



How the National HIV/AIDS Response Can Strengthen the Health System in Myanmar Through the Support of Global Health Initiatives

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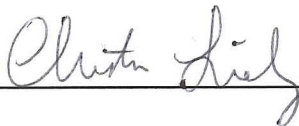
This Thesis, “How the National HIV/AIDS Response Can Strengthen the Health System in Myanmar Through the Support of Global Health Initiatives,” presented by Zarni Htun, and Submitted to the Faculty of The Harvard Medical School in Partial Fulfillment of the Requirements for the Master of Medical Sciences in Global Health Delivery in the Department of Global Health and Social Medicine has been read and approved by:



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**HOW THE NATIONAL HIV/AIDS RESPONSE CAN STRENGTHEN
THE HEALTH SYSTEM IN MYANMAR THROUGH THE SUPPORT OF
GLOBAL HEALTH INITIATIVES**

ZARNI HTUN

A Thesis Submitted to the Faculty of
The Harvard Medical School
in Partial Fulfillment of the Requirements
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Through the Support of Global Health Initiatives**

Abstract

International financing plays a substantial role in driving the national HIV/AIDS response in Myanmar. This health policy and systems research is designed as a piece of descriptive work that employs a sequential iterative context-focused approach. It aims to propose policy recommendations to Myanmar for strengthening its health delivery system for the national HIV/AIDS response through the support of global health initiatives. This study reviews the current situation of the national HIV/AIDS response and finds that Myanmar has missed the opportunity to capitalize on the use of the Global Fund's monies to strengthen the health system. We propose that strengthening service delivery platforms of township health systems will be the key to unlocking these opportunities in future. The role of complementary financing from other donors and domestic resources becomes instrumental to ensure sufficient resource allocation to the sub-national level. Deliberate planning is also required to optimize the use of those scarce resources. Several health system constraints and overarching issues that determine health service delivery and uptake are explored and discussed. Thus, this study will contribute to our global depository of knowledge about the constraints and challenges around health system strengthening in developing countries.

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Abbreviations and Acronyms

3DF	Three Diseases Fund
3MDG	Three Millennium Development Goal
ADB	Asian Development Bank
AEM	Asian epidemiological model
AIDS	Acquired immune deficiency syndrome
ART	Antiretroviral therapy
BSPP	Burma Socialist Programme Party
CBO	Community-based organization
CCM	Country coordinating mechanism
CD4	Cluster of differentiation 4
CMSD	Central medical stores depot
CSO	Civil society organization
DFID	Department for International Development
DMO	District medical officer
DMS	Department of Medical Services
DOH	Department of Health
DPH	Department of Public Health
FESR	Framework for economic and social reforms
FHAM	Fund for HIV/AIDS in Myanmar
FSW	Female sex worker
GAC	Grant approval committee
GAVI	Global Alliance for Vaccines and Immunization
GDP	Gross domestic product
GFATM	Global Fund to fight AIDS, Tuberculosis and Malaria
GFO	Global Fund Observer
GHI	Global health initiatives
GNI	Gross national income
GNP+	Global Network of People Living with HIV
HA	Health assistant
HCT	HIV counseling and testing

HDI	Human development index
HIV	Human immuno-deficiency virus
HMIS	Health management information system
HPSR	Health policy and systems research
HRH	Human resources for health
HSS	Health system strengthening
IBBS	Integrated biological and behavioral surveillance
ICG	International Crisis Group
ICW	International Community of Women Living with HIV/AIDS
IDP	Internally displaced person
IPPF	International Planned Parenthood Federation
JIMNCH	Joint initiative for maternal, newborn and child health
KTV	Karaoke television
LFA	Local fund agent
LHV	Lady health visitor
LMIS	Logistics management information system
MAP	Multi-country AIDS program
M-CCM	Myanmar country coordinating mechanism
MCH	Maternal and child health
MDG	Millennium development goal
MDR-TB	Multi-drug resistant tuberculosis
M&E	Monitoring and evaluation
M-HSCC	Myanmar health sector coordinating committee
MIMU	Myanmar Information Management Unit
MMT	Methadone maintenance treatment
MNCH	Maternal, newborn and child health
MOH	Ministry of Health
MSF	Médecins Sans Frontières
MSM	Men who have sex with men
NAP	National AIDS Programme
NASA	National AIDS spending assessment

NCD	Non-communicable disease
NCDP	National comprehensive development plan
NFM	New funding model
NGO	Non-governmental organization
NSEP	Needle and syringe exchange program
NSP	National strategic plan
OECD	Organisation for Economic Co-operation and Development
OPD	Out-patient department
PDR	People's Democratic Republic
PEPFAR	The United States President's Emergency Plan for AIDS Relief
PHC	Primary health care
PHS	Public health supervisor
PMTCT/PMCT	Prevention of mother to child transmission
PONREPP	Post-Nargis recovery and preparedness plan
PR	Principal recipient
PSM	Procurement and supply management
PWID	People who inject drugs
RHC	Rural health center
SCI	Save the Children International
SCMS	Supply Chain Management System
SDG	Sustainable development goal
SHD	State health director
SHG	Self-help group
SIDA	Swedish International Development Cooperation Agency
SLORC	State Law and Order Restoration Council
SOP	Standard operating procedure
SPDC	State Peace and Development Council
SR	Sub-recipient
SSF	Single stream of funding
STD	Sexually transmitted disease
STI	Sexually transmitted infection

SWEF	System-wide effects of the fund
TB	Tuberculosis
TMO	Township medical officer
TRP	Technical review panel
TSG	Technical and strategy group
TSG-AIDS	Technical and strategy group for HIV/AIDS
UHC	Universal health coverage
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNOPS	United Nations Office for Project Services
VBDC	Vector-borne disease control
VCCT	Voluntary confidential counseling and testing
WHO	World Health Organization

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Chapter One

Introduction

Today, millions of people suffer from Human Immuno-deficiency Virus (HIV) infection/ Acquired Immune Deficiency Syndrome (AIDS). An estimated 35 million people were living with HIV worldwide in 2012 (Joint United Nations Programme on HIV/AIDS [UNAIDS], 2013a). Due to financing dedicated to meeting the United Nations (UN) Millennium Development Goals related to health, global health initiatives¹ (GHI) have become significant forms of international aid for targeted health interventions since early 2000s. The Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM), the United States President's Emergency Plan for AIDS Relief (PEPFAR), and the World Bank Multi-Country AIDS Program (MAP) are major GHIs that provide substantial funding for global responses to HIV/AIDS in low and middle-income countries (Macro International Inc., 2009; Samb et al., 2009). The Global Fund has been providing funding for its targeted health interventions since its inception in 2002. By the end of 2011, a cumulative total of US\$ 22.9 billion had been approved for funding in 151 countries, and 54 percent of this funding was allocated for HIV and TB/HIV grants (The Global Fund, 2012a). As of mid-2015, a cumulative total of 8.1 million people have received antiretroviral therapy through the Global Fund's programs worldwide (The Global Fund, 2015b).

This study analyzes the current situation of the national HIV/AIDS response, the use of funds from the GFATM, and how it impacted strengthening the health systems in Myanmar. Based on these findings, the author proposes policy recommendations to Myanmar for strengthening its health delivery system for the national HIV/AIDS response through the support

¹ Global health initiatives, as defined by Brugha (2008, p.74), is "a blueprint for financing, resourcing, coordinating, and/or implementing disease control across at least several countries in more than one region of the world."

of the Global Fund. Through the health system strengthening (HSS) channel, the Global Fund has adopted the “diagonal approach”² to financing within its mandate to fight the three targeted diseases: AIDS, tuberculosis, and malaria (The Global Fund, 2014a). This diagonal approach, “in which explicit intervention priorities are used to drive the necessary improvements into the health system” (Frenk, 2006, p.957), may bridge the gap between the vertical approach³ and the horizontal approach,³ as described by Sepúlveda (2006) and Frenk (2006, 2010).

Vertical programs are often criticized for their narrow focus on a specific disease, service duplication, overall fragmentation of the system, high transaction costs, and poor sustainability (Atun, Bennett, & Duran, 2008; Msuya, 2004; Oliveira-Cruz, Kurowski, & Mills, 2003; The Global Fund, 2014a). The horizontal approach, on the other hand, is more integrated with the health system, and it may work well when the health system is robust and adequately funded. But in the context of weak health systems or resource-limited settings, vertical programs are easier to manage and to link with specific outcomes and rapid results than horizontal programs and thus attract many donors who prioritize financing for targeted diseases (Atun et al., 2008; Msuya, 2004; Oliveira-Cruz et al., 2003). Amidst such debates on vertical-horizontal dichotomy, the concept of a diagonal approach seems rational for performance-oriented and disease-specific financing institutions such as the Global Fund (Ooms, Damme, Baker, Zeitz, & Schrecker, 2008). Hence, this study examines the possibility for Myanmar to unlock diagonal financing opportunities from GHIs in the era of pursuits for the Sustainable Development Goals (SDGs).⁴

² See Diagonal Approach: Sepúlveda (2006, xiv).

³ There is no single complete definition on these terms; but in terms of service delivery, the vertical approach commonly refers to delivery of health services for a targeted disease or health problem with the application of specific/standalone interventions and resources, and the horizontal approach usually means integrated delivery of a range of health services with shared resources and infrastructure in the routine health system (Atun et al., 2008; Frenk, 2006, 2010; Msuya, 2004; Oliveira-Cruz et al., 2003; Sepúlveda, 2006).

⁴ See the Sustainable Development Goals (The United Nations, 2015).

Country profile of Myanmar

Myanmar, having a total area of 676,577 square kilometers, is the second largest country in the Southeast Asia region. Myanmar has a total population of 51 million in 2014, and 70 percent of people are living in rural areas (Department of Population, 2015). Administratively, the country is composed of Nay Pyi Taw Council Territory (the administrative capital) and 14 States and Regions, which are further divided into 74 districts and then into 330 townships. Myanmar is the homeland for 135 national races, speaking over 100 languages and dialects. Apart from Buddhists, who are the majority, there are also Christians, Muslims, Hindus, and Animists (Ministry of Health, 2014). In addition to its demographic variety, Myanmar has broad ecological diversity: a long mountainous border, an expanded coastal line, vast central plains and fertile delta areas along the major rivers, icy mountains in the north, and tropical islands in the south. Myanmar is well known for this demographic and ecological diversity as well as for its richness in natural resources such as petroleum and natural gas, gems and jade, timber, and ores. Myanmar's geopolitical context has been significant, historically and at present, because of its strategic location in the region between the two giants of Asia—China and India (Myint-U, 2011).

Myanmar used to be a low-income country in Asia. In 2014, the country's Gross Domestic Product (GDP) at the current US dollars was estimated at about \$64.33 billion, and per capita Gross National Income (GNI) at the current US dollars was estimated at \$1,270 (The World Bank, 2015b). Most recently in July 2015, the World Bank classified Myanmar as a lower-middle-income country⁵ because the country's annual per capita income has increased (The World Bank, 2015a). Myanmar's economy has been growing more rapidly in recent years

⁵ The World Bank classifies countries with a GNI per capita of more than \$1,045 but less than \$12,736 as middle-income countries (The World Bank, 2015a).

with estimated GDP growth of 8.5 percent in 2013–2014, as compared to 3.6 percent in 2008 and 5.1 percent in 2009 (The World Bank, 2015b). However, the economy still relies on revenues from extractive industries and transfers from state economic enterprises rather than on a wide-based tax structure. A significant portion of the government’s revenue is related to export of non-renewable resources such as natural gas, jade, and gems (Oo et al., 2015).

The United Nations Development Programme (UNDP) estimated the poverty rate in Myanmar at 26 percent in 2010 (UNDP, 2012). In Myanmar, investment in social sectors was neglected for many years. Over the past decades until 2011, public expenditure on health and education comprised less than 1 percent of the country’s GDP—one of the lowest rates in the world (Findlay, Park, & Verbiest, 2015). This low level of social sector investment accounts for poor human resources development: in 2013 Myanmar’s Human Development Index (HDI) was ranked at 150 out of 187, which was the lowest in the region (UNDP, 2014). According to the government’s budget figures, government spending on health and education has increased significantly since 2012. However, in order to contribute to its poverty reduction goals and economic growth, the government needs to mobilize many more resources and prioritize its spending on social sectors and infrastructure while providing appropriate supports to other sectors such as agriculture, rural development, and industry (Oo et al., 2015). Currently Myanmar has undertaken its democratization processes along with political and socio-economic reforms. Following the most recent general parliamentary elections of November 2015 held under the Constitution of 2008, Myanmar has taken further steps towards the inauguration of a new chapter in its history.

Burden of diseases

Today, people in Myanmar are facing “a triple burden of diseases”—the burden of communicable and non-communicable diseases and of maternal and child health problems (Grundy, Annear, Ahmed, & Biggs, 2014). HIV/AIDS, tuberculosis (TB), and malaria are communicable diseases of national concern that mainly affect the working age group. Malaria is endemic in most areas of the country, and it remains one of the leading causes of concern, with a morbidity of 6.44 per 1,000 population and mortality of 0.48 per 100,000 population in 2013 (Ministry of Health, 2014). More than one-third of the population lives in malaria high transmission areas. In 2013, 2.6 million suspected and 333,871 confirmed malaria cases were reported (World Health Organization, 2014b). Myanmar is one of the 22 countries with high burden of TB, but the exact TB burden of the country is unknown. The TB prevalence in 2014 was estimated at 457 per 100,000 people with an estimate of 180,000–220,000 new cases. The proportion of multi-drug resistant tuberculosis (MDR-TB) among new cases was 5 percent and among previously treated cases was 27 percent, which were higher than the regional estimates of 2.2 percent and 16 percent respectively (World Health Organization, 2015a).

In addition to the burden of communicable diseases, chronic and non-communicable diseases have also become increasingly threatening in Myanmar. According to the Ministry of Health’s data reported from public hospitals, non-communicable diseases (NCDs) accounted for 43 percent of mortality and 36 percent of morbidity among all cases of hospitalization in 2012 (Department of Health Planning, 2014a). Similarly, the World Health Organization’s estimates for 2012 indicated that NCDs accounted for more than half (59 percent) of total deaths in Myanmar. Three-fourths of those NCDs were related to cardiovascular diseases, cancers, and chronic respiratory diseases (World Health Organization, 2014a).

In the era of SDGs, Myanmar still needs to make substantial efforts towards meeting the UN Millennium Development Goals (MDGs) 4 and 5—those related to maternal and child health. Policy constraints, health system issues, and socio-economic barriers to population's access to health services have been challenging Myanmar's efforts to improve its health outcomes, particularly to achieve those health-related MDGs (United Nations Country Team in Myanmar, 2011). Achievements of maternal and child health care outcomes are mixed. For instance, a nationwide survey (conducted in 2009–2010) reported that 83.1 percent of pregnant women received antenatal care by a skilled provider; however, only 36.2 percent attended for institutional delivery at a health facility (Ministry of National Planning and Economic Development, Ministry of Health, & UNICEF, 2011). Post-partum hemorrhage, hypertensive disorders of pregnancy, and abortion-related complications are the leading causes of maternal deaths, whereas acute respiratory infections, diarrhea, malaria, and underlying malnutrition are the major causes of mortality among children aged under-five (Ministry of National Planning and Economic Development & UNICEF, 2012).

Health inequity

In Myanmar, many people in rural and hard-to-reach areas have poor access to quality affordable health care. Inequity in delivery and uptake of health services among different populations is recognized as a critical issue based on regional disparities, rural-urban disparities, and socio-economic disparities. For example, the number of hospital beds in the public sector available per 100,000 population in 2012 was as high as 160 in Kayah State and 127 in Kachin State but as low as 44 in Rakhine State and 45 in Mon State (Department of Health Planning, 2014a). Coverage of measles immunization (for children at 9 months of age) in 2012 was only 49.3 percent in Chin State (a remote ethnic state) while the national coverage was 80.3 percent

(Department of Health Planning, 2014b). Similarly, according to the Multiple Indicator Cluster Survey (2009–2010), only one-fourth of babies in rural areas were delivered in a health center, whereas in urban areas almost two-thirds of babies were delivered in a hospital/urban health facility. Mortality rates of infants and under-five children in the poorest quintile of the population were approximately 3.5 times higher than those in the richest quintile (Ministry of National Planning and Economic Development, Ministry of Health, & UNICEF, 2011).

Disparity in access to proper health care has been most evident for refugees and internally displaced persons (IDPs). According to the Office of the United Nations High Commissioner for Refugees (UNHCR), more than 800,000 people without citizenship, including 140,000 people displaced due to inter-communal conflicts in 2012, are confined to Rakhine State in the western part of the country. Additional 230,000 IDPs remain displaced in the southeast of Myanmar. Moreover, in the northern part of the country, more than 100,000 IDPs live in camps in Kachin State and northern Shan State. In these cases, health care has to be provided in the form of humanitarian assistance (UNHCR, 2015).

Status of HIV/AIDS epidemic

Myanmar is one of the countries with high burden of HIV in Asia and the Pacific region (UNAIDS, 2013b). The first HIV-positive case was reported in 1988 and the first AIDS case in 1991 (National AIDS Programme, 2010b). According to the estimates of the Joint United Nations Programme on HIV/AIDS (UNAIDS), HIV prevalence among adults (aged 15–49 years) in Myanmar has decreased from 0.8 percent in 2001 to 0.6 percent in 2009 (UNAIDS, 2010). A recent epidemiological estimate⁶ (as cited in National AIDS Programme, 2015a) has indicated that the incidence of new HIV infections has shown a decreasing trend from its peaks since early

⁶ See HIV Estimates and Projections, Asian Epidemiological Model (AEM), Myanmar, December 2014.

2000s. The HIV prevalence among adult populations (aged 15 years and above) was also estimated at 0.54 percent, with approximately 212,000 people living with HIV in 2014. There were approximately 9,000 new cases and 11,000 HIV-related deaths in 2014 (National AIDS Programme, 2015a).

Spread of HIV infection in Myanmar followed the pattern of a concentrated HIV epidemic.⁷ Eventually this made key populations⁸ central to the national HIV/AIDS response. The HIV prevalence among key populations is much higher than that in the general population. According to the HIV sentinel sero-surveillance survey data of 2014 (as cited in National AIDS Programme, 2015a), the HIV prevalence in the sentinel groups of female sex workers (FSW) was reported at 6.3 percent, men who have sex with men (MSM) at 6.6 percent, and people who inject drugs (PWID) at 23.1 percent, and that of MSM and PWID (aged 25 years and above) was as high as 14.9 percent and 25.5 percent respectively. These alarming figures indicate urgent need to focus the HIV/AIDS response interventions on these key population groups.

Rationale and methods of the study

In Myanmar, the national response to HIV/AIDS began with establishment of the National AIDS Committee in 1989 (Ministry of Health, 2014; National AIDS Programme, 2010b). In accordance with the current national strategic plan on HIV and AIDS, the public sector continues to scale up key interventions including provision of antiretroviral therapy (National AIDS Programme, 2015a). So, it is crucial to understand the current situation of the national response to HIV/AIDS in relation to its role in the general health care system.

⁷ HIV epidemic is defined as a concentrated epidemic when the HIV prevalence among sub-population groups is more than 5 percent while that of the general population remains less than 1 percent (UNAIDS, 2011).

⁸ Key populations (at higher risk of HIV exposure) are “those most likely to be exposed to HIV or to transmit it”—such as sex workers and their clients, men who have sex with men, people who inject drugs, people living with HIV, and sero-discordant couples (UNAIDS, 2011, p.18).

International financing has played a major role in the national HIV/AIDS response. In 2012–2013, more than 90 percent of HIV-related funding came from external sources. In particular, the Global Fund contributed more than half of that external financing as the single largest financing source for the national HIV/AIDS response in Myanmar (National AIDS Programme, 2015b). As of 2015, out of a total cumulative disbursement of US\$ 314 million by the Global Fund, US\$ 152 million (or 48.5 percent) has been disbursed for the national HIV/AIDS response in Myanmar (The Global Fund, 2015c). This scale of investment, along with the plan to scale up and decentralize service provision in the public sector, may place new demands on the health system and reveal challenges, particularly in terms of performance, responsiveness, and sustainability. A balanced approach is required for strengthening the health care delivery system while addressing the priority needs of disease-specific responses (The Global Fund, 2014a).

Objectives of the study

Thus, this study examines the critical question of “how the national HIV/AIDS response can strengthen the health system in Myanmar through the support of global health initiatives.”

This study was conducted with the following objectives:

Overall Objectives

To describe the impact of the Global Fund’s HIV/AIDS financing on health systems and propose policy options for how the Global Fund’s HIV/AIDS financing could strengthen the health care delivery system in Myanmar.

Specific Objectives

1. To assess how the Global Fund’s HIV/AIDS financing has affected health care delivery systems in other countries,

2. To understand the current situation of the national HIV/AIDS response in Myanmar, and
3. To recommend how health care delivery in Myanmar can be strengthened through the Global Fund’s support to the national HIV/AIDS response.

A comprehensive health system analysis of the national HIV/AIDS response would help us understand health care and social welfare among people living with HIV/AIDS and other key populations (such as sex workers, drug users, and men who have sex with men) in the broader context of Myanmar.

Methods of the study

This study is a health policy and systems research—HPSR (Gilson, 2012), designed as a descriptive study that employs a sequential iterative context-focused approach. Specific methods of data collection and analysis are applied for each of the specific objectives (Table 1).

Table 1: Summary of methods of study, data collection and analysis

Specific Objectives		Method of Study	Method of data collection	Method of analysis
1.	To assess how the Global Fund’s HIV/AIDS financing has affected health care delivery systems in other countries	Literature review	Systematic literature search of published papers and peer review articles (January 2002–June 2015)	Content analysis of literature findings
2.	To understand the current situation of the national HIV/AIDS response in Myanmar	Descriptive	Qualitative primary data collection: key informant interviews Secondary data collection: document review, desk review of reports/papers	Descriptive analysis of qualitative and quantitative data

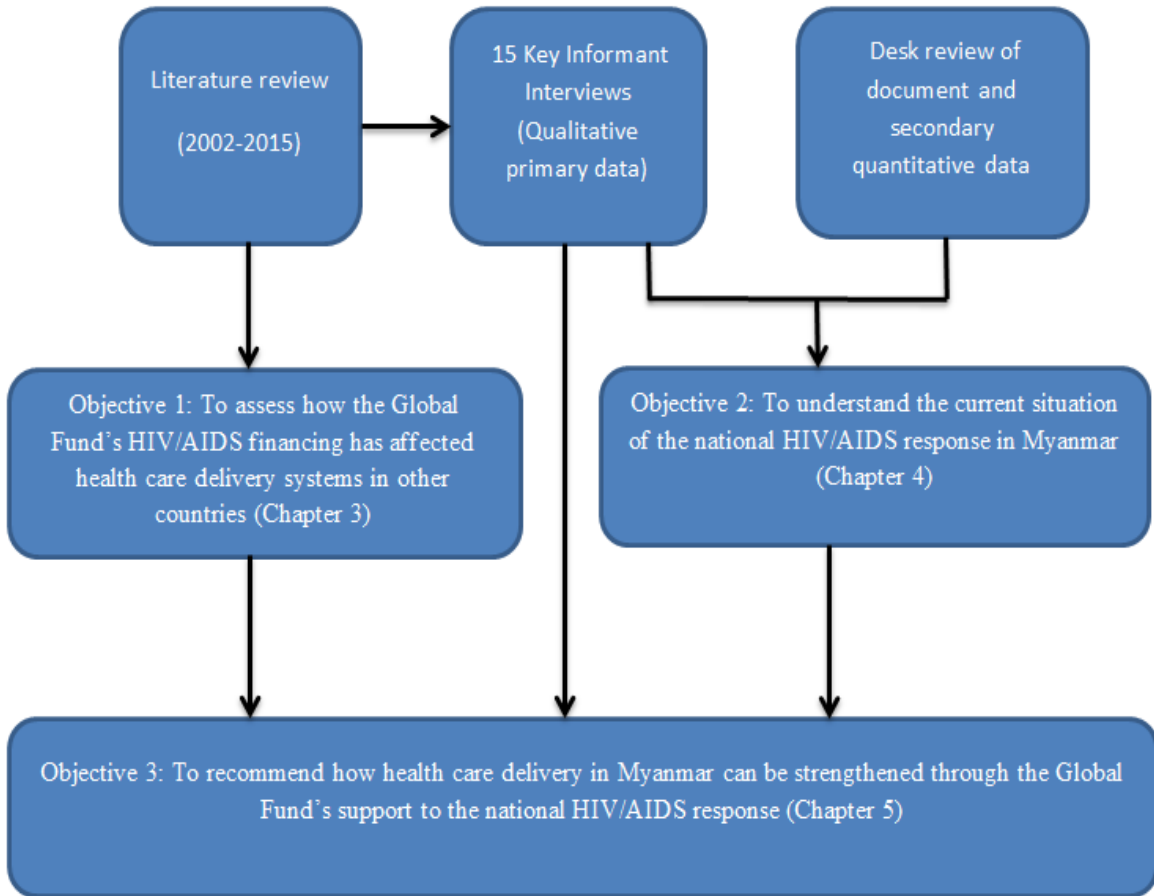
			Quantitative data: datasets provided by the National AIDS Programme, the WHO, the UNAIDS, the Global Fund	
3.	To recommend how health care delivery in Myanmar can be strengthened through the Global Fund’s support to the national HIV/AIDS response	Descriptive	Findings from specific objectives 1 & 2 Findings of the key informant interviews	Formulation of recommendations (policies and strategies)

For the ethical approval, this research was reviewed and approved by Harvard Longwood Medical Area Institutional Review Board in April 2015 and also by the Ethics Review Committee, Department of Medical Research in the Ministry of Health – Myanmar in June 2015. Detailed methods of data collection and analysis are described in the corresponding chapters.

Structure of the thesis

Through a sequential iterative context-focused approach, this paper is synthesized into five chapters: Chapter 1: Introduction, Chapter 2: Evolution of Myanmar’s Health System—History and Context, Chapter 3: Evidence of the Effects of the Global Fund’s Financing on Health Systems in Other Countries, Chapter 4: The Current Situation of the National HIV/AIDS Response in Myanmar, and Chapter 5: Discussion and Policy Recommendations. Chapters 3, 4, and 5 reflect each of the three specific objectives of the study as illustrated in the Figure 1.

Figure 1: Design and structure of the study



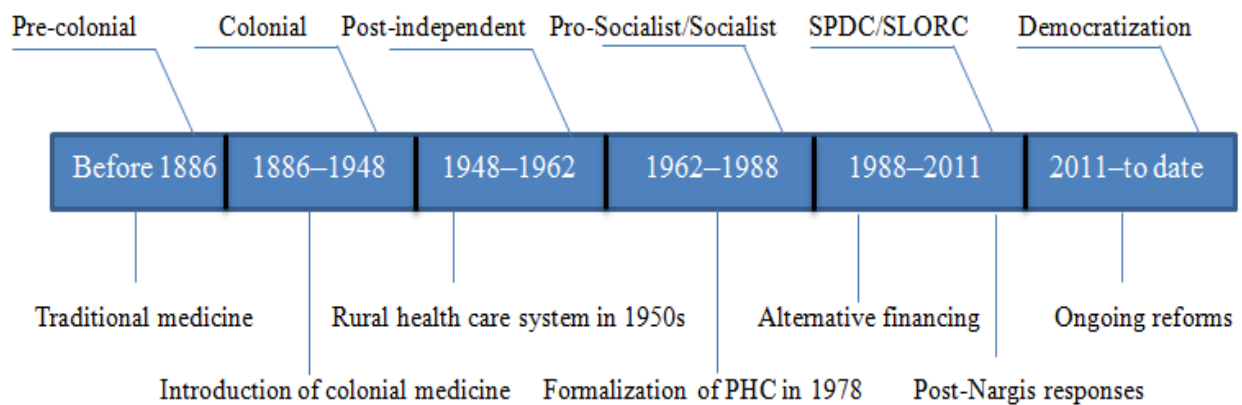
Chapter Two

Evolution of Myanmar’s Health System—History and Context

The evolution of the health system and health policies in Myanmar has been shaped by several political and social transitions of the country (Grundy et al., 2014; Rudland, 2003). For any assessment of the health system, it is critical to understand the historical background including political economy, social context, and institutional arrangements. Hence, the role of “resocializing disciplines”—history, political economy, and social context—will be examined for a “biosocial analysis” of health care delivery (Farmer, Kim, Kleinman, & Basilico, 2013). Understanding of the background situation and the current health system context will complete our analysis of the current situation of the national HIV/AIDS response in Myanmar. Thus, this chapter provides brief descriptions on the broader panorama of health care delivery, an overview of health system context, and the evolution of the national HIV/AIDS response in Myanmar.

Historical background of health care delivery in Myanmar

Figure 2: Timeline of historical periods and health care delivery in Myanmar⁹



⁹ This figure is partially adapted from that of Grundy et al. (2014, p.183).

Colonial era and introduction of the western medicine (1886–1948)

The significant context of Myanmar can be explained by understanding its background as a post-colonial state. Myanmar, formerly called Burma, used to be a British colony following three Anglo-Burman Wars in the nineteenth century and colonial control of the entire country in 1886 (Myint-U, 2001). Formal health care in Burma (Myanmar) was institutionalized even before this colonial era. In pre-colonial times, health care was provided by *tha-ma*—indigenous medical practitioners trained in the medical practice of *Ayurveda*, an ancient Indian medical tradition developed in the sixth century during propagation of the Buddhism. The *tha-ma* were trained in *pwe-kyauing*, special monasteries that served as medical schools (Committee of Enquiry into the Indigenous System of Medicine, 1951 cited in Rudland, 2003). But these Ayurvedic doctors mainly served the elite, so most of the people were accessible only to local healers (Dunn, 1976 cited in Rudland, 2003). As the state became more rationalized, those informal local healers, who were of varying quality and skill of practice, became termed as “quacks” (Leslie, 1976 cited in Rudland, 2003).

The British transformed the structures and rationalized the central functions of the State in Burma by instituting vertical administrative systems (Taylor, 1987). Eventually after their full colonial occupation in 1886, the British assigned a Sanitary Commissioner and set up a centralized body called the Health Services Administration, which was later separated into two bodies: one for administration of public health services and the other for curative services with establishment of hospitals at different levels (Ministry of Health, 2011). As in other colonial states in tropical regions, colonial medicine in Burma focused on tropical infections, hygiene and sanitation, and prevention of epidemics such as small pox, plague, and cholera. Colonial medicine existed mainly to protect the colonial rulers and their staff from those tropical

infections, epidemics, and their associated morbidity and mortality. Though the colonial health care was also extended to the indigenous population, essentially this care intended to prevent the native population from contracting and spreading diseases and to ensure their productivity in extracting economic resources of the colonial state (Furnivall, 1956). For instance, one of the most important functions of the Burma Civil Medical Department was vaccination against diseases such as small pox (Ireland, 1907).

The newly introduced western medical care marked a radical change from the indigenous health care practices, and the colonial health care failed to gain reliance of the local people (Committee of Enquiry into the Indigenous System of Medicine, 1951 cited in Rudland, 2003). In addition, even though the colonial powers opened 208 institutions (161 hospitals and 47 dispensaries) as of January 1906, these medical services did not benefit a majority of the population. Only a quarter of these health facilities were public institutions open to the poor. The rest were locally funded institutions and other facilities that were private in nature or available specifically to civil servants of the colonial administration (Ireland, 1907). Therefore, most of the people in rural areas continued to rely on local indigenous medical practitioners. Moreover, indigenous populations did not generally accept the colonial medical services, and they regarded the hospitals “with fear and mistrust” (Furnivall, 1956). This historical background is important in understanding a unique feature of health care in Myanmar: the co-existence of traditional medicine along with allopathic medicine (Ministry of Health, 2014). Colonial health policies did not comply with cultural and social context and created inequities in access to health care, lack of indigenous people’s reliance on public health services, and bureaucratic custom in running public health delivery system (Furnivall, 1956; Rudland, 2003). These legacies continue to have an impact on Myanmar’s health care system to this day.

Post-independence period and health care under welfare policies (1948–1962)

Myanmar (Burma) achieved independence in 1948 (Charney, 2009); however, legacies of British colonization remained dominant. Those legacies shaped the structure and functions of governing institutions and influenced political ideology during the post-independence period as Myanmar inherited administrative and institutional structures of the colonial system (Rudland, 2003). Colonial occupiers practiced the principle of “divide and rule” and installed the notion of ethnic pluralism that challenged Burmese nationalism and instigated ideological conflicts of the state over the practice of power (Gravers, 1993). As Emily Rudland (2003) described in her excellent thesis, the colonial legacies influenced the way in which successive political leaders struggled with the issue of the state’s legitimacy and reconsolidation and the way they controlled and maintained the political and economic power of the post-independent nation.

During this period, the newly independent country of Burma (Myanmar) experimented with a short practice of parliamentary democracy.¹⁰ In 1961, the government politicized Buddhism as the state religion. The country also suffered from insurgencies of the communists and from civil wars between the government and ethnic nationalities (Charney, 2009). While many political leaders during this period focused on socio-political ideologies of unitary nationalism, in reality these notions were paradoxical to co-existence of ethnocentric beliefs and notions of pluralistic society and syncretism (Gravers, 1993). Hence, these ideological conflicts introduced several structural and functional issues including allocation of administrative authorities and decision over sharing of rich resources. For many decades, ethnic minority groups did not trust the government dominated by the Burman ethnic majority. This created deep ethnic cleavages and political conflicts and hindered formation of a common national identity in the society (Rudland, 2003).

¹⁰ Except in the period (1958–1960) ruled by the Caretaker Government.

During the post-independence period in 1950s, the government struggled with rehabilitation of pre-World War II medical and public health services and also emphasized the expansion of health services in rural areas, along with training and deployment of different cadres of health workers for rural health delivery (Tinker, 1957). The government introduced reforms and plans—one of which was the *Pyidawtha* Plan, an eight-year economic and social development plan with the goal of creating an industrialized welfare state inspired by socialist norms, introduced in 1952 under *U Nu*'s civilian administration (Walinsky, 1962). This plan, in which about one-third of the expenses were dedicated to social services (Lockwood, 1958), was one of the first economic development plans embraced by a developing country in the post-war decolonization period (Rieffel & Fox, 2013). The *Pyidawtha* Plan (the New Burma Plan) aimed to improve the public health services by emphasizing health education, nutrition, environmental sanitation, and disease prevention and also through the establishment of rural health centers and new hospitals, expansion and modernization of hospital services, and training of health workers (Economic and Social Board, 1954). Health care was improved generally during the *Pyidawtha* period, but there were issues of performance inefficiency and poor distribution of benefits, and doctors were mainly concentrated in cities (Guyot, 1966). The government failed to sustain the *Pyidawtha* plan for many reasons including the state's incapability to reinforce development and social equity through planned industrialization and export of rice, bureaucratic machinery, and inefficiency in management of public enterprises, along with other functional issues of the nation (Walinsky, 1962).

Practice of socialism and introduction of primary health care (1962–1988)

After the parliamentary period, successive governments continued to incline towards a system informed by nationalistic and socialist principles. A military coup in 1962, which

signaled the demise of post-independent parliamentary democracy, was followed by the rule of the Revolutionary Council (1962–1974) and then by nominal civilian rule of the Burma Socialist Programme Party (BSPP) (1974–1988) (Charney, 2009). Unitary nationalistic and socialistic notions of 1950s and 60s became linked to isolationism in the political order of Burma (Myanmar), and this resulted in the embrace of economic and political self-sufficiency under the Burmese Way to Socialism in the later decades. During those periods, governmental health policies ascended from ideological commitment of the state to delivery of health services in pursuit of equality and social justice, and one of the platforms was through primary health care (Rudland, 2003).

Myanmar orientated its health care policy towards primary health care (PHC), following discussions with the WHO (World Health Organization), UNICEF (United Nations Children’s Fund), and other international agencies in 1970s. As one of the pioneering countries, Myanmar formally launched the primary health care approach in 1978. In fact, Myanmar adopted some components of primary care concepts as early as 1950s with establishment of rural health centers. Basic health services were integrated with vertical communicable disease control programs (UNICEF/WHO Joint Committee on Health Policy, 1981). By 1964, Rural Health Centers (RHCs) had been established in every district throughout the country (Ko Ko, 2006 cited in Grundy et al., 2014). Those RHCs and sub-RHCs operated by basic health staff (health assistants and midwives) functioned as the backbone in rural health delivery. Cadres of community health workers and auxiliary midwives had also been trained since 1978 and 1986 respectively. Since 1978, the government had introduced series of People’s Health Plans to achieve “Health for All” goal through PHC approach (Kyaing, 2008).

During the pro-socialist and socialist periods, distorted performance of the unipolar inward-looking economy was not able to support social sector policies of the government. The economy exercised under sharp nationalization and isolationism was characterized by lack of foreign investments and private sector participation. Along with economic and administrative malfunctioning of the country, the public health sector became resource-deprived and deteriorated, and the state was not able to undertake necessary reforms to realize its ambitious health policies in pursuit of universal health care through nationalized health services (Rudland, 2003). Poor resource allocation towards public health services meant the socialist state was not able to optimize its primary health care delivery. Only about 23 percent of the government's expenditure on health went to care at the primary level, and majority of the health budget was spent to support hospitals. Private payments became the major component of the total expenditure on health care (UNICEF/WHO Joint Committee on Health Policy, 1981). Rudland (2003, p.199) made a notable comment that the government's vision for rolling-out of the PHC was undermined by the "systemic problems" of the military-dominating state that also constrained performance of the socialist norms under "the Burmese Way to Socialism."

The public uprising in 1988, which demarcated the fall of the socialist regime, eventually gave way to another military rule for more than twenty years under the SLORC (State Law and Order Restoration Council) and the SPDC (State Peace and Development Council) regimes (Charney, 2009). Again, bureaucratic structural rigidities and functional inefficiencies resulting from colonialism and socialism were further exacerbated and institutionalized by the military rule in 1990s and 2000s.

The SLORC/SPDC regimes and health care under the military rule (1988–2011)

Under the SLORC and the SPDC regimes, the government undertook policy reforms that encouraged the state's responsibility for expansion of health service delivery. In 1989, the government formed a high level policy-making body called the National Health Committee. In 1993, the government also formulated the National Health Policy (Appendix 1), which embraces the same welfare principle of achieving Health for All goal through the primary health care approach (Ministry of Health, 2014). One of the notable health policy orientations was expansion of health services to the border areas (Rudland, 2003; Sein et al., 2014). During the twenty-year period from 1988–1989 to 2008–2009, the number of hospitals in the public sector increased from 631 to 846 and the number of RHCs from 1,337 to 1,481 (Ministry of Health, 2014). Although the government adopted the policy to expand health services in rural and border areas, the health sector was under-funded and the issue of vast disparities in access to and utilization of health services remained unsolved. The Health for All policy continued to be a concept that was not fully realized (Sein et al., 2014).

The government also pursued another policy reform to expand health services through the private sector, along with market-oriented economic liberalization. This reform caused private practitioners to become one of the major health care providers. In 2008–2009, a total of 14,157 medical doctors were practicing in the private and co-operative sector, and this was equivalent to 60 percent of the total medical doctors in the health workforce (Ministry of Health, 2014). In 1993, the government also adopted the concept of alternative health financing along with the National Health Policy. Public hospitals introduced user charges in the form of cost-sharing. Local financing mechanisms such as hospital trust funds, drug-revolving funds, and community cost-sharing were implemented in public hospitals. But, these mechanisms offered limited

effectiveness in mobilizing adequate revenue to replenish medicine or in dissolving financial barriers to seeking health care (Sein et al., 2014). Rudland (2003) remarked that the government's exploration of possible alternative financing schemes and openness to participation of the private sector and non-governmental organizations (NGOs) indicated withdrawal of the state from complete responsibility for the health sector.

The SPDC/SLORC regimes justified the necessity to maintain law and order and to ensure the state's orientation towards a peaceful modern developed nation. However, this approach represented more propaganda than pragmatism. People continued to suffer from political oppression, lack of civil freedom, and disrespect for human rights. Issues of poverty and corruption remained considerable, and social and legal justice remained questionable. With the nominal practice of market economy and rent seeking from economic opportunities over two decades, the regime magnified the socio-economic disparity and the power gradient between the few (military elites and their business cronies) and the majority of the population. The military regime rationalized low levels of investment in the social sectors. For instance, in the year of 2000, the military expenditure was approximately 1.7 percent of the GDP (UNDP, 2002) while the government's expenditure on health was around 0.3 percent of the GDP (World Health Organization, 2015b). In the same year, the World Health Organization (2000) ranked Myanmar at 190th out of 191 member states for overall performance of the health system, which was significantly lower than those of neighboring countries in the region such as Cambodia (ranked 174) and Lao PDR—People's Democratic Republic (ranked 165).

External pressures also affected Myanmar's health system. A number of economic and financial sanctions, including trade embargoes, foreign investment sanctions, and suspension of non-humanitarian aid and financial assistance, were imposed mainly by the Western countries

beginning in 1988. The economic burden of those sanctions constrained the government's fiscal space and caused the government to cut its spending in social sectors (International Crisis Group, 2004). In 2008, after twenty years of sanctions, the government's expenditure on health was as low as 11.1 percent of the total health expenditures. Financing from external sources was only 6.5 percent of the total health expenditures, which was much lower than that of Cambodia (19.6 percent) and Lao PDR (26.1 percent) (World Health Organization, 2015b). Even though the National Health Policy highlights the primary health care approach, 70 percent of those government health spending went to hospital services. Public health programs were much underfunded as only 2 percent of the total government health expenditure was used for provision and administration of public health programs (Ministry of Health, 2014).

As of 2008, private expenditures accounted for 88.9 percent of the total health expenditures, out of which 95.7 percent were out-of-pocket payments—the highest rate in the region (World Health Organization, 2015b). While high costs constrained access to health care services for people who were unable to afford out-of-pocket payments, poor quality of care also limited their desire to seek health services in public hospitals. The regime's prioritization of the security agenda over social sector investment, along with the regime's narrow conception of development and the impact of external sanctions, reduced political capacity and performance legitimacy of the state with regard to health care delivery (Rudland, 2003). This exacerbated the “social suffering”¹¹ of the people, as described by Hanna & Kleinman (2013), from poverty, social insecurity, restricted socio-political freedom, and long-standing state-societal disharmony.

¹¹ Hanna & Kleinman (2013, p.30) describe that “institutions and their agents can perpetrate violence in the name of health and welfare. Social forces—including economics, politics, social institutions, social relationships, and culture—can cause pain and suffering to individuals. . . . The concept of social suffering addresses the intersection of medical and social problems.”

In May 2008, a tropical cyclone, *Nargis* hit Myanmar, and this natural disaster impacted approximately 2.4 million people, including almost 140,000 people dead or missing (Tripartite Core Group, 2008). The junta's initial denial of international humanitarian access frustrated the international community, and it invoked discussions about responses that may imply the United Nations' principle of the "Responsibility to Protect"¹² in this particular case (Honda, 2009). However, *Nargis* established an historic and significant turning point of the regime's gradual acceptance to international aid and humanitarian access as well as to the role of civil society and NGOs. During the post-*Nargis* period, foreign aid flows and engagement of international NGOs dramatically increased, and various community groups working on humanitarian issues emerged. The military government undertook some policy reforms and improved its collaboration with international donors, development agencies, and civil society. This was an indication of the government's reactivity to sustained international pressure, humanitarian crises in conflict areas, and natural disasters like the Cyclone *Nargis*. For instance, implementation of the Post-*Nargis* Recovery and Preparedness Plan (PONREPP) and the Joint Initiative for Maternal, Newborn and Child Health (JIMNCH) program in the cyclone-affected areas created opportunities for NGOs, civil society partners, and communities to collaborate with the government in the health sector (Sein et al., 2014).

The democratization period and health care reforms (2011–to date)

Following ratification of a constitution through a national referendum in 2008 and the general elections of November 2010, a new quasi-democratic government was formed in 2011. Parliamentary bodies, called the *Pyidaungsu Hluttaw*, the *Pyithu Hluttaw*, and the *Amyotha*

¹² "Responsibility to Protect" is concerned with the responsibility of the international community, through the United Nations, to help protect vulnerable people from "genocide, war crimes, ethnic cleansing, and crimes against humanity," upon the failure of the state to protect its own population from such incidents (The United Nations General Assembly, 2005, p.31).

Hluttaw, were also established for legislative tasks. The government undertook economic and legislative reforms and removal of press censorship and also increased spending on health and education. The government's several attempts for national reconciliation, including release of political prisoners, engagement to the opposition groups, and peace talks with ethnic armed groups, were accompanied by improved international relations (Taylor, 2012). Most economic sanctions have been lifted or suspended (Council of the European Union, 2012; United States Department of the Treasury, 2015), and foreign development assistance to Myanmar has also increased (Organisation for Economic Co-operation and Development, 2015).

As part of its administrative reforms, the government has embarked on an ongoing process of decentralization.¹³ These decentralization processes are at the very early stage with varying degrees of progress in different sectors across the country. Even though the Ministry of Health—the Union Ministry—still acts as the central authority of the health sector, observers have noted some efforts of deconcentration,¹⁴ along with responsibilities for more administrative functions given to state and regional health departments (Nixon, Joelene, Saw, Lynn, & Arnold, 2013). Through a Framework for Economic and Social Reforms (FESR), the government introduced a set of policy priorities to achieve “quick wins” from the reform actions. For the health sector, the FESR emphasizes innovative measures for health financing and allocating more resources to rural primary health care, infectious disease controls, and maternal and child health care (Ministry of National Planning and Economic Development, 2013).

The Ministry of Health (MOH) has also envisaged the goal of achieving Universal Health Coverage (UHC) as part of its Vision 2030. The government has intended to formulate a long-

¹³ Decentralization is “the transfer of authority and responsibility for public functions from the central government to subordinate or quasi-independent government organizations or the private sector” (Litvack & Seddon, 1999, p.2).

¹⁴ Deconcentration is a weak form of decentralization in which the local administrative capacity can be created under supervision of the central government ministries (Litvack & Seddon, 1999).

term 20-year plan for the health sector, as part of the National Comprehensive Development Plan (NCDP) (2010–2011 to 2030–2031), and currently the MOH has been implementing the five-year National Health Plan of 2011–2016. In pursuit of health sector reforms and development, twelve task forces have been created to work on different components, and series of workshops, technical consultations, and meetings have been conducted (Ministry of Health, 2014). Implementation of these processes including policy reviews and reforms is ongoing to date.

Overview of the current health system structure in Myanmar

Health care system in Myanmar includes a mix of public and private systems both in terms of service provision and in financing (Ministry of Health, 2014). This section examines the current health care system of Myanmar based on a general framework of health system building blocks formulated by the World Health Organization (WHO). This framework clearly defines six health system building blocks: leadership and governance, health financing system, health workforce, health information system, medical products, vaccines and technologies, and health service delivery (World Health Organization, 2007).

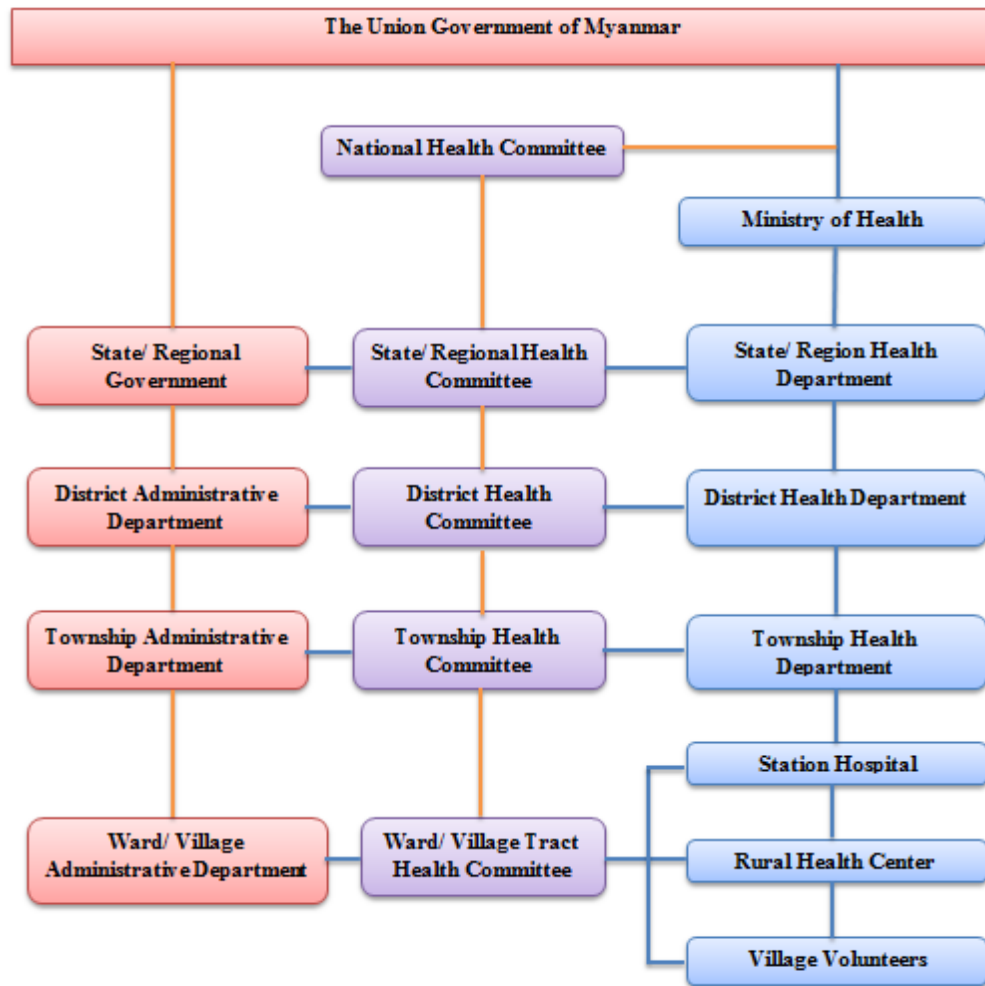
Governance of the health sector

The Ministry of Health (MOH) is responsible for planning, administration, financing, and provision of health services in the public sector. Essentially, the National Health Committee, a high level inter-ministerial policy-making body, sets policy agenda related to health matters, and the MOH has the authority for regulating and overseeing the health care system. At the central level and also at the state/regional level, the MOH undertakes coordination, technical support, and supervisory roles while township health departments—the basic units of health administration—manage delivery of primary health care and comprehensive health services at the local level. Planning and implementation functions are vertical in nature and top-down driven

as carried out by individual departments and programs of the MOH (Ministry of Health, 2014; Sein et al., 2014). Most recently in 2015, the government has re-organized the organizational structure of the MOH into six departments,¹⁵ each of which is led by a director general. The Department of Public Health is responsible for the disease control programs and other public health programs, including basic health services, maternal and child health services, environmental sanitation, nutrition, and health education, whereas the Department of Medical Services is responsible for management, support, and delivery of hospital services (Ministry of Health, 2015).

¹⁵ The MOH has been reorganized into Department of Public Health, Department of Medical Services, Department of Health Professional Resource Development and Management, Department of Medical Research, Department of Traditional Medicine, and Department of Food and Drug Administration (Ministry of Health, 2015).

Figure 3: Organizational structure of health care system in Myanmar¹⁶



Source: Ministry of Health (2014).

In the conduct of its functions, the MOH also collaborates with other ministries, professional associations, the UN agencies, non-governmental organizations, and community-based organizations (Ministry of Health, 2014). Myanmar Health Sector Coordinating Committee (M-HSCC), established in 2013 as an expansion of the former Myanmar Country Coordinating Mechanism (M-CCM), functions as a national level coordination body that holds a broad mandate to oversee and coordinate the national responses to HIV/AIDS, tuberculosis, and

¹⁶ This figure is adapted from that of Health in Myanmar 2014 (Ministry of Health, 2014, p.8).

malaria as well as to other public health sector issues. In addition to multi-stakeholder coordination, the M-HSCC advises the MOH on strengthening the health sector and provides a space for strategic discussion on health-related agenda. Members of the M-HSCC represent various constituencies, and seven Technical and Strategy Groups (TSGs)¹⁷ are also established to support the MOH by providing technical guidance on specific national strategies and clarity on main technical and policy matters. A number of specific working groups provide thematic inputs to the TSGs (Myanmar Health Sector Coordinating Committee, 2013).

Health system financing

In Myanmar, the main financing sources for health care services are the government/public expenditure, private spending including individual/household's out-of pocket payments, external aids, community contributions, and the social security system (Ministry of Health, 2012a). According to the WHO's data, Myanmar's total health expenditure during the period of 2000–2012 was around 2.1 percent of the GDP on average, which was lower than that of other countries in the region—for instance, Cambodia (5.7 percent), Lao PDR (3.6 percent), and Vietnam (5.6 percent). As of 2012, the government's expenditure on health accounted for 23.9 percent of the total health expenditure, a notable increase from the previous rates of, for instance, 14.2 percent in 2000 and 15.6 percent in 2010. Per capita expenditure for health in 2012 was US\$ 20 (at average exchange rate) whereas the government contributed around US\$ 5 per capita (World Health Organization, 2015b).

The government has allocated remarkable increases in its health spending since 2012. For example, in the fiscal year 2012–2013, the government increased its health expenditures to

¹⁷ The Technical and Strategy Groups are namely TSG for HIV/AIDS, TSG for TB, TSG for Malaria, TSG for Maternal, Newborn and Child Health (MNCH) and Reproductive Health, TSG for Monitoring and Evaluation (M&E) and Research, TSG for Health Systems Strengthening (HSS), and TSG for Public Health Emergency and Disaster Preparedness (Myanmar Health Sector Coordinating Committee, 2013).

approximately four-folds of the health budget that it had spent in the preceding fiscal year. In terms of the share of the GDP, as shown in the Table 2, the spending increased from 0.21 percent to 0.76 percent (Ministry of Health, 2014). Similarly, the government’s budget allocation for the health sector almost doubled in the fiscal year 2015–2016 as compared to that of 2012–2013 (Union Government of Myanmar, 2012, 2015).

Table 2: Government health expenditure as percentage of GDP and as percentage of general government expenditures

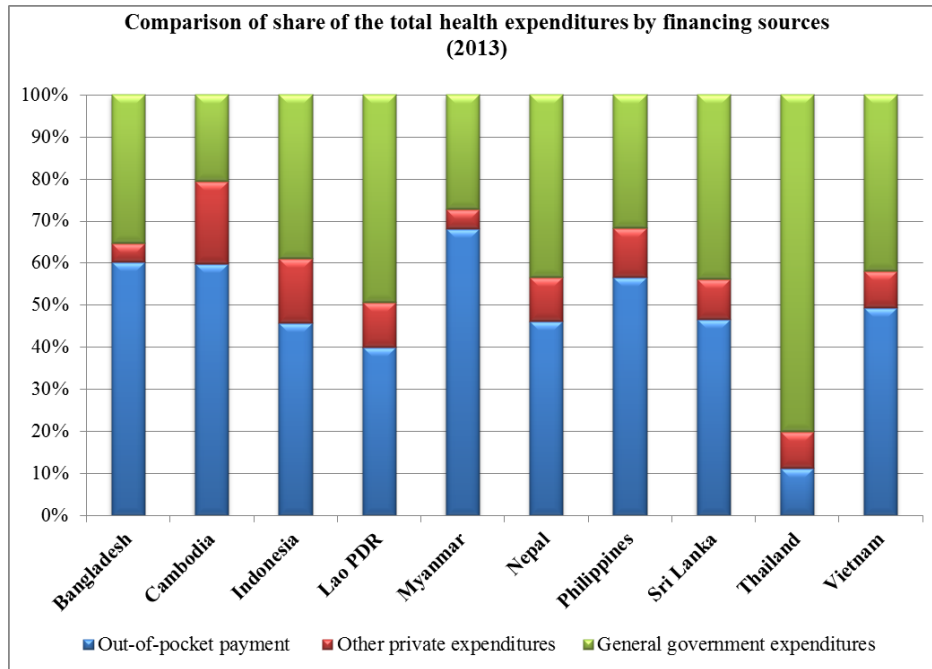
Fiscal Year	Government Health Expenditures as % of GDP	Government Health Expenditures as % of General Government Expenditures
2010–2011	0.20	1.03
2011–2012	0.21	1.05
2012–2013	0.76	2.82
2013–2014	0.89	3.15
2014–2015	0.99	3.38

Source: Health in Myanmar 2014 (Ministry of Health, 2014, p.14).

The private sector served as the main source of health care finance. During the period of 2000–2012, an average of more than 85 percent of total health expenditures came from private sources, out of which an average of more than 95 percent were out-of-pocket payments. As of 2013, the private expenditures on health accounted for 72.8 percent of the total health spending, and 93.7 percent of those private expenditures were individual/household’s out-of-pocket payments—one of the highest rates in the region as shown in the Figure 4 (World Health Organization, 2015b). The government has formulated strategies to achieve its goal of strengthening the health systems towards universal health coverage and intends to expand the fiscal space for the health sector through alternative health financing and risk-pooling

mechanisms, which would reduce catastrophic out-of-pocket expenditures and enhance financial protection (Ministry of Health, 2014).

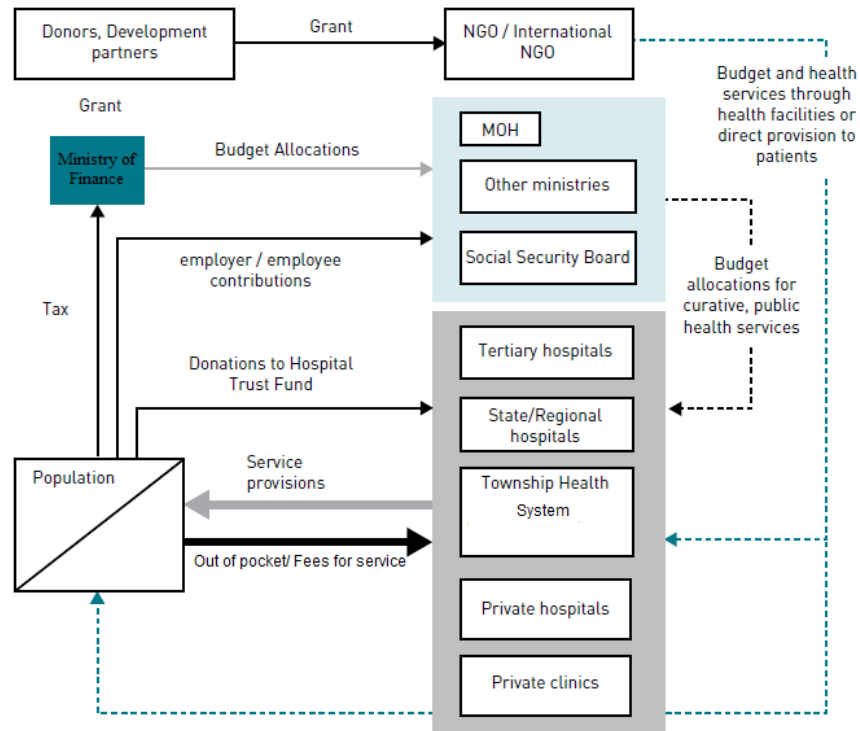
Figure 4: Comparison of share of the total health expenditures by financing sources in selected countries of South/Southeast Asia Region (2013)



Source: the WHO global health expenditure database, accessed November 18, 2015 (http://apps.who.int/nha/database/Key_Indicators_by_Country/Index/en).

In 1956, the Ministry of Labor introduced a social security scheme in accordance with the 1954 Social Security Act. However, the social security scheme offers limited coverage and has benefited less than 1 percent of the population in the country. The new Social Security Law of 2012 intends to increase compulsory and voluntary coverage of the scheme. The private voluntary health insurance mechanism is still in its initial phase (Sein et al., 2014). The role of foreign aid and development assistance is also significant. For instance, 15.3 percent of the total health expenditures (equivalent of more than half of the government’s spending) in 2013 came for external sources (World Health Organization, 2015b). The Figure 5 illustrates the main channels of health care financing in Myanmar.

Figure 5: The flows of health care financing in Myanmar



Source: The Republic of the Union of Myanmar Health System Review (Sein et al., 2014, p.68).

Health workforce

Myanmar's health workforce is comprised of different cadres of health professionals such as medical doctors, dental surgeons, nurses, and basic health staffs—health assistants, lady health visitors, midwives, and public health supervisors. Under the MOH, 14 universities and 46 nursing and midwifery training schools provide training to health professionals including pharmaceutical and other medical technicians. Voluntary health workers (auxiliary midwives and community health workers) also play an important role in providing community-based health services. In addition, the University of Traditional Medicine trains traditional medical practitioners. In most cases, the numbers of different categories of the health workforce in the recent years have increased approximately 2–3 times or more (Table 3) as compared to those of the year 1988–1989 (Ministry of Health, 2014).

Table 3: Development of health workforce in Myanmar

Health Workforce	Total number of health workforce		
	1988–1989	2008–2009	2012–2013
Doctors (Public)	4,377	9,583	12,800
Doctors (Private & Co-operative)	7,891	14,157	17,032
Nurses	8,349	22,885	28,254
Health Assistants	1,238	1,822	2,013
Midwives	8,121	18,543	20,617

Source: Health in Myanmar 2014 (Ministry of Health, 2014, p.143).

However, Myanmar faces shortages in health human resources and inequitable distribution of health workers across the country. The MOH estimated that 88,975 health workers, including 26,435 medical practitioners, 25,544 nurses, and 19,556 midwives, were in the health workforce as of 2010–2011. Accordingly, the density of health workers (doctors, nurses, and midwives) accounted for 1.49 per 1,000 people (Ministry of Health, 2012b), which was below the WHO’s threshold of 2.28 per 1,000 people. This indicates that Myanmar is experiencing critical shortage of health professionals to provide essential health services to achieve the health-related MDGs (World Health Organization, 2006). The distribution of health workers (doctors, nurses, and midwives) also varies across different states and regions. For instance, in 2009 the density of medical doctors in the public sector per 1,000 people was 0.59 in Chin State and 0.46 in Yangon Region, whereas it was as low as 0.06 in Mon State and 0.07 in Kayin and Rakhine States (Ministry of Health, 2010).

In addition, major issues for health human resources in Myanmar are related to difficulties in deployment of health workers to rural and remote areas, insufficient incentives and retention/motivation schemes, imbalance/mix of skills, and low performance of health workers at

different levels (Ministry of Health, 2012b). Health workers experience reduced motivation due to the burden of work and inadequate operational supports and training. A gap analysis highlighted those human resource issues as critical health system barriers in Myanmar (Tin et al., 2010).

Health information system

Hospital information, public health information, human resources information, and logistical information are reported through the current health information system. The hospital information system is based on monthly reporting system of all public hospitals, and the public health information system reports data of public health programs and basic health services. At the township level, basic health staff manually collect a minimum set of essential data by using standardized forms. The MOH at the central level compiles hospital statistics and public health statistics for analysis and dissemination. The public sector has established disease surveillance systems; however, availability of information from the private sector remains limited (Sein et al., 2014). The MOH introduced a computerized/electronically based system for the Health Management Information System (HMIS) and has organized trainings at different levels, but these developments are still in the early stage (Ministry of Health, 2014). The MOH needs to strengthen the HMIS in most aspects since infrastructural, technical, financial, and capacity supports are “present but not adequate” (Department of Health Planning, 2011).

Medical procurement and supply chain management system

In the public sector, the MOH has practiced decentralization of procurement functions, for which the Central Medical Stores Depot (CMSD), State/Regional Health Departments, and large hospitals (with more than 200 beds) /specialized hospitals share the responsibility for purchase of medicine, equipment, and consumables (Jackson & Gonsalkorale, 2014). The CMSD

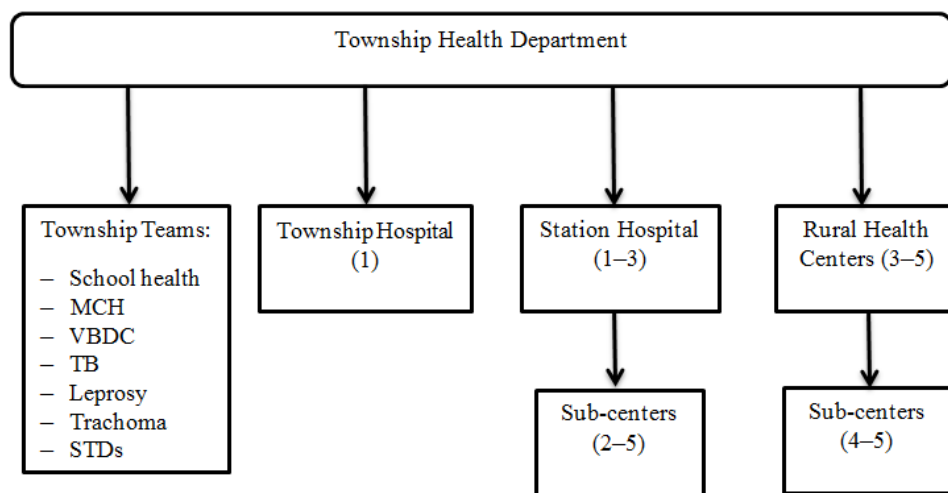
distributes medicines and other commodities through sub-depots, regional warehouses, transit camps, and hospitals. In some cases, vendors contracted by the CMSD distribute purchased items from their warehouses directly to health facilities. At the local level, township hospitals serve as pick-up points for distribution of medicines and commodities to peripheral facilities (RHCs/sub-RHCs). In addition, NGOs and development agencies use their own procurement mechanisms and supply chains in parallel to the MOH system in most cases. The presence of parallel systems and specific supply chains for vertical programs creates duplication of functions and fragmentation of the supply chain (Tolliver & Bartram, 2014). In the private sector, local pharmacies, drug shops, wholesalers, and retailers use their own supply chains, which are regulated under the National Drug Law of 1992 (Sein et al., 2014).

Service delivery

Health care services are delivered by providers in the public sector, in the private sector for profit, and also in the non-profit sector. For curative services in the public sector, the MOH runs a network of health care facilities—general hospitals, specialist hospitals, teaching hospitals, region/state hospitals, district hospitals, township hospitals, urban health centers in urban/sub-urban areas, and station hospitals, rural health centers (RHCs), and sub-rural health centers (sub-RHCs) in rural areas. The township health system, covering between 100,000 and 200,000 people, forms the backbone of health care delivery in Myanmar. Township hospitals function as primary referral centers at the local level, and specialist care is available at some 50-bedded township hospitals and district hospitals. Providers also refer patients to region/state level hospitals and specialist/general hospitals at the central level for advanced health care services (Ministry of Health, 2013). As of 2013–2014, the MOH ran 988 hospitals, and other ministries ran 68 hospitals in the public sector (Ministry of Health, 2014).

At the local level, the township health department provides both medical care and public health services. In rural areas, RHCs serve as the main centers for primary health care services. Typically, a RHC is staffed with one health assistant (HA), one lady health visitor (LHV), five midwives, and five public health supervisors grade II (PHS II). Due to shortage of PHS IIs, who are responsible for disease control activities and environmental sanitation, midwives undertake most of health care activities in rural areas. Midwives are usually overburdened with health promotion, immunization, and disease control activities, in addition to their tasks for maternal and child health care at the community level (Ministry of Health, 2014). Township teams are also organized for maternal and child health (MCH), school health, and vertical disease control programs—vector-borne disease control (VBDC), tuberculosis (TB), sexually transmitted diseases (STDs), trachoma, and leprosy etc. Each township has a township hospital, 1–3 station hospitals, 3–5 RHCs, and sub-RHCs (Figure 6). Each sub-RHC (sub-center) has a midwife and serves 5–15 villages (Ministry of Health & World Health Organization, 2011).

Figure 6: Organizational structure of township health department



Source: Ministry of Health & World Health Organization (2011, p.17).

At the community level, voluntary health workers (auxiliary midwives and community health workers) assist basic health staff and also perform some functions such as health

education, nutrition surveillance, simple case management of malaria and diarrhea, identification of risk pregnancy, and referrals (Sein et al., 2014). Recent figures indicate that 57 percent of community health workers and 69.7 percent of auxiliary midwives were functioning in 2012 (Department of Health Planning, 2014b).

The private sector also plays a crucial role in Myanmar's health care system as it is the main provider of out-patient care, covering approximately 75–80 percent of the total ambulatory care in the country (World Health Organization, 2008). Institutionalized care and specialized services are also available in the private sector, but most of private clinics and hospitals are concentrated in urban areas especially in big cities and towns. These private health facilities are regulated under the law (relating to private health care services) promulgated in 2007. Dual practice of health professionals in both public and private sectors is common, and health staff in the public sector also work as private practitioners during their off-hours (Sein et al., 2014).

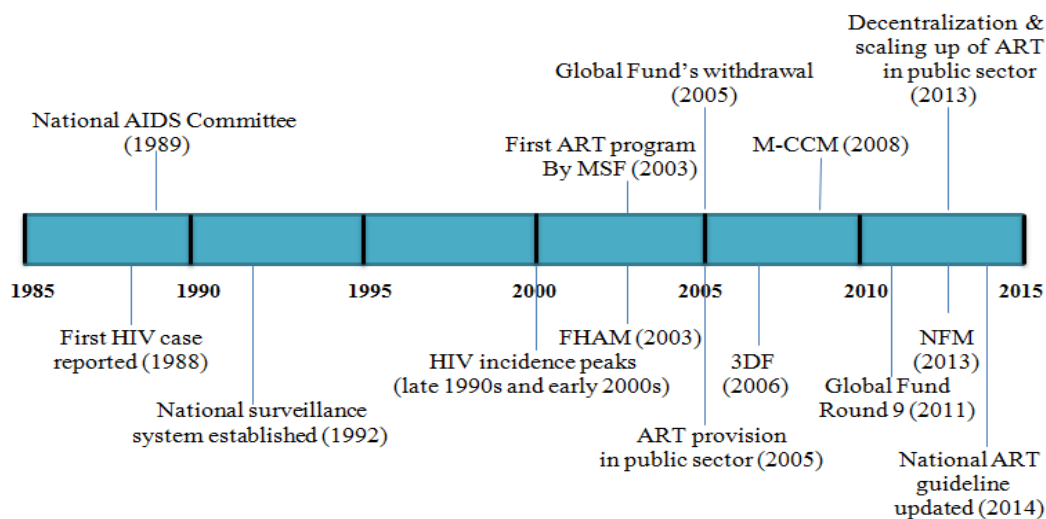
The United Nations (UN) agencies, local and international NGOs, and Community-Based Organizations (CBOs)/Civil Society Organizations (CSOs) in the non-profit sector also play a remarkable role in health care. Out of 205 national and international agencies reporting to Myanmar Information Management Unit (MIMU) in March 2015, 79 agencies (including 7 UN agencies, 39 international NGOs, and 21 local NGOs) ran more than 200 projects in the health sector, mostly related to communicable disease control (HIV/AIDS, TB, malaria), basic health services, MCH, and reproductive health (Myanmar Information Management Unit, 2015). In most cases, NGOs implement localized activities in specific townships due to funding and other constraints (World Health Organization, 2008). In conflict-affected areas, some ethnic opposition groups also run their own parallel health care systems. Most people in conflict areas do not have access to public health care services because delivery of governmental health services is usually

constrained by several factors including security issues, transportation difficulties, and communication barriers. In these cases, health care must be provided through local NGOs and CBOs/CSOs in the form of humanitarian assistance (The Three Millennium Development Goal Fund, 2015).

In terms of health outcomes in Myanmar, the general health profile has improved over the years, along with the evolution of the health sector. Life expectancy at birth (for both sexes) has increased from 59 years in 1990 to 66 years in 2013. Between 1990 and 2013, the maternal mortality ratio and the under-five mortality rate have fallen by 66 percent and 53 percent respectively. The under-five mortality rate (2013) is 51 per 1,000 live births; however, it is higher than that of, for example, Bangladesh (41 per 1,000 live births), Cambodia (38 per 1,000 live births), and Vietnam (24 per 1,000 live births). The maternal mortality ratio of 200 per 100,000 live births is also above the regional average of 190 per 100,000 live births in 2013 (World Health Organization, 2015c).

General evolution of the national response to HIV/AIDS in Myanmar

Figure 7: Historical timeline of the national response to HIV/AIDS in Myanmar (1985–2015)



Source: National AIDS Programme.

The national HIV/AIDS response (1985–2004)

In Myanmar, the MOH began active surveillance of HIV/AIDS in 1985 (Ministry of Health, 2014) and reported the first HIV case in 1988. The MOH formally launched the national response to HIV/AIDS by establishing the National AIDS Committee—a high level multi-sectoral committee—and introduced the first short-term plan for HIV prevention in 1989. Then, two national mid-term plans for HIV/AIDS prevention and control were developed in 1991 and in 1994. The National AIDS Programme (NAP) of the Ministry of Health (MOH) is responsible for implementing, monitoring, and coordinating the national response to HIV/AIDS at different levels. The NAP has conducted yearly surveys for HIV sentinel sero-surveillance among selected population groups since 1992 (National AIDS Programme, 2010b).

According to those surveillance data (as cited in National AIDS Programme, 2013a), HIV prevalence in Myanmar peaked among key population groups in 1990s and early 2000s. The HIV prevalence among people who inject drugs (PWID) peaked at 74.3 percent and 71.4 percent in 1993 and 1994 respectively. In the early 2000s, the HIV prevalence among female sex workers averaged about one-third (33 percent), with its peak of 38 percent in the year 2000 (National AIDS Programme, 2013a). During those periods, the response to HIV/AIDS was undermined by the government's sensitivity towards the issues related to HIV/AIDS and their reluctance to acknowledge the problem of the epidemic. As the junta assumed that the issue of HIV/AIDS was a politically sensitive threat, the military rulers initially denied the extent of the epidemic and of its underlying issues (personal communication, September 2015). This denial translated into the regime's inadequate response, erratic nature of actions, and lack of effective engagement to HIV/AIDS response activities. For instance, the government failed to introduce proper messaging to prevent further spread of the epidemic in the country (Rudland, 2003).

The sluggish response to HIV/AIDS in 1990s resulted in high incidence of new HIV infections in late 1990s and early 2000s. Even though exact data are not available, recent estimates¹⁸ have shown the highest incidence of more than 25,000 new HIV infections per year during 1999–2001 (as cited in National AIDS Programme, 2015a). Progressive consciousness of the government on the alarming situation of the epidemic and of subsequent international pressure seems to have changed the military regime’s policy towards HIV/AIDS gradually (Rudland, 2003). The government finally acknowledged HIV/AIDS as an important national concern when it listed HIV/AIDS as one of the priority diseases, after malaria and tuberculosis, in the national health agenda. This acknowledgement allowed expansion of the political space for the national response to HIV/AIDS, provided that the National AIDS Programme remained under-resourced in practice (International Crisis Group, 2002).

International agencies, especially the UN agencies, donors, and international NGOs, also played a prominent role in the national response to HIV/AIDS. Implementation of the UN Joint Plan of Action on HIV/AIDS (2001–2002) was followed by formulation of the Joint Programme (the Joint Programme for HIV/AIDS: Myanmar 2003–2005) to address the national response to HIV/AIDS in a more consolidated and comprehensive approach. The UN Expanded Theme Group on HIV/AIDS¹⁹ oversaw the implementation and coordination of the Joint Programme, which required an estimated cost of US\$ 88 million for three years (United Nations Expanded Theme Group on HIV/AIDS, 2004). In 2003, Myanmar organized a Country Coordinating Mechanism (CCM) as part of preparation for the proposal to the Global Fund and its application process (National AIDS Programme, 2010b). In 2003, international donors also introduced a

¹⁸ See HIV Estimates and Projections Myanmar, Asian Epidemiological Model (AEM), December 2014.

¹⁹ In 2002, the UN Theme Group for HIV/AIDS in Myanmar was expanded to include representatives from the government, donors, international and local NGOs. The Expanded Theme Group, supported by the Technical Working Group on HIV/AIDS and its sub-groups, held a mandate of monitoring the overall progress of the Joint Programme (United Nations Expanded Theme Group on HIV/AIDS, 2004).

multi-donor pooled funding mechanism, the Fund for HIV/AIDS in Myanmar (FHAM), to contribute to implementation of the Joint Program. By the end of 2004, the FHAM had raised US\$ 25.2 million (nearly 30 percent of the total cost estimate for the Joint Programme) from three donors.²⁰ Implementing agencies distributed half a million needles and syringes (for harm reduction among injecting drug users) and more than 35 million condoms in 2004. Médecins Sans Frontières (MSF) – Holland launched the first antiretroviral therapy (ART) program in the country in 2003 by providing triple combination ART through its pilot project in Yangon. However, the need for ART greatly exceeded the number of treatment spots available. By the end of 2004, an estimated 46,500 people needed ART whereas the country had set the national target for provision of ART at only 2,000 (United Nations Expanded Theme Group on HIV/AIDS, 2005).

The national HIV/AIDS response (2005–2010)

During this period, the national response to HIV/AIDS was notably hindered by the government's stringent restrictions on international agencies, NGOs, and CSOs. The regime imposed restrictive policies and guidelines that constrained activities of international organizations. Typically, this included travel restrictions and the regime's installation of lengthy and time-consuming procedures to obtain domestic travel permits for international staff. They were also required to be accompanied by governmental counterparts when they traveled to project sites (United States Government Accountability Office, 2007).

In addition, implementing agencies also faced formal or informal restrictions at the field level. In most cases, they needed prior approval from local authorities to organize their on-site activities. Civil society also faced similar constraints. One of their main issues appeared to be the

²⁰ The United Kingdom's Department for International Development (DFID), Swedish International Development Cooperation Agency (SIDA), and the Norwegian Government.

requirement for organization registration. Most civil society groups, especially those of key populations, were not officially registered due to several limitations. They usually remained to be self-help groups (SHGs), informal clusters, and community networks. Consequently, it was difficult for them to organize their members and implement their activities (personal communication, September 2015).

In 2005, Myanmar received grants for three diseases (HIV/AIDS, tuberculosis, and malaria) from the Global Fund. However, the Global Fund's concern about the regime's governance rationalized application of its "Additional Safeguards Policy" to those grants. These additional safeguards for grant implementation included the introduction of a "zero cash policy"²¹ and conditions ensuring stringent monitoring by both the Principal Recipient (the UNDP) and the Local Fund Agent. In August 2005, soon after implementation had been started, the Global Fund terminated its grants of US\$ 98.4 million to Myanmar. This funding would have been implemented over five years to address three diseases affecting Myanmar's population. The Global Fund's official statement highlighted that this sudden withdrawal of the grants was due to "new restrictions recently imposed by the [Myanmar] government," which were related to procedures for travel clearance, access to implementation areas, and procurement of medical supplies (The Global Fund, 2005).

In responding to termination of the Global Fund grants and the need to continue service provision supported by the FHAM, international donors established a multi-donor funding mechanism called the Three Diseases Fund (3DF)²² in 2006 (Three Diseases Fund, 2012). The

²¹ The condition in which no national entities would receive any cash, but instead, the Principal Recipient would undertake all purchases and payments directly (The Global Fund, 2005).

²² The Three Diseases Fund (2006–2012) was a pooled funding mechanism, totaling US\$ 138 million contributed by a consortium of seven donors: the European Commission and the Governments of Australia, the Netherlands, Norway, Sweden, and the United Kingdom, and also Denmark (joined in 2009). The 3DF concluded its activities in December 2012, and it was taken over by a new fund, called the Three Millennium Development Goal (3MDG) Fund (Three Diseases Fund, 2012).

3DF filled the gaps resulting from the Global Fund's withdrawal; and by the end of 2010, it had awarded grants, totaling US\$ 104 million, to 5 UN agencies, 17 international NGOs, and 12 local NGOs. More than half of the funding (nearly US\$ 60 million) was contributed to the national HIV/AIDS response. To an extent, this allowed expansion of service provision reaching 160 townships (nearly half of the total townships in the country). However, the limited scale of the funding could not meet the much greater needs in the country (Three Diseases Fund, 2010).

In 2005, the public sector started providing ART to treat the patients, but MSF was the main provider for ART (covering more than 85 percent of the total ART patients), and the National AIDS Programme (NAP) provided less than 10 percent of the total ART in the country (National AIDS Programme, 2005). The first National Strategic Plan (NSP I) for HIV/AIDS (2006–2010) was launched in 2006; and since that time, the national response has been aligned with the NSP. The NSP provided a strategic framework, emphasizing the need for prevention interventions and treatment scale-up. By the end of 2010, a total of 29,825 patients received ART, in which one-fourth of these treatments were provided through the public sector. However, the coverage of ART in Myanmar remained one of the lowest in the world, as compared to the actual need. Civil society (especially in the form of self-help groups) became increasingly engaged to the national response during this period (National AIDS Programme, 2010a).

The national HIV/AIDS response (2011–2014)

Two major events that drove the national response to HIV/AIDS during this period were Myanmar's re-engagement with the Global Fund and the introduction of the second National Strategic Plan (NSP II) for HIV/AIDS. Myanmar's application to the Global Fund (Round 9) was successful, and consequently, the Global Fund's program returned to Myanmar in 2011 to support implementation of the NSP II (2011–2015). At the national level, implementation was

overseen and coordinated by Myanmar Country Coordinating Mechanism (M-CCM),²³ re-established since 2008. Yet, external sanctions and safeguards imposed on Myanmar had restricted the direct flow of donor funds to the government. This meant external funds were mainly channeled through the UN agencies and the NGOs (National AIDS Programme, 2012), and the NAP (the government) became a Sub-Recipient of the Global Fund under one of the Principal Recipients, the United Nations Office for Project Services—the UNOPS in Myanmar (United Nations Office for Project Services, 2015b).

In 2013, Myanmar was the first Asia Pacific country that received grants under the New Funding Model (NFM)²⁴ of the Global Fund. More than US\$ 160 million became available from the Global Fund for the national HIV/AIDS response, covering the period from 2013 to 2016. This allowed Myanmar to emphasize the scaling-up and expansion of service provision for ART, HIV counseling and testing (HCT), and harm reduction among people who inject drugs (PWID). The NSP II was also revised and its timeline was extended up to 2016, the end of the current Global Fund’s grants (National AIDS Programme, 2014a). Scaling-up of the ART provision, along with decentralization of service delivery to lower level facilities in the public sector, brought remarkable progress during this period (National AIDS Programme, 2015a). In 2014, the NAP updated the national guideline for treatment,²⁵ and this guideline recommended the use of

²³ Later, M-CCM was expanded as Myanmar Health Sector Coordinating Committee (M-HSCC) in 2013 (National AIDS Programme, 2014a).

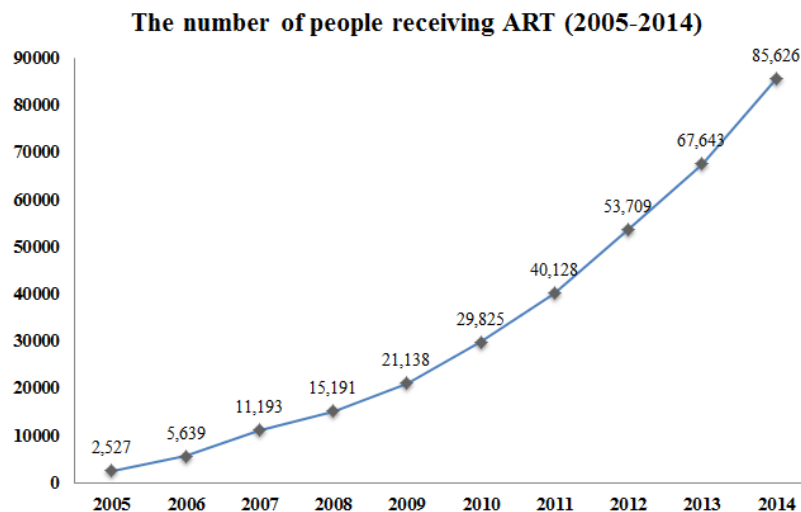
²⁴ Under the new funding model, the multiple grants of the Global Fund are consolidated into a single grant agreement per Principal Recipient per disease program as the Single Stream of Funding (SSF). All existing/ongoing grants (approved under the different Global Fund Rounds) were incorporated (and the future grants, if approved, would be incorporated) into a single consolidated grant (Single Stream Agreement) for the same Principal Recipient and the same disease program (Global Fund Observer, 2009; The Global Fund, 2009).

²⁵ See the Guidelines for the Clinical Management of HIV Infection in Myanmar, 4th edition.

simplified ART regimens and expanded eligible conditions²⁶ for ART by the people living with HIV (National AIDS Programme, 2014b).

Myanmar has made good progress towards achieving the HIV-related millennium development goal since Myanmar reduced the incidence of HIV infection by 75 percent during the period of 2001–2013 (World Health Organization, 2015c). In the recent years, implementing agencies have substantially increased the scale of their services for providing treatment with ART to people living with HIV. By the end of 2014, more than 85,000 people living with HIV received treatment with ART (National AIDS Programme, 2015a). This was approximately equivalent to three-folds of the number of treatment spots available in 2010 (Figure 8). Notably, this scale-up occurred mainly through the public sector. The NAP’s sites provided nearly half (47 percent) of those treatments at the end of 2014 (National AIDS Programme, 2015a) as compared to only one-fourth of the total at the end of 2010 (National AIDS Programme, 2010a).

Figure 8: The number of people receiving ART (2005–2014)



Source: Global AIDS Response Progress Reports – Myanmar (2014 & 2015) (National AIDS Programme, 2014a, 2015a).

²⁶ The updated national guideline recommended all people living with HIV (adults and adolescents) with CD4 (cluster of differentiation 4) cells count $\leq 500/\text{mm}^3$, and all key populations and sero-discordant couples (irrespective of their CD4 cells count) be eligible for ART (National AIDS Programme, 2014b).

Comprehensive understanding about the historical background of health care delivery, the current health system context, and the general evolution of the national HIV/AIDS response in Myanmar is instrumental to our analysis of the current situation of the national HIV/AIDS response (Chapter 4). The next chapter (Chapter 3) will review available evidence of the effects of the Global Fund's financing on health systems in other countries from the existing literature.

Chapter Three

Evidence of the Effects of the Global Fund’s Financing on Health Systems in Other Countries

The purpose of the Global Fund, as a financing institution rather than an implementation entity, is “to attract, manage, and disburse additional resources to make a sustainable and significant contribution in the fight against AIDS, tuberculosis, and malaria in countries in need, and contributing to poverty reduction as part of the MDGs” (The Global Fund, 2012b, p.5). The Global Fund grants are based on demand-driven, country-led proposals. Countries prepare concept notes for the Global Fund grant proposals, usually based on in-country needs and the national plans related to targeted diseases. Countries develop proposals through inclusive consultations with multi-stakeholders, a process led by the Country Coordinating Mechanisms (CCMs).²⁷ The submitted proposals are first reviewed by the Technical Review Panel (TRP)²⁸ and then by the Grant Approval Committee (GAC)²⁹ before they are presented to the Global Fund Board for approval on funding decisions (The Global Fund, 2014c, 2015d). At the country level, the Principal Recipients (PRs) and Sub-Recipients (SRs) implement the Global Fund grants.³⁰ There can be more than one PR in a country, and in cases where a qualified national

²⁷ Country Coordinating Mechanisms (CCMs) are country-level multi-stakeholder partnerships that include representatives from both the public and private sectors, such as governments, non-governmental organizations, civil society, academic institutions, private businesses, and people living with the diseases. CCMs develop and submit concept notes for grant proposals and oversee grant implementation process (The Global Fund, 2014b).

²⁸ As an advisory body to the Global Fund Board, the Technical Review Panel (TRP) is an independent panel composed of international experts in the areas of targeted diseases, health systems, community systems, and crosscutting development issues. The TRP assesses the concept notes for technical merit and strategic focus and then make recommendations (The Global Fund, 2014b).

²⁹ Based on the TRP’s funding recommendations, the Grant Approval Committee reviews the concept note and determines the upper ceiling and parameters for grant-making (The Global Fund, 2014c).

³⁰ Principal Recipients (PRs) and Sub-Recipients (SRs) are nominated by the CCMs. The PRs may be governmental entities, non-governmental organizations, civil society organizations, private sector entities, and multilateral organizations (such as the UN agencies). Principal Recipients, as entities legally bound to implement the Global Fund grants, receive direct funding to implement the programs and make sub-grants to other organizations and

entity is not identified, multilateral agencies or international non-governmental organizations may be nominated as a PR (The Global Fund, 2014b, 2014c).

The Global Fund’s funding mechanisms

The Global Fund’s “dual-track financing”—channeling of funds to both governmental and non-governmental recipients—ensures inclusion of different stakeholders in grant implementation. The Global Fund also applies the principle of “performance-based funding”—funding primarily based on demonstrated programmatic results—to some important aspects such as in determining financing decisions, grant continuation, and the level of resource allocation to a country for a specific period (The Global Fund, 2014c). As the Global Fund does not have an operational presence in recipient countries, grant performance is monitored and verified at the country level by specific entities (contracted by the Global Fund) called Local Fund Agents (LFAs) (The Global Fund, 2014b, 2014c).

Since its inception, the Global Fund has intended to support programs for targeted diseases “in ways that will contribute to strengthening health systems” (The Global Fund, 2012c, p.93). According to the World Health Organization (WHO), “health systems consist of all the people and actions whose primary purpose is to improve health” (World Health Organization, 2000, p.1). The WHO defines six health system building blocks: leadership and governance, health financing system, health workforce, health information system, medical products, vaccines and technologies, and health service delivery. Health system strengthening (HSS) refers to “improving these six health system building blocks and managing their interactions in ways that achieve more equitable and sustained improvements across health services and health outcomes” (World Health Organization, 2007, p.4).

agencies (Sub-Recipients) who implement all or parts of the program and provide services. The PRs are responsible for disbursed funds and reporting progress on program results (The Global Fund, 2014b, 2014c).

The Global Fund's financing for strengthening health systems

In 2005, the Global Fund (Round 5) invited specific proposals for health system strengthening. But, in the later funding rounds, financing of health system interventions was added to or embedded into disease-specific proposals (Bowser et al., 2013; Mookherji, Ryan, Ricca, Bize, & Dye, 2008; The Global Fund, 2015a). The Five-Year Evaluation study of the Global Fund revealed that the Global Fund's investments in supporting health systems were constrained by its poor alignment and harmonization with the existing systems (Mookherji et al., 2008). The Global Fund's strategy (2012–2016) embraces substantial highlights on alignment with national strategies/systems and maximizing the impact of its HSS activities (The Global Fund, 2012b).

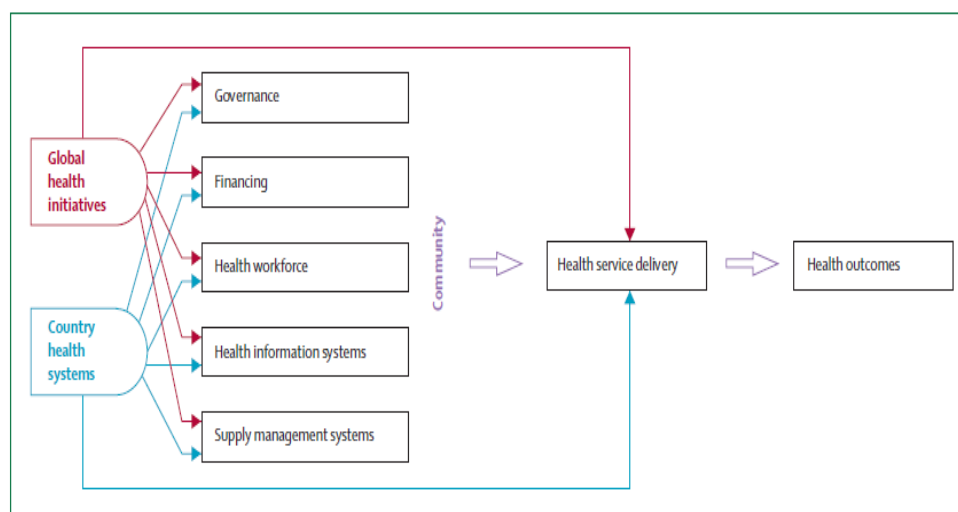
The Global Fund has supported its applicants with some ideas on its diagonal financing possibilities (disease-specific and crosscutting HSS interventions) that address health system bottlenecks, catalyze its positive spillover effects, or optimize its positive synergies with broader health system outcomes. The proposed HSS interventions, for instance, include activities such as capacity building of health workforce, improvement of procurement and supply management (PSM) and logistic systems, development of tools for PSM system and health information system, improving service delivery infrastructures and laboratory systems, and strengthening public financial management processes in the health sector (The Global Fund, 2014a).

Method of literature review

This chapter provides existing evidence generated from the available literature about the effects of the Global Fund's financing on health systems. For the purpose of analysis, we apply the conceptual framework (Figure 9) that examines the interactions between global health

initiatives and the health systems based on the WHO's health system building blocks (Samb et al., 2009).

Figure 9: Conceptual framework of the interactions between global health initiatives and country health systems (Samb et al., 2009)



Source: Samb et al. (2009, p.2142).

The intrinsic nature of this literature review is broad and intricate as it is constructed with multiple interactive elements. Hence, two specific research questions are further formulated as:

- (1) How the Global Fund's resources for HIV/AIDS programs are used to support or improve the different components of health systems (direct effects) and
- (2) How the Global Fund's support for HIV/AIDS programs interacts with the health systems in low and middle-income countries (indirect effects).

Systematic literature search

The literature search identified potentially relevant papers, document, and reports that were produced or published in English from 2002 up to June 2015. The systematic literature search was conducted in June 2015 by employing the following strategies:

(1) Through database/search engines:

- PubMed including MEDLINE, PMC, and MeSH,
- Popline (www.popline.org), and
- Google Scholar,

(2) Through library systems and portals:

- WHO Global Health Library (<http://www.globalhealthlibrary.net>): WHOLIS, MEDLINE, & regional indexes including IMSEAR,
- Harvard Library Portal (<http://library.harvard.edu>): HOLLIS+ and DASH,
- The Global Fund Evaluation Library (<http://www.theglobalfund.org/en/library/>), and
- AIDS Portal (<http://www.aidsportal.org>),

(3) Through the official web-pages of:

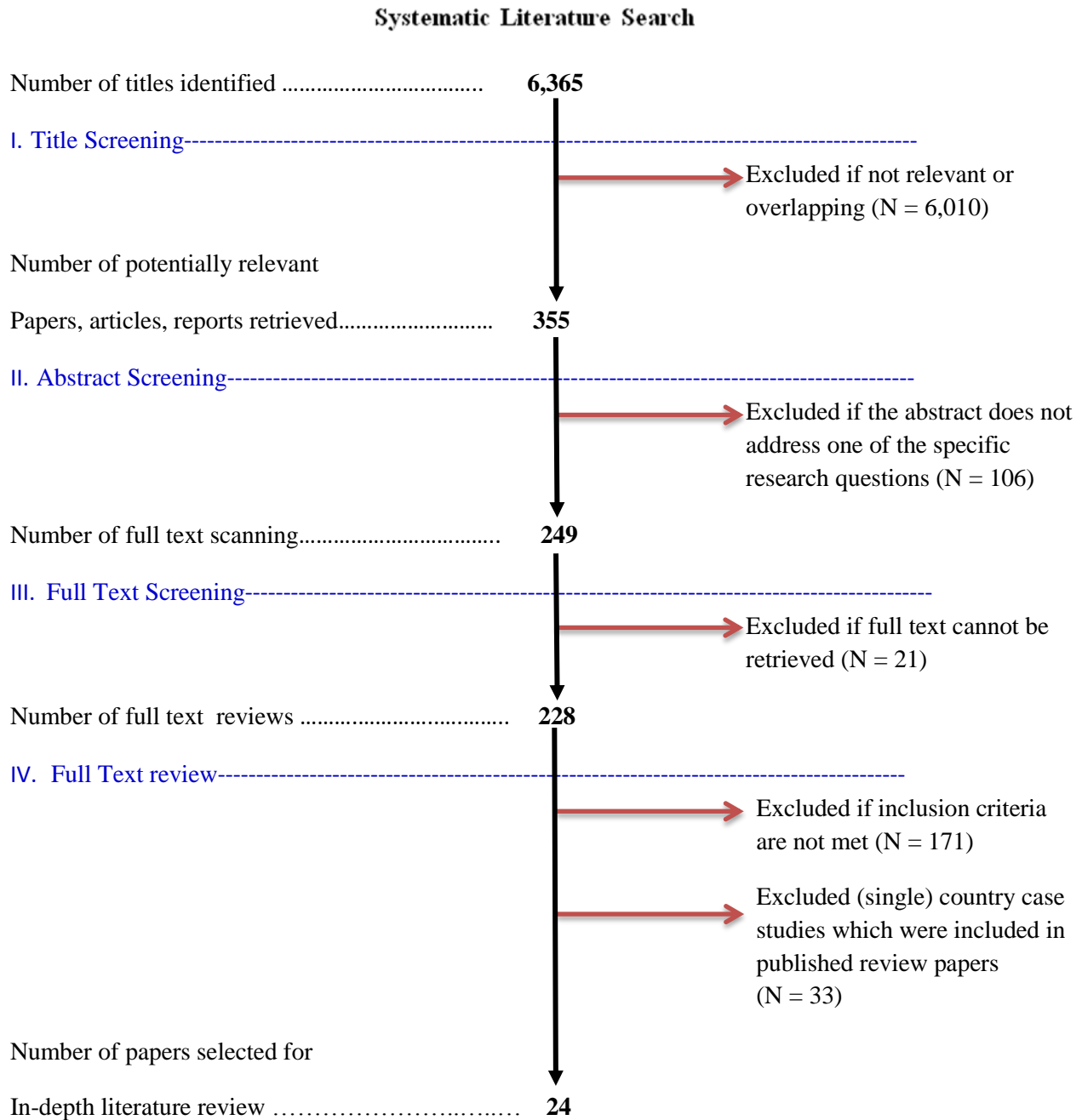
- WHO, UNAIDS, and the Global Fund,
- The Global Fund Observer (www.aidspace.org),
- Center for Global Development’s HIV/AIDS Monitor (www.cgdev.org/section/initiatives/), and

(4) Through reference lists of the identified papers.

Different combinations of the following key words are chosen, in consultation with an expert librarian from Harvard Countway Library of Medicine, for the literature search (either in the titles or abstracts/subjects): “HIV/AIDS”; “health system/health system strengthening/strengthening”; “global health initiatives/Global Fund.” Details of the search terms used are tabulated in the Appendix 3.

In terms of methodology, the literature review is organized in stages (Figure 10) such as systematic literature search, and screening and selection of the papers for in-depth review.

Figure 10: Stages of semi-systematic literature review



Screening of papers

To select potentially relevant papers, document, and reports for review, screening was organized in three steps: Step I – title screening, Step II – abstract screening, and Step III – full text screening.

Title screening: Potentially relevant papers, reports, and document were searched for retrieval by reviewing the titles of the search results. In total, 6,365 search results were screened, and 355 were retrieved electronically. Reference lists of the identified papers were also traced.

Abstract screening: Abstracts/summaries of the retrieved 355 papers were reviewed and screened for their relevancy in answering to at least one of the specific research questions. We excluded 106 papers whose abstract/summary does not address the specific research questions.

Full text screening: First, we excluded 21 papers for which full texts were not available and then screened the full texts of the remaining papers. After the three steps of screening, 228 papers/reports were found to be potentially relevant for the literature review. This literature review identified a large number of sources, so we could not examine all of them in a single frame of review. We employed a specific strategy to reduce the data volume and synthesize these broad-based findings into consolidated themes. Through compilation of available evidence, this literature review aims to identify specific themes regarding the health system effects of the Global Fund and the ways it supports the health systems in recipient countries, along with the main concerns and challenges. We will present the findings in a generalized way to capture the common themes that emerged, and thus, we will not discuss the details in this literature review section. We will reiterate the specified themes that emerged out of this literature review to discuss specific details of how those findings can be applied to the context of Myanmar, in answering to the main research question.

Selection of the papers

We set three inclusion criteria to select the papers/reports relevant for inclusion in this literature review, in order to extract particular themes out of a broad range of available literature

in examining the two specific research questions. For further analysis in this literature review, we select the papers/reports that meet the following criteria:

1. It must examine at least one of the specific research questions.
2. It must base either on previous literature reviews or on country-specific studies/evaluations.
3. It must describe the methods of study or analysis, i.e. it describes the source of (primary or secondary) data and the ways in which findings/results of the study are derived.

This literature review intends to compile evidence from studies and papers that explicitly capture the scope of this research. Thus, we did not select papers and studies that did not meticulously examine the specific research questions as their primary focus, even though they might have partially discussed our research questions. The papers had to be relevant to answering the specific research questions and also had to address the role of the global health initiatives (GHIs), particularly the GFATM, in relation to their support of HIV programs. For that reason, we excluded the papers/reports with findings that were not related to the HIV/AIDS interventions even if those papers examined the effects of vertical (disease control) programs on the health systems in general. We also excluded the papers that did not discuss the role of GHIs/GFATM in the findings.

In addition, we excluded articles that just outlined theories/conceptual frameworks or that did not cite any auditable evidence or not refer to any country case study. The selected papers had to be based on previous literature reviews or (multi or single) country case studies/evaluations. Because as an investigator we wanted to be able to evaluate how evidence was generated, we also omitted articles, reports, policy briefs, and commentaries if they did not mention the method of how data were collected or of how results/findings were derived. We identified 57 papers that met the inclusion criteria, but we also noticed some data overlapping

among those studies. So, we tried to minimize the overlapping by removing 33 (single) country case studies that had already been reviewed in the selected multi-country studies or previous literature reviews. On the other hand, as we kept all of multi-country studies and previous literature reviews selected, we managed to maintain a fair volume of papers for analysis. Finally, 24 papers were selected for in-depth analysis in this concise literature review.

Findings of the literature review

The full list of 24 papers/reports selected for this literature review can be found, along with short descriptions, in the Appendix 4. However, this does not represent an exhaustive list of papers and studies that capture the scope of the research questions. Many other studies were not included in this review just because they did not meet the inclusion criteria tailored for the purpose of this literature review. This concise literature review frame essentially captured a range of studies and reports that were adequate to extract specific themes about health system effects of the Global Fund and the ways it supported or improved different elements of the health systems. The investigator reviewed each selected paper in-depth and analyzed the findings.

In terms of thematic foci related to different health system components, five studies (Bowser et al., 2013; Brugha et al., 2010; Cailhol et al., 2013; Dräger, Gedik, & Dal Poz, 2006; Vujcic, Weber, Nikolic, Atun, & Kumar, 2012) were specifically associated with HRH (human resources for health); one study (Spicer et al., 2010) focused on coordination (governance), and one other study (Ivers, VanWassenhove, Jerome, Lambert, & Mukherjee, 2009) was typically associated with service delivery at the health facility level. The rest of studies mainly examined the overall health system or more than one of its components. Eight studies (Brugha et al., 2005; Brugha et al., 2010; Cailhol et al., 2013; Chima & Homedes, 2015; Dräger et al., 2006; Hanefeld, 2010; Oomman, Bernstein, & Rosenzweig, 2008; Stillman & Bennett, 2005) particularly focused

on countries in Sub-Saharan Africa, whereas one literature review (Conseil, Mounier-Jack, Rudge, & Coker, 2013) emphasized the Southeast Asia region. Except the two single-country case studies about Nigeria (Chima & Homedes, 2015) and Nepal (Tragard & Shrestha, 2010), all of the selected papers were multi-country studies or literature reviews that covered findings in a number of countries.

Although findings in all selected papers were related to the Global Fund, only ten studies (Bowser et al., 2013; Brugha et al., 2005; Car et al., 2012; Dräger et al., 2006; Drew & Purvis, 2006; Macro International Inc., 2009; Mookherji et al., 2008; Stillman & Bennett, 2005; Tragard & Shrestha, 2010; Warren, Wyss, Shakarishvili, Atun, & de Savigny, 2013) examined the effects of the Global Fund specifically. In the rest of the studies, the findings are also associated with other GHIs. Inferential analysis was required in such cases since the findings (unless explicitly stated) could not be directly interpreted as related to the effects/interactions of the Global Fund. Likewise, only ten studies (Biesma et al., 2009; Brugha et al., 2010; Cailhol et al., 2013; Chima & Homedes, 2015; Drew & Purvis, 2006; Hanefeld, 2010; Ivers et al., 2009; Oomman et al., 2008; Spicer et al., 2010; Yu, Souteyrand, Banda, Kaufman, & Perriens, 2008) include findings that are exclusive to HIV/AIDS programs. In the rest of the studies, the programmatic foci are on HIV and other GHI programs (such as malaria and tuberculosis); and thus, findings specific to HIV/AIDS programs cannot be isolated in such cases. For these reasons, this literature review presents inductive rather than conclusive findings about the Global Fund's HIV/AIDS programs and their effects on or interactions with the health systems in recipient countries.

Hence, this literature review synthesizes both direct and indirect health system effects of the Global Fund's programs for HIV/AIDS, along with ongoing challenges and concerns. Even though some findings are more context-specific, general themes can be extracted from similar

pattern of findings observed across several studies. Guided by the conceptual framework (Figure 9), we extracted relevant findings and compiled them in a worksheet. The investigator conducted the content-analysis (Krippendorff, 1980; Stemler, 2001; Weber, 1990), coding the findings and then framing them into different themes for categorization. Finally, the investigator extracted relevant health system themes from those categories for analysis, and then, the findings were constructed in a generalized and inductive way to identify the common thematic presentations. Our synthesis on direct and indirect effects of the Global Fund's diagonal financing was also reformulated and adapted from the analytical framework that Bennett & Fairbank (2003) conceptualized in early 2000s.

Direct effects of the Global Fund's financing on health systems

The specific research question we examine is how the Global Fund's resources for HIV/AIDS programs are used to support or improve the different components of health systems (as direct effects of the Global Fund's financing on health systems). The Global Fund's support of health systems is mostly related to targeted diseases, and its contribution to system-strengthening activities is often undermined by poor alignment or harmonization with the existing systems (Mookherji et al., 2008). A cross sectional study that examined a subset of the Global Fund's Round 8 grant data showed that in addition to disease-specific interventions, which were mainly funded, the Global Fund also approved funding, but to a lesser extent, for a wider range of other system-strengthening activities. According to analysis of those data, 37 percent of funding was allocated to health system strengthening activities related to specific diseases or system-level interventions (Warren et al., 2013).

Performance-based funding approach of the Global Fund

In the Global Fund Five-Year Evaluation study, findings from 16 recipient countries³¹ suggested that the most significant contribution of the Global Fund to supporting system-strengthening activities, in addition to its substantial financing, was mainly through its performance-based funding approach. Notably, the Global Fund's financing contributed to capacity building in recipient countries, especially in the areas of financial management, monitoring and evaluation, and reporting, as observed in the case of countries such as Cambodia, Ethiopia, Kyrgyzstan, Malawi, and Nepal (Mookherji et al., 2008). But, previous studies also noted different opinions on this performance-based model. The performance-based funding approach provides incentives for implementing partners to work quickly and efficiently and to improve accountability and transparency in program operations. However, this funding approach has focused more on targets with quantitative outputs. Concerns center around its burdensome reporting requirements and the unintended negative consequence as these targets might be achieved at the expense of quality of service delivery (Mookherji et al., 2008; Samb et al., 2009). Moreover, in some cases, for instance in Nepal, the pressure of donor reporting requirements led to creation of parallel monitoring and reporting systems that eventually fragmented the existing national system (Tragard & Shrestha, 2010).

Support of health infrastructures and equipment

Resources for HIV/AIDS programs were used to improve basic health infrastructures and laboratories in many cases (Conseil et al., 2013; Yu et al., 2008). GHI funding contributed to significant infrastructural improvements in health facilities and laboratories, for example, in Nigeria (Chima & Homedes, 2015), Haiti, and Rwanda (Ivers et al., 2009). Analysis of a random

³¹ Burkina Faso, Cambodia, Ethiopia, Haiti, Honduras, Kenya, Kyrgyzstan, Malawi, Nepal, Nigeria, Peru, Tanzania, Uganda, Vietnam, Yemen, and Zambia.

subset of the Global Fund's Round 8 grant data shows that the Global Fund provided funding, to varying extents, for activities such as maintenance of basic health infrastructures and dispensaries, maintenance of storage facilities, and provision/maintenance of equipment for central/regional medical depots (Warren et al., 2013).

Support of existing national systems

The Global Fund's financing contributes to development or improvement of strategic health information, monitoring and reporting systems, and supply chain systems related to HIV/AIDS programs in recipient countries. For instance, in Kyrgyzstan, Tajikistan, and Ukraine, the Global Fund supported bio-behavioral surveillance among the most vulnerable populations and also contributed to development of the national HIV/AIDS M&E system (Drew & Purvis, 2006). Nigeria used the GHI funding for HIV/AIDS to improve availability of quality data and management of the health information system (Chima & Homedes, 2015). In Mozambique, Uganda, and Zambia, the Global Fund supported activities to develop and strengthen the supply chain systems for antiretroviral drugs in collaboration with the governments (Oomman et al., 2008). Previous reviews reflected that such supports of national systems (including health information and supply chain systems) were mostly related to targeted disease interventions without reporting any robust evidence of support or impact on broader national systems (Biesma et al., 2009; Mookherji et al., 2008; Samb et al., 2009; Yu et al., 2008).

Support of health workforce and capacity building

This literature review captured four studies³² that analyzed some Global Fund grant data related to its supports of the health workforce. The findings of these studies showed that the

³² Dräger, Gedik, and Dal Poz (2006) reviewed thirty-five grant proposals approved by the Global Fund (Round 1–5) in five African countries. Similarly, Vujcic and colleagues (2012) also reviewed ninety Global Fund proposals approved in the Round 8. Bowser and colleagues (2013) analyzed HRH budgetary data of Global Fund Round 1–7 for 138 countries and reviewed detailed activities in six countries for qualitative analysis. More broadly, Warren

Global Fund financed a range of HRH activities such as support of trainings, recruitment, and health worker motivation and retention schemes. Supports were mostly for (but not limited to) short-term in-service trainings/on-job capacity building, more predominantly in the public sector for a broad range of health care workers at facility and community levels and also for volunteers. However, those trainings focused mainly on targeted diseases. The Global Fund also supported a range of health worker motivation and retention schemes, which varied across countries, such as salary top-ups, travel and training allowances, financial incentives, and remuneration schemes for different cadres of health workers. Direct salary support in the public sector and support on pre-service trainings and new recruitments that would increase the absolute number of core health care workers were uncommon (Bowser et al., 2013; Dräger et al., 2006; Vujicic et al., 2012; Warren et al., 2013). However, the Global Fund supported hiring physicians in some countries such as Ukraine and Honduras and also supported pre-service trainings of health workers in Ethiopia and Malawi (Bowser et al., 2013). Despite such exceptions, general findings are essentially consistent with those of other studies being reviewed in this section (Biesma et al., 2009; Oomman et al., 2008; Patel, Cummings, & Roberts, 2015; Samb et al., 2009; Stillman & Bennett, 2005).

Indirect effects of the Global Fund's financing on health systems

Next, we investigate the interactions of the Global Fund's HIV/AIDS programs with broader components of the health system (as indirect effects of the Global Fund's financing on health systems). Early studies (2003–2005) examined the implementation effects of the Global Fund in some Sub-Saharan African countries. In those countries, the Global Fund provided substantial funding opportunities and contributed to scaling-up in delivery of health care services

and colleagues (2013) examined the proportions of funding allocated for different categories of interventions in the Global Fund Round 8 (Phase I) by analyzing a random subset of 52 grant data.

for targeted diseases. Different system effects of the Global Fund were also reported in those early studies (Brugha et al., 2005; Stillman & Bennett, 2005). Despite having such early reports, the availability of strong evidence on health system effects of the Global Fund's financing still appears to be limited. Some evidence was considered anecdotal or hypothetical due to lack of sufficient robust data, the intrinsic nature of limited generalizability of available data, and inconclusive causal association (Samb et al., 2009; Yu et al., 2008). A similar conclusion was also reported by Josip Car and colleagues (2012) in their analytic review of literature due to scarcity of studies explicitly designed to examine the effects of the Global Fund's financing on health systems.

Despite these criticisms, the results of previous literature reviews that examined those health system effects indicated mixed results, with both positive and negative effects reported (Biesma et al., 2009; Conseil et al., 2013; Patel et al., 2015; Samb et al., 2009; Yu et al., 2008). Negative effects were most felt especially during the initial periods of implementation, and positive effects became more evident later on (Biesma et al., 2009; Stillman & Bennett, 2005). Countries have learned lessons from the implementation processes of their Global Fund grants over time. Likewise, the Global Fund has been adapting itself to align or harmonize its processes and mechanisms with existing systems, and some corrective measures have been taken to better utilize and support the country systems (Biesma et al., 2009; Brugha et al., 2005).

Drew & Purvis (2006) remarked that whether intended or not, system effects of the Global Fund are inevitable because of its scale of financing. The Global Fund's wider effects on health systems in recipient countries come not only through its robust financing and effective scale-up of targeted interventions but also through its performance-based funding mechanisms (Mookherji et al., 2008). At the same time, the Global Fund's financing tends to reveal several

challenges and raise concerns among stakeholders. Some also argue that the GHIs are not likely to create health system issues themselves, but the GHIs expose these challenges because of underlying weaknesses of the health systems in recipient countries (Brugha et al., 2005; McKinsey & Company, 2005; Stillman & Bennett, 2005).

Effects on governance

Alignment and harmonization

The earlier studies included in this literature review show that the main concerns are often related to whether or not the GHI funding is aligned with the national priorities and whether its processes are also harmonized with the existing plans and mechanisms of recipient countries (Biesma et al., 2009; Conseil et al., 2013; Mookherji et al., 2008; Patel et al., 2015; Samb et al., 2009; Stillman & Bennett, 2005). The extent to which the Global Fund's processes align with the existing national systems varies across countries, depending on the context of recipient countries. Studies conducted in Benin, Ethiopia, and Malawi reported that the Global Fund supported programs in those countries appeared to be aligned with the national priorities and plans (Stillman & Bennett, 2005). But in general, the Global Fund's mechanisms, especially in its early stages, often created parallel processes that led to overlapping and duplication with those of the existing systems (Biesma et al., 2009; Conseil et al., 2013; Mookherji et al., 2008; Stillman & Bennett, 2005).

In the context of Southeast Asia, a previous literature review highlighted evidence on skewing of national priorities and diverting government's attention away from other health sector priorities in some cases (Conseil et al., 2013). The Global Fund has made progress in aligning its programs with the national strategic plans and priorities over time. Nonetheless, its funding processes and planning, monitoring, and performance evaluation processes are vertical in nature.

These vertical processes created challenges in harmonizing the Global Fund's processes and activities with other aid mechanisms and also with the pre-existing country systems (Biesma et al., 2009).

Policy development

Even though GHI processes tend to distort national priorities and policies within the health sector in recipient countries (Biesma et al., 2009; Conseil et al., 2013; Patel et al., 2015), in some cases, they also contribute to the consideration and development of appropriate policies and strategies that enable or facilitate delivery of targeted interventions (Cailhol et al., 2013; Conseil et al., 2013; McKinsey & Company, 2005). For instance, in some Southeast Asian countries, policy considerations for neglected population groups, such as drug users, sex workers, and migrants, exist to improve their access to HIV prevention, care, and treatment services (Conseil et al., 2013). A study in five Sub-Saharan African countries³³ examined how the GHI-funded HIV programs affected HRH (human resources for health) strategies and policies, and the findings showed that over time national governments adopted appropriate and sustainable HRH strategies and policies (such as increase in HRH production, formalization of task shifting, and salary harmonization between governmental and non-governmental sectors) in their respective contexts (Cailhol et al., 2013).

On the other hand, concerns about sustainability of financing may have hindered policy development and implementation in some cases. For instance, some evidence suggests that the national policymakers often concern about the sustainability of the Global Fund's financing, and this appears to be one of the reasons why those leaders are hesitant to undertake major policy reforms such as adoption of new treatment regimens or direct salary support to governmental health workers (Bowser et al., 2013; Stillman & Bennett, 2005).

³³ Angola, Burundi, Lesotho, Mozambique, and South Africa.

Stewardship and oversight

The GHI processes tend to reveal weaknesses in the overall arrangement of health governance in many recipient countries (Samb et al., 2009). But at the same time, their mechanisms catalyze recipients to improve it. For instance, the Global Fund's financing allows diverse constituencies in its governance structure such as the Country Coordinating Mechanism, and this mechanism intends to promote transparency and participatory/consensus-based decision-making and leadership in governance processes (Drew & Purvis, 2006; Mookherji et al., 2008). But challenges usually exist around overcoming attitudes and practices of government-led management of the health sector, which might be deeply rooted in the overall health governance arrangement in some countries (Drew & Purvis, 2006). In addition to transparency in program operations, the performance-based funding model of the Global Fund also helps the stakeholders promote accountability for their financial management and program performance (Mookherji et al., 2008).

Engagement of stakeholders

Several studies highlight the Global Fund's financing mechanism as a significant positive contribution that allows participation of diverse stakeholders in governance, coordination, grant implementation processes, and service delivery. The Global Fund channels significant resources not only to the governmental sector but also to non-governmental organizations and civil society. Subsequently, this mechanism promotes collaboration and partnership building among different stakeholders and also ensures their engagement to coordination and implementation processes (Biesma et al., 2009; Brugha et al., 2005; Conseil et al., 2013; Drew & Purvis, 2006; McKinsey & Company, 2005; Mookherji et al., 2008; Patel et al., 2015; Samb et al., 2009; Spicer et al., 2010; Stillman & Bennett, 2005). Some studies reported that even though some tensions were

initially perceived between governmental and non-governmental stakeholders, the Global Fund's mechanisms such as the Country Coordinating Mechanism generally promoted dialogue, collaboration, and partnership (Brugha et al., 2005; Mookherji et al., 2008; Stillman & Bennett, 2005). Despite establishment of such partnerships, engagement of the private sector was limited. The report on the Global Fund Five-Year Evaluation highlighted the need to improve partnership with the private entities and their engagement to coordination and implementation processes (Mookherji et al., 2008).

Planning and coordination

The Global Fund's mechanisms allow different stakeholders to participate in coordination and grant implementation processes. On the other hand, common challenges appear around the effectiveness of stakeholder coordination and also the creation of multiple or parallel structures and mechanisms that lead to duplication in planning and coordination processes at national and sub-national levels (Biesma et al., 2009; Brugha et al., 2005; Chima & Homedes, 2015; Conseil et al., 2013; McKinsey & Company, 2005; Mookherji et al., 2008; Samb et al., 2009; Spicer et al., 2010; Stillman & Bennett, 2005). The Country Coordinating Mechanism (CCM) in many cases is perceived as a way to improve visibility and stakeholder participation in the governance process, but functionality of CCMs varies across countries. Despite its significant role in the process of proposal development, the CCMs seemed to play a limited role in oversight of grant management and implementation (Brugha et al., 2005; Mookherji et al., 2008).

There was also a criticism on the extent to which different stakeholders actually participated in governance and coordination processes. Even though some progress in the CCM's structure and processes has been observed across countries, participation of non-governmental stakeholders and civil society is often sub-optimal. In some cases, it is perceived that the CCMs

often tend to be dominated by governmental stakeholders (Brugha et al., 2005; Mookherji et al., 2008; Spicer et al., 2010; Stillman & Bennett, 2005). Many countries experience the issues of poor coordination and sub-optimal communication within and among different coordination structures and also among the different stakeholders. The Global Fund's vertical financing, planning, program management, and reporting systems often bypass the existing systems and routine mechanisms, and this undermines planning and coordination efforts. However, this effect appears to be felt especially at the sub-national level because sub-national coordination structures are often undermined by their limited authority over decision-making and participation in planning and resource allocation processes (Brugha et al., 2005; Spicer et al., 2010; Stillman & Bennett, 2005). For instance, in Zambia and South Africa, the stakeholder coordination in implementation of HIV/AIDS programs was considerably less at the sub-national level than at the national level in both countries (Hanefeld, 2010).

Effects on financing

The Global Fund contributes to an increase in funding available for the national HIV/AIDS response in low and middle-income countries. Analysis of data (2003–2006) on external funding for HIV/AIDS in 18 countries³⁴ shows that even though the level of external funding for HIV/AIDS varied across countries and countries with similar level of epidemic received varying levels of per capita funding, it contributed to an increase in both absolute and per capita funding for HIV/AIDS in all cases. Concerns exist about whether this substantial funding may replace domestic health spending in recipient countries and whether it may also displace financial resources for other interventions. However, there was no conclusive evidence

³⁴ Benin, Burkina Faso, Burundi, Cambodia, Democratic Republic of the Congo, Ethiopia, Ghana, Haiti, Kyrgyzstan, Lesotho, Malawi, Moldova, Mozambique, Peru, Rwanda, Tanzania, Vietnam, and Zambia.

that the increase in financing for HIV/AIDS replaced available financial resources for other interventions such as maternal and child health care (Macro International Inc., 2009).

Despite the scale of funding for targeted interventions, several concerns frequently arose regarding GHI financing. Evidence on whether GHI funding aligns with the priority needs in recipient countries was equivocal in some cases (Samb et al., 2009). Stakeholders often raised concerns regarding donor dependency and financial sustainability of the programs beyond the GHI funding period (Bowser et al., 2013; Chima & Homedes, 2015; Conseil et al., 2013; Drew & Purvis, 2006; Hanefeld, 2010; Macro International Inc., 2009; McKinsey & Company, 2005; Mookherji et al., 2008; Patel et al., 2015; Samb et al., 2009; Stillman & Bennett, 2005). The Global Fund Five-Year Evaluation study noted that dependency on external funding and potential for financial sustainability varied among recipient countries (Mookherji et al., 2008).

Effects on supply management and health information systems

Several studies widely acknowledge that the GHI funding ensures availability of and access to specific pharmaceutical products (like antiretroviral drugs), medical supplies, and equipment required for delivery of targeted health interventions. Similarly, the GHI funding also boosts availability and quality of strategic health information on targeted diseases (Chima & Homedes, 2015; Drew & Purvis, 2006; Macro International Inc., 2009; Patel et al., 2015; Samb et al., 2009). In many cases, the Global Fund's programs installed parallel drug procurement and distribution systems or M&E (monitoring and evaluation) systems as so-called a "quick fix solution" (Stillman & Bennett, 2005), especially when performance of the routine systems was weak. In such cases, those parallel systems tend to create inefficiencies, duplication, and fragmentation in existing systems (Biesma et al., 2009; Chima & Homedes, 2015; Conseil et al., 2013; McKinsey & Company, 2005; Mookherji et al., 2008; Oomman et al., 2008; Patel et al.,

2015; Samb et al., 2009; Stillman & Bennett, 2005; Tragard & Shrestha, 2010). On the other hand, several efforts to align the Global Fund's activities with the existing systems (procurement and supply chain, monitoring, and reporting etc.) have been observed, but the extent of alignment also varies across countries (Biesma et al., 2009; Mookherji et al., 2008; Oomman et al., 2008; Stillman & Bennett, 2005).

Effects on health workforce

Workload

This literature review identifies several concerns regarding the effects of the Global Fund's financing on the workload of the health workforce. Preparing proposals and planning for the Global Fund's programs consume much time and effort, especially for the senior staff who participate in the process (Brugha et al., 2005; Stillman & Bennett, 2005). Rapid scale-up of disease-specific interventions to achieve programmatic targets, without adequate staffing levels, may increase the workload and thus further burden the existing health workforce, which has already been overstretched in most cases (Biesma et al., 2009; Samb et al., 2009). Parallel systems and processes installed by the GHI programs create duplicated tasks, which also increase the administrative burden and the routine workload (Conseil et al., 2013; McKinsey & Company, 2005; Patel et al., 2015). Specific reporting requirements and lack of alignment or harmonization in planning, budgeting, and reporting timelines of the Global Fund's programs with the existing systems and with that of other donors also create additional workload on the staff participating in those processes at the national and sub-national levels (Brugha et al., 2005; Hanefeld, 2010; Oomman et al., 2008).

Health worker motivation and retention

To remedy the issues of staff motivation and retention, non-governmental stakeholders created short-term solutions such as offering higher salaries and better incentives than the public sector. This approach tends to attract health workers from the existing pool. In countries with limited health workforce, differential salaries and incentives between public and non-public sectors tend to cause health workers to shift from the public sector to better paid positions in GHI-funded programs outside of the governmental sector (“internal brain drain”) (Biesma et al., 2009; Brugha et al., 2010; Cailhol et al., 2013; Chima & Homedes, 2015; Mookherji et al., 2008; Samb et al., 2009; Stillman & Bennett, 2005; Yu et al., 2008).

Different responses to HRH issues

Countries reported challenges in the process of developing proposals, planning, timely implementation, and scaling-up of the Global Fund’s programs due to their overall constraints, especially in terms of human resource availability and capacity. This was articulated in the studies that examined the early implementation effects of the Global Fund in some Sub-Saharan African countries³⁵ (Brugha et al., 2005; Stillman & Bennett, 2005). Common challenges included HRH shortages and poor retention within the public sector. Depending on their own contexts in response to these HRH issues, recipient countries adopted different strategies and policies either independently of GHIs or with the support of GHIs. Essentially these responses included a range of approaches: recruitment from the existing pool of health workers, training of new cadres, task shifting for service delivery, salary harmonization, and introduction of incentive/retention schemes such as salary top-ups, performance-based incentives, remuneration, and allowances (Bowser et al., 2013; Brugha et al., 2010; Cailhol et al., 2013; Chima &

³⁵ Benin, Ethiopia, Malawi, Mozambique, Tanzania, Uganda, and Zambia.

Homedes, 2015; Dräger et al., 2006; Hanefeld, 2010; Oomman et al., 2008; Samb et al., 2009; Stillman & Bennett, 2005; Vujicic et al., 2012; Yu et al., 2008).

Implementing partners created their own localized or short-term solutions to address health worker retention and motivation. Such distortion of responses to HRH issues and sustainability concerns usually arose from the lack of alignment, coordination, and linkages of those responses with broader national schemes or basically from the lack of an overarching strategy and a long-term coordinated HRH plan to support the national HIV/AIDS response (Bowser et al., 2013; Mookherji et al., 2008; Stillman & Bennett, 2005; Vujicic et al., 2012).

Effects on service delivery

Coverage, access, and equity

The Global Fund Five-Year Evaluation study assessed the impact of scaling-up of interventions for targeted diseases. The Global Fund has contributed to improving access to and coverage of HIV prevention, care, and treatment services through its substantial financing for effective scale-up of targeted health interventions in recipient countries. Overall, the Global Fund's financing has dramatically increased the number of service delivery points and improved the uptake of services such as HIV counseling and testing, antiretroviral therapy, and PMTCT (prevention of mother to child transmission) (Macro International Inc., 2009).

GHIs have also contributed to equity of access to targeted services in some aspects. In many cases, GHIs revitalized the principle of free-of-charge services at the point of delivery for their targeted interventions (Samb et al., 2009). In addition, GHI-supported programs reached the most vulnerable groups such as low socio-economic people, migrants, and other key populations. As such, provision of health services including HIV prevention activities among those

marginalized populations improved (Drew & Purvis, 2006; Macro International Inc., 2009; Samb et al., 2009; Yu et al., 2008).

On the other hand, there is a concern about rural-urban inequity in access to health services that applies across the entire health delivery system. Scaling-up of GHI interventions mainly occurs in urban areas where there are more health workers and better health infrastructures with easier access and higher population coverage. This may further widen the existing gap of urban-rural inequity in terms of access to health services for targeted interventions (Hanefeld, 2010; Macro International Inc., 2009; Samb et al., 2009).

Effects on other health services

Generally, previous reviews noted that availability of robust evidence on the effect of scaling-up of HIV/AIDS interventions on other health services was limited (Macro International Inc., 2009; Samb et al., 2009). Demand generation effects of GHIs, along with revitalization of basic health infrastructures, improved laboratories, supply of essential drug and equipment, support of health workforce, and sharing of such available resources, may have synergistic impact that improves delivery and uptake of both targeted and non-targeted health services. However, most of these claims were based on association studies with limited establishment of robust causal relationships (Samb et al., 2009).

Despite such limitations, emerging evidence suggests that GHI-funded HIV/AIDS programs may have synergistic effects that promote access to and uptake of other basic health services at the primary care level in some cases if it is deliberately planned (Samb et al., 2009; Yu et al., 2008). For instance, a study conducted in Haiti and Rwanda suggested that the GHI funding for HIV/AIDS was associated with improvements in basic health infrastructure (including laboratories) and availability of human resources at the health facility level. Overall,

access to and delivery of both targeted and other non-targeted health services significantly improved in those health facilities. In those cases, HIV services were delivered along with other primary care services such as tuberculosis diagnosis and treatment, sexually transmitted infection (STI) diagnosis, maternal care, and child vaccinations (Ivers et al., 2009).

Chapter summary

This literature review suggests that despite having limited availability of robust evidence, the effects of the Global Fund's financing on health systems become predictable. This limited evidence offers some considerable insights on opportunities and challenges associated with the Global Fund's financing. This review also identifies thematic areas where synergistic effects between the Global Fund's support and health system functions can be most felt. However, researchers should exercise prudence when generalizing the findings to a specific context. At the same time, this may allow us to explicitly plan the ways in which disease-focused approach of the Global Fund can subsequently benefit broader health systems. This review also raises common areas of challenges and concerns that can be effectively managed through proper policies, strategies, and approaches. We acknowledge that due to complex, dynamic, and context-specific nature of interactions between GHIs and health systems, there are no evidence-based or consensus-based policies that can be easily generalizable (Samb et al., 2009). Some countries are better at managing those interactions than others, depending on robustness of the underlying health systems—meaning that these variations depend on whether the countries have strategies, plans, and mechanisms in place and whether they possess leadership and management capacity to coordinate and manage those processes effectively (McKinsey & Company, 2005).

The main limitation of this literature review is that findings are often inductive rather than conclusive about the Global Fund's financing on HIV/AIDS programs in examining their

effects on or interactions with the health systems in recipient countries. As some literature findings did not clearly suggest their relation to the Global Fund's financing on HIV/AIDS programs, the investigator had to assume inductive interpretations on their potential association. In such cases, we could not establish robust causal relationships of the findings due to a limited body of evidence. We literally organized our findings on the effects of the Global Fund's financing on health systems as direct effects (supports) and indirect effects (interactions). In practical terms, these effects are mixed and overlapping, and thus they are not separable. The health system themes that emerge in this section will be embedded in analyzing the current situation of the national HIV/AIDS response in Myanmar (Chapter 4) and in formulating discussion (Chapter 5).

Chapter Four

The Current Situation of the National HIV/AIDS Response in Myanmar

This chapter describes the current situation of the national HIV/AIDS response in Myanmar (specific objective 2) in two components: (1) analysis of the current situation of the national response including the role of the Global Fund and (2) specific contextual factors determining health service delivery and uptake. The findings involve a fair mix of descriptive analyses of qualitative and quantitative data. In-depth interview data from key informants are synthesized into specific themes through a deductive approach to describe the first component. For the second component of this chapter, findings are exclusively constructed through an inductive approach. In some cases, findings are also complemented with relevant secondary data collected through desk review of existing reports. The methods of data collection and analysis of findings presented in this chapter are described below in detail.

Methods of data collection and analysis

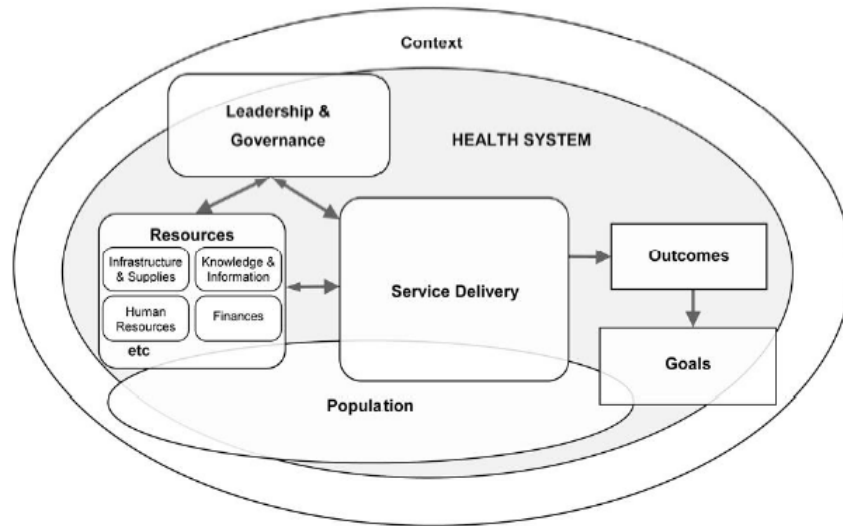
Key informant interviews

To collect qualitative primary data, 15 individual in-depth interviews with key informants were conducted in Myanmar from June to October 2015. Key informants were recruited through systematic purposive sampling and also through snowball sampling. Key informants were those from the UN agencies, NGOs, and civil society organizations, engaged in the national HIV/AIDS response in Myanmar at the national/sub-national level. By using a semi-structured interview guide (Appendix 5), the principal investigator asked respondents questions regarding their experience and opinions about the national HIV/AIDS response, the Global Fund's HIV programs in Myanmar, and the relationship of the Global Fund's financing to the health system.

Eight interviews were conducted in English and the other seven were in Myanmar language. All interviews were audio-recorded, and these audio-records were transcribed and translated into English.

All personally identifiable information of the respondents (the name of the respondents and the names of their position and organization) was removed from the transcripts and replaced by unique anonymous codes. Findings of the key informant interviews (qualitative primary data) were examined through a content-focused analytical process. A continuum of deductive and inductive approaches (Pope, Ziebland, & Mays, 2006) was used for analysis of the findings. First, a deductive approach was applied for analysis of transcript data. We used specific health system themes that emerged from the literature review (Chapter 3) to categorize the data. Findings with illustrated quotes were then grouped under relevant categories, as informed by the literature themes, to explain the current situation of the national HIV/AIDS response in Myanmar. Transcript data also revealed that an understanding of specific contextual factors was central to the experiences of interviewees. Following the analytical model of the “health system dynamics framework” (Figure 11) of Olmen and colleagues (2012), specific contextual factors also shaped the outcomes of health service delivery and uptake. Thus, we also adopted an inductive approach to transcript data to identify relevant themes that indicated those contextual factors. Relevant data were grouped into a set of six inductively derived categories described in the final section of this chapter.

Figure 11: The health system dynamics framework (Olmen et al., 2012)



Source: Olmen et al. (2012, p.4).

The entire data set was then reviewed for data reduction and analysis within a deductive – inductive spectrum and also for extracting the best illustrative quotes. Categories of findings were constructed into a logical structure through an iterative process that reflects respondents’ experiences and opinions. In the final stage, secondary data were also used, as relevant, to complement the findings of key informant interview data.

Document review

The study also involved desk review of documents, reports, and papers to obtain available aggregate information about the national HIV/AIDS response and the Global Fund’s program in Myanmar. These secondary qualitative and quantitative data were mainly collected from key informants in Myanmar and also accessed from the official websites of Myanmar Health Sector Coordinating Committee, the Global Fund, the Joint United Nations Program on HIV/AIDS (UNAIDS), and the World Health Organization (WHO) etc.

The current national response to HIV/AIDS in Myanmar and the role of the Global Fund

The current national response to HIV/AIDS is guided by the revised National Strategic Plan – NSP II (2011–2016). The revised NSP II (Appendix 2) reflects several strategic and programmatic directions informed by the 2013 Mid-Term Review of the NPS II. With three strategic priorities,³⁶ the revised NSP II has set ambitious targets to be achieved by 2016. These include reducing the incidence of new HIV infections by half of the estimated level of 2010 and delivering ART to over 110,000 people (86 percent³⁷ coverage of those in needs) in 2016. These goals have also indicated the need for rapid scale-up of service delivery for HIV prevention, treatment, and care interventions in Myanmar (National AIDS Programme, 2014d). Regarding the general progress of the national response, most key informants highlighted two salient features: (1) signs of improved government commitment to the national HIV/AIDS response and (2) scaling-up and decentralization of service delivery for ART in the public sector.

Signs of improved government commitment

The government has earmarked its specific financial contributions—US\$ 5 million for ART and US\$ 1 million for methadone maintenance treatment (MMT) (National AIDS Programme, 2015a). Key informants perceived a significant increase of health budgets over the recent years, and engagement of some parliamentarians in addressing HIV/AIDS-related issues also indicated very good signs of improved political will and commitment of the government on the national HIV/AIDS response. In addition, perception and acceptance of the government (the

³⁶ Strategic Priority 1 has focused on HIV prevention for key populations and other targeted groups, Strategic Priority 2 on providing comprehensive care for people living with HIV, and Strategic Priority 3 on impact mitigation of HIV (National AIDS Programme, 2014d).

³⁷ This target was set based on the previous need estimates. As the updated national treatment guideline (2014) expanded eligibility criteria for ART, this estimate on ART coverage would have been changed. Epidemiological estimates of HIV projections in Myanmar and population size estimates were also reviewed again in 2015 (personal communication, December 2015), and the updated report was not available at the time of writing this paper.

MOH in particular) towards in-country situation of HIV/AIDS epidemic seem to have changed and improved as compared to what had happened in the past.

Essentially this has also marked the government's acceptance of the epidemic situation in the country, which indicates a fundamental shift from its initial denial. A respondent³⁸ described an example of how the MOH's attitude has changed:

In the past, they did not want to speak out clearly that there were many HIV cases. For example, even for provision of ART, they said, "Be careful. It is good to provide [ART]. But then, who will take care of these patients?" Now, they say, "We must provide ART. We must save the lives of those people. What is the impact going to be?" (R14)

Scaling-up of service delivery

Since 2013, the national response has gained its momentum along with scaling-up of service delivery, especially for ART, HCT, PMTCT, and harm reduction services. Provision of ART is scaled up in the public sector by a two-pronged approach: expanding the number of treatment sites and decentralizing service delivery to peripheral facilities (called "decentralized sites") throughout the country. Most respondents described it both as a significant progress of the national response and as a challenge to the health system.

Leadership and governance

Alignment and harmonization: paramount importance

Key informants described the paramount importance of the alignment of external financing, the Global Fund in particular, with the National Strategic Plan (NSP). The current national response to HIV/AIDS is aligned with the revised NSP II, and the Global Fund supports the NSP II and its costed Operational Plan as the main external source of funding for the national

³⁸ The notation (R) denotes the anonymous code of the respondent to key informant interviews.

HIV/AIDS response. A respondent (R03) commented that the Global Fund has a “push and pull” effect on the NSP to be updated and to be costed with a good M&E frame, referring to its alignment with the NSP and the Operational Plan of the national HIV/AIDS response.

Respondents also explained that big funding programs coming into Myanmar were reviewed by the executive working group of Myanmar Health Sector Coordinating Committee (M-HSCC) or one of its Technical and Strategy Groups (TSGs) for their alignment and harmonization with the national priorities and plans.

Policy development: the Global Fund makes it possible

Respondents indicated that they have observed several policy changes in the national response to HIV/AIDS in recent years. These include policy development for broader participation of stakeholders, most notably the role of civil society, in governance of the national response. In addition, recent updates (2014) of the NSP and the national guidelines for clinical management of HIV/AIDS have signaled significant policy changes in terms of the country’s emphasis on treatment, especially ART. Respondents remarked that the Global Fund’s financing triggered such policy developments in the public sector that would substantially improve welfare of the people infected or affected by HIV/AIDS. Moreover, the financing also drove a cascade of subsequent actions such as expansion of service delivery points, decentralizing service delivery, standardization of essential service packages, and simplification of the ART regimens. A respondent explained this catalytic effect of the Global Fund’s financing as:

[I]t can be the leverage—so a bit like judo, you know; use the weight to the other. They [the Global Fund] put their money in. Because of that, we needed to reform the guidelines on treatment in the country. (R03)

The same respondent also continued to describe how the Global Fund’s financing catalyzed those actions:

[Y]ou can say that it came about because of the Global Fund’s investment. The Global Fund didn’t say, “I want you to do x, y, and z”; they said, “We agree with you; treatment is a priority. Here are resources for it.”(R03)

Stewardship and oversight: the role of M-HSCC

M-HSCC³⁹ has an expanded role of oversight on the broader health sector beyond the scope of the Global Fund. Respondents’ explanations about M-HSCC clarified the extent of stakeholder engagement and its role in stewardship and oversight. One explained that it gives the MOH “one platform to deal with development partners” and makes “the Global Fund more central rather than a separate program” (R03). Some respondents also remarked that engagement of stakeholders, particularly local NGOs and civil society, to CCM was humble initially. It was also challenging for CCM/M-HSCC, as a multi-stakeholder coordination body, to keep all stakeholders well informed and engaged in the discussions. A key informant described this situation as:

There are plenty of challenges in terms of ensuring that everybody has to say and everybody is informed. . . . You know this proverb: “If you want to go fast, go alone. If you want to go far, go together.” . . . So given that, we try to get as many stakeholders as possible involved; it takes a long time. (R06)

Another respondent also explained that in the beginning, some agencies were not active in discussions as they did not fully realize their role of participation in the CCM/MHSCC:

At the beginning, we didn’t understand the meaning of our participation very well. We didn’t know why we need to participate. We didn’t know what to talk [about]. (R09)

³⁹ Myanmar Health Sector Coordinating Committee: See also Chapter 2.

However, this situation seems to have changed over time. They became more and more confident in discussing various issues, and thus, their engagement and representation in M-HSCC improved. The same respondent indicated this notable change as:

In the past, we took a seat and we were just sitting and listening. We didn't dare to talk in front of the Chair—the Minister. . . . Right now, we have to talk when it is really necessary. . . . So gradually our participation became meaningful. (R09)

One respondent (R06) also highlighted another challenge for M-HSCC related to its role in decision-making process, which was sometimes not straightforward and also time-consuming. Such situation appeared to be a difficult and frustrating condition for non-governmental stakeholders. The respondent said:

When we think we have a decision by some of the entities, by the executive working group or somebody senior in the Ministry of Health, these decisions can suddenly be revoked and changed because somebody higher in the system has a different view. So, you are never really a hundred percent sure that this is the way we go until basically the Minister has signed off for it. (R06)

In addition, key informants elaborated about the important role of the Technical and Strategy Group for HIV/AIDS (TSG-AIDS) in coordination of stakeholders. Being supported by a number of working groups, the TSG provides a technical and coordination forum for all partners engaged in the national HIV/AIDS response. Different working groups also support the TSG with specific inputs and information essential for the national HIV/AIDS response, based on their respective thematic areas. A key informant (R03) perceived that this coordination mechanism also offered implementing partners a direct way to work with the government.

Planning and coordination: challenging at the sub-national level

At the central level, the NAP optimizes stakeholder coordination for planning, proposal preparation (including that for the Global Fund), and NSP preparation and reviews, with involvement of a lot of partner agencies. Respondents perceived that the coordination mechanisms introduced by the Global Fund's financing have greatly improved transparency and information sharing among different partners over time. This process also helps stakeholders gain the each other's trust and develop a culture of working together. Respondents also expressed their positive experiences of improved planning and coordination, especially at the national level.

At the sub-national level, the NAP also established AIDS/STD teams to oversee and coordinate implementation of activities. The NAP has deployed a total of 47 AIDS/STD teams at the state/regional level and also at the district/township level in 2014 (National AIDS Programme, 2015a). Quarterly planning and coordination meetings ensure implementation processes of the national response at the sub-national level, and respondents observed that stakeholder coordination seemed to be more challenging at this level. A key informant (R05) commented that the degree of the public sector's commitment seemed to have reduced when reaching to the lower level. However, the same respondent (R05) also clarified the opinion that "it is not because people [TMOs] do not want to do the business, but [because] they need support." Most township hospitals need operational supports in terms of funding, equipment, human resources, and staff training and capacity building. Township Medical Officers (TMOs), who bear the responsibility for implementation of different vertical programs, are sometimes not fully aware of all of the plans. In such cases, implementing partners face some constraints to coordinate their activities with the public sector at the local level.

Engagement of stakeholders: NGOs and civil society

Respondents also described the indispensable role of the UN agencies, NGOs, and civil society, all of which have played a substantial role in the national HIV/AIDS response, historically and at present. Non-governmental stakeholders continue to provide health care in many places where the coverage of governmental health services is poor, particularly in conflict-affected areas and hard-to-reach areas. NGOs also play a prominent role in delivering and promoting HIV prevention interventions among key population groups. While the public sector scales up services for provision of ART, international NGOs that used to be main providers of ART in the country have maintained the scale of their services for ART provision.

Respondents also indicated their observations that in some cases NGOs have been shifting their approach gradually towards a collaborative model and moving away from the model of gap filling with direct service delivery, which was parallel to the MOH system. Some NGOs have started transferring a number of their patients who are stable on ART to governmental sites. Respondents also explained different models of partnerships with the NAP that NGOs have adopted. These include (1) Partnership for infrastructural supports: these include renovation of health centers, OPD (out-patient department) rooms, laboratories, and medical stores, furnishing them with necessary equipment, and support of logistical need; (2) Partnership for human resource supports: some agencies hire staff and attach them (secondment of staff) to support the NAP and to have its workload shared; (3) Technical assistant partnership: some agencies work as technical assistant partners of the MOH, providing technical and capacity supports at various levels; and (4) Out-sourcing partnership: some NGOs work as “satellite sites” of the NAP for service delivery such as for HCT, patient enrollment, and follow-up.

Along with the scaling-up of interventions, the role of local NGOs has also been escalating. In the past, their role was mainly limited to providing counseling and home-based care, but now they have become engaged in scaling-up of interventions. A key informant of a local NGO said:

They [the NAP] support us with enough test kits to do blood testing. . . . It is easy. We don't need doctors to do testing; we don't need lab technicians. We do finger pricks. We put drops on the test strips and do the readings. Then we get the results. . . . Previously, when the people came to us, we referred them. . . . Now all of them [the services] become available at one-stop in our sites. (R09)

Other key informants also described the noteworthy role of civil society networks and their clusters (SHGs), which are composed of active members nationwide, in peer counseling, care giving (home-based or hospital-based care giving), patient follow-up, and defaulter tracing. Over the recent years, the private (for profit) sector has also become increasingly important to reach those who may not otherwise be picked up by existing services.

Collaboration: many improvements

Most respondents highlighted that collaboration among stakeholders, notably collaboration between the MOH/NAP and non-governmental stakeholders, has greatly improved at all levels over the years. A key informant (R09) remarks that the NAP “has well understood the partnership practice” with the NGOs and civil society. Even though there used to be some collaboration issues at the local level, in most cases this situation has changed. A respondent (R10) described this situation by using the words like “invite,” “welcome,” and “contact,” which indicate the change in the nature of collaboration between government hospitals and civil society. The respondent said:

Right now, when we are going to organize trainings in a hospital, the hospital may arrange for it. They arrange a room for the training. They invite us. They welcome us. They collaborate with us in organizing some events. They also tell us to contact them directly if necessary and to tell them directly if we have so and so issues. (R10)

On the other hand, despite having such positive experiences in general, NGOs still face some exceptional issues at the sub-national level. The different experience mostly depends on the respective MOH persons who are locally responsible. A key informant (R12) gave an example of how the MOH's collaboration worked at one level, but when expanded to a lower level, the collaboration did not work well. The key informant said:

[W]e tried to run a one-stop shop in [Township X]. . . . When we talked about it at the central level, it was going well. They also agreed to it. But when we talked about it at the field level, we were not able to negotiate with the respective DMO—the district medical officer. (R12)

The same respondent continued to explain one of the recent issues they have faced:

He [DMO] had many demands. . . . He demanded [us] do this thing, do that thing. We were not able to support that much. He would not have run it [health center] if we could not provide that support. So, we were not able to run it at all. I mean, no matter how it is going well at the central level, it largely depends on the respective DMOs, TMOs [Township Medical Officers], and SHDs [State Health Directors] at the field level. (R12)

This example indicates that a workable project needed to be cancelled outright due to the lack of MOH's collaboration at the lower levels and that a project launch required collaboration among MOH's personnel at many levels. Intensive advocacy at all levels is the key to smooth collaboration with the public sector. In some cases, respondents cited “the letter for

collaboration”⁴⁰ that seems to be an effective tool for implementing partners to run their activities successfully at the local level. For instance, a key informant said:

[T]he process becomes smooth because of their support and their letter for collaboration.

It is a little bit [more] convenient and easy to do prevention activities and find our targets in places like KTV [Karaoke Television] lounges and brothels in the township if we get their approval. (R09)

Financing

In recent years, Myanmar increased its spending on the national response to HIV/AIDS. According to the National AIDS Spending Assessment (NASA),⁴¹ the total spending in 2013 was approximately US\$ 53.5 million. This spending was 35 percent higher than that in 2012, which was about US\$ 39.5 million. This increase emerged from the amount of funding received from domestic and international sources, including the Global Fund’s grants under the New Funding Model.⁴² In 2013, the total national spending on HIV/AIDS response became approximately US\$ 1 per capita or US\$ 282 per person living with HIV/AIDS (as shown in the Table 4). This amount was significantly higher than the 2004 level of US\$ 0.35 per capita or US\$ 50 per person living with HIV/AIDS. Notably, care and treatment spending per person living with HIV/AIDS increased from US\$ 92 in 2012 to US\$ 137 in 2013 (National AIDS Programme, 2015b).

⁴⁰ “The letter for collaboration” refers to an official letter issued by the MOH/NAP that instructs or informs responsible staff at the lower level or local authorities to collaborate and support, as necessary, the implementing partners concerned.

⁴¹ The most recent National AIDS Spending Assessment (NASA) released in 2015 covered the period 2012–2013 (National AIDS Programme, 2015b); and data for 2014–2015 were not available at the time of writing this paper.

⁴² Myanmar received grants from the Global Fund for the period 2013–2016, totaling over US\$ 160 million for HIV/AIDS (National AIDS Programme, 2014a, 2014d).

Table 4: Health and HIV-related per capita expenditure in Myanmar (2013)

Estimated expenditure per capita (2013)	US\$
Total health expenditure ⁴³	14
Total government expenditure on health ⁴³	4
Total expenditure on HIV/AIDS ⁴⁴	1
Total government expenditure on HIV/AIDS ⁴⁴	< 0.1
Total expenditure on HIV/AIDS contributed by the Global Fund ⁴⁴	0.5
Total expenditure on HIV/AIDS per person living with HIV/AIDS ⁴⁴	282

Source: World Health Organization (2015b) & National AIDS Programme (2015b).

During 2012–2013, the Global Fund contributed more than half of the total HIV/AIDS spending in Myanmar as “the single largest financing source” for the national response (as shown in the Table 5), whereas 3DF/3MDG Fund, another pooled funding source, contributed over seven percent of the total spending. The government’s spending on HIV/AIDS also increased to an extent, and the government contributed US\$ 4.1 million (nearly 8 percent of the total spending) in 2013 as compared to only US\$ 0.7 million (nearly 2 percent of the total spending) in 2012. Despite this large increase of financing, the national HIV/AIDS response remained under-funded. For the year 2014, the expected resource gap was US\$ 71 million (61 percent of the total needs), estimated according to the costed and revised NSP II. Substantial gaps occurred in the impact mitigation component and the prevention component of the national plan, in which the expected financing gaps were 99 percent and 74 percent of the total needs respectively (National AIDS Programme, 2015b).

⁴³ See the WHO Global Health Expenditure Database (World Health Organization, 2015b).

⁴⁴ See the National AIDS Spending Assessment (2012–2013) Report (National AIDS Programme, 2015b).

Table 5: Breakdown of HIV/AIDS spending (2012–2013) in Myanmar by financing sources

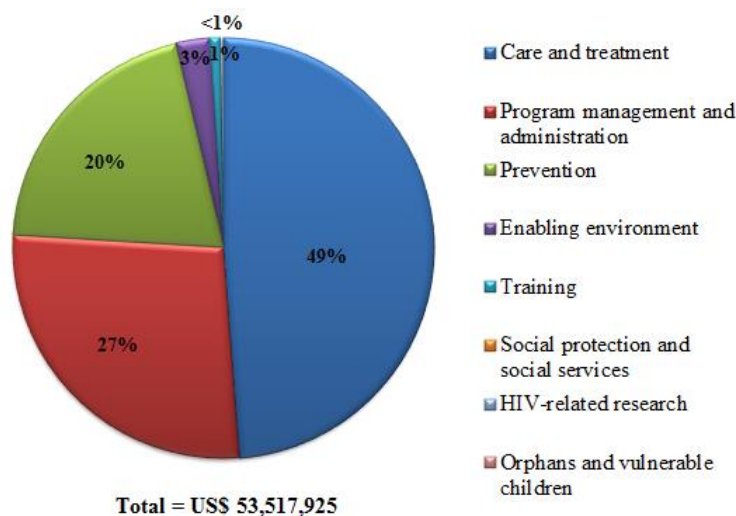
Financing sources	2012		2013	
	US\$	%	US\$	%
Domestic (public)	726,157	1.8	4,131,753	7.7
Bilateral government	4,019,403	10.2	4,632,803	8.7
International NGOs	8,031,202	20.4	11,967,631	22.3
Global Fund (GFATM)	22,067,259	56.0	26,854,010	50.2
Multilateral – UN agencies	2,738,468	7.0	3,981,497	7.4
Private (for profit) sector	1,386,639	3.5	1,435,863	2.7
Others	453,162	1.1	514,368	1.0
Total	39,422,290		53,517,925	

Source: NASA (2012–2013) Report (National AIDS Programme, 2015b, p.28).

In terms of managing financial resources in 2013, the majority of spending (almost 90 percent) was managed by international agencies, including the UN agencies and international NGOs. The public sector managed the resources coming from domestic spending, which amounted to less than 10 percent of the total financial resources. The government spent its contributions on expenses related to human resources, trainings, health commodities, infrastructure, and operational costs in the public sector. In terms of actual spending in 2012–2013, the national response spent only one-fifth (about 20 percent) of the total expenditure through providers in the public sector. The NASA also reported the breakdown of the HIV/AIDS spending by programmatic areas (as shown in the Figure 12). In 2013, almost half (49 percent) of HIV/AIDS-related expenditure was spent on care and treatment interventions, and 20 percent was spent on HIV prevention interventions of the national response. In addition, a significant portion (27 percent) of the total expenditure was spent for program management and

administration, out of which approximately two-thirds were used for policy/coordination-related costs and to a much less extent for other system-strengthening and crosscutting interventions (National AIDS Programme, 2015b).

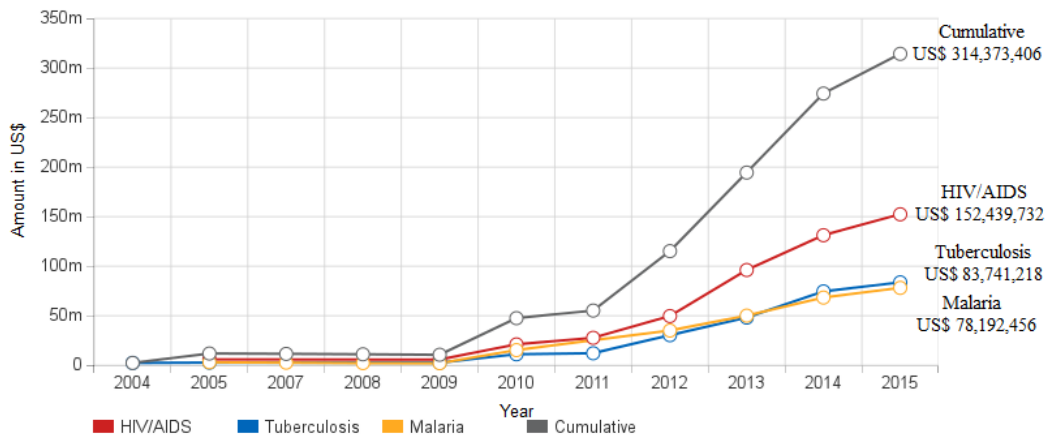
Figure 12: Breakdown of HIV/AIDS-related spending (2013) by programmatic category



Source: NASA (2012–2013) Report (National AIDS Programme, 2015b).

The Global Fund to fight AIDS, Tuberculosis and Malaria (GFATM) is the single largest financing source for the national HIV/AIDS response in Myanmar (Table 5), contributing over US\$ 22 million (56 percent of the total spending) in 2012 and over US\$ 26.8 million (50 percent of the total spending) in 2013 (National AIDS Programme, 2015b). Up through 2015, the Global Fund has disbursed approximately US\$ 152 million to Myanmar under its grants for HIV/AIDS, out of a cumulative total disbursement of over US\$ 314 million for three diseases (The Global Fund, 2015c). The Global Fund’s HIV/AIDS grants account for nearly half (48 percent) of its total cumulative disbursements to Myanmar for three diseases (Figure 13).

Figure 13: The Global Fund's disbursements to Myanmar



Source: The Global Fund (2015c), The Global Fund: Myanmar – Investments & Results, <http://www.theglobalfund.org/en/portfolio/country/results/?loc=MMR>, accessed December 8, 2015.

Currently, through its Single Stream of Funding (SSF) grants for HIV/AIDS, the Global Fund has committed its financial contributions to the national HIV/AIDS response for the period 2013–2016. The grant, totaling more than US\$ 160 million, is divided between the two Principal Recipients: Save the Children and the UNOPS, which manage approximately 55 percent (over US\$ 90 million) and 45 percent (over US\$ 70 million) of the total grant respectively (The Global Fund, 2013a, 2013b). The public sector (MOH/NAP) implements activities as one of the Sub-Recipients⁴⁵ of the grant managed by the UNOPS (United Nations Office for Project Services, 2015b) while 16 Sub-Recipients (NGOs and a multi-lateral agency) run their project activities under the grant managed by Save the Children (Save the Children, 2015). The Global Fund's financing in Myanmar has focused on providing direct supports for the scale-up of specific interventions. For instance, the National AIDS Spending Assessment 2012–2013 (National AIDS Programme, 2015b) reported that 64 percent of the Global Fund's money was spent on

⁴⁵ National AIDS Programme (NAP), the World Health Organization (WHO), Pyi Gyi Khin, International Union against Tuberculosis and Lung Disease (The Union), and Myanmar Anti-Narcotics Association.

interventions specifically targeting prevention, care, and treatment components of the national HIV/AIDS response in 2013 (as shown in the Table 6).

Table 6: Breakdown of the Global Fund's HIV/AIDS spending by programmatic components⁴⁶

Programmatic components	2012		2013	
	US\$	Percent ⁴⁸	US\$	Percent ⁴⁸
Prevention component	3,773,627	17.1	4,880,897	18.2
Care and treatment component	8,515,016	38.6	12,304,171	45.8
Program management and administration	7,961,889	36.1	8,528,132	31.8
Enabling environment ⁴⁷	1,815,693	8.2	1,058,942	3.9
Human resource trainings	1,035	< 0.1	81,867	0.3
Total ⁴⁸	22,067,259	100	26,854,010	100

Source: NASA (2012–2013) Report (National AIDS Programme, 2015b).

The Global Fund's additional safeguards

Some respondents voiced criticism about the approach of the Global Fund's financing to programs in the public sector. Because of the sanctions in place and also because of the Global Fund's Additional Safeguard Policy, no funding flowed directly to the government. A key informant explained that the Global Fund's financing to the government was through "a bit of convoluted way," which means "cash doesn't come to them [the government] to administer" and "somebody else in the parallel process [is] managing finances for them" (R03). The Global Fund applies its policy of "zero cash flow" to financial management of the funds for governmental programs. The UNOPS, the Global Fund's Principal Recipient for public sector programs,

⁴⁶ Based on expenditure analysis data reported for the National AIDS Spending Assessment 2012–2013.

⁴⁷ To ensure having an enabling environment for key populations, this component of the Global Fund's grant supports activities such as awareness raising, conducting advocacies for policy and legal reviews to address HIV/AIDS-related human rights issues, and also strengthening community systems and civil society networks (Save the Children, 2015; The Global Fund, 2013a).

⁴⁸ Adjusted for point estimates.

utilizes a system of disbursement called “the Managed Cash Flow.” The UNOPS deploys a cadre of staff, called field finance assistants, in every state and region. Having cash in hand, those staff make direct disbursement to service providers, advance payment, or offer cash reimbursement (based on the work-plan and implementation of activities) in the public sector. A set of Standard Operating Procedures (SOPs) guides the mid-level health managers in the governmental sector for planning, budgeting, auditing, verification, and accountability processes in finance management of the Global Fund’s programs (United Nations Office for Project Services, 2015a).

Some interviewees observed constraints in daily management of the program through that approach at the operational level. For instance, a respondent described that:

She [field finance assistant] reimbursed straightly to the staff or sometimes into the hands of TMO [Township Medical Officer]. Reimbursement was a hundred percent. . . . I am not sure what kind of vouchers they show to the finance staff. . . . But he or she cannot argue with the township medical officer. If there is a problem, she can be, I mean, she can be sacked. That is a kind of threatening. (R07)

Another respondent (R03) also commented on the Global Fund’s zero cash flow policy because the respondent felt that this policy did not help the MOH to improve their financial management capacity and accountability. The respondent said, “So, that has been a negative because it does not help the government build its capacity around managing the grant” (R03).

Supply management and health information systems⁴⁹

For vertical programs supported by the Global Fund, the two Principal Recipients, the UNOPS and Save the Children International (SCI), run their procurement and supply chain systems in parallel. To support the Global Fund’s programs, the UNOPS oversees the

⁴⁹ See also Chapter 2 for more information about supply chain and health information systems in Myanmar.

procurement of medicine, health products, and equipment for the public sector while SCI provides procurement services for its Sub-Recipients (NGOs) who have their own internal supply chains (personal communication, June 2015). Several respondents highlighted the overall need of the public sector for strengthening the medical supply chain and logistics system, along with capacity building of the staff. Some agencies also support the MOH to improve the overall medical supply chain system, which happens outside of the Global Fund's financing. At the local level, inventory management system is very much paper-based, and in terms of inventory control, a key informant said: "in some places, medicines may be piled up in stocks, but in other places, medicines are in shortage" (R12). Due to this reason, the key informant felt that the supply management system needed strengthening in the public sector as a priority.

Regarding health information, the routine Health Management Information System (HMIS) does not capture all strategic and programmatic information related to the national HIV/AIDS response. Due to specific reporting requirements of the donors, monitoring and reporting for the donor-funded vertical programs run parallel to the existing national system. However, the availability and reliability of strategic information about the HIV/AIDS epidemic and the national HIV/AIDS response have improved over the years. For instance, a respondent (R04) remarked that the reliability of data improved because of more transparency in the reporting process. The respondent said:

[T]en years ago you cannot talk about data. Ten years ago, many people from outside or inside don't [didn't] trust the data that we have or from MOH. Now all partners trust the data we have because there are[is] transparency of the way of working. (R04)

The Strategic Information and M&E (Monitoring and Evaluation) Working Group, one of the technical working groups of the TSG for HIV/AIDS, provides specific inputs and coordinates

M&E practices among implementing partners. The M&E Unit of the NAP is responsible for data compilation, monitoring, and reporting at the national level. Programmatic and strategic information⁵⁰ about the national response and situation of the epidemic has become available. Although the health information system related to HIV/AIDS has improved in general, priority needs and challenges still remain to further strengthen the M&E system and to improve M&E capacity especially at the sub-national level (National AIDS Programme, 2015a). Key informants also pointed out that the overall M&E system in the public sector remains very much paper-based. The application of modern technology, including the use of electronic database and the use of computers and internet, is limited at the sub-national level. The information management and data reporting system is weak, especially at peripheries of the MOH's system, due to lack of human resources, equipment, and specific technical supports.

Health workforce

Myanmar's health system has faced human resource for health (HRH) issues,⁵¹ which are critically related to availability of medical and public health professionals in the country. There are significant challenges in ensuring deployment, retention, and motivation of health workers, most notably in the public sector. In addition, the overall need to improve the skills and capacity of the health workforce reveals the broader deficiency in human resource development in Myanmar. Among the existing HRH constraints, respondents addressed some specific issues that impede effective scaling-up and decentralization of service delivery, especially for ART in the public sector.

⁵⁰ These include reports on annual progress of the national HIV/AIDS response, expenditure assessment (National AIDS Spending Assessment), HIV sentinel surveillance surveys, behavioral surveillance surveys among selected populations, integrated biological and behavioral surveillance (IBBS), epidemiological estimations on projections of HIV/AIDS, and population size estimates (National AIDS Programme, 2015a).

⁵¹ See also Chapter 2 for more information about human resources for health in Myanmar.

Human resources: A generalized health system crisis

Respondents agree that human resources for health, in terms of both quantity (availability) and quality (capacity), remain one of the most demanding health system issues in the current context. Basically, the issues stem not only from the absolute need for training more health workers but also from lack of adequate staffing and opportunities for capacity building. A respondent highlighted the critical need for more health care providers in the country as:

Human resources—that’s going to be the biggest challenge because you can buy a hospital; you can buy new machines and equipment, and all the rest. You could buy the drugs. Unless you have trained health care providers, you know what they are doing—they won’t give quality care. (R03)

Another respondent (R06) shared the opinion that the public sector is under-staffed at all levels and that “a significant upgrade” is also required for the capacity of the staff and the use of updated technology. The need for adequate staffing (not only doctors and nurses but also technicians and other support personnel) appears to be more serious than infrastructural needs to ensure functioning of the decentralized sites in providing ART services and follow-up care at the township level. For instance, one respondent (R10) described how most material needs were met, but they needed well trained personnel to offer reliable health services. The respondent said:

We do have the hardware right now. We have built hospitals. Equipment is provided. We have labs but there are no technicians. It is because the soft component [human resources] is totally deficient. (R10)

The staffing issues in the public sector constrain the health system at the service delivery level as well as at the national level. Different coordination structures of the MOH usually exist at the national level. However, resource gaps such as funding and human resource shortages undermine the functioning of those structures, effective coordination, and follow-up of activities.

In addition, respondents also highlighted that MOH officials were often burdened with outsized responsibilities for undertaking parallel or multiple tasks. A respondent (R04) explained how the shortage of human resources constrained the functioning of various MOH committees at the central level. The respondent said:

[Y]ou ask, “Do you have a committee for this? Do you have a team?” [It is] always “yes.” Then you ask, “How often this committee meets?” It is rarely done . . . because they [the MOH] have no budget to make it happen, or they have no focal person, or the focal person has multi-tasks. (R04)

Key informants also highlighted another underlying issue that stems from centralizing responsibility for HRH recruitment and deployment functions in the public sector at the higher level of the MOH. Accordingly, existing/emerging HRH gaps of township hospitals cannot be filled quickly at the operational level. Staff turnover and frequent transfers have also made timely and effective rolling-out of program implementation impossible, as noted by one interviewee in this quote:

So, just after we have given them trainings, they move [to another place]. What happens is that we give them trainings, and then they move. (R14)

Respondents’ explanations about existing HRH issues help to understand the current HRH crisis at the operational level. Basically, Township Medical Officers (TMOs) are responsible for many tasks, including managing and coordinating the township health system, overseeing implementation of different public health programs, providing medical care at the township hospital, and dealing with authorities. TMOs are much occupied with those multi-tasks, and in most cases, it is not realistic for them to do all of those parallel tasks effectively with frequent gaps in HRH availability. Township hospitals are often under-staffed, and practically, a

number of positions remain vacant. For instance, there is no specific person (or pharmacist) responsible for the medical store or no specific M&E person responsible for the database. In most cases, doctors and nurses complete all of those tasks. Due to these gaps in HRH availability, tasks of the health staff are frequently mixed in reality. A respondent (R14) described this situation, indicating that one person may be completing tasks equivalent to three jobs. The respondent said:

They are filling the gaps of each other. So, a person may be responsible for three positions. (R14)

TMOs may often assign available staff (township health nurse, another senior nurse, or township health assistant) as “the ART focal person” for implementation of the ART program at the township level. Another common challenge is frequent turnover of health staff, especially medical doctors at township level hospitals. Remoteness, staff transfers, and promotions are the common causes of those HRH turnovers. A key informant gave an example as:

Sometimes the turnover is high. They [medical doctors] stay at a place for a year; then they move to another place. It happens like this. (R13)

Another key informant also described a common reason for turnover of medical doctors:

The MOs [medical officers], who are arriving to township hospitals, are usually freshmen of their first posting or second posting. But at a certain time, all of these MOs would try for the postgraduate study. Then they join the specialty they want. . . . They are never stable at township hospitals. (R14)

Turnover of health professionals is common not only in the public sector but also in the private sector. A respondent also explained this situation:

I've never seen a place like Myanmar where people work three months there, six months there; every time they get a better opportunity, they move. We get a lot of CVs [Curriculum Vitae], when we ad, when we employ, and when we have openings, with people who had seven, eight jobs in . . . five years. (R06)

Short-term responses to HRH needs

Respondents also described some remedial responses that were introduced to satisfy the urgent HRH needs in the short term and to support the MOH for effective scaling-up and expansion of key HIV/AIDS interventions in the public sector. For example, additional technical and support staffs (such as technical officers, pharmacists, and logisticians) were hired through the World Health Organization (WHO) and some NGOs; and then, these people were attached to the MOH. M&E persons were also hired and attached to the state/regional health departments to support on data management and reporting. All these seconded staffs provide technical and operational supports to the MOH at different levels. A key informant described this approach:

Those people [are] sitting inside the government offices, working within the government offices and supervised by the government to provide daily management or support. (R08)

Some NGOs have also seconded medical doctors and other technicians to township hospitals to facilitate implementation of decentralized activities of the NAP at the local level. These seconded staffs provide a range of supports such as assisting the ART focal person, data recording and reporting, pharmaceutical forecasting, and preparing delivery orders. Even though this approach seems to have facilitated implementation of specific program activities (such as ART provision at the township hospital), it does not address the overall HRH issues in the public sector. Moreover, challenges arose in some cases. A key informant explained one of the challenges as:

For instance, we want them to use our staff specifically for the ART program. . . . Some senior doctors—they usually have to attend meetings. They have to go when the government calls them to do something else. In those cases, our MOs [medical officers] are asked to treat the patients. We tell them not to treat the patients because we are not going to take that responsibility, intentionally. (R09)

The same respondent also commented on this situation as:

In these cases, no matter what we have agreed at the higher level—whatever agreement we have—what happens at the lower level is case-by-case basis in many instances. (R09)

Service delivery

Prevention component: unfinished agenda

As guided by the Strategic Priority 1 of the revised NSP II (Appendix 2), the prevention component of the national HIV/AIDS response has mainly focused on key populations and other targeted groups. In 2013, nearly US\$ 11 million (20 percent of the total expenditure) was spent on the prevention component; however, these resources covered less than a third of what was intended to achieve in the strategic plan. Most of prevention expenditures were channeled to harm reduction programs (among people who inject drugs—PWID) and programs targeting other key populations (men who have sex with men, sex workers, and their clients) and PMTCT (National AIDS Programme, 2015b).

In 2014, almost 14 million sterile needles and syringes were distributed to PWID through harm reduction programs, and nearly 8,000 people received methadone maintenance therapy. These achievements were substantial as compared to, for instance, those of 2010, in which less than 7 million needles and syringes were distributed and less than 1,200 people received methadone maintenance therapy. Implementing agencies delivering harm reduction services

among PWID have faced several challenges. Injecting drug use is common in mining areas, remote/border areas, and areas affected by conflicts. As a result, implementing agencies find it rather difficult to reach injecting drug users in those areas. Another challenge for needle and syringe exchange program (NSEP) is the legal provisions under the Excise Act⁵² of 1917 that prohibit unlicensed possession of needles and syringes (National AIDS Programme, 2015a).

NGOs and civil society continue to take a substantial role in delivering HIV prevention services, especially among key population groups. The MOH also runs some programs targeting condom promotion, HIV prevention among sex workers, and opioid substituting treatment for drug users. Respondents commented on the public sector's lack of HIV prevention programs (particularly programs that target men who have sex with men) since most governmental programs are tailored for general population. However, interventions directly targeting the general population accounted for only about 1 percent of the total HIV/AIDS spending in 2012–2013 (National AIDS Programme, 2015b). Some respondents also highlighted the lack of adequate awareness, mobilization, and education campaigns, except the World AIDS Day events targeting the general population. The level of public awareness about HIV/AIDS remains low, and this may also exacerbate the existing burden of HIV/AIDS-related stigma in the community. A respondent (R10) highlighted the remaining need for awareness-raising about HIV/AIDS among the general population. The respondent said:

I wonder why people haven't got any knowledge. It is because we were doing activities among ourselves. I mean, for instance, we've reached to key populations—sex workers, drug users for HIV prevention. . . . They know how to prevent themselves from

⁵² The Section 13 of the Burma Excise Act – 1917 (*The Burma Excise Act, 1917*) states that “No person shall make, sell, possess, or use (i) any hypodermic syringe, or (ii) any other apparatus suitable for injecting any intoxicating drug, except under and in accordance with the conditions of a license granted under this Act.”

transmitting HIV infection to others. The general population does not have any awareness at all. As they are not aware of it, there is a huge gap in the community. (R10)

Harm reduction approach: Demands for a major re-think

Several key informants highlighted providers' constraints to implement harm reduction interventions. A respondent noted that it is challenging to implement harm reduction activities that are "innovative and may be not currently traditionally accepted by the government" (R01). Moreover, in some cases, there is resistance from local communities to distribution of needles and syringes, citing it may promote injecting drug use in their area. All of these challenges undermine delivery of essential HIV prevention interventions for PWID. A key informant described these challenges as:

They [local people] do not accept distribution of syringes. We are doing harm reduction, but what they actually want to do is demand reduction and supply reduction. We face some issues when we go to shooting galleries. Sometimes, they arrest peers—our peer workers—and destroy the syringes. We have faced this kind of things. (R12)

Some respondents also perceived that the MOH was not very proactive or "progressive" in providing harm reduction services, given that the government needs to introduce interventions like needle and syringe exchange programs that are primarily effective in breaking the chain of HIV transmission among PWID. In addition, key informants also expressed their concerns about high HIV prevalence and incidence of new HIV infections⁵³ among PWID. A respondent described how HIV infection is transmitted among PWID:

39 percent of the new infections are through injecting/sharing needles basically. That's not injecting drug use, right! That is the cause; it is the sharing of the needles. (R03)

⁵³ See also Chapter 1 for more information about the situation of HIV epidemic in Myanmar.

The Integrated Biological and Behavioral Surveillance (IBBS) survey (as cited in National AIDS Programme, 2015a) conducted in 2014 indicated that the HIV prevalence among PWID was found to be 28.3 percent, and it was as high as nearly 50 percent in four townships. Respondents often cited these alarming figures and also the need for effective harm reduction interventions to really curb this situation of the epidemic among PWID. A situational assessment conducted in 2014 reported that coverage of harm reduction interventions was insufficient as compared to the high extent of injecting drug use, especially in conflict-affected and border areas. The report also highlighted that delivery of harm reduction services was constrained by existence of some punitive laws⁵⁴ and also by frequent police crackdowns in some areas (Reid & Tip, 2015). Despite having such reported constraints, the MOH did not show strong motivation to address those issues. The current governmental programs pay more attention to methadone maintenance therapy rather than concentrating their efforts on harm reduction interventions for drug users. A respondent commented on this situation as:

They are not showing their leadership on the issue. . . . Some government officials want to work on methadone. Sorry! This doesn't stop you sharing the needles. Yes, we will have you eventually controlled your drug use. . . . So it is secondary. First line has to be needle-syringe program. (R03)

Subsequently, there are demands on the MOH to “re-think” its approach towards HIV prevention among drug users. The same respondent stated it as:

They [the MOH] have an old-fashioned psychiatric-based treatment logic. They need to move into the current century and look at harm reductions. (R03)

⁵⁴ The Burma Excise Act of 1917, and the Narcotic Drugs and Psychotropic Substances Law of 1993.

Care and support component: promoting the patients' welfare

Care and support activities (such as nutrition supports, peer supports, and home-based/ community-based caregiving) are integral elements for mitigating socio-economic impacts of the HIV epidemic. These services are supportive to improve the welfare of people living with HIV and their families. A respondent (R10) articulated that from the individual perspectives of patients and their families who are surviving in the context of impoverished situations, the need for food and care-taking is sometimes more urgent and vital than that for the medical treatment. The respondent said:

When people have patients in their households, nobody wants to take care of them. Nobody wants to feed them. They [patients] are being annoyed. When the clinic provides them with some supports, the daily living seems to be convenient for some families. . . . They may share the food. . . . Nutrition support has reduced very much, and patients are not willing to go to clinic even when they get sick. Some of them may think it would be better to die. (R10)

Members of self-help groups and civil society networks are also the main providers of peer supports (counseling, psycho-social supports, and home-based follow-up and caregiving) at the community level. As of 2013, nearly 19,000 people living with HIV engaged with countrywide networks of self-help groups (National AIDS Programme, 2013c). However, some of those volunteers faced constraints in conducting home-based follow-up to their peers because of their status and the stigma attached to it. A respondent explained this situation as:

[W]hen we organized volunteers and told them to follow up our new patients, they said that the whole town had already known them as HIV-positive people. . . . So, they could not go because they are well-known persons [living with HIV]. . . . He [the peer

volunteer] may visit to others as a friend. But, as he is the one [who is HIV-positive], the other person may also be suspected. People are like this. (R13)

Treatment component: inspired by scaling-up of interventions

Over the recent years, the most remarkable feature of the treatment component of the national HIV/AIDS response has been the scaling-up⁵⁵ of interventions especially provision of ART in the public sector. At the end of 2014, more than 85,000 people living with HIV received ART, and this number was approximately equivalent to 40 percent of the estimated total number of people living with HIV in the country (National AIDS Programme, 2015a). Notably, this scale-up was drastic, considering what had achieved over the last ten years.

Even though the private sector used to be the main provider of ART, the public sector has taken an increasingly expanding role in scaling-up of service provision in treatment component, especially since 2013. Accordingly, the public sector provided nearly half (47 percent) of the total ART in the country by the end of 2014. The public sector adopted a two-pronged approach: increasing the number of service delivery points countrywide and decentralizing some components of service provision to lower level health facilities. This trend of scale-up in the public sector is also expected to continue rising in the upcoming years (National AIDS Programme, 2015a).

Scaling-up and decentralization: emerging demands and challenges

To ensure accessibility of patients to treatment, the NAP is scaling up ART provision by opening new service delivery points as well as by shifting the task for continuation of ART provision at peripheral facilities called “decentralized sites.” The main ART centers, located mostly at specialist hospitals or hospitals at state/regional and district levels, initiate ART for

⁵⁵ Scaling-up in the context of NSP II refers to expansion of service provision not only in terms of numbers and geographical coverage but also in the scope of services with emphasis on ensuring quality and minimum standards (National AIDS Programme, 2014d).

eligible patients. Once these patients have been stabilized on treatment, they are transferred out from the main ART centers to decentralized sites at township hospitals in the area or near the area of their residence. Respondents described this process of decentralization in service delivery as an important but challenging aspect of scaling-up of services in the public sector. Essentially, the opening of decentralized sites throughout the country is intended to relieve patient loads at the main ART centers, to expand coverage of treatment services to peripheral areas, and also to ensure convenient access of patients to ART at nearby places. Thus, the main ART centers are primary facilities for enrollment of new patients, initiation of treatment, and management of complex cases, whereas decentralized sites are facilities that provide follow-up services to stable patients for continuation of treatment. In 2014, governmental hospitals and health facilities (main ART centers and decentralized sites) accounted for almost three-fourths (74 percent) of 184 service delivery points providing ART in the country. To support the country's scaling-up plan for providing ART to more than 110,000 people living with HIV by 2016, the NAP has also planned to increase the number of main ART centers to 80 in 2016 and also the number of decentralized sites to more than 100 by the end of 2015 and up to 150 sites in 2016 (National AIDS Programme, 2015a).

On the other hand, several respondents mentioned challenges regarding quality of care and operational efficiency of the decentralized sites. They also noticed varying degrees of functioning across those decentralized sites.⁵⁶ Some sites functioned well, but some others were not functioning or were not ready to start providing ART. Some operated as “dispensing sites” for ARV drugs without the ability to provide proper follow-up care. The functioning status of

⁵⁶ The process of decentralized service delivery was initiated in 2012, and a joint rapid assessment was conducted in 2013 (National AIDS Programme, 2013b). But, the updated information about the extent and the proportion of functioning status of those facilities for decentralized ART provision was not available at the time of writing this paper.

those health facilities depends on several factors, as described by respondents. For instance, some township hospitals did not have adequate human resources or the capacity to fully operationalize ART provision. In some cases, there were information gaps and misunderstanding between decentralized sites and main ART centers.

Moreover, several respondents also highlighted reluctance of some patients to go or to be transferred to decentralized sites at the township level as an important and emerging challenge.⁵⁷ This issue seemed to be serious particularly at the beginning of the process. On the other hand, some respondents also witnessed that over time a greater number of patients went to those decentralized sites since the patients benefited from improved access to treatment services. These local services also helped them save time and costs of going to the main ART centers. A respondent explained:

[W]hen some patients arrived there [decentralized site], they realized it was near to their home. For those who used to get up at two in the morning, they might get up at six in the morning to go there. . . . They got the same medication. . . . So, some [patients] became satisfied. As they felt satisfied, the information was spread from one to another, and a few more patients showed up. (R14)

Decentralization process: constraints and concerns

Respondents raised a number of issues related to the ongoing process of decentralizing the service delivery in the public sector, particularly for provision of ART continuation and follow-up care at the township level. As this process began only a few years ago, respondents observed that key health system constraints need to be addressed to ensure functioning of those decentralized sites and delivery of quality services. Basically, as explained by several key informants, constraints of those decentralized sites have resulted from (1) limited human

⁵⁷ More details about this issue would be described later in this chapter.

resource availability (staffing) and capacity, (2) limited laboratory capacity at township level hospitals, (3) limited medical supply chain and stock management capacity in the public sector, and (4) weak communication links among different facilities—main ART centers, decentralized sites, referral labs, and regional medical stores etc.

Key informants also expressed concerns about (1) functioning status of those decentralized sites (some sites are well functioning, yet some are not ready), (2) health system issues at the township level (human resource, supply chain system, and M&E system), and (3) financial and programmatic accountability in the public sector. Another concern is there might not be “actual decentralization,” as noted by key informants who indicated that those decentralized sites are just responsible for implementation of activities without having actual decision-making authority (especially in programmatic management) and that most decisions are made at the higher levels of the system. In addition, delivery of some programmatic components (such as pre-enrollment/peer counseling, patient tracking system, and follow-up for treatment adherence) still needs to be improved. These issues have led to respondents’ generalized concerns about the quality of care at the decentralized sites.

Reaching the most vulnerable: a challenge for service delivery

Despite scaling-up and decentralization of service delivery countrywide, implementing agencies still face challenges to reach people with the greatest need, including those in remote and conflict-affected areas. One respondent explained the challenge and security risks faced by implementing agencies to reach the most vulnerable people in conflict and border areas:

INGOs [international non-governmental organizations] and other sectors find their way. They use sometimes illegal routes to get to the patients. Sometimes, they took a lot of risks to get there [conflict and border areas]. (R07)

In addition, implementing agencies find challenging to reach some of key populations (sex workers, drug users, and mobile and migrant populations). For instance, one respondent (R13) explained the difficulty of reaching migrant and mobile populations. The respondent said:

[M]igrant and mobile populations do not stay in a township [for long]. Sometimes, the places they live are really away; they move far away from villages. They may live in woodlands. (R13)

Respondents also noted that because some populations move frequently, they find it difficult to access service delivery points regularly and to adhere to treatment. In some cases, lack of information flow about availability of services widens the existing gaps of service utilization at the operational level. Thus, inequity in access to service delivery points by some population groups remains a significant challenge for the national HIV/AIDS response.

Vertical programs: fragmenting the health care delivery system

The MOH implements vertical disease control programs and several other public health programs/projects through township health systems (Ministry of Health, 2014; Sein et al., 2014). These vertical programs and projects, running in parallel to each other, have fragmented the health system at different levels. At the national level, this fragmentation has led to inefficiencies and weak coordination around crosscutting issues. A key informant illustrated this as a frustrating situation:

[Y]ou will become kind of like a ping-pong ball. So, the different national programs will play you around the circle, and at the end of the day, you got frustrated. (R05)

Some respondents also pointed out that implementing parallel projects also constrained provision of integrated services at the operational level. Patients could not seek one-stop services at the points of service delivery by different national programs, and thus, they often have to go

from one place to another. Because some health facilities are far from each other, patients do not go from one facility to another when they are referred between facilities of different national programs. A respondent explained this situation as:

In terms of distance, some [health facilities] are far, some are close. But still, in terms of time to be spent by the clients, it is really challenging. So, because of that, we have a lot of . . . dropouts between the referral facilities. (R05)

Sustainability: many concerns

Respondents expressed their serious concerns about financial and programmatic sustainability of the current activities of the national HIV/AIDS response. As articulated, these concerns mainly arise due to Myanmar's excessive reliance on external donors for its national HIV/AIDS response. For instance, a respondent said:

[N]ow it's not very sustainable. . . . I think the bulk of the funding, over 90 percent, is coming from donors. . . . So, no [not sustainable]! It is all donor-driven. (R01)

At the same time, the level of the government's financing remains low in terms of the overall health expenditure and of particular contribution to the national HIV/AIDS response. A respondent (R06) also remarked that "the government does not have sufficient tax income in order to fund their own AIDS response." This indicated the government's inability to sustain the current momentum of the national HIV/AIDS response with its own financial resources. The same respondent continued:

It is not going to be sustainable in the near future; that's for sure unless Myanmar suddenly becomes a huge oil nation or whatever. I don't see that happening. (R06)

Financing constraints and substantial resource gaps have constrained Myanmar to fully operationalize its national HIV/AIDS response according to the current National Strategic Plan.

In addition, lack of visibility on availability of donor funding, particularly after 2016, exerted intense pressures on the current national response to HIV/AIDS. This also exacerbated some respondents' concern about financial sustainability and donor dependency of the current national response. A key informant said:

[I]n my opinion, sustainability mainly depends on the donors. If there is no donor, there will be a problem. For now, I think up to 2016, there is a commitment of the Global Fund. After 2016, no one commits for that. (R07)

Some respondents were also critical about donors' hesitancy to invest in long-term organizational strengthening and capacity development. Lack of sufficient investments in activities related to institutional strengthening and capacity building led to concerns about programmatic sustainability. This also threatened the long-term viability of civil society clusters, given that most civil society clusters were running on project-based activities. A respondent expressed the need for strengthening the capacity of national stakeholders as:

[T]here are a lot of challenges . . . in terms of sustainability in the technical sense because capacity built in government, civil society, and private sector needs to be retained, continued, and upgraded. (R06)

Moreover, key informants pointed out the issue of sense of contested ownership in the public sector as NGOs filled the urgent gaps at the MOH's decentralized sites directly. In some cases, this approach seemed to have enhanced the sense of shifting the public sector's responsibility to NGOs at the operational level. Respondents felt the sense of ownership vital to ensure sustainability of the programs in the public sector. One respondent expressed this opinion:

We [NGOs] have to explain that we are just assisting them [the public sector]. They have the ownership. It is for the national program, and so they have the ownership. (R15)

Overarching contextual factors determining health service delivery and uptake

This section describes overarching contextual factors, as identified by key informants, which determine health service delivery and uptake in the current situation of the national HIV/AIDS response. The themes discussed in this session were exclusively identified through inductive analysis of interview data. As elaborated, these issues create barriers to health service delivery, utilization, and uptake in the public sector and also affect the national HIV/AIDS response (directly or indirectly) in the broader context. Thus, these issues may undermine or challenge implementation and strengthening of the current national HIV/AIDS response interventions. These overarching contextual factors can be categorized as those originating from (1) requirement for organizational registration, (2) re-organization of the MOH, (3) bureaucratic mechanisms, (4) punitive laws and other policies, (5) social stigma and discrimination, and (6) trustworthiness of health services.

Requirement for organizational registration: a constraining factor for civil society

Despite a gradual growth of civil society networks and clusters (Self-Help Groups) for key populations over the recent years, many of these groups still face vast challenges. Most respondents mentioned the government's requirement for organizational registration as a major constraint for key population groups (sex workers, drug users, and men who have sex with men), whose status is not officially recognized in Myanmar. As the situation of the country becomes favorable for civil society (especially after 2011), these groups have opportunities to grow and to engage in the national HIV/AIDS response. However, one of their remaining constraints is related to organizational registration, as required by the Association Registration Law in Myanmar, to become a CSO. For instance, a respondent (R11) explained that as sex work is illegal, sex workers cannot organize a CSO that represents them. The respondent said, "They

cannot get any registration because it is a group of sex workers” (R11). Respondents also explained the consequence of this issue. In most cases, this inability to register has made key population groups ineligible to receive any direct funding from donors and also constrained them to become a direct Sub-Recipient of the Global Fund’s grants. In addition, most groups cannot be sustained over time due to lack of their legitimate status as a civil society organization. One respondent explained this situation as:

Since they don’t have any registration, it is difficult to get funding. Some organizations ask them to present their registration when they are going to give funding. For example, they could not become a SR [Sub-Recipient]. They may have good capacity as a CBO [community-based organization]. (R11)

Re-organization of the MOH: Uncertain local implications

During 2015, the MOH re-structured the organization of its departments,⁵⁸ and this process involved re-organization of the Department of Health (DOH), which was responsible for both public health and medical care functions, into two separate departments: the Department of Public Health (DPH) and the Department of Medical Services (DMS). At the same time, this re-organization seemed to have divided the national HIV/AIDS response in the public sector into two vertical components: the treatment component run by the hospitals under the DMS and the rest of programmatic components by the DPH. No obvious issue was presented at the time of this re-organization. However, respondents expressed their concerns that creation of a number of new positions, if unfilled, under this re-organization would further widen the existing HRH gaps in the public sector and that the new structure may also exacerbate existing communication and coordination issues at the local level. At the same time, respondents also expressed their confusion and uncertainty about its impact on service delivery structure of the township health

⁵⁸ See also Chapter 2 for more information about the re-organized structure of the MOH.

system.⁵⁹ Lack of clarity in roles seemed to confuse staff in the public sector about how they can situate themselves within the new system. A respondent expressed the feeling of uncertainty as:

All of them [health staff] work together as a team. Now it has been split. Some of them go to the [Department of] Public Health. Some of them go to the [Department of] Medical Services. Some do not know under which department they would be. . . . So, everybody has to observe this transition. We still don't know what would happen. (R14)

Bureaucratic mechanisms

Some key informants mentioned that widespread bureaucratic mechanisms and rigid administrative culture of the governance system constrained effective delivery of public services including health care. However, a respondent (R06) reminded that this situation is not unique to Myanmar but common to elsewhere as part of “the third world systems of bureaucracies.” Respondents believed that significant problems of the government’s bureaucratic machinery and its inefficiencies have undermined health service delivery and the flow of resources to the health sector in the generalized context of Myanmar. In addition, respondents viewed that bureaucracy would also hamper implementation of the national HIV/AIDS response as a consequence. A key informant described the observation that:

[T]he government system, I mean so many other countries and here, is not agile or flexible. It is very hierarchical, and decision takes incredibly long time sometimes because it has to pass through so many layers. (R06)

Specifically, the key informant (R06) pointed out issues around unclear and time-consuming decision-making processes, which indicate the need to practice further delegation of the authority and the need to change a lot of “outdated systems,” including the paper-based

⁵⁹ The process of the MOH’s re-organization was still ongoing in 2015. Even though the MOH was re-structured into six departments at the national level, clear and exact indications about the new organization structure of the township health system had not been established yet at the time of conducting this study.

management and the existing mindset of “the old very bureaucratic approach to do things” within the MOH’s system. The same respondent explained the MOH’s decision-making processes, which were both time-consuming and non-transparent. The respondent commented:

Sometimes, they don’t dare take the decisions because they have to go Nay Pyi Taw [the capital] first, and then in Nay Pyi Taw, you don’t know who will finally take the decision on these things. So, this whole chain of command slows things down and makes sometimes the processes non-transparent. (R06)

Another respondent (R07) also mentioned bureaucratic barriers as root causes of undermining coordination and implementation of activities at the sub-national level. The respondent felt that the MOH’s bureaucratic structure also impeded the efforts of managers at the sub-national level to undertake “changes” in the system. The respondent said:

Some state [health] officers or regional health officers—they are motivated. They want to do many things. They want to change. But, because of a kind of remaining bureaucratic and red tape system, they cannot change it. (R07)

Punitive laws and other policies: imposing personal and legal risks

Drug use, commercial sex, and sodomy are illegal in Myanmar, according to a set of punitive laws that criminalize such behaviors. These laws include the Burma Excise Act 1917, the Narcotic Drugs and Psychotropic Substances Law 1993, the Suppression of Prostitution Act 1949, and the Section 377 of the Myanmar Penal Code.⁶⁰ Some behaviors of key population groups (people who inject drugs, sex workers, and men who have sex with men) are thus subjected to severe penalties under provisions of those existing laws. Those people are also threatened by incidents of police arrest, physical abuse, and harassment. In addition, there are no

⁶⁰ The Section 377 of the Myanmar Penal Code states punishments on “unnatural offences” related to “carnal intercourse against the order of nature with any man, woman, or animal” (*Myanmar: The Penal Code*, 1860).

specific protective laws that assure human rights aspects of key population groups including people living with HIV (Godwin, 2014). Respondents also described several issues related to the police at the local level and their concerns about such situation that would eventually constrain key populations from having access to HIV prevention, care, and treatment interventions. These people have to take some legal risks of being arrested from adopting some prevention behaviors such as possession of needles or condoms. One respondent described the situation as:

[I]f you are found with or in possession of syringes and needles, you can be charged as like a drug user, regardless of whether you have drugs in-hand or not. (R05)

Another respondent also described a common situation related to sex workers:

[N]o matter they work as a sex worker or not, they may keep condoms in their hands for protection. It is for prevention. But, when condoms are found in their hands, police arrest them as sex workers. (R09)

In addition to legal risks, those discriminatory laws engendered a culture of harassment and violence towards key populations, which further exposes them to personal risks in the society. For instance, sex workers face serious personal risks of abuse, harassment, and violence by the police. The same respondent also explained such incidents as:

It is not appropriate such people are being suppressed because of a law. . . . Sex workers are beaten by the police. The police oppress them. Sometimes, they are called for sex against their will, without getting money. (R09)

The respondent continued noting that there was lack of laws or protective policies that would ensure health and social welfare of key populations. “It seems the law is constructed to eliminate them [key populations] instead of protecting them” (R09). Other respondents also pointed out the lack of welfare policies for people living with HIV regarding their employment

and access to social services. For instance, a respondent (R13) said, “[P]eople do not employ HIV patients; they dismiss a person [from the job] if he has HIV.”

On the other hand, respondents also observed that the civil society initiated several efforts to engage with some parliamentarians who were interested in HIV/AIDS-related issues to address those legal and policy issues. Respondents elaborated that civil society networks of key populations conducted advocacies to mobilize attention of the parliament and to have their issues discussed at the parliamentary assembly for legislative reviews. Some progress has been made so far, but several challenges still remain to ensure provisions of those punitive laws shall be amended, changed, or removed by the parliament. A key informant explained the kind of protection that key populations demanded as:

They [key populations] were not claiming to legalize them by law. They just claimed to protect them from unlawful actions and oppressions when they are being arrested. They want such protection. (R10)

Stigma and discrimination

In the context of Myanmar, key populations confront the issue of “double-stigmatization,” which means HIV-related stigmatization (due to having risks of HIV infection) and social stigmatization (due to having socially unacceptable behaviors such as drug use, commercial sex work, or homosexuality). A key informant said, “People may not trust them [key populations]; the society may look down on them” (R11). Another informant also explained the response of the society that stigmatizes key populations as:

[P]eople can say that “Ok, you will get HIV because you are a sex worker.” [It is] the same for the MSMs, “You will get HIV because you have sex with other men.” (R05)

Due to their HIV-positive status, people also face discriminatory attitudes not only within their households but also at schools and workplaces. A key informant gave an example as:

At schools, if a child has HIV [infection], other children would be withdrawn. The teacher separates that child from others. They separate the seats. (R10)

Trustworthiness of health services

Key populations who are taking ART at NGOs' clinics often hesitate to go or to be transferred to governmental health facilities including nearby ART decentralized sites. This overarching issue emerges from the existing low level of trust and reliance of patients on health services in the public sector. A key informant noted:

NGOs have been able to build a level of trust with these groups [key populations] that I think it would be very challenging for the governmental sector to do. . . . We were hearing many patients were reluctant to be transferred to a government site. . . . So, I think we need to build their confidence in the government sector. (R01)

Respondents also identified several underlying issues that explained why key populations were reluctant to use governmental health services. Key populations were usually inundated with generalized concerns about the poor quality of care, breach of confidentiality of their information, and stigmatization and harassment in some public hospitals. Most of these concerns originated from their previous negative experiences of seeking health care in the public sector. An interviewee described this concern as:

They [key populations] had some memory of hardships in taking medication from the NAP [National AIDS Programme] in the past. . . . This is the obvious concern of patients due to their fear. . . . They fear they would face this kind of things again. (R11)

A key informant shared the opinion that public hospitals just “run the old system they are used to” (R10), and most of services they provide are not tailored to meet specific needs of key populations who ordinarily seek some services such as peer counseling, psycho-social support, and proper caregiving. In addition, informants highlighted that patients cannot get one-stop services at most public hospitals. Poor quality of care, shortage of medicine, and lack of human resources at the peripheral sites are main driving factors for patients’ dissatisfaction and their subsequent reluctance to seeking health care in the public sector. A respondent gave an example:

[A]t hospitals in [Region-A], sometimes they are very careless in giving medication. If a patient is allergic to Nevarapine, we give him Efavirenz. . . . When the patient went back to the hospital to refill his medication, they gave him Nevarapine because Efavirenz was stock-out. (R10)

Another respondent also gave a different example:

[H]ospital staffs are also not able to give much time due to their workload and other duties. So, patients—clients—do not feel comfortable. (R12)

Some ART patients do not want to be referred to township level decentralized sites for treatment continuation due to their serious concern about breach of confidentiality of their HIV status and the social stigma attached to it. Patients often worry that their community would recognize their HIV status if they take ART at a nearby place. Some patients prefer to go to another health center at a distant town even though they realize they could have taken ART medication at the nearby township hospital. A respondent explained a reason why patients were hesitant to take ART at a nearby hospital. The respondent said:

Patients do not want to take medicine [ART] in their own town because they are worried that their community will know their status. So, they go to another town and take the medicine. . . . It could be okay when nobody is allergic to people taking ART. (R09)

Moreover, the issue of patient-provider relationship appeared as one of the main reasons explaining why key populations were hesitant to seek health services in the public sector. Key populations often felt embarrassed, annoyed, and stigmatized as they encountered verbal abuse and harassment by some staff at governmental health centers. A respondent explained:

[I]f someone has this disease [HIV], they will be attacked for sex issues. . . . For example, sex workers—if they have this disease, they will be reproached [even by health center staff]. They are being reproached like—“this was because of your flirt, because of this, because of that.” (R10)

As a consequence, such negative experiences of patients substantially reduced trustworthiness of some governmental hospitals. On the other hand, patients feel more comfortable with using health services provided by NGOs as they find providers’ attitude, quality of care, and scope of supports different between governmental decentralized sites and NGO clinics. All of those factors contribute to patients’ preference and rational choice to seek services provided by NGOs. A key informant expressed this opinion as:

[I]f you asked me whether I would take medication at governmental hospital or at NGO, for the moment I would feel confident myself taking medication in NGOs. I am comfortable to discuss with them. I would feel distress if I have to take medication there [governmental hospitals]. (R10)

Chapter summary

This chapter describes the main findings of the study regarding the current situation of the national HIV/AIDS response. It also explores several key issues and challenges that Myanmar needs to overcome. These issues and challenges are summarized under different health system themes and also linked with overarching contextual factors. Regarding the role of global health initiatives, the Global Fund has provided substantial support to leverage the HIV/AIDS response interventions in Myanmar. However, its role remains limited in addressing new demands that have arisen from the underlying fragile health system as a result of rapid scale-up of interventions and decentralization of service delivery in the public sector. Hence, the next chapter (Chapter 5) will discuss about possibilities and approaches of how these new demands can be addressed from the ongoing perspectives of strengthening health service delivery in Myanmar.

Chapter Five

Discussion and Policy Recommendations

This chapter discusses the main research question: “how the national HIV/AIDS response can strengthen the health system in Myanmar through the support of global health initiatives.” We will also recommend possible strategies and approaches (specific objective 3) based on the findings of the previous chapters. The rapid influx of HIV/AIDS funding from external sources over the recent years has allowed Myanmar to scale up HIV/AIDS response activities. However, the current national response to HIV/AIDS is at the developing stage, and the country has just gained its momentum in rolling-out of key interventions, especially provision of treatment and antiretroviral therapy in the public sector. Considering the short timeline of the response, the low budget, and the high restrictions the country had in the past, the national HIV/AIDS response has made good progress.

In the past decades, the national response was mainly driven by (international) NGOs in collaboration with civil society. However, over time, the government’s receptivity to the extent of HIV epidemic and its recognition of associated issues became distinct from its initial attitudes of resistance and reluctance. This change also demarcated a fundamental shift that was important for the evolution of the national response. The government’s improved political will and subsequent engagement, accompanied by financing from external donors, resulted in the drastic expansion of service provision in the public sector. This expansion also signaled the ongoing transition of the national response from NGO-led to government-led interventions. At the same time, this transition also triggered a cascade of actions including the revision of the national guidelines, expansion of service delivery points, and decentralized care in the public sector. This unique set of events also presented new demands and challenges to the health care system. In this

chapter, we emphasize health system strengthening perspectives on how Myanmar could potentially overcome some of these challenges and constraints.

We found that several constraints and issues, which were related to performance and responsiveness of the health system, had emerged at the initial stage of scaling-up and decentralization of service delivery in the public sector. We also learned that these challenges arose from specific or crosscutting constraints of the health system as well as from legal, social, and institutional arrangements in the broader unique context of Myanmar. These contextual arrangements, as subtle or overt forms of “structural violence” described by Galtung (1969), contributed to the causes of “social suffering”⁶¹ (Kleinman, Das, & Lock, 1997) among key population groups (people living with HIV, drug users, sex workers, and men who have sex with men), who were seeking HIV/AIDS prevention, care, and treatment services. As Paul Farmer and colleagues clarify, those social and contextual “arrangements are structural because they are embedded in the political and economic organization of our social world; they are violent because they cause injury to people” (Farmer, Nizeye, Stulac, & Keshavjee, 2006, p.1686). Social suffering is a symptom of structural violence affecting the whole or part of the society. Individuals suffer from simultaneous medical and social problems affecting their health and welfare as a result of existing political, economic, social, cultural, and institutional arrangements in a given context (Hanna & Kleinman, 2013).

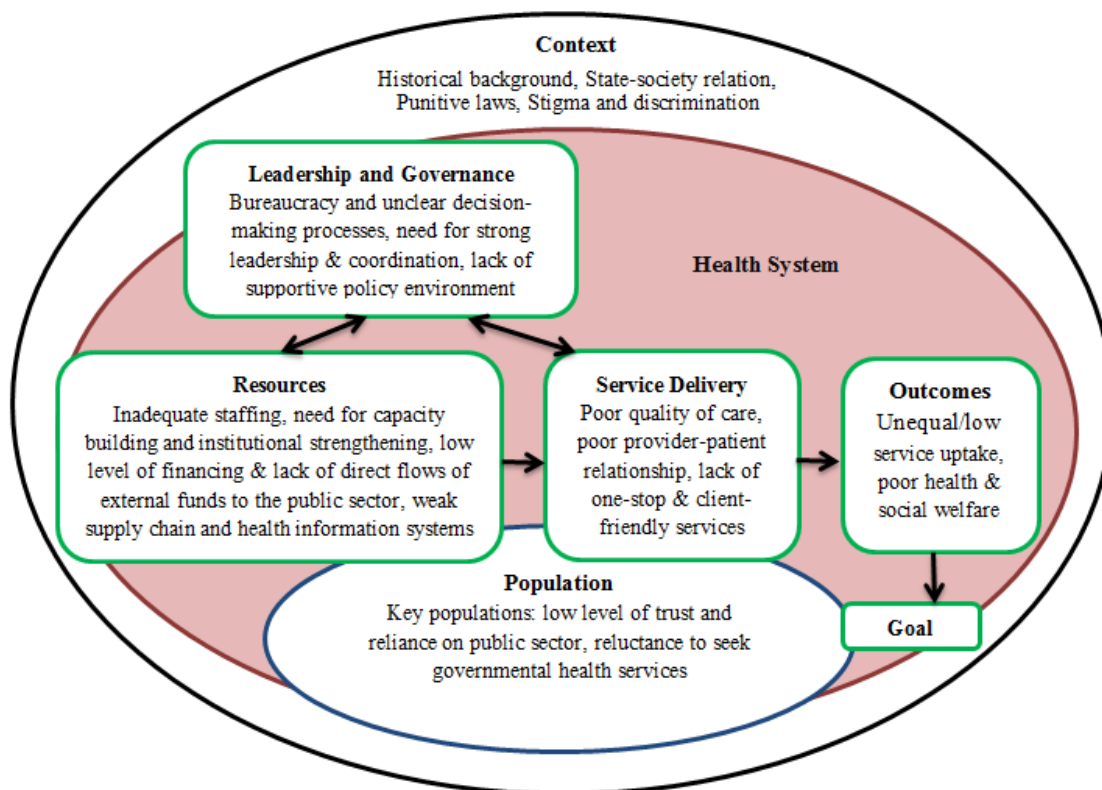
This study informs us that the chronically under-funded health system in Myanmar is plagued with issues of performance and responsiveness at all levels of the system. These issues also undermine the entire chain of provider-patient relationships and the extent of clients’ trust and reliance on governmental health services. In addition, findings of this study indicate the way

⁶¹ Kleinman, Das, and Lock (1997, p.ix) state that “social suffering results from what political, economic, and institutional power does to people and, reciprocally, from how these forms of power themselves influence responses to social problems.”

that contextual arrangements have affected key population groups and created barriers to their access to health care services. In the context of Myanmar's HIV/AIDS response, these arrangements are found to be associated with the historical legacies of Myanmar's political and economic panoramas, rigid attitudes and institutionalized mindsets of bureaucratic governance, fragile state-society relations, legal arrangements (punitive laws against key population groups), and socio-cultural settings (social stigma, discrimination, and harassment related to HIV). Thus, our examination of the current situation of the national HIV/AIDS response has to be extended up to overarching contextual issues beyond the scope of health system building blocks. Accordingly, we applied the "health system dynamics framework," introduced by Olmen and colleagues (Olmen et al., 2012), to the analysis of our findings in this study.

As illustrated in the Figure 14, the influence of contextual factors must be considered crucial for analysis of the national HIV/AIDS response from system-strengthening perspectives. Our analysis that is represented in this figure mainly focuses on the public sector of the health care system. The highlighted issues and constraints must be addressed to achieve the goal of the health system, which is to improve the health and social welfare of key populations (people living with HIV, drug users, sex workers, men who have sex with men, and other vulnerable populations) in this case.

Figure 14: Analysis of findings in the health system dynamics framework⁶²

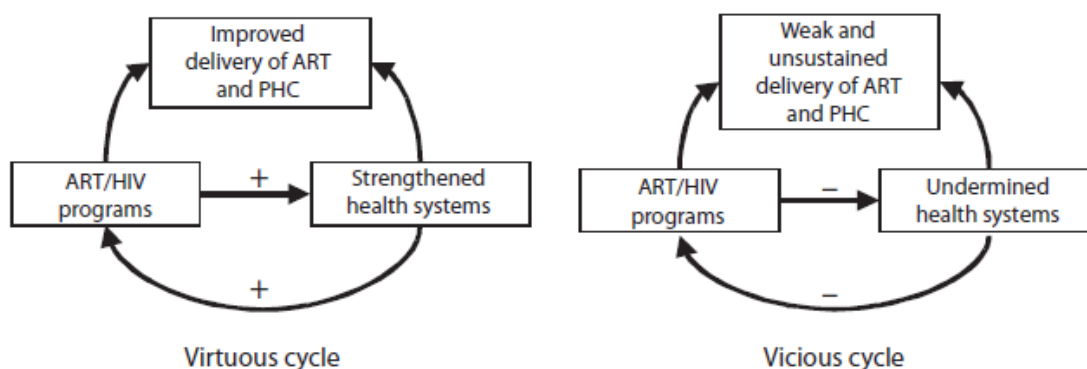


New demands on the health system

Scaling-up of key interventions, especially provision of ART through the public sector, creates new demands on Myanmar’s health care system. These demands include the need for drastic expansion of service delivery points, new patient enrollments for initiation of treatment, and decentralized care for continuation of ART. At the same time, the decentralized service delivery requires ensuring new referral links and readiness of decentralized sites at the township level. These processes also expose challenges of coordination, communication, and monitoring and support mechanisms that are notably weak at the sub-national level. Our respondents emphasized their observation on varying degrees of responsiveness across township health systems, which remain fragile and resource-deprived in most cases.

⁶² This figure is adapted from the health system dynamics framework of Olmen and colleagues (2012).

Figure 15: The virtuous and vicious cycles of rapid ART expansion (McCoy et al., 2005)



Note. ART = antiretroviral therapy; PHC = primary health care.

Source: McCoy et al. (2005, p.20).

As explained by McCoy and colleagues (2005), rapid ART scale-up may have a positive catalytic effect on the health system; on the other hand, it may undermine the existing fragile health system (Figure 15). McCoy and colleagues (2005) further noted that the difference of the catalytic effects stems from whether or not resources are “explicitly” channeled to benefit and support the underlying health system. This explanation also draws our attention to strengthening township health systems, the backbone of Myanmar’s health care delivery in the public sector. In this study, we identified three interrelated issues, affecting the outcomes of service delivery and uptake in the current context of the national HIV/AIDS response: (1) unequal distribution of resources and capacities, (2) lack of social welfare for key populations, and (3) low level of client’s trust and reliance on the public sector. All of these interrelated issues depend on both health system constraints and contextual settings.

Unequal distribution of resources and capacities

This study reports respondents’ observations of the difference in performance and responsiveness of health facilities within the public sector and also between the public sector and the NGO-sector. Some decentralized sites at township hospitals are well functioning while others are not ready to absorb new demands or to function properly with existing resources. We

conclude that this difference is due to the unequal distribution of resources (financing, medical supplies, and human resources etc.) and capacities (institutional and staff capacities). Chronically low level of public financing and scanty flow of external funding cause the public sector to be resource-deprived and inundated with issues of performance and responsiveness. Thus, robust financing is critically required for the MOH to satisfy its major needs for adequate staffing, institutional and staff capacity building, technical and infrastructural support, and upgrading of supply chain and M&E systems.

Lack of social welfare for key populations

Key populations face the issues of stigmatization and discrimination in the cultural and social context of Myanmar. According to a HIV Stigma Index survey (as cited in Cameron et al., 2011) conducted in 2009 among 324 people living with HIV in Myanmar, the prevalence of HIV-related exclusion from social gatherings and activities was 31 percent. In addition, 78 percent of respondents reported that they became subjects of gossip, and 45 percent had also encountered verbal insults, harassment, and threats as a result of their HIV status. These figures represented the highest rates among nine countries in Asia and the Pacific region where similar surveys were conducted. The same survey also found that one-fourth of respondents experienced discrimination from members of their households in the last 12 months (Cameron et al., 2011). A national legal review in 2013 concluded that key populations, including people living with HIV/AIDS, were still vulnerable to social stigma and discrimination in their daily living (Godwin, 2014).

In addition, presence of punitive laws and lack of supportive policies do not create an enabling environment for key populations to improve their social welfare. In some cases, as several respondents articulated, key populations also experience stigmatization from verbal

abuse and harassment by staff at governmental hospitals. Moreover, most governmental hospitals do not offer friendly services for key populations such as peer counseling and supports. At the same time, patients are not able to seek one-stop services in some governmental hospitals. Essentially, these conditions discouraged key populations to seek health services in the public sector.

Low level of trust and reliance

Another key issue we identify in the study is the low level of clients' trust and reliance on governmental health services. Key populations are reluctant to seek health care in the public sector as they have frequent flashbacks to their negative experiences of low quality of care, patient-provider communication, stigmatization, and harassment in some public hospitals. Shortage of human resources, burdensome workloads, and lack of infrastructural, technical, and capacity supports are the main determinants of providers' poor quality of care at the peripheral sites. These conditions also contribute to patients' dissatisfaction about the quality of health care in the broader health system. Realizing the historical background and evolution of health care delivery in Myanmar (Chapter 2), this situation also represents the need for re-establishing and strengthening the existing weak provider-patient relationship in Myanmar's health care system. On the other hand, we conclude that the findings about lack of clients' trust and reliance on the governmental health system also appear as a coherent reflection of Rudland's (2003) examination on the larger picture of fragile state-society relation in health care throughout the historical context of Myanmar.

Next, we discuss the approaches of how Myanmar's health system can be strengthened through investing in the national HIV/AIDS response. Hereafter, we propose a set of specific policy recommendations enriched by our context-focused analysis of Myanmar's health system.

These recommendations should rationalize what the MOH and the donor community should consider for improving the delivery capacity of health service platforms especially for provision of chronic HIV care in the general health care system.

The shift to the public health model of care

In Myanmar, introducing ART programs under the orientation of physicians does not totally cohere with the functional structure of health care delivery system, especially at the peripheral level. Specialist doctors are not available in most township hospitals. In peripheral health facilities, doctors are often over-burdened with several parallel functions including facility-based medical care and administrative tasks. In addition, there are frequent turnovers of doctors in township hospitals. This indicates that Myanmar should consider scaling-up of ART provision through the “public health approach” as proposed by the World Health Organization (2002) for expansion of ART services in resource-limited settings of developing countries. Evidence shows that standardization and simplification of treatment regimens, accompanied by decentralized service delivery, proper task shifting, and patient tracking, allowed other developing countries to successfully expand ART provision and chronic HIV care in resource-limited settings (Gilks et al., 2006).

In fact, Myanmar has already adopted some of those recommendations. Service delivery has been decentralized to the township level for continuation of ART and follow-up HIV care. In many cases, township health nurses or other senior nurses are also assigned as focal persons for the ART program. Available evidence also reported that task shifting from doctors to properly trained nurses may not necessarily reduce the quality of care in providing ART and managing simple cases for long-term HIV care (Kredo, Adeniyi, Bateganya, & Pienaar, 2014). Thus, Myanmar should formalize and roll out the public health approach to ART provision and HIV

care as a chronic disease condition at the township level, provided that adequate investments can also be made to improve the township health systems. A shift to the public health approach would align with the existing systems at the local level, and it would also enhance integration of HIV care within the general health system of Myanmar in the long term.

Investing in township health systems

At the moment, Myanmar's health system is particularly fragile at the implementation level. Expansion of service delivery points (decentralized sites) at the township level would improve population's access to essential services (such as HIV testing, continuation of ART, and follow-up care). At the same time, most respondents expressed their concerns about quality of care and responsiveness of local health care delivery systems due to the issues of inadequate staffing and technical capacity support at the township level. Inadequate laboratory infrastructures and technicians, lack of pharmacists, and shortage of M&E technicians also constrained implementation of specific programs like provision of ART and follow-up of long-term HIV care at the township level. This rationalizes the need for strengthening township health delivery systems to scale up provision of ART and follow-up of people living with HIV through a decentralized model of care within the existing system of the public sector.

System strengthening at the township level should focus on addressing priority needs and main bottlenecks at the points of service delivery. The priority needs may vary across different health facilities. However, most respondents highlighted on the absolute need for adequate staffing, proper task shifting, staff capacity building, and institutional strengthening for supply chain management, monitoring, and reporting at the township level. At the same time, strengthening township health systems would be the key to unlocking opportunities and benefits from the diagonal financing approach of external donors (such as the Global Fund). This

approach would also help optimize its spillover effects on the broader health system, as informed by the findings of the literature review (Chapter 3). Ensuring quality and responsiveness of health care system at the township level may also improve trustworthiness of service delivery and provider-patient contacts/communications in the public sector.

Comprehensive national plan for continuum of HIV care

The national strategic plan, instead of standing alone, should be linked with broader health system strategies and goals by articulating finite sets of deliverables for strengthening system-level interventions as well as facility-level interventions. Myanmar can also learn experiences of its neighboring countries in the region that have the similar pattern of HIV epidemic and health system context. For instance, the experience of Cambodia showed that the national HIV/AIDS response was initiated with an intensive approach to curb the epidemic. Over time, a more sustainable and integrated approach was phased-in to address the need for continuum of care, to link HIV/AIDS response interventions with other health services, and also to strengthen the health delivery system (Chhi Vun et al., 2014). Such fundamental shifts must be facilitated by strong national plans. In the case of Cambodia, the national strategic plan (NSP III) for comprehensive and multi-sectoral response to HIV/AIDS (2011–2015) guided scaling-up and decentralization of services for continuum of HIV prevention, treatment, and care. The strategic plan also encouraged mainstreaming of HIV programs into the existing general health system. The plan was also intended to support the government’s “decentralization and deconcentration strategy” and to link with broader national plans (National AIDS Authority, 2010).

Currently, the national HIV/AIDS response in Myanmar is guided by the revised National Strategic Plan (NSP II) for 2011–2016 (Appendix 2). In addition to specific key interventions for HIV prevention, treatment, and care components, the NSP II addresses health

and community systems strengthening as crosscutting interventions (National AIDS Programme, 2014c, 2014d). As the national HIV/AIDS response becomes advanced, the NSP should also evolve in addressing health system demands for scaling-up of key HIV/AIDS interventions and also in streamlining these interventions with the existing systems in the public sector. Thus, upcoming NSPs should rationalize continuum of prevention, treatment, and long-term HIV care within the current health delivery system of the public sector, not as a standalone vertical plan but as an integrated national plan.

The vital quest for strong leadership and policy supports

This study highlights that the government's political commitment and the MOH's sustained engagement to the national HIV/AIDS response have remarkably improved over time. It is essential that the national HIV/AIDS response continue to be driven by strong leadership at the high level of the government and the MOH. The MOH's strong leadership is required for effective coordination with other ministries (such as the Ministry of Finance and the Ministry of Home Affairs) as well as with donors and implementing agencies. For instance, a key informant (R04) commented that “. . . we need really the lead” and also continued that “I think that sometimes the authorities want to do everything” and they should “concentrate on the lead of coordination.” Respondents expressed their opinion that the central level of the MOH should enhance their role in providing policy guidance and regulation and also in ensuring resource mobilization, coordination, and oversight. In addition, the current decentralization process must be fueled by engagement of the sub-national level in the processes of decision-making, planning, and resource allocation.

Some respondents identified institutionalized bureaucratic mechanisms of the existing systems as major barriers to effective policy implementation. On the other hand, they also

acknowledged the government's acceptance to constructive criticism and dialogue for policy change. Major policy shifts are still required for strengthening service delivery platforms at the township level to accommodate integrated services including chronic HIV care and also for streamlining disease control programs in the public sector, which are running in parallel for the moment within the township health care system. The M-HSCC and its TSGs would be appropriate entries for providing such policy inputs to the MOH. The role of the civil society and the parliament also stands out in addressing the issues of punitive laws against key populations and in formulating supportive policies that would improve social welfare of key populations in the context of the national HIV/AIDS response.

The role of global health initiatives and health system strengthening

Finally, we examine the primary research question of “how the national HIV/AIDS response can strengthen the health system in Myanmar through the support of global health initiatives.” Particularly, our focus would be the role of the Global Fund's HIV/AIDS financing in Myanmar. In 2013, nearly half (45.8 percent) of the Global Fund's HIV/AIDS spending was dedicated for the treatment and care component.⁶³ Most notably, the Global Fund's financing on the ART programs increased nearly 10 times from US\$ 0.4 million in 2012 to about US\$ 3.8 million in 2013, and it was approximately equivalent to 70 percent of the country's total spending on ART in 2013. Almost 90 percent of the Global Fund's spending on the prevention component focused on key population groups in 2013 (National AIDS Programme, 2015b).

Key informants did not recognize any direct effect of the Global Fund's financing on health problems other than three diseases—HIV/AIDS, TB, and malaria. However, they often cited some elements of its financing for having “spillover” effects on the broader health system.

⁶³ Also see the Table 6 (Breakdown of the Global Fund's HIV/AIDS spending by programmatic components) in the Chapter 4.

The health system strengthening component is also embedded in the grant proposals for three diseases especially in the HIV grants. Essentially this component, as articulated by key informants, includes specific activities in the public sector such as (1) renovating, furnishing, and equipping laboratories, OPD rooms, medical stores, and warehouses; (2) supporting training and capacity building for health workers; and (3) providing tools, equipment, and trainings for strengthening HMIS, M&E system, Logistics Management Information System (LMIS), and supply chain management. Respondents also felt that trainings supported by the Global Fund benefited health care workers and volunteers to acquire some skills and capacity at the individual level. In addition, this also helped most volunteers gain a personalized impression that they were connecting to something meaningful. A respondent expressed this positive experience as: “They [volunteers] have gained confidence in their life as somebody” (R13).

Nonetheless, in quantitative terms, the Global Fund’s financial contributions to system-strengthening interventions were found to be limited. The 2012–2013 data of the National AIDS Spending Assessment (National AIDS Programme, 2015b) showed that over 30 percent of the Global Fund’s spending was used under “program management and administration” category, and a majority of spending under this category was related to program management, planning, coordination, and administrative/overhead costs. Due to limitations in data availability, the analysis could not capture the exact quantification specifically on the extent of the Global Fund’s financing on system-strengthening activities in Myanmar. But available aggregate data suggested that the level of its funding dedicated for system-strengthening activities in the public sector was relatively low as compared to its overall spending. In 2012–2013, only 18 percent of the Global Fund’s total HIV/AIDS expenditure was spent through providers in the public sector. In addition, the Global Fund’s contribution to system-strengthening interventions (other than policy,

coordination, or administrative strengthening) in the public sector was estimated to be less than 1 percent⁶⁴ of its total spending for HIV/AIDS in 2012–2013 (National AIDS Programme, 2015b).

Key informants, however, articulated that the Global Fund’s financing has allowed the national HIV/AIDS response “to grow, to expand, and to learn.” At the same time, the NAP is also learning to fit its operations with international standards and requirements of the Global Fund, particularly in terms of program management, planning, and M&E. For instance, a respondent said, “It is an ongoing process of learning,” but it also has to “work with a lot of pain, headaches, [and] hiccups” (R04). Initially, some local NGOs/CSOs found the Global Fund’s rules, monitoring mechanisms, and operational requirements “strict” to follow. However, over time this has helped them build their confidence and institutional capacity in terms of program management, planning, budgeting, finance management, and accountability etc. For instance, a key informant said:

[T]he Global Fund has requirements such as this must be in place, this is needed; this is the basic. . . . These strict requirements regulate our practice, and we become a systematic and well-controlled organization. (R09)

In addition, data management and monitoring capacity of the implementing agencies seem to have improved because of the Global Fund’s emphasis on data quality and monitoring. At the same time, this also reflects willingness and ability of implementing agencies to adapt themselves and comply with the Global Fund’s fundamental requirements over time. An interviewee (R13) described how the Global Fund’s monitoring mechanisms improved the capacity of implementing agencies. The interviewee said:

⁶⁴ This estimation included spending on infrastructure, human resource trainings, and strengthening of supply chain and health information systems, as reported in the National AIDS Spending Assessment (NASA) for 2012–2013. Some spending categories cannot be classified or determined as specific system-level activities, and thus, the exact calculation on the Global Fund’s contributions to system-strengthening interventions from its HIV/AIDS-related spending cannot be extracted from this expenditure analysis.

They [the Global Fund] are very precise about data. They check everything including the sources. As they are doing so, I would say that the skills of the volunteers, of our staff at different levels, and of staff from the health department have improved than before. . . .

They are always monitoring us and also teaching us for improving the quality. (R13)

Key informants also remarked that the country has gained positive experiences of grant implementation in compliance with the Global Fund's requirements and standards over time. In addition to this compliance ability, in-country stakeholders are willing and ready to accept technical guidance and inputs provided to them. A key informant reflected this opinion as:

[W]e remind everyone in the room, not just the government; we have to remind ourselves—wait! Remember last year when we submitted the concept note, we received this feedback. Let's think about how we can incorporate these interventions to strengthen our program to address, you know, the technical guidance provided to us. . . . I think it is a good check-and-balance. (R01)

The literature review (Chapter 3) has also informed that the Global Fund's diagonal financing approach has created opportunities for recipient countries to improve service delivery platforms and strengthen health system interventions in their respective contexts. Myanmar missed this opportunity to optimize the advantage of the Global Fund's diagonal financing approach. However, the Global Fund's financing has catalyzed the country's policy efforts to make some fundamental changes, such as improved access to ART, scaling-up of key interventions, and expansion of service delivery platforms in the public sector.

It is also important to highlight some opinions of the respondents that the Global Fund's support on system strengthening and institutional capacity building might be limited due to its mandate. Key informants also think that it would be difficult to squeeze up additional resources

from the Global Fund as the amount of funding is usually set for each country by the high level decision-making entity of the Global Fund. At the same time, they emphasize that health financing from external sources is highly donor-driven, and in some cases the government is not in the position to set priorities or control over international aids. This has alarmed the underlying need for aid harmonization among different donor sources in Myanmar. Harmonization of funding mechanisms among external donors remains to be challenging since bilateral/multi-lateral donors channel most of their funds through their own mechanisms. Lack of a single consolidated platform for external financing seems to have constrained harmonization of funding mechanisms among the main donors in Myanmar.

For the long run, key informants clearly expressed their concerns regarding sustainability of the national HIV/AIDS response and its integration with the general health care system. However, they also foresee some distant opportunities since Myanmar is currently trying to leverage efforts to realize its Vision 2030 for achieving universal health coverage (UHC). Respondents believe that a rational step towards sustaining the national HIV/AIDS response is to ensure inclusion of HIV prevention, treatment, and care in the minimum package of services for UHC. Again, this would require major policy shifts, which must be supported by the government's strong leadership and robust financing schemes. Yet, there seems to have "a huge missing piece" to fill the gap between the current situation of health financing and the possibility for sustaining the national HIV/AIDS response on the universal health coverage platform. Hence, before Myanmar can bridge this gap, stakeholders must optimize the benefits of financing from external donors and global health initiatives including the opportunity of the Global Fund's diagonal financing to strengthen the health care delivery platforms.

In addition, mobilization of complementary financing from other donors and most importantly from the government's spending and other domestic sources will be instrumental to optimize the outcomes of the supports of global health initiatives on health system strengthening in Myanmar. The government's spending on the health sector must be increased, and this increase should focus on building up delivery capacity of health service platforms at the township level. The government's political commitment will play a paramount role in achieving health system goals. Myanmar should be inspired by the Abuja Declaration, in which several African countries made a political commitment to allocate at least 15 percent of their annual national budgets to the health sector (Organisation of African Unity, 2001). On the other hand, donors should maintain continuity and predictability of their financing, realizing Myanmar's current need for the huge missing piece of financing to sustain and strengthen its national HIV/AIDS response.

Policy recommendations

Below are policy recommendations for Myanmar that should be formulated and tailored appropriately to strengthen health care delivery system through the support of global health initiatives in the current context of the national HIV/AIDS response.

1. To scale up key interventions including provision of ART through the public health care model

This would require policy shifts for formal task shifting among health care workers and aligning service delivery platforms for chronic HIV care with the public health care model of township health systems.

2. To promote decentralized care by strengthening service delivery platforms of township health systems

Strengthening township health systems is the key to ensure proper functioning of decentralized sites that the MOH is currently expanding throughout the country. Application of this policy would require sufficient resource allocation (financing and staffing), capacity building, and infrastructural supports for those decentralized sites.

3. To delineate the continuum of HIV prevention, treatment, and care framework within the general health care system

This policy should be supported by comprehensive national strategic framework and plans that would link HIV programs with other health services and also streamline them with the general health care system gradually through a phase-in approach.

4. To promote public-private partnerships in planning and implementation processes

Participation of diverse stakeholders including key populations and the community in policy formulation, planning, and implementation processes must be encouraged. NGOs and civil society may continue to play a substantial role in demand generation, reaching key population groups, and providing them with essential outreach services.

5. To ensure aid harmonization and optimization through common funding platforms

This policy must be supported by strong government leadership, stakeholder coordination, and planning. This also requires the government's ability to engage with the donor community and to assure continuity and predictability of their financing. Planning and resource allocation must ensure that donors' monies for specific programs are deliberately used in ways that support and improve service delivery platforms particularly at the sub-national level.

Strengths and limitations of the study

This study is designed as a piece of descriptive work that employs a sequential iterative context-focused approach with application of a fair mix of qualitative and quantitative data. The

study is enriched by triangulation of findings collected through different methods (document and literature reviews, in-depth interviews, and secondary data analyses). To our knowledge, this study is the first independent study of its kind to assess the national HIV/AIDS response in Myanmar from a system-strengthening approach, particularly with regard to the role of the global health initiatives—the Global Fund in this case. Previous reports published by the NAP/MOH and the UNAIDS (Myanmar) gave us comprehensive insight into the situational analysis of the national response to HIV/AIDS in Myanmar. These reports also offered pertinent recommendations from strategic and programmatic perspectives crucial for strengthening key interventions to curb the epidemic and to ensure key populations' access to those interventions in an enabling environment (Lowe, 2013; National AIDS Programme, 2013b; Reid & Tip, 2015; UNAIDS, 2015). Hence, we did not repeat highlighting those specific recommendations again in this study. Instead, we structured our discussion and formulated recommendations mainly in the light of crosscutting system-strengthening perspectives as the main purpose of this study.

However, in terms of the scope, this study was mainly designed to conduct a system-level analysis, most qualitative and quantitative data about the situation of the national HIV/AIDS response reflected overall findings at the national/sub-national level in Myanmar. Thus, the findings cannot be disaggregated for further analysis based on geographical strata or specific populations. In addition, this study mainly focused on health system themes, and thus, its subsequent attention to programmatic perspectives of the national HIV/AIDS response was limited. Fifteen key informants who were interviewed in this study represented the UN agencies and international/national NGOs. Thus, the findings may not fully explore opinions of the National AIDS Programme or the Ministry of Health. There might be some recall bias introduced by the respondents as well as some selection bias introduced by the investigator since

most key informants were selected through purposive sampling. In addition, those interviews were conducted with respondents at the senior management and programmatic levels, the study did not capture direct opinions of health care providers and end-users at the points of service delivery. Further studies are recommended to focus on providers' and end-users' perspectives at service delivery and utilization points.

This study reviewed time-series analysis on the evolution of the health system and the national HIV/AIDS response in Myanmar. However, the cross-sectional analysis of health system issues and constraints (as of mid-2015) could not synthesize outcomes of ongoing health system responses and transitioning processes in the current context of Myanmar. Moreover, the expenditure analysis for the national HIV/AIDS response was based only on 2012–2013 data available from the National AIDS Spending Assessment. Lack of most recent data for 2014–2015 constrained this study in drawing conclusions about the trend and the extent of financial resource flow to system-level interventions in these recent years during which considerable scale-up of service delivery occurred in the public sector. Thus, further expenditure analyses would be required to track the trends and patterns of HIV/AIDS-related spending and investments in system-strengthening interventions.

Due to a limited body of evidence, findings compiled in the literature review (Chapter 3) are inductive rather than conclusive about the Global Fund's HIV/AIDS financing in examining their effects on or interactions with the health systems in recipient countries. As some literature findings did not clearly suggest their relation to the Global Fund's financing on HIV/AIDS programs, the investigator had to assume inductive interpretations on their potential association. Thus, direct causal relationships of the findings could not be established in such cases. Further researches are recommended to expand the existing body of evidence.

Conclusion

This study presents a descriptive work that explores several health system constraints and overarching issues undermining the national HIV/AIDS response in Myanmar. These challenges may not be specific to Myanmar but may also be common to other developing countries facing a concentrated epidemic of HIV in resource-limited settings. However, application of the “bio-social lens” to zoom in the underlying historical background and the broader context of Myanmar makes our analysis comprehensive and context-focused. This study also presents a country case describing the importance of addressing health and social welfares of key populations to curb the concentrated HIV epidemic. In addition, this study informs us with a key message that Myanmar has missed the opportunity to capitalize on the use of the Global Fund’s monies to strengthen the health system. Strengthening service delivery platforms of township health systems would be the key to unlocking those opportunities. The role of complementary financing from other donors and domestic resources becomes instrumental to ensure sufficient resource allocation to the sub-national level. Deliberate planning is also required to optimize the use of those scarce resources. This study will contribute to our global depository of knowledge about the constraints and challenges around health system strengthening in developing countries.

References

- Atun, R. A., Bennett, S., & Duran, A. (2008). *When do vertical (stand-alone) programmes have a place in health systems?* Copenhagen: WHO Regional Office for Europe.
- Bennett, S., & Fairbank, A. (2003). *The system-wide effects of the Global Fund to Fight AIDS, Tuberculosis and Malaria: A conceptual framework*. Partners for Health Reformplus, Abt Associates Inc.
- Biesma, R. G., Brugha, R., Harmer, A., Walsh, A., Spicer, N., & Walt, G. (2009). The effects of global health initiatives on country health systems: a review of the evidence from HIV/AIDS control. *Health Policy and Planning*, 24(4), 239–252. doi:10.1093/heapol/czp025
- Bowser, D., Sparkes, S. P., Mitchell, A., Bossert, T. J., Barnighausen, T., Gedik, G., & Atun, R. (2013). Global Fund investments in human resources for health: innovation and missed opportunities for health systems strengthening. *Health Policy and Planning*, 29(8), 986–997. doi:10.1093/heapol/czt080
- Brugha, R. (2008). Global health initiatives and public health policy. In K. Heggenhougen & S. R. Quah (Eds.), *International encyclopedia of public health* (pp. 72–81). Amsterdam: Elsevier/Academic Press. doi:10.1016/B978-012373960-5.00239-2
- Brugha, R., Donoghue, M., Starling, M., Walt, G., Cliff, J., Fernandes, B., ... Mwale, S. (2005). *Global Fund tracking study: Country summaries and conclusions (Mozambique, Tanzania, Uganda, Zambia)*.
- Brugha, R., Kadzandira, J., Simbaya, J., Dicker, P., Mwapasa, V., & Walsh, A. (2010). Health workforce responses to global health initiatives funding: a comparison of Malawi and Zambia. *Human Resources for Health*, 8(1), 19. doi:10.1186/1478-4491-8-19
- Cailhol, J., Craveiro, I., Madede, T., Makoja, E., Mathole, T., Parsons, A. N., ... Sanders, D. (2013). Analysis of human resources for health strategies and policies in 5 countries in Sub-Saharan Africa, in response to GFATM and PEPFAR-funded HIV-activities. *Globalization and Health*, 9(1), 52. doi:10.1186/1744-8603-9-52
- Cameron, S., Wilson, J., Hows, J., Pascal, R., Todd-Gher, J., Tremlett, L., ... Godwin, J. (2011). *People living with HIV stigma index: Asia Pacific regional analysis – 2011*. UNAIDS, GNP+, ICW, & IPPF. Geneva: UNAIDS.
- Car, J., Paljärvi, T., Car, M., Kazeem, A., Majeed, A., & Atun, R. (2012). Negative health system effects of Global Fund's investments in AIDS, tuberculosis and malaria from 2002 to 2009: systematic review. *Journal of the Royal Society of Medicine Short Reports*, 3(10), 70. doi:10.1258/shorts.2012.012062
- Charney, M. W. (2009). *A history of modern Burma*. Cambridge: Cambridge University Press.

- Chhi Vun, M., Fujita, M., Rathavy, T., Eang, M. T., Sopheap, S., Sovannarith, S., ... Verbruggen, R. (2014). Achieving universal access and moving towards elimination of new HIV infections in Cambodia. *Journal of the International AIDS Society*, 17, 18905. doi:10.7448/IAS.17.1.18905
- Chima, C. C., & Homedes, N. (2015). Impact of global health governance on country health systems: the case of HIV initiatives in Nigeria. *Journal of Global Health*, 5(1). doi:10.7189/jogh.05.010407
- Conseil, A., Mounier-Jack, S., Rudge, J. W., & Coker, R. (2013). Assessing the effects of HIV/AIDS and TB disease control programmes on health systems in low- and middle-income countries of Southeast Asia: a semi-systematic review of the literature. *Public Health*, 127(12), 1063–1073. doi:10.1016/j.puhe.2013.09.013
- Council of the European Union. (2012). *Burma/Myanmar: EU sanctions suspended*. Council of the European Union press release. Brussels: Author.
- Department of Health Planning. (2011). *Five-year strategic plan (2011–2015): Health information system Myanmar*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Department of Health Planning. (2014a). *Annual hospital statistics report 2012*. Department of Health Planning in collaboration with Department of Health, Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Department of Health Planning. (2014b). *Public health statistics 2012*. Department of Health Planning in collaboration with Department of Health, Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Department of Population. (2015). *The 2014 Myanmar population and housing census – The union report, census report volume 2*. Ministry of Immigration and Population – Myanmar. Nay Pyi Taw: Author.
- Dräger, S., Gedik, G., & Dal Poz, M. R. (2006). Health workforce issues and the Global Fund to fight AIDS, Tuberculosis and Malaria: an analytical review. *Human Resources for Health*, 4, 23. doi:10.1186/1478-4491-4-23
- Drew, R., & Purvis, G. (2006). *Strengthening health systems to improve HIV/AIDS programs in the Europe and Eurasia region using Global Fund resources*. Social & Scientific Systems, Inc. The Synergy Project. Washington, DC: United States Agency for International Development.
- Economic and Social Board. (1954). *Pyidawtha: The new Burma. A report from the government to the people of the Union of Burma on our long-term programme for economic and social development*. Rangoon: Government of the Union of Burma.

- Farmer, P. E., Nizeye, B., Stulac, S., & Keshavjee, S. (2006). Structural violence and clinical medicine. *PLoS Medicine*, 3(10), e449. doi:10.1371/journal.pmed.0030449
- Farmer, P., Kim, J. Y., Kleinman, A., & Basilio, M. (2013). Introduction: A biosocial approach to global health. In *Reimagining global health – An introduction*. Berkeley and Los Angeles: University of California Press.
- Findlay, R., Park, C. Y., & Verbiest, J. P. A. (2015). *Myanmar: Unlocking the potential – A strategy for high, sustained, and inclusive growth*. ADB economics working paper series, 437. Manila: Asian Development Bank (ADB).
- Frenk, J. (2006). Bridging the divide: global lessons from evidence-based health policy in Mexico. *The Lancet*, 368(9539), 954–961. doi:10.1016/S0140-6736(06)69376-8
- Frenk, J. (2010). The global health system: Strengthening national health systems as the next step for global progress. *PLoS Medicine*, 7(1), e1000089. doi:10.1371/journal.pmed.1000089
- Furnivall, J. S. (1956). *Colonial policy and practice: A comparative study of Burma and Netherlands India*. New York: New York University Press.
- Galtung, J. (1969). Violence, peace, and peace research. *Journal of Peace Research*, 6(3), 167–191. doi:10.1177/002234336900600301
- Gilks, C. F., Crowley, S., Ekpini, R., Gove, S., Perriens, J., Souteyrand, Y., ... De Cock, K. (2006). The WHO public-health approach to antiretroviral treatment against HIV in resource-limited settings. *The Lancet*, 368(9534), 505–510. doi:10.1016/S0140-6736(06)69158-7
- Gilson, L. (Ed.). (2012). *Health policy and systems research: A methodology reader*. Geneva: World Health Organization.
- Global Fund Observer. (2009). Global Fund to implement new funding architecture. *GFO Newsletter*, 111. Retrieved from www.aidspace.org/gfo
- Godwin, J. (2014). *National HIV legal review report: Review of Myanmar's legal framework and its effect on access to health and HIV services for people living with HIV and key affected populations – Final report*. Yangon: UNAIDS – Myanmar Country Office, UNDP Country Office, & Pyoe Pin.
- Gravers, M. (1993). *Nationalism as political paranoia in Burma: An essay on the historical practice of power*. Copenhagen: Nordic Institute of Asian Studies.
- Grundy, J., Annear, P., Ahmed, S., & Biggs, B. (2014). Adapting to social and political transitions – The influence of history on health policy formation in the Republic of the

- Union of Myanmar (Burma). *Social Science & Medicine*, 107, 179–188.
doi:10.1016/j.socscimed.2014.01.015
- Guyot, J. F. (1966). Bureaucratic transformation in Burma. In R. J. D. Braibanti (Ed.), *Asian bureaucratic systems emergent from the British imperial tradition*. Durham, North Carolina: Duke University Press.
- Hanefeld, J. (2010). The impact of global health initiatives at national and sub-national level – a policy analysis of their role in implementation processes of antiretroviral treatment (ART) roll-out in Zambia and South Africa. *AIDS Care: Psychological and Socio-medical Aspects of AIDS/HIV*, 22(S1), 93–102. doi:10.1080/09540121003759919
- Hanna, B., & Kleinman, A. (2013). Unpacking global health: Theory and critique. In *Reimagining global health – An introduction*. Berkeley and Los Angeles: University of California Press.
- Honda, M. (2009). *Natural disaster and humanitarian assistance in Asia: The case of Myanmar*. Waseda University.
- International Crisis Group. (2002). *Myanmar: The HIV/AIDS crisis. ICG Asia briefing paper*. Bangkok/Brussels: Author.
- International Crisis Group. (2004). *Myanmar: Sanctions, engagement or another way forward? ICG Asia report*, 78. Yangon/Brussels: Author.
- Ireland, A. (1907). Medical and sanitary administration. In *Colonial administration in the far east: The province of Burma. In two volumes: Volume II*. (pp. 734–744). Boston and New York: Houghton, Mifflin and Company.
- Ivers, L. C., VanWassenhove, J., Jerome, J. G., Lambert, W., & Mukherjee, J. S. (2009). *Global health initiatives in Haiti and Rwanda – facility-level analysis of impact on health systems*.
- Jackson, C., & Gonsalkorale, R. (2014). *Procurement options analysis: OECD-DAC MAPS, procurement options analysis, supply chain analysis and SCMS action plan for further support to Ministry of Health, Myanmar*. Report submitted to the US Agency for International Development by the Supply Chain Management System (SCMS).
- Kleinman, A., Das, V., & Lock, M. M. (Eds.). (1997). *Social suffering*. Berkeley: University of California Press.
- Kredo, T., Adeniyi, F. B., Bateganya, M., & Pienaar, E. D. (2014). Task shifting from doctors to non-doctors for initiation and maintenance of antiretroviral therapy. *Cochrane Database of Systematic Reviews*, (7). doi:10.1002/14651858.CD007331.pub3.
- Krippendorff, K. (1980). *Content analysis: An introduction to its methodology*. Beverly Hills, CA: Sage Publications.

- Kyaing, N. N. (2008). *Myanmar country paper for revisiting primary health care*. Department of Health, Ministry of Health – Myanmar.
- Litvack, J., & Seddon, J. (Eds.). (1999). *Decentralization briefing notes. World Bank Institute working papers*. The World Bank's Decentralization Thematic Group. Washington, DC: World Bank Institute.
- Lockwood, A. N. (1958). The Burma road to Pyidawtha. *International Conciliation*, 518, 385–450.
- Lowe, D. (2013). *Mid-term review of the Myanmar national strategic plan on HIV and AIDS 2011–2015: Consolidation report*. Nay Pyi Taw: National AIDS Programme, Ministry of Health – Myanmar.
- Macro International Inc. (2009). *The impact of collective efforts on the reduction of the disease burden of AIDS, tuberculosis, and malaria. Global Fund five-year evaluation – Study area 3: Final report*. Submitted to the Global Fund to Fight AIDS, Tuberculosis and Malaria by Macro International Inc.
- McCoy, D., Chopra, M., Loewenson, R., Aitken, J. M., Ngulube, T., Muula, A., ... Rowson, M. (2005). Expanding access to antiretroviral therapy in sub-Saharan Africa: Avoiding the pitfalls and dangers, capitalizing on the opportunities. *American Journal of Public Health*, 95(1), 18–22. doi:10.2105/AJPH.2004.040121
- McKinsey & Company. (2005). *Global health partnerships: Assessing country consequences*. Bill & Melinda Gates Foundation, McKinsey & Company.
- Ministry of Health. (2010). *Myanmar health statistics 2010*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Ministry of Health. (2011). Myanmar health care system. In *Health in Myanmar 2011*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Ministry of Health. (2012a). *Health in Myanmar 2012*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Ministry of Health. (2012b). *Health workforce strategic plan 2012–2017*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Ministry of Health. (2013). *Health in Myanmar 2013*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- Ministry of Health. (2014). *Health in Myanmar 2014*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.

- Ministry of Health. (2015). *Ministry of Health, the Republic of the Union of Myanmar*. Retrieved November 6, 2015, from <http://www.moh.gov.mm/>
- Ministry of Health, & World Health Organization. (2011). *Strategic framework for artemisinin resistance containment in Myanmar (MARC) 2011–2015*. Retrieved from <http://www.searo.who.int/myanmar/documents/MARCframeworkApril2011.pdf>
- Ministry of National Planning and Economic Development. (2013). *Framework for economic and social reforms: Policy priorities for 2012–15 towards the long-term goals of the national comprehensive development plan*. Final draft submitted to the first Myanmar development cooperation forum. Nay Pyi Taw: Author.
- Ministry of National Planning and Economic Development, Ministry of Health, & UNICEF. (2011). *Myanmar multiple indicator cluster survey 2009–2010*. Nay Pyi Taw: Author.
- Ministry of National Planning and Economic Development, & UNICEF. (2012). *Situation analysis of children in Myanmar*. Nay Pyi Taw: Author.
- Mookherji, S., Ryan, L., Ricca, J., Bize, M., & Dye, T. (2008). *Evaluation of the Global Fund partner environment, at global and country levels, in relation to grant performance and health systems effects, including 16 country studies. The five-year evaluation of the Global Fund – Study area 2: Final report*. Submitted to the Global Fund to Fight AIDS, Tuberculosis and Malaria by Macro International Inc.
- Msuya, J. (2004). *Horizontal and vertical delivery of health services: What are the trade offs?* Background paper for the world development report. Washington, DC: The World Bank.
- Myanmar Health Sector Coordinating Committee. (2013). *Governance manual – Myanmar Health Sector Coordinating Committee (M-HSCC)*. Retrieved from <http://www.myanmarhsc.org/>
- Myanmar Information Management Unit. (2015). *MIMU 3W – April 2015: Countrywide overview*. Retrieved from <http://www.themimu.info/3w-maps-and-reports>
- Myanmar: The Penal Code*. (1860).
- Myint-U, T. (2001). *The making of modern Burma*. Cambridge: Cambridge University Press.
- Myint-U, T. (2011). *Where China meets India: Burma and the new crossroads of Asia*. New York: Farrar, Straus and Giroux.
- National AIDS Authority. (2010). *The national strategic plan for comprehensive & multi-sectoral response to HIV/AIDS III (2011–2015) in Cambodia*. National AIDS Authority – Kingdom of Cambodia.

- National AIDS Programme. (2005). *Response to HIV & AIDS in Myanmar – Progress report 2005*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2010a). *Progress report 2010: National strategic plan for HIV/AIDS in Myanmar*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2010b). *UNGASS country progress report, Myanmar – 2010*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2012). *Global AIDS response progress report: Myanmar – 2012*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2013a). *HIV sentinel sero-surveillance survey report, 2012*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2013b). *Joint rapid assessment of HIV treatment in Myanmar: Final report*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2013c). *Progress report 2013: National strategic plan for HIV/AIDS in Myanmar*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2014a). *Global AIDS response progress report: Myanmar – 2014*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2014b). *Guidelines for the clinical management of HIV infection in Myanmar* (4th ed.). Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2014c). *Myanmar national strategic plan & operational plan on HIV and AIDS (2011–2016): Operational plan*. Revised 2014. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2014d). *Myanmar national strategic plan on HIV and AIDS (2011–2016)*. Full version, revised 2014. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2015a). *Global AIDS response progress report: Myanmar – 2015*. Ministry of Health – Myanmar. Nay Pyi Taw: Author.
- National AIDS Programme. (2015b). *National AIDS spending assessment in Myanmar (2012–2013): Resource flows and actual spending in the HIV response in Myanmar*. Ministry of Health – Myanmar & UNAIDS. Nay Pyi Taw: Author.
- Nixon, H., Joelene, C., Saw, K. P. C., Lynn, T. A., & Arnold, M. (2013). *State and region governments in Myanmar*. Yangon: Myanmar Development Resource Institute – the Centre for Economic and Social Development (MDRI-CESD) & The Asia Foundation.

- Oliveira-Cruz, V., Kurowski, C., & Mills, A. (2003). Delivery of priority health services: Searching for synergies within the vertical versus horizontal debate. *Journal of International Development*, 15(1), 67–86. doi:10.1002/jid.966
- Olmen, J. van, Criel, B., Bhojani, U., Marchal, B., Belle, S. van, Chenge, M. F., ... Kegels, G. (2012). The health system dynamics framework: The introduction of an analytical model for health system analysis and its application to two case-studies. *Health, Culture and Society*, 2(1), 1–21. doi:10.5195/hcs.2012.71
- Oo, Z., Joelene, C., Minoletti, P., Phyu, P. P., Saw, K. P. C., Win, N. W., ... Smurra, A. (2015). *Fiscal management in Myanmar. ADB economics working paper series, 434*. Manila: Asian Development Bank (ADB).
- Oomman, N., Bernstein, M., & Rosenzweig, S. (2008). *Seizing the opportunity on AIDS and health systems*. Washington, DC: The Center for Global Development.
- Ooms, G., Damme, W. Van, Baker, B. K., Zeitz, P., & Schrecker, T. (2008). The “diagonal” approach to Global Fund financing: a cure for the broader malaise of health systems? *Globalization and Health*, 4(1), 6. doi:10.1186/1744-8603-4-6
- Organisation for Economic Co-operation and Development. (2015). *OECD statistics: Aid (ODA) disbursements to countries and regions [DAC2a]*. Retrieved October 26, 2015, from <http://stats.oecd.org/index.aspx#>
- Organisation of African Unity. (2001). *Abuja declaration on HIV/AIDS, tuberculosis and other related infectious diseases*. African summit on HIV/AIDS, tuberculosis and other related infectious diseases. Abuja, Nigeria: Author.
- Patel, P., Cummings, R., & Roberts, B. (2015). Exploring the influence of the Global Fund and the GAVI Alliance on health systems in conflict-affected countries. *Conflict and Health*, 9(1), 7. doi:10.1186/s13031-015-0031-z
- Pope, C., Ziebland, S., & Mays, N. (2006). Analysing qualitative data. In C. Pope & N. Mays (Eds.), *Qualitative research in health care* (3rd ed.). Oxford, UK: Blackwell Publishing Ltd.
- Reid, G., & Tip, S. L. (2015). *Situational analysis on drug use, HIV and the response in Myanmar: Looking forward*. Yangon: UNAIDS – Myanmar Country Office.
- Rieffel, L., & Fox, J. W. (2013). *Too much, too soon? The dilemma of foreign aid to Myanmar/Burma*. Arlington, Virginia: Nathan Associates Inc.
- Rudland, E. (2003). *Political triage – Health and the state in Myanmar (Burma)*. A thesis submitted to Department of Political and Social Change, Research School of Pacific and Asian Studies, Australian National University.

- Samb, B., Evans, T., Dybul, M., Atun, R., Moatti, J.-P., Nishtar, S., ... Etienne, C. (2009). An assessment of interactions between global health initiatives and country health systems. *The Lancet*, 373(9681), 2137–2169. doi:10.1016/S0140-6736(09)60919-3
- Save the Children. (2015). *Save the Children's Global Fund portfolio in Myanmar*. Save the Children in Myanmar. Yangon: Author.
- Sein, T. T., Myint, P., Tin, N., Win, H., Aye, S. S., & Sein, T. (2014). *The Republic of the Union of Myanmar health system review*. (V. Tangcharoensathien & W. Patcharanarumol, Eds.), *Health Systems in Transition*, 4(3). Asia Pacific Observatory on Health Systems and Policies. Geneva: World Health Organization.
- Sepúlveda, J. (2006). Foreword. In D. T. Jamison, J. G. Breman, A. R. Measham, G. Alleyne, M. Claeson, D. B. Evans, ... P. Musgrove (Eds.), *Disease control priorities in developing countries* (2nd ed., pp. xiii–xv). New York: Oxford University Press and The World Bank.
- Spicer, N., Aleshkina, J., Biesma, R., Brugha, R., Caceres, C., Chilundo, B., ... Zhang, X. (2010). National and subnational HIV/AIDS coordination: are global health initiatives closing the gap between intent and practice? *Globalization and Health*, 6, 3. doi:10.1186/1744-8603-6-3
- Stemler, S. (2001). An overview of content analysis. *Practical Assessment, Research & Evaluation*, 7(17). Retrieved from <http://pareonline.net/getvn.asp?v=7&n=17>
- Stillman, K., & Bennett, S. (2005). *Systemwide effects of the Global Fund: Interim findings from three country studies*. Partners for Health Reformplus, Abt Associates Inc.
- Taylor, R. H. (1987). The rationalization of the state, 1825–1942. In *The state in Burma* (pp. 66–147). London: C. Hurst & Co.
- Taylor, R. H. (2012). Myanmar: From army rule to constitutional rule? *Asian Affairs*, 43(2), 221–236. doi:10.1080/03068374.2012.682367
- The Burma Excise Act*. (1917).
- The Global Fund. (2005). *Termination of grants to Myanmar*. The Global Fund to Fight AIDS, Tuberculosis and Malaria – Fact sheet: August 18, 2005.
- The Global Fund. (2009). *Architecture review – Transition provisions*. The Global Fund to Fight AIDS, Tuberculosis and Malaria: Twentieth board meeting – Decision point GF/B20/DP31. Retrieved from <http://www.theglobalfund.org/Knowledge/Decisions/GF/B20/DP31/>
- The Global Fund. (2012a). *Strategic investments for impact – Global Fund results report 2012*. Retrieved from <http://www.theglobalfund.org/en/publications/>

- The Global Fund. (2012b). *The Global Fund strategy 2012–2016: Investing for impact*. Retrieved from <http://www.theglobalfund.org/en/strategy/>
- The Global Fund. (2012c). *The Global Fund to Fight AIDS, Tuberculosis and Malaria: The framework document 2001*. Retrieved from <http://www.theglobalfund.org/en/documents/governance/>
- The Global Fund. (2013a). *Myanmar – Program grant agreement for single stream of funding: Grant number MYN-H-SCF – Modification number 5*. Amended and restated. Retrieved from <http://www.theglobalfund.org/en/portfolio/country/list/?loc=MMR>
- The Global Fund. (2013b). *Myanmar – Program grant agreement for single stream of funding: Grant number MYN-H-UNOPS – Modification number 6*. Amended and restated. Retrieved from <http://www.theglobalfund.org/en/portfolio/country/list/?loc=MMR>
- The Global Fund. (2014a). *Information note on health systems strengthening for Global Fund applicants*. Retrieved from http://www.theglobalfund.org/documents/core/infonotes/Core_HSS_InfoNote_en
- The Global Fund. (2014b). Section 2: Core structures. In *The Global Fund to Fight AIDS, Tuberculosis and Malaria – Governance handbook*. Retrieved from <http://www.theglobalfund.org/en/documents/governance/>
- The Global Fund. (2014c). Section 3: Funding model. In *The Global Fund to Fight AIDS, Tuberculosis and Malaria – Governance handbook*. Retrieved from <http://www.theglobalfund.org/en/documents/governance/>
- The Global Fund. (2015a). *The Global Fund: Funding decisions*. Retrieved from <http://www.theglobalfund.org/en/fundingdecisions/>
- The Global Fund. (2015b). *The Global Fund: Results factsheet – July 2015*. Retrieved from <http://www.theglobalfund.org/en/publications/>
- The Global Fund. (2015c). *The Global Fund: Myanmar – Investments & results*. Retrieved December 8, 2015, from <http://www.theglobalfund.org/en/portfolio/country/results/?loc=MMR>
- The Global Fund. (2015d). *The Global Fund: Resource book for applicants*. Retrieved from <http://www.theglobalfund.org/en/fundingmodel/>
- The Three Millennium Development Goal Fund. (2015). *The 3MDG Fund strategy to operate in conflict affected areas in Myanmar*. Retrieved from <http://www.3mdg.org/library>
- The United Nations. (2015). *Sustainable development goals*. Retrieved March 8, 2016, from <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>

- The United Nations General Assembly. (2005). *2005 world summit outcome*. Retrieved from <http://www.who.int/hiv/universalaccess2010/worldsummit.pdf>
- The World Bank. (2015a). *The World Bank: New country classifications*. Retrieved September 22, 2015, from <http://data.worldbank.org/news/new-country-classifications-2015>
- The World Bank. (2015b). *The World Bank's country data: Myanmar*. Retrieved September 21, 2015, from <http://data.worldbank.org/country/myanmar>
- Three Diseases Fund. (2010). *Three Diseases Fund: Annual report 2010*. Retrieved from <http://www.3dfund.org/>
- Three Diseases Fund. (2012). *Three Diseases Fund, Myanmar*. Retrieved January 5, 2016, from <http://www.3dfund.org/>
- Tin, N., Lwin, S., Kyaing, N. N., Htay, T. T., Grundy, J., Skold, M., ... Nirupam, S. (2010). An approach to health system strengthening in the Union of Myanmar. *Health Policy*, 95(2), 95–102. doi:10.1016/j.healthpol.2009.11.013
- Tinker, H. (1957). *The Union of Burma: A study of the first years of independence*. London: Oxford University Press.
- Tolliver, J., & Bartram, K. (2014). *Myanmar national supply chain baseline results: Capability and performance*. Report submitted to the US Agency for International Development by the Supply Chain Management System (SCMS) and the Three Millennium Development Goal Fund (3MDG) by the Partnership for Supply Chain Management (PFSCM).
- Tragard, A., & Shrestha, I. B. (2010). System-wide effects of Global Fund investments in Nepal. *Health Policy and Planning*, 25(S1), i58–i62. doi:10.1093/heapol/czq061
- Tripartite Core Group. (2008). *Post-Nargis recovery and preparedness plan*. Retrieved from <http://yangon.sites.unicnetwork.org/>
- UNAIDS. (2010). *Global report: UNAIDS report on the global AIDS epidemic 2010*. Geneva: Author.
- UNAIDS. (2011). *UNAIDS terminology guidelines*. Revised version – October 2011. Geneva: Author.
- UNAIDS. (2013a). *Global report: UNAIDS report on the global AIDS epidemic 2013*. Geneva: Author.
- UNAIDS. (2013b). *HIV in Asia and the Pacific: UNAIDS report 2013*. Bangkok: Author.
- UNAIDS. (2015). *Situational analysis of the HIV response among men who have sex with men and transgender persons in Myanmar*. Yangon: UNAIDS – Myanmar Country Office.

- UNDP. (2002). *Human development report 2002 – Deepening democracy in a fragmented world*. New York: Oxford University Press.
- UNDP. (2012). *UNDP in Myanmar: About Myanmar*. Retrieved September 22, 2015, from <http://www.mm.undp.org/content/myanmar/en/home/countryinfo/>
- UNDP. (2014). *Human development report 2014 – Sustaining human progress: Reducing vulnerabilities and building resilience*. New York: Author.
- UNHCR. (2015). *2015 UNHCR country operations profile – Myanmar*. Retrieved December 3, 2015, from <http://www.unhcr.org/pages/49e4877d6.html>
- UNICEF/WHO Joint Committee on Health Policy. (1981). *National decision-making for primary health care*. Geneva: World Health Organization.
- Union Government of Myanmar. (2012). *The Union Budget Law, 2012*.
- Union Government of Myanmar. (2015). *The Union Budget Law, 2015*.
- United Nations Country Team in Myanmar. (2011). *Achieving the millennium development goals in Myanmar: Thematic analysis 2011*. Yangon: Author.
- United Nations Expanded Theme Group on HIV/AIDS. (2004). *Joint programme for HIV/AIDS: Myanmar 2003–2005*. Revised – April 2004. Yangon: UNAIDS – Myanmar.
- United Nations Expanded Theme Group on HIV/AIDS. (2005). *Joint programme for HIV/AIDS in Myanmar: Progress report 2003–2004 & Fund for HIV/AIDS in Myanmar (FHAM): Annual progress report April 2004–March 2005*. Retrieved from www.myanmarhsc.org/
- United Nations Office for Project Services. (2015a). *Managed cash flow: Standard operating procedures*. Field level standard operating procedures for the Department of Health/UNOPS managed cash flow – GFATM funded programme, Myanmar. Revised – January 2015. Retrieved from <http://pr.org.mm/managed-cash-flow/>
- United Nations Office for Project Services. (2015b). *UNOPS: Welcome to principal recipient of the Global Fund to Fight AIDS, Tuberculosis and Malaria*. Retrieved January 6, 2016, from <http://pr.org.mm/>
- United States Department of the Treasury. (2015). OFAC FAQs: Other sanctions programs – Burma sanctions. *US Department of the Treasury: Resource center*. Retrieved October 26, 2015, from http://www.treasury.gov/resource-center/faqs/Sanctions/Pages/faq_other.aspx#burma
- United States Government Accountability Office. (2007). *International organizations: Assistance programs constrained in Burma*. Report to the Committee on Foreign Affairs, House of Representatives. Washington, DC: Author.

- Vujcic, M., Weber, S. E., Nikolic, I. A., Atun, R., & Kumar, R. (2012). An analysis of GAVI, the Global Fund and World Bank support for human resources for health in developing countries. *Health Policy and Planning*, 27(8), 649–657. doi:10.1093/heapol/czs012
- Walinsky, L. J. (1962). *Economic development in Burma, 1951–1960*. New York: The Twentieth Century Fund.
- Warren, A. E., Wyss, K., Shakarishvili, G., Atun, R., & de Savigny, D. (2013). Global health initiative investments and health systems strengthening: a content analysis of global fund investments. *Globalization and Health*, 9(1), 30. doi:10.1186/1744-8603-9-30
- Weber, R. P. (1990). *Basic content analysis* (2nd ed.). Newbury Park, CA: Sage Publications.
- World Health Organization. (2000). *The world health report 2000 – Health systems: Improving performance*. Geneva: Author.
- World Health Organization. (2002). *Scaling up antiretroviral therapy in resource-limited settings: Guidelines for a public health approach*. Geneva: Author.
- World Health Organization. (2006). *The world health report 2006 – Working together for health*. Geneva: Author.
- World Health Organization. (2007). *Everybody's business – Strengthening health systems to improve health outcomes: WHO's framework for action*. Geneva: Author.
- World Health Organization. (2008). *WHO country cooperation strategy 2008–2011: Myanmar*. Yangon: World Health Organization Country Office for Myanmar.
- World Health Organization. (2014a). *Noncommunicable diseases country profiles 2014*. Geneva: Author.
- World Health Organization. (2014b). *World malaria report 2014*. Geneva: Author.
- World Health Organization. (2015a). *Global tuberculosis report 2015*. Geneva: Author.
- World Health Organization. (2015b). *World Health Organization global health expenditure database*. Retrieved November 18, 2015, from http://apps.who.int/nha/database/Key_Indicators_by_Country/Index/en
- World Health Organization. (2015c). *World health statistics 2015*. Geneva: Author.
- Yu, D., Souteyrand, Y., Banda, M. A., Kaufman, J., & Perriens, J. H. (2008). Investment in HIV/AIDS programs: Does it help strengthen health systems in developing countries? *Globalization and Health*, 4, 8. doi:10.1186/1744-8603-4-8

Appendices

Appendix 1: The National Health Policy 1993

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1. To raise the level of health of the country and promote the physical and mental well-being of the people with the objective of achieving "Health for all" goal, using primary health care approach.
 2. To follow the guidelines of the population policy formulated in the country.
 3. To produce sufficient as well as efficient human resource for health locally in the context of broad framework of long-term health development plan.
 4. To strictly abide by the rules and regulations mentioned in the drug laws and by-laws which are promulgated in the country.
 5. To augment the role of co-operative, joint ventures, private sectors, and non-governmental organizations in delivering of health care in view of the changing economic system.
 6. To explore and develop alternative health care financing system.
 7. To implement health activities in close collaboration and also in an integrated manner with related ministries.
 8. To promulgate new rules and regulations in accord with the prevailing health and health-related conditions as and when necessary.
 9. To intensify and expand environmental health activities including prevention and control of air and water pollution.
 10. To promote national physical fitness through the expansion of sports and physical education activities by encouraging community participation, supporting outstanding athletes, and reviving traditional sports.
 11. To encourage conduct of medical research activities not only on prevailing health problems but also giving due attention in conducting health system research.
 12. To expand the health service activities not only to rural but also to border areas so as to meet the overall health needs of the country.
 13. To foresee any emerging health problem that poses a threat to the health and well-being of the people of Myanmar, so that preventive and curative measures can be initiated.
 14. To reinforce the service and research activities of indigenous medicine to international level and to involve in community health care activities.
 15. To strengthen collaboration with other countries for national health development.
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Source: Health in Myanmar 2014 (Ministry of Health, 2014, p.17).

Appendix 2: National Strategic Plan on HIV/AIDS (2011–2016)

Strategic Priorities and Interventions	
Strategic priority 1: Prevention of the transmission of HIV through unsafe behavior in sexual contacts and injecting drug use	
Intervention 1.1	Reducing HIV-related risk, vulnerability, and impact among female sex workers and their clients
Intervention 1.2	Reducing HIV-related risk, vulnerability, and impact among men who have sex with men
Intervention 1.3	Reducing HIV-related risk, vulnerability, and impact among drug users
Intervention 1.4	Reducing HIV-related risk, vulnerability, and impact among prison and rehabilitation facility populations
Intervention 1.5	Reducing HIV-related risk, vulnerability, and impact among mobile and migrant populations
Intervention 1.6	Reducing HIV-related risk, vulnerability, and impact among uniformed services personnel
Intervention 1.7	Reducing HIV-related risk and vulnerability among young people
Intervention 1.8	Enhancing prevention, care, treatment, and support in the workplace
Strategic priority 2: Comprehensive continuum of care for people living with HIV	
Intervention 2.1	VCCT (Voluntary Confidential Counseling and Testing), TB, ART, community home-based care, health facility-based care, and referral
Intervention 2.2	PMCT (Prevention of Mother to Child Transmission) and reproductive health
Strategic priority 3: Mitigation of the impact of HIV on people living with HIV and their families	
Intervention 3.1	Psychosocial, nutritional, and economic support
Intervention 3.2	Orphans and vulnerable children infected and affected by HIV
Crosscutting interventions	
Intervention 4.1	Health systems strengthening, structural interventions, and community systems strengthening
Intervention 4.2	Favorable environment for reducing stigma and discrimination
Intervention 4.3	Strategic information, monitoring and evaluation, and research

Source: Myanmar National Strategic Plan on HIV/AIDS (2011–2016), revised 2014 (National AIDS Programme, 2014d).

Appendix 3: Databases and search terms of the literature search

Database/ Search Engine	Search Terms
PubMed	((HIV[tiab] OR AIDS[tiab]) AND (health system[tiab] OR health system strengthening[tiab])) AND ("2002/01/01"[PDAT] : "2015/05/31"[PDAT])
	Global Fund[tiab] OR global health initiatives[tiab] AND ("2002/01/01"[PDAT] : "2015/05/31"[PDAT])
	HIV[tiab] AND (strengthening[tiab] OR integration[tiab] OR financing[tiab]) AND health system[tiab] AND ("2002/01/01"[PDAT] : "2015/05/31"[PDAT])
	("hiv"[MeSH Terms] OR "hiv"[All Fields]) AND "health system"[All Fields] AND ("2002/01/01"[PDAT] : "2015/05/31"[PDAT])
PMC	HIV[Abstract] AND health system[Abstract] AND ("2002/01/01"[PubDate] : "2015/05/31"[PubDate])
	global fund[Abstract] OR global health initiatives[Abstract] AND ("2002/01/01"[PubDate] : "2015/05/31"[PubDate])
HOLLIS +	HIV [title] AND health system [title] AND strengthening [keywords anywhere] AND (Date 2002/01/01 - 2015/05/31)
	HIV [subject] AND health system [subject] AND strengthening [keywords anywhere] AND (Date 2002/01/01 - 2015/05/31)
	global fund [title] AND health system [title] AND (Date 2002/01/01 - 2015/05/31)
	global fund [subject] AND health system [subject] AND (Date 2002/01/01 - 2015/05/31)
	"global health initiatives" [title] AND (Date 2002/01/01 - 2015/05/31)
	"global health initiatives" [subject] AND (Date 2002/01/01 - 2015/05/31)
DASH	(abstract:HIV) AND (abstract:health abstract:system)
	(title:HIV) AND (title:health title:system)
	(keyword:HIV) AND (keyword:"health system")
	(abstract:"global fund")
	(title:global title:fund)
	(keyword:"global fund")
	(abstract:global abstract:health abstract:initiative)
	(abstract:financing) AND (abstract:"health system")
	(abstract:strengthening) AND (abstract:health abstract:system)

Google Scholar	allintitle: HIV, health system
	allintitle: "global fund"
	allintitle: "global health initiatives"
	allintitle: HIV, strengthening
WHO Global Health Library: Regional Indexes	HIV, health system in Title
	"HIV" "health system" in Subject
	global fund in all indexes
	global health initiatives in all indexes
	"HIV" "strengthening" in Title
MEDLINE (WHO Global Health Library)	HIV, health system in Title
	"HIV" "health system" in Subject
	"global fund" in Title
	"global fund" in Subject
	global health initiatives in Title
	global health initiatives in Subject
	"HIV" "strengthening" in Title
WHOLIS (WHO Global Health Library)	HIV, health system in Title
	"HIV" "health system" in Subject
	"global fund" in Title
	"global fund" in Subject
	global health initiatives in Title
	global health initiatives in Subject
	"HIV" "strengthening" in Title
Popline	"HIV" AND "health system" in Title
	"global fund" in Title
	"global health initiative" in Title
aids-portal	global fund
	"HIV" "health system" "strengthening"
Aidspan/GFO (Global Fund Observer)	Tag: "Health Systems Strengthening"
	Tag: "HIV"
	"HIV" "health system" in Title
	"HIV" "health system" in Abstract
Center for Global Development Publications	"HIV" in Title
	"global fund" in Title
	"global health initiatives" in Title
	"health system" in Title

Appendix 4: Lists of the papers/reports selected for the literature review

Author (Year)	Title and short description of the study
Biesma <i>et al.</i> (2009)	<p>The effects of global health initiatives on country health systems: a review of the evidence from HIV/AIDS control</p> <p>Description: This study reviews available literature and reports (2002–2007) to examine the effects of three main global health initiatives (GHIs) for HIV/AIDS on health systems, particularly on national policy and priorities, coordination and planning, stakeholder participation, fund disbursement and absorptive capacity, health workforce, and monitoring and evaluation systems at the national level in recipient countries.</p>
Bowser <i>et al.</i> (2013)	<p>Global Fund investments in human resources for health: innovation and missed opportunities for health systems strengthening</p> <p>Description: This mixed methods study analyzes the Global Fund's (Round 1–7) budgetary data for HRH (human resources for health) and examines the scope of the Global Fund's HRH investments in six selected countries (Bangladesh, Ethiopia, Honduras, Indonesia, Malawi, and Ukraine).</p>
Brugha <i>et al.</i> (2005)	<p>Global Fund tracking study: country summaries and conclusions (Mozambique, Tanzania, Uganda, Zambia)</p> <p>Description: This paper compiles the findings of the Global Fund tracking studies that examine the effects of the Global Fund during establishment and early implementation phase and describes different stakeholders' perspectives on proposal preparation, grant implementation, and coordination processes in four African countries (Mozambique, Tanzania, Uganda, and Zambia).</p>
Brugha <i>et al.</i> (2010)	<p>Health workforce responses to global health initiatives funding: a comparison of Malawi and Zambia</p>

	<p>Description: This study examines the impact of scaling-up of service delivery for HIV/AIDS on the workload of health workers at the health facility level in two African countries (Malawi and Zambia).</p>
Cailhol <i>et al.</i> (2013)	<p>Analysis of human resources for health strategies and policies in 5 countries in Sub-Saharan Africa, in response to GFATM and PEPFAR-funded HIV-activities</p> <p>Description: This mixed methods study describes the different strategies and approaches that five African countries (Angola, Burundi, Lesotho, Mozambique, and South Africa) adopted to address the HRH issues in responding to scaling-up of services for antiretroviral treatment.</p>
Car <i>et al.</i> (2012)	<p>Negative health system effects of Global Fund’s investments in AIDS, tuberculosis and malaria from 2002 to 2009: systematic review</p> <p>Description: This study reviews available peer-reviewed literature (2002–2009) to examine evidence on the negative health system effects of the Global Fund’s mechanisms.</p>
Chima & Homedes (2015)	<p>Impact of global health governance on country health systems: the case of HIV initiatives in Nigeria</p> <p>Description: This country case study examines how GHI-funded HIV programs have affected the health system in Nigeria.</p>
Conseil <i>et al.</i> (2013)	<p>Assessing the effects of HIV/AIDS and TB disease control programmes on health systems in low-and middle-income countries of Southeast Asia: a semi-systematic review of the literature</p> <p>Description: This study reviews available literature (2003–2011) to examine the health system effects of HIV/AIDS and TB programs in low and middle-income countries of Southeast Asia.</p>

<p>Drager <i>et al.</i> (2006)</p>	<p>Health workforce issues and the Global Fund to fight AIDS, Tuberculosis and Malaria: an analytical review</p> <p>Description: This study reviews the approved Global Fund's grant proposals (Round 1–5) from five African countries (Ethiopia, Ghana, Kenya, Malawi, and Tanzania) and examines what activities these countries proposed to address the HRH (human resource for health) issues with the Global Fund's financing.</p>
<p>Drew & Purvis (2006)</p>	<p>Strengthening health systems to improve HIV/AIDS programs in the Europe and Eurasia region using Global Fund resources</p> <p>Description: This report examines the health system effects of the Global Fund programs for HIV/AIDS and explores the ways that the Global Fund's support can address health system issues for effective scaling-up of HIV/AIDS programs in the context of Kyrgyzstan, Tajikistan, and Ukraine.</p>
<p>Hanefeld (2010)</p>	<p>The impact of global health initiatives at national and sub-national level – a policy analysis of their role in implementation processes of antiretroviral treatment (ART) roll-out in Zambia and South Africa</p> <p>Description: This study compares the role of two GHIs (PEPFAR and GFATM) in rolling-out of ART in Zambia and South Africa and examines the impact of those GHI processes on health systems, particularly on coordination, sustainability, human resources, and equity of access to ART.</p>
<p>Ivers <i>et al.</i> (2009)</p>	<p>Global health initiatives in Haiti and Rwanda: facility-level analysis of impact on health systems</p> <p>Description: This study examines the effects of the Global Fund's and PEPFAR's funding on health infrastructure, human resources, access to and outcomes of health services for targeted and non-targeted health interventions at the health facility level in the context of Haiti and Rwanda.</p>

Macro International Inc. (2009)	<p>The impact of collective efforts on the reduction of the disease burden of AIDS, tuberculosis, and malaria</p> <p>Description: This is the report on the Global Fund five-year evaluation study (Study Area 3) that examines the collective impact of prevention and treatment programs on three diseases (HIV, TB, and malaria).</p>
McKinsey & Company (2005)	<p>Global health partnerships: assessing country consequences</p> <p>Description: This study examines the effects of global health partnerships on health systems in recipient countries in terms of benefits, consequences, and challenges.</p>
Mookherji <i>et al.</i> (2008)	<p>Evaluation of the Global Fund partner environment, at global and country levels, in relation to grant performance and health system effects, including 16 country studies</p> <p>Description: This is the report on the Global Fund five-year evaluation study (Study Area 2) that examines the Global Fund's partnership system and its wider effects on the health systems in recipient countries.</p>
Oomman <i>et al.</i> (2008)	<p>Seizing the opportunity on AIDS and health systems</p> <p>Description: This report compares and examines the effects of three main GHIs for HIV/AIDS on health information system, supply chain management system, and human resources for health in the context of three African countries (Mozambique, Uganda, and Zambia).</p>
Patel <i>et al.</i> (2015)	<p>Exploring the influence of the Global Fund and the GAVI Alliance on health systems in conflict-affected countries</p> <p>Description: This study reviews available literature about the health system effects of the Global Fund and the GAVI in the context of conflict-affected countries.</p>

Samb <i>et al.</i> ⁶⁵ (2009)	<p>An assessment of interactions between global health initiatives and country health systems</p> <p>Description: This study compiles available evidence (1990–2009) on possible interactions between the GHIs and health systems of the recipient countries.</p>
Spicer <i>et al.</i> (2010)	<p>National and subnational HIV/AIDS coordination: are global health initiatives closing the gap between intent and practice?</p> <p>Description: This study synthesizes the findings on the effects of GHIs on structures and mechanisms of coordination for HIV/AIDS programs at national and sub-national levels in seven countries (China, Georgia, Kyrgyzstan, Mozambique, Peru, Ukraine, and Zambia).</p>
Stillman & Bennett (2005)	<p>System-wide effects of the Global Fund: interim findings from three country studies</p> <p>Description: This paper synthesizes the interim (baseline) findings of SWEF (System-wide Effects of the Fund) studies that examine the system-wide effects of the Global Fund particularly on policy processes, human resource, stakeholder participation, and supply chain systems during the early implementation phase of the Global Fund in Benin, Ethiopia, and Malawi.</p>
Tragard & Shrestha (2010)	<p>System-wide effects of Global Fund investments in Nepal</p> <p>Description: This country case study examines the effects of the Global Fund supported HIV, TB, and malaria programs and their extent of integration into the health system in Nepal.</p>
Vujicic <i>et al.</i> (2012)	<p>An analysis of GAVI, the Global Fund and World Bank support for human resources for health in developing countries</p> <p>Description: This study analyzes and compares the HRH-related activities supported by three GHIs.</p>

⁶⁵ World Health Organization Maximizing Positive Synergies Collaborative Group.

Warren et al. (2013)	<p>Global health initiative investments and health systems strengthening: a content analysis of global fund investments</p> <p>Description: This study analyzes a subset of the Global Fund's Round 8 Phase I grants to examine the proportions of funding allocated for different categories of interventions.</p>
Yu et al. (2008)	<p>Investment in HIV/AIDS programs: Does it help strengthen health systems in developing countries?</p> <p>Description: This study reviews available literature in the public domain to examine the health system effects of HIV/AIDS programs.</p>

Appendix 5: Key informants interview guide

Introduction

1. Thank the respondent.

Thank you for agreeing to meet and for allocating time for the interview.

2. Explain the research objectives and process to the respondent.

Review the project information sheet.

3. Explain to the respondent about the informed consent process. Review the informed consent form. Obtain the informed consent from the respondent.

4. Explain to the respondent about the confidentiality of the responses.

Identifying information will be kept confidential and all the responses will remain anonymous.

5. Remind the respondent that he/she can refuse to respond to some specific questions (if uncomfortable) or he/she may decide to stop/withdraw from the interview at any time.

Remind the respondent to ask any question at any time (for clarification).

6. Obtain the respondent's consent for audio-recording of the interview.

7. Start the interview process.

Topic: How the national HIV/AIDS response can strengthen the health system in Myanmar

Let's start by telling me anything that you think is important to understand about the current situation of the national HIV/AIDS response in Myanmar?

I would like to learn more about the Global Fund HIV program in Myanmar.

How would you describe the role of the Global Fund in delivery of HIV prevention, treatment and care services in Myanmar?

To the best of your knowledge, can you describe the role of the Global Fund HIV program in delivery of non-HIV services [other health care services than HIV] in Myanmar?

Could you explain any challenges/constraints you experienced, regarding the Global Fund HIV program in Myanmar? Why do you think it is challenging?

I am particularly interested in learning about the relationships between the national HIV/AIDS response and the different components of the health system, especially in terms of service delivery, health workforce, procurement and supply chain management, health information system, financing, and governance of the public health system in Myanmar. And I am going to ask you a few details about it.

Can you describe to me how you understand the relationships between the national HIV/AIDS response and these different components of the health system in Myanmar, based on your experience?

[Use the probes: "Can you give me an example of your experience?" "Can you describe for me what that would look like in practice?" "Can you give me an illustration of that so I can better understand that relationship?" etc.]

Depending on the response and the profile of the respondent, ask one or more of the following prompts:

- Any relationship between the national HIV/AIDS response and the health service delivery
- Any relationship between the national HIV/AIDS response and the health workforce
- Any comment about the relation between the national HIV/AIDS response and the medical procurement and supply chain system
- How about health information system? Can you describe any relation between the national HIV/AIDS response and the health information system?
- How about leadership and governance. Can you describe any relation between the national HIV/AIDS response and the leadership/governance of the health system?

Let's talk about sustainability!

How do you think of the long-term sustainability of the national HIV/AIDS response in Myanmar?

What kind of opportunities, do you see? What kind of challenges, do you see?

In your opinion, what kinds of approaches may address sustainability of the national HIV/AIDS response?

How do you see the role of the Global Fund in this regard?

Finally, can you tell me any recommendations that you consider crucial in policy formulation about the national HIV/AIDS response in Myanmar?

Do you have any other thoughts that you would like to share me regarding the topic?

Is there any question that you have for me? Please.

Thanks a lot. It is indeed a very fruitful interview! Thanks you very much!

Remark: This is open ended semi-structured questionnaires. The investigator may probe the respondents with more follow-up questions, depending on their response.