MALDIVES NATIONAL HEALTH ACCOUNTS 2015-2017

MINISTRY OF HEALTH
REPUBLIC OF MALDIVES

CONTENTS

Foreword

The Maldives National Health Accounts series provide a detailed overview of resource flows in the Maldives healthcare system. It aims to capture and collate information on the overall spending incurred for health service for Maldivians, within and outside Maldives, along with the sources as well as the changes in the flow of health care expenditure for a specific period. More importantly, it serves as the single most reliable, comprehensive and one-stop reference source for in this area, both professionals and policymakers.

This is the 3rd report in the series, which was formulated based on a globally accepted framework known as System of Health Accounts (SHA, 2011). I believe that the comprehensive analyses presented in this report, will not only help to identify any possible flaws in the resource flows, but also be vital in the orientation of decision makers engaged in healthcare financing reforms. Additionally, it will be a valuable source when setting benchmarks for evaluating the performance of health systems and assessing the impact of health policies in the future.

I take this opportunity to thank various Divisions, Institutions and Departments including Policy Planning and International Health (PIH) Division, Accounts Division and others in the Ministry who offered support in providing data on time. I would also like to acknowledge the contribution of all the other partners, including development partners, insurance agencies, enterprises, other line ministries and many related officials who provided quality data in a timely manner. Furthermore, I extend my gratitude to the World Health Organization for the continuous support provided in the compilation of Maldives National Health Accounts series.

On a final note, it is envisaged that Maldives National Health Accounts 2015-17 will facilitate better and equitable allocation of resources for healthcare. I am confident that Maldives National Health Accounts series and the evidence would continue to be disseminated regularly and play a critical role in shaping the healthcare reforms and strengthening the healthcare system of the country.

Abdulla Ameen
Minister of Health

Preface

The Government of Maldives is committed to sustain current fund allocation to the health sector and ensuring financial protection through provision of health services free of cost to every Maldivian citizen. This complements to the global narrative around health transition which revolves on Sustainable Developments Goals (SDGs) with Universal Health Coverage (UHC) at its core mandate.

This round of NHA examined several aspects of health expenditure distributed by disease conditions, age and gender as Maldives is currently experiencing rapid epidemiological transition, non-communicable disease conditions remain a challenge, compounded by several risk-factors.

The evidence from public expenditure review in combination with NHA findings demonstrate the need to make use of resources efficiently and point to resource reallocation for effective use of funds. While doing so, in future significant additional allocations must be for primary care directed towards preventive and promotive care that can relieve the need for curative care.

Identifying risk factors associated with NCDs and putting in place mechanisms and interventions are critical as approach of early diagnosis and detection of disease conditions along with treatment of simple and uncomplicated cases in primary care settings can save up tremendous amount of funds to the exchequer and to households as well.

This piece of work is a joint product for which WHO provided support to the Ministry of Health, ensuring availability of quality evidence in a timely manner. I am confident that the new set of estimates would provide further direction in future policy making especially for resource allocation and re-allocations and programs in the health sector.

Dr Arvind Mathur
WHO Representative to Maldives

ACKNOWLEDGMENTS

Maldives National Health Accounts (NHA) 2015-17 is a sequel to the second edition which was released in the year 2014. NHA provides a comprehensive understanding of financial flow in the health system of Maldives. It also gives information on sectoral contributions including the magnitude and pattern of health expenditure by government and private organizations. The NHA estimate for 2015-17 is a result of the collaboration between the Ministry of Health (MoH) and the World Health Organization (WHO) as well as the relentless efforts of the technical teams at all levels. Policy level leadership for this important work was consistently provided by the Minister of Health, Hon. Abdulla Ameen. The team from Policy Planning and International Health Division undertook the exercise of collecting and verifying both primary and secondary data. . The team, with support from the international consultant Dr.Sakthivel Selvaraj, carried out data collection, analysis and dissemination of the key findings. We would like to thank Dr Arvind Mathur, WHO Representative to the Republic of Maldives, and acknowledge the support and technical guidance provided by country office and regional office colleagues under his guidance. We also would like to highlight the technical guidance provided by Ms Hui Wang, Health Economist of WHO regional office. In addition, this study could not have been implemented without the contribution of all the individuals mentioned below.

The National Health Economics Team of the MoH with technical and financial support from WHO conducted the survey data collection and analysis. The current publication was drafted by Ms Moomina Abdullah; Director, Head of Health Information and Research Section along with Dr. Sakthivel Selvaraj; the international consultant, under the able leadership of Ms Aishath Samiya; Deputy Director General, Head of Policy and Planning and International Health Division.

The team of peer and technical reviewers include the following key officials of the Ministry of Health and other organizations: Ms Aishath Samiya; Deputy Director General, Policy Planning and International Health Division, Ms Sofoora Kawsar Usman; Assistant Director, Health Information and Research Section, Mr. Ahmed Aslam; Director, Accounts Division, Ms Fathimath Riyaza; Deputy Statistician, National Bureau of Statistics, Ms Aishath Hassan; Statistician, National Bureau of Statistics, Ms Mariyam Shafeeq; Managing Director, Aasandha Company Limited, Ms Mariyam Fayaza; Manager, Aasandha Company Limited, Ms Aminath Zeeniya; Assistant General Manager, Aasandha Company Limited, Ms Aminath Nafha; Assistant Director, National Social Protection Agency, Ms Noorul Hudha; Assistant Director, National Social Protection Agency.

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KEY FINDINGS

As one of the critical step towards UHC, with a large rise in funding over the last eight years, the government has been able to expand its coverage of health services. This was made possible by its own multi-tiered health system and purchasing services through Husnuvaa Aasandha – a universal tax funded health insurance system – from public and private health care providers. Key results from this round of National Health Accounts suggest that the Current Health Expenditure (CHE) as a percentage of GDP, one of the key summary measure, had recorded a peak of over 10% during 2016 but declined to less than 9% in 2017. Despite the recent setback to spending, it may be observed the share of CHE to GDP remains high, with government expenditure alone contributing to nearly four-fifths of all health spending. During 2017, the CHE in absolute terms was MVR 6,760 million, with its per capita health expenditure at MVR 14,966. Two plausible reasons are a seemingly rising expansion in governments' fiscal capacity along with an increase in budget prioritization. As a result, financial risk protection provided to households accelerated phenomenally, where only one fifth of all spending in the country is OOP payments.

An analysis of spending by functional classification reveals that nearly 60 percent of all spending is directed towards outpatient care expenditure, followed by hospitalization expenses (19%),medical goods (10%) and the rest is accounted by administrative expenses. Preventive care expenses accounted for less than 0.5 percent of overall spending during 2017. From the dimension of providers, the findings demonstrate roughly 15 percent of all health care expenses are devoted to domestic hospitalization whereas the share of oversees hospitals roughly accounted for three percent during 2017. It could be surmised that more and more hospitalization episodes are occurring now in Maldives and far less episodes of inpatient in foreign settings, especially through Aasandha scheme. Pharmaceutical expenditure in per capita terms stood at MVR 4,727 during 2017, which accounted for one-third of all spending in the country. One positive spin-off is its profound impact on reducing households' OOP but on the negative territory, several inefficiencies were observed in selection, procurement, pricing and distribution mechanisms of medicines.

Dissecting health spending by age, gender and disease conditions, the per capita expenditure standardized for age-specific population, reveals that nearly three-fourth (73%) of all spending is devoted to elderly population, while expenditure on children accounted for 3% during 2017. Striking variation between age groups among similar disease conditions is not only observed but between different disease conditions. In order to treat a particular communicable disease conditions, a child will require, on an average, of about MVR 3595,

while those in the age group of 70-79 would need a per capita spending of roughly four times that of the child. To treat a non-communicable condition, a child will require, on an average, of about MVR 3471 whereas for an elderly in the age group of 70-79, the same would cost MVR 55,907. The pronounced difference between age and gender groups is further amplified if detailed disease conditions were to be examined. Reflecting a substantial disease burden on account of hypertension and Cardiovascular Diseases (CVD), the former is the first and the later the fourth largest component of health expenditure. The biomarker indicator (BMI) as well risk factor marker (tobacco consumption) together shows a higher burden in the population which is clearly linked to significant funds devoted to circulatory diseases. This points to resource intensive nature of such conditions requiring routine medication. Respiratory disorders, musculoskeletal conditions also appeared to account for a larger share of health spending in Maldives. The fifth leading expenditure by per capita terms is on diabetes, whose spending rises with increase in age. The magnitude of self-reports as underscored by MDHS 2016-17 and the per capita expenditure on diabetes appear to be a mismatch. This could be due to gross underreporting of such conditions as clinical evidence demonstrate a much higher burden based on spending pattern. Pregnancy and childbirth associated expenditure is found to be not substantial but suggest that it is largely spent during the reproductive years of 20-29 and 30-39.

The foregoing amply demonstrates several key policy directions to which future resource allocation must be attempted at. Sustaining the current levels of public spending is critical to keep up the momentum of achieving universal coverage and sustain the momentum on providing financial risk protection to its population. While doing so, in future, significant additional allocations must be ring-fenced to primary care directed at promotive and preventive services, that can relieve health systems from unnecessary and irrational spending, a pattern that is well entrenched currently. One of the gradual approach towards achieving this goal must be treating simple, uncomplicated cases in primary care settings rather than in tertiary care facilities. Combining this approach with an additional step of early diagnosis and detection of disease conditions can save up tremendous amount of funds to the exchequer and to households as well. This must be attempted not only underlying infectious diseases but more so in chronic conditions.

1.Introduction

Achieving Universal Health Coverage (UHC) has become the central goal for every nation in the world today. This essentially involves expanding health service coverage to entire population, deepening the benefits package to include promotive, preventive, curative and rehabilitative services. All this is expected to be provided without the households facing financial hardship. If countries were to achieve UHC, they need to mobilize domestic resources in a sustained manner thereby reducing the reliance on external sources for funding the health sector. A rise in overall health expenditure in a country alone may not serve the purpose, if significant share of that fund were devoid of pooled funds. Therefore, prepayment and pooling of resources is equally critical which is expected to reduce households' burden on Out-Of-Pocket (OOPs) payments. Such funding mechanism is not only considered equitous but efficient as well.

Maldives currently enjoy the status of a high-middle income economy, whose per capita GDP in nominal terms is about USD 10,449[1]. Reflecting its status of a middle-income country, life expectancy at birth in 2016 was 78.4 years[2]. The child and infant mortality, another vital indicator to measure health system progress, was at 10 per 1000 live births (Under 5 Mortality Rate) and at 8 per 1000 live births (IMR) during 2014[3].

As part of UHC coverage measurement, the reported health service coverage for Maldives demonstrates tremendous achievement with pregnancy care at 90%, access to basic sanitation at 96%, TB treatment coverage at 80% during 2017[4]. Interestingly, the UHC services coverage index, a summary measure considering the health service coverage in the country, which stands at 72% for the year 2017[5]. While a 100% coverage would have implied full coverage of all health services measured, the country appears to have marched ahead with more than a modest progress in 2017.

As one of the critical step towards UHC, Maldivians currently enjoy a fully funded universal health insurance scheme by the government[6]. The health financing structure of Maldives have undergone a significant change as a result of near comprehensive universal roll out of government funded health

[1]Maldives Monetary Authority (2018), Monthly Statistics Vol.19; No.12 December, 2018
[2]World Health Organization (2018), Sustainable Development Goals, SEARO 2018
[3]Ministry of Health (2016), Annual Report, published in 2016
[4]World Health Organization (2018), Sustainable Development Goals, SEARO 2018
[5]Ibid, 2018
[6]Ministry of Health (2016), Annual Report, published in 2016

insurance scheme, initially by Madhana scheme in 2009 (30% of population covered), which transformed in to Aasandha scheme from 2012, with an annual upper limit per person of MVR 100,000 with coverage of all Maldivians. Later in 2014, this scheme was rebranded as Husnuvaa Aasandha with the removal of the annual financial limit per person.

Such funding is over and above the tax funded health care system. With a large rise in funding, the government has been able to expand its coverage of operations both by its own multi-tiered health system and purchasing services through Husnuvaa Aasandha – a universal tax funded health insurance system – from both government and private health care providers. With an open-ended coverage, the Husnuvaa Aasandha scheme provides benefits to every Maldivians for free and cashless involving comprehensive care from outpatient services, hospital care requiring surgeries and procedures, medicines and consumables, emergency evacuations, and even airfare for patients to access high end hospital procedures and interventions abroad at empaneled facilities.

The coverage of those benefited from the Husnuvaa Aasandha scheme accelerated from about 30% in 2010 to about 94% in 2016. The tax funded health care system, on the other hand, has managed to expand coverage phenomenally. During 2017, the number of outpatient treatments provided by government providers in all inhabited islands are about 728,572 and about 19,441 hospital admissions were reported by the government hospitals[7].

The increase in health coverage to its population was amply aided by expansion in health workforce, health delivery institutions, and medical goods & supplies which was subsequently made possible by an ever-rising resource allocation to the health care sector from general budget. Over the last one and half decades, the level of per capita health expenditure has risen phenomenally from USD 454 during 2000 to about USD 1,048 in 2016 (Table 1). Two plausible reasons are a seemingly rising expansion in governments' fiscal capacity and an increase in budget prioritization. It may be noted that during the same period, the GDP per capita accelerated from USD 5,865 to about USD 9,875. As a result, the general government expenditure drawn from domestic sources as a percent of GDP was stepped up from 29% during 2000 to 38% in 2016. Therefore, it is obvious that the governments' fiscal capacity widened significantly in view of sustained and robust growth of the economy. The economic growth rate between 2002 and 2013 averaged about 7%, which is largely driven by high-end tourism and related activities (construction, transport and communications), fisheries[8]. After a sharp dip in growth rate to 2.2% during 2015, the economy has witnessed a growth rate of over 6% during the last three years[9].

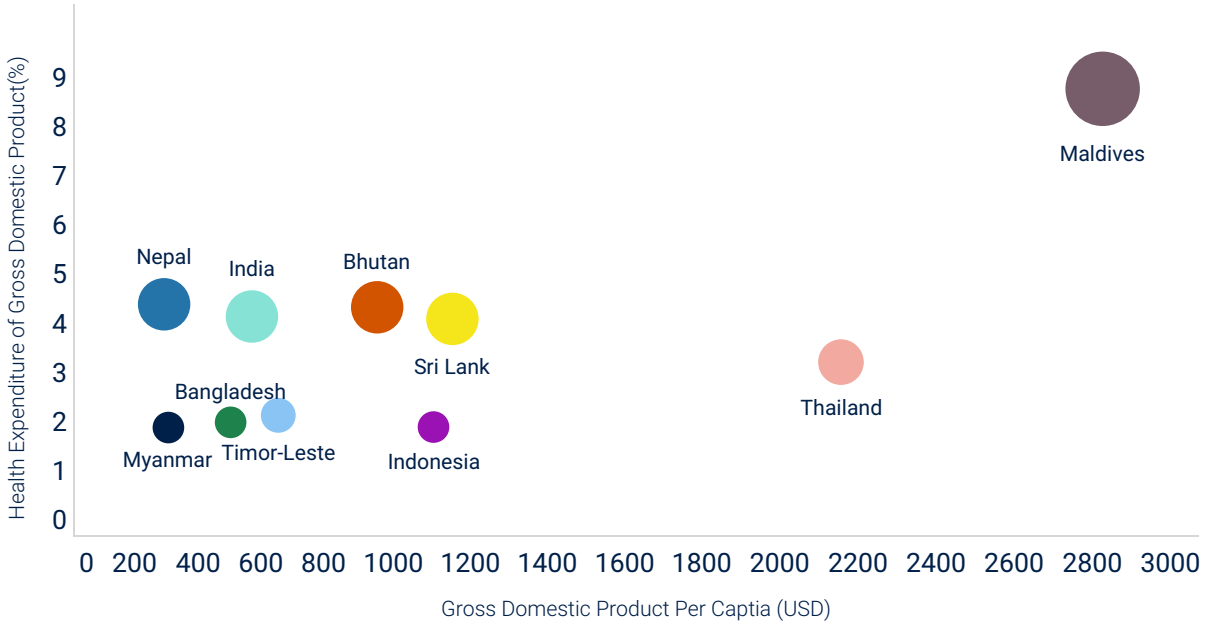
[7]National Bureau of Statistics, Ministry of National Planning and Infrastructure (2018), Hospital Health Statistics – Medical Staff, 2017
[8]The World Bank (2015), Maldives – Systematic Country Diagnostic, The World Bank Group
[9]The Asian Development Bank (2018), The Asian Development Outlook, 2018

Table 1 - Health Expenditure Profile, Maldives, 2000 to 2016

Financial Indicators	2000	2005	2010	2016
GDP Per Capita (USD)	5,865	6,513	8,486	9,875
Current Health Expenditure (CHE) Per Capita (USD)	454	575	720	1,048
Govt. Health Exp. as % Current Health Expenditure	33%	34%	53%	73%
Govt. Health Exp. as % GDP	3%	3%	5%	8%
OOPs as % Current Health Expenditure	63%	56%	40%	19%
General Govt. Expenditure as % GDP	29%	39%	33%	38%
General Govt. Health Exp. as % General Govt. Expenditure	9%	8%	14%	20%

Source: GHED, Health Expenditure Profile - Maldives, WHO, 2018
Note: The decimals are rounded off in Govt. Health Expenditure as % of GDP

Chart 1A - Health Expenditure as Percent of GDP in South-East Asian Countries, 2002

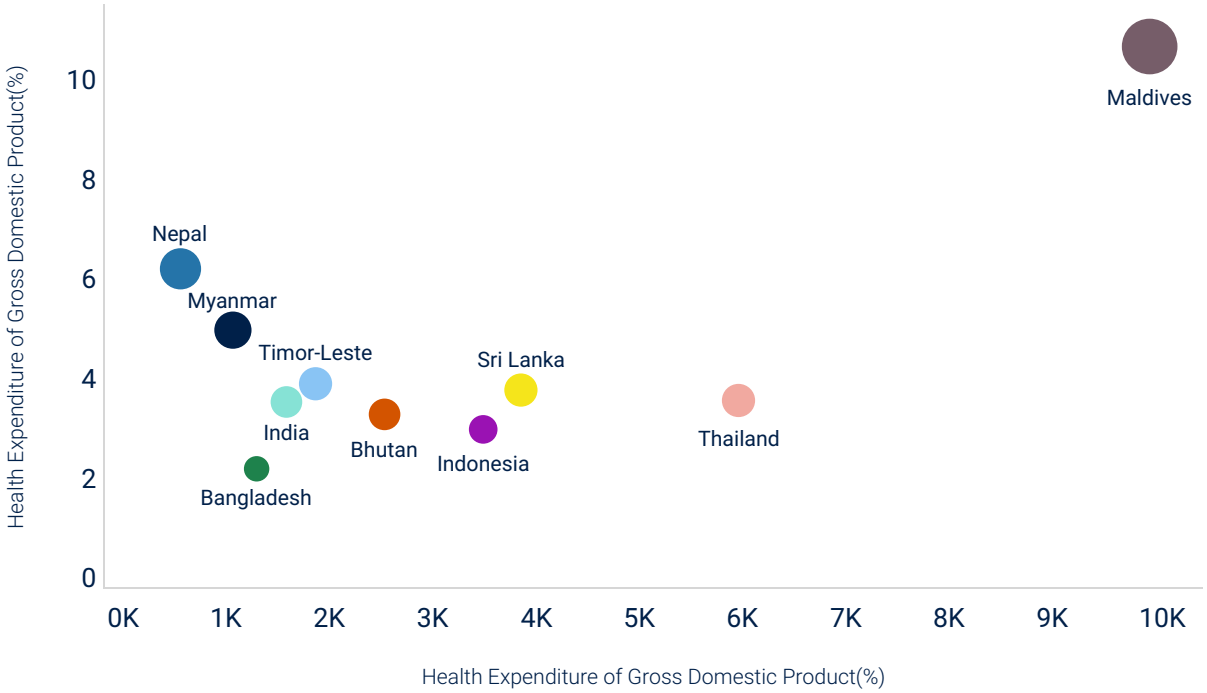


Source: Chart created from Global Health Expenditure Database, 2018

It may be observed that an increase in income per capita had certainly had a relatively salutary effect of a rise in overall health spending in Maldives. Three sets of observations are worth reporting here when Maldives and its neighbors' overall health expenditure pattern were to be examined. Firstly, most South-East Asian countries appear to spend, on an average, 3-4% of its expenditure on health care during 2016. (Chart 1b: Health Care Expenditure as a percent of GDP), as against 2-4% range in the year 2002 (Chart 1a: Health Care Expenditure as a percent of GDP).

Thailand and Maldives had a relatively better income per capita both in 2002 and 2016. Despite enjoying a relatively higher income per capita than their counterparts besides having more than doubled its income over the last one and half decade, Thailand has been able to sustain its health spending in the range of 3.5-4% during this period. Maldives, on the other hand, had witnessed its GDP per capita to double during this period while its health expenditure as a percent of GDP accelerated from 8% to 10% during the period under consideration.

Chart 1B - Health Expenditure as Percent of GDP in South-East Asian Countries, 2016



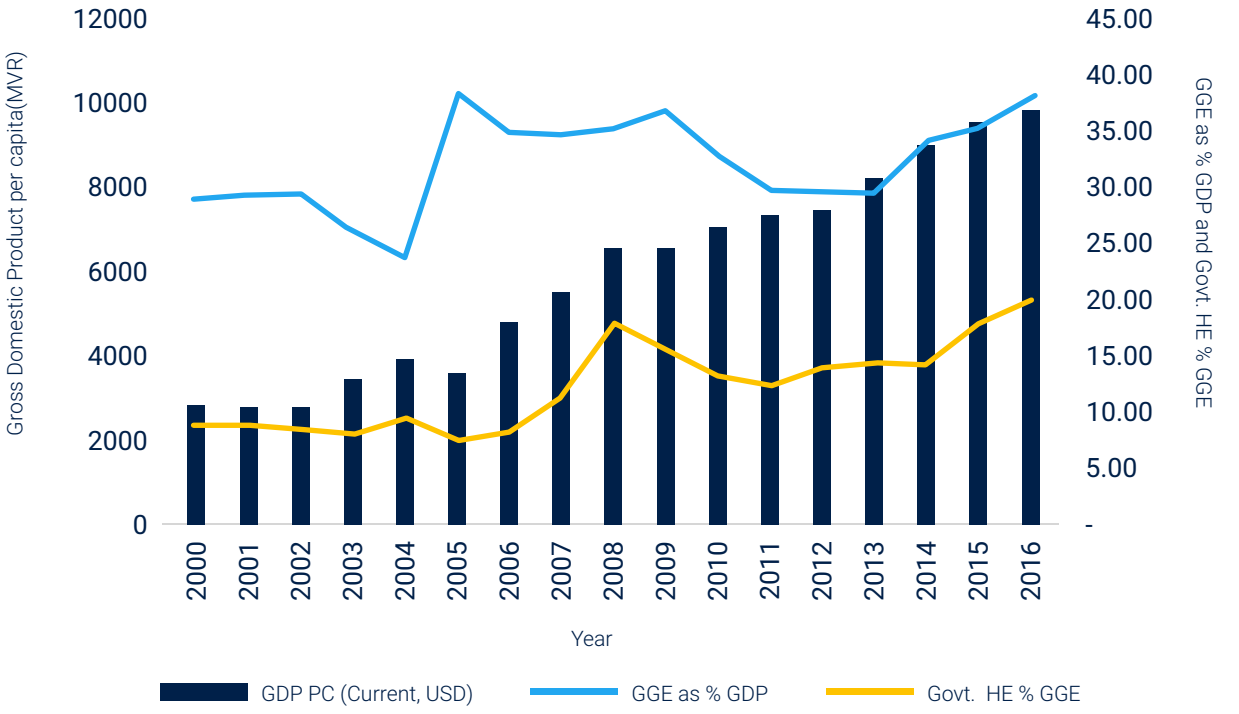
Source: Chart created from Global Health Expenditure Database, 2018

It may be argued that in Maldives, a rapid and sustained economic growth led by tourism has provided the country with adequate room to finance the provision of public services including education and health. The expansion in fiscal capacity measured by a higher tax-GDP ratio and the country's

overall spending on sectoral development provides unmistakable evidence. It may be observed that from about 12.6% of GDP in the early 1990s, tax revenue as a percent of GDP doubled to 25.8% in 2015. However, during this period, non-tax revenue recorded a corresponding decline from about 15.4% to 9.2% of GDP. But overall revenue as a percent of GDP increased from about 28% to 35% during the period under consideration[10].

Along with increase in revenue buoyancy, development expenditure was also stepped up during this period. The general government expenditure as a percent of GDP had witnessed a 10% basis point rise, from 29% in the year 2000 to about 38% in 2016, in a span of one and half decades. A substantial increase in overall general government expenditure is observed to be in the health sector, which went up from 9% in the year 2000 to about 20% during 2016 (Chart 2).

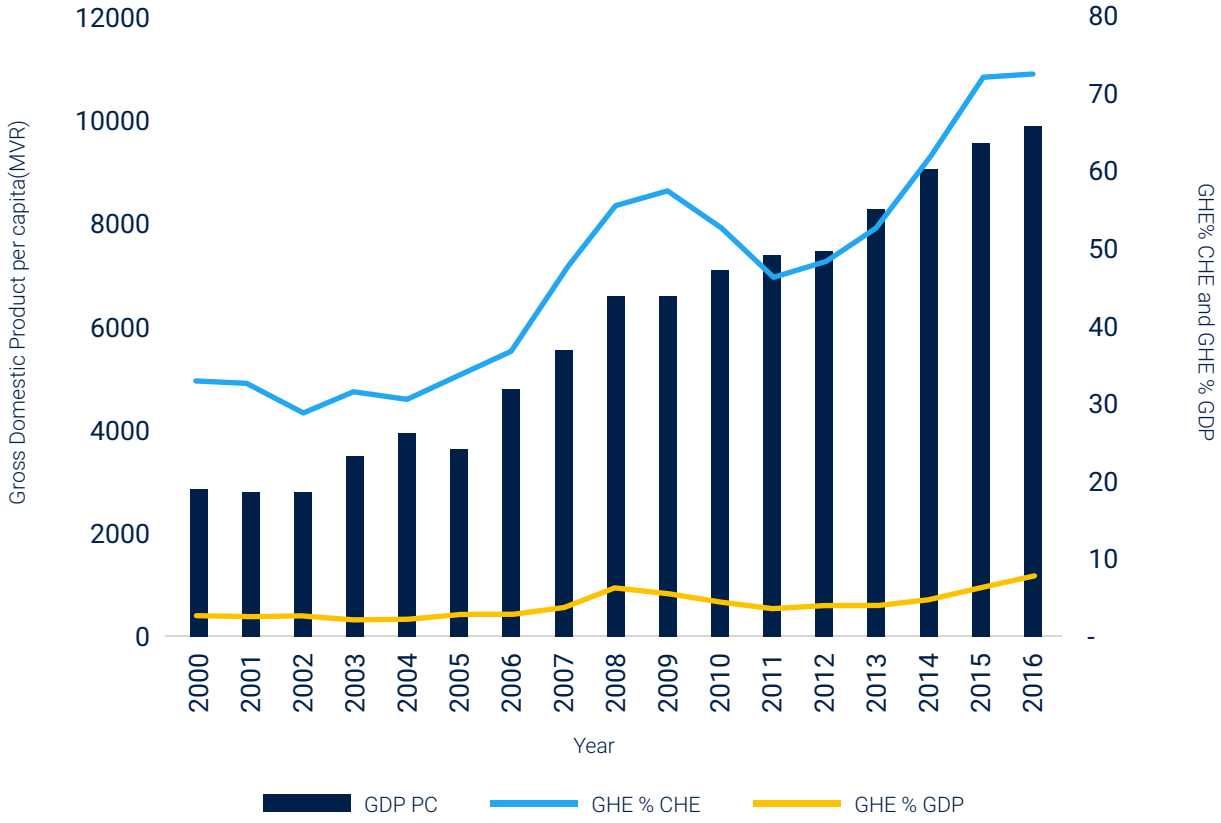
Chart 2 - Expansion in Fiscal Capacity, Maldives, 2000-2016



Source: Ministry of Finance and Treasury, Budget in Statistics, respective years
Note: GDP PC denotes to Gross Domestic Product per capita; GGE refers to General Government Expenditure while HE includes government health expenditure

[10]Ministry of Finance and Treasury, Budget in Statistics, respective years.

Chart 3 - Budget Prioritization on Health Care, Maldives, 2000-2016



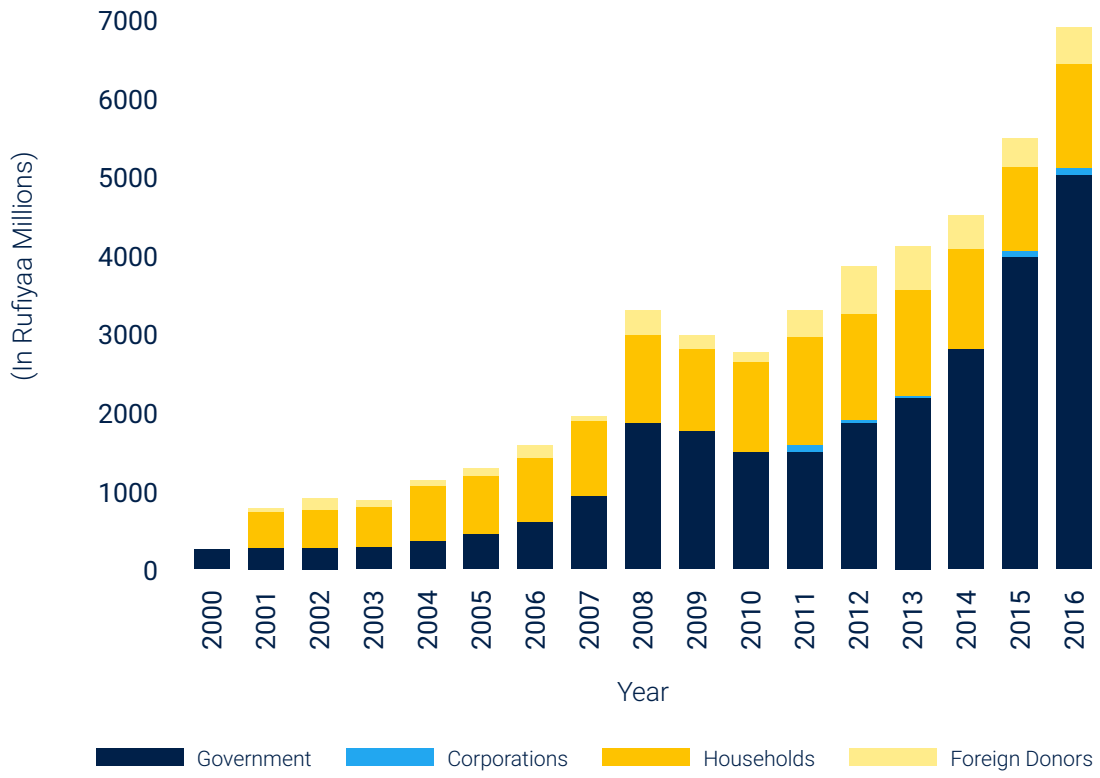
Source: Ministry of Finance and Treasury, Budget in Statistics, respective years
Note: GHE refers to Government Health Expenditure; CHE stands for Current Health Expenditure; while GDP indicate Gross Domestic Product

Emerging evidence from low-income countries appear to suggest that while fiscal capacity had expanded in most economies but it is not accompanied by budget prioritization. In other words, this means that rapid and significant economic growth had led to revenue buoyancy and a concomitant increase in government spending, but the additional spending is not allocated to health sector (WHO, GHED, 2018). Trends emerging from Maldives goes to demonstrate that the fiscal capacity of the country not only expanded but what is also unmistakable is the higher priority accorded to health sector has resulted in greater government health expenditure, both in terms of per capita spending and its share. The accompanying chart 3 depicts domestic government expenditure on health as a percent of GDP and also as a percent of overall health expenditure. Along with a substantial rise in government spending on health as a percent of GDP from 2.6% to 7.7% between the year 2000 to 2016, the government health expenditure as a percent of overall health spending accelerated from about 34% in 2000 to around 74% during 2016.

Development of economic sectors in Maldives enabled a higher budget prioritization for health propelled by an expanded fiscal capacity. This change brought a relatively higher level of government spending resulting substantial reduction in households' financial burden. From Chart 4 it is apparent that beginning from the year 2000 until 2008, the contribution of households' OOP was not only significant but accounted for the largest component which subsequently declined in later years.

The government funding (both tax funded system and government funded health insurance scheme) has steadily accelerated over the last one and half decades but more so from the 2008. It is equally apparent that the share of donor financing in the health sector has not been significant in the past.

Chart 4 - Sources of Health Funding, Maldives, 2000 to 2016

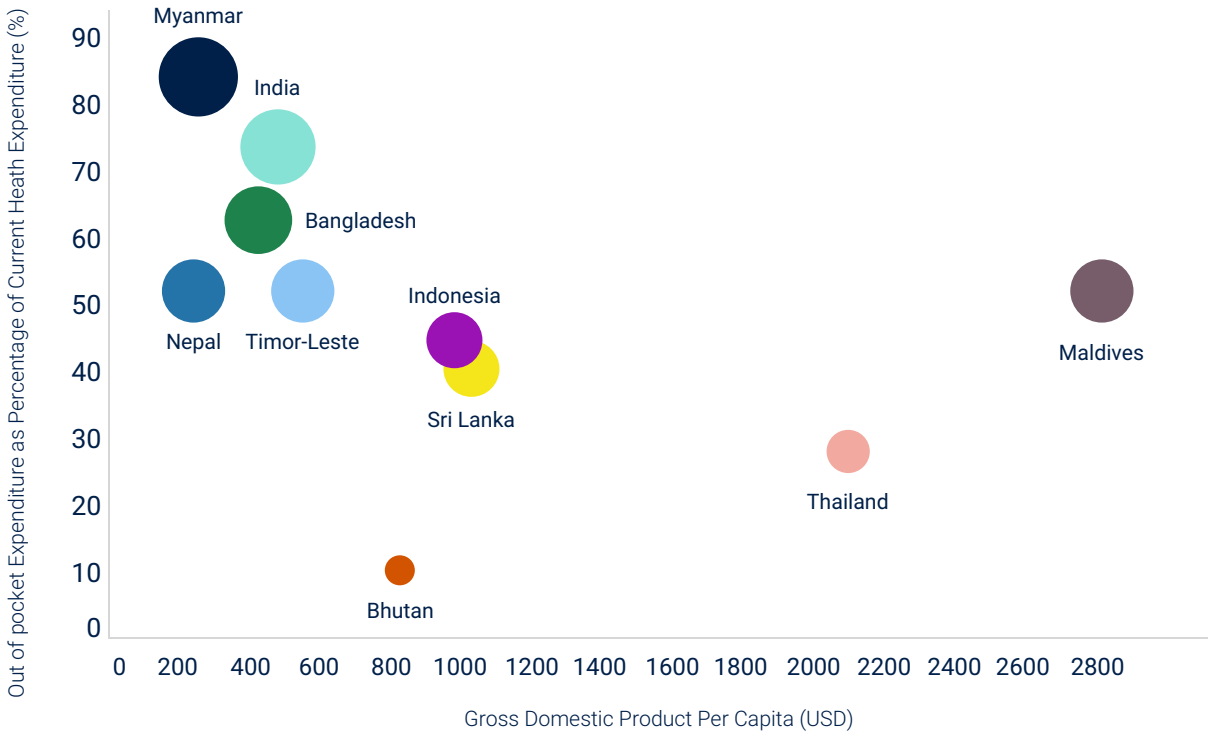


Source: Chart created from Global Health Expenditure Database, 2018

When levels and share of public spending increases substantially, as it did in Maldives, a larger government commitment is expected to provide financial risk protection to households. At lower levels of income, the share of OOP is significantly higher, as demonstrated in the accompanying Chart 5a where the difference between Maldives and other countries in the South-East region was not so substantial which caused a higher households' OOP.

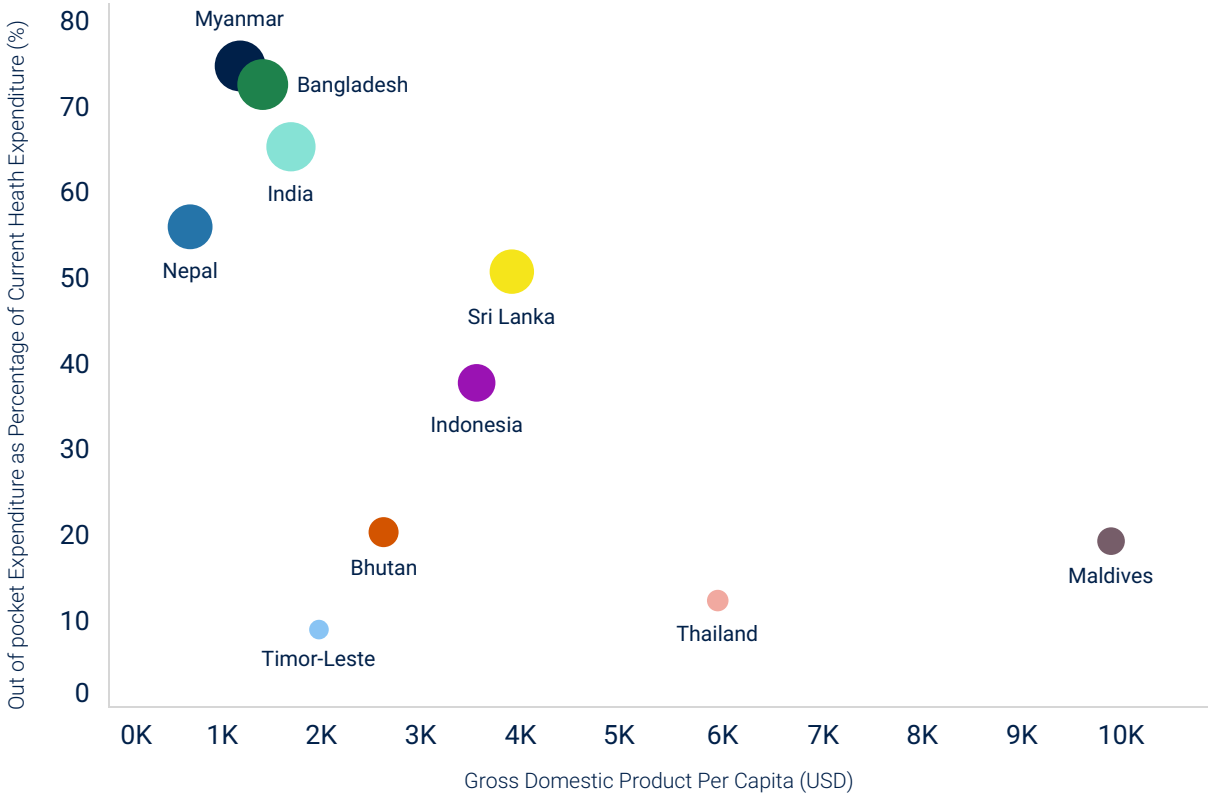
Nearly half of all health spending was on account of households' OOP during 2002 in Maldives, while on the other hand, countries such as Myanmar, India, Bangladesh, etc. had witnessed its households to bear a relatively higher financial burden in the range of 60-80% of overall health spending. Chart 5b further illustrates that as Maldives marched ahead in income level, a higher share and levels of public spending has resulted in lower financial burden on households, which is reported to be less one-fifth of all health expenditure in the country during 2016. And this is also true in the case of Thailand during this period.

Chart 5A - Households' Out-Of-Pocket Expenditure, South-East Asia, 2002



Source: Chart created from Global Health Expenditure Database, 2018

Chart 5B - Households' Out-Of-Pocket Expenditure, South-East Asia, 2016



Source: Chart created from Global Health Expenditure Database, 2018

2.The Framework and Approach

The foregoing evidence clearly highlighted the past and emerging health care financing levels and pattern in Maldives and its comparison to its neighbouring counterparts in the region. This underscores the need for an in-depth analysis of financial flows underlying different health care schemes, its link to various sources from which funds originate. Furthermore, the need for examining the financial flows to different health care functions and to various health care providers are even more critical. Finally, it is equally critical to understand the nature and pattern of financing flows to age, gender and disease classifications. The distributional aspects of financing health care are important as it provides valuable answer to the question of who benefits from government funds. The levels and pattern of health care funding is also expected to provide ample clue to the question of how efficient are resources allocated and utilised in the health system.

The underlying framework to address these questions in this report is derived from the System of Health Accounts 2011 (SHA, 2011)[11]. The system of health accounts is often defined as an accounting framework that describes the levels and pattern of financial flows in the health system, by examining various sources of funds and its distribution by health functions and providers. Primarily, the framework is built by drawing three different dimensions in health care and linking them, namely, financing, provision and consumption. It is therefore argued that what is financed is also provided which is finally consumed.

The financing dimension, which is the centrepiece of the framework, highlights three elements, namely, institutional units providing funds to health care schemes, health care schemes and financing agents. The second dimension relates to provision of health care, namely health care providers and factor of provision. The third dimension deals with consumption of health care. Health care functions and beneficiaries are highlighted under consumption function. These three functions are inextricably linked in the framework, whereby estimates of expenditure incurred under financing function, must be equivalent to estimates of spending reported under consumption function which must equal the provision function.

[11]OECD, Eurostat, WHO (2011), A System of Health Accounts, OECD Publishing

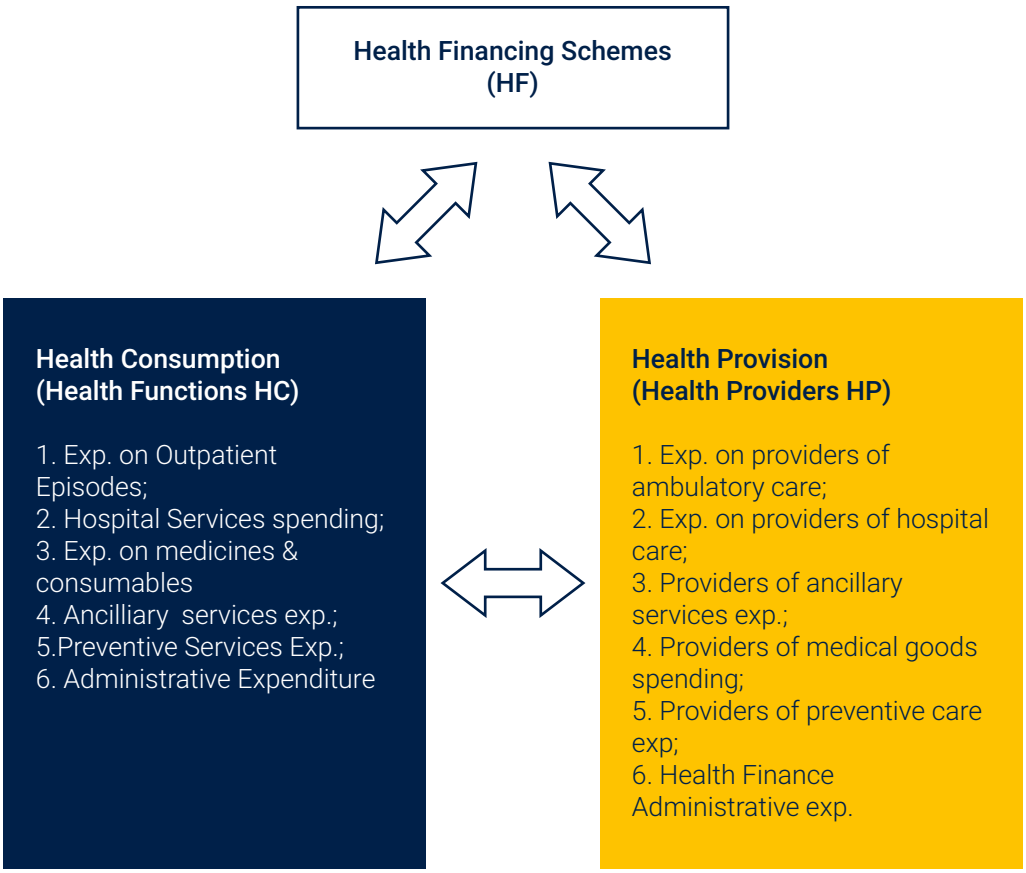
The primary objective of the SHA is to provide an estimate of absolute levels of health spending in a country for any given financial year. Such an estimate is provided along with the sources from which funds originate (Government, donors, enterprises, non-profit institutions serving households, households, etc.). These entities are often referred to as institutional units providing funds to the health system (with an alphabetical code – FS RI – referring to institutional units). Different financing schemes are defined underlying SHA, 2011. The Health Financing Schemes (alphabetically coded as HF) take different forms, such as, government schemes, compulsory health insurance schemes, voluntary private health insurance schemes, Non-Profit Institutions Serving Households (NPISH), households, etc. The health financing schemes derive its funds from institutional units.

Chart 6.1 - The SHA, 2011 - The Tri-Axial Framework

Source: Reproduced from OECD, Eurostat, WHO (2011), A System of Health Accounts, OECD Publishing.

The funds thus received from institutional units flowing through various financial schemes are routed to providers or functions through financing agents (FA). Funds flowing from health financing schemes are incurred on different health care functions. The functions – which are coded under HC – can take various forms, including payments to outpatient episodes, hospitalisation services, medicines & consumables, ancillary services, preventive care services and health financing administration (key components of health care functions and providers are outlined in Chart 6.2). Finally, the end users of these funds can be traced to health care providers (coded as HP), who are sub-classified under: providers of hospital care, providers of ambulatory care, providers of ancillary services, providers of medical goods, providers of preventive care, providers of health financing administration and rest of the world providers.

Chart 6.2 - Key Components of Health Functions (HP) and Health Providers (HP)



The framework described above clearly underscores the importance of expenditure in the accounting framework. Therefore, SHA, 2011 deals largely with expenditure approach. On the other hand, the GDP estimates are normally derived from production, income and expenditure approach. The GDP estimates derives its framework from SNA, 2008 (System of National Accounts). In respect to health care expenditure, the SHA 2011 framework delineates four sets of boundaries, including defining the consumption of health care goods and services. These consist of i) all those health care activities that involve health promotion, prevention, treatment, diagnosis, palliative care and governance & administrative activities; ii) expenditure associated with consumption of those goods and services; iii) time boundary to highlight annual expenditure running from January to December, in the case of Maldives; iv) spatial boundary to underscore the importance of including only those activities and associated expenditure incurred within the country by residents, Maldivians who live in other countries and those Maldivians who travel outside the country for treatment.

Chart 6.3: Key Features of Health Care Financing Arrangements, Maldives

Health Care Financing Schemes	Mode of Participation	Benefit Entitlement	Basic Method of Fund Raising	Pooling
Govt. Schemes (MoH)	Participation is automatic for all residents	Universal entitlement and non-contributory in nature	Tax and non-tax revenues; budget revenues are utilised	Nation-wide pooling
Mandatory Social Health Insurance Schemes - Aasandha Scheme (NSPA)	All residents are eligible	Open-ended comprehensive package of services with no contribution required from beneficiaries	Tax and non-tax revenues; budget revenues are utilised	Nation-wide pooling
Voluntary Private Health Insurance Schemes	Voluntary participation	Contributory in nature involving Inpatient and outpatient expenditure	Risk-rated premium from individuals, corporates, Govt., etc.	Pooling limited for covered population
Not-For-Profit Institutions Serving Households (NPISHs) Schemes	Voluntary participation	Non-contributory and discretionary	Contributions as Grant/loans from foreign entities, or grants from corporations and individuals	Programme level pooling
Households' OOP Payments	Voluntary participation	Fully contributory and contributed at the point of service delivery	Households' disposable income/saving or borrowing	No inter-household pooling
Rest of World Schemes	Voluntary participation	Entitlement set by foreign entities	Grants transferred by bilateral or/and multilateral or/and private philanthropy	Pooling varies across programmes

Source: Framework for this table is drawn from System of Health Accounts, 2011, page 163, WHO, OECD and Eurostat

One of the core dimensions around SHA 2011 is the underlying health financing arrangements that countries follow. The arrangement typically involves a combination of public and private sources of financing. The key public financing arrangement in the Maldivian context is the government scheme where the mode of participation is automatic to all residents in the country. The scheme provides universal entitlement with no defined contribution required from the users, while the funds for the scheme is largely drawn from budget sources allocated by Ministry of Finance, involving tax and non-tax revenues of the

government. The government scheme is the most comprehensive of all the schemes as it provides preventive, promotive, curative (outpatient and inpatient) and rehabilitative care.

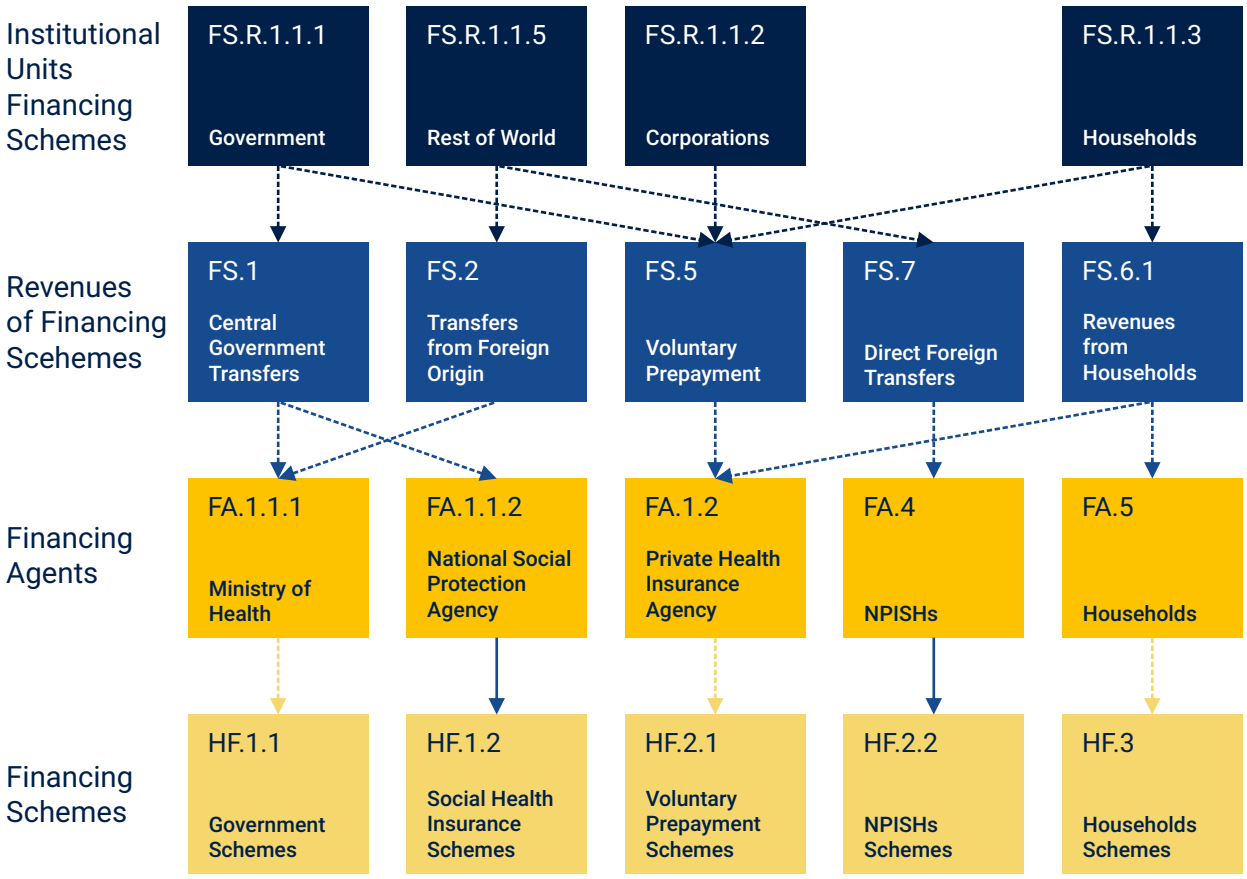
Aasandha scheme currently implemented by the National Social Protection Agency (NSPA)is the main source of health care provision in the country. Although the Aasandha scheme was initially designed as a contributory scheme (a defined contribution by participants), but no such contributions are required and moreover the entitlements are open-ended comprehensive benefit packages including outpatient (OTC and prescription drugs), inpatient (domestic and foreign), transportation (inter-Atoll and overseas), dialysis, etc. The patients are entitled to receive services from both public and private health care providers. The Aasandha scheme and its allocation is classified under mandatory social health insurance scheme. Unlike the traditional tax funded and provided health services managed by MoH, the Aasandha scheme is intermediated by a financial intermediary (Aasandha Insurance Company), although it is fully tax funded now, with no more contribution required from households, as the contribution from beneficiaries were removed in 2012.

The other key financing schemes relate to voluntary health insurance funds. Currently, three private insurance companies provide health insurance schemes (Amana Thakaful, Allied Insurance Company and Solarelle Insurance Company). As the schemes are voluntary in nature, with defined contribution where individuals and corporations pay risk-rated premiums for their beneficiaries. Recently, the government took these schemes for its top officials where premiums are paid by the government providing comprehensive health care services.

State owned enterprises and private companies subscribed to these health insurance schemes on behalf of their employees. However, these schemes are open to all citizens who are required to pay the premiums when they enrol for the scheme. The role of pooling in voluntary private health insurance scheme is limited by those who are covered. As far as households are concerned, participation is voluntary and they do so by fully contributing at the point of service delivery. Funds for households' scheme is largely derived from disposable income/saving/borrowing while no inter-households pooling is possible. In respect to Rest of World (RoW) financing scheme, the participation is voluntary in nature, the benefit entitlement is set by foreign bilateral/multilateral/private philanthropy whose funds are mobilised through grants, and pooling is considered to vary across the programmes followed.

Utilizing the framework underlined above, this report attempts to capture the health care fund flows in Maldives across different entities. The Chart 7 below highlights four such entities and the process of fund flows between entities.

Chart 7 - Health Financing Flows, Maldives, 2017



There are four entities that act as institutional units providing funds for the health system including government, households, corporations and rest of the world (including official and private charity donors). As will be observed later in this report, the role of government both as financier and provider of health services has increased several-fold in the past. In respect to revenues, the central government through Ministry of Finance allocates tax funds to Ministry of Health (MoH). Whereas, when official donors channel their funds through government, the MoH acts as an intermediary. As far as revenues of voluntary financing schemes are concerned, it is interesting to observe that three entities, namely, government, households and corporations channel certain funds through voluntary insurance payment mechanism to provide health insurance coverage.

Households, who end up spending from their own pockets are expected to purchase health care services from providers largely directly or to a lesser extent through a financing agent (private health insurance companies). Official donors are expected to route their funds largely through the government health system while private donors are observed to channel their funds through NPISHs providing health care services. Private corporations, who as employers contribute adequate funds to purchase health care services to its employees through financing intermediaries (private health insurance companies). Finally, the funds move to ultimate users either in the form of health care functions (inpatient, outpatient, preventive care, etc.) or health care providers (hospitals, providers of ambulatory care, providers of medical goods, etc.).

Utilizing the framework outlined above, this report will produce several matrices that describe the levels and pattern of fund flows underlying the three dimensions, namely, financing, consumption and provision. In specific, the report produces the following sets of matrices. The core matrices are reported at annexure while the key aggregates and policy relevant indicators for the years 2015, 2016 and 2017 are reported in the following sections. In order to compare and contrast earlier estimates of NHA, the following sections also draws key NHA aggregates from earlier reports for the years 2011 and 2014. The core matrices produced for this report include the following:

1. Fund flows from Revenues of Financing Schemes (FS) to Health Financing Schemes (HF);
2. Fund flows from Health Financing Schemes (HF) to Health Care Functions (HC);
3. Fund flows from Health Financing Schemes (HF) to Health Care Providers (HP);
4. Fund flows from Health Care Functions (HC) to Health Care Providers (HP);
5. Fund flows from Health Financing Schemes (HF) to Factor of Provision (FP);
6. Fund flows from Health Care Functions (HC) to Beneficiary Characteristics (including age, gender and disease classifications).

3.Key NHA Results, Maldives, 2015-17

The key NHA results and policy relevant aggregates are reported in this section. The results present both the levels and relative share of key health financing indicators in relation to macroeconomic aggregates. It was earlier observed in the first section that Maldives witnessed dramatic expansion in fiscal capacity as both Tax-GDP ratio accelerated and as a result the overall government spending (as % to GDP) increased to 38% in 2016. Recent evidence reported that indeed there has been a phenomenal rise in overall government expenditure. In absolute terms, current government spending in the economy accelerated sharply from MVR 12,824 million during 2011 and reached a peak of MVR 17,985 million during 2018, while it dropped during 2017 to MVR 14,955 million[12]. The economy grew stronger during 2013-2018 registering over 7 percent real GDP growth rate, except in the year 2015, when it dropped below 3 percent. During 2019, it is expected to accelerate at little less than 7 percent, in which nominal GDP is expected to touch roughly MVR 90,188 million[13].

Despite a rise in overall government spending during 2011-17 except a slump in 2017, the health sector had managed to secure a reasonable jump in allocation until 2016 while in 2017 the fund allocation declined considerably. The sharp drop in allocation to health sector in recent years appear to be driven by fiscal discipline measures initiated by the government, cutting back health subsidy especially to *Husnuvaa Aasandha* program, which is often been cited as one of the factor contributing to higher fiscal deficit[14 15]. It may be observed that during the last two years of 2016 and 2017, the health sector spending slightly declined to about MVR 4,832 million in 2017 from a peak of MVR 5,478 million in 2016. In view of this reduction in health budget, the overall health spending in the country also got dragged down slightly from MVR 6,919 million in 2016 to MVR 6,760 million during 2017. In percentage terms, the government budget on health as a share of overall government expenditure declined slightly to 32.31% in 2017. The government expenditure on health as a percentage to overall health expenditure also fell from a peak of 79% in 2016 to about 71% in 2017.

[12]Maldives Monetary Authority, December, 2018
[13]Maldives Monetary Authority, December, 2018
[14]World Bank (2015), Maldives Systematic Country Diagnostic – Identifying Opportunities and Contrainsts to Ending Poverty and Promoting Shared Prosperity", World Bank Group
[15]International Monetary Fund (2019), Maldives – 2019 Article IV Consultation – Press Release; Staff Report; and Statement by the Executive Director for Maldives, June, 2019.

The Current Health Expenditure (CHE) as a percentage of GDP, one of the key summary measure, had recorded a peak of over 10% during 2016 but declined to less than 9% in the subsequent year. Despite the recent setback to spending, it may be observed the share of CHE to GDP remains high, levelling at the average spending incurred by rich nations. Government expenditure alone contributed to the high share of CHE to GDP, contributing to nearly four-fifths of all health spending. Further, it may be observed that the allocation to Ministry of Health (MoH) per se to overall government budget in the year 2017 was nearly one-fifth, without taking into account the spending by the government for *Husnuvaa Aasandha* program.

Table 2 - Key Summary of National Health Accounts, 2011 to 2017

Description of Indicators	2011	2014	2015	2016	2017
Total Govt. Expenditure (MVR Million)	12,824	13,960	16,734	16,141	14,955
Govt. Expenditure on Heath (MVR Million)	1,217	2,834	3,959	5,478	4,832
Current Health Expenditure (MVR Million)	2,766	4,287	5,489	6,919	6,760
Govt. Expenditure on Health (% of Total Govt. Expenditure)	9.5	15.8	18.5	33.9	32.3
Govt. Expenditure on Health (% of Total Health Exp.)	44.0	66.0	72.1	79.2	71.5
GDP Estimates (MVR Millions)	29,936	56,867	63,147	67,837	74,866
GDP Per Capita (in Rufiyaa)	93,550	136,974	138,957	143,934	155,767
Current Health Expenditure (% of GDP)	9.2	9.1	8.7	10.2	9.03
Govt. Expenditure on Health (% of GDP)	4.4	6.2	6.3	8.1	6.5
Private Expenditure on Health (% of GDP)	4.8	2.9	1.8	2.1	2.0
MoH Expenditure (% of Govt. Expenditure)	3.3	9.4	14.8	19.9	19.6
Households Out-Of-Pocket Expenditure (% of Total Health Expenditure)	49.0	29.5	19.5	18.9	20.6
Drugs as a % of Total Health Expenditure (Percent)	17.0	18.2	21.9	21.1	32.0

A rapid and significant step-up of government spending on health had a salutary effect on providing financial risk protection to Maldivian citizens. The households' OOP which reported to be nearly half of all health spending in the country during 2011, declined to around 30% in 2014 and further to less than 20% in recent years (Table 2). The accompanying table 3 further corroborates the story of a decline or stagnant levels of households spending. Households' who incurred about MVR 1,245 million during 2011, its spending levels accelerated only marginally to about MVR 1,396 million in 2017.

Table 3 - NHA Key Results, Maldives, 2011-2017

Year	2011	2014	2015	2016	2017
					(In Millions Rufiyaa)
I. Overall Health Expenditure (Recurrent)	2,767	4,287	5,489	6,919	6,760
I.1.1 Govt. Health Expenditure (Recurrent)	1,217	2,834	3,959	5,478	4,832
I.1.2 Govt. Health Expenditure (Capital)	98	88	165	156	39
I.1.3 Govt. Health Expenditure (Recurrent + Capital)	1,315	2,922	4,124	5,634	4,871
I.2. Households OOPs	1,245	1,265	1,072	1,313	1,396
I.3. Development Partners	340	429	368	480	809

Note: CHE – refers to Current Health Expenditure; OOP indicates Out-Of-Pocket payments; Final figures for 2017 involving development partners not yet available from OECD sources.

Even in absolute terms measured in nominal per capita terms (Table 4), households' OOP which remained high at MVR 4,267 during 2011, declined considerably to MVR 2,904 during 2017. The private corporations have continued to contribute to health care funds as a way of contribution to its employees' share of private voluntary health insurance premiums. In absolute terms, although insurance premiums increased but in per capita terms it has been stagnant at about MVR 200 over the last four years, whose share in overall health funds of the country remained at less than two percent. In per capita terms, the overall per capita income levels of Maldivians accelerated from MVR 93,550 in 2011 to MVR 155,767 in 2017. CHE per capita also kept its pace from MVR 8,646 to MVR 13,966 during the same period.

An examination of distribution of health funds to its end use is critical as it will provide a reasonable clue to the allocation of funds to different programs and providers, providing ample direction to allocative efficiency and equity. The financing flows in the Maldivian health system from the consumption view point is highlighted in Table 5. The funds allocated to health care functions over the period from 2011-2017 provides interesting trends of fund utilization.

Table 4 - Per Capita Health Expenditure by Different Sources, Maldives, 2011, 2014 - 2017

Institutional Units	2011	2014	2015	2016	2017
	(In Rufiyaa)				
Current Health Expenditure	8,646	12,461	12,078	14,681	13,966
Government	3,803	8,493	8,713	10,605	10,053
Corporations	271	217	200	275	200
Households	4,267	3,677	2,359	2,786	2,904
Rest of the world	285	74	806	1,015	809
	(Percent)				
Current Health Expenditure	100.00	100.00	100.00	100.00	100.00
Government	45.37	68.16	72.13	72.24	71.47
Corporations	2.68	1.74	1.66	1.87	1.93
Households	41.59	29.51	19.52	18.98	20.65
Rest of the world	10.36	0.59	6.70	6.93	5.95

3.1. Expenditure by Functional Classification

From the consumption view point, two largest components of functional classification of health care expenditure are primarily linked to curative care, namely outpatient and inpatient care. One unmistakable trend is to do with a reversal in the share of outpatient vs inpatient care expenditure. The share of outpatient (or ambulatory) care expenditure accelerated from 20 percent in 2011 to over 59 percent during 2017, while the respective share of hospitalization expenditure declined from 47 percent to 18 percent during the period. The acceleration is particularly profound from the year 2014, owing largely to rise in medicines spending. It may be observed that outpatient care and the associated expenditure includes spending on consultation, diagnostics and drugs, which are bunched together under this head. Similarly, for hospitalization or inpatient expenditure, spending is bunched together involving hospital bed charges, surgeries, consultation and drugs. Therefore, on account of *Aasandha* as well as tax funded supply system, the expenditure associated with medicines accelerated phenomenally. The section dealing with pharmaceutical trend and pattern highlighted later in the report further attests to this assertion. As far as the day care health services and associated expenditure is concerned, the level and trends confirm a relatively insignificant role that it has been playing in the Maldivian health system. And similar pattern is also observed because expenses incurred towards ancillary health care services, which comprises of clinical laboratories, imaging diagnostics, patient transportation, etc. has been accounting for less than one percent of overall health care expenses (Table 5).

The medical care goods' components largely include medicines purchased (both over-the-counter (OTC) and prescription medicines) and therapeutic appliances bought by the households. In absolute terms, households spent at estimated MVR 661 million on medicines and consumables during 2017 as against MVR 470 million in the year 2011. One would have expected a higher amount of funds spent by households on medicines and consumables as in other countries. In Maldives, the need for purchasing such items from retail shops has considerably reduced in view of free supply of both OTC and prescription medicines from government health facilities as well as through Aasandha insurance scheme. The share of medical goods in overall health care functions has reduced substantially from about 17% in 2011 to roughly about 10% in 2017. Medical goods expenditure in the context of functional classification takes into account only retail level medical goods purchased by households and doesn't take into account government spending on medicines. For an overall level and share of medicines expenditure, please see section 3.3.

As Maldives move towards a health system dominated by non-communicable diseases along with reducing infectious diseases, one would have expected a higher share of allocation of funds towards preventive and promotive care. But as demonstrated by evidence from Table 5, it is apparent that during 2011-2017, the share of preventive care expenses has remained at less than two percent. One possible explanation for such a lower share of spending is availability of data to capture expenditure allocated to preventive care services, especially in the tax funded system. Even if such data were to be explored and counted for, the actual allocation may still be far from being ideal levels.

In respect to expenditure associated with health care administration and health insurance administration, it may be observed that during 2011-2017 the share of such spending is hovering around one-tenth of all expenses in the health sector. Three sets of components are included under the broad heading of health administration: i) MoH funds allocated to administrative expenses, ii) administrative expenditure relating to *Husnuvaa Aasandha* program and iii) expenditure associated with administrative functions of private voluntary insurance companies. One classic trend around voluntary private health insurance in Maldives is that roughly half of all premiums collected are paid out as claims, with the rest half being considered administrative expenses and profit made by the insurance agencies.

Table 5 - Trends in Expenditure by Health Care Functions, Maldives, 2011-17

Functional Classifications	2011	2014	2015	2016	2017
	(In Millions Rufiyaa)				
Inpatient Curative Care	1,395	1,520	1,149	1,406	1,224
Day Care Spending	NA	4.0	1.6	2.1	2.8
Outpatient Curative Care	551	2,061	2,862	3,937	4,010
Exp. on Ancillary Services	2.9	97.0	65.1	84.3	57.9
Medical Goods	470	279	536	666	702
Preventive Care	52	45	113	163	112
Governance and Health System	295	193	762	661	652
Total	2,766	4,199	5,489	6,919	6,760
	(In Percent)				
Inpatient Curative Care	46.9	36.2	20.9	20.3	18.1
Day Care	-	0.1	0.1	0.1	0.1
Outpatient Curative Care	19.9	49.1	52.1	56.9	59.3
Ancillary Services	0.1	2.3	1.2	1.2	0.8
Medical Goods	17.0	6.6	9.8	9.6	10.4
Preventive Care	1.9	1.1	2.1	2.4	1.7
Governance and Health System	10.7	4.6	13.9	9.6	9.6
Total		100	100	100	100

Note: Day care spending refers to expenditure incurred by Aasandha scheme for conducting dialysis on patients

3.2. Health Expenditure by Providers

Although similar in its classification with few exceptions, expenditure around health care provider classification reflects levels and trends as witnessed under functional categories. The single most variation is to do with hospital entities. The curative care under the hospital category is further sub-classified into two distinct components, namely domestic hospitals as providers for hospitalization care and foreign hospitals as providers. One fourth of all health care expenses were devoted to hospitalization that occurred in domestic settings including public and private ones during 2011, but the same has declined to about 15 percent during 2017. Interestingly, foreign hospital providers which accounted for nearly one fourth of all health care expenses in Maldives during 2011, the share has declined to less than three percent. Although one could be tempted to argue that more and more hospitalization episodes are occurring now in Maldives and far less episodes of inpatient in foreign settings, the declining trend requires further investigation.

Table 6 - Trends in Expenditure by Health Care Providers, Maldives, 2011-17

Provider Classifications	2011	2014	2015	2016	2017
	(In Millions Rufiyaa)				
Domestic Hospitals - Inpatient Care	641	761	927	1,182	1,049
Foreign Hospitals – Inpatient Care	656	718	222	224	175
Domestic Hospitals – Day Care	NA	NA	1.59	2.09	2.78
Ambulatory Providers - Outpatient Care	551	2,061	2,862	3,937	4,009
Ancillary Care Providers	2.99		65	84	58
Medical Goods Providers	470	279	536	666	701
Preventive Care Providers	52	45	113	163	112
Providers of Governance and Health System	295	193	762	661	652
Total	2,668	4,199	5,489	6,919	6,760

Note: Ambulatory providers refer to providers of outpatient care.

3.3. Trends and Pattern of Pharmaceutical Expenditure, 2011-17

Besides providers, one of the other consumption dimension involve the factor of provision that includes compensation to employees' (salaries and wages), self-employed professional remuneration, materials and services used (medical goods and supplies, such as pharmaceuticals, therapeutic appliances etc.), consumption of fixed capital, etc. The fund flows by factor of provision is useful for several policy-relevant and planning purpose. For instance, it is often observed that salaries and wages account for a larger share of overall health care expenditure in most developing countries' health systems.

Similarly, medicines, vaccines and other supplies are also expected to account for a significant share. While in several low-and-middle-income economies, the underfunding of government health system in general and procurement of medicines, in particular, is often a key source of financial burden on households. Although efforts were made in this report to produce estimates involving factor of provision, but in view of partial availability of data, a complete set of matrix around factor of provision is not produced. Information/data relating to salaries and wages are available only for the tax-funded system. However, for the

Aasandha insurance program, such data is not made available. On the other hand, data on pharmaceutical expenditure is available for most sources, including MoH expenditure, NSPA spending and households' OOP expenditure on medicines. The table 7 below tracks pharmaceutical expenditure for the years 2011-2017.

Table 7 - Pharmaceutical Expenditure, Maldives, 2011-2017

Description of Source	2011	2014	2015	2016	2017
(In MVR Millions)					
Ministry of Health Exp.	11	276	279	355	788
NSPA Exp.	181	251	356	471	586
Households' OOP Exp.	250	253	508	622	661
Others spending*	27	0.26	6.2	11	14
Total	470	780	1,149	1,459	2,049
(In MVR per capita and percent in parentheses)					
Ministry of Health Exp.	27 (2.0%)	631 (35%)	614 (20%)	753 (21%)	1,640 (35%)
NSPA Exp.	445 (39%)	574 (32%)	783 (26%)	999 (28%)	1,219 (26%)
Households' OOP Exp.	615 (53%)	578 (32%)	1,466 (49%)	1,762 (50%)	1,839 (39%)
Others spending*	66 (6.0%)	1 (0.0%)	136 (5.0%)	23 (1.0%)	29 (1.0%)
Total	1,154 (100%)	1,783 (100%)	2,999 (100%)	3,537 (100%)	4,727 (100%)

*Others include expenditure by voluntary private health insurance, non-governmental organizations, etc.

In absolute terms, the country's spending on medical goods and supplies during 2011 was around MVR 470 million which accelerated to MVR 780 million in 2014, while in 2017 the overall spending on medicines and supplies stood at around MVR 2,049 million. In per capita terms, this increased from MVR 1,154 in 2011 to about MVR 4,727 in 2017, almost four times rise during 2011-2017. The key NHA indicators highlighted the increasing role of pharmaceuticals, wherein it accounted for about 17% of overall health spending in the year 2011 which gradually went up to about 22% in 2015, while in 2017 it accelerated to 32%. Nearly, one-third of all health spending in Maldives is incurred on procuring medicines and supplies. Two spin-offs from such spending pattern is observed as below.

The households' OOP on drugs appear to have declined between 2011 and 2014 but went up in the following years, but in 2017 it declined to 39% from 53% in 2011. As a result, households' OOP has declined considerably by more than half during this period. However, several inefficiencies in procurement and distribution of medicines have been observed recently. Although the Essential Medicines List is limited to roughly 360 drugs, the number of approved drugs' list runs over 4,000 items, which are used for reimbursement by *Husnuvaa Aasandha*. It is reported that most of these drugs are branded ones rather than generics, even when therapeutically equivalent medicines are available. Furthermore, significant price difference is observed for similar brands and molecules reimbursed in *Husnuvaa Aasandha*. Besides, the inefficiencies in procurement system of medicines has also been noted.

4.Expenditure by Beneficiaries, Maldives, 2017

(Age, Gender and Disease Classifications)

Allocation of resources in health systems by beneficiaries is a matter of political and social interest. The principles of efficiency, equity and fairness involving resource allocation across age and gender groups becomes critical in decision making. Projecting future health care expenditures or health care resource requirements is often critical but whose estimates depends on availability and reliability of age and gender distribution of current resources. Countries saddled with the emerging problems around population ageing or nations with high burden of child and reproductive health conditions often require estimates of resource allocation by age and gender. Besides, disease-wise distribution of health care resources has become even more pertinent. This is relevant on several counts. Data informing disease-wise allocation of resources can facilitate monitoring disease burden and enable evaluation of current interventions that are directed at priority conditions. National governments often plan to eliminate and/or reduce substantially certain preventable infectious disease conditions and improve maternal and child mortality indicators. Availability of disease burden estimates or medical interventions alone will be insufficient to plan, monitor and evaluate such priorities. Current resource allocation by disease conditions is one such vital requirement that is expected to improve monitoring and evaluation of national disease priorities. Moreover, health accounts estimates involving diseases can serve as a regular monitoring tool for national governments to examine expenditure levels and trends. As epidemiological profile of the population undergoes tremendous changes in short span, as is being felt in most middle-income countries, where infectious disease burden gives way to non-communicable disease conditions, tracking such trends have gained far more importance.

4.1. Technical Approach

An attempt is made here for the first time for Maldives to distribute expenditure by beneficiary characteristics. Three key elements of beneficiary features are the focus of this analysis, namely, age, gender and diseases. The starting point of this analysis is NHA estimates for the year 2017, whose numbers by health financing schemes are presented

earlier. The national health expenditure as represented in NHA 2017 is further partitioned in homogenous cost buckets underlying health care functions. It may be noted that the SHA guidelines clearly specify that such cost buckets (or cost units) can be partitioned either by health care providers or functions, depending upon data availability[16]. Such an approach is depicted in Chart 8. Although provider-wise data is available, but function-wise data distribution is considered a desirable step given that a detailed personal claims data is more amenable to the later classification in the Maldivian context. The underlying functional classification approach is the delineation of health care activities by i) individual and collective units (curative vs preventive), ii) basic purposes of health care (whether curative, rehabilitative, and long-term care) and iii) modes of provision (inpatient vs outpatient)[17]. Table 5 above pointed to functional classification of expenditure wherein it revealed that 77% of all health spending in Maldives is contributed for curative care involving inpatients and outpatients. In absolute terms, it works out to about MVR 5,176 million as against an overall national current health expenditure of MVR 6,760 million during 2017. The entire episodes and the associated expenditure relating to curative care (IP and OP) are thus directly allocable by age, gender and diseases. In principle, a directly allocable expenditure is considered as the ones incurred at the individual level for curative care, for this set of exercise. Earmarked expenditure, on the other hand, are measured to capture preventive care, which are program specific and are used at the community level. For instance, funds incurred under the preventive category involving immunization, IEC and disease surveillance, etc. are accounted under the earmarked expenditure. Although immunization, for instance, are largely considered underlying the age of children, IEC expenses for reproductive and maternal health conditions are considered for the age group 18-49 involving females. While disease surveillance expenses are incurred for both infectious and non-communicable diseases. Although this is the broader technical approach we adopted here, but absence or lack of detailed program data often prevented the analysis from distilling expenditure under this category.

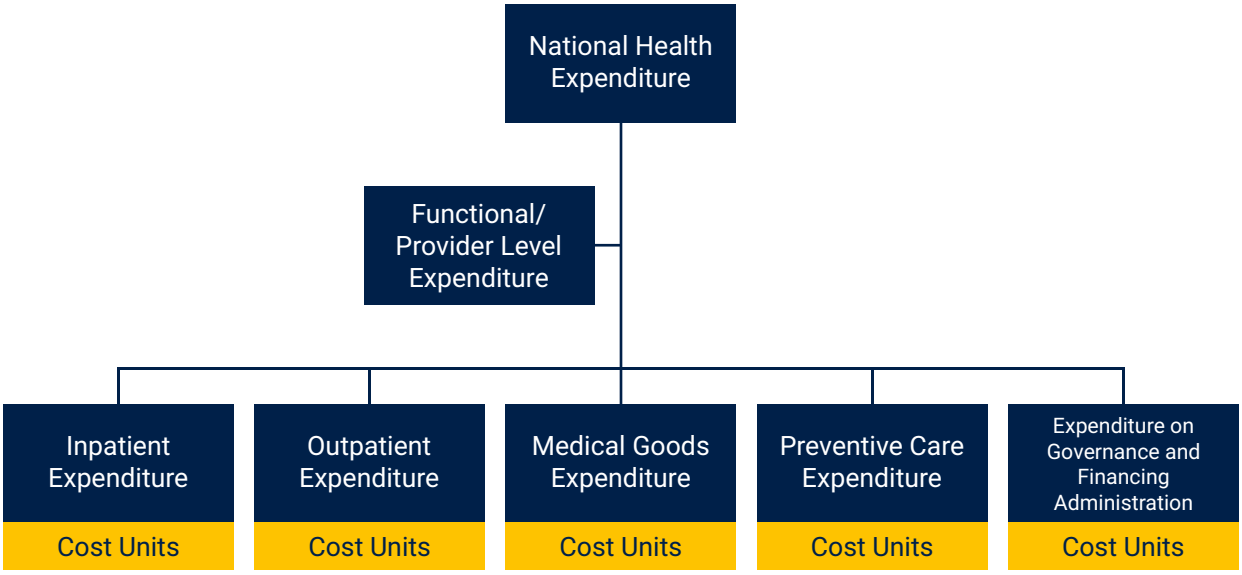
Preventive expenses which are largely incurred by the government accounted for half a percent of overall national health expenditure during 2017. The third category of expenditure are the ones that are unallocable ones. The largest component under this category are administrative expenses in the government health care system, expenditure under insurance administration, etc. Additionally, most households' expenses are linked to unallocated category here in the absence of survey data on disease conditions. However, survey data did capture age and gender of the households.

As far as disease classifications are concerned, the claims data was already coded in detail utilizing ICD-10 classifications. We labelled the claims data underlying ICD-10 classifications. The ICD-10 classifications were then converted into 22 detailed categories and further into 6 broad categories: i) communicable diseases; ii) non-communicable diseases; iii) injury; iv) Eye & ENT (Ear, Nose and Throat); v) Reproductive, Maternal, Neonatal and Child Health (RMNCH) and vi) Others. Key findings from both detailed as

[16]OECD, Eurostat, WHO (2011), A System of Health Accounts, OECD Publishing, pp. 243
[17]OECD (2013), Extension of work on expenditure by disease, age and gender, OECD Health Division, Directorate for Employment, Labour and Social Affairs, EU Contribution Agreement 2011 53 01, December, pp.20-21.

well as broad category disease conditions are presented in this section. When disease classifications were examined in conjunction with age and gender, several outliers and incongruous results were observed. Therefore, the results must be taken with a note of caution. Two plausible reasons are: i) the data underlying claims were misclassified; and/or ii) bunching of codes and classifications in broad categories can sometimes mislead the evidence. For instance, it was noted that per capita values involving RMNCH for male and/or age group 50-59 & above is observed. This was observed due to the fact that congenital malformations and chromosomal abnormalities especially among men in that age group is classified under the RMNCH category. Similarly, for NCD conditions, several outliers were observed including: a) diseases of the digestive system; b) diseases of the nervous system; and c) neoplasms were noted in the child age group. Although it is not abnormal to expect child population to undergo some of the unusual set of health conditions involving neoplasms/nervous system/digestive system, a relatively high number of frequencies involving such conditions may be medically unreliable which could have arisen due to coding errors.

Chart 8



Further, it may be observed that government spending, both through MoH and *Aasandha,* together contributed to 83% (table 9) of all curative care including inpatient and outpatients. It is interesting to note the *Husnuvaa Aasandha* insurance program purchases health care from both government and private health care providers. When patients access curative care from public hospitals (all levels of care), claims data are generated without distinguishing whether the funds relate to MoH or *Aasandha,* but all transactions are recorded through claims. Such transactions are only notional where funds are typically not transferred from MoH to *Aasandha* for claims made by the latter for patients utilizing public facilities. However, in respect to private health providers, the transactions as well as corresponding funds that flow to them are captured. In terms of data availability, the *Aasandha* claims data underlying private providers, is made available for this analysis,

which account for complete set of claims for the year 2017. This included all inpatient and outpatient transactions cross classified by age, gender and disease (ICD-10). Further, the private provider transaction data also captured medicines' claims involving inpatient and outpatient transactions cross classified by age, gender and disease (ICD-10). The total number and value of transactions/claims underlying private (Aasandha), public (Aasandha) and public (IGMH) providers for the year 2017 are as described in Table 8. It may be observed that an episode of inpatient or outpatient visits may involve 3 or more transactions. For instance, each OP visits are likely to encompass one round of consultation, one set of prescription and one set of dispensing of medicine. Each of these transactions are captured by age, gender and disease conditions. The estimates of age, gender and disease-wise distribution of expenditure pertaining to private providers are based on entire universe and therefore no sample was used.

In respect to public providers, although each OP visits and IP admissions are captured by Aasandha, given that the public providers are not mandated to submit claims for reimbursement, the response for claims process has been lackluster over the years. As per NSPA, claims are not invoiced by government providers as they are not mandated, however transactions are lodged for the services provided by *Aasandha* system. In view of this trend, we relied on two sets of data to build on estimates around public spending by beneficiary characteristics. Fortunately, the Indira Gandhi Memorial Hospital (IGMH), the government owned tertiary care provider, has been collecting data on inpatient details including age, gender, disease (ICD-10), number of claims, expenditure, etc. This report utilizes the IGMH claims data for the year 2017. The transactions for IGMH denoted blocked amounts from Aasandha Systems and these are not exact claim amounts. It may include rejects and repeated amounts. As per MoH figures made available for this report, during 2017, IGMH alone treated about 13,978 inpatients, most of which are captured here and therefore we considered the entire universe[18]. One of the major lacunae, however, is to do with complete absence of data involving outpatient visits and its details under IGMH. But it must be outlined here that even though data for OP is available involving IGMH, it is yet to be coded and therefore not made available to this analysis. Other than IGMH, the Atolls and other health centres in government also treat inpatients besides outpatients. Given the challenges outlined above in respect to public providers (as data is collected but not coded, underlying outpatient visits), a sample of transactions carried out during 2015 in public health facilities underlying outpatient visits are utilized for inpatient and outpatient expenditure by beneficiary characteristics. It is assumed that the pattern of disease distribution by age and gender in the year 2015 is likely to be similar in the year 2017 and for the entire universe in government setting.

[18]Universe here indicate all hospitalization visits that occurred in IGMH during 2017.

Table 8 - Claims Data Underlying Curative Care Expenditure

Claims Data Description	Inpatient	Outpatient	Medicines - Inpatient	Medicines - Outpatient
Private (*Aasandha*), 2017	MVR 167.06 Million (20,851)	MVR 91.67 million (705,282)	MVR 43.37 million (150,286)	MVR 528.80 million (2,204,365)
Public (*Aasandha*), 2015	MVR 37.89 million (43,780)	MVR 4.27 million (23,885)	NA	NA
Public (IGMH), 2017	MVR 108.24 million (13,643)	NA	NA	NA

Note: 1. Private (Aasandha) claims data captures complete set of transactions underlying Aasandha for the year 2017. Figures in parentheses denote number of transactions and not total number of claims.
2. Public (Aasandha) claims data relates to the year 2015. The claims data are samples made available and not the entire claims data. Figures in parentheses denote number of transactions and not total number of claims.
3. Public (IGMH) claims data relates to the year 2017 and captures complete set of transactions. Claims denote to number of actual claims.
4. NA – not available. Expenditure on medicines (IP and OP) and its claims are not coded under public as well as in the IGMH setting. In respect to IGMH, eventhough outpatient data claims are available, but it is not coded and therefore not made available for this analysis.

Table 9 provide further information about sources of expenditure (Health Financing Scheme) and its links to functional classification. During 2017, Maldives spent an estimated MVR 6,760 million.

Table 9 - Distribution of Health Spending from Sources to Health Care Functions, Maldives, 2017

(MVR Millions)

Description	MoH	NSPA	VHC*	Households	RoW	Total
Inpatient Care	591	432**	146	50	8	1,227
Outpatient Care	1,773	1,309	240	684	4	4,010
Ancillary Services	24	31	3	0	0	58
Drugs & Appliances	0	26	14	661	0	701
Preventive Care	28	0	71	0	13	112
Governance	524	55	48	0	23	652
All Above	2,940	1,853	524	1,395	48	6,760

Note: As per the SHA framework, medicines, appliances, etc. are captured under IP or OP care expenditure, since they are bundled together in the government health care setting. Medicines and supplies are reported here relates to only household and other entities, other than the government.

*VHC – Voluntary Health Care Payment Schemes including voluntary health insurance scheme and NPISH scheme
** includes Day Care expenses of 2.78 million

The table above brings out the link between health care spending by functional specifications and sources of funding for the year 2017. The flow of funds from various sources to functional categories suggest that MoH and NSPA (through Aasandha scheme) are the major sources of funds followed by households. Much of these funding flows goes to suggest outpatient care expenditure accounted for the single most category of expenses followed by hospitalization expenses and finally the administrative and governance functions. In respect to households, besides outpatient spending, medical goods, supplies and medical appliances appear to be the largest segment of expenses.

In terms of distribution of these spending by age, gender and disease conditions, the allocation keys applied to carry out such an exercise is outlined in Table 10. The approach to allocation keys underlying health care functions are highlighted by: directly allocable funds, earmarked funds and unallocated funds. Preventive services and the associated expenditure are considered as earmarked funds, since these expenditures are clearly demarcated to specific services related to preventive categories including immunization, IEC, etc. for infectious and non-communicable conditions. This accounted for 0.44% of overall spending during 2017. The major funds that are unallocated relates to households, VHI, etc. As explained earlier, since households' data captures only age and gender, but leaves out disease conditions, we did not allocate these expenditure involving households OOP, VHI, etc. to any specific age or disease categories. This accounted for roughly 33% of overall funds. Although Governance and Health Administration expenses could have been allocated pro-rata to all disease conditions and by gender and age, we did not allocate it to any specific conditions. Therefore, the rest 67 percent was allocated directly to age, gender and disease conditions. This was achieved by means of available information/data that are either universe and/or sample estimates, depending upon the availability of claims data, as outlined in Table 8. The results from this exercise are highlighted in the next section.

Table 10 - Allocation Keys Underlying Age, Gender and Disease Conditions, Maldives, 2017

Allocation Keys	Directly Allocable	Unallocated Funds	Earmarked Funding
Inpatient Care	Public Funds	Household Funds	
Outpatient Care	Public Funds	Household Funds	
Ancillary Services	Public Funds	Household Funds	
Medical Goods		Households Funds	
Preventive Care			Public Funds
Governance		Public Funds	
All Above	66.55%	33%	0.44%

4.2. Key Results: Expenditure by Beneficiaries

Expenditure by beneficiary characteristics namely age and gender are highlighted here in this section, in per capita expenditure terms while absolute estimates are presented in the annexure. The per capita expenditure is adjusted for age-wise respective population. Clearly, an unmistakable trend that emerges from age-gender distribution of expenditure is that nearly three-fourth (73%) of all spending is devoted to elderly population, while expenditure on children appear minimal with 3% of the overall spending. Such a trend is more acute among male population where elderly males accounted for 77% of overall health spending among them as against 70% among women. The trend of significant spending of nearly 10% is reported to begin from the age group of 50-59. The average per capita spending on male children was about MVR 5,051 as against female child with a per capita spending of MVR 4,442. Whereas, expenditure on an elderly female is higher at MVR 57,053 while that of elderly male at MVR 59,209. The combined (male and female) per capita spending increases with age, from about MVR 4,746 among children, to nearly double that amount at MVR 8,526 among the middle age group (age 40-49) and to roughly MVR 58,131 among elderly population (80 and above age).

Table 11 - Age Standardized Gender-wise Per Capita Expenditure

Age Group	Female		Male		All	
	Per Capita	Percentage	Per Capita	Percentage	Per Capita	Percentage
0-5	4,442	2	5,051	3	4,746	3
06-19	3,679	2	3,920	2	3,800	2
20-29	8,573	5	3,271	2	5,922	3
30-39	9,944	5	4,635	3	7,289	4
40-49	10,535	6	6,517	4	8,526	5
50-59	19,132	10	13,021	8	16,077	9
60-69	33,676	18	28,331	17	31,003	18
70-79	39,612	21	38,627	24	39,119	22
80 & above	57,053	31	59,209	36	58,131	33

Expenditure by disease conditions bring out even more starker variation. Striking variation between age groups among similar disease conditions is not only observed but between different disease conditions. The resource intensive nature of disease conditions is revealed by this pattern. In order to treat a particular communicable disease conditions, on an average, a child requires MVR 3,595, while those in the age group of 70-79 would need a per capita spending of roughly four times that of the child. For chronic conditions, the resource requirement was much larger between the younger and older age groups. For instance, to treat a non-communicable condition, a child may require, on an average, of about MVR 3,471 whereas for an elderly in the age group of 70-79, the same would cost MVR 55,907. The progressive nature of spending among age group, especially among elderly population is further revealed, more specifically in non-communicable disease conditions. This trend is further confirmed in Chart 9. It shows a secular rise in per capita spending as age rises. While children and elderly population above age-group 70-79 reveals similar expenditure pattern among gender, but resource use beginning from reproductive age and until the age 60-69, female population appear to absorb a slightly higher level of spending than the male counterparts. To some extent, a higher expenditure pattern among women is associated with reproductive and maternal conditions of the mother during this stage of their age. Chart 10 demonstrates pronounced difference between male and female across five broad categories of disease conditions.

Table 12 - Age Standardized Per Capita Expenditure by Disease Conditions

Age Group	Communicable disease	Eye and ENT	Injury	Non -communicable disease	Others	RMNCH	Grand Total
0-5	3,595	252	142	3,471	1,311	721	9,493
06-19	3,241	456	272	2,368	1,168	95	7,599
20-29	3,020	449	471	5,490	2,040	373	1,1844
30-39	3,719	513	542	6,756	2,630	418	1,4579
40-49	3,908	624	534	9,688	2,103	196	17,052
50-59	5,336	933	701	22,059	2,909	214	32,153
60-69	10,135	2,023	981	43,678	4,834	356	62,007
70-79	13,412	2,449	1,193	55,907	5,036	241	78,239
80 & above	20,201	2,335	2,118	84,474	6,963	171	116,262

Chart 9 - Gender-wise per capita expenditure by Age-Group

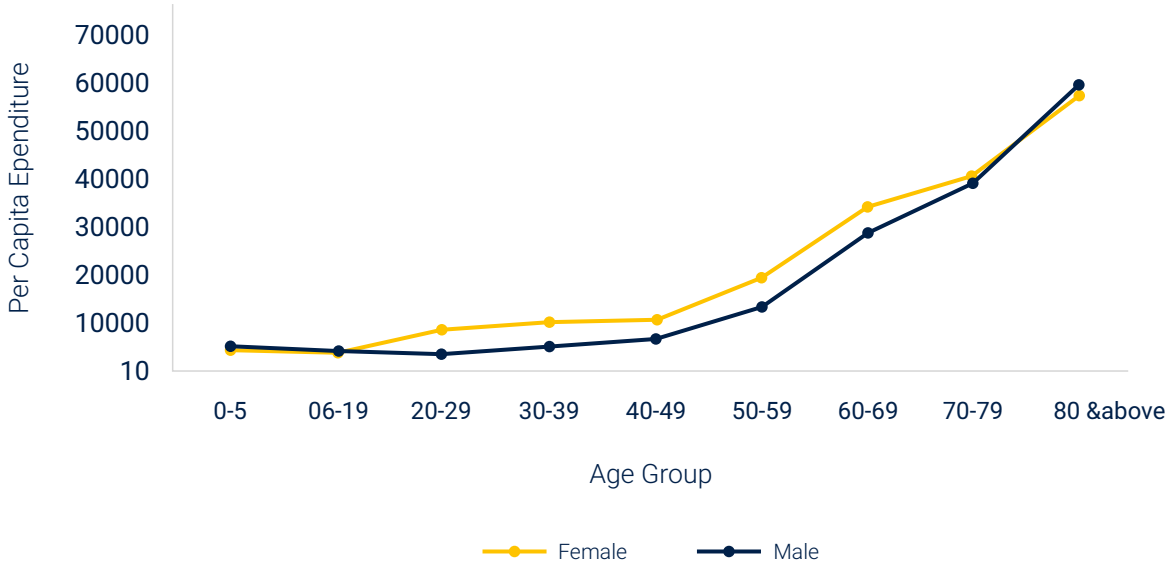


Chart 10A - Expenditure by Disease conditions distributed by Gender Groups

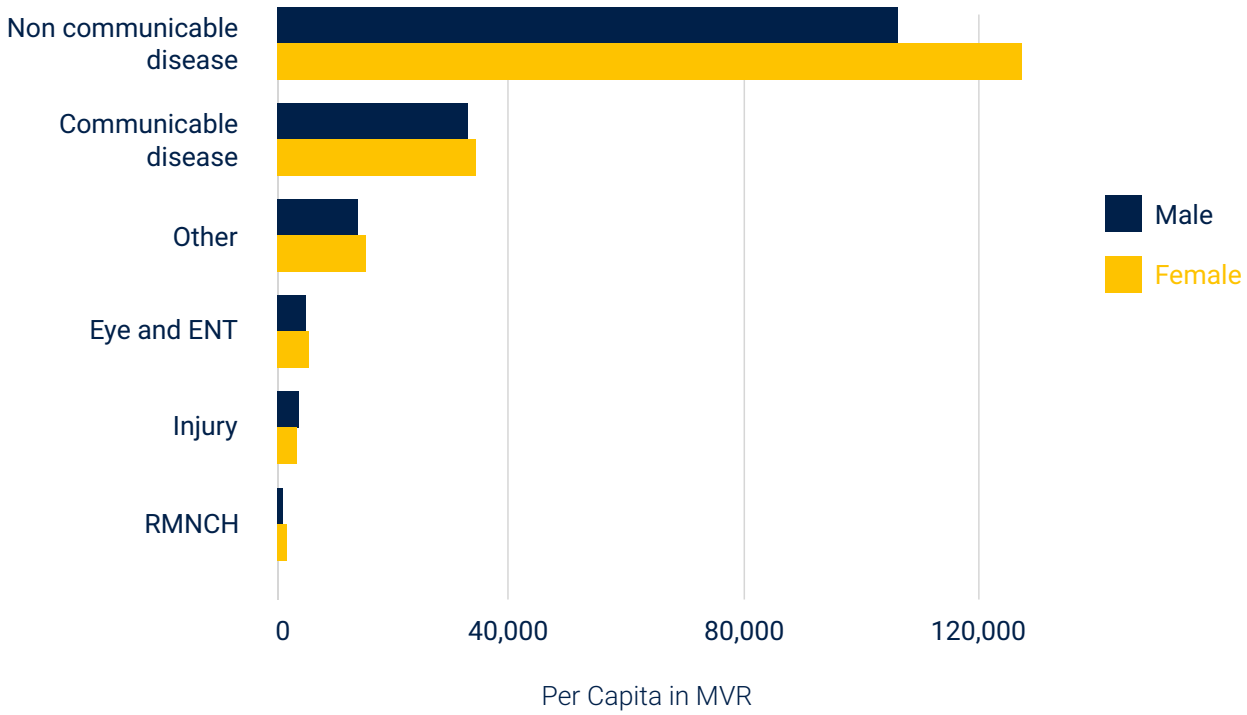


Chart 10B - Expenditure by Reproductive and Child Health Conditions distributed by Gender Groups (Female)

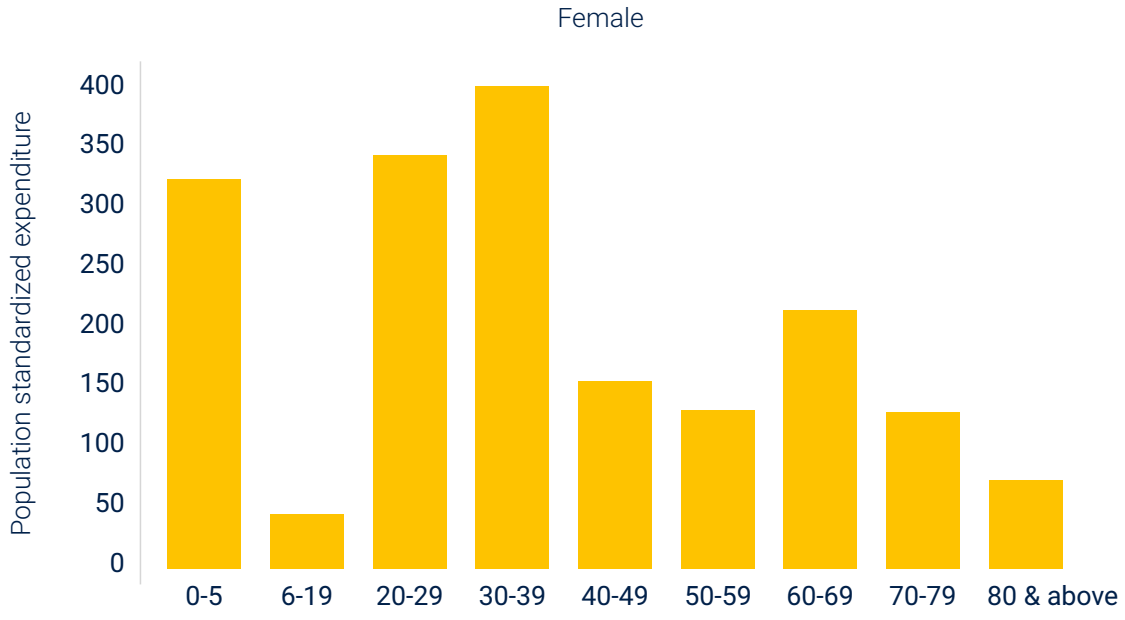


Chart 10C - Expenditure by Reproductive and Child Health Conditions distributed by Gender Groups (Male)

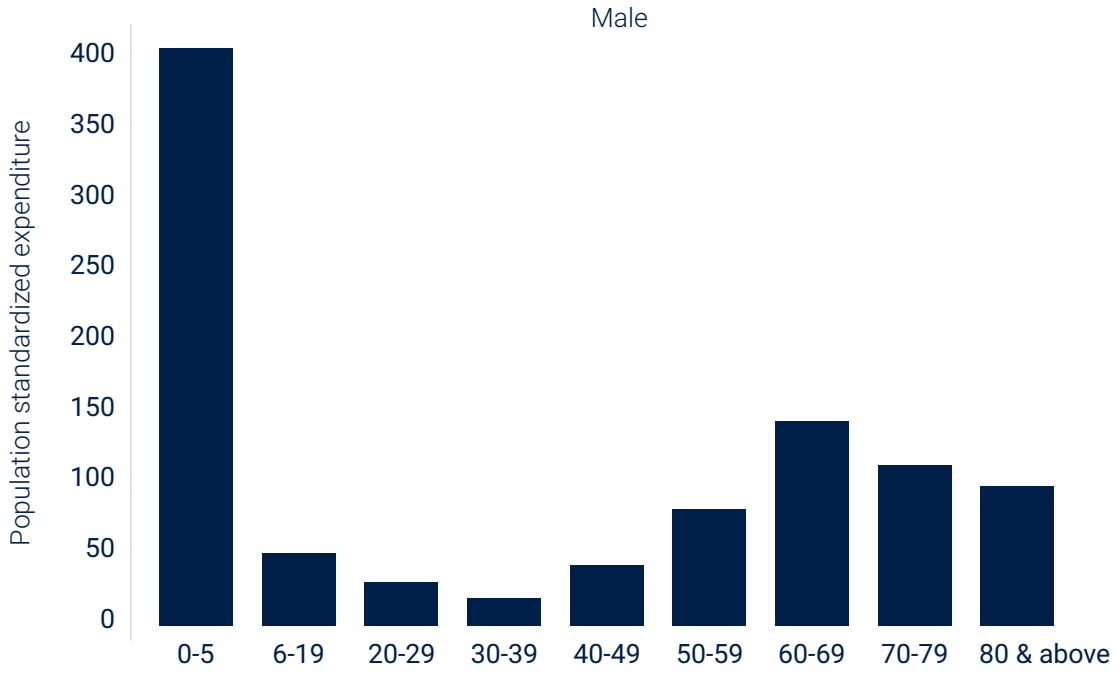
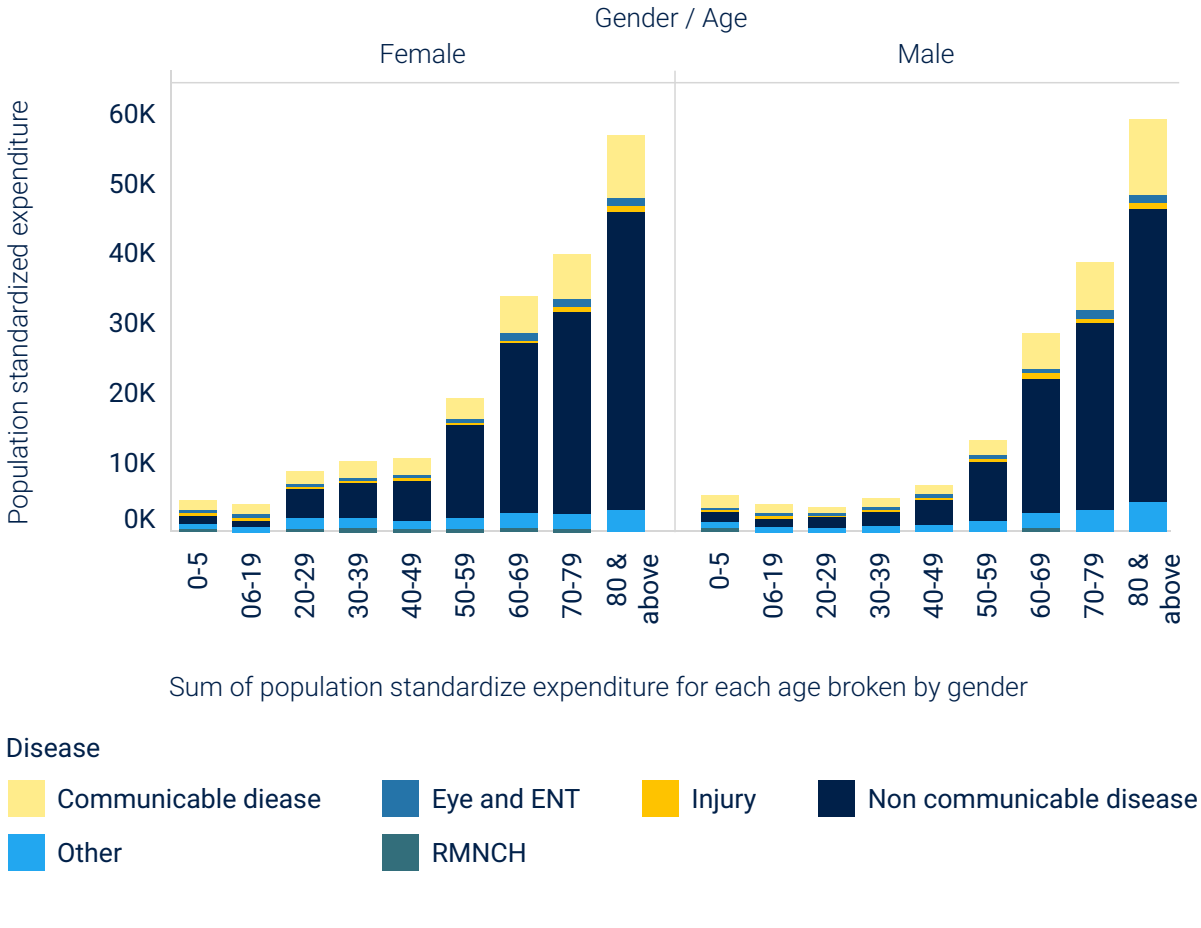


Chart 11 - Expenditure by Broad Disease Conditions Distributed by Gender Groups



Applying age-wise expenditure pattern to gender groups distributed by broad disease conditions reveal that the pronounced difference between gender groups is further amplified, as in Chart 11 and Chart 13. A deep dive into the claims data involving ICD-10 conditions classified by age-groups into 22 disease/health conditions show hypertension to be the largest recipient of per capita expenditure involving elderly population (Chart 12 and Chart 13). Combined with the fourth largest spending on Cardio Vascular Diseases (CVD), the circulatory system appears to corner the largest share as well as in absolute terms. Based on biomarker indicator as reported by the DHS 2016 -17, the Body Mass Index (BMI), 30% and 19% of all women reported to be overweight and obese whereas in men, the respective percentage share was 27% and 8%.A substantially larger share of resources are spent on treating hypertension given its high resource intensity since each patient is expected to consume medications on a routine basis throughout the year. If we were to consider tobacco consumption as a risk factor, with high rate of tobacco consumption in Maldives, it is highly likely that hypertension cases are reported in significant numbers and therefore treatment sought and provided.

Chart 12 - Per Capita Expenditure by Detailed Disease Conditions Distributed by Age Groups

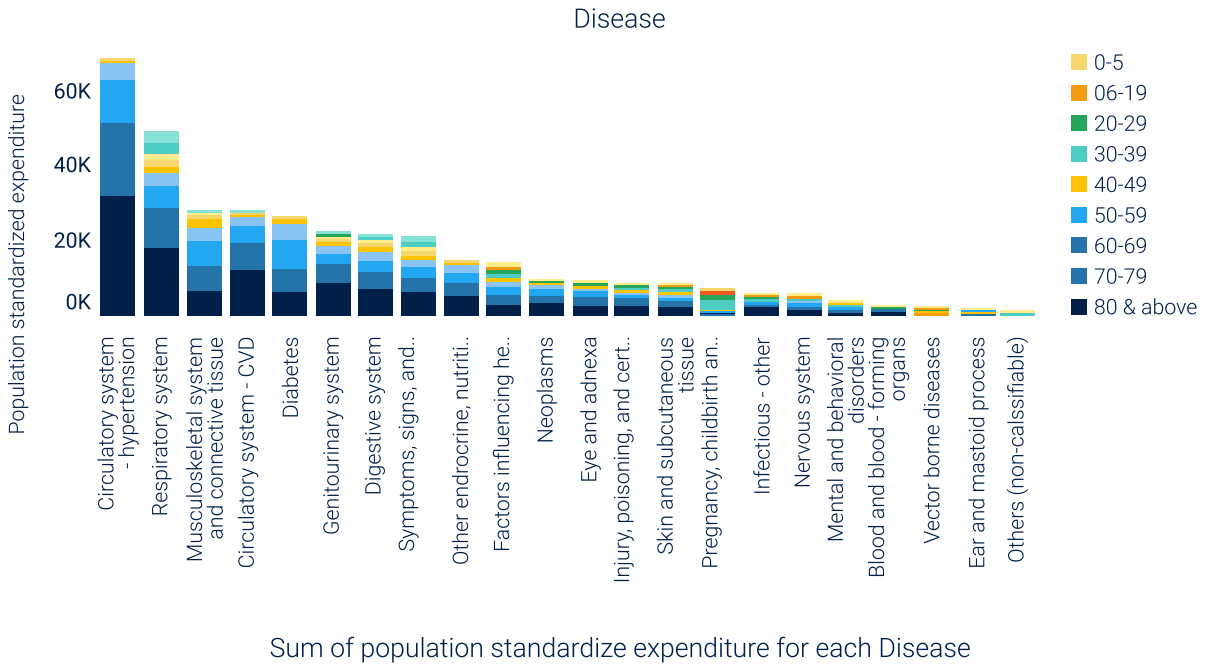


Chart 13 A - Per Capita Expenditure by Detailed Disease Conditions Distributed by Gender and Age Groups (Male)

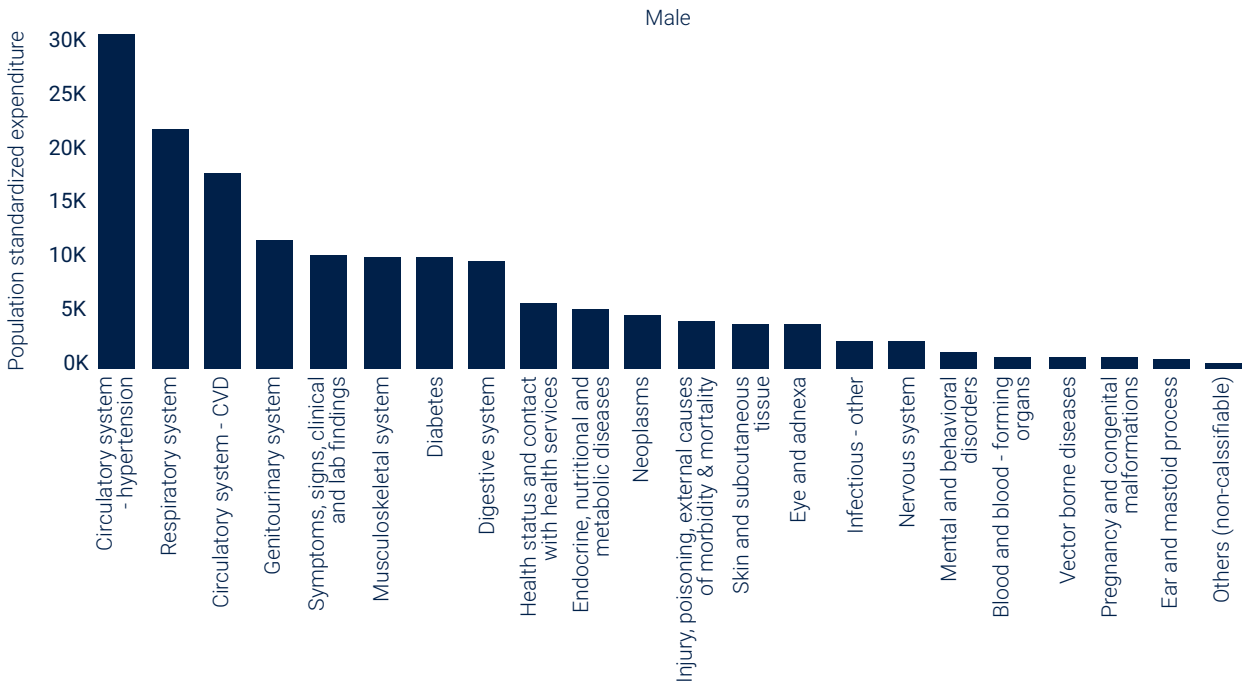
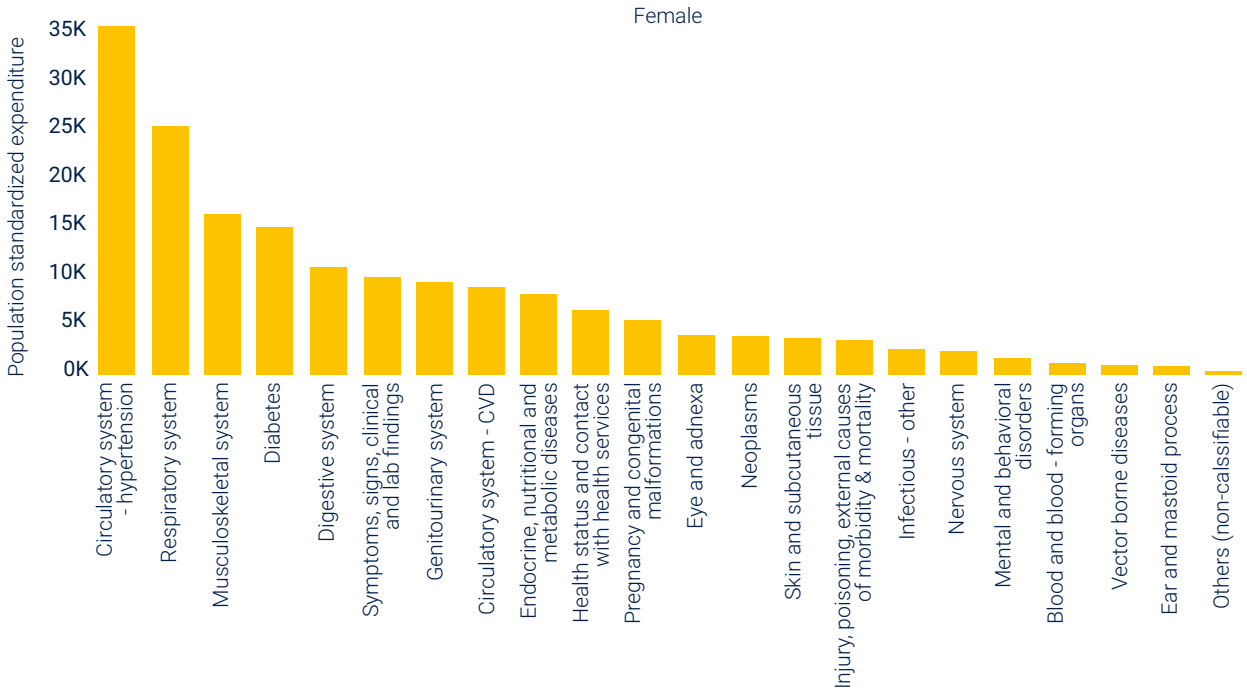


Chart 13 B - Per Capita Expenditure by Detailed Disease Conditions Distributed by Gender and Age Groups (Female)



Even though true of other conditions, respiratory disorders involving age-groups also display a pattern that where elderly population appear to receive significant funds but the levels of funds spent by early age population is no less significant. The third major set of health condition that tend to receive larger allocation is relating to musculoskeletal disorders. The disorder is manifest often in low back pain considered the leading cause of disability globally and is set to increase with the higher prevalence of risk factors for non-communicable diseases. Although persistent across the life-course, substantial funds are devoted beginning the age-group of 40-49 but rapidly rising as population catches up with age. The fifth leading expenditure by per capita terms is on diabetes, whose spending rises with increase in age. The per capita expenditure on diabetes included in this report shows high expenditure on diabetes.

The analysis further suggests that like any other health system, coding and classification of diseases and health conditions need to be strengthened with practical difficulty of capturing the right conditions. This is often the case when most outpatient care visits go undiagnosed where patients receive treatments largely manifesting in symptoms and signs. General fever, pain, cold, cough, etc. are indicators of bacterial, viral infections or other forms of short and long term conditions. Such conditions are more often found to subside in few days of its onset. The per capita spending on symptoms and signs per se accounted for the eighth largest expenditure in Maldives. Pregnancy and childbirth associated expenditure is found to be not substantial but suggest that it is largely spent during the reproductive years of 20-29 and 30-39. It may be further noted that spending on cancer appear to account for a larger share, due mainly to resource intensive nature of treatment required.

Chart 14 A - Expenditure Distribution by Disease-Conditions Among Children (Age 0-5)

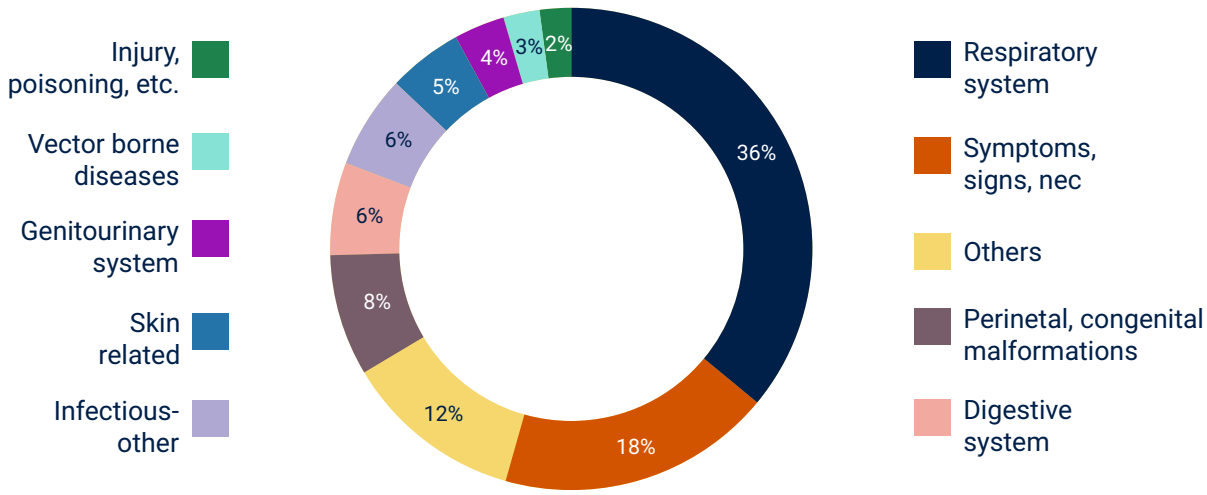


Chart 14 B - Expenditure Distribution Among Children with Respiratory Ailments (Female, Age 0-5)

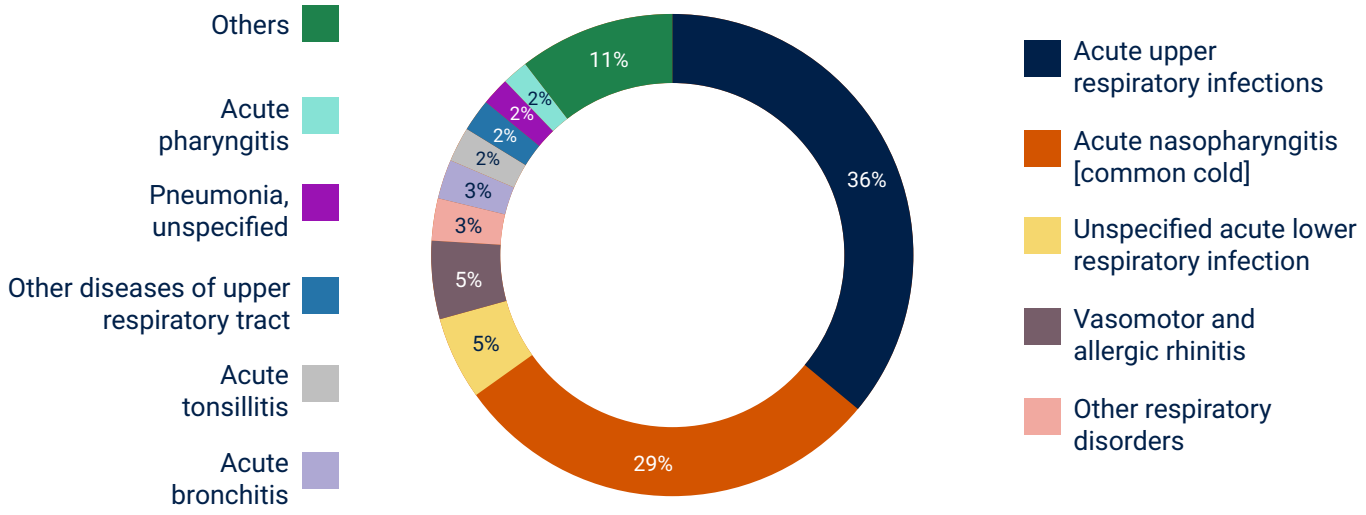
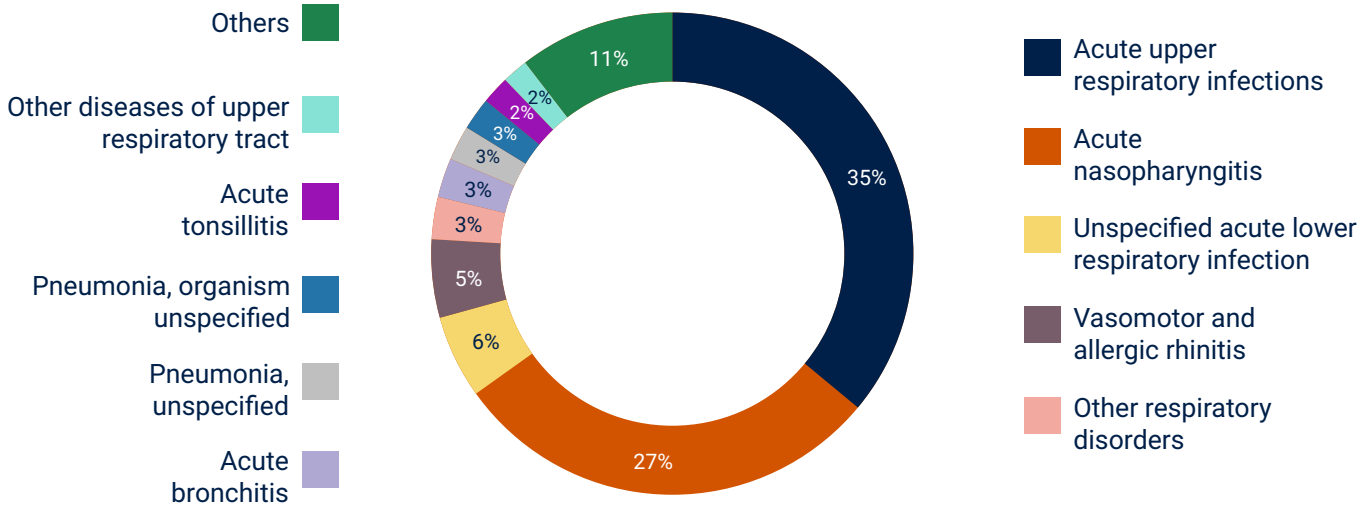
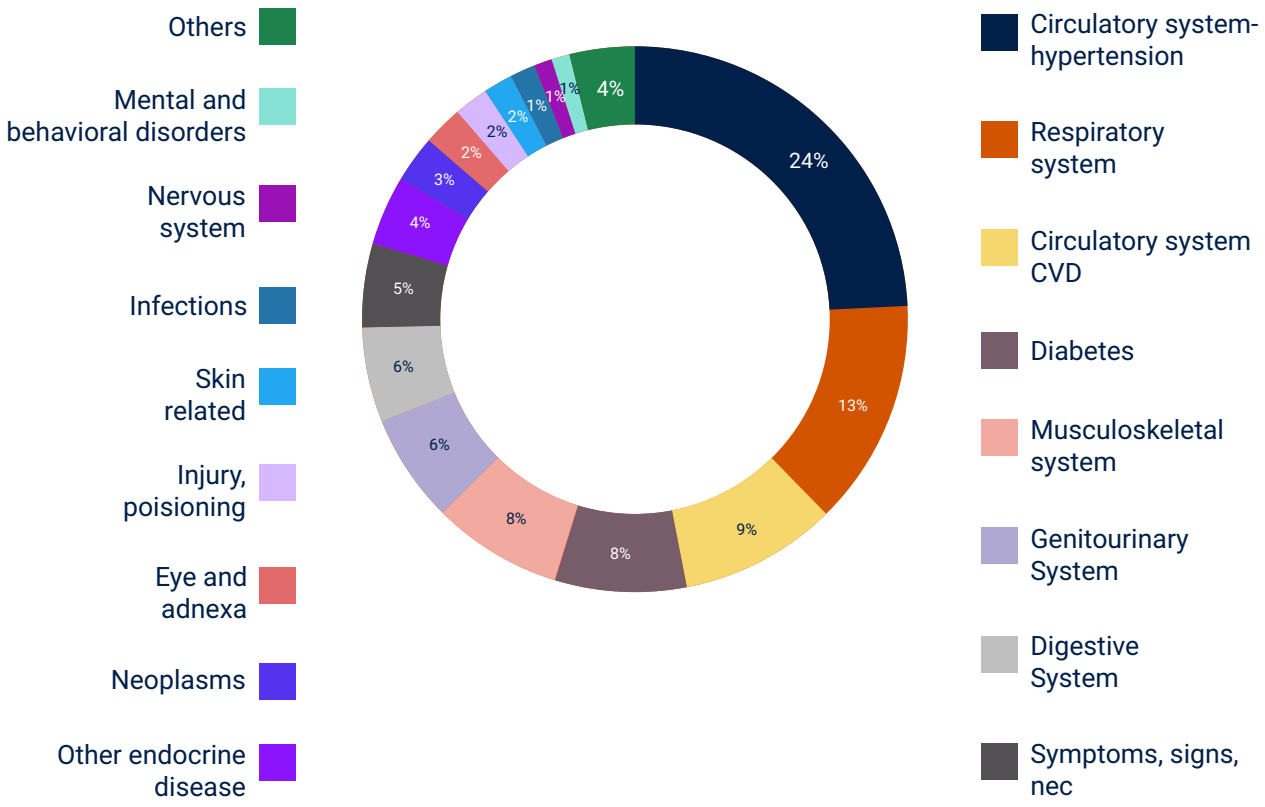


Chart 14 C - Expenditure Distribution Among Children with Respiratory Ailments (Male, Age 0-5)



As far as expenditure involving children are concerned, per capita spending distribution by shares of different diseases reveal that over one-third of all spending is due to respiratory system, a commonly observed phenomenon among children, who are vulnerable to communicable disease conditions, often resulting in respiratory illness (Chart 14). Vector-borne diseases such as dengue, etc. appear to account only for about four percent of all expenditure among children, while other communicable disease conditions accounted for six percent. A large chunk of spending, which is often reflected in children population as mere symptoms and signs, not elsewhere classified, accounted for nearly one-fifth of all expenditure. Perinatal and congenital malformations appear to be another major condition that required significant resources, to the extent of 8 percent. Conditions that often manifest as digestive disorders among children took a share of 6 percent. Fortunately, injury and poisoning did not appear to be a major factor among children, whose spending accounted for 2 percent. As respiratory conditions accounted for over one-third of spending among children, we further dissected respiratory conditions into several components among boys and girls (Chart 14 b and 14 c). It may be noted that acute respiratory ailments accounted for over one-third of all respiratory ailments among boys and girls followed by common cold. Acute lower respiratory ailments and allergic rhinitis are the other major respiratory conditions among children that accounted for substantial sums of payments.

Chart 15 - Expenditure Distribution by Disease-Conditions Among Elderly (Age 60 & Above)



It was earlier noted that the largest share of spending among elderly population was on account of chronic diseases. Over one third of per capita spending by elderly population is channeled towards circulatory system involving hypertension and cardio vascular diseases, with the former alone accounting for 24 percent. One of the larger malaise underscoring significant spending on hypertension is its association with tobacco consumption. Adult Maldivians' tobacco consumption pattern suggests that 42% of men and 2.7% of women consume tobacco (MDHS 2016-17). Spending on diabetes was observed to be around 8 percent along with another 4 percent accounted by other endocrine disorders. The current expenditure pattern appears reasonable. Neoplasms largely involving cancer conditions, took a share of 3 percent of spending. Expenditure underlying respiratory systems was another major contributor to spending by elderly population (13%). Musculoskeletal system and its contribution to elderly population's health expenditure was about 8 percent. On the other hand, six percent each of spending was contributed towards digestive and genitourinary system. Symptoms, signs and other conditions associated with expenses among elderly population accounted for roughly 5 percent. Interestingly, it may be observed that expenditure towards mental and behavioral disorders accounted for about one percent. While a lower share of spending may reflect current treatment access, further investigation is required to unravel whether the underlying reason could be due to underreporting of such conditions as a consequence of social stigma and/or clinical underestimation.

Reflecting the disease profile and disease-wise expenditure reported earlier, it is worth noting the distribution of spending on NCDs by age profile (Chart 16). Clearly, as NCD conditions are expected to rise with age, the associated expenditure also mirrors similar pattern. Beginning from 40s, the per capita expenditure on NCDs demonstrated phenomenal rise in the 50+ age group, while the largest share of spending is witnessed in the 80 and above age group. Whereas in respect to communicable diseases, three distinct spending pattern emerges (Chart 17). Expenditure among children is reportedly higher, given the significant burden of infectious diseases including respiratory conditions. The per capita expenditure begins to fall and remains at the lowest level in the age groups above 6 years and below 59 years. The elderly population accounted for the largest spending both in absolute and its share, reflecting the vulnerability of older population in contracting infectious diseases.

Chart 16 - Age-Wise Expenditure Distribution by Non-Communicable Disease Conditions

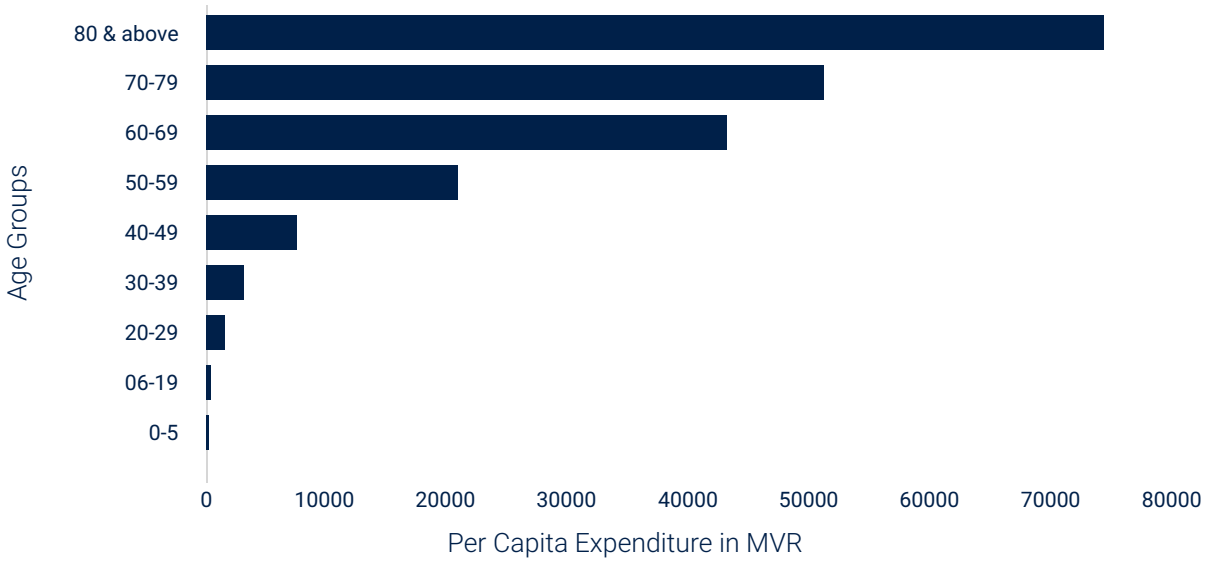
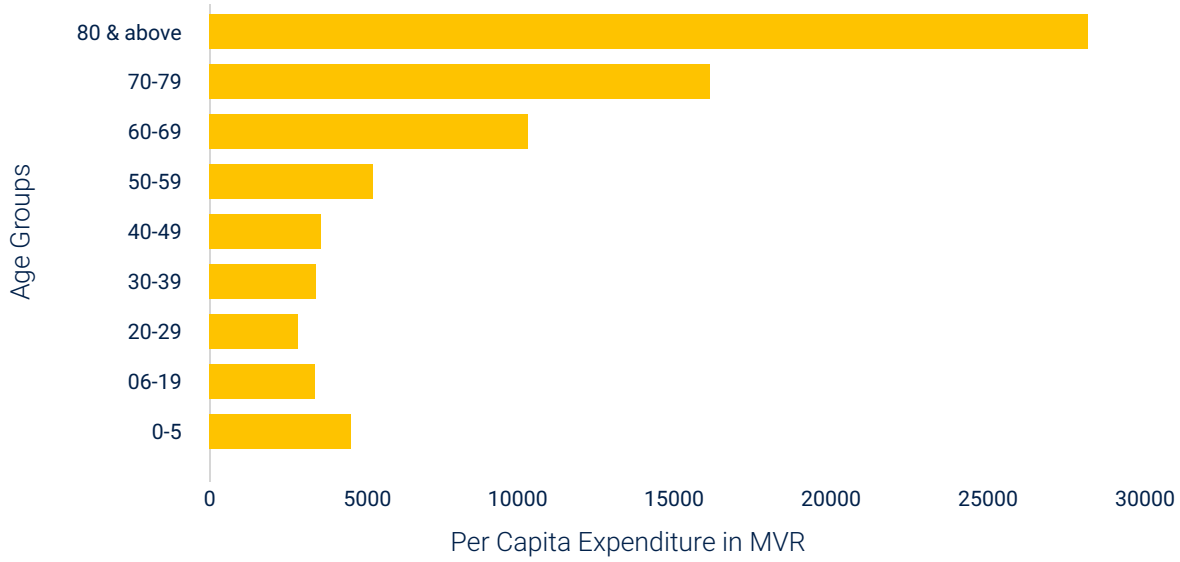


Chart 17 - Age-wise Expenditure Distribution by Communicable Disease Conditions



5.Methods and Data Sources

The primary sources for which estimates are derived in this report, along with methods adopted to arrive at estimates are outlined below. The data sources and methods used are linked to each SHA 2011 classifications. The relevant classifications and its sources of data are bunched together to link the later to the former. The NHA matrices in this report relates to the years 2015-17, while some of the estimates and the associated tables/charts in the first section relates to the years 2000-2017, which was carried out as part of the Global Health Expenditure Database (GHED) exercise.

NHA Classifications/ Codes	Data Description/ Sources	Methods
FS.1 Transfers from Govt. Domestic Revenue FS.2 Transfers Distributed from Foreign Origin HF.1.1. Government Scheme HF.1.2 Government Health Insurance Scheme FA 1.1 Central Government	This report utilizes several sources of data that were obtained for the period 2015-17. The data descriptions underlying the data sources are also outlined here: i) Budget in Statistics, Ministry of Finance and Treasury, Maldives, 2013-2018; ii) Annual Report, Maldives Monetary Authority (MMA) and iii) National Social Protection Agency (NSPA); iv) Survey of 3 Health Insurance Agencies for collecting data from voluntary private health insurance agencies on premium contributions to health insurance of its employees, For transfers distributed from foreign origin by government, respective years of Creditor Reporting System, Organisation for Economic Cooperation and Development (OECD, CRS) database were used.	The methods used for estimating NHA matrices are outlined here. In order to obtain estimates for government scheme, funds allocated to MoH and Indira Gandhi Memorial Hospital (IGMH) by Ministry of Finance are added together; ii) The MoF Contributions to National Social Protection Agency (only Aasandha contributions and Emergency Medical Welfare were added) is considered as Mandatory Social Health Insurance. However, it may be noted that NSPA expenditure on health insurance is entirely tax-funded by the government and no contributions from employers and employees. iii) MoF contributions of premium to government employees, MPs, are added together. This estimate were derived from a survey of private health insurance companies. Above 3 sources were added to obtain transfers from govt. domestic revenue (FS.1). In order to obtain estimates for Government Schemes (HF1.1), two sets of estimates from revenues of financing schemes such as, (FS.1) and (FS.2) were added together.
FS.5 Voluntary Payment HF. 2.1 Voluntary Health Insurance FA 2.1 Insurance Corporations	Based on data obtained from survey of three insurance companies for premium contribution by private companies.	Added premium contributions from employers, individuals and government, obtained from survey of three insurance agencies.
FS.6.1 Households Revenues HF. 3 Households OOP FA. 5 Households	The major source of data for estimating households' OOP is based on Household Income and Expenditure Survey 2016, National Bureau of Statistics, Ministry of Finance and Treasury. During the years 2015 and 2017, private final consumption expenditure of households on health from NAS. For households' contribution towards premium of health insurance, Survey of Insurance Companies.	This report highlights OOP estimates from the years 2011 to 2017. The estimate for 2011 and 2014 are from NHA estimates for the respective years. These are simple reproduction of OOP estimates from respective NHA estimates. For the year 2016, households OOP expenditure was directly estimated from Household Income and Expenditure Survey (HIES), 2016. For the years 2015 and 2017, growth rates obtained from Private Final Consumption Expenditure (PFCE) of National Accounts Statistics (NAS) were applied to 2016 estimates.
FS 6.2 Corporate Revenues	Based on data obtained from survey of three insurance companies for premium contribution by private companies to its employees	Added premium contributions from employers, individuals and government, which are obtained from survey of three private insurance companies
FS. 7 Direct Foreign Transfers	For direct foreign transfers to NPISHs, database of respective years of OECD, CRS is used. Also called Rest of World (RoW) financing.	Direct foreign transfers to Not-For-Profit Institutions Serving Households (NPISHs) are obtained from CRS, OECD database
HF.2.2 NPISH Scheme	For direct foreign transfers to NPISHs, database of respective years of OECD, CRS is used.	No funds reported from civil society organisations as their own revenue. This is one of the reason why NPISH scheme funds appear to have shown sharp decline. This is largely owing to no response from NGOs during the survey. As far as funds are routed through NPISH from foreign donors, but treated under Direct Foreign Transfers
HK. Capital Spending	Budget in Statistics, Ministry of Finance and Treasury	Funds allocated by MoF for Public Sector Investment Program (PSIP) for health considered here

Health Care Providers and Functions		
HC/HP. Health Care Functions/Providers	**Data Description/ Sources**	**Methods**
HC.1. Curative Care (HC.1.1. Inpatient care; HC.1.2 Day Care and HC.1.3 Ambulatory Care) HP.1.1. Hospital Providers; HP.1.2. Day Care Providers; HP.3. Ambulatory Providers	1. Functional and provider level data involving IP and OP expenditure incurred by Aasandha program are obtained from NSPA for the years 2015, 2016 and 2017 – the nodal agency for running Aasandha program. 2. Program-wise and provider level information is obtained from budget data, including expenditure by directorates, health centers, regional hospitals, Atoll hospitals, IGMH hospital, etc. for the years 2015, 2016 and 2017. 3. For IGMH Hospital and Hulumale' Hospitals, separate budget sheet was obtained for the year 2017, as these are being now given financial autonomy. 3. Curative care expenditure involving functional and provider level information for households are from Household Income and Expenditure Survey (HIES) 2016 4. Curative care expenditure by IP and OP data involving voluntary private health insurance is obtained from a survey of three Health Insurance Companies, namely, Allied Health Insurance, Amana Thakaful and Solleris. 5. Ambulatory care expenditure involves those spending that includes outpatient care and associated expenditure; 6. Day care expenditure includes those spending that are incurred in a hospital setting where patients are admitted to be discharged on the same day without overnight stay. These include largely expenses associated with dialysis, chemotherapy, etc.	1.Claims data of Aasandha spending obtained for respective years by functional and provider classifications. By functional classifications, the claims data provides detailed information involving expenditure on inpatient, outpatient, inpatient pharmacy, outpatient pharmacy, dental treatment spending, expenditure on therapeutic goods, expenditure on treatment obtained from foreign hospitals. 2. All expenses falling under the budget codes 210-281 are treated as recurrent expenses, while budget codes 291, 421 and 423 are taken to represent capital expenditure. 3. The MoH Expenditure in the budget documents are considered as expenses incurred towards health administration. 4. All expenditure items underlying Health Protection Agency is treated as preventive care expenditure. 5. The Ministry of Health's curative care expenditure is distributed in the ratio of 25:75 for IP:OP for the year 2017. This ratio was obtained from available claims data underlying Aasandha for public providers for the year 2016. The same ratio is applied across all 3 years: 2015, 2016 and 2017, assuming similar distribution in the absence of year-wise claims data. 6. For households' expenditure on OOP for IP and OP, the HIES survey estimates are utilized directly from the survey results. 6.The curative care expenditure for voluntary health insurance was obtained from the survey of health insurance companies but its distribution into IP and OP for the years 2015, 2016 and 2017 were derived from 2014 ratio.
HC.5. Medical Goods HP.5. Medical Goods Providers	1.Households' OOP for medicines extracted from HIES, 2016.	1.Medical goods spending by households is obtained from HIES, 2016 directly. For the years 2015 and 2017, similar share of medical goods reported in HIES 2016 are taken to be estimates for respective years.
HC.6. Preventive Care HP.6. Preventive Service Providers	The only source of data on preventive care and providers of preventive care are from MoH budget documents for respective years, 2015, 2016 and 2017.	This is data is largely obtained from the Government Budget Document, especially from Health Protection Agency (HPA), including immunization, expenses on disease surveillance, IEC, etc.
HC.7. Governance & Admn. HP.7. Health Admn. & Financing	Aasandha data on health insurance administration obtained from NSPA documents of 2015, 2016 and 2017. Budget data on health administration obtained from detailed budget documents for the years 2015, 2016 and 2017.	1.Expenditure incurred by the Office of Ministers and all National Directorates, such as, MFDA, HPSN, MBS, etc. are treated under Governance and administrative functions/providers. Administrative expenses underlying Aasandha, voluntary health insurance companies, etc. are treated under this category.

6.Roadmap for Institutionalisation of Health Accounts

6.1. Design and Support an Enabling Environment

The central task of health accounts institutionalisation in any country is the design and support of an eco-system. An enduring link must be established between various stakeholders and institutions. This can be achieved once producers and consumers of health accounts data are convinced about the criticality of such a data that is produced on an annual basis. The Health Economics Unit under the Policy Planning and International Health Division, Ministry of Health has been functioning as the nodal agency to steer the production and dissemination of health accounts in Maldives. Besides the task of regular production of health accounts, a routine assignment of the Health Economics Unit is to establish a network among ministries, departments and institutions that supply data. Primary among them being Finance Unit at the MoH, The National Bureau of Statistics and NSPA focal points. Universities and research institutions are not only expected to play the role of consumers of NHA data but can also facilitate production of NHA. Building capacity and regular interaction with these institutions can help build an enduring platform for regular supply of technical expertise. Similarly, the Finance Unit and the National Bureau of Statistics (NBS) can gain from routine production of NHA numbers. One of the challenge that the NBS faces currently is to do with regular production of numbers relating to households' final consumption expenditure that relate to National Accounts. The quality and consistency of this data is often a matter of challenge. The NBS also regularly expects technical inputs to streamline and improve its Household Income and Expenditure Survey. The Health Economics units' expertise and experience can be directed to facilitate the NBS task, as such an exercise is often a win-win situation for both the institutions.

6.2. Establish a Working Group on NHA

While the Health Economics Unit of the PIH will continue to work as the fulcrum of NHA exercise and can act as a technical support unit, a Working Group on NHA must be constituted that is expected to take up the task of institutionalizing NHA in Maldives. The NHA WG will be composed of members from different constituency, including but not limited to, PIH, Finance Unit of MoH, National Bureau of Statistics, NSPA, Aasandha, IGMH, Private Health Insurance Companies, State Trading Organisation, etc. The NHA WGs assignment will essentially involve:

1. NHA-WG will oversee production of NHA annually although actual production of NHA with the prerogative of Health Economics Unit;

2. Monitor and facilitate routine data collection process from different stakeholders;

3. Quarterly meeting of progress reports involving NHA will be assessed;

4. Organise a minimum of one technical workshops annually with participants from different stakeholders (Department of Pharmacy, SAMES, HMIS, MoH, Dept. of Statistics, MoF., WHO, GFATM, UNICEF, private insurance companies, etc.). The WHO country office will be requested to arrange technical personnel for such workshops while national experts will be drawn from available pool for the training;

5. Atleast one dissemination event would be organized to diffuse the health financing evidence emanating from NHA reports;

6. Any other health financing strategies and plans must be discussed and shared when advice sought from the group.

6.3. Generate adequate funds for NHA Activities

The NHA production is often carried out in several steps, from data collection, coding, classification, assembling matrices, analysis of data collected, report production, dissemination, etc. All these tasks require adequate resources that needs to be mobilised and sustained. The MoH is required to allocate dedicated funds – perhaps as part of line item budget – for conducting regular surveys, hosting technical workshops and dissemination events annually. Conducting national sample surveys require adequate funds, but it would be ideal to piggyback on regular routine surveys that NBS does, such as, NBS. Until such arrangements are made, the MoH can conduct national surveys involving enterprises, NGOs, private voluntary insurance, etc. These surveys require adequate funds which must be conducted biannually. Cost minimization can be further achieved if it were to involve research institutions and universities which are expected to facilitate a survey that is robust enough and without compromising the quality. Coordination between different agencies and conduct of technical studies (such as, costing exercise, epidemiological data) may also require funds.

6.4. Improve Data Quality

Sustaining NHA activities is centred on both quantity and quality of data collected. Ensuring that the data collected if of good quality is predicated on whether the data is relevant and consistent. Making survey methods consistent with national and international standards is equally vital for ensuring that the NHA estimates are indeed unbiased and robust. Robustness of data collected and estimation can be ensured by improving survey sample design, expanding samples to be nationally representative, and making estimates consistent so that two similar surveys produce similar set of estimates and do not vary

widely. The blow-up strategies underlying sample estimates for making it nationally representative is equally critical whose task is based on how well the universe is identified and defined. For instance, the total number of enterprises existing in the country must be known, which is often carried out as Economic Census in many countries.

Two sets of data, namely treasury budget for MoH and NSPA, assumes critical importance in the context of Maldives, since these two alone contribute now nearly four-fifth of all spending in the country. Therefore, ensuring its timely availability, completeness and reliability is extremely vital. It may be observed that the treasury route budgets often suffer from absence of information underlying program or epidemiological conditions. Any design level changes in budget reporting is an exercise that involve Ministry of Finance at the highest level and health institution level at the bottom. Similarly, the NSPA (National Social Protection Agency) is currently tasked with the functioning of Aasandha health insurance scheme, whose published data and claims data are equally important. This is more so in the context of NHA estimates that is required to report expenditure by beneficiaries, including age, gender and disease conditions. However, at present the claims data (transactions underlying treatment) that is made available for this report is incomplete. The incompleteness in claims data is predicated on the fact that although it captures the entire universe of claims data involving private providers, this is not the case among public providers. Until the mid-2017, public providers appear to have been participants by sharing claims data with Aasandha especially the ones when patients utilised government hospitals. Even those public health institutions that used to share data were doing so by sharing incomplete claims data. During mid-2017, such a practice ceased as public providers have stopped sharing claims data. Fortunately, the PIH unit has initiated an exercise from 2017 to undo this practice by ensuring that IGMH shared data on hospitalisation expenditure by age, gender and disease conditions. The IGMH is the leading tertiary care hospitals which treats over half of all hospitalisation and a sizeable number of OP episodes in Maldives. Moreover, the PIH is currently collecting data on IP and OP from all public and private hospitals/facilities, which are required to be ICD coded and made available in time for the NHA exercise and for routine budget analysis.

Although the magnitude and share of the external funds has been declining over the years in Maldives, data availability, its quality and quantity is of great concern. All data relating to donor funds to health sector are currently being collected by the international relation section while the data underlying other local donations are collected by Trust Funds under MoH. However, the MoH must make efforts to provide detailed information about the source of external funds – official and private philanthropy – the value and in-kind support, original commitments vs actual receipt, and by functional, provider and disease conditions of which funds were utilised must be collected.

7.Summing Up and Future Policy Direction

Sustaining the current momentum to realise universal health coverage goals in Maldives is critical. In a short span of less than a decade, Maldivians have been able to achieve a near universal health coverage. Nearly 95 percent of Maldivian population are covered by government sponsored health insurance - the Aasandha scheme - besides the tax-funded public health system. While population coverage expanded exponentially, the service coverage has deepened, where citizens receive free and cashless health services ranging from preventive, promotive and curative care. An open-ended benefit package offered to patients assures everyone access from simple curative care including outpatient, diagnostic and medical goods to high end surgery and hospitalisation overseas at empanelled facilities, when such services are not available domestically. Maldivians now can get access to over 4000 branded medications without paying from their income. As a result of these measures, cost coverage has accelerated where households spend only half of their resources on health care compared to what they used to pay ten years ago. Consequently, the share of households OOP payment in total health expenditure has declined from over half of all spending in 2011 to about one fifth of total health expenditure during 2017.

The sharp and rapid decline in households' OOP is largely due to substantial rise in government spending on health. During 2017, Maldivian government spent an estimated MVR 10,053 per capita, out of a total health expenditure MVR 13,086 per capita, accounting for over three-fourth of spending. As a percent of GDP, during the same year, total health expenditure accounted for roughly eight and half percent. Barely half of all spending during 2011 was prepaid and risk-pooled, as against four-fifth currently. The current levels of health spending are considered notably adequate to meet its health needs, but several steps are required to realign spending pattern so that services are delivered effectively, resources utilized efficiently and funds distributed equitably.

7.1. Accelerate and Set Aside Substantial Share of funds towards Primary Level Care

From an aspirational goal, any additional resource allocation over and above the current levels, must be set aside to primary level care and prevention. Efforts must be made on early detection and diagnosis to promote a healthy life style that is expected to reduce disease burden substantially. Significant additional allocations must be set aside to primary care directed at promotive and preventive services, that can relieve health systems from unnecessary and irrational spending, a pattern that is well entrenched currently. One of the gradual approach towards achieving this goal must be treating simple, uncomplicated cases in primary care settings rather than in tertiary care facilities. Combining this approach with an additional step of early diagnosis and detection of disease conditions can save up tremendous amount of funds to the government and to households as well. This must be attempted not only underlying infectious diseases but more so in chronic conditions.

7.2. Allocate Adequate Resources for Prevention and Promotion

Currently the primary challenge of epidemiologic transition brought about by demographic transformation needs to be halted. A substantial rise in longevity is expected to create a large share of elderly population with serious implications for increase in chronic non-communicable disease conditions. Both in terms of overall levels of spending as well as per capita spending on different disease conditions by age structure, reveals that 40 plus age group has tended to utilise far more resources than the younger age groups. This is likely to intensify further as Maldives population is expected to live longer. Programs and plans needs to be designed for implementing them in a manner that most common chronic and acute illnesses are treated at primary level care. Rich evidence from global experience demonstrates that primary care prevention including population level screening, routine monitoring and surveillance, can go a long way in preventing several disease conditions from being pushed to be treated at tertiary level care. Such as strategy is likely to bring cost down substantially.

Evidence emerging from the health accounts estimates during the last decade clearly reveal a trend of underfunding towards prevention and promotion. Currently the share of spending on prevention services, largely by the tax funded system, works out to be around two percent of the overall spending in the country. Notwithstanding the lack of serious methods to capture prevention and promotion expenditure by the government, the actual expenditure is likely to be way below the required resources. The government must gradually move towards setting aside atleast 10% of government spending for prevention and promotion activities.

7.3. Procure Medicines Efficiently to Reduce Cost

The evidence from health accounts estimates highlighted earlier that over one-third of all health spending is incurred on medicines (35% of Total Health Expenditure), largely incurred by government health system and Aasandha schemes, but fully funded from tax resources. Such high level of spending on pharmaceuticals appear to be an outlier compared to other countries. This points to the direction of large scale reforms that must be put in place to achieve cost savings: i) The first set of decision-making in pharmaceutical procurement is about what to purchase? The government follows two sets of medicines list. While the Essential Medicines List (EML, 2018) contains about 440 drugs which are procured and supplied in government health system but a larger list covering over 4000 medicines under the Approved Drug List (ADL) is reimbursed by Aasandha, both of which are tax funded; ii) The government must commit to move towards a pooled procurement model, whereby economies of scale can be achieved, with monopsony purchase power playing a direct role to buy medicines and supplies from the manufacturers, cutting out intermediaries in between; iii) There is an urgent need to move towards promoting prescription and dispensing of only generic medicines, and discourage use of patented medicines and branded generics. Procuring and prescribing patented medicines must be allowed only when generic substitutes are not available; and finally, iv) The current practice of prescription, dispensing and use of medicines appear to irrational and unnecessary. Encouraging the rational use of drugs and diagnostic services is expected to reduce cost significantly. Although such a move will require time and efforts to seriously bring behavioural change, in order for this change to be effective, a beginning must be made to introduce and adhere to Standard Treatment Guidelines and its use in both government health care system as well as through the Aasandha health insurance program.

7.4. Move away from Passive to Strategic Purchasing

One of the critical function of health financing is strategic purchasing. The primary aim of any strategic purchasing decision is to ensure resources are allocated and spent efficiently, promote quality and rationality of care provided to its population and finally allocate resource equitably to geographies and social groups. By setting up standards that are applicable to both public and private health facilities, quality improvements may be reaped for the benefit of patient population. A stringent treatment protocols (Standard Treatment Guidelines – STGs) for treating various disease conditions must be put in place in both private and public facilities. When rational prescription based on STGs were to be implemented in health facilities, this is expected to reduce costs to a large extent, while rationality of care is also ensured in the process. In order to strengthen the existing mechanism of procurement and logistic system for drugs, vaccines and supplies, the government may need to improve logistic and information system, improve forecasting and monitoring besides putting in place a cost control mechanism.

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Annexure – NHA Matrices

Matrix 1: Health Care Financing Schemes and Its Revenues, 2015

(In Thousand)

Codes/ Description	Codes	FS.1	FS.2	FS.5	FS.5.1	FS.5.2	FS.6	FS.7	Total
	Govt. Schemes & Compulsory Contributory Schemes	Transfers from Govt. Domestic Revenue	Transfers Distributed by Govt. from Foreign Origin	Voluntary Prepayment	Voluntary Prepayment from Individuals/ Households	Voluntary Prepayment from Employers	Other Domestic Revenues from Households	Direct Foreign Transfers	Sum of all Revenues
HF.1	Govt. & Compulsory Contributory Schemes	39,23,669	1,711	-	-	-	-		39,25,380
HF1.1.	Govt. Schemes	24,71,759	1,711	-	-	-	-	-	24,73,470
HF1.2.	Compulsory Contributory Scheme (Aasandha)	14,51,910	-	-	-	-	-		14,51,910
HF.2	Voluntary Health Care Payment Schemes	**33,950**	-	-	**1,617**	**62,229**	-	**366,160**	463,955
HF.2.1	Voluntary Health Insurance Scheme	33,950	-	-	1,617	62,229	-	-	97,796
HF.2.2	NPISH Scheme	-	-	-	-	-		3,66,160	3,66,160
HF.3	Households' OOP	-	-	-	-	-	10,71,795	-	10,71,795
HF.4	Rest of World	-	-	-	-	27,534	-	-	27,534
	Total	39,57,619	1,711	-	1,617	89,763	10,71,795	3,66,160	54,88,662

Matrix 2: Health Care Financing Schemes andHealth Care Functions, 2015

(In Thousand)

Codes	Description	HC.1. Curative Care	HC.1.1 Inpatient Curative Care	HC.1.2 Day Care	HC.1.3 Outpatient Curative Care	HC.4 Ancillary Services	HC.5 Medical Goods, Appliances and Supplies	HC.6 Preventive Care Services	HC.7 Governance, Financing and Administrative Services	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	33,04,335	9,95,488	1,598	23,07,249	65,054	22,436	13,481	5,20,075	39,25,380
HF1.1.	Govt. Schemes	19,60,141	5,88,042	-	13,72,098	31,074	-	13,481	4,68,775	24,73,470
HF1.2.	Compulsory Contributory Scheme (Aasandha)	13,44,194	4,07,446	1,598	9,35,151	33,980	22,436	-	51,300	14,51,910
HF.2	Voluntary Health Care Payment Schemes	55,702	52,977	-	2,725	-	6,235	-	63,391	1,25,328
HF.2.1	Voluntary Health Insurance Scheme	55,702	52,977	-	2,725	-	6,235	-	63,391	1,25,328
HF.2.2	NPISH Scheme	-	-	-	-	-	-	-	-	-
HF.3	Households' OOP	5,64,085	38,738	-	5,25,348	-	5,07,710	-	-	10,71,795
HF.4	Rest of World	88,960	62,213	-	26,747	-	-	99,998	1,77,202	3,66,160
	Total	40,13,081	11,49,415	1,598	28,62,068	65,054	5,36,381	1,13,479	7,60,668	54,88,662

Matrix 3: Health Care Financing Schemes and Health Care Providers, 2015

(In Thousand)

Codes/ Description		HP.1.1 General Hospitals	HP.1.2 Day Care Providers	HP1.3 Ambulatory Care Providers	HP.4 Providers of Ancillary Services	HP.5 Retailers of Medical Goods	HP.6 Providers of Preventive Care	HP.7 Providers of Health System Admn. and Financing	HP.9 Rest of World	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	7,73,182	1,598	23,07,249	65,054	22,436	13,481	5,20,075	2,22,306	39,25,380
HF1.1.	Govt. Schemes	5,88,042	-	13,72,098	31,074	-	13,481	4,68,775	-	24,73,470
HF1.2.	Compulsory Contributory Scheme (Aasandha)	1,85,140	1,598	9,35,151	33,980	22,436	-	51,300	2,22,306	14,51,910
HF.2	Voluntary Health Care Payment Schemes	52,977	-	2,725	-	6,235	-	63,391	-	1,25,328
HF.2.1	Voluntary Health Insurance Scheme	52,977	-	2,725	-	6,235	-	63,391	-	1,25,328
HF.2.2	NPISH Scheme	-	-	-	-	-	-	-	-	-
HF.3	Households' OOP	38,738	-	5,25,348	-	5,07,710	-	-	-	10,71,795
HF.4	Rest of World	62,213	-	26,747	-	-	99,998	1,77,202	-	3,66,160
	Total	9,27,109	1,598	28,62,068	65,054	5,36,381	1,13,479	7,60,668	2,22,306	54,88,662

Matrix 4: Health Care Financing Schemes and Its Revenues, 2016

(In Thousand)

Codes/ Description		FS.1 Transfers from Govt. Domestic Revenue	FS.2 Transfers Distributed by Govt. from Foreign Origin	FS.5 Voluntary Prepayment	FS.5.1 Voluntary Prepayment from Individuals/ Households	FS.5.2 Voluntary Prepayment from Employers	FS.6 Other Domestic Revenues from Households	FS.7 Direct Foreign Transfers	Total Sum of all Revenues
HF.1	Govt. Schemes & Compulsory Contributory Schemes	49,71,701	16,128	-	-	-	-	-	49,87,829
HF1.1.	Govt. Schemes	32,21,251	16,128	-	-	-	-	-	32,37,379
HF1.2.	Compulsory Contributory Scheme (Aasandha)	17,50,450	-	-	-	-	-	-	17,50,450
HF.2	Voluntary Health Care Payment Schemes	26,552	-	82,401	2,740	79,661	-	4,63,590	5,72,543
HF.2.1	Voluntary Health Insurance Scheme	26,552	-	82,401	2,740	79,661	-	-	1,08,953
HF.2.2	NPISH Scheme	-	-	-	-	-	-	4,63,590	4,63,590
HF.3	Households' OOP	-	-	-	-	-	13,13,244	-	13,13,244
HF.4	Rest of World	-	-	45,549	-	45,549	-	-	45,549
	Total	49,98,253	16,128	1,27,950	2,740	1,25,210	13,13,244	4,63,590	69,19,165

Matrix 5: Health Care Financing Schemes and Health Care Functions, 2016

(In Thousand)

Codes/ Description		HC.1. Curative Care	HC.1.1 Inpatient Curative Care	HC.1.2 Day Care	HC.1.3 Outpatient Curative Care	HC.4 Ancillary Services	HC.5 Medical Goods	HC.6 Preventive Care Services	HC.7 Governance, Financing and Administrative Services	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	44,63,472	12,06,303	2,087	32,55,082	84,334	33,166	36,624	3,70,233	49,87,829
HF1.1.	Govt. Schemes	28,58,172	7,71,706	-	20,86,465	47,601	-	36,624	2,94,982	32,37,379
HF1.2.	Compulsory Contributory Scheme (Aasandha)	16,05,301	4,34,597	2,087	11,68,617	36,733	33,166	-	75,251	17,50,450
HF.2	Voluntary Health Care Payment Schemes	77,063	73,159	-	3,904	-	11,047	-	66,391	1,54,500
HF.2.1	Voluntary Health Insurance Scheme	77,063	73,159	-	3,904	-	11,047	-	66,391	1,54,500
HF.2.2	NPISH Scheme	-	-	-	-	-	-	-	-	-
HF.3	Households' OOP	6,91,160	47,464	-	6,43,695	-	6,22,084	-	-	13,13,244
HF.4	Rest of World	1,12,633	78,769	-	33,865	-	-	1,26,609	2,24,348	4,63,590
	Total	53,44,328	14,05,695	2,087	39,36,546	84,334	6,66,296	1,63,233	6,60,972	69,19,163

Matrix 6: Health Care Financing Schemes and Health Care Providers, 2016

(In Thousand)

Codes/ Description		HP.1.1 General Hospitals	HP.1.2 Day Care Providers	HP1.3 Ambulatory Care Providers	HP.4 Providers of Ancillary Services	HP.5 Retailers of Medical Goods	HP.6 Providers of Preventive Care	HP.7 Providers of Health System Admn. and Financing	HP.9 Rest of World	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	9,82,949	2,087	32,55,082	84,334	33,166	36,624	3,70,233	2,23,354	49,87,829
HF1.1.	Govt. Schemes	7,71,706	-	20,86,465	47,601	-	36,624	2,94,982	-	32,37,379
HF1.2.	Compulsory Contributory Scheme (Aasandha)	2,11,243	2,087	11,68,617	36,733	33,166	-	75,251	2,23,354	17,50,450
HF.2	Voluntary Health Care Payment Schemes	73,159	-	3,904	-	11,047	-	66,391	-	1,54,500
HF.2.1	Voluntary Health Insurance Scheme	73,159	-	3,904	-	11,047	-	66,391	-	1,54,500
HF.2.2	NPISH Scheme	-	-	-	-	-	-	-	-	-
HF.3	Households' OOP	47,464	-	6,43,695	-	6,22,084	-	-	-	13,13,244
HF.4	Rest of World	78,769	-	33,865	-	-	1,26,609	2,24,348	-	4,63,590
	Total	11,82,341	2,087	39,36,546	84,334	6,66,296	1,63,233	6,60,972	2,23,354	69,19,163

Matrix 7: Health Care Financing Schemes and Its Revenues, 2017

(In Thousand)

Codes/ Description		FS.1 Transfers from Govt. Domestic Revenue	FS.2 Transfers Distributed by Govt. from Foreign Origin	FS.5 Voluntary Prepayment	FS.5.1 Voluntary Prepayment from Individuals/ Households	FS.5.2 Voluntary Prepayment from Employers	FS.6 Other Domestic Revenues from Households	FS.7 Direct Foreign Transfers	Total Sum of all Revenues
HF.1	Govt. Schemes & Compulsory Contributory Schemes	47,87,121	5,404	-	-	-	-	-	47,92,524
HF1.1.	Govt. Schemes	29,34,421	5,404	-	-	-	-	-	29,39,824
HF1.2.	Compulsory Contributory Scheme (Aasandha)	18,52,700	-	-	-	-	-	-	18,52,700
HF.2	Voluntary Health Care Payment Schemes	44,070	-	96,339	2,406	93,933	-	3,83,499	5,23,908
HF.2.1	Voluntary Health Insurance Scheme	44,070	-	96,339	2,406	93,933	-	-	1,40,409
HF.2.2	NPISH Scheme	-		-	-	-	-	3,83,499	3,83,499
HF.3	Households' OOP	-	-	-	-	-	13,95,816	-	13,95,816
HF.4	Rest of World	-	-	48,134	-			-	48,134
	Total	48,31,191	5,404	1,44,473	2,406	1,42,067	13,95,816	3,83,499	67,60,384

Matrix 8: Health Care Financing Schemes and Health Care Functions, 2017

(In Thousand)

Codes/ Description		HC.1. Curative Care	HC.1.1 Inpatient Curative Care	HC.1.2 Day Care	HC.1.3 Outpatient Curative Care	HC.4 Ancillary Services	HC.5 Medical Goods	HC.6 Preventive Care Services	HC.7 Governance, Financing and Administrative Services	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	41,03,408	10,19,421	2,786	30,81,201	54,881	26,150	27,829	5,80,256	47,92,525
HF1.1.	Govt. Schemes	23,63,502	5,90,875	-	17,72,627	23,646	-	27,829	5,24,847	29,39,825
HF1.2.	Compulsory Contributory Scheme (Aasandha)	17,39,906	4,28,546	2,786	13,08,574	31,235	26,150	-	55,409	18,52,700
HF.2	Voluntary Health Care Payment Schemes	3,86,859	146,256	-	2,40,603	3,080	14,351	71,343	48,253	5,23,886
HF.2.1	Voluntary Health Insurance Scheme	79,032	69,299	-	9,733	3,080	14,351	-	47,026	1,40,409
HF.2.2	NPISH Scheme	3,07,827	76,957	-	2,30,870	-	-	71,343	1,227	3,83,499
HF.3	Households' OOP	7,34,618	50,449	-	6,84,169	-	6,61,199	-	-	1,395,817
HF.4	Rest of World	11,693	7,920	-	3,773	-	-	13,145	23,297	48,134
	Total	52,36,578	1,224,046	2,786	40,09,746	57,961	7,01,700	112,317	651,806	67,60,395

Matrix 9: Health Care Financing Schemes and Health Care Providers, 2017

(In Thousand)

Codes	Description	HP.1.1	HP.1.2	HP1.3	HP.4	HP.5	HP.6	HP.7	HP.9	
		General Hospitals	Day Care Providers	Ambulatory Care Providers	Providers of Ancillary Services	Retailers of Medical Goods	Providers of Preventive Care	Providers of Health System Admn. and Financing	Rest of World	Total
HF.1	Govt. Schemes & Compulsory Contributory Schemes	844,358	2,786	3,081,201	54,881	26,150	27,829	580,256	1,75,063	47,92,525
HF1.1.	Govt. Schemes	5,90,875	-	1,772,627	23,646	-	27,829	5,24,847	-	29,39,825
HF1.2.	Compulsory Contributory Scheme (Aasandha)	2,53,483	2,786	13,08,574	31,235	26,150	-	55,409	1,75,063	18,52,700
HF.2	Voluntary Health Care Payment Schemes	146,256	-	240,603	3,080	14,351	71,343	48,253	-	523,886
HF.2.1	Voluntary Health Insurance Scheme	69,299	-	9,733		14,351	-	47,026	-	1,40,409
HF.2.2	NPISH Scheme	76,957	-	230,870	3,080	-	71,343	1,227	-	383,477
HF.3	Households' OOP	50,449	-	684,169		661,199	-	-	-	1,395,817
HF.4	Rest of World	8,178	-	3,514		-	13,145	23,297	-	48,134
	Total	1,049,241	2,786	4,009,487	57,961	701,700	112,318	651,807	1,75,063	6,760,362