staff from atoll level hospitals. Similarly an essential health indicator database for planning, monitoring and evaluation established. ICD-10 coding was introduced to strengthen the morbidity and mortality data and information dissemination strengthened through publication of annual health reports.

4.5 Human Resources for Health

Human resource development was given a very high priority and both government and external resources have been utilized in order to meet the resource requirement. Human resource requirement have increased over the last 10 years with increase in health care institutions. Currently Maldives have 1 tertiary level hospital, 20 atoll level hospitals and more than 140 health centres.

There is a high dependency on expatriate workforce for doctors and nurses, which is creating a high turnover and limiting sustainability of quality health services. Human resource development in clinical, technical, administrative and support services are priority needs of the country. Not having a medical college in the country has limited the number of doctors getting trained. Although, in-country training of nurses are available, requirement for health sector cannot be fulfilled due to the limited clinical services available for practice.

4.6 Health care financing

Health care is financed by a proportion of government budget and over the last 30 years there has been an average of 20% increase in government expenditure on health each year. In the year 2005, 11% of government budget was allocated to health care and 28% of this budget was assigned to preventive health services. Funding for specific preventive programs are also available through International NGO's like UN, WHO, UNICEF and UNDP.

Provision of curative services at island levels has almost doubles the cost of health service delivery. Attempts have been made to introduce cost sharing mechanisms such as subsidized user fees. Welfare assistance is the only mechanism whereby most needy can obtain financial assistance for health care. Private medical insurance systems have also emerged and the government has initiated the process to develop social health insurance mechanism.

5 LESSONS LEARNT

There are gaps and achievements between policy and practice in primary health care. For some components primary health care, improvements have been slow however; at other areas there have been accomplishments which exceeded the targeted figures.

Atoll level health management systems

It is important to strengthen the atoll level health systems for sustainable development and improvement of primary health care, for which a decentralized system is essential.

Decentralization approach was started in the Maldives since 2006 however; the main set-back have been lack of local human resource to set-up a permanently appointed management team, capacity of the managerial team, high turnover of staff and lack of information systems to gather data for need analysis and cross referencing for implementing activities to improve and understand areas that need focus in that particular catchment area.

Similarly, not having a well defined referral system creates a break in the care-link that clients require. The health system in the Maldives does rely on 5 levels of care which automatically indicates clients to move from one level to the other depending on the kind of care required. Though a referral system is prescribed, a reliable and affordable transport mechanism is yet to be implemented. With the commitment of Ministry of health each Atoll is set-up with sea transport facility since mid 2007 however; this transportation is utilized for emergency purposes with a user-cost. Maldives need to identify a reliable, sustainable and affordable transport mechanism for accessing essential services.

Maldives still need to identify and define “essential health services” this include both curative and diagnostic services. With institutionalization of services at atoll and island level special focus has been given to curative services, preventive and promotive component had taken a back-stall. Although, out-reach services are being provided to remote islands where limited services are available, more emphasis is given to the curative component of health care. Similarly, the focus of Community Health Workers (CHW) has changed from community focused to institution focused activities; where rather than the health care provider going to the community, community comes to the institutions for seeking health care.

Health system of Maldives, need a dependable and consistent health information management system, for reporting as well as surveillance purposes. Implementation of an evidence-based management of primary health care services requires data gathering to employ community needs, achievements, health impact assessments and future steps.

Community involvement in health is one big achievement that Maldives has seen. The success that the health system has achieved is because of the participation of island level communities. However, establishing health committees at island or atoll

level, involvement of private sector, community and religious leaders and granting more control especially on supervision and monitoring of health care services still need to be streamlined.

Maldives have achieved some health targets of Millennium development goals, targets of “health for all”, which comprises mainly of primary health care components. The biggest challenge now facing the health system is sustaining these results and additionally dealing with new and up-coming issues related to health. For sustaining results, quality of care provided is one component that health system needs to focus on. Maternal and infant mortality rates have been reduced however, Maldives is still struggling with interventions to reduce neonatal mortality. The focus is changing to look

6 PHC AND THE CURRENT HEALTH ISSUE AND CONTEXT

6.1 Demographic changes and epidemiological transition

Lifestyle changes that occurred due to development and globalization has increased prevalence of chronic non-communicable diseases. Although communicable diseases have been controlled, there is still the burden of emerging and re-emerging communicable diseases. However, NCD’s have turned out to be the main cause of mortality in the country. While, cardiovascular diseases, diabetes and cancer are the leading causes of death in the country, thalassaemia and renal diseases is a growing concern. Furthermore, increase in the number of accidents and injuries due to road traffic accidents, leading to death and disabilities especially of the young population is becoming a major concern.

Although the epidemiological transition from communicable to non-communicable diseases has occurred in the disease pattern, the country is burdened with emerging communicable diseases and high prevalence of malnutrition. Similarly, environmental health problems continue to be of public health concern.

6.2 Public private partnership

Public private partnership with local and international NGOs operating within the country is reasonably good. They are involved in development and implementation of policy and strategic actions within the health care system.

Private sector partnership needs to be further enhanced, to ensure public and private sector provides services that complement each other for good quality of care. There is no existing policy direction, regulatory and quality control mechanism for enabling the development of such partnership in the current system.

7 THE WAY FORWARD

The government of Maldives is committed in further improving the health status of its population. Equity, accessibility and affordability of health care are what the Ministry of Health is aiming to achieve. It has been proven that primary health care approach played a major role in improving the health status of Maldivian people over the last 30 years. Primary health care has evolved during the last 30years to incorporate additional elements which are of importance with demographic and epidemiological changes that are occurring within the countries. Similarly, tackling issues and changing health trends due to globalization is another factor that each country needs to be taken into consideration during health planning.

The previous Health Master 1996 – 2005 mainly addressed elements of PHC. The Health Master Plan 2006-2015 addresses sustaining what the country has achieved during the last decade, issues related to current health trends both nationally and internationally and foreseeable future health trends. Improving the quality, accessibility and affordability of health that is being provided to the public is the major concern addressed in this master plan. Additionally, developing public confidence in the system is also another area that the health sector needs to work on.

Reproductive and maternal child health is one component of health that still needs vigorous attention and health master plan addresses the current problems and ways of sustaining what the country has achieved. Similarly, Maldives have achieved targets set for immunization coverage and some locally endemic diseases, where health master plan concentrates on sustaining the achieved targets.

Targets to Achieve by 2010 & 2015

Health Education

Indicator	Baseline 2005	Target 2010	Target 2015
% of mothers with correct knowledge on initiation of complementary feeding	76%	80%	90%
% of mothers aware of aware of signs & symptoms of ARI	NA	50%	75%
% of adolescents with correct knowledge about contraceptives	16%	25%	50%
% of adolescent with correct knowledge on preventing STIs and HIVs	54%	65%	75%
% of pregnant women receiving 4 ANC check ups by a trained health professional	91%	>95%	100%
% of adult population do daily physical activities for 150mins per week	NA	45%	65%
% of people above 35yrs screened for cholesterol, blood pressure, blood sugar	NA	50%	75%
% of women screened for breast and cervical cancer	NA	50%	75%
% of people with correct knowledge on HIV/AIDS signs/symptoms	99%	100%	100%
% of people with correct knowledge on ways of transmission of HIV/AIDS	91%	95%	>95%
% of people with correct knowledge on STIs signs/symptoms	48%	75%	>90%
% of people with correct knowledge on ways of transmission of STIs	67%	80%	>95%

Nutrition

Indicator	Baseline 2005	Target 2010	Target 2015
% of mothers with correct knowledge on initiation of complementary feeding	76%	80%	90%
% of households using iodized salt	71%	80%	95%
Proportion of babies born with birth weight less than 2500grams	11%	<10%	<5%

Prevalence of anemia among pregnant women	51%	35%	25%
Percentage of underweight children under 5 years	30%	25%	20%
Proportion of adults who are obese	46%	Reduce by 5%	Reduce by 15%
Proportion of children with Vitamin A deficiency	5.7%	3%	1%

Maternal and Child Health

Indicator	Baseline 2005	Target 2010	Target 2015
% of pregnant women receiving 4 ANC check ups by a trained health professional	91%	>95%	100%
Contraceptive prevalence rate	39%	50%	65%
% of women of reproductive age (16-45) given TT vaccination	49%	75%	>95%
% of pregnant women consuming iron folic acid for at least 2months during pregnancy	80%	90%	>95%
% of women attended by a gynecologist at least once during third trimester	NA	75%	>95%

Water and Sanitation

Indicator	Baseline 2005	Target 2010	Target 2015
Access to safe water	76.5%	85%	>95%
Access to sanitary means of excreta disposal	80.5%	90%	100%