Healthcare Financing Reforms in Cambodia:

Challenges and Options for Achieving Universal Health Coverage under Financial Constraint

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Abbreviations

AHC	Angkor Hospital for Children
AIDS	Acquired Immune Deficiency Syndrome
AOP	Annual Operational Plan
ASEAN	Association of Southeast Asian Nations
BSP	Budget Strategic Plan
CAR	Council for Administrative Reform
CBHI	Community-Based Health Insurance
CDRI	Cambodia Development and Research Institute
CDHS	Cambodia Demographic and Health Survey
CGD	Comptroller General Department
CMDG	Cambodia Millennium Development Goals
CMS	Central Medical Store
CoA	Chart of Accounts
COMEX	Inter-Ministerial Technical Committee
CPA	Complementary Package of Activities
CSES	Cambodia Socio-economic Survey
CSMBS	Civil Servant Medical Benefit Scheme
DP	Development Partners
GDP	Gross Domestic Product
GGHE	General Government Health Expenditure
GNI	Gross National Income
DFAT	Australian Government Department of Foreign Affairs and Trade

DPHI	Department of Planning and Health Information
DRG	Diagnosis Related Group
DHS	District Health Systems
GDP	Gross DomesticProduct
GIZ	Deutsche Gesellschaft für Internationale
HC	Health Centre
HCMC	Health Center Management Committee
HEF	Health Equity Fund
HEFI	Health Equity Fund Implementer
HEFO	Health Equity Fund Operator
HEFP	Health Equity Fund Promoter
HEQIP	Health Equity and Quality Improvement Program
HIV	Human Immune-deficiency Virus
HP	Health Partner
HSP	Health Strategic Plan
HSSP	Health Sector Support Program
HTWG	Health Technical Working Group
IPD	Inpatient Department
JKN	Jaminan Kesehatan Nasional
JICA	Japan International Cooperation Agency
KBH	Kantha Bopha Hospital
KRR	Khmer Rouge Regime
LMIC	Lower Middle-Income Countries
MCH	Maternal and Child Health
MCS	Ministry of Civil Service

MDG	Millennium Development Goal
MEF	Ministry of Economy and Finance (Cambodia)
MoF	Ministry of Finance (Thailand)
MoH	Ministry of Health
MoI	Ministry of Interior
MoLVT	Ministry of Labor and Vocational Training
MoP	Ministry of Planning
MoPH	Ministry of Public Health (Thailand)
MoSVYR	Ministry of Social Affairs, Veterans, Youth, and Rehabilitation
MoU	Memorandum of Understanding
MPA	Minimum Package of Activities
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
NH	National Hospital
NHSO	National Health Security Office (Thailand)
NIPH	National Institute of Public Health
NIS	National Institute of Statistics
NCDD	National Committee for Democratic Development
NP-SNDD	National Program for Sub-National Democratic Development
NSDP	National Strategic Development Plans
NSSF	National Social Security Fund
NSSFC	National Social Security Fund for Civil Servants
OD	Operational District
OOP	Out-of-Pocket Expenditure
OPD	Outpatient Department

PAR	Public Administrative Reforms
PBB	Project-Based Budget
PBF	Performance-Based Financing
PEFA	Public Expenditure Financial Accountability
PFMRP	Public Financial Management Reform Program
PHD	Provincial Health Department
PF	Health Facility
PHFs	Public Health Facilities
PNH	Provincial National Hospital
RGC	Royal Government of Cambodia
RH	Referral Hospital
SARS	Severe Acute Respiratory Syndrome
SEA	South East Asia
SDC	Swiss Development Cooperation
SDG	Service Delivery Grant
SDG	Sustainable Development Goals
SKMH	Sonja Kill Memorial Hospital
SHCH	Sihanouk Hospital Center of Hope
SHI	Social Health Insurance
SHPA	Social Health Protection Association
SOA	Special Operating Agency
SSS	Social Security Scheme
TSA	Treasury Single Account
SUBO	Subsidy Scheme(s)
THE	Total Health Expenditure

TGE	Total Government Expenditure
TRT	Thai Rak Thai
TSA	Treasury Single Account
UHC	Universal Health Coverage
UHS	Universal Health Scheme
UNCDF	United Nations Capital Development Fund
USAID	United State Agency for International Development
VHSG	Village Health Support Groups
VSS	Vietnam Social Security
WB	World Bank
WHO	World Health Organization

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Executive Summary

Cambodia, as many other developing countries in the South East Asia (SEA) region, has faced tremendous challenges in funding health services out of the government budget and in supporting Cambodians, especially the poor and the near poor, to access health services they need without risk of financial catastrophe or impoverishment. Despite various reform efforts, including the introduction of Health Equity Funds (HEFs) in the late 1990s, to improve access to health services for the Cambodian poor, out-of-pocket (OOP) spending has remained at about 60% of total health expenditure in the last decade. This level of OOP spending is the second highest among the ten countries in the Association of South East Asian Nation (ASEAN). Furthermore, Cambodian health system has been heavily dependent on donors' financing, which accounts for about 20% of total health expenditure (THE). This proportion is almost equal to government spending for health sector.

This study aims to explore options for achieving Universal Health Coverage(UHC) in the Cambodia's financial constraint context through a three-track approach to assess how the coverage of and access to quality health services in Cambodia can be expanded in top-down and bottom-up interventions to support the intermediate objectives and ultimate goals of UHC:

- Review healthcare financing models in the ASEAN countries with a case study on Thailand, which has the closest resemblance in health system structure to Cambodia and was able to achieve UHC in a very short period of time;
- Explore possibilities to scale up quality health coverage by improving health governance and increasing fiscal capacity through a top-down intervention; and
- Identify the potential of expanding quality health coverage by not-for-profit local hospitals through a bottom-up intervention.

UHC is defined as all people obtaining the quality health services they need on time without facing financial difficulty. It involves equitable use of health services, quality of care, and financial protection.

Healthcare Financing in the ASEAN Region

In the ASEAN region, most countries use social health insurance (SHI) as a tool to achieve the breadth of UHC. With this model, the insurance coverage has been expanded progressively, but health coverage varies substantially across countries. Thailand achieved universal coverage in 2002 through multiple social insurance schemes. The heath care system in Thailand is mainly financed through general tax, social insurance contribution, private insurance, and OOP payment. Malaysia's national health service provides access to all its citizens with a low level of user fees at its public health facilities, which are funded through general taxation. Singapore's compulsory government health insurance schemes reach 93% of its population. The Philippine's National Health Insurance Program, or PhilHealth, covers above 79% of the population with financial resources from private insurance premiums (both formal and informal sectors) and government subsidies using taxes for retirees, pensioners, and indigents. Indonesia's health schemes currently cover about 60% of the population, who is insured through *Jamkesmas,* the government-financed health insurance scheme for the poor and the near poor; Askes for public sector employees and pensioners; and *Jamsostek* for private employees. Vietnam's Social Security (VSS) which uses a single-pool risk approach with cross-subsidies between income groups provides one national benefit package, reaching 65% of its population. Health insurance coverage in Cambodia and Lao PDR, which depend heavily on donors' support to reach the poor and vulnerable populations, is low– at 24% in Cambodia and 15% in Laos.

Many ASEAN countries had already achieved the Millennium Development Goal (MDG) targets set on poverty reduction and maternal and child mortality in 2015. However, the remaining key challenge is to narrow the gaps in health outcomes and access in these countries, especially among low and lower-middle income countries (LMICs). These countries face common issues in expanding coverage: financial constraints (including low levels of general expenditure as well as government expenditure on healthcare); health workforce shortage; and rising burdens of non-communicable diseases (NCDs).

Lessons Learnt from Thailand

The success of Thailand, which has the closest resemblance in health system structure to Cambodia and was able to achieve UHC in a very short

period of time, is worth examining. Healthcare reforms in Thailand aimed to reach UHC with suitable benefit package, curb the increase in health spending, foster efficiency in health service delivery, distribute more resources to the poor, and strengthen the capacity of the health system to provide health services to the population at large. The successful implementation of the UHC, which ensured financial protection and more equitable health outcomes for Thai people, can be attributed to:

- Government's high expenditure on health, at 80.1% of THE, compared to 20% in Cambodia and 49.3% in Laos;
- Payment methods that prevent overcharge from healthcare providers;
- Good health care infrastructure that spans across Thailand;
- Strong political will, which has been sustained across different governments since UHC was first introduced; and
- Strong institutional capacity to provide quality health services.

Healthcare Financing in Cambodia

On-going Issues

The Health Financing Charter in 1996 allows public health facilities (PHFs) to charge user fees and grant fee waivers to the poor. Despite the provision for fee-waivers, the proportion of poor patients who received fee exemption was very low because the reimbursement system to PHFs did not function well. As a result, PHFs that were operating at or near to full capacity had no incentive to provide fee exemptions, as it affected salary supplement of their staff. When this fee waiver mechanism for the poor was not favorable, further reforms were introduced to address both the demand and supply sides for health financing. The demand-side mechanism is channeled through third party payers. The Health Equity Fund (HEF), Community-Based Health Insurance (CBHI), voucher scheme, and SHI, were initiated one after another, starting from the late 1990s. The supply-side mechanism mainly focuses on health facilities, including fee exemption, Special Operating Agency (SOA), and Subsidy Scheme (SUBO). These initiatives helped PHFs that were underfunded to improve quality of care and to expand their health services. Despite the presence of these schemes, which provide a range of benefits to the insured population and PHFs, expansion of coverage to Cambodian people at large requires additional support from both the government and development partners.

Strengthening Health Governance

Some of the ongoing issues in the health sector, which slow down the process of health financing reforms, could be overcome by the RGC's efforts to strengthen governance structure in the past years. Since 2008, the government has mainly focused on public financial management reform, public administration reform, decentralization and deconcentration reform, which to some extent have helped to decongest the centralized administration and reduce leakage inside the Ministry of Health (MoH).

Toward Universal Health Coverage

The concept of UHC was initially described in a cube diagram in the World Health Report in 2010. For a country to move closer to UHC, key tasks include making health services available for the people who need them but do not receive any; increasing number of services for those who receive some but not all services they need; and improving financial protection by raising sufficient revenues for health spending through pooled funds.

Revenue Raising Mechanisms (A Top-Down Approach)

Revenue raising mechanisms are essential for promoting the UHC goal of financial protection when pool funds are used in a way that maximizes the redistributive capacity of the prepaid funds. The government can raise revenues for health system in various ways.

Firstly, this revenue can come from general taxes levied directly on individuals or firms, such as personal income tax and tax on corporate income or profits; taxes levied on consumption or trade, such as value added tax and customs duties; and government-owned enterprises or assets, such as oil, gas, gems, and minerals.

Secondly, the government can also impose earmarked taxes on certain products to finance UHC. It is difficult to ensure that sufficient budget is made available for UHC given the presence of many development priorities; however, additional resources could be earmarked from specific taxes on goods and services, especially alcohol and tobacco.

Thirdly, the revenue can be raised through social insurance contributions, known as payroll taxes. Other revenue raising mechanisms include

voluntary prepayment, household OOP spending, and official development assistance.

A combination of the above revenue raising mechanisms can be used to finance the health system. In the last two decades, a key challenge in Cambodia is the high level of OOP spending, indicating insufficient financial protection. To be able to reduce OOP expenditure, the majority of the Cambodian population will need to be insured through prepayment schemes. In Cambodia, UHC can be expanded by filling gaps in the current schemes while expanding the coverage of the prepayment schemes. All of the formal sector employees should be insured by the SHI schemes, and the poor can be supported by HEF. The remaining population in the informal sector (of which a very small proportion is enrolled in CBHI) can be insured by the expansion of the prepayment schemes. This would depend largely on the fiscal capacity of the RGC.

Fiscal capacity refers to "the government's ability or willingness to mobilize public revenue, which in turn allows the government to spend money on public services and programs, including health." To gauge the fiscal capacity of the RGC, four indicators – government revenue to the Gross Domestic Product (GDP)[1] ratio, government expenditure to the GDP ratio, budget deficit, and government debt to GDP ratio – are examined:

- With tax revenue at 13.7% of GDP in 2015, Cambodia still has a very **low fiscal capacity**.[2] Going forward, the RGC will benefit from increasing the revenue base by identifying additional sources for tax revenues to ensure fiscal sustainability with the increased allocation for achieving UHC.
- The government expenditure remained stable in the past five-year at about 21% to 22.8% of GDP. At this level of spending, Cambodian government has **medium-low fiscal capacity**. When the overall expenditure does not increase, it is difficult to argue for more public spending on health because increasing real spending on health may require decreasing spending on other prioritized sectors.

[1] GDP is the monetary value of all the finished goods and services produced within a country's borders in a specific time period.
[2]According to the rule of thumb suggested by the International Monetary Fund and the World Bank: 15%-20%=low; 20%-25% = low to medium; 25% to 35% = medium; 35%-45% = medium to high; and 45% = very high fiscal capacity.

- The government's current account balance, excluding grant, shows a budget deficit during the 2011-2015 period. Although the amount of the budget deficit was smaller in 2015 compared to 2011, this budget deficit generally indicates that it is difficult for the Cambodian government to increase its spending.
- Public debt remained stable in the past five years and will not increase beyond 32% of GDP according the WB prediction. This ratio of debt to GDP is within the recommended range. As suggested by the International Monetary Fund and the WB for low- and middle-income countries, crisis occurs when debt-to-GDP ratio exceeds 40% of GDP.

With this limited fiscal capacity, the MoH should instead, in the short run, work to improve efficiency, equity in the distribution of resources, and transparency and accountability, which are the intermediate objectives for UHC. Improving efficiency of the distribution of resources has almost the same potential positive effects as increasing the level of public health spending, as the savings through efficiency gains can be redistributed within the health system.

Quality of Health Care (A Bottom-Up Approach)

Another priority for Cambodia is to increase the number of and coverage by health providers and enhance the quality of care in both private and public sectors. Health service coverage has been expanded, particularly in regards to maternal and child healthcare following the implementation of the Fast Track Initiative Roadmap for Reducing Maternal and Newborn Mortality, the increased coverage of skilled birth attendance, and other safe motherhood services. However, the quality of care remains a concern in both public and private sectors.

The quality of public health care is constrained by the poor conditions of facilities, shortage of staff, and lack of staff motivation (incentives). Most sick and injured people often use private health facilities, which have sprouted quickly in the past decades, as their point of first contact. The use of private health facilities during the episode of illness among children aged 0-9 years old increased from 44.4% in 2005 to 69.1% in 2014, while the rate for adults aged above 14 years old jumped from 53.2% in 2005 to 71.7% in 2014. Even among the poor quintile, the use of private health facilities rose from 42.8% in 2005 to 59.5% in 2014.

When public health facilities could not fully respond to the needs, non-profit hospitals have taken up some roles in improving quality of care and increasing human resources in health to meet the rising demand for affordable quality health care. Some not-for-profit hospitals in Cambodia provide free health care, while others charge user fees to be able to sustain and expand their services. Whether charging user fees or not, they mostly target the poor and near-poor population. This study discusses the model of healthcare delivery of Angkor Hospital for Children (AHC), Kantha Bopha Hospital (KBH), and Sonja Kill Memorial Hospital (SKMH). These hospitals have helped to save lives of many Cambodian children and adults.

The three not-for-profit hospitals contribute substantially to improving the quality of health care in Cambodia. All doctors and nurses are Cambodian, and they are trained locally. The newly recruited doctors or nurses receive intensive training from their seniors before treating patients. Besides being able to generate qualified human resources for their hospitals, they also collaborate closely with the MoH, provincial health departments, district hospitals, and community organizations in their areas, to improve skill levels of government health workers and to provide useful health information to people in the community. The three hospitals, especially KBHs, are also able to provide internships to hundreds of freshly graduated medical students to strengthen their skills before entering the job market.

Financial sustainability of those hospitals, especially KBHs and AHC, is crucial since they treat approximately 86.5% of sick children in Cambodia. KBHs receive financial support from the government, while AHC does not. Due to their good reputation, people from all over the country come for their services. There are hundreds of people waiting outside the hospitals' compounds each day for services. Unlike the SKMH that charges user fees to recover some of the expenses, KBHs and AHC are facing financial sustainability concern in the past few years because of the rising demand for their services. Several other smaller not-for-profit hospitals in Cambodia are also facing similar challenges.

There are several options for tackling long-term financial sustainability of these not-for-profit hospitals that do not charge user fees for their services:

1. Lobby the government for additional resources through earmarked taxes on specific products (e.g. Tabaco, alcohol, and junk food). Tax mechanisms are a long-term and stable support scheme to these

hospitals; however, expansion of health financing is only feasible to the extent that fiscal space allows.

2. Bring big contributors together and seek their long-term commitment/systematic support for the hospitals. The hospitals have received financial support from some private companies in Cambodia, but their donation comes individually with no clear long-term commitment. If long-term commitment can be gauged, this could ease overall financial constraints for the hospitals. However, this should be done with a clear agreement between the hospitals and the companies to avoid reputational risks to the former.
3. Negotiate with NSSF to extend the provision of services to these hospitals for dependents of formal sector employees when included in social insurance schemes. This option is feasible in the future as Cambodia moves toward UHC and the Cambodian government gradually expands health insurance coverage for formal sector employees. In this case, the hospitals can raise additional fund from the formal sector population to support the poor and near poor population.
4. Consider the option for establishing fee charging services to fund the non-fee charging services. Instead of providing free healthcare to all, they can use their existing resources and start outpatient clinics in their hospitals' compounds that charge user fees for services for non-poor patients. The doctors and nurses should, however, rotate between the charged and non-charged services clinics to avoid inequality in provision of health services. To further maintain equity in receiving services, identical quality of services should be ensured by the rotating staff. A clear explanation on how the revenue from service fees is used should to be displayed publicly to gain confidence from patients who are willing and able to pay so that others can get free services. This additional revenue from service fees can help to ease financial tension and give the hospitals breathing space during the economic downturn and the period with less contribution from international donors. This model is used by the Hope Community Medical Clinics to support SHCH that provides free-of-charge inpatient services to the poor in Cambodia. The revenue raised from their three outpatient clinics was able to cover 8% of the SHCH's cost in 2015.
5. Consider charging fee at the level patients can afford (the model that the SKMH is currently using: payment according to

affordability). The patients are evaluated based on their socio-economic status. In this case, wealthy people pay for services, and in return, this revenue is used to help the vulnerable groups. For this model, people are treated equally at the health facilities although they pay differently.

1. Introduction

Globally, there are about 100 million people who slip into poverty each year because of out-of-pocket (OOP) expense for healthcare services when either they or their family members are severely sick, and approximately one billion people cannot afford to pay for the healthcare they need, a situation that can lead to disease outbreaks and become disastrous epidemics.[3] In the Asia Pacific Region alone, around 900 million people earn less than US$2 a day. These people are prone to catastrophic healthcare expenses. The levels of OOP payment for healthcare expense in the Asia Pacific region are much higher than those in other regions, ranging from over 40% in the West Pacific region to 60% in South East Asia (SEA) [1].

Cambodia, as many other developing countries in the SEA region, has faced tremendous challenges in funding healthcare services out of the government budget and supporting Cambodians, especially the poor and the near poor, to access health services they need without risks of financial catastrophes or impoverishment [2]. Since the health financial reform in 1996 and followed by the establishment of the Health Equity Funds (HEFs) to improve access to health services for Cambodian poor, OOP has remained at about 60% of total health expenditure (THE). This level of OOP payment is the second highest in the Association of South East Asian Nations (ASEAN). In addition, health system has been heavily funded by donors, accounting for about 20% of THE. This share is almost equal to the government spending for health [3, 4].

Overall, the share of THE to Gross National Product (GDP) at approximately 7% is within the recommended range of the World Health Organization (WHO) for countries that aim to make progress towards universal health coverage (UHC), but its composition is not. The high OOP and dependency on contribution from donors, together with the low government budget, slows down the progress to reach UHC [2, 5]. The concept of UHC centers mainly on prepayment mechanisms and access to quality of care [6]. As recommended by the WHO to its member states who

[3] Joint press release by the Rockefeller Foundation, the World Health Organization, and the World Bank in December 2014, available at: http://www.worldbank.org/en/news/press-release/2014/12/12/500-organizations-global-coalition-accelerate-access-universal-health-coverage.

want to achieve UHC, the population who is insured by prepayment schemes should be around 90% [1]. Currently the gap between insured and uninsured populations in Cambodia is huge. Among 15.4 million people, approximately three million poor are covered by HEFs, about 0.13 million are insured by Community-Based Health Insurance (CBHI), and a little bit over one million formal sector employees are entitled to work injury insurance [7], while the rest finance their health services through either OOP expenses or private health insurance scheme.

In line with the global trend, it becomes clear that the Royal Government of Cambodia's (RGC) policy direction is leaning toward UHC, an agreed target within the newly ratified Sustainable Development Goals (under SDG 3, the health goal) [6]. Thus, the health system will need to be further upgraded to achieve this target by 2030.

Although there are many issues ahead to be addressed in order to strengthen the health system, Cambodia has made significant progress in improving the health status of its population. These improvements can be attributed in part to long-term political stability, which has provided space for development to occur, and to long-term and coherent collaboration between the RGC and its Development Partners (DPs). Results include: (a) reduced maternal and child mortality rates; (b) decreased prevalence of communicable diseases such as malaria, tuberculosis, and HIV/AIDS; (c) expanded coverage and increased access to essential health care services; and (d) health equity schemes that provide a measure of financial protection, particularly for the poor [8-11].[4]

This study aims to explore options for achieving UHC within Cambodia's financial constraint context. For such options to be vibrant and relevant, this study will do the following:

- Examine healthcare financing models in ASEAN countries, especially Thailand, which has the closest resemblance of health system structure to Cambodia and was able to achieve UHC in a very short period of time;
- Explore possibilities for scaling up quality health coverage by improving health governance and increasing fiscal capacity through

[4] See **Appendix 1** for progress of health indicators from 2000 to 2015, extracted from CDHS, CMDG, and NSDP.

top-down interventions; and

- Identify the potential for expanding quality health coverage by not-for-profit local hospitals through a bottom-up intervention.

From these three levels of analysis, we would be able to portrait how the coverage of and access to quality health services in Cambodia can be expanded for top-down and bottom-up interventions. This study also adds on the existing literature on healthcare financing. The presence of not-for-profit hospitals helps to reduce the inequality in access to health services, especially for the poor, and also contributes to the improvement of quality of care in Cambodia when services in many public health facilities are inadequate. Moreover, it also provides additional information to countries with similar healthcare systems that will soon embark on the UHC path.

2. Methodology

This study based its analysis on documents related to healthcare financing from the Ministry of Health (MoH), the Ministry of Economy and Finance (MoEF), Health Technical Working Group (HTWG) meetings, Health Partners (HPs) meetings, local and international organizations, study tour in Thailand, and available data online. In addition, several local health experts from Angkor Hospital for Children (AHC), Cambodia Development and Research Institute (CDRI), German Technical Cooperation (GIZ), National Institute of Public Health (NIPH), MoH, Sihanouk Hospital Center of Hope (SHCH), and Sonja Kill Memorial Hospital (SKMH) were also interviewed to capture their views on mechanisms to achieve UHC in Cambodia and on sustaining not-for-profit hospitals in this country. Furthermore, secondary data from Cambodia Health Demographic Survey (CDHS 2005-2014) and the 2013 Census were used to calculate the number of sick children aged 0-14 and PHF utilization rates in Cambodia. Some graphs and tables in this study were developed based on data extracted from the WB and the WHO websites.

3. Health Care Financing in the ASEAN Region

Overview

The Association of South East Asian Nation (ASEAN), currently consisting of ten independent countries, such as Brunei, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, was established in 1967. The ASEAN countries have a combined total population of approximately 600 million, of which about 43% live in urban areas. These ten countries differ greatly in terms of socio-economic status, political system, and health system, which links to the differences in health status of the region's diverse populations. Further, the health care system of each country is at different stages of development; thus, the progress toward UHC varies considerably [12-15]. Social Health Insurance (SHI) model has been used as a tool to achieve the breadth of UHC in some ASEAN countries. With this model, the insurance coverage has been expanded progressively, but the gaps of coverage across countries remain large.

Thailand achieved universal health coverage in 2002 through multiple insurance schemes [12]. The health care system in Thailand is mainly financed through general taxation, social insurance contribution, private insurance, and OOP payment [16, 17].

In Malaysia, public health facilities are funded through revenues from general taxation where health services are provided to all Malaysians with low user fees.

In Singapore, approximately 93% of the population are insured through the government's compulsory health insurance schemes. The pool of government subsidies for acute hospital care, together with contributory schemes for primary healthcare and sickness, gives several layers of protection to Singaporeans. The schemes are known as 3M. MediSave, a mandatory medical saving account coming from the contribution of employers and employees, is used to pay general health service fees; MediShield, a low-cost voluntary medical insurance scheme, is used to pay large medical bills; and MediFund, an endowment fund established by the government, is reserved to support low-income individuals or those who

face larger medical bills compared to their income [12, 18-21].

In the Philippines, above 79% of the population are covered under the Philippines' National Health Insurance Program or PhilHealth. Financial sources to support SHI come from private insurance premiums (both formal and informal sectors) and government subsidies using revenues from taxes for retirees, pensioners, and indigents [12, 18, 22].

In Indonesia, there is currently about 60% of the population insured through *Jamkesmas,* the government-financed health insurance scheme for the poor and near poor; *Askes* for public sector employees and pensioners; *Jamsostek* for private employees. In 2014, the Indonesian government declared its commitment to reach UHC in 2019 and is planning to put the three fragmented schemes under the national health insurance program named *Jaminan Kesehatan Nasional* (JKN). This unified insurance program will be funded by premiums from self-employed and informal sector members and deduction from the payrolls of public and private sector employees [12, 18, 23-25].

Vietnam provides one national benefit package using a single-pool risk approach with cross-subsidies between income groups and relying on general tax to fund coverage for the poor and payroll tax to fund coverage for formal sector employees [26]. Approximately 65% of the population are covered by Vietnam Social Security (VSS) [12].

Cambodia and Lao PDR depend highly on support from DPs to reach the poor and vulnerable populations [27]. The coverage of health insurance remains low both in Cambodia (24%) and Laos (15%). The government of Lao PDR is considering putting the four different social health protection schemes under one unified institutional arrangement and is committed to reach UHC by 2020 [12]. The same as in Loa PDR, the Cambodian government is also planning to put all fragmented schemes under one unified institution in the draft of national social health protection policy framework developed in 2016 [28].

Last but not least, in Myanmar, healthcare system is mainly financed through OOP. OOP in Myanmar is the highest among the ten countries [12].

Challenges

Many ASEAN countries had achieved the Millennium Development Goal

(MDG) targets set on poverty reduction and maternal and child mortality by the deadline in 2015. However, there is large inequity in health outcomes and access within and between these countries, especially among low- and lower-middle-income countries (LMICs) [29]. Common issues in expanding coverage faced by these countries are summarized below.

Firstly, there is a financial constraint, including low levels of general expenditure as well as government expenditure on health care as shown in **Table 1**. Beside Cambodia (7.5%) and Vietnam (6%), the general health expenditure was less than 5% of GDP in 2013. The government expenditure on health as a percentage of THE ranged from 20.5% in Cambodia to 91.9% in Brunei, whereas the government expenditure on health as the percentage of total government expenditure ranged from 1.5% in Myanmar to 17% in Thailand. This inadequate investment from the government in health sector has resulted in poor quality of care in public health facilities due to a range of issues, including staff absenteeism, overcrowding, shortage of drugs, and insufficient medical equipment, especially in rural areas where private health facilities are not available [29]. At the same time, OOP expense in seven out of the ten countries accounted for more than 40% of THE. As a result, the incidence of catastrophic expenditure on health services, defined by the WHO as OOP payment above 40% of household income after subsistence needs, is high in those countries, particularly Cambodia, Lao PDR, and Myanmar [30]. This high private spending on health implies that the poor are less protected. A study in Cambodia in 2007 showed that the rate of catastrophic health expenditure was 4.3%, and the rate of impoverishment was 2.6% [12, 31], while the rates of catastrophic health expenditure and impoverishment in Lao in 2008 were 1.7% and 1.1%, respectively [12, 32]. In the Philippines, the proportion of catastrophic health expenditure was 1.2%, and the proportion of impoverishment was 1.0% in 2009 [12, 33]. A study in Vietnam showed that the rate of catastrophic health expenditure was 3.9%, and the rate of household who fell into poverty due to OOP expenditure was 2.5% in 2010 [12, 34].

Secondly, there is a shortage and unequal distribution of health workforce, particularly in rural areas, which contributes to the disparities in health outcomes. The ratio of doctors to population varies considerably across the ASEAN countries, ranging from two doctors per 10,000 people in Cambodia, Indonesia, and Lao PDR to 19 doctors per 10,000 in Singapore [12]. At the regional level, with an average of 27 doctors, nurses and midwives per 10,000 people, there is no critical shortage in human

resources for health in the region. However, at the national level, Cambodia, Indonesia, Lao, Myanmar, and Vietnam are below the threshold of 22.8 doctors, nurses and midwives per 10,000 people, as set by the WHO [15, 35, 36]. Furthermore, the uneven distribution of health workforce exacerbates the situation. Approximately 60-70% of public physicians in Indonesia and Thailand are allowed to work for private health facilities outside their office hours to generate additional incomes, while public physicians in the Philippines are allowed to treat private patients in order to keep them in service. Such dual practices encourage physicians to seek employment in urban areas and also affect essential health service coverage for UHC [15].

Thirdly, there is an epidemiological transition of mortality with the coexistence of communicable diseases and the rising burden of non-communicable diseases (NCDs). Indeed, ASEAN countries are confronting with an epidemic of chronic NCDs, accounting for 60% of deaths across the region. NCD age-standardized mortality rates ranged from 720 per 100,000 people in the Philippines to 264.8 per 100,000 people in Singapore. The age-standardized mortality rate caused by NCDs in 2012 in ASEAN was slightly different from the WHO Europe region (537.1 vs. 523.9 per 100,000), but the proportion of mortality rate occurred prematurely was much higher than in the WHO Europe region (50.9% vs. 31.2%) [12, 37]. Aging population, lifestyle behaviors, and environmental factors contribute to this rising deaths from NCDs. At the same time, ASEAN countries also confront with the emergence of infectious diseases, including severe acute respiratory syndrome (SARS) and Influenza (H5N1), which have posed heavy burdens on public health as well as the economy. The factors causing the ASEAN countries to be prone to such infectious diseases are so complex. The SEA region is seen as a center point where biological, social, ecological and technological processes intertwine, allowing microbes to find new ecological places [12, 38].

Table 1: Selected Indicators for Demographic Characteristics and Health Financing in ASEAN

Country	Population (Million)[a]	GNI per capita (PPP int. $)[a]	Poverty Head Count 2012 (%)[a]	GGHE/ THE[b] (%)	OOP/ THE[b] (%)	SHI/ THE (%)	GGHE/ TGE[b] (%)	THE/ GDP[b] (%)
Brunei	0.4	NA	NA	91.9	7.9	0	7.4	2.5
Cambodia	15.3	3,100	17.7	20.5	59.7	0	7.7	7.5
Indonesia	254.5	10,190	12.0	39	45.8	17.6	6.6	3.1

Lao PDR	6.7	5,060	23.2	49.3	40	3.1	3.5	2
Malaysia	29.9	24,080	1.7	54.8	36.1	1.2	5.9	4
Myanmar	54.4	1,270	NA	27.2	68.2	3	1.5	1.8
Philippines	99.1	8,380	25.1	31.6	56.7	37.6	8.5	4.4
Singapore	5.5	55,150	NA	39.8	56.8	11.8	12.5	4.6
Thailand	67.7	13,840	12.6	80.1	11.3	9.1	17	4.6
Vietnam	90.7	5,350	17.2	41.9	49.4	37	9.3	6

Note: GGHE, General Government Health Expenditure; GDP, Gross National Product; GNI, Gross National Income; OOP, Out of Pocket; SHI, Social Health Insurance; THE, Total Health Expenditure; TGE, Total Government Expenditure.

Source: World Bank Data 2014 (a); World Health Statistics 2013 (b).

Lessons Learnt from Thailand

Although ASEAN countries face common challenges, the health system in each country is at different stages of development. ASEAN member countries, especially low-income ones that are struggling to increase fiscal capacity to expand health coverage, can learn from other member states which already progress closer to achieving UHC. The SHI model used in Thailand resembles many other member countries' models in the region; therefore, Thailand's experience in its path toward UHC is explored in detail as a case study.

Healthcare reform in Thailand aimed to achieve UHC with suitable benefit packages to curb the increase in health spending, promote efficiency in health service delivery, distribute more resources to the poor, and strengthen the capacity of the health system in providing health services to the population at large. After more than three decades of a series of reforms on the health insurance system, Thai people are insured through one of the three public health insurance schemes: civil servant medical benefit scheme (CSMBS), social security scheme (SSS), and universal coverage scheme (UCS). The CSMBS established in the 1980s provides health insurance to civil service employees, their dependents, and civil service retirees. This scheme is funded through the general tax revenue with no premiums from beneficiaries. The Comptroller General Department (GDC) of the Ministry of Finance (MOF) manages this scheme. The scheme provides a comprehensive benefit package, including inpatient and outpatient services, emergency treatment, and medicines [39]. It also grants beneficiaries a free choice of health providers. Before 2007, fee-for-service was used for both outpatient and inpatient services to reward civil servants with salaries, but later on diagnosis-related group (DRG) was used for inpatient services to contain the rapidly rising cost [40, 41].

Despite this cost containment method, per capita expenditure in 2010 remained higher than the other two schemes (CSMBS=US$367, SSS=US$71, and UCS=US$76) [17].

The SSS, introduced in 1990, is a compulsory insurance scheme for private sector employees. The scheme is managed by the Social Security Office (SSO) of the Ministry of Labor (MOL) and financed through an equal tri-partite contribution from government, employers, and employees at 1.5% of salary. Since its launch, the SSS expended its coverage gradually and was finally able to reach every establishment with one employee in 2002 [41]. The benefit package under this scheme includes non-work-related illness and a separate worker compensation scheme for work-related illness and injury. Beneficiaries can choose among contracted healthcare providers, and SSO pays a fixed capitation rate per enrollee to each provider. In 2010, per capita expenditure for this scheme was US$71 [17].

The UCS, financed by general tax, was launched in April 2001 in six provinces and expanded rapidly to the rest of the provinces in April 2002. This scheme covered the remaining 47 million Thais who were not eligible for either CSMBS or SSS. It is administered by the National Health Security Office (NHSO), an autonomous institute, that acts as a purchaser on behalf of the beneficiaries [17]. The benefit package is almost the same as SSS in which certain high cost treatments are included. It is worth noting that UCS also covers health promotion and disease prevention for the whole population, which are not included in the other two schemes. Capitation[5] is used for outpatient services, disease prevention, and health promotion, while DRG is used for inpatient services [39]. All health service providers in the UCS have to be registered and approved by NHSO for quality assurance. Per capita expenditure of this scheme in 2010 was slightly higher than SSS (US$76 vs. US$71) [42].

The successful implementation of the UCS, which provides financial protection and more equitable health outcomes for Thai people, can be attributed to the government's high expenditure on health, payment methods that prevent overcharge from healthcare providers, good healthcare infrastructure, strong political will, and strong institutional

[5]Capitation is a payment arrangement for health care service providers, such as physicians or nurse practitioners. It pays a physician or group of physicians a set amount for each enrolled person assigned to them, per period of time, whether or not that person seeks care.

capacity [29, 42-44].

The healthcare system in Thailand is financed mainly by general government tax revenue. As shown in **Table 1**, the Thai government's expenditure on health is the second highest among ASEAN countries, at about 80% of THE. Following the expansion of the health insurance coverage for the uninsured population, the total spending on health has increased rapidly, but as a share of GDP, it remains flat at 4.6% of GDP, slightly diverging from the past trends [39, 44, 45]. One of the most important features of the affordability of the UCS is the ability of the Thai government to control cost as the implementation of this scheme depends entirely on funding from the government. The UCS was designed to cover a large population within the proposed budget constraint. The birth of the UCS in 2001 brought a major health financing reform, including the split of purchasers and providers in the public sector and a strategic purchasing approach. This approach means that active commissioning or contracting for services by NHSO is made using different payment methods to guarantee access within the proposed budget constraints [43, 46]. Funding for contracted providers is calculated according to the number of UCS's members registered for outpatient services. For inpatient care, the system imposes DRG with global budget constraint. This mechanism allows UCS to keep the overall cost within the total available fund. Along the implementation in the past decade, some specific high-cost treatments were also included in order to reduce underutilization and under referral. On top of that, the NHSO also utilizes several additional mechanisms to contain the rising cost, such as using national essential drug list, encouraging the use of generic drugs, and applying monopsony[6] power to negotiate pricing with service providers and suppliers. Furthermore, in order to control utilization of higher-level care, UCS members are mandated to register with UCS's contracted providers in their area to be eligible for referral to secondary or tertiary care and for prepaid services. However, beneficiaries can go to any hospital in case of emergency [43].

Moreover, the success of UCS's implementation can also be attributed to a strong healthcare infrastructure with a well-functioning district health system (DHS) spread across the country. There are almost 50,000 community health posts with community health volunteers working in

[6]A monopsony, sometimes referred to as a buyer's monopoly, is a market condition similar to a monopoly except that a large buyer, not a seller, controls a large proportion of the market and drives prices down.

villages outside of Bangkok. Each sub-district has at least one health center with nurses, health officers, and other health professionals who provide outpatient primary care services. In Bangkok, there are at least 68 health centers. The health centers are well organized with adequate medications and qualified staff. At the village level, the community health volunteers have a list of households' health status in their assigned area. At the sub-district level, population-based household list is used to monitor, implement and expand programs [43]. These result from strong political commitment for health equity, which shifts budget from urban to rural areas, together with adequate human resources for health [44]. The adequate distribution is highly related to compulsory contracts with medical students imposed by the Thai government in 1968 to cope with external and internal brain drain. Through this contract, fresh graduates have to serve in public health facilities for three years or face high fines [47]. In addition, medical students who are assigned to the remote areas are rewarded with additional payment and better opportunities for professional training [43]. This mandatory requirement was later expanded to cover other health professionals. In 1961, MOPH created their own nursing and midwifery colleges to cope with the shortage of nurses and midwives and later introduced a two-year technical nurse diploma in place of a four-year program, and those with the nurse diploma can also obtain a bachelor degree and professional qualification after four years of mandatory rural health services. With these policies, the number of doctors and nurses serving in the rural health facilities has been maintained [48, 49].

Another critical factor is the strong political will to achieving UHC. Before UCS's inception, many external experts believed that this scheme was not financially feasible as it was pursued after the Asian Financial Crisis in 1997 when the GDP per capita was only US$1,900. However, after the electoral victory in 2001, Prime Minister Thaksin Shinawatra from the Thai Rak Thai (TRT) party announced that UHC was one of the government's priorities, and his party was committed to achieving this ambitious plan within one year. It is worth noting that UHC was one of the nine priorities that the TRT party promised to achieve during the election campaign, and the slogan "30 bath treats all diseases" quickly drew attention of the public. The rapid scaling up of UCS, which reached universal coverage in 2002, was largely attributed to the appealing leadership of the party. Despite the political instability between 2001 and 2011, UCS has been anchored by the other six leaders who came to power after Prime Minister Thaksin Shinawatra was ousted in 2006 [17]. After the implementation of USC, the rates of catastrophic health expenditure and impoverishment due to

healthcare cost have decreased dramatically, and the service utilization at DHS has risen substantially [26, 50-52].

Finally, the institutional capacity also played a key role in the success of the health sector in Thailand. Many senior staff who gained from stable employment in the public sector or were educated overseas have carried on the institutional spirit. NGOs have also taken part in providing forums for health policy debates and fighting corruption. Other policies outside the health sector, such as investment in rural development, infrastructure expansion, and improvement in adult literacy, have also contributed to health gain in Thailand [48, 49].

Although Thailand has achieved universal coverage for more than a decade, there remain many challenges confronting Thailand's health financing system. The rapidly rising healthcare spending has prompted the Thai government to use a number of cost-containment measures, such as cost sharing, drug supply management, and cash flow administration under UCS, and at the same time, CSMBS has also been under critical review [43]. The 30-bath co-payment per visit was abolished following Prime Minister Thaksin Shinawatra's ouster in the September 2006 coup [17]. Once removed, it is not easy to reintroduce the co-payment system. However, the government has planned to introduce co-payment for the non-poor to ensure long-term financial sustainability. In addition, the plan to put the three schemes under the supervision of one unified institute has also been discussed [N1]. Another key challenge is to adjust the supply side to accommodate demands for services. Hospitals and staff are centered mainly in the central region [43]. After the UCS implementation, some hospitals under financial support from the government have transformed themselves from general to specialized hospitals [42]. In addition, civil society organizations have increasingly put pressure on the Thai government to solve the discrepancies of benefit packages among the three schemes in which beneficiaries of CSMBS get the most privileged package, whereas the beneficiaries of SSS receive even less benefits compared to beneficiaries of UCS [43].

4. The Cambodian Government's Health Strategic Plans

The Cambodian government's health policy priorities to accelerate health system reforms are outlined in the National Strategic Development Plan (NSDP) 2013-2018. These key priorities are further operationalized in a series of Health Sector Plan (HSP) and programs. Bottom-up approaches from provincial to central levels, with Annual Operational Plans (AOP) and three-year rolling Budget Strategic Plans (BSPs), have been used as instruments to implement the designed interventions.

The first Health Sector Plan (HSP1) was launched in 2003 with a focus on child and reproductive health, HIV/AIDS prevalence, access to health facilities, and utilization of health services. This health sector plan was supported by a Health Sector Support Program (HSSP1) 2003-2008.

HSSP2 2008-2014 supported wider targets in the second Health Sector Plan (HSP2). DPs contributed US$120 million to the MoH through pooled and discrete funds under HSP2. The main focus of HSP2 was reproductive, maternal, neonatal and child health; communicable diseases (CD); and non-communicable diseases (NCD). The HSSP2 was extended to mid-2016 to allow time for the design of the third Health Sector Plan (HSP3) 2016-2020, which is partially supported by the Health Equity and Quality Improvement Project (H-EQIP). The estimated cost for implementing H-EQIP is approximately US$174.2 million, of which DPs contributes US$80 million and the RGC takes care of the rest.

The area of focus in the HSP3 is broader compared to the HSP2, with additional commitment for the development of a responsive and accountable health system [53]. The main goals in HSP3 include: (i) Enhancing equitable access to effective and efficient health services; (ii) reducing maternal deaths, newborn, infant and child mortality, and malnutrition; (iii) reducing burdens of communicable diseases; (iv) reducing burdens of non-communicable and chronic diseases; and (v) reducing impacts on human health due to major public health concerns [54]. The H-EQIP, the successor of HSSP2, provides support to some priorities outlined in the HSP3. The main development objective of H-EQIP is to enhance the quality of health services and to provide financial protection to the poor in the country. Other program objectives are linked to RGC's policy directions, such as enhancing efficiency and quality of service

delivery, moving towards using government systems, and reducing dependency on donors' funding. The H-EQIP program consists of four components: (i) Strengthening health service delivery; (ii) improving financial protection and equity; (iii) ensuring sustainable and responsive health systems; and (iv) emergency response [53].

5. Overview of Healthcare Financing and Ongoing Issues

The health system in Cambodia is mainly financed by the government, DPs, and OOP payment. **Table 2** shows the total health expenditure, by source of financing, from 2008 to 2014. The government spending remained between 19% and 22.7% of THE. The rise in OOP spending offsets the decline in donor and government spending, which is financed by revenue from general tax and social health insurance.

Cambodia's social health insurance comprises of HEF schemes for the poor population and NSSF for the formal private sector workers. Donors and NGOs also support HEF schemes and Community-Based Health Insurance (CBHI) schemes. The total amount of health expenditure, according the recent estimates, did not vary much in the past three years, increasing fromUS$1.032 billion in 2012 to US$1.057 billion in 2014. This was driven mostly by increased OOP expenditures (US$622 million in 2012 to US$658 million in 2014) [55]. The total health spending as a share of GDP remained between 5% and 7%, while per capital total health expenditure rose from US$41.1 to US$68.3.

Table 2: Health Expenditure by Source of Financing From 2008-2014

Category	2008	2009	2010	2011	2012	2013	2014
OOP	60.9%	60.9%	61.6%	62.3%	60.2%	61.9%	63.2%
Donors	20.1%	19.8%	16.0%	15.0%	20.2%	18.7%	18.3%
Government	19.0%	19.3%	22.5%	22.7%	19.3%	19.4%	18.5%
THE (%GDP)	5.3%	6.2%	5.8%	5.5%	7.2%	7.0%	5.8%
THE per capita (US$)	41.1	46.0	47.3	49.0	70.4	72.3	68.3
GDP per capita	772	738	813	885	974	1,033	1,188

Note: GDP, Gross Domestic Product; THE, Total Health Expenditure; US $, US Dollar
Source: MoH, Health Financing Report 2014.

The Health Financing Charter in 1996 allowed public health facilities (PHFs) to charge user fees and grant fee waivers to the poor. However, after this reform, the proportion of poor patients who received fee exemption remained very low because the reimbursement system to PHFs did not function well. As a result, PHFs that were operating at or near to full capacity had no incentive to provide fee exemption, as it affected the salary

supplement of their staff [56]. When this mechanism was not favorable, a series of health financing reforms addressing both the demand and supply sides emerged in the late 1990s to overcome access barriers to health services, especially for the poor, and to expand the health coverage to the population at large [4].

Overview

The demand-side mechanism for financing health services is channeled through third party payers. The HEF schemes, CBHI schemes, voucher schemes, and SHI were initiated one after another, starting from the late 1990s. As outlined in the strategic framework for healthcare financing 2008-2015, the role of HEF scheme is to help the poor who live under the national poverty line as defined by the MoP to access health services and to protect them from falling deeper into poverty.

The role of CBHI is to provide a risk-pooling plan for the informal sector population. The formal sector population is covered by SHI [2, 5].

Table 3 presents the progress of the demand-side schemes from 2008 to 2014. By 2014, 63 out of 97 RHs and 602 out of 1105 HCs were contracted by the HEF schemes. These schemes supported approximately 2.6 million poor. The total cost, including operational costs for Health Equity Fund Operators (HEFOs) and Health Equity Fund Implementer (HEFI), rose to more than half in a five-year period (US$ 4.8 million to US$11.5) [4]. This was driven by the expansion of coverage. The HEF schemes will be further scaled up to cover all RHs and HCs across the country by the end 2016 [57]. The CBHI schemes had been operational in 11 provinces, with about 139,971 beneficiaries, as of 2014. The total cost of all CBHI schemes was about US$284,883 in 2014. A voucher scheme began in 2011 with the aim to reduce maternal mortality. The scheme provided support to poor women to use reproductive health services atcontracted public and private health facilities [58]. This scheme supported 68,271 women of reproductive age in 20 ODs, with a total cost of US$1.8 million in 2014.

For the formal sector, there are two types of SHI schemes, one for private sector employees and anotherone for civil servants. The National Social Security Fund (NSSF) for the private sector is managed by the Ministry of Labour and Vocational Training (MoLVT), and the National Civil Servant Social Security Fund (NCSSF) is mangedby the Ministry of Social Affairs, Veterans, and Youth (MoSAVY) [4]. The NSSF provides work injury

compensation and comprehensive health insurance for private sector employees. The work injury insurance scheme began in 2008 which mendated owners of the registered enterpirses with 8 empoyees or more to contribute 0.8% of average wage of employees to NSSF.[7] As of 2014, there were around 7,041 enterprises with 1,021,588 employees registered with the NSSF. The comprehensive health insurance scheme for private sector workers has been rolled out inPhnom Penh, Kandal, and Kampong Speu by mid 2016 and will furtherbe scaled up in 2017 based on the lessons learnt from the initial phase.[8] For civil servants, a sub-decree on the provision of pension, occupational injury benefits, and other benefits have been drafted, but not yet finalized. Currently, MoSAVY is working closely with other relavent ministries, especially MoH and MEF, to determine who should be included in the scheme, the benefit package, and payment method for OPD and IPD.The scheme for civil servants is expect to be launched in 2017.[9]

The supply-side mechanism includes fee exemption, Special Operating Agency (SOA), and Subsidy Scheme (SUBO). The exemption fees for the poor are reimbursed by the MoH, of which 40% is used to cover operational cost and 60% for staff incentives [59]. The SOA aims to improve the quality of public health services in response to health needs, change the behavior of health staff, and develop sustainable service delivery capacity [4]. SOA health facilities are eligible to charge fees for services or contract with HEFO to deliver services to people in their catchment area. As part of the contract with MoH, managers of SOA have the authority to terminate members of staff who conduct private practices, hire or rotate staff, and implement a range of performance-based staff incentives [60]. As of 2014, there were 36 SOAs operating in 26 ODs [4]. SUBO emerged in 2006 where PHFs were reimbursed for user fee exemption for the poor. This is one of the HEF schemes, but it does not go through a third-party implementer. Basically, PHFs get payment through the provincial treasury on a quarterly basis [61]. The SUBO is mainly implemented in the areas with no HEF scheme. As shown in **Table 2**, the scheme had not been scaled up, and the total expenditure had substantially decreased (see Appendix 2for details of the demand and

[7] Memorandum of Understanding for supporting social health protection in Cambodia, available at: www.nssf.gov.kh
[8] Healthcare access to expand, the Phnom Penh Post in May 2016, available at: http://www.phnompenhpost.com/national/health-care-access-expand
[9] This information was circulated by DPs during P4HC+ meeting

supply schemes) [62].

The Cambodian government has implemented several SHI schemes to improve access to health services and expand health coverage to the population at large. These initiatives also help PHFs that are underfunded to improve quality of care and expand health services. Although SHI schemes provide a range of benefits to the insured population and PHFs, the schemes from both the demand and supply sides also face challenges, which require increased support from the government as well as DPs in order to expand the health coverage effectively.

Challenges

From the demand side, the operation of HEF schemes involve multiple partners, such as MoH, DPs, HEFIs, and HEFOs, which create a fragmented system with complex reporting requirements and high operational cost. As a result, the reimbursement is regularly delayed. This situation affects the operation of PHFs that depend heavily on funding from these schemes [59, 63-65]. The H-EQIP, successor of HSSP2, launched in September 2016, was designed to tackle these issues.

CBHI also faces ongoing challenges. Many organizations that operate CBHI schemes are unable to expand their coverage and have difficulties sustaining operation without support from the government and DPs. As shown in **Table 2**, the number of insured persons has declined by approximately 70%. There are several reasons attributed to this huge drop. The benefit packages are less attractive to the insurred as the risk pools are so small. On the other hand, people do not understand why they should purchase health insurance and what they can get from the insurers. This is also atrributed to the perceived poor quality of care of the contracted HFs. People do not trust that they can get much from the contracted HFs.

For the supply side, the SUBO scheme is reported to have various issues related to its design and implementation, which severely reduce the effectiveness of the scheme. There were no contracts or memorandum of understanding (MoU) between the Department of Planning and Health Information (DPHI) and ODs/NHs to implement the scheme; staff at the health facilities did not receive enough training on how to operate the scheme; and some poor patients with or without equity access card (EAC) still had to pay for services. With these constraints, researchers suggested

that SUBO be pursued with improved design; integrated into the HEF scheme in which government budget is used for user fee reimbursement and DPs' fund is reserved for transportation, food allowance, and other costs; or completely replaced by the HEF scheme [66]. However, the removal of SUBO is only feasible once HEF schemes are available at NHs. So far, only the Khmer-Soviet Friendship Hospital uses the HEF scheme.[10]

Table 3: Summary of Social Health Protection Schemes 2008-2014

Category	2008	2009	2010	2011	2012	2013	2014
Health Equity Funds							
OD	42	42	44	44	45	49	51
National Hospital			1	1	1	1	1
Referral Hospital	44	44	44	45	46	50	63
Health Center	110	141	235	272	313	458	602
Total Cost (US$)		4,820,215	4,652,391	6,429,228	10,045,676	9,959,458	11,559,134
Population's coverage	469,038	909,606	1,535,478	2,028,739	2,244,852	2,693,373	2,620,759
Community-Based Health Insurance							
OD	12	13	18	18	19	19	20
National Hospital			2	2	2	2	1
Referral Hospital	11	12	20	20	18	24	20
Health Center	81	81	164	182	231	240	183
Total Cost (US$)	448,944	697,089	855,604	901,361	662,715	1,213,722	284,883
Population's coverage	79,873	122,829	170,490	297,687	166,663	455,648	139,971
Voucher							
OD				9	9	9	21
National Hospital							1
Referral Hospital				5	5	5	19
Health Center				78	118	121	297
Clinic				2	4	4	8
Total Cost (US$)				307,606	1,119,631	1,229,255	1,804,337
Utilization cases				13,712	36,299	53,772	68,276
Subsidies							
OD				12	12	12	12
National Hospital				6	6	6	6
Referral Hospital				11	11	11	11
Health Center				47	57	57	57
Total Cost (US$)				351,606	284,955	424,561	214,940
Utilization cases				71,078	75,771	55,928	48,827

Note: OD, Operational District; US$, US Dollar.
Source: MoH, Health Financing Report, 2014

[10] Information executed from TWG meeting in January 2016

6. Strengthening the Health Governance Structure

Some of the ongoing issues in the health sector, which slow down the process of healthcare financing reforms, can be tackled through the RGC's reform efforts in the past years. Indeed, since 2008 the government has centered its focus on public financial management reform, public administration reform, and decentralization and deconcentration reform, which to some extent have helped to decongest the centralized administration and reduce some leakages inside the MoH.

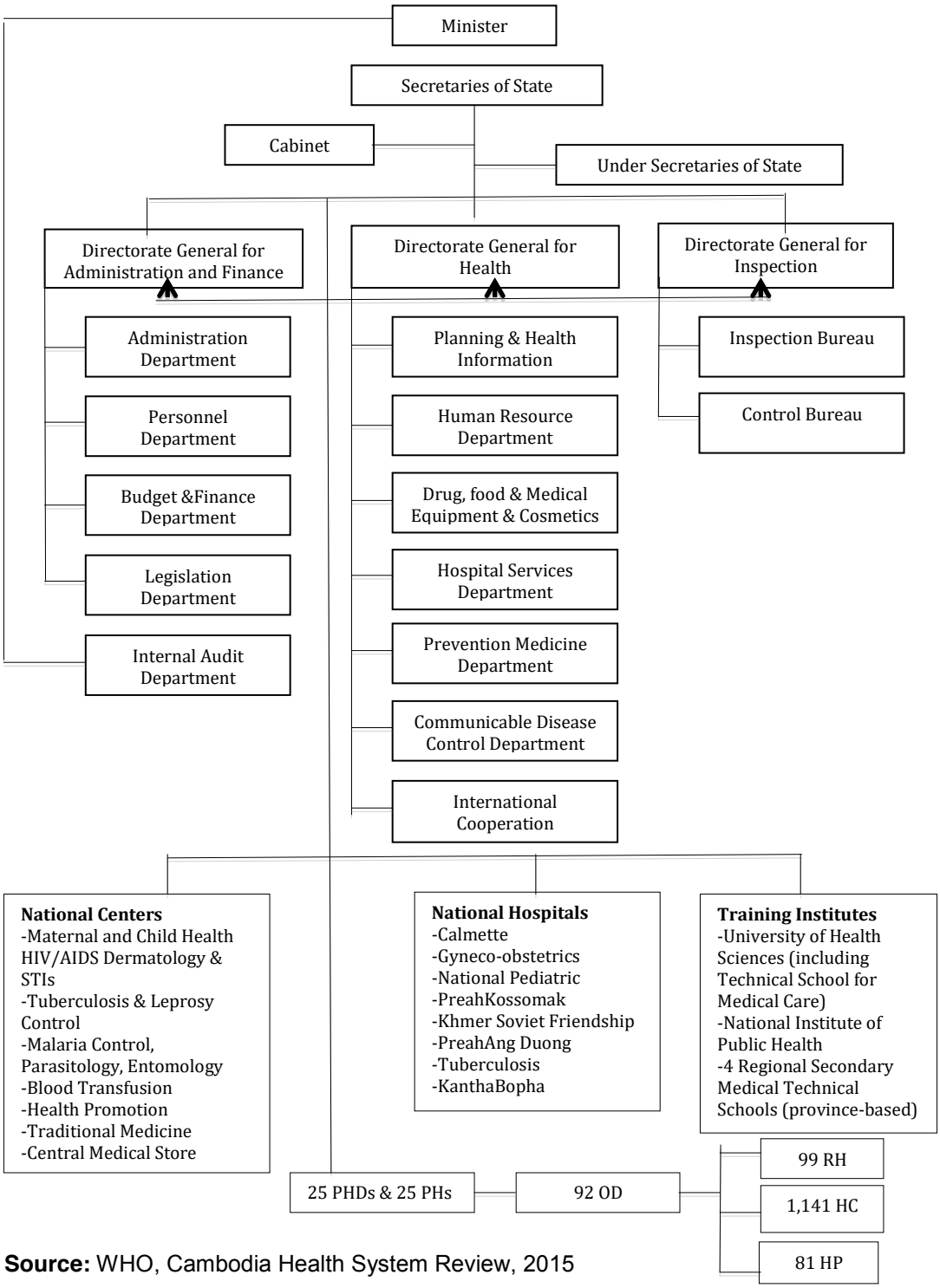
Overview of the Health Governance Structure

The MoH, as mandated by the RGC, governs both public and private health sectors. The public health sector mostly provides preventive and inpatient services, while the private providers focuses more on curative services, mainly through outpatient consultation. Public health services are arranged according to the district health system model with three levels of responsibility. **The central level** is in charge of developing policies, legislations, and strategic plans; providing training and support to provinces and districts; coordinating with other ministries and external aid; mobilizing resources; and conducting evaluation. **The provincial level** is responsible for implementing the health strategic plan through annual operational plans; allocating and using the available resources effectively; and linking the central level with health operational districts. **The district level (operational districts)** is responsible for delivering effective and comprehensive health services and implementing national policies and provincial health strategies [67].

The comprehensive governance structure of the MoH is shown in **Figure 1**. The minister of health leads 12 secretaries of state (the policy teams) and three general directors (the technical teams). There are various technical departments under the supervision of the three general directors [60]. The general directors have to ensure that the objectives outlined in NSDP are transformed into policies, strategies, and guidelines to reach the targets set by the RGC. The general directors for health through their eight departments are responsible for developing and implementing MoH policies, and oversee 25 Provincial Health Departments (PHDs) and 92 ODs. PHDs manage provincial hospitals and ODs. The number of ODs in

each province varies, from 1 to 10, based on geography and population as instructed in the 1995 health coverage plan. OD with a catchment population of 100,000–200,000 has to have at least one RH and a couple of HCs. AHC covers a catchment population of 10,000–20,000, where as a Health Post (HP), the lowest tier and located around 15 kilometers from the nearest HC, covers a catchment population of 2000–3000 [67].

Figure 1: Governance Structure of the Ministry of Health



Source: WHO, Cambodia Health System Review, 2015

Key Issues Affecting Health System Governance

The task of ensuring good health outcome depends on the efficient use of public resources and ability to ensure quality services provided by both public and private sectors. In this regard, governance arrangement in the health sector faces a number of challenges:

Firstly, although the governing structure looks like a Weberian-style bureaucracy, decision-making inside the MoH is influenced by several important figures outside the health sector. Existing reports suggest that the figures from inside and outside of the MoH have formed a strong coalition that to some extent dominates the health system governance [60]. This impacts the ability of the MoH to exercise value judgment/technical decisions required for efficient and quality operation in the sector.

Secondly, the management of public finance also faces with some difficulties. Existing reports suggest that within the MoH it remains difficult to ensure accountability and transparency in the management of the health budget at the central level, particularly in procurement. Development partners have raised regular concerns about transparent budget handling; however, progress has been incremental [60]. In addition, the ongoing PFM reform will give more authority to the budget manager and move toward more focus on results for the implementation of program budget. A program budget structure has been introduced into the line item budget,[11]but budget negotiation continues to be based on line items, making the budget strategic plan developed by the MoH less meaningful.

Thirdly, the health sector also suffers from an insufficient incentive structure and performance management for its staff. Some reports point out that merit counts little and that certain appointments or promotions are not evaluated based on achievements and ability to handle the workload, making some highly qualified staff underutilized [60]. The competency and motivation of frontline staff are commonly low due to lack of funds for additional training and low salaries. Thus, they usually look for other sources to earn additional incomes to support their living. Dual practice among health sector workers is common. With more opportunities for private practice in urban areas, many health workers are crowding in urban centers, leaving rural areas behind.

[11] A line item budget is an accounting method that lists all of an organization's expenditures based on the departments or cost centers.

Ongoing Efforts to Strengthen Health System Governance

Public Financial Management Reform

The RGC launched the Public Financial Management Reform Program (PFMRP) in 2004 to tackle issues in the public financial management system. The PFMRP is based on a multi-stage/platform approach and implemented by the Ministry of Economy and Finance (MEF) through its reform committee secretariat. The first three-year period, starting from 2005, focused on improving budget credibility. During that period, the government adopted a new procurement law, revised procurement and financial management manual, implemented a new debt management strategy, improved cash planning and cash flow management systems, and established the treasury single account (TSA). By 2008, it was agreed among all stakeholders that budget credibility was more or less maintained. Building on the gains from the first stage, the reform in its second stage focused on financial accountability, which was implemented until 2015. The third stage was launched in 2016 with the aim to link budget and program planning, and transfer some of the responsibilities to budget owners. The fourth stage will emphasize on result-based budgeting and other plans to enhance the accountability of the budget process [68-71].

The MoH is among the pilot ministries to implement PFM reforms in its central and sub-national administrations. This reform substantially contributes to an additional increase in budget investment in health, enhancement in transparency of budget allocation and expenditure (to some extent), and improvement in the performance of public sector providers through result-based budgeting [54]. With the ongoing reform of the PFM system of the RGC, the treasury single account (TSA) will be strengthened, and transfer of funds will be carried out through the banking system. The new unified chart of account (COA) and the new uniform account code structure will be used, enabling the government to generate financial reports more accurately and timely. The COA has been implemented at the central and sub-national levels of the MoH since 2014 in preparation for the financial management information system to be rolled out. However, it will take a few more years to process all inputs and to fully rollout the unified COA as there is recently only a limited version of administrative, economic, and functional classifications being utilized. Moreover, the MoH as well as other pilot ministries does not have enough qualified accountants and has to depend heavily on staff with other qualifications to perform financial management tasks [53].

Public Administrative Reform

Starting from 1994, the RGC established the inter-ministerial technical committee (COMEX) to redesign the state structure, improve the management capacity of line ministries and institutions, reform civil service procedures, strengthen management capacity of cities and provincial administrations, and enhance human resource development. In 1999, the RGC formed the Council for Administrative Reform (CAR), which worked under the general direction of the Supreme Council of State Reform chaired by the Prime Minister, to lead the development of the National Action Plan for Public Administration Reform (NPAR), with the intention to further upgrade the public administration to be more operational, productive, and accountable. Progress of the civil service reform was slow until after the 2013 election when CAR's role was shifted to the Ministry of Civil Service (MCS) (established in 2013). The NPAR 2013-2018 was designed with three overarching objectives: Strengthening the quality and delivery of public services, improving the management and development of human resource within the civil service, and reforming the compensation for civil servants [70, 72, 73]. Notable progresses include improved compensation for civil servants (particularly those in priority sectors, such as health and education, with the restructure of civil service salary to allow for a more realistic increase of basic salary), improved location-based allowance for remote posting, timely payment of salary directly through civil servants' bank accounts, and automatic tax deduction for salaries beyond a certain threshold. Despite these improvements, ensuring that civil servants are adequately incentivized and their performance appropriately managed remain an ongoing challenge.

Through the RGC's NPAR, SOA in the health sector has been set up to provide broader management autonomy to district health facilities and hospital directors by using the internal contracting arrangement and community monitoring. Currently, there are 36 SOA-ODs, with four additional ones to be created in 2016 [53, 67]. The SOA-ODs receiving Service Delivery Grants (SDGs) have made great improvement on various performance indicators, particularly financial management. However, there remain some issues related to the design and use of the service delivery grant and performance component of the SDG that need to be settled [54]. From mid-2015, all SOAs also became budget entities. With this status, SOAs can retain petty cash, do procurement, and get disbursement to their bank accounts directly from the Provincial Treasury (PT) [53].

Decentralization and Deconcentration

The decentralization and deconcentration reform began in 2001.The RGC started the reform at the Commune and Sangkat (C/S) level through two laws: the Law on the Administration and Management of Communes and the Law on Commune Election. C/S councils were directly elected for the first time in 2001. Furthermore, to provide the administrative basis for decentralization and deconcentration, the Ministry of Interior (MoI) adopted the organic law on Administrative Management of the Capital, Provinces, Municipalities, Districts and Khans in 2008 [53]. The organic law created a framework to (i) establish three tiers of subnational administration (province, municipality/ khan/ district, and sangkat), each with their own elected council (only commune/sangkat councils are directly elected; high level councils are elected through the electoral college comprising of commune/sangkat councilors); (ii) select the board of governor to act as the chief executive of the province and khan, and supervisor of the provincial department of national ministry; (iii) permit the council to select their staff members; (iv) allow the council to take care of their own financial administration; and (v) create the National Committee for Democratic Development (NCDD) to review the roles and functions of line ministries and decide which functions should be delegated to the lower tier levels [N10]. Following this, the national program for Sub-National Democratic Development (SNDD) was established for the period 2010 to 2019 to implement the organic law. The national program was designed to enhance local accountable participation, expand pubic services and infrastructures, promote social development, and reduce poverty. The first phase of the program implementation focuses on alignment of line ministries' oversight; the second phase centers on the commission of the financial management to subnational administrations; the third phase emphasizes the full handover of specific and mandatory functions to subnational administrations [67].

For this decentralization process, the MoH had to do a mapping exercise of functions and determine associated resources to prepare for the transfer of administrative duties to the subnational level [N10].

Between October 2014 and December 2015, the MoH completed a review of the mapping exercise of functions and piloted a functional transfer project in three districts in Battambang and two districts in Pursat. The functions transferred during the pilot period consisted of (1) maintenance of commune health center buildings (service, electricity and water supply); (2)

support to the Health Center Management Committees (HCMCs) and Village Health Support Groups (VHSGs); (3) provision of incentives to health staff and expansion of additional services (community outreach and 24-hour standby services); and (4) strengthening monitoring and evaluation mechanism of service delivery at health centers and communities.

End of 2015, at the central level, guidelines for piloting delegated functions, financial allocation, and procurement processes, have been fully developed in preparation for the second phase of the pilot. In addition, an action plan and monitoring and evaluation framework have also been established. The capacity development support for piloted districts and relevant project officers as well as financial transfers have also been implemented.

Starting from 2016 until 2017 and based on the gains from the first pilot project, some non-technical management tasks of 24 HCs and 9 HPs within four target ODs (Kampong Speu, Kandal, Phnom Penh, Tboung Khmum) have been transferred gradually to the administrative district. During this second phase, only ODs with one Administrative District (AD) were selected to ensure that health service delivery is not interrupted and is provided according to the national health policy and clinical practice guideline [N1, N8, N9].

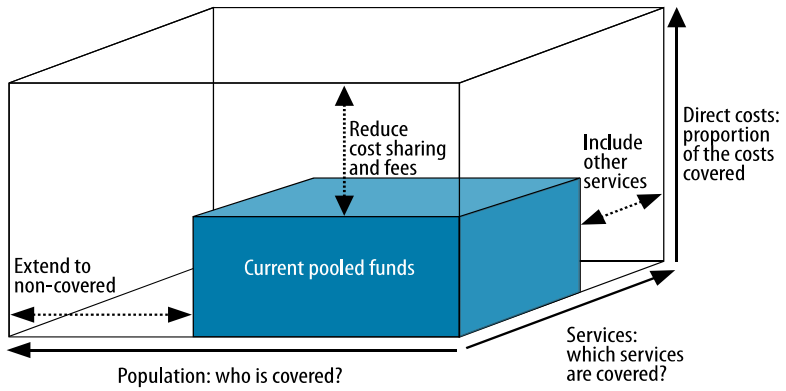
End of 2016, when the second phase of piloting is almost coming to an end, the MoH proposed to transfer provincial health system (PHD, PRH, OD, HC, and HP) to Provincial/Municipal Administration. In this sense, the MoH leaves the decision whether to transfer OD functions (RH, HC, and HP) to administrative district to NCDD and provincial administration, and the roles of PHD will be reviewed and revised to align with the changes. Phnom Penh, Kampot, and Battambang were chosen for piloting in 2017, while further expansion will be considered based on the outcome of the current pilot projects.[12]

[12]This information was circulated by GIZ during DPs meeting in November 8th 2016.

7. Toward Universal Health Coverage

Universal Health Coverage (UHC) is defined as all people obtaining the quality health services they need on time without facing financial difficulties. In this regard, UHC involves equity in the use of health services, quality of care, and financial protection [74]. The concepts of UHC were initially described in a cube diagram in the World Health Report in 2010 (**Figure 2**). The first axis represents the number of people who need health services, and the second axis shows the availability of services the people need. The vertical axis represents the share of total cost for delivering services to the people that is supported by pooled funds. The size of the blue cube depicted in **Figure 2** shows that slightly more than half of the population is insured for approximately half of the services they need, and only half of the cost of these services are financed through pooled funds. For a country that wants to move closer to achieving UHC, the size of the blue cube has to be expanded further. This means making health services available to more people who are in need but do not receive any; increasing the number of services to those who receive some of the services but not all, per their needs; and improving financial protection by raising the amount of health spending financed through pooled funds. **There is no single path towards UHC that a country can follow**; therefore, each country has to find its own UHC's path according to its own available resources [75, 76].

Figure 2: Three Dimensions to Consider When Moving Toward Universal Health Coverage (UHC)



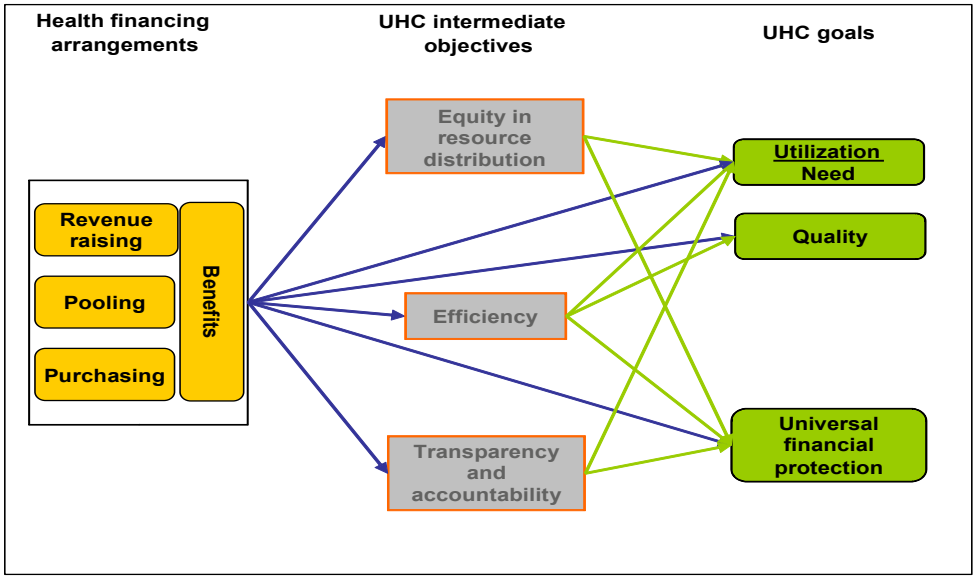
Source: WHO, World Health Report 2010

Athorough situation analysis of a country's health financing system – which provides detailed information on whether or not the current health system is being implemented well, explains the reasons behind this state of implementation, and outlines the issues the country encounters –is recommended for countries that want to achieve UHC. **Figure 3** presents the connections between health financing functions, intermediate objectives, and UHC's ultimate goals. The immediate objectives are the steppingstones toward achieving the UHC goals. These intermediate objectives consist of equity in resource distribution, efficiency, and transparency and accountability. The equity in resource distribution means that the resources should be used in line with needs for health services and in accordance with socio-economic groups and geographic areas. Similarly, efficiency implies that resources should not be wasted but used to their potential to provide effective and good quality services. Transparency helps promote people' knowledge of their health rights and empower them to use these rights, while accountability refers to a possibility of public inquiry in the use of public funds and on what is promised to be delivered [74].

The three health financing functions (revenue raising, pooling, and purchasing) on the left hand side of **Figure 3** are related to the UHC intermediate objectives and goals individually or in combination with other functions. The first health financing function (revenue-raising function) is essential for moving toward universal financial protection. **The revenue raising mechanisms** include: Compulsory or mandatory prepayment, voluntary prepayment, OOP, and external sources. **The second one is pooling**, which refers to the arrangements of prepaid funds for health on behalf of some or all of the population with an aim to maximize the redistributive capacity of these funds, but the effectiveness of the redistribution depends largely on the size of the pool, diversity of population in the pool, and compulsory versus voluntary participation. **The last health financing function is purchasing**, which refers to the payment mechanisms to health service providers using pool funds. The benefit entitlement policies for insured population, provider payment mechanisms, and organizational structure and governance of the purchasers, are considered when analyzing the purchasing function. Generally, the majority of the population has some form of entitlement to benefits from health services, but some groups, such as undocumented immigrants, may not be eligible for any services. It is useful to look at the

cube diagram shown in **Figure 2** when considering benefit entitlements: Proportion of the population that is insured, number of services provided, and costs of which health services are covered [74].

Figure 3: The Links between Health Financing System and Universal Health Coverage's Goals



Source: WHO, Health Financing Diagnostics and Guidance, 2016.

Revenue Raising Mechanisms (A Top-Down Approach)

The revenue raising function is essential for promoting the UHC goal of financial protection when pooling is arranged in a way to maximize the redistributive capacity of the prepaid funds. Upon setting up what can be redistributed, the effect to which this can be realized in practice hangs on to the purchasing function, which controls the expenses and incentives that have essential implications for the intermediate objectives related to the efficiency and equity in resource distribution. This section focuses on the mechanisms that the Cambodian government can use to raise revenue for health system so that the coverage as well as quality of health services can be expanded to the majority of the population in the coming years.

Firstly, this revenue can come from general taxes levied directly on individuals or firms, such as personal income tax and tax on corporate income or profits; taxes levied on consumption or trade, such as value added tax and customs duties; and government-owned enterprises or

assets, such as oil, gas, gem, and minerals. The government currently implements the Medium Term Revenue Mobilization Strategy 2014-2018 with a focus on strengthening revenue administration and has made a substantial improvement in generating revenue, reaching 17.5% of GDP in 2015 [77]. However, the revenue increase remains insufficient to fund the needed investment in social services, with a large proportion of the government budget dedicated to improving compensation under the civil service reform. Going forward, the RGC will benefit from increasing the tax base by identifying additional sources for tax revenue to ensure fiscal sustainability with an increased budget allocation to achieve UHC.

Secondly, the government can also impose earmarked taxes on certain products to finance UHC [74]. It is difficult to ensure that sufficient budget is made available for UHC given the presence of many development priorities; however, additional resources could be earmarked from specific taxes. Asian governments in the last few years have applied earmarked taxes on a series of goods and services, especially alcohol and tobacco. For example, in South Korea, education financing partially comes from taxes levied on alcohol, while public health is partially financed from tax levied on tobacco. Taiwan's tax imposed on cigarettes has been used to finance its health and welfare since 2002. In Thailand, taxes on alcohol and cigarettes are designated to fund the Thai Health Promotion Foundation [N14].

Thirdly, the revenue can be raised through social insurance contributions, known as payroll taxes. Other revenue raising mechanisms include voluntary prepayment, household OOP spending, and development assistance.

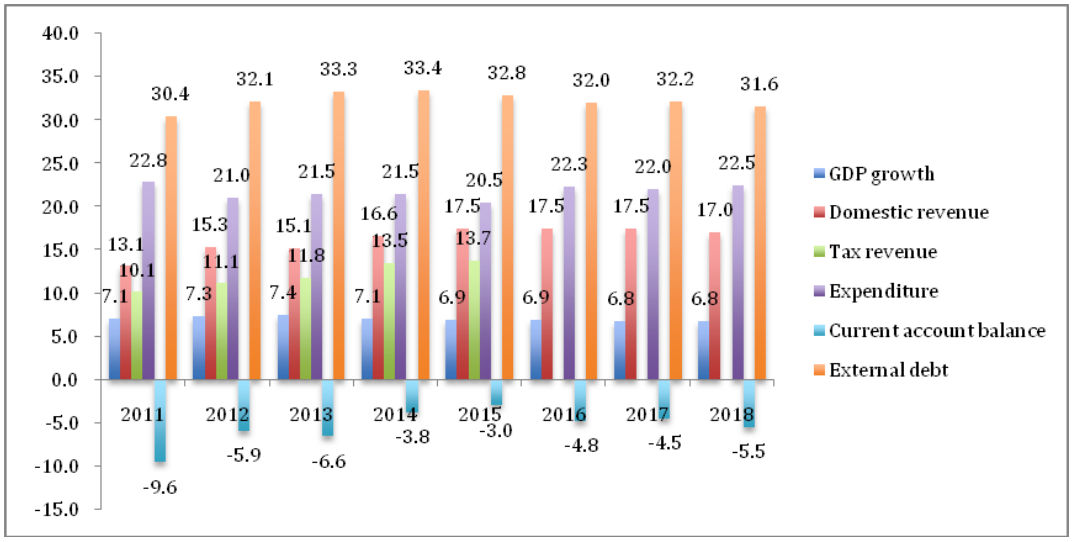
A combination of the above revenue raising mechanisms can be used to finance the health system. In the last two decades, a key challenge in Cambodia is the high level of OOP spending, indicating insufficient financial protection. To be able to reduce OOP expenditure, the majority of the Cambodian population will need to be insured through prepayment schemes. The application of prepayment schemes has been successful in Thailand. Prior to the introduction of UHC, 75% of the Thai population not enrolled in a civil servant medical benefit scheme or social security scheme were not covered, but they are now covered by the universal coverage scheme, which is financed by general tax [42]. OOP spending for Thai decreased from 18.3% before universal health scheme to 8%-10% after

the launch of this universal health scheme [50]. In Cambodia, UHC can be expanded by filling gaps in the current schemes while expanding coverage of the prepayment schemes. All of the formal sector employees should be insured by the SHI schemes, and the poor can be supported by HEF. The remaining population in the informal sector (of which a very small proportion is enrolled in CBHI) can be insured by the expansion of the prepayment schemes.

Using tax revenues to fund the coverage expansion is the most sustainable way to support this large informal sector to enroll into a prepayment scheme. This would hang on the fiscal capacity of the RGC. Fiscal capacity refers to "the government's ability or willingness to mobilize public revenue, which in turn allows it to spend money on public services and programs, including health." When the fiscal capacity is high, public spending on health can also be enlarged. The higher public spending on health is, the lower dependence on OOP spending for health services becomes. This is essential for achieving the UHC goals as it implies higher financial protection when seeking health services [74].

To gauge the fiscal capacity of the RGC, we look at four indicators: Government revenue to Gross Domestic Product (GDP) ratio, government expenditure to GDP ratio, budget deficit, and government debt to GDP ratio. **Figure 4** shows the trends of these four indicators from 2011 to 2018.

Figure 4: Key Fiscal Indictors as Percentage of GDP: 20011-2018



Note: Data on domestic revenue, expenditure, and current account balance excluding grants were taken from the Cambodia Economic Update 2015 and 2016, whereas the data on tax revenue were extracted directly from the World Bank website.

Government revenue to GDP ratio

Stable economic growth in the past decades allows the Cambodian government to expand its tax base and tax capacity. Tax revenue collection, both direct and indirect taxes, rose steadily each year from around 10.1% of GDP in 2011 to 13.7% of GDP in 2015. Despite this gradual increase, until 2015, Cambodia still had a very **low fiscal capacity** according to the rule of thumb suggested by the IMF and the WB:15%-20% is equivalent to low fiscal capacity; 20%-25% low to medium; 25% to 35% medium; 35%-45% medium to high; and 45% or above very high. From 2016 to 2018, tax revenue probably will not be increased far beyond the 2015 level as the domestic revenue is predicted to be the same in the next three years. Based on this prediction, Cambodia will maintain its low fiscal capacity in the next three years. To move from low to medium level, it will take several years with continued improvement in tax administration and compliance management.

Government expenditure to GDP ratio

The government expenditure remained stable in the past five years, about 21% to 22.8% of the GDP. This expenditure is predicted to be the same in the next three years. According to the rule of thumb above, which also applies to government spending, it indicates that the Cambodian government has **medium-low fiscal capacity**. The expenditure trend from **Figure 4** reflects that the overall government spending from 2011 to 2015 barely increased beyond 1% to 2% of GDP and will remain the same in the next three years. When the overall expenditure does not increase, it is difficult to argue for more public spending on health because increasing real spending on health may require decreasing spending on other prioritized sectors.

Current account balance and debt to GDP ratio

The current account balance discussed here does not include grants. The government has been running a budget deficit from 2011 to 2015. Although the amount of budget deficit was smaller in 2015 compared to 2011, this will not be reduced further in the next three years as the revenue and expenditure are predicted to be the same. This budget deficit generally indicates that the Cambodian government will have difficulty to increase its spending. Concerning debt, it remained stable in the past five years and

will not be increased beyond 32% of GDP, according the prediction from the WB. This ratio of debt to GDP is still within the recommended range. For low- and middle-income countries, as suggested by the IMF and the WB, crisis occurs when debt to GDP ratio exceeds 40% of GDP [74].

By looking at the key fiscal indicators, there is room to increase fiscal capacity in Cambodia. The real GDP growth, which is predicted to be 7% annually, will translate into higher government revenue in absolute terms. Although the share for health out of total government expenditure remains the same, the real amount increases because of the positive GDP growth. After 2018, the proposal for an increased percentage share of total government expenditure for health is more realistic if the total government expenditure increases in real terms. In this context, increased real health expenditure does not affect spending on other sectors. However, it is not easy to argue for more in practice. For an increase in funding support to this sector, the MEF usually requests the MoH to provide proof that the existing resources are being used efficiently [74].

As the share for health out of the total government expenditure is predicted to be the same until 2018, a key area that the MoH should focus on is to demonstrate that the ministry is using the existing public fund efficiently and effectively in order to make the case for increased budgetary resources after 2018.

A 2011 study conducted by the WB showed that the Cambodian government can reap substantial savings by improving procurement and logistics management for drugs and medical supplies, coordinating budgeting and planning processes better, and integrating demand-side and supply-side mechanisms for health financing schemes [78]. According to this study, the government could save up to one-third of the 2010 health budget (0.4% of GDP) with efficient purchasing of drugs and medical supplies. The government can further save through converging the BSP, the AOPs, and annual budgets in terms of coverage, types of spending, and sources of financing [78]. The government can reduce administrative costs and minimize misunderstanding between contractors (health facilities) and purchasers (MoH, URC, and NGO) by consolidating some of the demand-side and supply-side schemes. The government has initiated several health financing schemes and incentives, such as HEF, subsidies, user fee exemption, special operational agencies (SOAs), vouchers, and midwifery payments, to provide additional compensation and motivation to government health workers (see appendix 2 for details of each scheme).

Each scheme has different rules regarding the allocation of revenue collected for health facilities' staff, and there is no clear guideline on how much additional revenue staff should receive. This permits health facilities to maximize their revenues through costly services and makes the services less efficient and accessible for the near poor and informal sector [78]. Beside, patients are more likely not to understand their benefit entitlements or know which providers are contracted for what services.

Quality of Healthcare (A Bottom-Up Approach)

A priority for Cambodia is to increase the number and coverage of the health providers and to enhance the quality of care in both private and public health facilities. Health service coverage has been expanded, particularly for maternal and child health care following the implementation of the Fast Track Initiative Roadmap for Reducing Maternal and Newborn Mortality, the increase coverage of skilled birth attendance, and other safe motherhood services. However, the quality of care remains the main concern in both public and private sectors [67].

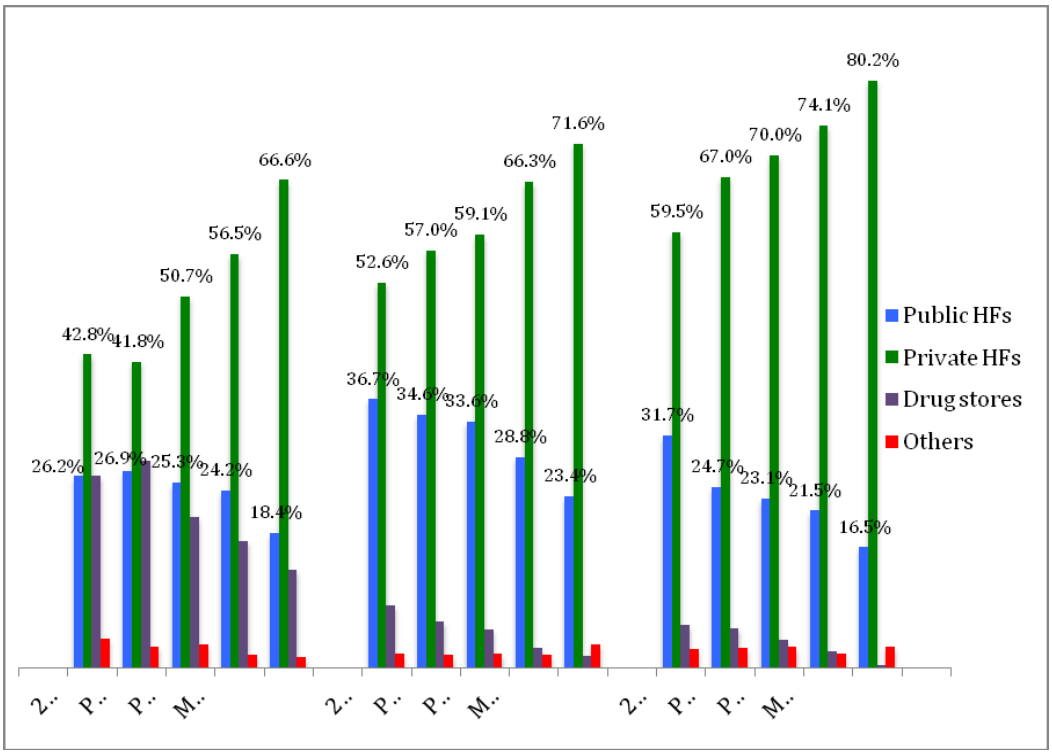
The quality of public healthcare is constrained by the poor conditions of facilities, shortage of staff, and lack of staff motivation (incentives). Most sick and injured people use private health facilities, which have sprouted quickly in the past decades, as their point of first contact. The visit to private health facilities during the episode of illness among children aged 0-9 as shown in **Table 4** increased from 44.4% in 2005 to 69.1% in 2014, while the rate of adults aged above 14 jumped from 53.2% in 2005 to 71.7% in 2014. Even among the poor quintile, the use of private health facilities rose from 42.8% in 2005 to 59.5% in 2014 (see **Figure 5**).

Table 4: Place to Seek Treatment: 2005-2014

Age	Public Health Facilities (%)	Private Health Facilities (%)	Pharmacies/drug stores (%)	Others (%)
2014				
0-9	25.6	69.1	4.1	1.0
10-14	23.0	67.7	5.7	3.6
15+	22.1	71.7	2.9	3.3
2010				
0-9	35.7	57.9	5.6	0.8
10-14	29.9	61.2	7.2	1.7
15+	29.8	62.6	4.6	3.0
2005				
0-9	28.0	44.4	25.5	2.1
10-14	21.7	48.8	28.0	1.5
15+	23.6	53.2	19.7	3.5

Note: Data were calculated using Cambodia Health Demographic Surveys: 2005-2014.

Figure 5: Choices of Health Facilities according to Five Wealth Quintiles



Note: Data were calculated using Cambodia Health Demographic Surveys: 2005-2014.

As of 2015, the public health sector had 1,413 public facilities spread over 92 ODs and employed 20,954 health workers, of which 2,346 were medical doctors, 8,918 nurses, and 5,412 midwives. The private health sector comprised of around 8,488 licensed private health facilities ranging from simple medical consultation rooms to sophisticated hospitals [57]. Although the registration of all private health facilities is mandatory since 2000, it has been loosely regulated [67]. Furthermore, the exact number of skilled workers serving in this sector is not known, as health professional councils are still at their early stage of implementation. The most pressing issue in both public and private sectors is not so much about the number of health workers as it is about the levels of skills and competencies. A previous study showed that approximately 30% of the medical doctors could not properly diagnose common infectious diseases. For certain diseases, even after correct diagnoses, the probability of providing the right medication was only about 70%. It is a daunting task to certify who is a qualified

medical practitioner and who is not under the current medical accreditation and licensing system in the country [79].

Other key challenges to improve quality of care are the discrepancy of health workforce distribution between rural and urban areas, shortage of medical and nursing specialties, and widespread dual practices.

The section below focuses on contribution of not-for-profit hospitals in improving quality of care in Cambodia from which good practices could be expanded to both public and private health facilities to accommodate the rising demands for quality health care once health insurance schemes are scaled up.

Study of Various Healthcare Models

Some not-for-profit hospitals in Cambodia provide free healthcare, while others charge user fees to be able to sustain and expand their services. Whether or not user fees are charged, the hospitals mostly target the poor and near-poor population. This study discusses the model of healthcare of Angkor Hospital for Children (AHC), Kantha Bopha Hospital (KBH)[13], and Sonja Kill Memorial Hospital (SKMH). The three hospitals are well known and recognized by many Cambodians for their high quality health services. These hospitals have helped to save lives of many Cambodian children and adults.

Table 5 presents summary information of the three hospitals. AHC and SKMH have only one hospital each, located in Siem Reap and Kampot, respectively. The KBHs consist of five hospitals, four of which are in the capital city of Phnom Penh and the other one in Siem Reap. AHC provides free healthcare services to children, while KBHs include free maternity care services in its Siem Reap hospital, in addition to the services for children. SKMH is run differently from the other two. This hospital charges user fees according to patients' affordability. This particular model is practiced by various not-profit-hospitals or clinics in Cambodia. Therefore, it is useful to investigate this model to provide insight into the financial sustainability of not-profit-hospitals in Cambodia (see **Appendix 3** for more details of the three hospitals).

[13] KBHs belong to the government, but they are solely managed by Dr. Beat Richner in the past two decades. Since these KBHs are operated differently from other public health facilities although under the government control, this study treats KBHs as not-for-profit hospitals.

Table 5: Summary of Kantha Bopha Hospitals (KBHs), Angkor Hospital for Children (AHC), and Sonja Kill Memorial Hospital (SKMH) in 2014

Categories	KBHs	AHC	SKMH
Board of Directors (Person)	11	13	4
Budget (in million US$)	42.3	6.4	1.4
Fund from RGC	Yes	No	No
Quality Assessment	NA	Team from abroad	Self-assessment
Received drugs donation	Yes	Yes	Yes
Health Workers (Person)	2500	507	188
Number of Outpatients (Person)	696,329	125,732	28,208
Number of Inpatients (Person)	122,086	25,178	9,880
Cost of healing for Outpatient/person/visit (US$)	NA	6.7	NA
Cost of healing for Inpatient/person/visit (US$)	NA	167.3	NA

Source: Annual reports of AHC, KBHs, and SKMH in 2014.

Health Services and Operational Budget

Most severely sick children in Cambodia are referred to KBHs, as these hospitals are well equipped and have experts who can handle complicated cases. AHC also refers patients to KBHs when the beds are fully occupied or the cases are too complicated [N4]. Everyday around 3,000 to 3,500 sick children and pregnant women come to KBHs for health services. The founder of the hospitals, Dr. Beat Richner, claimed that KBHs treats about 85% of severely sick children in Cambodia. AHC is able to provide health services to 500 outpatients each day. An estimate based on the 2014 CDHS data and 2013 census data showed that the KBHs treated

approximately 73.3% of sick children in Cambodia in 2014. Together with AHC, both health facilities treated about 86.5% of sick children in Cambodia in 2014 (see **Appendix 4** for the method used to calculate these estimates).[14]Started in 2012, SKMH has treated 28,208 patients (children and adults) in 2014. The number of free treatment given at this hospital is made possible by user fees collected and charity fund raised through the Sonja Kill Foundation (SKF) and Hope Worldwide [N5].

KBHs are run with funding support from the KBH foundation, the Cambodian government, and the Swiss government. Each year, the KBH foundation is able to raise fund to cover about 80% to 85% of the total cost. The Swiss government contributes 4 million Swiss Francs each year, whereas the Cambodian government in early 2016 decided to increase its funding support to US$6 million a year. With a total budget of US$42.3 million in 2014, the five hospitals were able to provide services to 818,415 sick children and 19,361 pregnant women. Starting from February 2017, the KBF will receive US$2 per Angkor Wat ticket sold to foreign tourists on top of the existing government's funding support.[15]AHC's operation is funded by support from donors in the country and abroad. Its total expenditure for 2014 was about $6 million. SKMH collects user fees to support the hospital's operation; its additional expenses are funded by the SKF and Hope Worldwide [N4, N5].

Contribution to Improving Quality of Care

The three not-for-profit hospitals contribute substantially to improving the quality of healthcare in Cambodia. All doctors and nurses are Cambodian, and they are trained locally. The newly recruited doctors or nurses receive intensive training from their senior colleagues before treating patients. Both doctors and nurses meet weekly or monthly according to individual hospital's internal rules to discuss new treatment guidelines or complicated cases to improve their knowledge and treatment procedures. On top of that, they also get additional training from expat volunteers and have a chance to go abroad for specialized training in exchange for their hard

[14]In the CDHS 2014, respondents were asked whether they had been sick in the past 30 days. If yes, had they sought care at health facilities? For small children, caregivers were asked to answer those questions. From such as data, mostly it is per person and per treatment in the past 30 days. The estimates above vary according to the way that the hospitals register/count their patients. Whether the hospitals count one person with two separate visits as one or two. Further analysis is needed. These estimates are just the preliminary work to compare with Dr. Richner's claim (85%).

[15] Notification issued by MEF to Dr. Beat Richner, the founder of KBF, on August 08 2016 concerning additional financial support to the five hospitals.

work. All members of staff of the three hospitals receive decent salaries and are not permitted to work in other health facilities or to accept money from patients [N2, N4, N5, N15].

Besides being able to generate qualified human resources for their hospitals, they also collaborate closely with the MoH, provincial health departments, operational district hospitals, and organizations in their areas to improve skill levels of government health workers and to provide useful health information to community people. For example, the AHC worked with the MoH to develop and implement ethical guidelines and best treatment practices for pediatric care at public health facilities. Through this collaboration, AHC provided both in-class and on-the-job training to government health workers. Moreover, the AHC's neonatal program, with permission from the MoH, took a group of nurses into communities to provide government health workers with neonatal care education. AHC also served as a training site for Integrated Management of Childhood Illnesses Program of the WHO [N4].

SKMH also works closely with the provincial health department for achieving Millennium Development Goals (MDG) for mother and child health in Kampot. Through this collaboration, SKMH receives some vaccines, vitamins, and contraceptive kits from the provincial referral hospital, and free consultation services are provided to women who come for family planning program at SKMH. SKMH also helps the provincial referral hospital to get additional incomes by passing some lab work to be carried out there. Furthermore, SKMH has a program to help community people around their area to learn about some important health information and be informed of services available at the hospital, along with providing financial support to those who cannot effort to pay the bill [N5].

The three hospitals, especially KBHs, are also providing internships to hundreds of freshly graduated medical students to strengthen their professional skills before embarking on the real jobs. They collaborate with hospitals or companies abroad from whom they receive some free drugs or medical equipment that are still in good condition to use in the hospitals. For example, the SKMH was able to set up a fully operational neonatal unit with equipment from a hospital in Switzerland that closed its operation.

The three hospitals have both adequate human resources and medical equipment to support their daily activities. The operation and functionality is efficient; quality of care is high; and there is no dual practice among its

employees. All of these are possible because of decent salaries; continuous medical education; additional incentives for their hard work, such as opportunities to attend conferences and training abroad; and strong leadership and ethic of the management teams in motivating their staff to serve patients professionally. In addition, the management teams of these hospitals have close partnerships with hospitals or academic institutions abroad where they can secure some free or discount on purchases of sophisticated medical equipment and expertise training for their hospitals. This good practice could be expanded to public health facilities through strengthening partnership between not-for-profit hospitals and public health facilities, especially focusing on improving skills, working conditions of government health workers and overall governance arrangement that is professionally service-oriented.

Financial Sustainability

While the MoH is working to improve the quality of care at public health facilities, the presence of these not-for-profit hospitals helps to bridge some gaps in the meantime. These not-for-profit hospitals not only provide quality healthcare to Cambodian poor and near poor but also contribute to improving human resources for health and combating corruption at the hospital level. However, the long-term financial sustainability of those hospitals is also of important concerns, especially for KBHs and AHC, as they treat about 86.5% of sick children in Cambodia free of charge. The KBHs receive financial support from the government, while AHC does not. Due to their good reputation, people from all over the country come for their services. There are hundreds of people waiting outside of the hospitals' compounds each day for healthcare. Unlike the SKMH that charges user fees to recover some of the expenses, KBHs and AHC's financial sustainability has become an important matter of concern in the past few years. This is due to the rising demands for their quality services, which public health facilities have not yet been able to provide, and the constraints in collecting revenues, particularly from abroad, due to global political and economic turbulences that make it difficult for donors to increase or maintain their contribution. Several other smaller not-for-profit hospitals in Cambodia are facing similar issues.

This study proposes several options for long-term financial sustainability of the not-profit-hospitals that do not charge user fees for their services as follows:

1. Lobby the government for additional resources through earmarked taxes on specific products (e.g. Tabaco, alcohol, and junk food). Tax mechanisms are a long-term and stable support scheme to these hospitals; however, expansion of health financing is only feasible to the extent that fiscal capacity allows.

2. Bring big contributors together and seek their long-term commitment/systematic support for the hospitals. The hospitals have received financial support from some private companies in Cambodia, but their donation comes individually with no clear long-term commitment. If long-term commitment can be gauged, this could ease overall financial constraints for the hospitals. However, this should be done with a clear agreement between the hospitals and the companies to avoid reputational risks to the former.

3. Negotiate with NSSF to extend the provision of services to these hospitals for dependents of formal sector employees when included in social insurance schemes. This option is feasible in the future as Cambodia moves toward UHC and the Cambodian government gradually expands health insurance coverage for formal sector employees. In this case, the hospitals can raise additional fund from the formal sector population to support the poor and near poor population.

4. Consider the option for establishing fee charging services to fund the non-fee charging services. Instead of providing free healthcare to all, they can use their existing resources and start outpatient clinics in their hospitals' compounds that charge user fees for services for non-poor patients. The doctors and nurses should, however, rotate between the charged and non-charged services clinics to avoid inequality in provision of health services. To further maintain equity in receiving services, identical quality of services should be ensured by the rotating staff. A clear explanation on how the revenue from service fees is used should to be displayed publicly to gain confidence from patients who are willing and able to pay so that others can get free services. This additional revenue from service fees can help to ease financial tension and give the hospitals breathing space during the economic downturn and the period with less contribution from international donors. This model is used by the Hope Community Medical Clinics to support SHCH that provides free-of-charge inpatient services to the poor in Cambodia.

The revenue raised from their three outpatient clinics was able to cover 8% of the SHCH's cost in 2015.

5. Consider charging fee at the level patients can afford (the model that the SKMH is currently using: payment according to affordability). The patients are evaluated based on their socio-economic status. In this case, wealthy people pay for services, and in return, this revenue is used to help the vulnerable groups. For this model, people are treated equally at the health facilities although they pay differently.

Each option has its pros and cons. An additional assessment will be necessary to weigh their advantages and disadvantages.

Short-Term and Medium-Term Solutions

If the hospitals face severe financial constraints that threaten their sustainability, they may start to put in place some restrictions to reduce financial burden until a new solution is found. Currently, free treatment is provided to all sick Cambodian children whose parents queue for services. The hospitals may consider imposing a flat rate co-payment option for outpatient services to get some revenues to cover operation costs and avoid moral hazards like the THB30 scheme in Thailand. This method provides multiple positive effects, but not without any consequences (increase use of drugs from pharmacies and number of inpatients due to prolong seeking treatment). On the one hand, the hospitals may receive less outpatient visits, which help them save some operation costs for inpatient services. On the other hand, this restriction may help increase use of the public health services, which helps finance the public sector. With the current practice, most parents of the sick children with severe or mild symptoms skip services at public health facilities due to perceived poor quality of care and go directly to these hospitals. When the PHFs are less visited, they cannot generate enough income to support their daily operation costs. As a consequence, health staff have no incentive to work full time and do not fully commit to their work. More importantly, the facilities that are contracted by the HEF scheme lose portions of their incomes, as the insured poor do not use the services.

Furthermore, the hospitals can explore other opportunities to further enhance efficiency of their operations. The hospitals may revisit their spending on drugs, medical equipment and supplies, and see whether or not there are ways to generate some savings if different mechanisms are utilized.

8. Conclusion and Recommendations

Universal Health Coverage (UHC) is an agreed target within the newly ratified sustainable development goals, the health goal number three. Moving towards UHC in 2030 is thus an obligation for Cambodia. The health sector will need to be further upgraded to achieve this UHC aspiration. Despite the success in improving health outcomes in the past decades, Cambodia's health system falls short of professional services that its citizens require. The health system needs sufficient public funding to tackle many pressing issues along the path toward UHC, including adapting to the changing disease pattern, rising complexity of non-communicable diseases (NCDs), and emergence of new infectious diseases. Non-communicable disease risks are high, and prevention and surveillance are insufficient. The public sector is highly centralized and not well managed, while the private sector has only been regulated loosely. A large chunk of the government budget for health, other than personnel costs, is mainly spent at the central level for procurement of drugs, medical equipment and other supplies, to be distributed to public health facilities, but stock-outs at local level persist. Recent estimates have shown that medicines accounted for 39.7% of total health spending in 2012, 46.5% in 2013, and 39.7% in 2014 [55]. The shortage of qualified and trained human resources also has adverse effects on the government's efforts to move toward UHC. Therefore, achieving UHC requires action across the health system, not just the health financing reforms.

The proportion of health expenditure out of the total government expenditure from now until 2018 is expected to remain the same, while the revenues raised through prepayment mechanisms are still too small to address the issues above. The MoH in the short run should improve efficiency, equity in the distribution of resources, and transparency and accountability, which are the immediate objectives for UHC. Working to improve efficiency in the distribution of resources has almost the same potential effects as increasing the level of public health spending, as the savings through efficiency gains can be redistributed within the health system.

First, the government can further improve the efficiency on health spending through more strategic purchasing, mostly in regards to medicines and medical equipment. Previous studies showed that the government could save up to US$50 million a year if procurement is in line with international best practices. These savings could be used to tackle drugs stock-outs or support other priority programs. **Second**, the government can further save through converging the BSP, the AOPs, and annual budgets, in terms of coverage, types of spending, and sources of financing. **Third**, the government can reduce administrative costs and

minimize misunderstanding between contractors (health facilities) and purchasers (MoH, URC, and NGO) by consolidating some of the demand-side and supply-side health financing schemes. **Fourth**, fees for services, e.g. medical tests, should be displayed at each public health facility, and the use of revenue collected should be disclosed to the public to enhance accountability in spending.

Furthermore the government can increase its collaboration with not-for-profit hospitals to fulfill the current needs for skilled and trained human resources. Some not-for-profit hospitals, such as KBHs, AHC, SKMH, and SHCH, as documented in this study, and several others have provided both in-class and bedside training to hundreds of newly graduated medical students to strengthen their skills before serving the patients. These hospitals have already provided short-term trainings to government health workers, but trainings have been delivered based largely on the availability of funds. There are hundreds of health workers that need intensive specialized training to brush up their knowledge and catch up with updated treatment guidelines. The MoH could, therefore, set up long-term collaboration with these hospitals to provide continuous training for government health workers based on their specialty, and in return, ensure some funding either through pooled fund or government budget where necessary.

Over the medium-to-long term, to be able to reduce out-of-pocket (OOP) spending and ensure access to quality healthcare services for the population at large, especially the poor and near poor, the government will benefit from:

- Initiating a social health insurance law to determine individuals who will benefit from such insurances and the rights to be granted. Dr. Sanguan Nityarumphong, the father of universal coverage scheme in Thailand, said that the sustainability of any initiative has to be backed by the law;

- Establishing an appropriate national institution to govern the three main social health protection schemes to contain administrative cost and to simplify reporting system. Currently, the social health protection schemes for the informal sector population and the poor is under MoH and the social security schemes for formal sector is under MoLVT;

- Emphasizing the alignment of provider payment methods, benefit packages, claiming process, and criteria for quality of care of the three main schemes in order to merge them into one administrative authority at a later stage. Thailand also has three major social health insurance schemes, which are administered by three different

institutes, and have different provider payment methods and benefit packages. With this fragmentation, it is not easy to put the three institutions under one administrative authority to contain healthcare and administrative costs. The Cambodian government should take these issues into serious consideration before launching the other social health protection schemes;

- Considering providing subsidies to the informal sector through general tax or sin tax as the informal sector population is large in Cambodia, and it is difficult to increase the number of enrollees into the voluntary insurance schemes;

- Strengthening the regulations regarding user fees/medical licenses; and

- Providing special allowances together with specialized training opportunities to doctors or nurses who decide to work at the remote health facilities.

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List of appendices