MALDIVES

HEALTH MASTER PLAN

2016- 2025

"For Our Nation's Health"

MINISTRY OF HEALTH

Contents

Introduction

Development planning in the health sector started in the late 80's. The first health sector plan was a 3 year medium term plan developed in 1980 which followed the principles of primary health care approach adopted at Alma Ata in 1978. The Health Master Plan (HMP) 1996-2005 was the first long-term plan which was developed in 1995. The HMP 2006-2015 was implemented satisfactorily, particularly in the first half of the plan period. The latter half of the plan period was challenging with a shift in policy direction to short term planning. Despite the challenges, HMP2006-2015 proved to be a valuable guidance for health planning. This HMP 2016-2025 is the third long-term plan and draws on lessons from previous planning cycles and challenges in implementing such a long-term plan in a volatile political context.

This Health Master Plan 2016-2025 outlines the principles and the national health goals, and provide strategic guidance and direction to the public and the partners in health, to further develop programmes and business plans to improve the health of the population and develop the health system of the country.

Process

The process for the developing the HMP 2006-2015 was undertaken in a stepwise manner. These were situation analysis, identification of priority focus areas and national goal, consensus building followed by development of the monitoring and evaluation framework and final endorsement of the plan. The mechanism set to support the development of the plan were appointment of a technical committee, technical support to develop the draft and formal and peer reviews of the draft HMP. The process was initiated in June 2014 and Stages 1-3 completed in seven months. Due to gaps in baseline data considerable time and efforts were put into updating data and complete the final stages.

Stage 1: Situational analysis included an evaluation of the previous HMP, desk reviews, and interviews with key informants, service providers, individual meetings with stakeholders and consultation workshops.

Stage 2: Identification of priority focus areas and national goals involved analysis of the outcomes and suggestions from situation analysis, inputs from social media forum, further consultations with key informants and stakeholders including public and political parties.

Stage 3: Consensus building involved discussion and feedback from technical health professionals within the health sector, workshops with service providers, public health service providers and collaborating sectors, and workshop and separate meetings with senior management of health sector, policy makers and political parties. As part of the

consensus building the draft was reviewed by key informants as peer reviewers and partners in other sectors and subjected to public opinion.

Sage 4: Development of the monitoring and evaluation framework involved identification of appropriate indicators to measure the goal, outcomes and outputs, obtaining baseline data on the indicators and discussions with partners to set targets.

Stage 5: Endorsement of the plan by the Government of Maldives followed by publication in the Government Gazette and on the website of Ministry of Health.

The Planning Model

The planning cycle for the Health Master Plan (HMP) 2016-2025 asks five basic questions.

This HMP sets out high level strategic directions for the health sector and its public, private and international partners for the period 2016-2025. The model adopted for this Plan is based on a strategic management framework.

In accordance with this model, the HMP focuses on general strategic directions—outcomes, broad strategies and the operating environment—but does not focus on detailed operations or resource requirements. As the HMP 2016-2025 is expected to traverse at least two election cycles, this model provides the political contenders the flexibility to integrate their manifestos' health priorities to contribute to the population health goals.

In this framework, all the partners in health (government and its institutions and private for profit and non-profit institutions, development partners) are provided

Figure 1: Planning Cycle for Health Master Plan 2016-2025

guidance that enables them to establish:

- Medium term policies or strategic priorities identifying the intended contributions that each partner of the health system hope to have on the health of the people.
- Statements or strategic actions which show how each partner will contribute to achieving the national health goals identified in this plan.
- Specific outputs, which are the specific goods and services produced and delivered by each partner.

The business plan for each financial year will, thus, translate the high level strategic directions identified in the HMP 2016-2025 into specific action plans relevant to the government's manifesto in the public sector and institutional priorities in the private health care providers and NGOs for the upcoming fiscal year. It will also link the resource envelope with the performance measures and targets for the institution that contribute to the national heath targets.

Figure 2: Strategic management framework for the Health Master Plan 2016-2025

Legal and Regulatory Framework

The constitution of Maldives and legislations that govern health and its determinants provide the regulatory framework within which we develop and operate the Health Maser Plan 2016-2025. These include:

Constitution of Maldives

Article 21, under Right to Life, the Constitution of Maldives states that: "Everyone has the right to life, liberty and security of the person, and the right not be deprived thereof to any extent except pursuant to a law made in accordance with Article 16 of this Constitution".

Article 23, under Economic and Social Rights Provision, the Constitution of Maldives states that: "The State undertakes to achieve the progressive realization of these rights by reasonable measures within its ability and resources:

(a) adequate and nutritious food and clean water;
(b) clothing and housing;
(c) good standards of health care, physical and mental;
(d) a healthy and ecologically balanced environment;
(e) equal access to means of communication, the State media, transportation facilities, and the natural resources of the country;
(f) the establishment of a sewage system of a reasonably adequate standard on every inhabited island;
(g) the establishment of an electricity system of a reasonably adequate standard on every inhabited island that is commensurate to that island."

Article 35, under the 'Provision; Special protection to children, young, elderly and disadvantaged people', the Constitution of Maldives states that,

"(a) Children and young people are entitled to special protection and special assistance from the family, the community and the State. Children and young people shall not be harmed, sexually abused, or discriminated against in any manner and shall be free from unsuited social and economic exploitation. No person shall obtain undue benefit from their labor.

(b) Elderly and disadvantaged persons are entitled to protection and special assistance from the family, the community and the State".

Laws directly addressing health

Food establishment's hygiene Act (27/78)
Medicines Act (75/78)
Port Health Act (76/78)

Import products and Food Establishments Act (60/78)
Export Import Act (31/79)
Birth and Death registration Act (7/92)
Disability Act (8/2010)
Tobacco control Act(15/2010)
Drug control Act (17/2011)
Social health insurance Act (15/2011)
Public health protection Act (7/2012)
Thalassemia control Act (4/2012)
Health services (under consideration by the parliament)
Health professionals (under consideration by the parliament)
Food safety (under consideration by the parliament)

Laws in other areas addressing health issues

Child Protection Act (9/91)
Environment protection Act (4/93)
Consumer protection Act (1/96)
Family Act (4/2000)
Human rights Act (6/2006)
Immigration Act (1/2007)
Civil service Act (5/2007)
Employment Act (2/2008)
Land transport Act (5/2009)
Pension Act (8/2009)
Local governance Act (7/2010)
Customs Act (8/2011)
Domestic violence Act (3/2012)
Penal code (9/2014)
Social protection Act (2/2014)

Situation Analysis

The situation analysis informs the need assessment and identification of health needs and guide priority areas for action in the period 2016-2025. In carrying out the situation analysis, desk reviews, interviews and discussions were carried out with technical and management personnel of the health system (public, private, voluntary and external partners), other sectors, key informants, community leaders and members of political parties.

Geo-spatial context

Maldives is an archipelago consisting of 1192 tiny coral islands that form a chain stretching 820 km in length and 120 km in width in the Indian Ocean located 600 km south of Indian sub-continent. These islands cover a geographical area approximating 90,000 square kilometers of the ocean with a land area of only 298 square kilometers. The islands form 26 natural clusters (atolls) which are administratively grouped into 20 atolls. At present, a total of 187 islands are officially declared as inhabited islands. As there is an ongoing population consolidation program, the number of inhabited islands is gradually decreasing. In addition, to the official inhabited islands, there are 107(2014) islands designated as tourist resorts and around 14 islands used for industrial purposes (Ministry of Health, 2014).

Governance

In the past seven years the country has seen major transformations of its governance structure with a new constitution ratified in the year 2008. The key changes in relation to the 2008 Constitution of Maldives is a presidential system that is geared towards a full democratic governance system with the separation of powers of the executive, judiciary and legislature, multi-party elections, decentralized governance and a bill of rights and freedoms for its citizens. The transition in governance has been erratic; with the first elected president under the new constitution in 2008 resigning in 2011, a transition government till November 2013, followed by a new multiparty election in 2013 and parliamentary election in early 2014. The result of these elections is a new President with a ruling party majority in the Parliament (Ministry of Finance and Treasury and UNDP, 2014).

Economic context

Maldivian economy had shown a steady growth averaging 7% over the past decade, which dropped following Asian financial crisis and started picking up in 2013 with a real GDP growth of 3.7 (World Bank Group, 2014). The economy is highly dependent on the tourism industry which accounts for around 30% of the direct GDP and almost 75% when counting direct and indirect income (Ministry of Finance and Treasury and UNDP, 2014). Currently Maldives is placed as a middle human development country with a HDI

of 0.688 (in 2012) with a per capita GDP of US$7,177 (Ministry of Finance and Treasury and UNDP, 2014; World Bank Group, 2014). The consistent growth led to the graduation of Maldives from a least developing country to a middle income country with implications for external development assistance to Maldives. Poverty in Maldives has also shown consistent reduction. As measured by $2 per capita per day, poverty in Maldives reduced from 31% in 2003 to 24% in 2010 (World Bank Group, 2014). However the poverty gap continues to be a concern, with only a small reduction from 5-4% in the Atolls, while the poverty gap increased in Male' from 2003-2009/10.

Although the Maldivian economy is recovering, continued high levels of fiscal deficit is threatening the macroeconomic sustainability. In 2013 the current account deficits stood at 20% of GDP and the gross reserves were at $386 million (World Bank Group, 2014). A review of the public expenditure and financial accountability in 2014, that indicated the high public spending, is one of the main drivers of the public and external fiscal imbalances challenging the macroeconomic situation. The recent introduction of welfare schemes of utility subsidies and allowances for vulnerable populations, social health insurance and old age pensions that solely drive on government contribution adds further pressure on the fiscal deficit. Added to this, are the recent economic policies that waive resort lease rents and import duties for tourism constructions and concessions on imports directly to regional ports in the atolls. According to World Bank, the high public expenditure with short-term borrowing is putting Maldives at a high risk of external debt crisis. As Maldives is highly dependent on imports for food, fuel and consumer products, the country is particularly vulnerable to the changes at a global level.

Many of the aspects in the country's economy present a challenging situation of it being vulnerable to external shocks. Most of the staple foodstuffs, basic necessities and items for the tourism industry and the country's population are imported. This external dependence on commodities along with geo-spatial vulnerabilities of Maldives makes sustainable development a continuous challenge. The Maldives Human Development Report 2014 identified two sets of vulnerabilities (Figure 3). The structural vulnerabilities related to economic development and the vulnerabilities associated with socio-economic transitions and natural disasters.

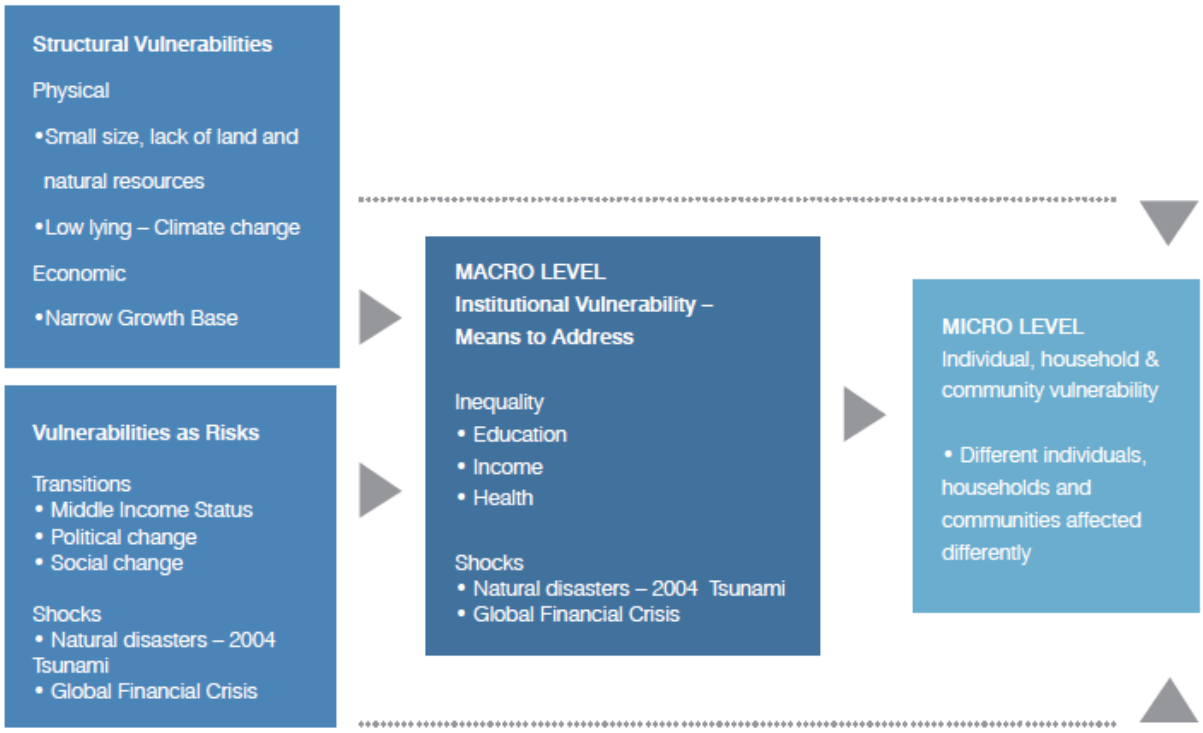

Figure 3: Vulnerability links to inequality in Maldives *(Ministry of Finance and Treasury & UNDP, 2014)*

Demography

The population of Maldives grew at a rate of 1.56 from 2006 to 2014 resulting with a population of 399, 939 in Census 2014 (National Bureau of Statistics, 2014). Maldivians represent 85% of the population with 51% males and 49% females while 15% of the resident population are expatriates (Figure 4). The expatriate population is however, predominantly male with 87% men and 13% women. According to the Census 2014, the population continues to be concentrated in the capital city Male' with 38% of the population living in Male's city in 2014. A similar pattern is observed when the population is disaggregated by Maldivian and expatriate populations. While the Maldivians are a homogenous population speaking one language (Dhivehi) and follows Islam, the increasing expatriate migrant population is creating multiple ethnicities and religious beliefs among the population.

Although age disaggregated data from Census 2014 is not available at the time of writing this report, young people under 25 years will continue to form the majority (47%) of the population of Maldives (Department of National Planning, 2013). Furthermore the population projections (Figure 5) indicate an increase in dependent age populations (<5 years and >65 years) associated with the high percentage of young people entering the reproductive age and the increased life expectancy (Ministry of National development, 2008).

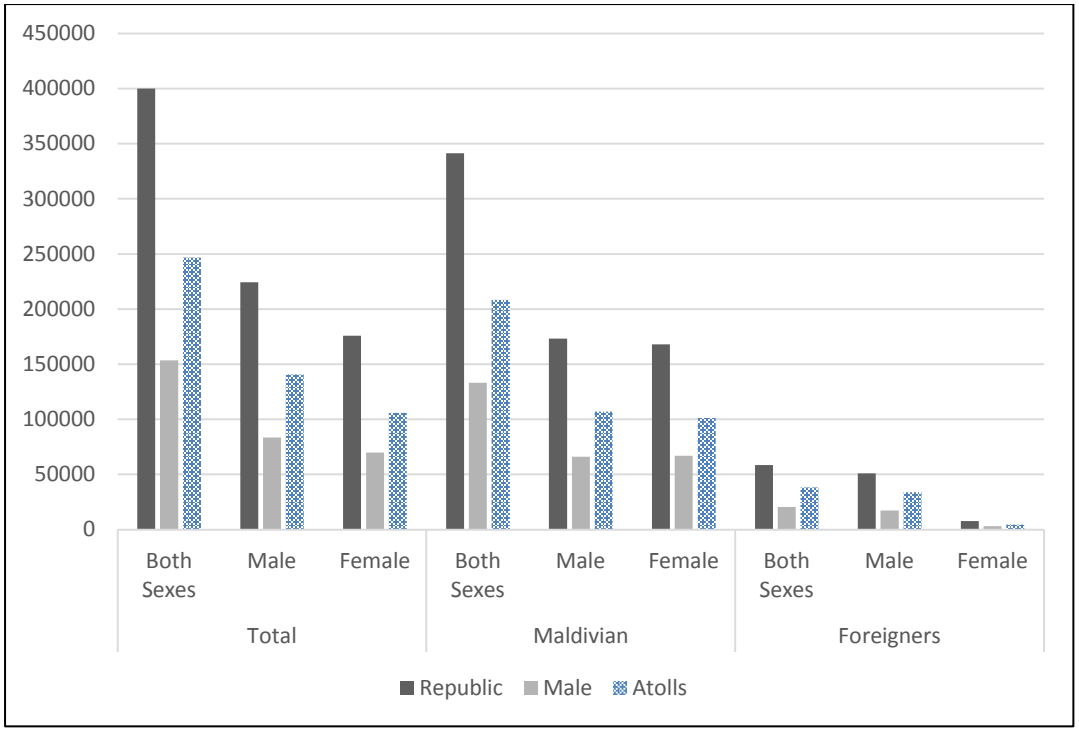

Figure 4: Population of Maldives, by gender and citizenship, Census 2014 ***(National Bureau of statistics, 2014)***

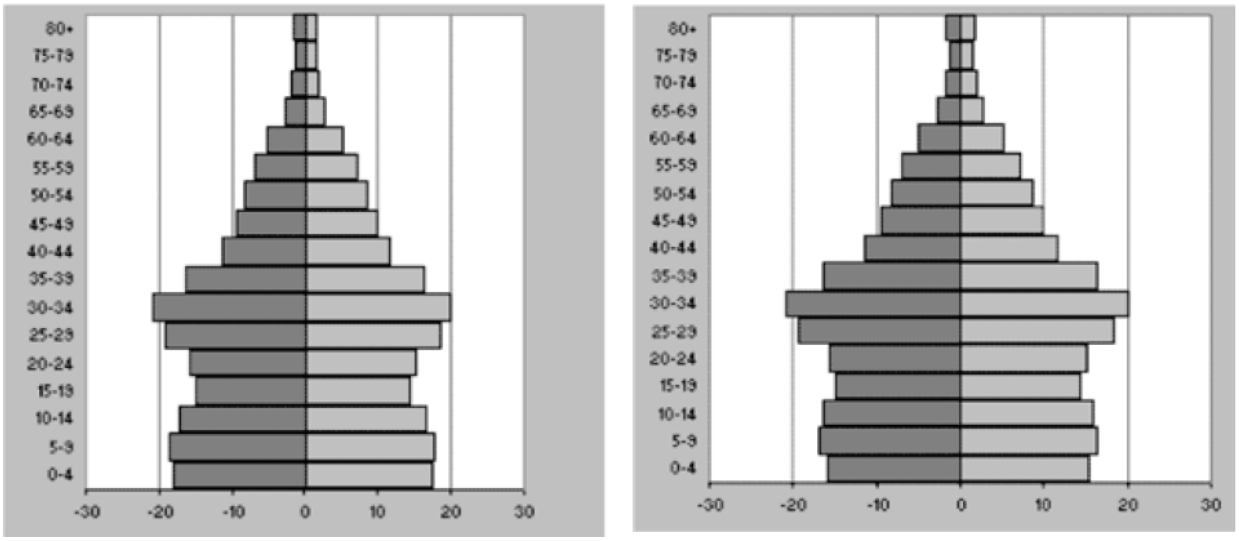

Figure 5: Low (left) and high (right) projections of the population structure for the year 2020
(Ministry of Planning and National Development, 2008)

A high rate of literacy among the Maldivian population has been maintained for several years and the literacy rate stood at 93.8% among both men and women over 6 years in 2006. The goal of the universal primary education has been achieved; however there are emerging concerns due to the increasing number of drop-outs from primary schools (Department of National Planning, 2010). Furthermore, unemployment increased across the country, by 8% in Male' and by 12% in the Atolls from 2006 to 2010 (Department of National Planning, 2012).

Health system

The public sector conforms to the largest share of the health system in Maldives. The public sector is supported by a number of private health care providers, mainly providing curative and diagnostic services, and medicines and medical products located within the country as well as in neighbouring countries. Another key sector that forms part of the health system is the voluntary sector in the form of NGOs working on specific health issues. While the public system extends to all inhabited island, private and voluntary sector services are concentrated in Male'. The health system is also supported by external development partners.

Health care delivery in the public sector

The health care delivery system of Maldives is organized into a four-tier system with island level primary health centres, a higher level of health facilities with respect to provision of maternal and new born care at an atoll level, specialty care hospitals at regions (groups 0f 2-4 atolls) and tertiary care at a central level. Health policies with regard to public service delivery include, establishing a public health facility either a hospital or health centre in each inhabited island, for which the service level would be decided depending on the level of population, patient load, and distance to nearest hospital. Each atoll excluding K atoll, has a hospital catering to the population of that atoll. Even though hospitals are called regional or atoll hospitals, the grading criteria for hospitals, contains three levels. Health centres have four levels and health posts are also referred to level four health centres. Administratively, the regional or atoll hospital in each atoll acts as the main coordinating body in providing primary and curative health care in that atoll and each atoll covers a population of 5,000 to 15,000 people. Hence, to ensure access to health care, health facilities are established even if the population number is low. Therefore, the distribution of PHC centres is island based and not population based resulting in inefficiencies in terms of material, human and financial resources (eg:– Haa Alif Atoll has 13 centres serving over 13,405 populations, while in Vaavu there exists 1 HC and 3 HP for a population fewer than 1600). In 2014 there were 20 hospitals (IGMH, the tertiary hospital, 5 regional hospitals and 14 atoll hospitals) and 169 primary healthcare centres (30 health posts, 139 health centres).

Primary level health care in Maldives is provided through health posts, health centres and Atoll and Regional hospitals and in Male' city through a separate PHC centre (Dhamanaveshi). Health care services including medical examination, investigations, immunization, antenatal care, drugs etc. are provided free to all Maldivian citizens. However, the delivery of services at primary health centres at rural level is challenged due to the geographic isolation of islands and inadequate human resources, specialties, supplies and equipment and poor management. Additionally, there is no adequate service demand due to the small populations and health needs which compromise the skills of health professionals. Hence, despite the high ratios of skilled health personnel-to-population ratios, (eg. the doctor-population ratio in 2012 was 1:609) the

geographical situation leads to limited availability of skilled health workforce in the smaller islands. Although there is continuous training and re-training of primary health care staff, nurses and public health workers, ensuring quality service delivery to all inhabited islands continues to be a challenge. Added to the geographic challenges, is the poor human resource management, limited career development and professional development opportunities making retention of trained staff difficult.

The dispersed islands pose challenges to logistic management, particularly in providing necessary supplies and equipment, assuring quality services and regular maintenance with an associated decline in the ability of the system and its personnel to administer the delivery of services. Furthermore, there are no public pharmacies and due to diseconomies of scale the private sector is not attracted to provide pharmacy services in smaller islands. Thus, although a primary health care centre is available in the islands, access to medicine is a major problem for residents of small islands. Despite the challenges in distribution and difficulties to provide basic health services at the peripheries, the health system in Maldives has been able to operate and substantially expand access to health care.

In addition to the provision of routine health care, health services have in-built systems for preparation and response to public health emergencies and disasters. As such, national protocols are in place and drills are conducted intermittently for public health emergencies and to a lesser extent on national emergency situations. However, emergency medical services (ambulance and paramedic services) are not established in the country, which contributes to a number of deaths which could have been saved with appropriate emergency care. Maldives Red Crescent was stablished in 2009 and are actively promoting volunteerism and developing community capacity for emergency preparedness and response including public health epidemics and pandemics.

However associated with transition in governance and political context, major changes were brought to the health system with corporatisation of the public healthcare delivery system and dissolution of the single coordinated system into six separate systems in the years 2010-2011. This change was associated with breakdowns in the supply of medical equipment and skilled human resources as well as health information systems. This transition to the system was accompanied by the loss of a portion of the skilled health workforce, resulting in a gap, especially in preventive health and primary health care. The system was reorganised again in 2012 into a single system, but has not yet recovered from the losses and instabilities associated with the changes. Attempts to regain stability have led to a draft legislation on health service delivery in Maldives which, at the time of writing this analysis, is under consideration by the Parliament.

Since the beginning of 2014 a number of reforms are being brought into the public health care system. A policy to establish a general practice (GP) service is being piloted as the gate keeper to entry into the public health care system and establishing a referral

model, linking with secondary and tertiary care facilities and the social health insurance system's information system. The management of public health care facilities in the Male' city region (the national referral hospital IGMH, Vilimale' health centre and Hulhumale') have been delegated to be managed by a corporate management board independent of the Ministry of Health. The government has entered into a partnership with the State Trading Organisation (STO) in 2014 outsourcing the supply and man agent of medical supply system of the public health care delivery system. As such, STO is establishing pharmacies in smaller island, medical storage facilities among the atolls, establishing a biomedical service and medical supplies information system to guide effective supply of medicines, medical products and technology to all public health facilities. Other policy initiatives proposed include establishment of a national diagnostic centre which can be accessed by all health care facilities. The current policy initiatives however do not reflect constructive policy action for strengthening human resources for health (except for development of GPs) and health information systems.

Public and voluntary health sector

The private sector in health in the Maldives, although small, is vigorous and distributed widely across the islands. The ADK hospital is a large tertiary facility located in Male' while others are smaller clinics. The majority are located in Male' city. ADK hospital has 50 beds and provides a wide range of medical and surgical facilities. Outpatient visits at ADK are close to the levels seen at IGMH, the tertiary public sector facility in Male'. According to the register of all clinics maintained by the Ministry of Health, there are 65 private health care facilities of which most (73%) are located in Male'.

Although the private sector predominantly provides allopathic services, a few provide traditional Maldivian medicine (Dhivehi beys) and alternative medicine services such as Acupuncture, Ayurvedic medicine and Chinese medicine. However, country capacity to ensure quality of these services and medicinal products used in these services are weak.

Unlike health care provision, supply and provision of medicines is managed totally by the private sector. As such, all pharmacies in the country are in the private sector, including those located in public sector facilities including IGMH. There are 224 pharmacies in the private sector across all locations with the greatest number (80) in Male'.

Although a large number of NGOs are registered (over 700), the NGO capacity is limited in the country due to a number of reasons, including limited resources and organized voluntarism (Australian High Commission Colombo & UNDP Maldives, 2009). However, the NGO sector in health is developing with a number of NGOs based in Male' having the capacity and resource mobilization mechanisms for their programmes. NGOs that have been able provide sustained services in the past decade include Society of Health Education, Diabetes Society of Maldives, Care Society, Maldives Thalasaemia

Association, AgedCare Maldives and Journey. In addition to these NGOs a number of NGOs have emerged working on disability, child rights, youth and human rights contributing to health outcomes.

Public private partnerships (PPP) were experimented in 2009-2012 in Maldives in the provision of health care. The lessons learned indicate a lack of exposure to a mode of working as a financier (rather than provider), lack of knowledge of implementation PPP models (among the private and public sector), uncertainty of outcomes and retrenchment worries were contributing factors for negative outcomes of the effort. These risks were noted in the assessment report for opportunities for PPP conducted prior to implementation of the corporatisation policy in 2010 (Altmas Consulting, 2009). Future initiatives in building PPPs need to address capacity building to carry out appraisal of projects, define and conduct performance assessment and undertake supervision and audit in the public sector.

Health care financing

Although the primary focus of the government is to provide equitable access to primary health care services and sustain uninterrupted service delivery at all levels there has been a move towards curative and hospital based care, as seen in the resource allocation. The public funds for health are primarily spent on curative care (66.8%), both inpatient and outpatient curative care, with almost 11% spent on administration, 5.5% on preventive care and 17% on medicines. Nationwide, Maldives spent US$ 130 per capita on inpatient curative services and the same amount on inpatient treatment abroad and US$ 95 per capita has been spent on medicine in 2011. Only US$ 11 per capita has been spent on public health programmes.

Spending on health is high in Maldives when compared to other countries in similar developmental situations. The total health expenditure (THE) in 2011 was 9% of GDP corresponding to US$ 561 per capita, while the Government spent US$ 247 per capita (Ministry of Health & World Health Organisation, 2013). There are three main sources of finance for the health sector: the public, private and external sources. The major source of health funds is the people, which accounts for 49% followed by the Government (44%). External sources, such as donations and grants for multilateral and bilateral aid contributed to less than 3.3%.

Overall, more than 45% of the THE is managed and spent directly by the household, 45% by the public financing agents and 3% by donors and NGOs. Public sector providers are the major recipients of the total health expenditure (THE). These include IGMH (10.6% of THE), regional and atoll hospitals (30% of THE), health centres 7.5% and health posts (1% of THE). Private providers (physicians, clinics, dentists and

private pharmacies) account for 28% of the THE. Providers in other countries account for 23.7%, mainly overseas treatments, paid for mostly by the people.

The social health insurance scheme (SHI) was established to protect the public from catastrophic health expenditure and also cover some of the cost of curative services provided to the Maldives population in 209. Since then, the scheme has undergone a number of policy changes from a contributory scheme to a non-contributory scheme with an annual limit of MVR 100,000. The current SHI scheme, *Husunvaa Aasandha*, has been in use since January 2014 without annual individual financial limits. The scheme is managed by a private company, for which the Ministry of Health (MoH) is the main provider of health care, both curative and preventive and the National Social Protection Agency (NSPA) is the regulating agency. The private sector provides curative services to only a limited population on a fee-for-service basis. The universal social health insurance scheme has attained a high coverage of the country's local population, however only a small number of private providers are registered in the scheme. Furthermore, the scheme does not cover foreign nationals resident in the country. Under the health insurance system, the rural population had access to free public health care with free referrals to the nearest hospital including sea transport in emergencies as well as treatment abroad for services not available in the country. Currently, beneficiaries tend to over-utilize services due mainly to poor information and the perception of the *Husnuvaa Aasandha* being a "unlimited pre-paid scheme", which results in inefficient use of resources, especially with the absence of gate-keepers in the system. Despite the SHI, direct out-of-pocket expenditures was high (49%) in 2011-12, of which almost 53% was spent at public providers and 47% at private providers. A law on SHI in Maldives was enacted in 2011, however the SHI system in place is not consistent with the law.

Quality of health care

Ensuring access to good quality of health services is a responsibility of the State. Interventions focused on improving quality of health care are mainly operated through the licensing of health care facilities, pharmacies, health care professionals and the registration of medicines and vaccines. In addition, a number of national standards and protocols are developed and implemented to assure patient safety in provision of care and management of disease conditions. However, due to frequent changes in health professionals in service and the high reliance on health professionals from different countries, maintaining consistent use of the standard guidelines and protocols is a challenge. Furthermore, due to the high cost associated with physical inspection of health care facilities in Maldives quality audits are often deferred or not conducted. Hence, the interventions on development of quality health systems are mainly supported by external developmental agencies.

Despite the inadequacies of the quality management system, a number of standards are followed by the health professional and service providers, especially in services related to maternal and child health, blood services and treatment of communicable diseases and reporting of notifiable diseases. Areas of concern include inadequate application of infection control measures within health facilities, management of medical supplies and consumables, diagnostic services and health care waste management.

As major reforms are continuing in areas of the health system building blocks, a health services bill under consideration in the Parliament which provides direction for the public health system, responsibilities of the government in service provision and quality control of health services.

Health situation

The health situation has improved significantly in Maldives as evidenced by the improvements in the life expectancy, reductions in fertility and mortality rates and achievement in the Millennium Development Goals (MDGs). The total fertility rate (TFR) declined from a high of 6.4 children to 2.1 in 2006 (Ministry of Planning and National Development 2008). Fertility decline was more prominent in the atolls (rural) population than in Male' (urban). As a consequence of the population cohort of the high fertility period reaching the reproductive age, increases in the crude birth rate has been seen in recent years. The patterns of age-specific fertility rates (ASFR) have shown an increased age of child bearing. The ASFR peak at 20-24 years in the year 2000 increased to 25 – 29 years in 2006.

Crude Death Rate (CDR) over the years had shown a steady decline and it has stabilized between 4 and 3 per 1000 population during the years of the last decade (Ministry of Health, 2014). The CDR stands at 3 per 1000 population as of 2012. Significant falls in CDR was seen to be mainly associated with the fall in the infant and child mortality rates over the last two decades. Access to better health care and expansion of health services to the atoll populations and effective immunization programs played a major role in the fall of death rates.

Trends in the age sex ratio of the deaths show that the disparity in deaths among males and females in the child population have been declining over the years while deaths among the older population groups were seen to be declining among women.

The life expectancy trends in the population show marked improvement which indicates improvement in the health status of the population. The life expectancy at birth has increased from 70.0 to 73.0 for males while it has increased from 70.1 to 74.8 for females from year 2000 to 2012 respectively (Departmentt of National planning, 2013). Several factors may have contributed to the increase in life expectancy such as improved accessibility to health care, improved levels of education and economic

standard of living, access to safe water and hygiene technologies, increased awareness within the population leading to increased healthcare seeking behaviour and healthy practices at household levels.

Maternal health

The MDG goal of reducing maternal mortality has been achieved in Maldives. Maternal mortality rate decreased from 69 to 13 per 100,000 live births during the period 2006 to 2012. However due to the small size of the population, the MMR shows fluctuations from year to year as an increase in one death also causes a significant increase in the MMR. The regular review of maternal and perinatal morbidity and mortality indicate that the causes of maternal deaths during the period 2009-2011 were, among others, eclampsia, complications of abortion, postpartum haemorrhage, puerperal sepsis, amniotic fluid embolism, and rupture of the uterus.

Unsafe abortion is a challenge in Maldivian society that contributes to maternal mortality and morbidity. Abortion is allowed only within 120 days of conception and only on the grounds of multiple congenital anomalies and anencephaly, thalassaemia and other haemoglobinapathies, and for victims of rape and incest.

A number of women who get pregnant suffer from poor nutritional status. About 12% of Maldivian women have short stature below 145 cm. About 4.6% has a BMI less than 18.5, which denotes under-nutrition. The indicators of poor nutrition increases with age, are higher in rural areas, and decreases with increasing level of education and wealth status. According to the Maldives Demographic Health Survey, 2009, 65% of women took iron supplements during pregnancy for 90 days or more, and 7% took iron tablets for fewer than 60 days. Anaemia prevalence among women was 15.1% in 2007. The high prevalence of thalassaemia and other haemoglobinopathies is a factor that underlies the situation of anaemia among pregnant women in Maldives.

The coverage of antenatal care (ANC) was 97% in 2009, with the majority of women (90%) having their first ANC visit in the first trimester of pregnancy (MDHS, 2009). More than 97% of those who received ANC were weighed, had their blood pressure measured, urine and blood samples taken and their blood tested. Blood testing is of particular importance in the screening for maternal syphilis, HIV, anaemia and Hepatitis B. The majority of births (95% in 2011) occur in a health facility, with 85% in a public facility and 10% in a private health facility. The proportion of births assisted by a skilled attendant was 95%, with 71% assisted by a gynaecologist; 9% by a doctor and 14% by a nurse or midwife. The coverage of postpartum/postnatal visits was 94%, with 67% receiving a postnatal check-up within two days of delivery and 3% of women had a check-up 3-40 days after delivery. The majority of women (92%) received a postnatal check-up from a gynaecologist, doctor or nurse/midwife.

The c-section rate is high (32%), which may subject some women to unnecessary risks during childbirth and postpartum. Quality of care is an issue, as preventable causes of

maternal deaths, such as rupture of the uterus and puerperal sepsis are still found. As many specialists from different countries work at all hospital levels, standard of care and written clinical protocols are required to ensure the practice of evidence-based standards in managing pregnant clients. In addition team work and communication between team members, ensuring availability and standards of medical equipment for obstetric care, and investigation of near misses are important areas of action to ensure further improvements in maternal health.

Child health

Child health related MDGs have been achieved as observed in the infant and under-five mortality rates as well as neonatal mortality rates. During the period 2006 -2012, infant mortality decreased from 16 to 9 per 100,000 live births and under-five mortality decreased from 18 to 11 per 100,000 live births. Neo-natal morality rates also decreased substantially during this period from 11.5 to 5.9 per 100,000 live births. Despite these improvements in averting child deaths, there continues to be a number of concerns related to new-born care and child health. These include slow reduction in stillbirth rates, low birth weight in babies and increasing premature and large for gestational age babies and congenital abnormalities and defects. These indicate the need for action targeting the child during the ante-natal period.

Child health monitoring is in place from new born to under five years aimed at monitoring growth, developmental delays and providing vaccinations and nutrition supplements. Although the aim is to provide comprehensive care, the focus is on ensuring EPI vaccination coverage, resulting in 93% coverage for all EPI vaccines in 2012. However the increasing observance of disabilities, especially Autism Spectrum of Diseases (ASDs), Global Developmental Delay (GDD) and congenital heart diseases (CHDs) are emerging areas of concern that needs to be addressed for improving quality of life of children.

In addition, child malnutrition continues to be a major concern despite the growth monitoring efforts. The demographic health survey of 2009 shows that under-nutrition has not shown significant decrease in the past decade with 17.3% of children under 5 years being under-weight (weight-for-age). At the same time there is an indication of emerging obesity among children with 5.9% of children under 5 years being over-weight (weight-for-height above +2SD). Micronutrient deficiencies are of concern in all age groups and more prevalent in north and south central regions of the country. The micronutrient survey conducted in 2007 showed that anaemia prevalence among children 6 months to 5 years is 26%, with more than half the children (57%) being iron deficient. Similarly more than half the children 6 months to 5 years are vitamin A deficient (5.1% severely and 50.1% moderately deficient). Zinc and iodine deficiencies though less severe is a public health concern with 16% of children being zinc deficient and 19% iodine deficient. The survey didn't show a statistically significant difference in

micronutrient deficiencies between boys and girls. Zinc deficiency and iodine deficiency among reproductive aged women remained at 27% for both minerals (MoHF and UNICEF, 2010).

Although there is no data on consumption patterns, infant feeding practices and dietary practices show that grains are the most frequently fed to children, followed by milk and milk products. Beans, legumes and nuts are usually not fed to infants, while the fruit and vegetable intake is less than twice a day (MoHF and UNICEF, 2010). It must be noted that only 48% of infants are breastfed exclusively for 6months, with 25% of babies mixed fed with breast milk substitutes. According to MDHS, 2009, at the time of weaning 53% of infants are given commercial baby food as their first food (MoHF and MACRO international, 2010).

While availability nutritious food and cost play a role, the main reasons for the poor nutrition status is over reliance on processed food, including breast milk substitutes and commercial food services as a result of easy availability and marketing (UNICEF & MoHF, 2011). This is coupled with limited functional knowledge of food and infant feeding among the caregivers due to poor nutrition education and awareness from health services and school system. Furthermore, there are no mechanisms to coordinate between food security and food safety interventions and the nutrition programme interventions. Agricultural and fisheries programmes are primarily implemented as economic activities and food security features as a secondary output. However, present agricultural policies highlight food security. There is also no proper system in place for food quality control. Emphasis needs to be given to address these gaps and develop health, food security and food safety systems with clear links between programmes to contribute to national goals, while achieving sector specific goals.

Adolescent and young people's health

About 30% of the Maldivian population are in the age group 15-25 years, calling for health action supporting adoption of healthy choices and practices related to reproductive and sexual health, diet and physical activity, tobacco use and substance abuse and mental health.

The school health programme is a key area of action towards empowering adolescents with correct information on healthy practices and life skills to respond to peer pressure and support their peers. Hence, the school health programme continues to implement programmes to make the school environment one which is health promoting through standards on canteens, tobacco-free environment and health education and life skills programmes. Furthermore, the national curriculum has been revised to include health and physical education as a separate subject area throughout primary school. Despite the efforts, tobacco use among the 13-15 year age group increased from 10.4 to 11.2 during the period 2001 to 2011. The estimated prevalence of drug use for Malé and atolls were 6.64% and 2.02% respectively and majority of the drug users are in the age group 15-19 years and unmarried and about half are unemployed (UNODC, 2013).

However school health programmes are also facing challenges providing need based sexual and reproductive health information and support to students due to changing religious beliefs in the society.

The drug use survey 2011/12, shows that opioid and cannabinoids were most common among drug users in Malé, and slightly more than a third of opioid and cannabinoids users were likely to be dependent on these drugs. In the atolls the highest number of problem drug users was among opioid, and 65% of opioid users were likely to be dependent on this drug. In terms of medical problems, weight loss was common among respondents from both Malé and atolls. About 6% in Malé and 16% in the Atolls reported that they had experienced symptoms of overdose at least once. The Biological and Behavioural Survey (BBS), using snow ball sampling method identified 144 injecting drug users (IDUs) in Malé and 129 IDUs in Addu Atoll and also found that sharing of unsterile needle and syringes is common among IDUs (31% Malé, 23% Addu). Although a large proportion of current drug users were aware of HIV, not many were informed or had undergone any testing or vaccinations against Hepatitis B, Hepatitis C or Tuberculosis (TB). Although alcohol use is prohibited in Maldives, the alcohol consumption is an emerging problem. Among school children aged 13-15 years, 6.7% reported consuming alcohol in a self enumerated survey (Ministry of Education, 2009). A study among prison inmates were serving a sentence for a drug related offence indicated that majority of them had used heroin (69.1%) and cannabis (63.3%) followed by alcohol (47.9%) (UNDP, 2011).

Among the drug users, about 15% in Malé and 9% in the Atolls had been diagnosed with a psychological disorder (UNODC, 2013). In addition, close to three fourths of current drug users had experienced eating and sleeping problems, both in Malé and the atolls. More than a third of current drug users in Malé stated that they were affected by a mental problem, while the situation is slightly better in the atolls with one in six respondents facing the same problem. About 13% of the drug users in the atolls, and 7% in Malé sought help from a certified treatment centre. In the last one year, 28% of the current drug users in the atolls were admitted in a detoxification centre while only 4% of current drug users in Malé were admitted at the rehabilitation centre.

Reproductive health practices are another area that has not seen significant progress and needs focused attention. The proportion of women who had sex before age 18 is high among women who live in urban areas and in Malé (8%) compared to those living in the atolls. The rate of young women having sexual intercourse by age 18 decreases rapidly by their degree of education, from 14% among women with primary education to 5% among women with secondary education. The median age at first intercourse has increased from 17.0 years among women age 45-49 to 21.8 years among women age 25-29. Very few teenagers have begun childbearing at age 18, while 7% have started at age 19 (MoHF & Macro International, 2010).

Premarital sexual activity was found among 11.6% youths of 18-24 year olds. About 36% of men reported having had sex with more than one partner in a lifetime. These men have on average 2.3 partners ranging from 1.7 among men age 15-24 to 2.9 among men age 40-49. The mean number of lifetime sexual partners is highest among men who are divorced, separated or widowed (3.9). Urban men, those in the South and men with no formal education have higher proportions of multiple partners. As the divorce rate and the remarriage rate in Maldives are high, it contributes to a high number of lifetime sexual partners.

The contraceptive prevalence rate for all methods decreased, by 4% from 2006 to 2009. Although the use of condoms increased from 6% to 9% (1999- 2009), the use of oral pills decreased from 13% to only 5% during this period. At the same time, the proportion of married women who used sterilization for family planning declined from 10% to 7% in 2004 but reverted back to 10% in 2009. Thus, female sterilization had become the most commonly used modern method. Among the reasons for the discontinuation of all methods were; wanting to become pregnant (28.3%), became pregnant while using contraceptives (13.8%) and FP side effects (10.4%). The situation is however unique in Maldives in that while it has a low CPR (27% for modern methods) and a high unmet need (29%), the TFR is low (2.5). Possible reasons for this might be because of a very high divorce rate, termination of pregnancy, infertility and use of traditional contraceptive methods. Knowledge about the fertile period is deficient in young women as well as young men: 51% among women and 53% among men with only 16% of women and 11% of men giving the correct response. However, knowledge about contraceptive methods is high and equal among women and men with 94% and 93%, respectively.

Quality of care for FP could be one of the reasons for the discontinuation of contraceptive methods. One of the main issues deterring family planning service delivery is lack of adequate infrastructure providing adequate privacy in health facilities as well as limited primary care workers who have competing priorities in the workload of management and technical work. Youth health café was a project initiated in Male' to identify an appropriate model for delivery of youth friendly health services to young people in Male'. However this service is limited to health education and use referrals to health facilities for counselling and accessing reproductive health services from NGOs. Another model is the establishment of an adolescent health clinic at health facilities and was piloted in IGMH in Male'. The clinic provides several services to adolescents such as information services on general health issues, health education, nutritional advice, counselling, medical screening, immunization, treatment for sexually transmitted infections, contraceptive technologies including emergency oral pills, and referral to other units when necessary. However the services of the adolescent health clinic are under-utilized as the service environment is stigmatizing to young people. Thus it has been proposed that youth health café service be expanded to include services offered by the adolescent health clinic in IGMH.

The national estimates of most-at-risk populations (MARPs) for STIs/HIV in Maldives include IDUs, female sex worker (FSW) and men having sex with men (MSM). These MARPs include not only Maldivian population but also foreign expatriates working in the country. According to the BBS survey (2009) IDUs are the most likely trigger for an HIV epidemic, as there is a relatively large number of Maldivians using drugs with a high prevalence of needle sharing as previously noted. FSW and IDUs both reported very low consistent condom use, while a high percentage of MSM reported they had also had sex with women. The situation calls for customised health education and intervention for promoting safe sexual and reproductive health practices. Prevention of mother to child transmission (PMTCT) of HIV infection is given special attention and 100% of women attending ANC clinics are screened for HIV and other STIs.

Gender-based-violence is another aspect affecting young people's health, especially young women. Around 19.5% women aged 15-49 who had ever been in a relationship, reported experiencing physical and/or sexual violence by an intimate partner (in 2004). About 29% of ever-partnered women aged 15-49 reported experiencing emotional abuse by an intimate partner and non-partner violence was experienced by 13.2% of women. Those who experienced intimate partner violence are more likely to report miscarriage, stillbirth and abortion. The experience of physical and/or sexual partner violence tends to be accompanied by highly controlling behaviour by intimate partners. There was a significant overlap between physical and sexual partner violence with most women who reported sexual violence also reporting physical partner violence. Women who are younger (aged 25-29), have lower levels of education and have been separated or divorced appear to be at increased risk of partner violence.

Efforts to address gender-based-violence are implemented at a national level. The health sector response has been weak to establish a coordinated system of medical examination and health care for those victims of GBV. Efforts to establish early detection of GBV cases have had limited success due to factors such as limited space affecting privacy and frequent change of focal points for coordination at health facilities and other sectors involved in the response teams.

Adult health

Adult health is an area that has not been studied or given adequate attention, predominantly as this age group is a group with lesser health needs. However, with the growing burden of chronic and non-communicable diseases, there is growing recognition of designating health interventions targeting this age group. The MDHS indicated that a number of unhealthy practices such as tobacco use, drug use, physical inactivity and unhealthy diet leading to obesity are prevalent in this age group. In Male' smoking prevalence among adults was at 18% in 2011, while 15% had obesity

(BMI>30kg/m2), 42% had low levels of physical activity (defined as < 600 MET-minutes per week).

Interventions to promote healthy lifestyles targeting adult population have not been sustained in the past few years. Legislation on tobacco use was enacted in 2010, but policy and intersectional support to implement the law and its regulation is weak, thus undermining public health efforts to reduce tobacco use. Similarly availability and promotion of unhealthy food and drinks are on the rise, often conflicting with the health messages. The focus of interventions has thus been for early detection and management of chronic illnesses and conditions in this age group. A number of NGOs are working in the area of chronic disease prevention and support towards behaviour change for healthy dietary practice and physical activity.

Similar to young people, reproductive health practices continue to be low among the adult age group. Predominant action is focussed on women, yet, issues such as infertility are inadequately addressed. Furthermore, men's reproductive health issues have not been addressed systematically.

Other aspects with specific relevance to the adult population such as occupational health and mental health of local and foreign workers of the productive age population are areas that have had limited health and intersectoral intervention.

Older people's health

The majority of deaths in Maldives occur in the older ages. The health of older people is characterised by chronic diseases as observed in the cause of death statistics in Maldives. Common disease conditions among older people include cardiovascular disease, chronic respiratory diseases, renal diseases, cancer oral and dental health as well as functional limitations and dementia/cognitive impairment requiring long term care (WHO SEARO, 2010). Furthermore, about 8 -10% of the older population are receiving home care services as they are bed bound and frail.

Although a healthy ageing strategy has been developed, it has not been implemented. However, responding to the growing number of older people, health services have been initiated to provide home-care support through primary health care centres in the atolls. In Male' NGOs are providing health education, skill development of families caring for bed-ridden older people and social engagement services to older people.

Morbidity and epidemiological trends

Maldives is moving from a high burden of communicable diseases towards an increasing burden of non-communicable diseases. We now face the challenge of controlling non-communicable diseases and addressing social determinants of health while also continuing to strengthen preparedness and control of emerging and re-emerging communicable diseases.

The progress towards achievement of the MDG goal 6; combating HIV/AIDS, malaria and other diseases has been achieved. Notable achievements have been made in the control of many of the communicable diseases. The country is malaria free and no indigenous cases of malaria have been seen since 1984. Vaccine preventable diseases have also been controlled to such an extent that diseases like polio, neonatal tetanus, whooping cough and diphtheria are non-existent. Leprosy and filaria is progressing towards the regional elimination target.

However, tuberculosis is re-emerging and recent years have seen an increase in prevalence from 0.14 to 0.19 to .04 sputum positive cases per 1000 cases. This is associated with poor case detection and case management. Case detection activities are not effective as the screening of immigrants into Maldives from countries with high TB prevalence, are not rigorous and there is continued stigma associated with TB among the local population. Poor case management is reflected in lowering of the treatment success rate and emergence of MDR-TB and XDR TB indicating poor case management.

Although the MDG target for HIV has been achieved there is an emerging indication of in-country spread of disease in recently detected cases. Furthermore, risk of HIV and STIs are significant due to the practice of unsafe and harmful practices such as unprotected sex, commercial sex work, and needle sharing among injecting drug users. Hepatitis B is also a significant disease that has high risk of transmission, particularly among adults. While infants are vaccinated under the routine EPI and safe blood practices are maintained, surveillance needs to be strengthened, and Maldives needs to develop a comprehensive strategy for prevention and control of Hepatitis B, with a particular emphasis on women of reproductive age.

Dengue, diarrhoeal diseases and acute respiratory infections (ARI) continue to cause significant morbidity among children and adults. In 2012, ARI, viral fever and diarrhoeal diseases were the communicable diseases with the highest incidence, amounting to 4748, 2130 and 694 per 100,000 population respectively. Diseases such as scrub typhus and toxoplasmosis have also emerged and continue to be endemic. Although there have been significant improvements in access to safe water and improved toilet facilities, further improvements are still required regarding access to safe drinking water, improving sanitation and waste management. In addition, continued interventions for public education on personal and environmental hygiene and disease prevention practices need to be conducted for further reductions in infectious diseases.

With the improvements in environmental hygiene and living standards of the population, chronic non-communicable diseases have emerged as the main cause of morbidity and mortality in the country. Cardiovascular diseases, chronic respiratory diseases, accidents and injuries and cancers are the leading causes of death in the country. In terms of the number of lives lost due to ill-health, disability, and early death (DALYs), NCDs (inclusive of injuries) account for 78% of the total disease burden. As highlighted in the NCD policy brief, only 22% of the DALYs come from communicable

diseases, maternal and child health, and nutrition issues all combined (Ministry of Health, 2011). As discussed before, risk factors for NCDs such as smoking, physical inactivity are high among young people and adults in Maldives. Hypertension (16% in Male' in 2011) and diabetes continues to be highly prevalent in the country (national estimate of type 2 diabetes: 4-7%).

Other chronic diseases of public health concern in Maldives are Thalassemia and other haemoglobinopathies, chronic renal diseases, congenital heart diseases and auto-immune diseases. Disabilities continues to be a challenge with a prevalence of functional difficulties in vision as high as 18% in the population (as indicated by MDHS 2009), followed by mobility restriction (7.4%) and hearing defects (5.7%). Moreover Autism Spectrum of Diseases is increasingly observed among children. Added to these physical disease conditions is the issue of mental health and psychosocial wellbeing which have not been in the limelight till very recently, thus needing a high focus and investment. The national estimate of mental and neurological disorders is as high as 16.5% (WHO, 2011).

Interventions to address the NCD burden have been focused on improving the management of diseases through standard treatment guidelines and strengthening of the provision of health services for early detection of non-communicable diseases. Addressing the social determinants of chronic diseases and disabilities is essential to achieve and sustain positive changes for reducing chronic disease burden and disabilities and improve quality of life of those affected.

A number of legislations have been enacted to support public health protection, promotion of healthy choices (such as tobacco control), and social protection for people with disabilities, long-term illnesses and older people. However these laws are not being enforced which undermines the efforts of health promotion and public health programmes, resulting in poor health outcomes of the population.

Summary

Maldives is in transition where transformations are observed in the macro, meso and micro levels. At the macro level transitions are seen in governance, economic and social aspects and demographic structure of the Maldives population. At the meso level with regard to health, transitions are seen in the epidemiological pattern of disease and disability and the health system financing and management. At micro level, transitions are observed at household and individual levels in family structures, living arrangements and individual behaviour and lifestyle.

In this transition, the structural vulnerabilities and risks are accentuated in Maldives due to the volatilities in the economic and political situation, calling for specific commitments to concerted action by all partners. In the health sector, the challenges relate not only to reducing diseases and disabilities among the population, but to re-build the health system to one that is sustainable, efficient and responsive to the changing population health needs of the country.

Critical areas that needs concerted action in the coming years are addressing:

- The health concerns of the vulnerable age groups, particularly young people, pregnant women and children, the ageing population and foreign migrants, taking into consideration their socio-economic position in the society.
- Health promotion and addressing social and environmental determinants of health to reduce non communicable chronic diseases burden, communicable disease control and improving quality of life of people with disabilities and long-term illnesses.
- Providing unified action across the government and with private sector for positive health outcomes.
- Health system particularly filling the gap in human resources for health, improving health information systems, supply systems of medicines, vaccines and medical products, and quality of care.
- Financing inefficiencies and instability in the public sector health care services.

Frameworks for Action

The frameworks adopted in developing the HMP 2016-2025 include the legislative framework in Maldives and the post 2015 sustainable development goals at global level. In addition, we adopted two technical frameworks in identifying priorities and strategic actions in the HMP 2016-2025. These are the 'determinants of health' and the 'health system building blocks' (WHO, 2005; 2010).

In the past decade, the policy focus has been to target actions of the health sector in addressing midstream factors through delivery of preventive and curative health care services. Recent years have seen actions that have been initiated to address downstream factors such as rehabilitation and therapy that contribute to enhance quality of life and survival.

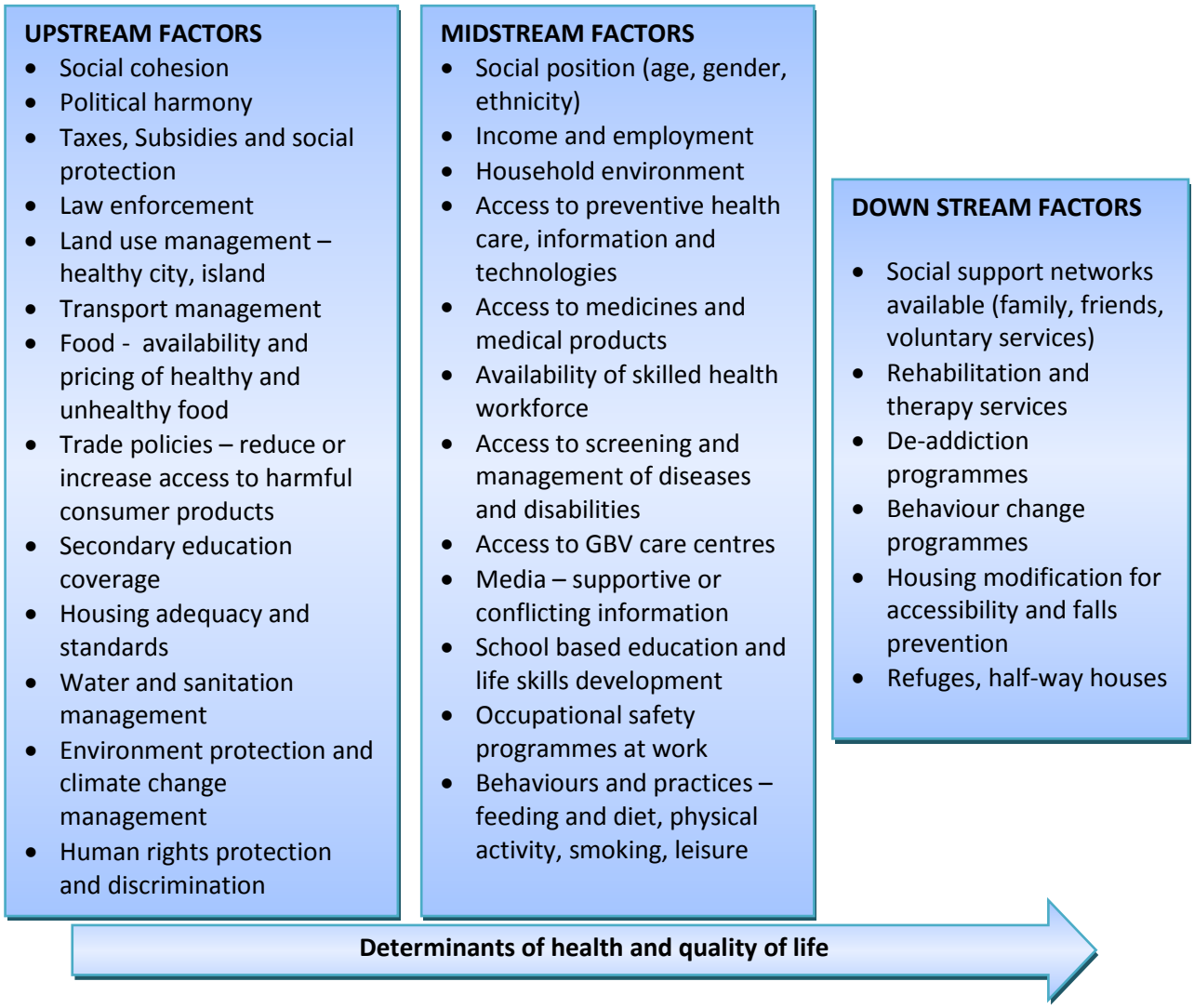

Figure 6: Upstream, midstream and downstream factors affecting health and quality of life in Maldives

Despite this, effective results in reducing ill-health and disease burden among the population were not achieved due to the neglect of upstream factors in policy action. Hence we have adopted the determinants of health approach focusing action on all three levels; upstream, midstream and downstream factors (Figure 6). The move towards taking action on upstream factors requires intersectional action and the stewardship of the Ministry of Health in ensuring healthy public policies in other sectors.

The second framework used in the HMP 2016-2025 is the health system building blocks, specifically targeted towards developing health system action addressing midstream factors (Figure 7). This framework is especially significant in the current situation of the Maldives health system. Action of the six building blocks is required to bring stability and re-build the health system, improve efficiency and quality of services as well as improving access and coverage of population with essential health services.

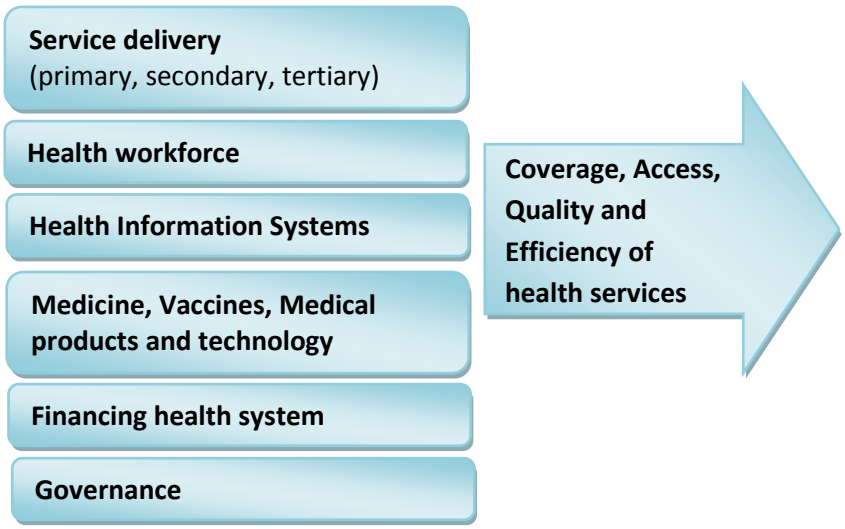

Figure 7: Health system building blocks (adapted from WHO, 2010)

Vision:

A population that enjoys high levels of physical, mental and social wellbeing irrespective of their age, gender and socio-economic position and island environment.

Core Values:

The principle values required to ensure accomplishment of our Vision are:

Human rights

Commitment to health as a human right in all policies, programmes and services.

Equity

Assurance that the health system provides equitable access to health services that are responsive to age, gender, ethnic and socio-economic situation of the individual.

Inclusion

Emphasize collaboration and partnerships in health.

Accountability

Rely upon transparent and evidence-based decision-making at all levels towards achieving health gains.

Sustainability

Commitment to efficient use of resources and effective delivery of health services that are responsive to epidemiological and population health needs.

Professionalism

Competent health personnel with commitment to ethical and moral obligations of health care.

National Health Goals & Outcomes

We have adopted an overall national goal to "Enhance health and wellbeing of the population". The government and all health partners will endeavour to achieve this goal in the period 2016-2025 focussing on three specific health outcomes. These goals are based on the current and perceived health situation, socio-economic and political context for the next ten years. The three goals are:

Goal: Enhance health and wellbeing of the population.

Outcomes:

1. Build trust in the national health system.
2. Reduce disease and disability among the population.
3. Reduce inequities in access to health care services and medicines.

Outputs at national level

The national health goals can be realized through achievements of critical outputs during the period 2016-2025. We acknowledge the interconnectedness of the outputs and recognize that each output will contribute to achieving one or more of the three national goals. The desired outputs are:

1. Adopt value-oriented and evidence-based public policy making.
2. Strengthen partnerships for health within government, with private, voluntary sectors and civil society.
3. Ensure financial sustainability of the health system.
4. Enforce legislations enacted.
5. Enable a healthy start in life and childhood through the health system.
6. Enable young people and adults to adopt healthy practices.
7. Enhance quality of life of older people, those with disabilities and long-term health conditions.
8. Unify health care delivery by the public, private and voluntary sectors.
9. Maintain an adequate skill-mix of the health workforce, committed to provide holistic, customer-centred, quality care.
10. Ensure a responsive, integrated health information system that provides relevant information for evidence based decision making.

11. Ensure health services are adequately equipped with medical products, medicines, vaccines and technologies.
12. Ascertain good quality of health services, responsive to changing health needs of the population.

The health gaols and output provide the basis to develop outcome and output indicators. Specific indicators for measuring the national health goals and outputs are provided in the logical framework outlined in the monitoring and evaluation framework of the Health Master Plan 2016-2025.

Strategic Focus Areas and Directions

Based upon the situation analysis, national goals and expected outcomes the critical areas that must be addressed are categorized under three focus areas; Governance, Public health protection and Health service delivery. The critical must do's in these focus areas are:

Governance:

1. Establish an efficient health system governed by legislation, regulatory and oversight mechanism.
2. Ensure public policy making is transparent, evidence-based and information-driven.
3. Develop public-private partnerships in health promotion and delivery of preventive and curative health services.
4. Ensure financial sustainability of the health system and the social health insurance scheme (Aasandha).

Public health protection

5. Provide a healthy start in life through effective reproductive, maternal and child health services
6. Reduce chronic diseases (diabetes, cardio-vascular diseases, stroke and cancers) and improve mental and psychological health of the population.
7. Maintain successes in control of communicable diseases and prevent re-emergence and introduction of new communicable diseases.
8. Enable healthy behaviours, safe sexual and reproductive health practices among adolescents and young adults.
9. Improve quality of life of older people and people with long-term illnesses and disabilities.
10. Strengthen health promotion and health education customized to the target audiences.
11. Provide a clean, safe and supportive environment to enable healthy choices and prevent injuries and spread of diseases.

Health care delivery

12. Ensure public delivery of primary health care services in all inhabited islands.
13. Establish a coordinated system of care from primary care to secondary and tertiary care providers (public and private)
14. Enable timely surveillance of diseases, births and deaths, morbidity patterns as well as social determinants of health through an integrated health information system and research.
15. Ensure uninterrupted supply of essential medicines, vaccines and medical products and technologies.
16. Invest in training and retention of professional and ethical standards of the health workforce.

17. Establish a capacity for health and medical response in national disasters and emergencies.

Strategic Inputs

1. Governance:

1. Establish an efficient health system governed by legislation and oversight mechanisms.

- Determine clear roles and responsibilities of the State and its institutions at national, local governance levels through legislation.
- Establish a "one system approach" through defined primary, secondary and tertiary care services across the country.
- Develop capacities and support enforcement of enacted laws and regulations.
- Establish a National Health Council that is representative of key stakeholders in health.

2. Ensure the public policy making is transparent, evidence-based and information-driven.

- Strengthen health sector's leadership in advocating healthy public policies in other sectors that impact health of the population.
- Conduct health impact assessments and resource requirement of policy options and use them in decision making on health projects.
- Use internationally available tools such as "One-choice" in identifying effective and sustainable policy options.
- Conduct regular monitoring of health programmes and projects using the results-based framework.
- Facilitate a research culture and support regular research such as demographic health surveys, national health accounts and other research to address national health information needs.

3. Develop public private partnerships in health promotion and delivery of preventive and curative health services.

- Communicate clearly the areas of public investment in health to avoid duplication of investments in health at national level.
- Establish contractual and audit mechanisms to facilitate out-sourcing of selected services.
- Establish mechanisms to finance and support NGO programmes on health promotion and community based health projects.

4. Ensure financial sustainability of the health system and the social health insurance scheme (Aasandha).

- Ensure allocation of adequate financial resources for preventive health and primary care.

- Prioritise resource allocation to interventions that produce high health returns towards achieving population health goals.
- Review the coverage of the social health insurance scheme with respect to population, services and cost.
- Identify alternative financing sources for the social health insurance scheme and prepayment mechanism for provider payments.
- Raise awareness of public, policy and law makers on effective use of social health insurance.
- Conduct regular audit of the national health expenditures to identify ways to improve efficiency of the health system.

2. Public health protection

1. Provide a healthy start in life through effective reproductive, maternal and child health services

- Empower young people to plan their pregnancies and seek health care from pre-conception, during the pregnancy and post natal period through targeted health promotion, education and skill development.
- Provide access to essential obstetric and neonatal care services at all levels of health system and mechanism to access care in obstetric and neonatal emergencies.
- Maintain skills of the health workforce on provision of integrated management of neonatal, infant, child and maternal care.
- Empower caregivers to breastfeed, vaccinate and provide appropriate nutrition to infants and young children.
- Raise awareness of caregivers on neglect as a cause accidents, injuries and illnesses among children and during pregnancy.
- Expand childhood vaccination programmes based on changing disease patterns and developments in vaccine technologies.
- Monitor reproductive, maternal and child health morbidities and mortalities through facility and programme level data and population based research.

2. Reduce chronic diseases (especially diabetes, cardiovascular diseases and cancers) and improve mental and psychological health of the population.

- Empower young people and adults to adopt healthy choices regarding food, physical activity, tobacco use and prevent substance abuse through education and life skill development.
- Adopt standard management guidelines and up-skill health care providers for early detection and management of priority NCDS including those with co-morbidities and multiple morbidities.
- Implement a national food and nutrition strategy targeting different age groups.
- Provide access to cancer screening services and maintain national registers of cancer to enable rehabilitation and social support.
- Provide access to counselling and peer support services for those with mental health problems and addictions.
- Advocate and raise awareness for enforcement of tobacco control law and its regulations
- Expand programmes for prevention of substance abuse and drug rehabilitation services as required by drug control law and its regulations.
- Develop and implement strategic action plans in the area of NCDs as integrated and individual plans as required (e.g. a separate cancer control strategy and a mental health strategy).
- Develop programmes for oral heath targeting children and older people.

3. Maintain successes in control of communicable diseases and prevent re-emergence and introduction of new communicable diseases.

- Maintain vaccine coverage and nutrition status of vulnerable and high risk populations (such as children, adolescents, older people).
- Adopt standard management guidelines for detection and management for priority communicable diseases.
- Maintain reporting of notifiable diseases and disease surveillance system that links public, private and voluntary providers.
- Develop country capacity for IHR 2005 and conduct regular up-skilling of the partners involved in IHR 2005 implementation.
- Develop and implement strategies for control of TB/HIV/STIs based on epidemiological information on these diseases.
- Maintain elimination strategies for diseases such as filarial and those already eliminated (e.g. malaria, polio) from the country.
- Empower and educate stakeholder institutions and civil society regarding measures and practices for prevention and control of spread of communicable diseases and vector control.
- Advocate and raise awareness for effective enforcement of public health protection law and its regulations.

4. Enable health behaviour and sexual and reproductive health practices among adolescents and young adults.

- Provide health and life skills education through the school system and in higher education institutes.
- Provide access to gender appropriate youth health services together with access to productive or leisure activities to assist young people to make and maintain healthy choices.
- Develop health service capacity and mechanisms to support national efforts to address gender-based violence.
- Empower young people to make healthy choices with age and gender appropriate education, skills and access to reproductive technologies.
- Provide targeted health education to young migrant populations on safe sexual and reproductive health practices and prevention of sexually transmitted infections.

5. Improve quality of life of older people and people with long-term illnesses and disabilities.

- Expand programmes for disability prevention, early detection and rehabilitation with the effective use disability law and its regulations.

- Establish a social support mechanism (such as a home visit service) to assist families in providing care for older people, people with disabilities and long-term illnesses.
- Empower families with the information and skills to provide home-based care for bed-ridden people and people with mobility restrictions.
- Establish a need assessment mechanism to identify those in need of home-based nursing care and occupational and rehabilitation therapy.
- Establish a separate facility at national level for providing a good standard of care for those older people who require institutionalized care on a day-to-day basis.
- Develop programmes for inter-generational action to enhance social wellbeing of older people.

6. Strengthen health promotion and health education customized to the target audiences.

- Promote joint public policy action that contributes to ensuring safer and healthier goods and services, healthier public services, and a cleaner, more enjoyable environment.
- Develop the capacity and skills of primary care workers and public health professionals on health promotion
- Reach civil society and empower communities for health promotion through education and access to reliable, relevant information.
- Create supportive environments using the healthy settings approach among schools and higher education institutes, hospitals, work places as well as healthy cities and islands.

7. Provide a clean, safe and supportive environment to enable healthy choices and prevent injuries and spread of diseases.

- Enforce regulation and standards on reduction and management of waste: communal, health care and hazardous waste.
- Empower communities to demonstrate for safety of drinking water and food safety and enforce quality assurance measures for drinking water and food products.
- Reduce and regulate import and availability of harmful food products available in the market.
- Empower housing developers and city and island planners on safe and accessible housing and public infrastructure.
- Establish mechanisms to ensure occupational safety and safety in land and sea transport.
- Coordinate and integrate the management of chemicals especially insecticides, pesticides and fertilizers in the country.
- Monitor health impacts of climate change and develop strategies for reorienting programmes to address the emerging health issues.

- Develop strategies to reduce the carbon foot print related to health care services in alignment with national strategies.

3. Health care delivery

1. Ensure public delivery of primary health care services in all inhabited islands.

- Identify the basic package of essential health services to be delivered as primary care services in all islands.
- Define clear roles and responsibilities of Local Councils and Ministry of Health in the financing, management and delivery of the defined health care services.
- Ensure that the basic package of essential services is provided free to all customers.
- Ensure availability of essential medicines, vaccines medical products and technology for primary care.
- Establish a system of contact with families on the island or neighbourhood of each primary care centre to create opportunities to educate and empower families for healthy practices.

2. Establish a coordinated system of care from primary care to secondary and tertiary care providers (public, private and voluntary).

- Define by legislation the organization of the health system with clear mandates of institutions in the public and private sector as well as lines of reporting and accountability.
- Establish quality standards for establishing and delivering different health care services and build capacity to audit them.
- De-concentrate specialty care from Male' city to other atolls by establishing specialised centres in other atolls or industrial or resort islands.
- Develop mechanisms for distant diagnosis through effective sample transport, image transfer and other telemedicine technologies.
- Define services that can be outsourced or made open for private or foreign investment in the country.
- Establish referral links with health care centres within the country and in neighbouring countries in coordination with the social health insurance provider.
- Promote need-based health care utilisation and ore effective use of over- the-counter medicines for minor ailments.
- Expand provision of blood banking services towards a coordinated blood transfusion service throughout the country mediated by voluntary blood donations.
- Establish an emergency medical service linked to other emergency services such as fire and rescue, coast guard and disaster management services.
- Develop 'Dhivehi beys' and alternative medicine and rehabilitation services of good quality towards supporting medical tourism.
- Develop the national capacity to support post-mortem examination and forensic analysis of human samples

3. Enable timely surveillance of diseases, births and deaths, morbidity patterns as well as social determinants of health through health information systems and research.

- Establish an integrated national health information system (disease reporting, surveillance and medical records) linking different levels of the health system and private health care providers.
- Strengthen the health system management information linking human, material and financial resources of different health care providers.
- Expand digitalization of the vital registration system by linking different health care providers.
- Identify research priorities and manage research to meet information needs for programming and policy.
- Strengthen research management, ethics and publication of academic literature based on research.

4. Ensure uninterrupted supply of essential medicines, vaccines and medical products and technologies.

- Strengthen the forecasting and management of vaccines, reproductive technologies and essential medicines.
- Ensure timely procurement and delivery of childhood vaccines to health care centres.
- Establish a mechanism to reduce cost of essential medicines by introducing generic drugs and a dispensing mechanism in the public health care system.
- Establish a central supplies mechanism to ensure uninterrupted supply of medical products and technologies as well as maintenance of medical equipment.
- Strengthen quality control of medicines, vaccines and medical products through regulatory, quality assurance and practice of rational use of medicines.
- Establish a digital inventory of medical equipment products and tools and implement a preventive maintenance programme.
- Establish bio-medical engineering services to provide uninterrupted and continued support to health care facilities.

5. Invest in training and retention of a professional and ethical health workforce.

- Strengthen the management of the health workforce to support equitable distribution with an appropriate skill mix, for defined services.
- Market the health sector as an attractive workplace and foster a work culture that will motivate employees.
- Establish mechanisms for maintaining ethical conduct of health professionals along with protection mechanisms from undue negligence claims.
- Establish a fair personal assessment system and team building exercises in order to enhance workforce productivity and retention of qualified staff.

- Strengthen regulatory frameworks as required by the health professionals' law for assurance towards quality of services.
- Establish a mechanism to coordinate higher education and training at national level with national health workforce requirements.
- Strengthen management and administration of health sector institutions and health care facilities to ensure effective use of available health workforce.
- Increase funding from public, private and international sources for training human resources for health.

6. Establish capacity for health and medical response in national disasters and emergencies.

- Develop a health sector response plan and standard operating procedures in natural disasters and more frequent emergencies in alignment with national disaster management plans.
- Develop rapid response teams at Male' and atoll levels as first responders and conduct regular drills to maintain necessary skills and effectiveness of the response.
- Develop contingency plans to deliver health care services in situations where health services get disrupted in disaster or emergency situations.
- Maintain a national stock of emergency health supplies and health technologies for prevention of diseases and provision of health care in emergencies.
- Develop country capacity for the delivery of ambulance services (land, sea, air) supported by trained paramedics.
- Enhance the capacity within the health sector to respond to public health emergencies such as national epidemics and pandemics.
- Establish a partnership with Maldives Red Crescent to develop health sector preparedness and responses in provision of relief, rehabilitation and mitigation in disasters and emergencies.

Stakeholders of health

We acknowledge the close collaboration and partnership among government institutions, with private and voluntary sectors, and developmental partners for successful achievement of the national goals, outcomes and outputs. This calls for joint action and recognising health as everybody's business in developing strategic action plans at national and institutional levels for each financial year. The key stakeholders for successful implementation of the HMP2016-2025 are:

State institutions: Parliament, Local councils, Human Rights Commission, Maldives Inland Revenue Authority, Maldives Red Crescent, Maldives Police Service and Maldives National Defence Force.

Government institutions: Ministries and departments of Health, Education, Environment, Youth, Gender, Housing, Trade, Finance, Disaster management, National University, Government companies and corporations.

Private and Voluntary sector: NGOs working in different areas of health, Medical Clinics, Pharmacies, Alternative medicine clinics and services, Medical products and technology suppliers, Utility providers, Suppliers and retailers of food and consumer goods, Provides of amenities and services, Banks and financial institutions.

External Development Partners: World Health Organisation and other United Nations institutions, Financial institutions such as World Bank, Asian Development Bank, International Funds (e.g. Global Fund for HIV/AIDS), Other Friendly Countries.

Strategic Risks

The HMP 2016-2025 presents a disciplined attempt to guide and align policies and programs of the government and private sector to contribute to the attainment of specific population health outcomes at a national level. The actual ability of the government, private and voluntary sectors to achieve the identified outputs and by extension, goals as stated herein is dependent upon the following:

1. Stability of the public health care delivery system.
2. Sustainability of public expenditure on health.
3. Contributions by the private and voluntary sectors as well as other government sectors.
4. Availability of the information architecture to allow for evidence-based management and decision-making.
5. Extent to which unplanned projects or intuitive decisions conflict with or is given precedence over this HMP.
6. Extent to which the health workforce is committed to achieving the goals of the HMP.

Organizational Capability and Resources

The resources available at the time of developing this HMP are as follows. The output targets during each business plan cycle must carefully consider the changes to the resource availability.

Capacity & resources	Status	Year & Source
MATERIAL RESOURCES		
Number of hospital beds	800	2011, MOH records
Hospital beds per 10,000 population	25	2011, MOH records
Number of PHC centres	184	2013, MOH records
Number of private medical centres	65	2013, MOH records
Number of "Dhivehi beys" & alternative medicine centres (excl. spas)	6	2013, MOH records
Number of hospitals providing specialist medical services	11	2013, MOH records
Number of pharmacies	224	2014, MFDA records
Number of centres providing disability-related rehabilitation services	8	2013, MOH records
Number of centres providing drug rehabilitation services	4	2013, MOH records
Number of public health labs	1	2013, MOH records
Number of NGOs targeting specific health issues	9	2013, MOH records
HUMAN RESOURCES		
Doctors per 10,000 population	15	2012, MOH records
Practicing nurse per 10,000 population	54	2012 MOH records
PHC workers per 10,000 population	17	2012 MOH records
Percent of health professionals employed in the public sector	91	2012 MOH records
Proportion of doctors serving at the central level	42	2012 MOH records
Proportion of local doctors in the health workforce	18	2012 MOH records

Proportion of local nurses in the health workforce	45	2012 MOH records
FINANCIAL RESOURCES		
Total health expenditure	MRV 2.8 billion	2011, NHA survey
Total Expenditure on Health (THE) as % of Gross Domestic Product (GDP)	9.2	2011, NHA survey
General Government Health Expenditure (GGHE)as % of Total Expenditure on Health (THE)	44.0	2011, NHA survey
Private Expenditure on Health (PvtHE) as % of Total Expenditure on Health (THE)	52.7	2011, NHA survey
General Government Health Expenditure (GGHE) as % of General Government Expenditure (GGE)	9.5	2011, NHA survey
Social Security Expenditure on Health (SSHE) as % of General Government Health Expenditure (GGHE)	19.6	2011, NHA survey
Per capita Total Expenditure on Health (THE) at official Exchange rate (X-Rate per US $)	561	2011, NHA survey
Out-of-Pocket Spending on Health (OOPS) as % of Total Expenditure on Health (THE)	49	2011, NHA survey

Monitoring and Evaluation

Since the HMP is expected to be the basis against which the government and its partners will measure and report its achievements, it will be monitored biannually among all partners of the health, led by Ministry of Health. Such monitoring is expected to provide evidence for making necessary adjustments to the business plans of the partners towards meeting the national outputs.

A mid-tem review of the HMP 2016-2025 in the year 2020 shall be undertaken to guide adjustments to the strategic priorities and inputs to meet the changing health needs of the population and the changing socio-economic and political context of Maldives. The indicators for monitoring outputs and outcomes are provided in the results based logical framework (Appendix 1). A final evaluation of the HMP 2016-2025 will be conducted in the years 2024-2025 by the Ministry of Health.

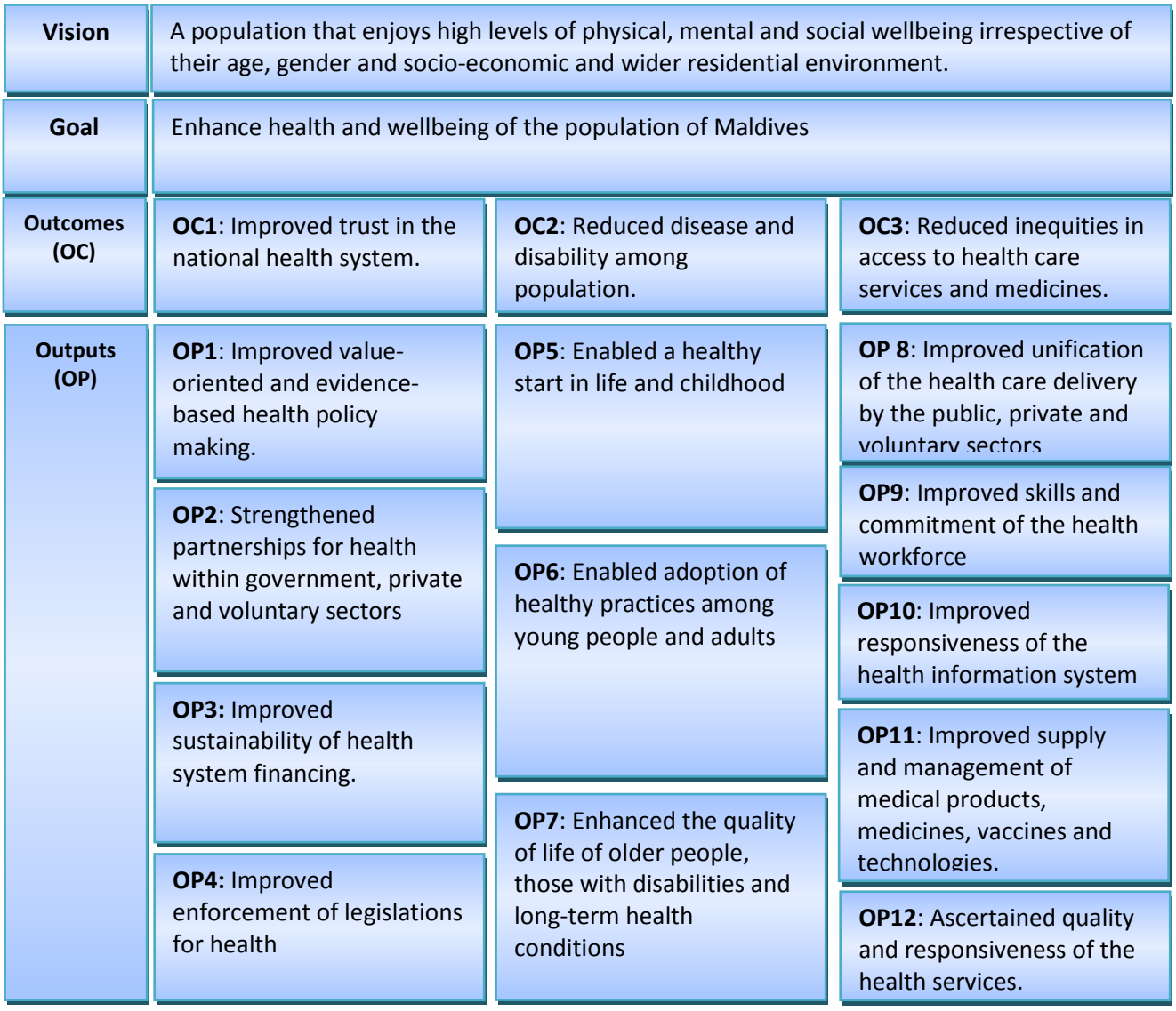

Figure 8: Conceptual framework for monitoring and evaluation of the Health Maser Plan 2016-2025

Conclusion

The Health Master Plan (HMP) 2016-2025 represents a strategic framework for the prioritization, implementation and monitoring of the health services and programmes, as well as a guide for development of a comprehensive business plan for all partners in health in Maldives.

The stewardship of the Ministry of Health is critical to ensure effective utilisation of the HMP 2016-2025 as a guide in developing strategic action plans and business plans within the government health sector as well as other partners of health.

Appendix -1: Logical framework for monitoring and evaluation

LEVEL	INDICATORS	MEANS OF VERIFICATION	ASSUMTIONS & RISKS
Goal			
Enhance health and wellbeing of the population of Maldives	Life expectancy at birth	VRS, Census	Achieving improvements in the indicators require stability in the health system with adequate resource allocation for essential health services together with healthy public policies in other sectors.
	Total fertility Rate	VRS	
	Crude birth rate	VRS	
	Crude death rate	VRS	
	Neonatal mortality rate ('000 live births)	VRS	
	Infant mortality rate ('000 live births)	VRS	
	Maternal mortality ratio ('000 live births)	VRS	
	Morality from NCDs under the age of 65 years ('000 population <65 years)	VRS	
	Per capita Total Expenditure on Health (THE) at official Exchange rate (X-Rate per US $)	NHA	
	Prevalence of poverty (% population under national poverty line)	VPA	
	Access to safe drinking water (% of population)	MDHS	
	Access to improved source of toilet facilities (% of population)	MDHS	
Outcomes (OC)			
OC 1: Improved trust in the national health system	Overall satisfaction with health services (% of sample)	MDHS	Achievement of the indicators depends on the extent of stewardship at political level for accountability, evidence-based resource allocation and engagement with civil societies and partner for need-based utilization and provision of health services. Leadership at MOH is necessary to bringing all partners together to attain the outcomes and outputs.
	Level of trust in the government health sector (% of sample)	MDHS	
	Out-of-Pocket Spending on Health (OOPS) as % of Total Expenditure on Health (THE)	NHA	
	General Government Health Expenditure (GGHE) as % of General Government Expenditure (GGE)	NHA	
	General Government Health Expenditure (GGHE)as % of Total Expenditure on Health (THE)	NHA	
	Population coverage of social health insurance scheme (% of population)	Aasandha records	
OC 2: Reduced disease and	Still births (per 1000 live births)	VRS	The main challenges for

disability among population	Prevalence of low birth weight (weight <2500 grams at birth) (%)	VRS	achieving this goal is limited intersectoral support in providing supportive environment and policies for healthy lifestyles. In addition, due to double burden of disease and expected double burden of vulnerable populations of under 5 years and older people, the resource allocation for programmes need careful assessment of health gains that can be achieved. Social-economic empowerment of vulnerable populations is essential for reducing inequalities in health
	Prevalence of underweight (weight-for-age) in children <5 years of age (%)	MDHS	
	Prevalence of overweight children <5 years (weight for height above +2SD)	MDHS	
	Contraceptive prevalence rate (%) all methods and modern methods	MDHS	
	Measles prevalence rate ('000 population)	Disease surveillance system	
	Tuberculosis prevalence rate ('000 sputum positive)	Disease surveillance system	
	Leprosy prevalence rate ('000 smear positive)	Disease surveillance system	
	HIV prevalence rate ('000 population)	Disease surveillance system	
	Substance use prevalence (%)	MDHS	
	Prevalence of hypertension (%)	NCD STEPS survey	
	Prevalence of heart disease (%)	NCD STEPS survey	
	Prevalence of MNS disorders (%)	Mental health survey, Medical records	
	Prevalence of cancer in adult population (%)	NCD STEPS survey	
	Prevalence of diabetes (%, type I & type 2)	NCD STEPS survey, DSM records	
	Prevalence of disabilities (%)	MDHS	
	Prevalence of beta-thalassaemia (%)	SHE records	
	Morality due to road traffic accidents (% '000 pop)	VRS, injury surveillance reports	
	Morality due to workplace accidents (% '000 pop)	VRS, injury surveillance reports	
OC 3: Reduced inequities in access to health care services and medicines.	% of population using primary care services (Access to primary care services)	MDHS	The outcome indicators are possible with commitment for improving system efficiency and provision of care that match the population health needs. Adequate resource allocation for cost effective health care interventions and partnerships with private and voluntary sectors are important for success.
	% of population able to obtain prescribed medicines with 24 hrs of prescription (Access to medicines)	MDHS	
	% of population living within 30-minute travel time to a referral hospital (Access to specialty care)	MOH HMIS records	
	% of population who had obtained transport services within 2hrs of emergency referral (Access to emergency care within Maldives)	EMS records, MOH HMIS records	
	Doctors per 10,000 population	Medical council registration records	
	Nurse per 10,000 population	Nursing council registration records	
	PHC workers per 10,000 population	Health Sciences council registration records	
	Number of PHC centres per 1,000 population, by city, atoll	MOH HMIS	
	Hospital beds per 1,000 population	MOH HMIS	
Outputs			

OP1: Improved value oriented and evidence based health policy making	% of policies/projects that used information and evidence for decision making	MOH HMIS records	Commitment of government and policy makers to interest in information system and use of evidence
	% of policies or projects in health sector that assessed health impact prior to implementation	MOH HMIS records	
	% of developmental projects that assessed health impact prior to implementation)	PO records?	
	% of business /action plans in the government health sector which links with the HMP outputs or outcomes	MOH HMIS records	
OP 2: Strengthened partnerships for health	% of business /action plans of partners that links with the HMP outputs or outcomes	MOH monitoring records	Government and policy makers recognize the role of other sector in impacting health as well as the role of private and voluntary health sector
	% of health partners who are aware of the government's medium term health sector investment plans of the government	MOH HMIS records	
	% of health services outsourced to private sector	MOH HMIS records	
	% of private health care institutions who are registered providers of Aasandha	Aasandha information system	
	% of NGOs working on joint projects with public sector	MOH HMIS records	
	% of NGOs supported financially for health programmes	MOH HMIS records	
OP 3: Improved financial sustainability of the health system	Total Expenditure on Health (THE) as % of Gross Domestic Product (GDP)	NHA	Government and law makers' commitment to allocate adequate resource allocation for sustainable health care financing options in budgetary allocations and setting resource envelopes
	Private Expenditure on Health (PvtHE) as % of Total Expenditure on Health (THE)	NHA	
	Out-of-Pocket Spending on Health (OOPS) as % of Private Expenditure on Health (PvtHE)	NHA	
	% of government spending on preventive health	NHA	
	% of contributions from the beneficiaries to the social health insurance scheme (Aasandha)	Aasandha information system	
OP 4: Improved enforcement of legislations	% of regulations under public health protection law enforced	MOH HMIS records	Law makers and government's commitment to enforce enacted laws with policy support and resource allocation for enforcement functions. Public support for law enforcement
	% of regulations under tobacco control law enforced	MOH HMIS records	
	% of regulations under social health insurance law enforced	MOH HMIS records	
	% of regulations under health services law enforced	MOH HMIS records	
	% of regulations under disability law enforced	MOH HMIS records	
OP 5: Enabled a healthy start in life and childhood	% low birth weight newborns	VRS	Socio-economic empowerment, women's empowerment with adequate material, human and financial resource allocation
	% of births attended by a skilled health professional	Programme records	
	% of near-miss maternal deaths	Programme records	
	% of teenage pregnancies (<20 years)	Programme records	
	% of pregnant women receiving 4 or more ANC checkups by a skilled provider	Programme records	

	% f pregnant women who receiving iron-folate supplements during pregnancy (Iron-folate supplements coverage)	Programme records	
	% of girls <18 years who had received 5 doses of TT (TT vaccine coverage)	Programme records	
	% of children breastfed exclusively up to 6 months	MDHS	
	% of children under 2 years who received all EPI vaccines (EPI vaccine coverage)	MDHS, programme records	
	% of children <1 year with measles vaccination (Measles vaccine coverage)	MDHS, programme records	
	% of children <5years provided with Vitamin A supplements (Vit A coverage in children)	Programme records	
	% of children introduced with complementary foods at 6 months	MDHS	
	% of children <5 years screened for disabilities	Programme records	
	Prevalence of diarrhoea (% <5 years)	Disease surveillance	
	Prevalence of congenital heart diseases (% <5 years)	Medical records	
	Prevalence of neural tube defects (% of live births)	Medical records	
	Prevalence of autism spectrum of diseases (% <5 years)	Medical records	
OP 6: Enabled young people and adults to adopt healthy choices	% of who currently smoke cigarettes, (adolescents 13 - 15yrs, adults 15-64 by gender and expatriates)	NCD STEPS survey, School health survey	Intersectoral support, particularly form economic sectors for promoting healthy food and consumer products and services together with intersectoral action in different settings to support health promoting practices
	% of who currently use addictive drugs (adolescents 13 - 15yrs, adults 15-64 by gender and expatriates)	MDHS, School health survey	
	% of obesity (BMI>30) (adolescents 13 - 15yrs and adults 15-64)	NCD STEPS survey, School health survey	
	% who consume < than 5 servings of fruit and/or vegetables (adolescents 13 - 15yrs and adults 15-64)	NCD STEPS survey, School health survey	
	% o with low levels of activity (defined as < 600 MET-minutes per week) (adolescents 13 - 15yrs and adults 15-64)	NCD STEPS survey, School health survey	
	% of population with comprehensive correct knowledge of HIV/AIDS (adolescents 13 - 15yrs, adults y gender b15-64 and expatriates)	MDHS, RH survey	
	% of with knowledge of contraceptive methods (modern method) (adolescents 13 - 15yrs, adults 15-64 by gender and expatriates)	MDHS, RH survey	
	Number of episodes of food products confiscated for health risks or non-compliance with national food safety standards	MFDA records, MoH HMIS	
	Prevalence of unmet need for contraceptives (%)	MDHS, RH survey	
	% of smear positive pulmonary TB cases cured under DOTS (cure rate)	Programme records	
	% of smear positive leprosy cases cured with MDT (cure rate)	Programme records	
	% of women (40-65) screened for cervical cancer	Programme records, service provider records	

	% of women (40-65) screened for breast cancer	Programme records, service provider records	
	% of men (40-65) screened for prostate cancer	Programme records, service provider records	
	% of adults screened for early detection of NCDs (%)	Programme records, service provider records	
	Incidence of injuries at workplace (per 1,000 working age population)	Programme records, service provider records	
Output 7: Improved quality of life of older people, with disabilities and long-term illnesses	Prevalence of physical impairment (% of population)	MDHS	Scio-economic empowerment of families and appropriate housing and social support mechanism.
	Prevalence of visual impairment (% of population)	MDHS	
	Prevalence of hearing impairment (% of population)	MDHS	
	% of children screened for disabilities (<5 years, at school entry)	Programme records, service provider records	
	% with access to assistive devices (% of those with disabilities)	Programme records, service provider records	
	% of people with disabilities receiving financial assistance	NSPA records, NGO records	
	% with access to therapy and rehabilitation (% of those with disabilities & long-term illnesses)	Programme records, service provider records	
	% with access to cataract surgery (% of patients with cataract)	Programme records, service provider records	
	% of people with mobility restrictions provided with home care	Programme records, AgedCare Maldives records	
	% of people with dementia provided with home care	Programme records, AgedCare Maldives records	
	% of older people receiving care in a specialized institution	Programme records, service provider records	
OP8: Improved unification of health care delivery system	% of households with which PHC centres has regular contact	MOH HMIS	Political commitment for health system stability and partnerships with private and voluntary sector.
	% of PHC centres with established referral links to a secondary or tertiary centre	MOH HMIS	
	% of TB cases with DOTS coverage	Programme records, service provider records	
	% of school children provided with health checkup at grade 1	MOE School health records	
	Number of youth health service centres per 5,000 youth population	Programme records, service provider records	
	Number of specialist medical care centres per 5,000 population	MOH HMIS, Service provider records	
	Number of BEONC centres per 5,000 population by city, atoll	MOH HMIS, Service provider records	
	Number of specialty centres/clinics in the atolls	MOH HMIS, Service provider records	

	Waiting time for general doctor appointment >4 hrs (% of patients)	MOH HMIS, Service provider records	
	Waiting time for specialist appointment >2weeks (% of patients)	MOH HMIS, Service provider records	
	Waiting time for elective surgery >4 weeks (% of patients)	MOH HMIS, Service provider records	
	Waiting time for emergency referral >4 hrs (% of all emergency referrals)	MOH HMIS, Service provider records	
	Waiting time for blood transfusions (planed & emergency) % of patients	MOH HMIS, Service provider records	
	Average length of stay per admission (days)	MOH HMIS, Service provider records	
	Hospital discharges per 5,000 population	MOH HMIS, Service provider records	
	% of inpatient care provided (as a proportion of all hospital based care)	MOH HMIS, Service provider records	
	% of caessarean sections	MOH HMIS, Service provider records	
	% of health facilities linked to a diagnostic lab	MOH HMIS, Service provider records	
	% of health facilities providing inpatient care with mechanism to provide medicines and medical products wile patient is admitted	MOH HMIS, Service provider records	
	% of inhabited islands without a pharmacy	MOH HMIS, Service provider records	
OP9: Improved skills and commitment of the health workforce	% of health professionals employed in the public & private sector	MOH HMIS, Service provider records	Socio-political transitions doesn't not have large influence on human resource policies and management of health care institution in the public sector.
	% of doctors serving at the central level and atolls	MOH HMIS, Service provider records	
	% of local doctors in the health workforce	MOH HMIS, Service provider records	
	% of local nurses in the health workforce	MOH HMIS, Service provider records	
	% of locally trained health workforce joining the workforce (nurses, PHC, pharmacists)	MOH HMIS, Service provider records	
	% of locally funded health graduates joining health workforce	MOH HMIS, Service provider records	
	% of licensed health practitioners in practice (% doctors, nurses, PHC practitioners)	MOH HMIS, Service provider records	
	% of attrition of health workforce (attrition rate)	MOH HMIS, Service provider records	
	% of health professionals who had professional development training in the previous year (doctors, nurses, PHC practitioners)	MOH HMIS, Service provider records	
	% of health professionals engaged in voluntary work with NGOs (doctors, nurses, PHC workers)	MOH HMIS, Service provider records	
	% of specialist doctors who provided outreach services in smaller islands	MOH HMIS, Service provider records	
OP10: Improved responsiveness of the health information system	% health care providers and programmes providing complete data on annually reportable indicators by end of June of the following year (private, voluntary and public institutions)	MOH HMIS, Service provider records	Commitment to evidence-based policy and a culture of information driven decision making in health planning and programming.
	% of health information systems using standard codes	MOH HMIS, Service provider records	
	% of tertiary and secondary hospital (public and private) implementing ICD 10 and reporting coded information to health information system	MOH HMIS, Service provider records	

	% of health facilities (public and private) reporting to national health information system (by type or level)	MOH HMIS, Service provider records	
	% of policy decisions supported with data and information	MOH HMIS, Service provider records	
	Number of research findings published using secondary data	MOH HMIS, Service provider records	
	Number of population based survey findings published	MOH HMIS, Service provider records	
	Number of core health indicators reported/not reported in the Maldives Statistical year book	MOH HMIS, Service provider records	
	Number of research articles on health aspects of Maldives published nationally or international journals	MOH HMIS, Service provider records	
OP11: Improved supply and management of medical products, medicines, vaccines and technologies	% of PHC centres with no stock out of the free vaccines, essential drugs & preventive health technologies during the year	MOH HMIS, Service provider records	Commitment to corruption free management of medical supplies system by all partners involved
	% of reports of service disruption due to non-availability and non-functioning of medical products	MOH HMIS, Service provider records	
	% of secondary and tertiary facilities with no stock out of the essential and emergency drugs & medical technologies	MOH HMIS, Service provider records	
	% of health facilities (public and private) who maintains forecast of medicines, medical products and technologies requirements	MOH HMIS, Service provider records	
	%of health facilities (public and private) with established mechanism for biomedical service	MOH HMIS, Service provider records	
	% of health facilities (public and private) with contingency plan for obtaining medical supplies in the even of emergency incidents and disasters	MOH HMIS, Service provider records	
	Number of medical supplies storage facilities in the atolls	MOH HMIS, Service provider records	
OP12:Assertained quality and responsiveness of the health services	Hospital acquired infections (% of MRSA infections)	MOH HMIS, Service provider records	Commitment of service providers towards moral values of service to people to reduce harm and improve health, together with adequate resource allocation for quality, safety and relevance of the services provided.
	Medical, medication and lab test errors in the past year (% of patients)	MOH HMIS, Service provider records	
	Mortality from communicable diseases (per 100 patients)	MOH HMIS, Service provider records	
	Mortality after admission for MI (per 100 patients)	MOH HMIS, Service provider records	
	TB treatment success rate	MOH HMIS, Service provider records	
	% of health facilities (private and public) that review clinical outcome data	MOH HMIS, Service provider records	
	% of health facilities (private and public) that review patient experience data	MOH HMIS, Service provider records	
	% of health facilities (pubic and private) that use national standard guidelines for case management (e.g.: for EOC, Dengue, childhood illnesses, NCDs..)	MOH HMIS, Service provider records	
	% of pharmacies operating to the level of national standards	MOH HMIS, Service provider records	
	% of antibiotic prescriptions issues with/without sensitivity testing	MOH HMIS, Service provider records	
	% of health facilities (private and public) that meets infection control standards	MOH HMIS, Service provider records	
	% of diagnostic facilities (private and public) that meets national standards	MOH HMIS, Service provider records	

	% of health facilities (private and public) that meets health care waste management standards	MOH HMIS, Service provider records
	Number of episodes of confiscation of medicines and medical product imports due to non-compliance to national standards and regulations	MOH HMIS, SFDA records
	Number of episodes of suspension of health care services due to non-compliance to national standards and regulations	MOH HMIS, Service provider records
	Number of health professionals whose license to practice was not granted or not renewed (doctors, nurses, PH practitioners, pharmacist)	MOH HMIS, Service provider records

Appendix -2: Result-based planning tool for annual planning & monitoring

OUTCOMES AT NATIONAL LEVEL	OUTPUTS AT NATIONAL LEVEL	STRATEGIC INPUT AREAS (GOVERNANCE)	ORGANISATIONAL LEVEL OUTPUTS /MANIFESTO OUTPUTS	INSITUTIONAL LEVEL ACTIVITIES
OC1. Build trust in the national helath system	OP1. Adopt value-oriented and evidence-based public policy making.	1. Establish an efficient health system governed by legislation, regulatory and oversight mechanism.		
OC2. Reduce disease and disability among the population.	OP2. Strengthen partnerships for health within government, with private, voluntary sectors and civil society.	2. Ensure public policy making is transparent, evidence-based and information-driven.		
OC3. Reduce inequities in access to health care and medicines	OP3. Ensure financial sustainability of the health system.	3. Develop public-private partnerships in health promotion and delivery of preventive and curative health services.		
	OP4. Enforce legislations enacted.	4. Ensure financial sustainability of the health system and the social health insurance scheme (Aasandha).		
OUTCOMES AT NATIONAL LEVEL	**OUTPUTS AT NATIONAL LEVEL**	**STRATEGIC INPUT AREAS (PUBLIC HEALTH PROTECTION)**	**ORGANISATIONAL LEVEL OUTPUTS /MANIFESTO OUTPUTS**	**INSITUTIONAL LEVEL ACTIVITIES**
		5. Provide a healthy start in life through effective reproductive, maternal and child health services		
OC1. Build trust in the national helath system	OP5. Enable a healthy start in life and childhood through the health system.	6. Reduce chronic diseases (diabetes, cardio-vascular diseases, stroke and cancers) and improve mental and psychological health of the population.		
OC2. Reduce disease and disability among the population.	OP6. Enable young people and adults to adopt healthy practices.	7. Maintain successes in control of communicable diseases and prevent re-emergence and introduction of new communicable diseases.		
OC3. Reduce inequities in access to health care and medicines	OP7. Enhance quality of life of older people, those with disabilities and long-term health conditions.	8. Enable healthy behaviours, safe sexual and reproductive health practices among adolescents and young adults.		
		9. Improve quality of life of older people and people with long-term illnesses and disabilities.		

		10. Strengthen health promotion and health education customized to the target audiences.		
		11. Provide a clean, safe and supportive environment to enable healthy choices and prevent injuries and spread of diseases.		
OUTCOMES AT NATIONAL LEVEL	**OUTPUTS AT NATIONAL LEVEL**	**STRATEGIC INPUT AREAS (HEALTH SERVICE DELIVERY)**	**ORGANISATIONAL LEVEL OUTPUTS /MANIFESTO OUTPUTS**	**INSITUTIONAL LEVEL ACTIVITIES**
	OP8. Unify health care delivery by the public, private and voluntary sectors.	12. Ensure public delivery of primary health care services in all inhabited islands.		
OC1. Build trust in the national helath system	OP9. Maintain an adequate skill-mix of the health workforce, committed to provide holistic, customer-centred, quality care.	13. Establish a coordinated system of care from primary care to secondary and tertiary care providers (public and private)		
OC2. Reduce disease and disability among the population.	OP10. Ensure a responsive, integrated health information system that provides relevant information for evidence based decision making.	14. Enable timely surveillance of diseases, births and deaths, morbidity patterns as well as social determinants of health through an integrated health information system and research.		
OC3. Reduce inequities in access to health care and medicines	OP11. Ensure health services are adequately equipped with medical products, medicines, vaccines and technologies.	15. Ensure uninterrupted supply of essential medicines, vaccines and medical products and technologies.		
	OP12. Ascertain good quality of health services, responsive to changing health needs of the population.	16. Invest in training and retention of professional and ethical standards of the health workforce.		
		17. Establish a capacity for health and medical response in national disasters and emergencies.		