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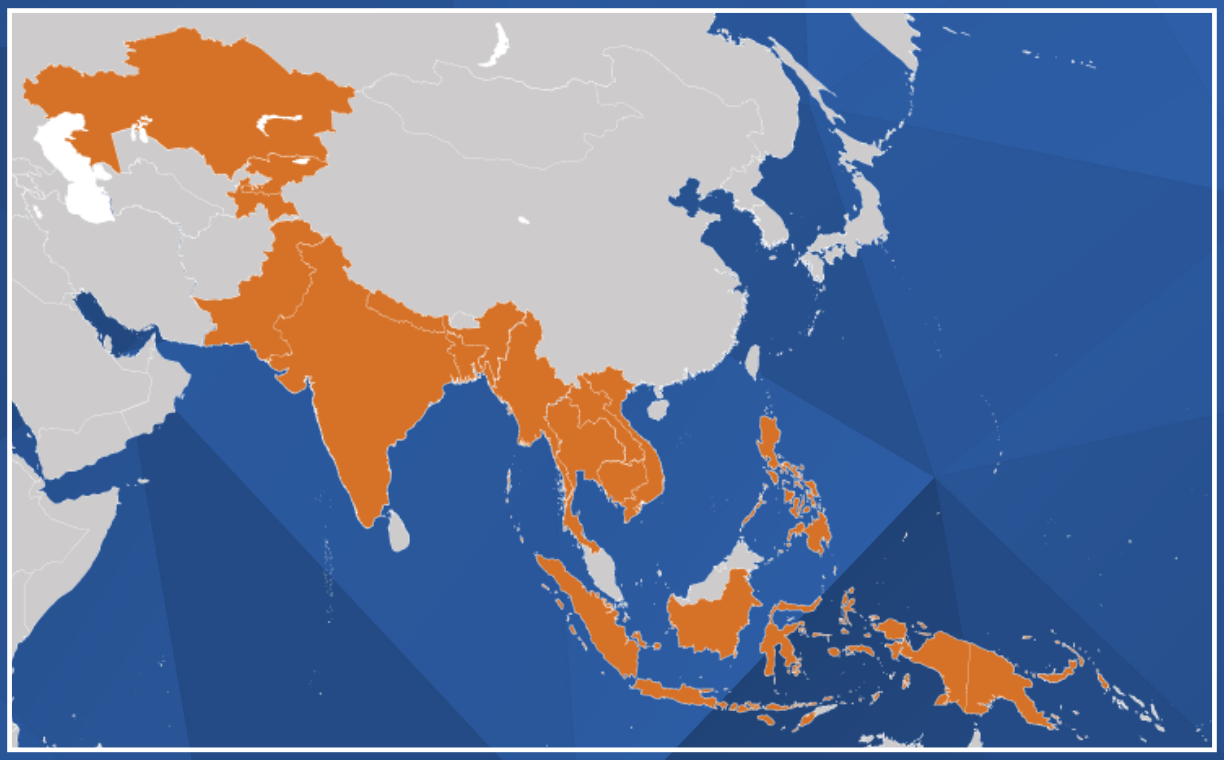

EFFECTS OF COVID-19 ON HIV FINANCING PROSPECTS IN 15 ASIAN COUNTRIES

USAID FROM THE AMERICAN PEOPLE

PEPFAR

HP+ HEALTH POLICY PLUS

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Abbreviations

AIDS	acquired immunodeficiency syndrome
COVID-19	coronavirus disease 2019
GDP	gross domestic product
HIV	human immunodeficiency virus
HP+	Health Policy Plus
IMF	International Monetary Fund
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PrEP	pre-exposure prophylaxis
USAID	U.S. Agency for International Development
USD	U.S. dollar
UNAIDS	Joint United Nations Program on HIV/AIDS
WHO	World Health Organization

Executive Summary

Many countries across the Asia region have made strong efforts to prioritize their HIV responses over recent years, yet the fiscal space to finance the interventions remains limited. A previous Health Policy Plus (HP+) report (published just prior to the COVID-19 pandemic) estimated that only Thailand and Papua New Guinea had sufficient domestic government resources to fund the required HIV response in 2019/2020 (Cantelmo and Ward, 2020). HIV funding gaps have grown substantially due to the economic contractions and shifts in budgetary priorities that many countries have experienced throughout the COVID-19 pandemic. This report uses updated macroeconomic inputs (as of April 2021) to better understand the impact that COVID-19 has had on countries' abilities to increase domestic funding for their HIV response. The accompanying country annexes detail the ways in which HIV service delivery has been altered by the pandemic.[1]

HP+ projects that overall government funding for health in 2022 may be 53% less than estimates projected prior to the pandemic, even under an optimistic scenario in which health budgets maintain a boost from COVID-19 spending going forward (see Table 1).

Table 1. Optimistic Health Spending Estimates (USD Millions)

Country	Pre-pandemic	Expected 2022	Percent Change
Bangladesh	$7,281	$3,495	-52%
Cambodia	$1,175	$555	-53%
India	$134,308	$47,282	-65%
Indonesia	$34,824	$22,884	-34%
Kazakhstan	$4,722	$4,318	-9%
Kyrgyz Republic	$361	$287	-21%
Lao PDR	$435	$266	-39%
Myanmar (Burma)	$2,948	$767	-74%
Nepal	$1,781	$649	-64%
Pakistan	$9,539	$3,378	-65%
Papua New Guinea	$654	$503	-23%
Philippines	$11,961	$8,804	-26%
Tajikistan*	--	$202	--
Thailand	$18,447	$22,267	21%
Vietnam	$12,431	$8,508	-32%

* Tajikistan was omitted from pre-COVID-19 health spending projections due to a lack of available data on projected government expenditures.

[1] This report covers countries under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR)'s Asia Region—Cambodia, India, Indonesia, Kazakhstan, Kyrgyz Republic, Lao PDR, Myanmar (Burma), Nepal, Papua New Guinea, Philippines, Tajikistan, and Thailand—as well as Vietnam, which receives PEPFAR support that is managed separately, and Bangladesh and Pakistan, which are among the Global Fund's high-impact countries of focus.

Across the 15 countries included in this analysis, of the total HIV resource needs required, domestic governments in 2020 could provide a little less than half (46%), assuming optimistic conditions. By 2022, estimates suggest domestic governments could increase financing to 66% of the total resources needed. Under a more pessimistic scenario, this number drops to 41% in 2020 and 36% by 2022. Pakistan and Lao PDR face the largest resource gaps in terms of the percentage of needs that will likely go unmet, with less than 10% of HIV resource needs being met by government funding even under the optimistic scenario in 2020. Decreased spending would jeopardize hard-fought progress toward epidemic control and could result in increased HIV incidence and mortality. To avoid this situation, it is important that governments and implementing partners look for efficiency gains and innovative solutions to improve value for money in the short term and give larger budgetary priority to HIV in the medium and long term.

Introduction

The COVID-19 pandemic has negatively affected economies around the world and may result in long-term setbacks in poverty reduction and inclusive growth. Although Asia might be better-poised for economic recovery than other regions due to some countries' relatively successful COVID-19 containment and relief strategies in 2020, the magnitude of COVID-19's economic impact varies widely by country. Countries with weak social protection mechanisms, high COVID-19 caseloads, and reliance on trade and tourism have experienced sharper economic contractions than others. In response to the pandemic, many Asian countries have temporarily increased spending on health, income support, and other relief measures. For example, East Asian countries have introduced fiscal measures valued at 5% of gross domestic product (GDP) on average to support households and public health (World Bank, 2020). However, governments are also experiencing significant revenue losses due to COVID-19, leading to high fiscal deficits. The sharp rise in public debt in many countries could constrain the fiscal space for health—including HIV—over the next few years, even as the pandemic resolves and economies begin to recover. Further, prioritization of HIV within health budgets may be lacking in the short to medium term as countries focus on containing the COVID-19 pandemic, particularly as the majority of these countries face concentrated HIV epidemics, with low prevalence rates among general populations.

Box 1. Countries Included in the Analysis

Global Fund "High Impact" Countries*:

- Bangladesh (BGD)**
- Cambodia (KHM)
- India (IND)
- Indonesia (IDN)
- Myanmar (MMR)
- Pakistan (PAK)**
- Philippines (PHL)
- Thailand (THA)
- Vietnam (VNM)

Other PEPFAR-Supported Countries in the Asia Region:

- Kazakhstan (KAZ)
- Kyrgyz Republic (KGZ)
- Lao PDR (LAO)
- Nepal (NPL)
- Papua New Guinea (PNG)
- Tajikistan (TJK)

* Under its differentiation framework, the Global Fund categorizes portfolios as either "focused," "core," or "high impact." High-impact countries are those that receive more than US$400 million from the Global Fund and that have a disease burden (HIV, tuberculosis, or malaria) deemed "mission critical." For more, see Global Fund (2021a).

** Pakistan and Bangladesh are not PEPFAR-supported countries.

Under the Health Policy Plus (HP+) project, Cantelmo and Ward (2020) conducted an analysis funded by the U.S. Agency for International Development and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR)'s Sustainable Financing Initiative that examined the capacity of countries in the Asia region to finance their HIV response. That analysis found that some countries (e.g., Thailand, Papua New Guinea, and Vietnam) may have the ability to finance the majority, if not all, of their HIV response using domestic government funding sources. Others (e.g., Pakistan and the Philippines) face significant constraints not only in raising sufficient domestic public resources for HIV but also with using these resources effectively and efficiently. The analysis also showed that many Asian

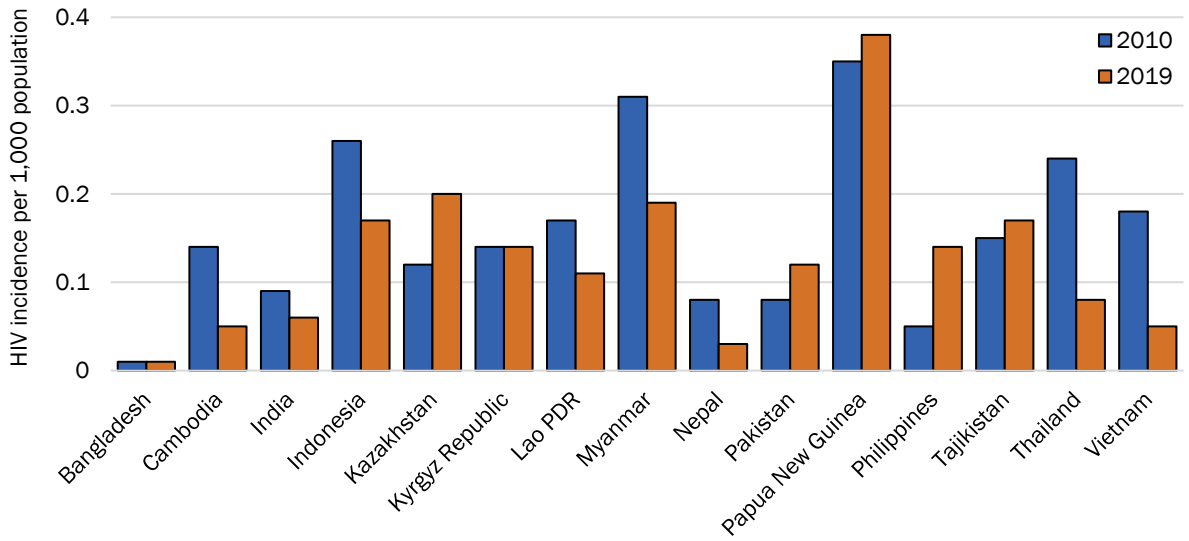
countries have the ability to gradually increase domestic public resources for HIV. Furthermore, HIV integration into health insurance schemes, government contracting arrangements with civil society organizations, and other innovations present opportunities for efficiency gains and improved value for money.

However, given the deteriorating macroeconomic outlook and shifting health financing landscape due to the COVID-19 pandemic, an updated analysis was needed to better understand the capacity of country governments to increase spending on HIV in the short term. Accordingly, HP+ has updated estimates for potential health and HIV spending in 15 countries in the region (see Box 1) from 2020 to 2022 while taking into consideration the potential effects of COVID-19 on economic growth projections and prioritization of specific health areas.

Epidemiological Overview

Over the last decade, HIV infections and AIDS-related deaths in Asia and the Pacific have declined by 12% and 29% respectively; however, these aggregate numbers mask increases in some countries including Kazakhstan, Pakistan, Papua New Guinea, the Philippines, and Tajikistan (see Figure 1) (UNAIDS, 2020). On the one hand, two countries—Thailand and Cambodia—met UNAIDS' 90-90-90 targets by 2020 and have seen steep reductions in HIV incidence and AIDS-related deaths (Cantelmo and Ward, 2020). On the other hand, Pakistan has the lowest identification rate in the region, estimated to be just 22%, resulting in low antiretroviral therapy coverage and viral suppression (7%) among all people living with HIV (UNAIDS, 2020).

Figure 1. Changes in HIV Incidence per 1,000 Population from 2010 to 2019 by Country



Source: UNAIDS, 2020
Note: Data for Bangladesh and Indonesia are from 2010 and 2018; data for India are from 2010 and 2016.

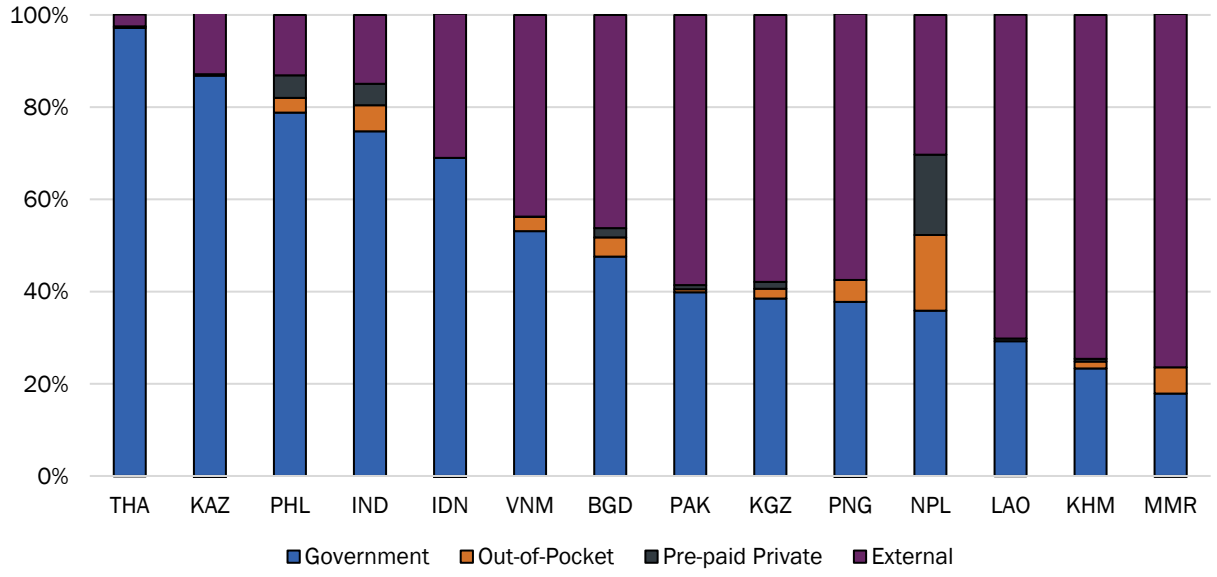
Asian countries primarily face concentrated epidemics, with 98% of all new infections in the region occurring in key populations (UNAIDS, 2020). Across the Asia region, men who have sex with men account for the largest proportion (44%) of new infections. However, in many

countries, people who inject drugs experience the highest prevalence rates, e.g., as in Indonesia (28.8%), Thailand (20.5%), Myanmar (19%), and Cambodia (15.2%). The Kyrgyz Republic has a high prevalence rate among prisoners (11.3%), while in Papua New Guinea, 15.5% of sex workers are affected. Among all these groups, coverage of HIV prevention services remains low. Many countries continue to criminalize sex work, drug use, same-sex sexual acts, and other behaviors among key populations, inhibiting efforts to reach these groups with HIV prevention, testing, and treatment services (UNAIDS, 2020). Cambodia, Thailand, and Vietnam have introduced and are scaling up pre-exposure prophylaxis (PrEP) services, but elsewhere in the region access to PrEP remains quite limited and has faced interruptions due to COVID-19.

Overview of HIV Financing in the Region

HIV spending accounts for a relatively small proportion of total health expenditure in nearly all 15 countries included in this analysis. In eight countries, HIV expenditure is less than 1% of total health expenditure.[2] This relatively low spending is primarily a result of countries having concentrated epidemics with low HIV prevalence and competing health demands (Cantelmo and Ward, 2020). Countries in the region continue to rely on the Global Fund and PEPFAR for funding their HIV response, particularly prevention services and commodity procurement (see Figure 2). External financing for HIV as a percentage of total HIV spending ranges from just 2.6% in Thailand to 76.6% in Myanmar (see Figure 2). Only six countries—India, Indonesia, Kazakhstan, the Philippines, Thailand, and Vietnam—finance the majority (on average 77%) of their HIV response using domestic government funding (IHME, 2020).

Figure 2. HIV Expenditure by Financing Source, 2017



Source: IHME, 2020

[2] Bangladesh, India, Indonesia, Kazakhstan, Nepal, Pakistan, the Philippines, and Vietnam.

The COVID-19 Pandemic in Asia and Related Impacts on HIV Programs

Although many countries in Asia initially controlled the spread of COVID-19 through timely lockdowns and public health interventions, recent waves spurred by the Delta variant have challenged most health systems. As of December 1, 2021, the number of global COVID-19 cases stood at 33,824 per 1 million. The reported numbers are much lower in countries like Bangladesh (9,440), Cambodia (7,049), Pakistan (5,663), Papua New Guinea (3,836), and Tajikistan (1,737) (Worldometer, 2021). However, low case rates may be an artifact of low testing, so comparisons are speculative.

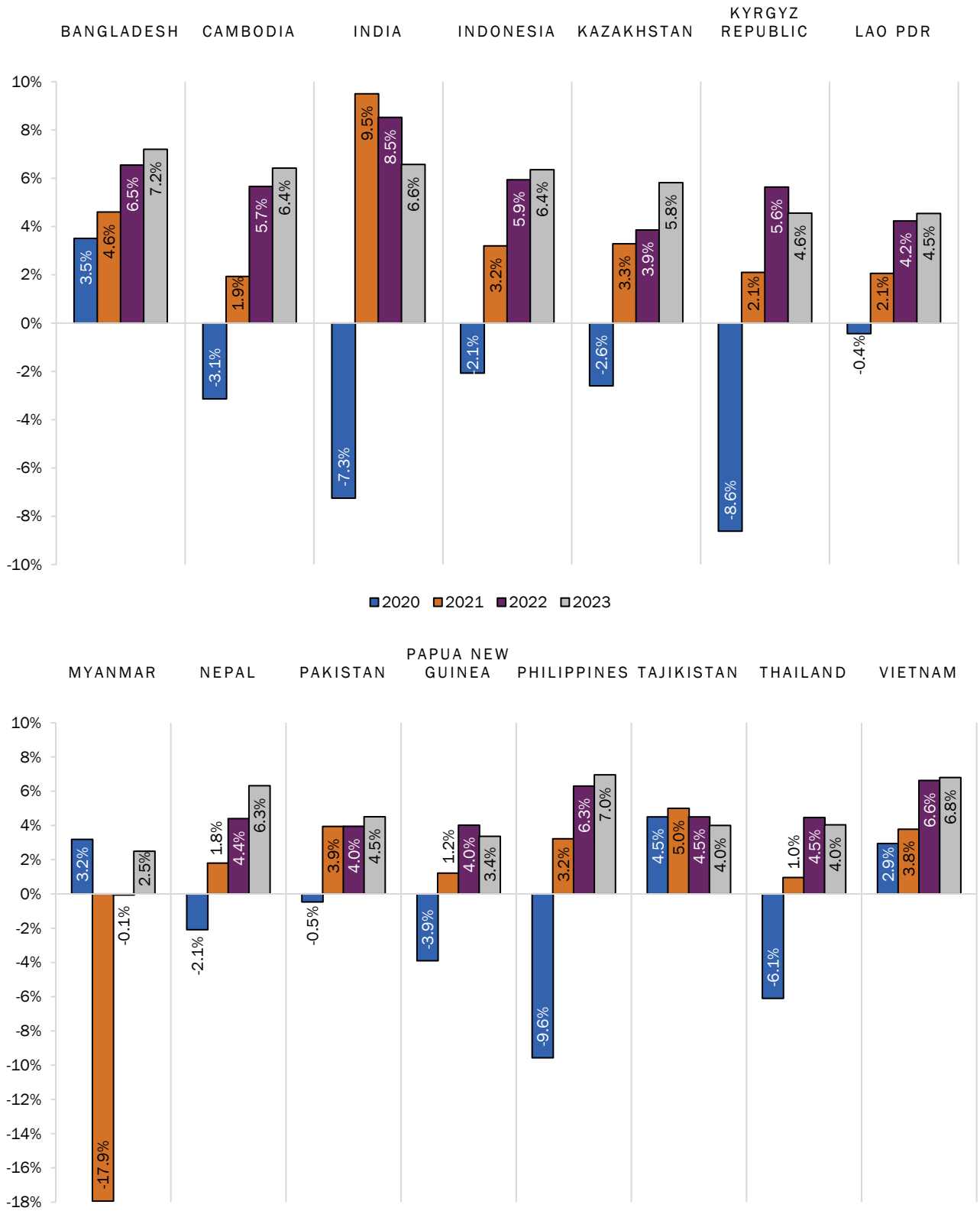
Emergency measures to contain COVID-19 have disrupted health service provision at facility and community levels throughout the region, including for HIV prevention and care (see country annexes for country-specific details). Reductions in the number of people tested for HIV and the number of visits made to facilities for antiretroviral therapy have led to declines in HIV identification and raised concerns about whether people living with HIV have continuity of care and access to medicines (PATH, 2020). For example, India, Kazakhstan, Lao PDR, and Nepal fell short of testing targets by 23–37% in 2020 (U.S. Department of State, 2021). Similarly, the Kyrgyz Republic, Myanmar, and Tajikistan missed initiation of new treatment targets by 39–77%.

Many countries have and continue to introduce service delivery innovations to overcome these challenges. Several countries have scaled up multi-month dispensing by expanding eligibility to participate as well as extending the period in between refills (up to six months). For example, Kyrgyzstan now allows all people living with HIV to receive a three-month supply of antiretrovirals in light of the pandemic. Countries have also scaled up self-testing, virtual outreach and case management (including telehealth visits in place of facility visits), home delivery of antiretrovirals, and social assistance programs for people living with HIV. Vietnam has piloted TelePrEP services in Ho Chi Minh City that allow for online risk assessment, prescription, and receipt of PrEP through the mail. While some of these initiatives have already resulted in cost savings to patients and the health system, others, such as self-testing, may require additional investments to ensure adequate support and linkage to care are available. HP+ plans to publish a future brief detailing COVID-19-spurred innovations in the region, identifying innovations that could be institutionalized going forward and evaluating potential for cost savings.

Shifting Priorities Amid Poor Economic Growth and Uncertainty

Most countries in the region are classified as lower-middle-income, with gross national income per capita ranging from US$960 in Nepal to US$7,830 in Kazakhstan (World Bank, 2018). Prior to the pandemic, cumulative three-year growth projections ranged from 8% in Papua New Guinea to 23.7% in Bangladesh. The International Monetary Fund (IMF) now estimates that, on average, countries experienced economic contraction of 2.1% in 2020 (see Figure 3) (IMF, 2021a). Only four countries avoided economic contraction in 2020: Bangladesh, Myanmar, Tajikistan, and Vietnam. Economic rebound is expected in 2021 (except for Myanmar), with real GDP projected to grow on average by 3.3%.

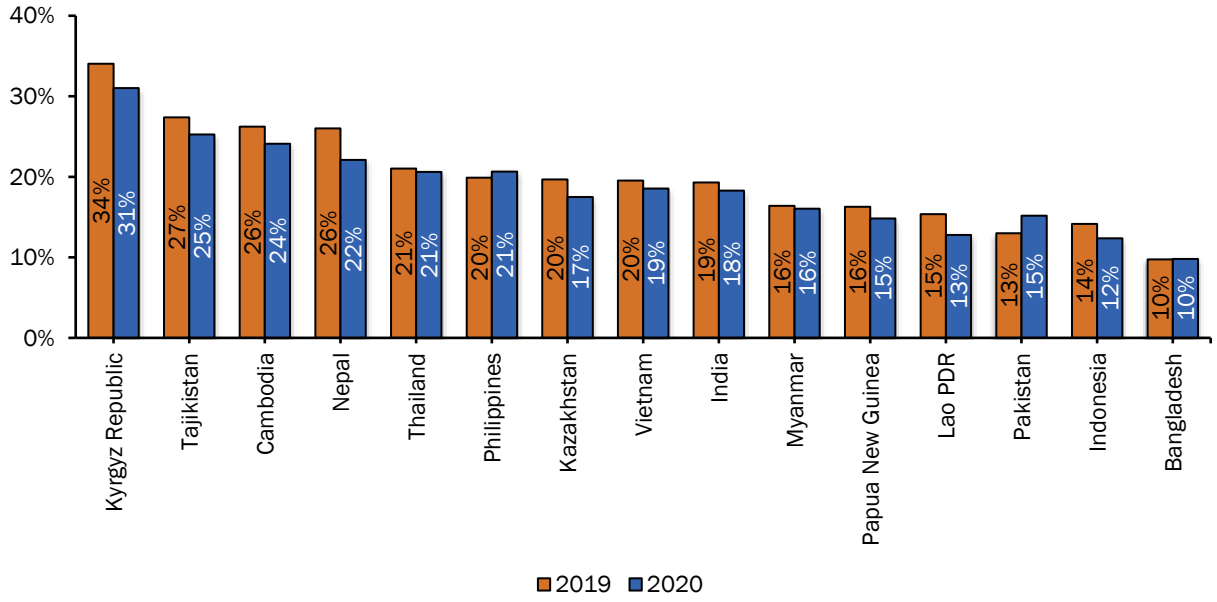
Figure 3. Annual GDP Growth Projections by Country



Source: IMF, 2021a

Raising sufficient government revenue to finance public programs, including health, education, and other areas, was a challenge in these countries prior to the COVID-19 pandemic. Complicated tax policy, narrow tax bases, and poor tax administration and collection efforts continue to be contributing factors. For example, Bangladesh has one of the lowest ratios of government revenue to GDP in the world and a growing problem of tax evasion (Nurunnabi, 2019). The pandemic has exacerbated these issues across countries; many have implemented tax exemptions to ease the burden on households and businesses, resulting in significant declines in government revenue (see Figure 4). Further, increased unemployment and declines in domestic consumption and investment driven by containment policies and public health behaviors, in addition to declines in international tourism due to travel bans, have lowered tax revenues. Pakistan and the Philippines are the only countries where government revenue as a percentage of GDP is estimated to be higher in 2020 than 2019 (the difference in Bangladesh is negligible).

Figure 4. Government Revenue by Country as a Percentage of GDP, 2019 versus 2020



Source: IMF, 2019 and 2021a

In all countries, government expenditure for 2020 exceeded expected revenue (inclusive of grants), contributing to growing deficits and tightening fiscal space. The difference between expenditure and revenue for 2020 ranged from 10% in the Kyrgyz Republic to 41% in India. In countries where fiscal collections are low, growing debt and deficits could present a challenge for economic growth and government spending over the next few years. Countries have increased borrowing and government spending to counteract the negative health and economic impacts of COVID-19. Thailand, for example, approved a borrowing plan in August 2020 that would result in outstanding debt reaching nearly 52% of GDP by the end of the year (Reuters staff, 2020). Even though Thailand's government revenue as a percentage of GDP is higher than many other countries in the region, high levels of borrowing put the country at risk of reaching limits on public debt (set at 60% in Thailand), which could necessitate austerity measures. Other countries with high debt-to-GDP ratios include India (90%), Pakistan (88%), the Kyrgyz Republic (68%), and Lao PDR (68%). These rates are relatively low considering that many G20

countries have debt-to-GDP ratios well over 100%. However, developing countries face higher costs to service their debt and a lower capacity for government to raise revenue.

Finally, unexpected shocks such as political instability may further dampen prospects for future health and HIV spending. Myanmar, for example, experienced a coup in February 2021 that has severely impacted economic growth. Countries may also experience social unrest due to dissatisfaction with government response to the COVID-19 pandemic and re-opening of the economy.

Economic contraction, growing debt and deficit, and shifting priorities in efforts to contain COVID-19 and mitigate economic and social impacts all contribute to a shrinking fiscal space for health and HIV. Additionally, as COVID-19 stabilizes over the coming years, government priority is likely to return to critical sectors that drive economic growth (e.g., infrastructure and export-oriented sectors), further detracting from health budgets (ADB, 2021). The following sections present the methodology and findings of the analysis that HP+ performed to elucidate domestic government resource capacity to finance health and HIV over the short term, given the described challenges.

Methods

To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of the COVID-19 pandemic, HP+ projected future funding levels based on two scenarios. These two scenarios represent the upper and lower bounds of health and HIV funding potentially available over the next three years.

1. The **optimistic scenario** assumes that (a) the increases in government health spending during COVID-19 will continue and that (b) HIV spending as a percentage of government health spending will remain constant from 2020 to 2023.
2. The **pessimistic scenario** also makes two assumptions. First, it assumes that (a) while government health spending increased initially due to COVID-19 in 2020, spending will revert to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. Second, it assumes that (b) HIV spending as a percentage of government health spending will decline over time to account for increased health sector costs for COVID-19 and related pandemic preparedness.

Using inputs gathered from the October 2019 and October 2021 IMF World Economic Outlook, the World Health Organization (WHO) Global Health Expenditure Database, UNAIDS, and country-specific sources, including budget documents and funding requests, HP+ calculated the following features of health and HIV spending projections:

1. **GDP projections:** The 2019 baseline GDP was multiplied by the 2020 GDP growth rate to project the GDP for 2020. HP+ repeated this calculation using IMF projected growth rates to estimate GDP for future years until 2023.
2. **Government spending:** The GDP projection for 2020 from the previous step was multiplied by 2020 general government expenditure as a percent of GDP. HP+ repeated this calculation using IMF general government expenditure projections to calculate GDP for the years 2021–2023.

3. **Health spending (optimistic):** Each year's government spending, as calculated in the previous step, was multiplied by 2018 general government health expenditure. The estimated additional health spending due to COVID-19 (0.5% of the 2019 GDP) was then added to the result. The COVID-19-adjusted rate of general government health expenditure to general government expenditure was held constant for all years.[3]
4. **Health spending (pessimistic):** For the year 2020, HP+ used the same calculation as the optimistic scenario health spending. After 2020, HP+ used general government health expenditure as a percent of general government expenditure based on 2018 rates.
5. **HIV spending (optimistic):** Each year's health spending, as calculated in step 3, was multiplied by domestic government HIV spending as a percentage of general government health expenditure. The rate was held constant for all years.
6. **HIV spending (pessimistic):** Each year's health spending from step 4 was multiplied by domestic government HIV spending as a percentage of GDP, less COVID-19 health spending as a proportion of general government health expenditure. The rate was held constant for all years.

The following section summarizes the results from this analysis. Individual country analyses are included in the annex.

Findings

What Is the Potential to Increase Government Spending on Health?

Health Financing Projections

In 2018, domestic government health spending constituted less than half of total health expenditure in 12 of 15 countries (the exceptions being Kazakhstan, Papua New Guinea, and Thailand) (IHME, 2020). Further, in the same year, the gaps were primarily filled by out-of-pocket payments, which accounted for 50.9% of total health spending in the region. Most countries in the region have failed thus far to meet global thresholds or targets for government health spending. For example, on average, the governments included in this analysis spent an estimated 2.1% of GDP on health in 2020, with only Thailand meeting the WHO recommendation of spending at least 4–5% of GDP on health (WHO, 2010).

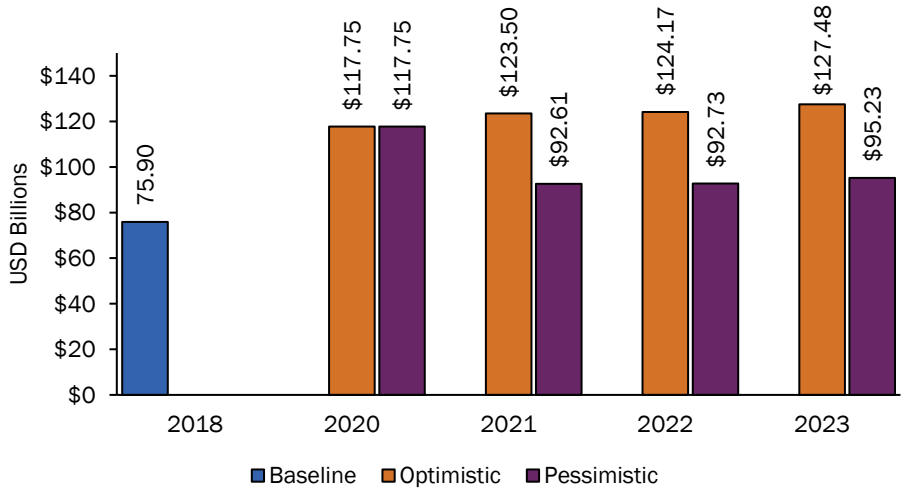
Despite variations in prioritization of health in government budgets, nearly all the countries have significantly increased health sector allocations during the COVID-19 pandemic. For example, Bangladesh increased its health sector budget allocations for fiscal year 2021 by more than 13% compared to fiscal year 2020 levels (Hossain and Ahmed, 2020). Others, such as the Philippines, Indonesia, Kazakhstan, and Thailand, spent significantly on emergency health and social protection stimuli in 2020 (2.2%, 3.8%, 9.0%, and 9.6% of GDP, respectively) (IMF, 2021b). Notwithstanding, future health spending remains unclear given the uncertainty surrounding the trajectory of the pandemic, vaccination campaigns, and economic recovery.

[3] Country-specific data on COVID-19 increases to health budgets were used when available. Otherwise, 0.5% of GDP was conservatively estimated.

Temporary increases in health spending across countries in the region to combat COVID-19 may translate into improved prioritization of health spending in the future if countries maintain high political will to invest in health systems. In recent years, such political will has been evidenced through increased health sector allocations or implementation of health reforms in Cambodia, Indonesia, the Philippines, and Thailand (Cantelmo and Ward, 2020). However, previous research suggests that economic downturns often lead to decreased social sector spending by the government, including for health, given fiscal constraints. For example, overall health expenditure fell by 36% in Thailand during the Asian financial crisis of 1997–1998 (Hou et al., 2013). Given the sharp economic contractions due to the pandemic, many countries may choose to decrease health spending in the short or medium term to balance their budgets. Further, the observed decline in health-seeking behavior for services unrelated to COVID-19 (e.g., chronic illness and noncommunicable disease) could lead countries to allocate fewer resources than are needed for health (WHO, 2020a). To better understand these divergent scenarios, HP+ modeled "optimistic" and "pessimistic" scenarios for health and HIV spending in each country, as detailed in the methods.

As shown in Figure 5, in 2020, domestic government health spending is estimated to have reached US$117.8 billion across all 15 countries. Projections range from US$195 million in Tajikistan to US$42,405 million in India. As a percentage of general government expenditure, health spending ranges from 5.1% in India to 17.1% in Thailand in 2020. If health remains a priority over the next few years (i.e., if COVID-19 allocations persist), countries could increase health spending by US$9.7 billion from 2020 to 2023 (Figure 5). Under the pessimistic scenario, where the prioritization of health returns to pre-COVID-19 proportions, health spending may decrease by 19% from 2020 to 2023, or by US$22.5 billion.

Figure 5. Projected Government Spending on Health by Scenario Across All 15 Countries



COVID-19 has highlighted globally the need to strengthen health systems for future pandemic preparedness and resilience. Cross-cutting strategic investments have the power to produce positive spillover effects for HIV control. Two striking examples include investments in procurement and supply chain capacity and in the skill and supply of health workforces. Increased demand for emergency personal protective equipment revealed weaknesses in many national supply chains, including a lack of transparency and capacity to manage high volume

orders. For example, in the Kyrgyz Republic, procurement data is only publicly available for signed contracts; information regarding procurement planning does not require disclosure. This lack of transparency reportedly contributed to a surprise shortage of personal protective equipment in February and March 2020 (Nestulia and Hrytsenko, 2020). Investments to strengthen national procurement, as well as creative alternatives (e.g., the COVID-19 Vaccines Global Access Facility), can benefit supply management of antiretrovirals and reduce stock-outs.

Similarly, the pandemic has highlighted critical shortages in health workforces. Further, as frontline workers battle COVID-19, they are simultaneously exposed to disproportionately higher risk of infection. Optimizing the supply of human resources for health, including geographic distribution, is critical to maintaining HIV services and responding to health emergencies. Countries have adopted various methods to mobilize additional human resources, including deployment of medical students, reviving retired professionals, and repurposing staff. Thailand, for example, contracted 150,000 temporary medical workers and has committed to permanently absorb 40,000 new workers into the health system (Haldane et al., 2021). Still, WHO projects that Southeast Asia will require at least 1.9 million additional nurses and caregivers to achieve 2030 universal healthcare goals, a degree of workforce growth that may take decades to develop (WHO, 2020b). Task-shifting as well as importation of overseas providers can assist in filling critical gaps in the short term. Additional cross-cutting solutions to improve efficiency could include expansion of private–public partnerships in the health sector, reduction of the proportion of budgets spent on administrative activities, and an increase in the implementation of telemedicine. Of course, each option will need to consider short- and long-term tradeoffs and country context (Kurowski et al., 2021) (see country annexes for specific recommendations).

What Is the Potential to Increase Government Spending on HIV?

If countries in the Asia region increase overall health spending, government spending on HIV may increase as well. Cross-cutting health system investments in infrastructure, the health workforce, and other areas can benefit HIV service provision. However, if countries choose to prioritize other health issues—particularly COVID-19 prevention, testing, and treatment—over HIV or expect continued external financing assistance to fill HIV program financing gaps, government spending on HIV may plateau or even decrease in the short term as countries grapple with budget constraints. This section analyzes HIV financing prospects across the 15 countries.

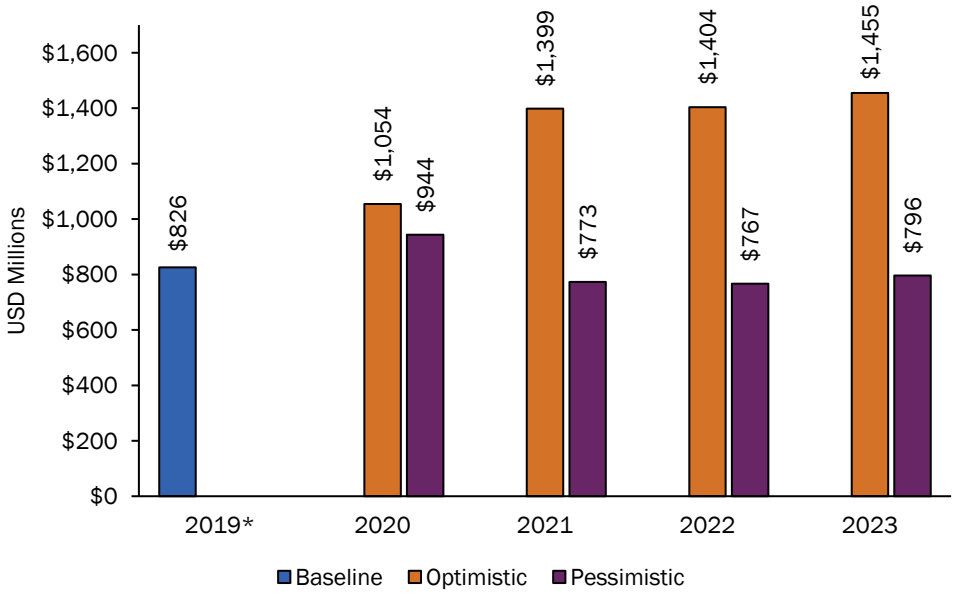
In all countries, HIV spending accounts for a relatively small proportion of total health expenditure, ranging from less than 0.1% in Pakistan to 4.2% in Myanmar. Further, most countries continue to rely on external financing to carry out their HIV programs. Only five countries—India (100%), Kazakhstan (94%), Thailand (92%), the Philippines (81%), and Indonesia (62%)—financed the majority of their HIV responses using domestic government funding in 2020 or the latest year for which data was available.[4] Out-of-pocket payments, which tend to account for most health spending in many countries, account for a very small proportion of HIV spending in most countries in the region (Global Burden of Disease Health Financing Collaborator Network, 2018).

[4] Thailand: 2019; Indonesia: 2018; Philippines: 2017.

During the COVID-19 pandemic, HIV spending is expected to decrease due to disruptions in service utilization; redirecting of public and donor funds to COVID-19; and reduced income and loss of jobs, resulting in lower domestic private funding available (Global Fund, 2021b; The Lancet Regional Health, 2020). Countries will continue to face slowed economic growth and competing priorities for public investment in the years to come. However, governments must recognize that decreased spending on HIV will have negative impacts on access to medicines and services, leading to inconsistent follow-up, possible drug resistance, and decreased viral suppression. Hard-fought gains may be lost, with countries experiencing increased HIV incidence and mortality, generalized transmission, and ultimately more people living with HIV who require antiretroviral therapy. In other words, decreased spending on HIV in the short term would likely cause much higher HIV costs to governments in the long term.

Under the optimistic scenario, where health spending as a percentage of government spending remains at 2020 levels and HIV spending as a percentage of health spending remains constant, HP+ projects that as much as US$1.5 billion could be spent on HIV across the 15 countries included in this analysis by 2023 (see Figure 6). This number would represent a 38% increase over 2020 HIV spending levels. However, the total amount of government funding available for HIV is much lower than it was prior to the pandemic; even under the optimistic scenario, countries will spend approximately 26% less by 2022 than Cantelmo and Ward (2020) previously estimated.[5] Indeed, under the pessimistic scenario, HP+ projects that aggregate HIV spending will decrease each year to just US$796 million by 2023, representing a 20% decrease in domestic public resources available compared to pre-COVID-19 projections.

Figure 6. Projected Government Spending on HIV by Scenario Across All 15 Countries

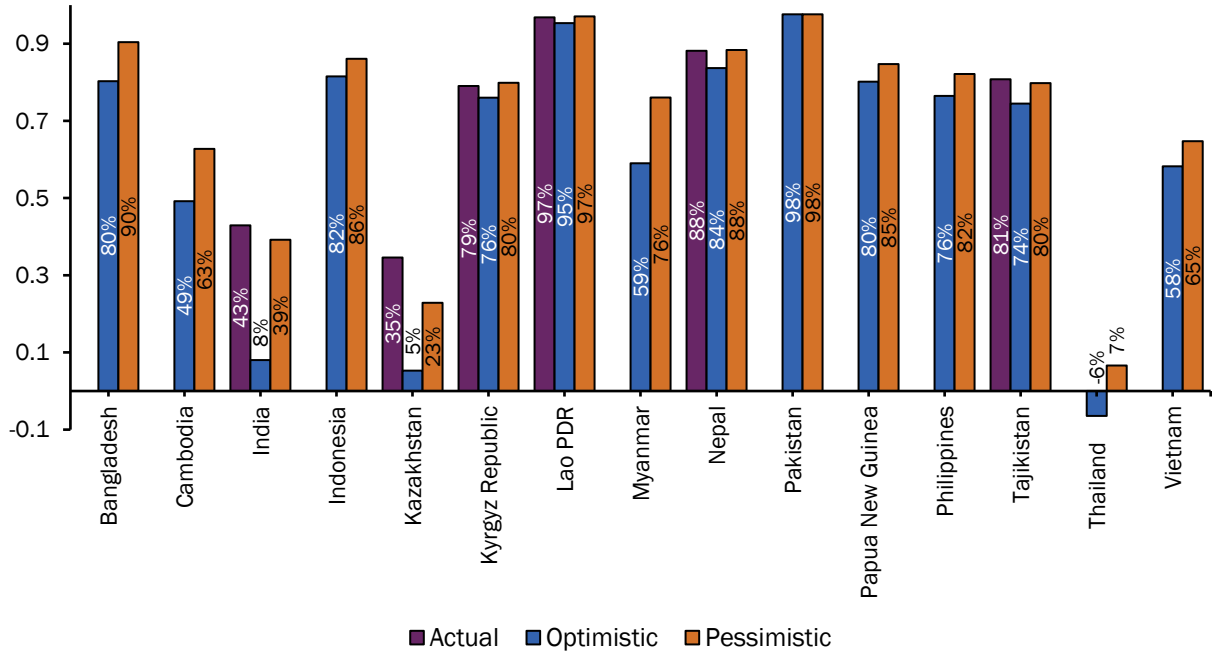


* For some countries, the most recent data (2017/2018) was used as a baseline.

[5] Note that Cantelmo and Ward's (2020) analysis projected estimates only through 2022 and excluded Tajikistan.

To contextualize these scenarios, one needs to consider the HIV financing gap, i.e., the projected domestic government resources available for HIV as a proportion of resources required. Under the optimistic scenario, for 2020, the HIV financing gap is estimated on average to be 47%. Under the pessimistic scenario, the gap increases to 68%. Bangladesh, Indonesia, Lao PDR, Nepal, Pakistan, Papua New Guinea, and the Philippines face gaps exceeding 80%, the largest gaps of all countries in this analysis, even under the optimistic scenario (see Figure 7). In terms of absolute amounts, Indonesia faces the largest funding gap, estimated to be US$485.7 million in 2020.

Figure 7. Domestic Government HIV Financing Gaps by Country in 2020



Sources: Global Fund, 2017; National AIDS Authority, 2019; HP+ and Sub-Directorate for HIV/AIDS and STI, 2018

Note: Funding gaps are calculated as total program cost minus public domestic resources available, divided by total HIV program costs. External contributions are not included in the numerator. At the time of publication, 2020 HIV financing data was available for six countries (India, Kazakhstan, Kyrgyz Republic, Lao PDR, Nepal, and Tajikistan). For these countries, actual 2020 gaps are presented. Domestic financing gaps for Pakistan are the same under both scenarios. See the country annex for explanation. Under the optimistic scenario, Thailand exhibits a funding surplus, depicted in the figure as a negative number.

Despite the inability of many governments to fully finance their HIV response, strong political will to invest in HIV and inclusion of HIV in ongoing health reforms in the region present opportunities to increase domestic public resources for HIV and improve sustainability of the HIV response. For example, several countries have focused on including HIV services in social health insurance schemes over the last two decades, with Thailand in particular paving the way for others (e.g., Kazakhstan and Lao PDR) to consider HIV services during the process of establishing social health insurance. Social contracting arrangements in which the government can directly fund civil society organizations are being introduced and scaled up across many countries in the region; such arrangements are critical to providing sufficient funding to organizations serving key populations and people living with HIV. However, past experiences

have shown that these arrangements often exist at the whim of leadership and are subject to cancellation due to political and fiscal pressures (e.g., real or perceived corruption in the bidding process). Social contracting must be conducted with the utmost transparency to avoid any implications of impropriety, and contracts should be structured to include some level of funding predictability to avoid service interruption (e.g., multiyear contracting). In addition, the role of the private sector in delivering services and the role of private finance in strengthening HIV programs, though beyond the scope of this report, are becoming increasingly important. Additional information on HIV considerations in ongoing health reforms is available in Cantelmo and Ward's 2020 report.

Conclusion

The COVID-19 pandemic has negatively affected Asian economies, with 9 of the 15 countries included in this analysis experiencing economic contractions in 2020. Many Asian countries have successfully managed to keep COVID-19 caseloads and mortality low and have offered relief in the form of direct assistance and tax cuts to households and businesses. This relief marks an effort to minimize the economic downturn experienced globally. Nonetheless, along with recent reopening of economies, economic shocks from the pandemic are expected to have lasting effects on poverty, inequality, and revenue generation potential in the region.

Setbacks in economic growth are expected to restrict budgetary space for government spending on health and HIV over the next few years, particularly in countries with high fiscal deficits prior to the pandemic and high rates of current borrowing to combat the impacts of the epidemic on both the health sector and the economy. Compared to the previous HP+ analysis conducted by Cantelmo and Ward (2020), the present HP+ analysis shows that only two countries—Thailand and Kazakhstan—have health financing prospects similar to their prospects prior to the pandemic. This change has resulted from the significant allocation of resources to the health sector to combat COVID-19. However, these countries may not maintain this level of investment in health over the next few years. India, Pakistan, and Myanmar are the furthest from achieving pre-pandemic health spending projections due to significant reductions in economic growth as well as relatively low prioritization of health spending during the pandemic.

Even if countries prioritize health spending and maintain proportional spending on HIV in the next few years, government funding alone is likely insufficient for achieving national HIV goals in the short term for nearly all countries included in the analysis. Thailand is the only country where projected government funding for HIV under either scenario is greater than resource needs estimates. This suggests that countries will continue to rely on donors such as PEPFAR and the Global Fund over the next few years to fill HIV financing gaps.

If Asian governments deprioritize health spending in the future due to fiscal constraints while prioritizing COVID-19 prevention, testing, and treatment over HIV service delivery, domestic government HIV spending is likely to decrease in real terms over the next three years. Decreased spending would jeopardize progress toward epidemic control and could lead to increased HIV incidence and mortality. To avoid this situation, it is imperative that civil society organizations and donors hold governments accountable to their HIV financing commitments. Under the latest Global Fund grants (2020–2022), most countries in the region are expected to increase domestic public spending on HIV commodities, key population prevention and outreach, and

HIV service delivery. For example, Cambodia has committed to increasing government spending on antiretrovirals to US$5 million by 2023.

Despite economic setbacks, there are still opportunities. Countries could increase funding for HIV through domestic public and private sources (e.g., leveraging private capital investments or earmarking revenue for health vis-à-vis "sin taxes") or pursue strategies to make HIV spending more efficient and effective. Policymakers may wish to consider integrating HIV services into national health insurance schemes to help mobilize funding for HIV while also providing subsidized coverage for those in need. Countries can also improve targeting to ensure limited resources support key population prevention efforts; most countries in the region have faced concentrated epidemics where key populations are disproportionately at risk of and affected by HIV. Introducing and scaling up social contracting arrangements will allow civil society organizations serving key populations to receive funds directly from the government, which will particularly benefit countries expecting transitions in donor funding in the short term. For civil society organizations in countries with limited government budgets for social contracting, social enterprise models can help fill financing gaps through the organizations' own revenue-raising capabilities. Lastly, many countries in the region are middle-income countries that lack access to affordable HIV commodities. Innovative solutions, including pooled procurement, could lower HIV commodity prices and achieve cost savings in the HIV response.

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Country Annexes

Bangladesh

June 29, 2021

HIV Situational Context

After a slight leveling off in 2016, new HIV infections are on the rise in Bangladesh, with 1,600 new cases reported in 2018 compared to 1,400 in 2016 (HIV and AIDS Data Hub, 2019). Almost 80% of reported new infections were concentrated in Dhaka and Chattogram. AIDS-related deaths have also steadily increased, reaching 580 in 2018. Although prevalence among the general population remains low at 0.1%, rates have been rising for key populations in recent years (see Figure 1) (AIDS/STD Programme, 2019). People who inject drugs remain the most affected key populations, making up 27% of new infections in 2017. External resources predominantly financed the HIV response prior to 2013, accounting for 84% of the US$21 million spent. The financing landscape has since changed significantly. The U.S. President's Emergency Plan for AIDS Relief (PEPFAR) withdrew support from the country in 2013, with a one-year transition consisting of limited funds (US$1 million). That same year, the Global Fund reduced its funding by about half (Health Policy Project, 2016). The latest financing data indicate that the Government of Bangladesh has taken on a larger share of the response, funding 41% in 2018.

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 61% (7,900) of people living with HIV know their status
- 64% (5,043) of those who know their status are on antiretroviral therapy
- Data not available on people living with HIV who have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 1,600 ▲
- Prevalence among:
  - People who inject drugs: 18.1%
  - Transgender people: 1.4%

HIV FINANCING

- Total spent in 2018: US$15 million
- 41% funded by domestic government
- 59% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$65.6 million
- Domestic gap (optimistic): 80%
- Domestic gap (pessimistic): 90%

* Resource gap estimates do not include external or donor funding.
Data sources: HIV and AIDS Data Hub, 2019; UNAIDS, 2020a; Global Fund, 2017

Macroeconomic Environment

Following a steady decline in new COVID-19 cases since June 2020, a wave beginning in March 2021 resulted in a nationwide lockdown on April 5, 2021. By mid-June 2021, the country was facing a third wave, with more than 8,000 new daily cases (JHU CSSE, 2021). The country began its vaccination campaign in February; however, as of July 2021, less than 3% of the population had received two doses (Economist Intelligence Unit, 2021). Further, as India grapples with its own domestic surge, vaccine supply to Bangladesh will be constricted. Bangladesh is not expected to reach mass immunization until the end of 2023 (Economist Intelligence Unit, 2021).

Although Bangladesh was the only South Asian economy to avoid a recession in 2020, economic prospects for the country have been significantly downgraded. In particular, the ready-made garment sector, a key source of foreign currency, was hard hit by low international demand. As an initial response, the Ministry of Finance disbursed 2.5 billion Bangladeshi taka (approximately US$29 million[6]) in additional resources to support the Ministry of Health's COVID-19 preparedness and response plan and to expand existing transfer programs for the poor (IMF, 2021b). Prior to the pandemic, the International Monetary Fund (2019) predicted real gross domestic product (GDP) growth would reach 7.4%. Post COVID-19 estimates now place growth at 3.5%, resulting in a GDP of US$313 billion (see Table 1) (IMF, 2021a). Revenue collection is also estimated to have decreased slightly from 10.2% of GDP to 9.8% of GDP, a US$2.5 billion decline. General government expenditure has remained steady at 15% of GDP. Gross debt as a percent of GDP is now estimated to have increased by 3.6 points, reaching 38.9% of GDP.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained low and even decreased in recent years, declining from 4% in 2012 to 3% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (presented in Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario in Bangladesh, HP+ estimates that 6.1% of general government expenditure is allocated to health in 2020, a percentage that remains level through 2023. In addition, HIV spending amounts to 0.4% of the health budget each year, resulting in US$12.9–16.0 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 3.0% from 2021 to 2023, and HIV spending falls to 0.2% of the total health budget. The result is a 76% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Bangladesh, 2020–2022

Indicator	2020	2021	2022	2023
Gross domestic product projections	$313,141	$327,542	$348,976	$374,103
General government expenditure	$48,030	$52,659	$57,019	$59,535
Domestic health spending, *optimistic*	$2,944	$3,228	$3,495	$3,649

[6] Using an exchange rate of 1 Bangladeshi taka to US$0.012.

Indicator	2020	2021	2022	2023
Domestic health spending, *pessimistic*	$2,944	$1,569	$1,699	$1,774
Domestic HIV spending, *optimistic*	$12.9	$14.2	$15.4	$16.0
Domestic HIV spending, *pessimistic*	$6.3	$3.4	$3.6	$3.8

Discussion

In 2020, the total cost of implementing the *4th National Strategic Plan for HIV and AIDS Response* was estimated to be US$65,610,809 (Global Fund, 2017). Under the optimistic scenario, this total cost would result in a domestic funding gap of 80%. Under the pessimistic scenario, the gap is projected to be 90%. The government has committed to providing universal access to treatment, care, and support for all people living with HIV; however, the National AIDS/STD Program has attributed difficulty in providing timely antiretroviral therapy to issues with procurement and resource constraints (UNAIDS, 2020b). Bangladesh has one of the highest HIV treatment unit costs in the Asia region at approximately US$1,500 per person per year (Cantelmo and Ward, 2020). Further, the health financing system in Bangladesh is characterized by high out-of-pocket expenditure (63.3%) and no mechanism for pre-payment (Molla and Chi, 2017).

COVID-19-related interruptions in service delivery have exacerbated the above challenges. Testing fell short by an estimated 50% in 2020 (Financial Express, 2020). Government, civil society, and implementing partners have worked to overcome some accessibility issues, such as by expanding coverage of three-month multi-month dispensing (National AIDS/STD Programme, 2019). Patients can also now receive antiretrovirals from any antiretroviral therapy center, rather than only from their designated treatment center, as was previously the case (UNAIDS, 2020b). Prior to COVID-19, treatment was facility-based with no provision for community dispensing. Though community dispensing is still in the planning phase, the Government of Bangladesh is already recommending this approach. Other innovations have included targeted outreach and roll-out of self-testing for transgender and gender-diverse individuals in Dhaka, Sylhet, Khulna, Chittagong, and Mymensingh. Prior to self-testing, third-gender individuals were only able to receive testing at government hospitals, where fear of discrimination presented a major barrier.

Though these service delivery innovations are promising, they are mostly implemented in an ad hoc manner. Further, root problems such as limited ability to procure and dispense antiretrovirals or provide financial protection to vulnerable groups risk allowing the epidemic to continue to grow. There is also little information or evidence regarding the interventions currently used to address the alarmingly high prevalence of HIV among people who inject drugs (18.1%). The government of Bangladesh has dealt with a challenging transition as donor support has diminished; fully implementing its national strategic plan will require continued searching for creative solutions to address critical bottlenecks and mobilize domestic resources.

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Cambodia

June 15, 2021

HIV Situational Context

The Kingdom of Cambodia has made significant progress toward achieving UNAIDS' 95-95-95 targets (see Figure 1). In 2017, Cambodia was one of only seven countries that had reached the 90-90-90 targets. However, the majority of Cambodia's response is still funded by external resources. In 2017, domestic financing was equal to US$8.3 million, or 24% of the national response, with funding allocated mainly to procurement of antiretrovirals. Only 2% of domestic HIV financing was allocated for prevention activities (National AIDS Authority, 2019). According to the fifth National Strategic Plan, the government has committed to increasing its share of financing for the HIV response to 50% by 2023.

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 84% (63,000) of people living with HIV know their status
- 99% (62,164) of those who know their status are on antiretroviral therapy
- 97% (60,299) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 1,100 ▼
- Prevalence among:
  - People who inject drugs: 15.2%
  - Transgender people: 9.6%
  - Men who have sex with men: 4%

HIV FINANCING

- Total spent in 2017: US$34.4 million
- 24% funded by domestic government
- 76% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$24.9 million
- Domestic gap (optimistic): 49%
- Domestic gap (pessimistic): 63%

* Resource gap estimates do not include external or donor funding.
Data sources: Global Fund, 2017; UNAIDS, 2020, 2021; National AIDS Authority, 2019

Macroeconomic Environment

After a relatively mild experience with the COVID-19 pandemic in 2020, Cambodia experienced a large outbreak at the end of February 2021. A lockdown was instituted on May 3, 2021, after a peak of 841 new COVID-19 cases were reported, though restrictions have eased since May 6, 2021 (Reuters, 2021a, 2021b). The country has administered more than 4.5 million vaccine first doses, enough to fully immunize 45% of its adult population (Reuters, 2021a). Disruption to international tourism and low demand for manufactured goods contributed to a decline in employment by 11 percentage points (down to 71%) in May 2020, which persisted through August 2020 (World Bank, 2020a). Prior to the pandemic, the economy was expected to grow by 6.8% in 2020 (IMF, 2019); it is now estimated to have contracted by 3.1%, resulting in a gross domestic product (GDP) of US$25.9 billion (see Table 1) (IMF, 2021a). In 2020, general government expenditure was US$87 million higher than pre-COVID-19 predictions. Gross government debt also grew 4.1 percentage points (relative to GDP), reaching 34.2% of GDP. In an attempt to mitigate economic and health consequences, the government has allocated US$60 million for COVID-19 testing, containment, and treatment, as well as US$760 million for social assistance

(IMF, 2021b). Additionally, in March 2020, US$14 million was reallocated from the Health Equity and Quality Improvement Project (H-EQIP) to provide emergency capital to the country's COVID-19 response (World Bank, 2020b).[7]

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has declined over the past several years from 8.6% in 2000 to 5.2% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years (see Table 1). Under the optimistic scenario, HP+ estimates that 7.1% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending comprises 2.5% of the health budget each year, resulting in US$12.6–14.6 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 5.2% of the general government expenditure from 2021 to 2023, and HIV spending falls to 1.8% of the total health budget. The result is a 46% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Cambodia, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$25,888	$26,389	$27,883	$29,673
General government expenditure	$7,136	$7,385	$7,810	$8,235
Domestic health spending, *optimistic*	$507	$525	$555	$585
Domestic health spending, *pessimistic*	$507	$385	$407	$429
Domestic HIV spending, *optimistic*	$12.6	$13.1	$13.8	$14.6
Domestic HIV spending, *pessimistic*	$9.3	$7.0	$7.4	$3.8

[7] H-EQIP is a five-year, US$195.2-million project closing in 2022. Its objectives are to improve financial protection and equity, strengthen health service delivery, and ensure sustainable and responsive health systems (World Bank, n.d.).

Discussion

Based on an HIV resource needs estimate of US$24,870,000 in 2020, HP+ estimated a 49% domestic funding gap under the optimistic scenario and a 63% funding gap under more pessimistic assumptions for health (National AIDS Authority, 2019). Cambodia has faced challenges in achieving equitable access to HIV services. In 2018, it was estimated that more than half of people living with HIV did not have access to the country's Health Equity Fund, a social health protection scheme meant to allow access to free healthcare for the lowest wealth quintile.

However, in July 2019, a new HIV benefits package went into effect under the Health Equity Fund; the new package covers testing and counseling, inpatient care, and antiretroviral therapy services. Further, in February 2019, a policy memo (SCN 213) improved access to HIV services by increasing government funding to civil society organizations and expanding subsidized eligibility for people living with HIV to receive health equity cards (Jain and Srey, 2020). A recent HP+ analysis found that expansion of coverage to all newly eligible people living with HIV would cost the government an additional US$2.1 million per year, reaching nearly US$2.9 million by 2023 (Jain and Srey, 2020). Cambodia has also implemented innovations to improve HIV service delivery pre- and post-COVID-19 that can be scaled up to yield efficiency gains and achieve program objectives. For example, Cambodia is one of five countries in the Asia region supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) that began partial implementation of pre-exposure prophylaxis, though COVID-19 has caused delays prompting a temporary pause (U.S. Department of State, 2021). Additionally, multi-month dispensing was initiated in 2019 and has successfully expanded during the pandemic. An estimated 50% of people living with HIV now have access to multi-month dispensing, up 16 percentage points prior to COVID-19 (UNAIDS, 2021).

Encouraged by its momentum in reaching UNAIDS' 90-90-90 targets, the government has committed to achieving 95-95-95 targets by 2025. This commitment requires the government to significantly scale up its programmatic investments. Under the optimistic scenario, the government would have had the resources to satisfy its 50% financing commitment in 2020. Under the pessimistic scenario, HP+ estimated that the government would fall short by at least 11% that year. Further, since external support has been decreasing over recent years (from a peak of US$221.8 million in 2010 to US$162.4 million in 2017), leadership must honor domestic funding commitments as well as strive to achieve efficiency gains.

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India

May 3, 2021

HIV Situational Context

India has demonstrated important progress toward achieving UNAIDS' 95-95-95 targets (see Figure 1), carrying out acts of political will such as the passage of the HIV Act in 2017. The number of people receiving antiretroviral therapy has significantly scaled up over the past decade, nearly doubling from 0.75 million in 2013 to approximately 1.5 million in 2019 (HIV and AIDS Data Hub for Asia Pacific, 2020). Overall cases are down 15% since 2010, and the rate of new infections has decreased 37% (NACO, 2020). However, new infections have continued to rise in three states—Arunachal Pradesh, Chhattisgarh, and Tripura—and in the union territory of Chandigarh. Among key populations, prevalence is 6.3% among people who inject drugs, followed by 3.1% among transgender individuals, 2.7% among men who have sex with men, and 1.6% among female sex workers (NACO, 2020). The total cost for implementing the national strategic plan is estimated to have been US$640 million in fiscal year 2020 and will grow to US$741 million by fiscal year 2022 (NACO, 2017).[8] Currently, India reports funding 100% of its HIV response with domestic public resources; however, the US$414.3 million spent in 2020 fell 43% short of resource needs as outlined in the national strategic plan (UNAIDS, 2021).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 76% (1.77 million) of people living with HIV know their status
- 84% (1.49 million) of those who know their status are on antiretroviral therapy
- 84% of patients on antiretroviral therapy have suppressed viral loads*

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 69,222 ▼
- Prevalence among:
  - People who inject drugs: 6.3%
  - Transgender people: 3.1%
  - Men who have sex with men: 2.7%

HIV FINANCING

- Total spent in 2020: US$414.3 million
- 100% funded by the government
- 0% funded by external sources

DOMESTIC RESOURCE GAP

- 2021 total resource needs: US$719.1 million
- Domestic gap (optimistic): -0.4%
- Domestic gap (pessimistic): 56%

* Of approximately 577,000 tested from 2019–2020.
** Resource gap estimates do not include external or donor funding.
Data sources: NACO, 2017, 2020; Global Fund, 2021; HIV and AIDS Data Hub for Asia Pacific, 2020; UNAIDS, 2021

Macroeconomic Environment

After an extended first wave peaking in September 2020 with more than 98,000 new infections per day, COVID-19 cases steadily declined to a low of 11,000 per day by mid-February 2021, largely due to severe restrictions on physical movement (JHU CSSE, 2021). However, beginning in mid-February, a deadly second wave emerged; by mid-April, there were more than 200,000 new cases per day (Biswas, 2021). India began its vaccination program in January 2021, with the

[8] Using an exchange rate of 1 Indian rupee to US$0.014.

goal of vaccinating 300 million by mid-August. However, implementation has faced delays due to a shortage of vaccine supplies and health workers, technical failures in registration systems, and vaccine hesitancy. Prior to the pandemic, the economy was expected to grow by an impressive 7.0% in 2020; instead, the economy contracted dramatically by an estimated 7.3%, resulting in an estimated gross domestic product (GDP) of US$2,661 billion (see Table 1) (IMF, 2019, 2021). Ability to collect revenue is also estimated to have decreased slightly by 1.4 percentage points (relative to GDP), resulting in a loss of US$118.1 billion in 2020. General government expenditure has increased (relative to GDP) by 4.2 percentage points, or US$1.2 billion. Moreover, gross government debt has increased significantly, from 68.5% of GDP to 89.6% of GDP, further compressing fiscal space. The economy is expected to rebound to 13% growth in 2021, reaching US$2.8 trillion (Economist Intelligence Unit, 2021). However, considering the recent surge of COVID-19, future projections and actual figures may be downsized significantly.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained flat in India, from 3.3% in 2000 to only 3.4% in 2018 (WHO, n.d.). To understand the country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 5.1% of general government expenditure is allocated to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 1.6% of the health budget each year, resulting in US$667.8–773.8 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to just under 3.4% from 2021 to 2023, and HIV spending falls to just 1.0% of the total health budget. The result is a 56% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), India, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$2,660,875	$2,913,579	$3,161,903	$3,369,608
General government expenditure	$826,814	$886,835	$921,916	$958,047
Domestic health spending, *optimistic*	$42,405	$45,483	$47,282	$49,135
Domestic health spending, *pessimistic*	$42,405	$30,064	$31,253	$32,478
Domestic HIV spending, *optimistic*	$667.8	$716.2	$744.6	$773.8
Domestic HIV spending, *pessimistic*	$441.4	$312.9	$325.3	$338.1

Discussion

In 2021, the total cost of implementing the national HIV/AIDS strategic plan is estimated to be US$719,094,304 (Global Fund, 2021). Under the optimistic scenario, this total cost results in a small funding surplus of 0.4%. However, under the pessimistic scenario, the gap could grow to 56%. Given the alarming spike in COVID-19 cases observed recently, which has stretched an already overburdened health system, there is strong cause for concern that fiscal space for government HIV funding will shrink (Trivedi and Sen, 2021). Although the most pressing priority for the government currently is to control the present wave of COVID-19, essential HIV services, especially those for key populations, must not get interrupted. For example, in 2020, sites assisted by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) in India observed a 10% decrease in patient antiretroviral therapy loads among men who have sex with men and among people who inject drugs, a decrease likely caused by severe movement restrictions (U.S. Department of State, 2021). Similarly, harm reduction services were initially interrupted (Choudhury, 2020).

However, examples of positive innovations in HIV service delivery implemented in India amidst the pandemic have also emerged. These include the expansion of 3+ multi-month dispensing, increased community-based refill sites and new antiretroviral pick-up locations, as well as home delivery (e.g., in Andhra Pradesh) (U.S. Department of State, 2021). Virtual case management has also seen success without significant loss to follow-up (e.g., through the Yes4Me campaign, which utilizes phone and WhatsApp-based follow-up) (Levitt and Lillie, 2020). Finally, community-based organizations have adapted to virtual outreach, particularly regarding harm reduction. These innovations should be strengthened and adequately financed given the current COVID-19 outlook and the likelihood of a second lockdown and subsequent economic impacts. India already has strong mechanisms to contract with community-based organizations, which will likely continue to play an essential role in providing virtual outreach and case management.

Finally, given the uncertainty surrounding any economic rebound, strategic and creative financing solutions must be considered, such as blended finance and leveraging of corporate social responsibility. The U.S. Agency for International Development (USAID) Blended Financing Roadmap characterizes India as falling under the "transitioning" archetype, which provides a rich enabling environment for complex blended financing tools such as impact funds and bonds or debt buy-downs (USAID, n.d.). Recently, the National Health Authority and USAID established a blended financing facility to address COVID-19 and strengthen health systems and social protection programs. The country has also demonstrated leadership in implementing creative financing approaches, such as a microloan program for people living with HIV in Manipur and the Utkrisht development impact bond to improve maternal and child health (Bagcchi and Collier, 2012; Palladium, 2018). USAID and development partners can learn from these experiences to catalyze private sector investment in the HIV response by de-risking investment opportunities. However, given India's complex and varying health ecosystem, a subnational approach may be prudent.

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Indonesia

May 5, 2021

HIV Situational Context

In recent years, Indonesia has made important progress in reducing the rate of new HIV infections (see Figure 1) (UNAIDS, 2020). In 2020, the rate of new infections was down to a low of 28,000 from a peak of 49,000 in 2007. Despite this progress, the rate of AIDS-related deaths continues to climb, with a 102% increase since 2010. In 2016, only about 14% of AIDS-related deaths were averted by antiretroviral therapy (BMJ Blogs, 2021). The general adult prevalence rate is low at 0.4%. However, the transmission is generalized in provinces like Papua and West Papua, with prevalence rates over 2.3% (Gedela et al., 2021). Rates also remain high among certain key populations. In 2018, total spending on the HIV program was US$119.1 million, with the majority (62%) financed by the Indonesian government. However, the cost of implementation is expected to more than double by 2023 (HP+ and Sub-Directorate for HIV/AIDS and STI, 2018).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 67% (360,000) of people living with HIV know their status
- 39% (140,000) of people who know their status are on antiretroviral therapy
- 90% of patients on antiretroviral therapy have suppressed viral loads*

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 28,000 ▼
- Prevalence among:
  - People who inject drugs: 13.7%
  - Transgender people: 11.9%
  - Men who have sex with men: 17.9%

HIV FINANCING

- Total spent in 2018: US$119.1 million
- 62% funded by domestic government
- 29% funded by external sources

DOMESTIC RESOURCE GAP

- 2020 total resource needs: US$582.4 million
- Domestic gap (optimistic): 82%
- Domestic gap (pessimistic): 86%

* Of those recently tested. Gedela et al. (2021) estimate the proportion of virally suppressed over total number of people living with HIV is 1%.
** Resource gap estimates do not include external or donor funding.
Data sources: HP+ and Sub-Directorate for HIV/AIDS and STI, 2018; UNAIDS, 2020

Macroeconomic Environment

After a relatively slow-growing epidemic, COVID-19 cases began steadily rising in November 2020, peaking at more than 14,400 new cases per day by the end of January 2021. New cases then declined, appearing stable at around 5,000 per day as of April 2021 (JHU CSSE, 2021). Encouragingly, bed occupancy ratios for COVID-19 patients are also reported to be decreasing (OCHA, 2021). Gross domestic product (GDP) shrank more than expected in the fourth quarter of 2020, and the year ended with the country's first economic contraction since the Asian financial crisis in 1997 (Al Jazeera, 2021). To finance various stimulus and social protection programs, the government has boosted its spending by 18.6% from 2019. Finance Minister Sri Mulyani Indrawati has indicated that the 2021 budget will nearly match the 692.5 trillion rupiah (US$49.4 billion) stimulus package in pandemic relief delivered in 2020. However, given that

revenue raising will be severely hampered, the government will likely rely on issuing new debt to meet these needs. Pre-pandemic, government gross debt was projected to reach 30% of GDP by 2020 and remain level through 2022 (IMF, 2019). Now, debt is expected to rise to 36.6% of GDP in 2020 and 43.3% of GDP by 2022 (from US$401.7 to US$519.3 billion) (IMF, 2021). Debt service alone will severely restrict the government's fiscal space.

Government Health and HIV Spending

Priority to health (as measured by public health expenditure as a proportion of general government expenditure has been steadily rising in Indonesia, increasing from 4.6% in 2012 to 6.8% in 2019 (Dutta et al., 2020). To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, HP+ projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 11.3% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.5% of the health budget each year, resulting in US$103.8–107.6 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 8.5% of general government expenditure from 2021 to 2023, and HIV spending falls to 0.4% of the total health budget. The result is a 43% decrease in dollars available for HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Indonesia, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$1,096,954	$1,32,046	$1,199,289	$1,275,504
General government expenditure	$199,997	$209,462	$202,368	$192,907
Domestic health spending, *optimistic*	$22,616	$23,686	$23,884	$21,814
Domestic health spending, *pessimistic*	$22,616	$17,825	$17,222	$16,416
Domestic HIV spending, *optimistic*	$107.6	$112.7	$108.9	$103.8
Domestic HIV spending, *pessimistic*	$81.0	$63.8	$61.7	$58.8

Discussion

Based on an HIV resource needs estimate of US$582,394,400 conducted in 2020, HP+ estimated an 82% domestic funding gap under the optimistic scenario and an 86% funding gap under the pessimistic scenario for health (HP+, 2020). Indonesia is considered by the U.S.

President's Emergency Plan for AIDS Relief (PEPFAR) to be a tier 3 country facing historical challenges in meeting HIV cascade targets despite significant investments. The government of Indonesia has committed to rapidly scale up access to HIV services, particularly antiretroviral therapy and viral load testing (HP+, 2020). Given resource constraints and the challenging economic impacts of COVID-19, efficiency gains in spending and service delivery must be identified and implemented. In particular, HIV services remain concentrated at the hospital facility level, and primary care is underutilized. The current funding model through the national health insurance program creates weak incentives for down-referral to primary care, despite the potential efficiency gains and improvements to quality of care (HP+, 2020). Additional persistent challenges include insecure supply chains, which cause stockouts and rationing of antiretrovirals; criminalization of drug use (including execution); and elimination of vertical transmission (Mandavilli, 2020; Avert, 2020).

HP+ recently published a report resulting from consultations held with clinicians, implementing partners, and civil society organizations in Indonesia; the consultations were led by the Ministry of Health's Center for Health Financing and Insurance and the Ministry of Health's HIV Sub-directorate (HP+, 2020). The report summarized focal areas and corresponding recommendations, including performance-based capitation at the primary care level; strengthening of referral/down-referral policies to ensure case management of people living with HIV at the appropriate (decentralized) level of care; and improving efficiency and pricing of antiretroviral and viral load commodities procurement. In addition to the above recommendations, adaptations to ensure continuity of care during COVID-19 may be expanded and instituted to ensure patient-centered care that is good value for money, such as telehealth HIV prevention and treatment services, task shifting among service providers, and continued implementation of multi-month dispensing (Francis, 2020; Munro and Richards-Hewat, 2020; Mahendradhata et al., 2021).

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Kazakhstan

May 3, 2021

HIV Situational Context

The Republic of Kazakhstan has made substantial progress toward achieving UNAIDS' 95-95-95 targets (see Figure 1). For example, Kazakhstan has the highest rate of people living with HIV who know their status in Central Asia (U.S. Mission Kazakhstan, 2018). However, the country continues to face a growing concentrated epidemic among key populations. Since 2010, new HIV infections have increased by 73% while AIDS-related deaths have decreased by 62% (National Team et al., 2020). In 2018, more than 30% of new infections were among people who inject drugs and more than 60% of new infections were among men who have sex with men. The predominant route of HIV transmission is sexual, at 66.7% (Eurasia Coalition on Male Health, 2018). In terms of financing, the total budget for HIV in 2020 was US$37.7 million, of which the Kazakh government financed 94% (UNAIDS, 2021).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 77% (27,000) of people living with HIV know their status
- 74% (20,000) of those who know their status are on antiretroviral therapy
- 85% (17,000) of patients on antiretroviral therapy have suppressed viral loads*

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 3,700 ▲
- Prevalence among:
  - People who inject drugs: 8.3%
  - Prisoners: 4.1%
  - Men who have sex with men: 6.5%

HIV FINANCING

- Total spent in 2020: US$37.7 million
- 94% funded by domestic government
- 6% funded by external sources

DOMESTIC RESOURCE GAP

- 2021 total resource needs: US$64.0 million
- Domestic gap (optimistic): 28%
- Domestic gap (pessimistic): 52%

* Of those tested within the last 12 months.
** Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020, 2021; Global Fund, 2020

Macroeconomic Environment

Following a reopening of the economy in March 2021, Kazakhstan experienced its highest rate of new daily COVID-19 cases, up to 3,000 per day by mid-April, compared to less than 900 in late February (JHU CSSE, 2021). The country's vaccination rate is about 1.5%, indicating that Kazakhstan is falling behind its neighbors (Economist Intelligence Unit, 2021). In March 2020, the government announced a significant stimulus package amounting to 9% of gross domestic product (GDP), somewhat mitigating the economic contraction due to a weakened service sector and OPEC+ required oil cuts (IMF, 2021a). As a result, the budget deficit expanded to an estimated 3.1% of GDP, forcing the government to draw on the National Fund of the Republic of Kazakhstan's assets as well as borrow from the Asian Development Bank and the Asian Infrastructure Investment Bank (Economist Intelligence Unit, 2021). Prior to COVID-19, the economy was expected to grow by 3.9% in 2020 (IMF, 2019). It is now estimated to have contracted by 2.6%, resulting in a GDP of US$176.9 billion (see Table 1) (IMF, 2021b). Ability to collect revenue is estimated to have

decreased by 3.6 percentage points relative to GDP, resulting in a loss of US$8.9 billion in 2020. However, general government expenditure increased beyond pre-COVID-19 projections by 3.4 percentage points (relative to GDP), resulting in an additional US$3.6 billion in public spending. Consequently, debt to GDP is now estimated to have grown by 5.2 percentage points (relative to GDP) in 2020, reaching 26.3% debt to GDP.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained significant yet flat in Kazakhstan; despite an increase to 11.7% in 2006, it declined slightly to 9.1% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 11.2% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 1.1% of the health budget each year, resulting in US$47.2–51.3 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 9.1% from 2021 to 2023, and HIV spending falls to 0.9% of the total health budget. The result is a 51% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Kazakhstan, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$176,944	$182,760	$189,812	$200,854
General government expenditure	$43,392	$38,968	$ 38,633	$39,930
Domestic health spending, *optimistic*	$4,849	$4,355	$4,318	$4,463
Domestic health spending, *pessimistic*	$4,849	$3,546	$3,516	$3,634
Domestic HIV spending, *optimistic*	$51.3	$46.1	$45.7	$47.2
Domestic HIV spending, *pessimistic*	$41.8	$30.5	$30.3	$31.3

Discussion

With HIV resource needs estimated at $63,955,163 in 2021, the optimistic scenario results in a funding gap of 28% (Global Fund, 2020). Under the pessimistic scenario, the gap could grow to 52%. According to the latest gap analysis included in the 2020 Global Fund funding request, this

gap translates to programmatic failures to meet prevention targets for people who inject drugs, treatment for all people living with HIV, and testing services for men who have sex with men and people who inject drugs. Compared to other countries in the analysis, Kazakhstan has a funding gap that is particularly concerning, as Kazakhstan finances most of its HIV response with domestic public resources (94% compared to the regional average of 46%).

The country has worked hard to reach the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) targets, exceeding those set for the number of individuals who received testing and were positive (136%), the number of individuals currently on antiretroviral therapy (115%), and the number of individuals newly started on antiretroviral therapy (223%) (U.S. Department of State, 2021). In addition, among the PEPFAR-supported Asian countries, Kazakhstan recorded the greatest proportion of people living with HIV who received multi-month dispensing in the fourth quarter of fiscal year 2020. However, the country continues to face challenges regarding COVID-19 control and vaccination, and the economy remains sensitive to volatility in commodity prices. As the pessimistic scenario shows, the country risks losing more than 33% of its HIV budget by 2022. The country recently launched a mandatory health insurance fund that includes HIV services (WHO, 2016). Pooling resources and sharing risk is likely to yield some efficiency gains, but this will take time to realize. To ensure sustained progress in achieving HIV program goals, it is vital that the government protects and maintains its investment, seeking alternative funding sources if needed.

One potential area in which Kazakhstan could achieve efficiency gains is through its antiretroviral procurement. Though the country commendably finances 100% of its antiretrovirals, as an upper-middle income country, it continues to face high drug prices. For example, in 2019, total antiretrovirals expenditure was US$15,099,000. With an estimated 18,000 patients on antiretrovirals, the per patient cost is estimated at US$839, significantly higher than regional counterparts. Achieving lower cost antiretrovirals through access to generics or pooled procurement could be a viable strategy to improve program costs. Kazakhstan has also faced challenges transitioning to the World Health Organization-recommended tenofovir/lamivudine/dolutegravir (TLD) formula due to high drug costs. Recently, Kazakhstan entered a licensing agreement under the Medicines Patent Pool and ViiV Healthcare to obtain greater access to dolutegravir-based regimens (Medicines Patent Pool, 2020).

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Kyrgyz Republic

June 15, 2021

HIV Situational Context

In the Kyrgyz Republic, the HIV epidemic remains high among key populations (see Figure 1). The World Health Organization (2021) reported that, after a period of stabilization, the rate of new infections is again on the rise, increasing to 800 new annual cases and threatening generalized transmission. The general adult prevalence rate is 0.2%, and the total estimated number of people living with HIV was 9,200 in 2020 (UNAIDS, 2020a). The number of women living with HIV has grown in recent years; in 2016, women represented more than 40% of people living with HIV, compared to 30% in 2010 (Global Fund, 2017; Messner and Kazantseva, 2013). The growth rate of new infections among women is three times higher than that among the general population (WHO, 2021). In 2020, domestic financing was equal to US$2.1 million, or 20% of total HIV spending (UNAIDS, 2021).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 77% (7,100) of people living with HIV know their status
- 62% (4,400) of people who know their status are on antiretroviral therapy
- 91% (4,000) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: < 1,000 ▲
- Prevalence among:
  - People who inject drugs: 14.3%
  - Prisoners: 11.3%
  - Men who have sex with men: 6.6%

HIV FINANCING

- Total spent in 2020: US$10.7 million
- 20% funded by domestic government
- 80% funded by external sources

DOMESTIC RESOURCE GAP*

- 2021 total resource needs: US$10.7 million
- Domestic gap (optimistic): 77%
- Domestic gap (pessimistic): 83%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020a, 2021; Global Fund, 2020

Macroeconomic Environment

The Kyrgyz economy has experienced a severe contraction due to the impact of COVID-19, as well as political instability; following parliamentary elections in October 2020, the former President Zheenbekov resigned amid violent protests (Economist Intelligence Unit, 2021). Immediately following the onset of the pandemic, the government enacted a strict state of emergency that was gradually eased beginning in May 2020. Fiscal policy responses have included a US$16-million health sector contingency plan as well as a US$15-million economic, food, and tax relief package. However, the Kyrgyz Republic faces very tight fiscal space due to high external debt, which is estimated to have increased to 116% of gross domestic product (GDP) in 2020 (Economist Intelligence Unit, 2021). The country's vaccination drive began March 31, 2021, with a slow start, but as of September 14, enough vaccines were administered to fully cover about 10% of the country's population (Reuters, 2021).[9] Prior to the

[9] Assuming two doses confer immunity.

pandemic, the economy was expected to grow by 3.4% in 2020 (IMF, 2019); however, it is now estimated to have contracted by 8.6%, resulting in a GDP of US$7.73 billion (see Table 1) (IMF, 2021). Ability to collect revenue decreased slightly relative to GDP by 1.4 percentage points, resulting in a loss of US$441 million in 2020. General government expenditure also decreased by 1.2 percentage points (relative to GDP), resulting in US$451 million less in public spending. Gross government debt is estimated to have increased significantly, from 55.7% to 68.0% of GDP.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has declined after a significant but transient increase; after rising from 7.1% in 2000 to 14.5% in 2006, it decreased to 8.4% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 10% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.9% of the health budget each year, resulting in US$2.4–2.7 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 8.4% from 2021 to 2023, and HIV spending falls to 0.8% of the total health budget. The result is a 29% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Kyrgyz Republic, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$7,726	$7,889	$8,333	$8,713
General government expenditure	$2,649	$2,759	$2,872	$2,937
Health spending, *optimistic*	$265	$275	$287	$293
Health spending, *pessimistic*	$265	$231	$241	$246
HIV spending, *optimistic*	$2.4	$2.5	$2.6	$2.7
HIV spending, *pessimistic*	$2.0	$1.8	$1.8	$1.9

Discussion

With total HIV resource needs estimated at US$10,672,523 in 2021, the optimistic scenario results in a sizeable funding gap of 77% (Global Fund, 2020). Under the pessimistic scenario, the gap could grow to 83%. These scenarios are concerning given the country's growing HIV epidemic and tight fiscal space. Following the findings of the 2015 Optima model, which showed that the Kyrgyz Republic spent a steep average of US$1,500 per person living with HIV, the country has taken steps to improve value for money and reduce programmatic inefficiencies (Sarybaeva et al., 2020). Important progress has been made, including reducing administrative costs, increasing antiretroviral therapy coverage, and expanding outreach to people who inject drugs. Nonetheless, the country still faces persistent challenges in fully executing the state program. For example, UNAIDS data from 2019 showed that the country had only reached 57% of the ambitious target to expand antiretroviral therapy coverage to 6.7 times the 2013 level (i.e., reaching approximately 7,200 people living with HIV) (Sarybaeva et al., 2020). Prevention and harm reduction programs, particularly for people who inject drugs, have also been identified as key priority areas. The Kyrgyz Republic has increased investments for people who inject drugs from 16% to 22% of the national HIV response, but still falls short by nearly US$1 million of recommended spending levels (i.e., investing US$2.3 million rather than US$3.2 million) (Sarybaeva et al., 2020). Finally, the strategic emphasis on targeting people who inject drugs should not overshadow that sexual transmission now accounts for twice the rate of new infections due to needle use (50.8% versus 23.6%) (Sarybaeva et al., 2020).

The onset of COVID-19, particularly lockdown-related movement restrictions, introduced both challenges and opportunities to address HIV priorities. A study conducted in April 2020 revealed that 56% of respondents living with HIV in the Kyrgyz Republic experienced challenges in accessing medicines (UNAIDS, 2020b). Patients traveling to health facilities were required to provide formal documentation that many patients did not possess; volunteers and health workers responded by accompanying patients to ensure they were not turned away. Innovations have included online consultations and mobile brigades comprised of teams that deliver services, including antiretroviral therapy, directly to patients' homes (UNDP, 2020). Civil society organizations have been instrumental in maintaining service delivery, including support for self-testing and harm reduction. Self-testing for certain key populations has been ongoing in the Kyrgyz Republic since 2019 and has expanded during COVID-19 to address accessibility issues (USAID, 2020; UNDP, 2020). These innovations, which notably prioritize patient-centered care, can be maintained after the pandemic, and previous commitments, particularly the commitment to expand scale-up of antiretroviral therapy coverage, need to be upheld. Other strategies, such as take-away dosing for opiate substitution therapy and better integration of HIV services at the primary healthcare level, should continue to be explored and supported to achieve efficiency gains (Sarybaeva et al., 2020; PEPFAR, 2020).

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Lao PDR

June 29, 2021

HIV Situational Context

Lao PDR continues to make progress toward addressing its HIV epidemic but has struggled to reach UNAIDS' 95-95-95 targets despite significant investments (see Figure 1). In 2020, an estimated 15,000 people were living with HIV in the country, with a general population prevalence rate of 0.3%. Prevalence was higher among key populations: 4.1% among men who have sex with men and 0.8% among female sex workers (UNAIDS, 2020a). However, information is sparse about other key population groups such as people who inject drugs, transgender people, and prisoners and other incarcerated people. Further, Lao PDR is marked by high rates of cross-border migration, creating a highly mobile population of vulnerable groups that compounds the difficulty of monitoring the situation. In 2020, domestic financing was equal to US$0.4 million, representing only 9% of total HIV spending (UNAIDS, 2020a).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 85% (10,180) of people living with HIV know their status
- 72% (7,300) people who know their status are on antiretroviral therapy
- 96% (7,900) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: < 1,000 ▼
- Prevalence among:
  - Men who have sex with men: 4.1%
  - Sex workers: 0.8%

HIV FINANCING

- Total spent in 2020: US$4.3 million
- 9% funded by government
- 91% funded by external sources

DOMESTIC RESOURCE GAP*

- 2021 total resource needs: US$8.8 million
- Domestic gap (optimistic): 93%
- Domestic gap (pessimistic): 97%

* Resource gap estimates do not include external or donor funding.
Data sources: Global Fund, 2020; UNAIDS, 2020a; Sine et al., 2019

Macroeconomic Environment

Similar to many countries in the Asia region, Lao PDR has been affected by decreases in international trade and tourism during the COVID-19 pandemic. On June 4, 2021, the country's lockdown was extended for a fourth time following a spike in domestic COVID-19 cases beginning in April. As of June 5, 9.5% of the population had received at least one vaccine dose, and 4.2% had received both doses (Economist Intelligence Unit, 2021). However, due to health infrastructure challenges—including a shortage of health workers—experts estimate that the country will not achieve widespread vaccination until after 2025 (Economist Intelligence Unit, 2021). Prior to the pandemic, the economy was expected to grow by 6.5% in 2020 (IMF, 2019); however, it is now estimated to have contracted by 0.4%, resulting in a gross domestic product (GDP) of US$19 billion (see Table 1) (IMF, 2021). Ability to collect revenue is estimated to have decreased by 3.1 percentage points relative to GDP, resulting in a loss of US$801 million in 2020. General government expenditure has decreased by 1.7 percentage points (relative to GDP), resulting in a

decrease of US$585 million in public spending. General government debt has grown by 11.9 percentage points, reaching 68.2% of GDP, and fiscal space will be further compressed following the new General Secretary Thongloun Sisoulith's plans to prioritize austerity and fiscal consolidation (Fitch Solutions, 2021).

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained low, somewhat increasing from 1.8% in 2012 to 4.4% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 7.0% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.3% of the health budget each year, resulting in US$0.6–0.7 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to just 4.4% from 2021 to 2023, and HIV spending falls to 0.2% of the total health budget. The result is a 61% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Lao PDR, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$18,976	$19,367	$20,187	$21,104
General government expenditure	$3,472	$3,619	$3.813	$4,004
Domestic health spending, *optimistic*	$243	$253	$266	$280
Domestic health spending, *pessimistic*	$243	$158	$167	$175
Domestic HIV spending, *optimistic*	$0.6	$0.6	$0.7	$0.7
Domestic HIV spending, *pessimistic*	$0.4	$0.2	$0.3	$0.3

Discussion

Based on an HIV resource needs estimate of $8,811,125 in 2021, HP+ estimated a 93% domestic funding gap under the optimistic scenario, versus a 97% funding gap under the pessimistic scenario. The country has committed to a "Three Zero Strategy," which aims to achieve zero new HIV infections, zero discrimination, and zero AIDS-related deaths; the strategy is supported by the 2010 Law on HIV and AIDS Control and Prevention and the 2011 Political Declaration on

HIV and AIDS (Sine et al., 2019). However, major challenges persist, particularly surrounding outreach and testing for key populations and access to antiretroviral therapy more broadly. Although 85% of people living with HIV know their status, only 58% of all female sex workers and 9% of men who have sex with men were tested for HIV in 2019 (Global Fund, 2020). Further, the 2017 Integrated HIV Bio-behavioral Survey shows that, among men who have sex with men, high-risk behaviors are increasing while knowledge regarding HIV is decreasing (Global Fund, 2020). In 2010, a pilot assessment found that HIV prevalence was as high as 17% among people who inject drugs; however, information on people who inject drugs is minimal, and no widespread interventions exist to reach and test this vulnerable group.

Antiretroviral therapy coverage faces major barriers that contribute to the country's low retention rate, which is reportedly the lowest in the Asia region at 89% (Global Fund, 2020; U.S. Department of State, 2021). Although eligibility for antiretroviral therapy was expanded to all people living with HIV (regardless of CD4 count) in 2017, antiretroviral therapy is only available at 11 out of 192 testing sites and in 8 of the 18 provinces (Sine et al., 2019). Additionally, patient-incurred travel costs are no longer reimbursable as of 2018. In addition to accessibility challenges, fear of stigma and discrimination, including from health workers, persists.

Given the challenging fiscal space, HP+ recommends that the country accelerate integration and decentralization of HIV services down to the primary care level. However, this process will require legislative reforms and capacity building for provincial- and district-level health facility staff (Global Fund, 2020; Sine et al., 2019). According to 2021 regional operational plan guidance, Lao PDR has made progress in the past year in quality improvement and case management approaches (U.S. Department of State, 2021). Expansion of multi-month dispensing may help ease access barriers and fear of stigma when interacting with the health system. Lao PDR has outlined guidance for multi-month dispensing in its national differential service delivery strategy, with recommendations for up to 3 and 6 months, and pressure from the COVID-19 pandemic has helped to accelerate this strategy (UNAIDS, 2020b).

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Myanmar (Burma)

August 5, 2021

HIV Situational Context

Myanmar has the second-highest HIV prevalence in Southeast Asia at 0.6% of the adult population after Thailand at 1.0% (Ministry of Health and Sports, 2019; UNAIDS, 2020a). More than 70% of new infections occur among key populations (see prevalence in Figure 1) (Avert, 2020). Most new infections occur among people who inject drugs and among young people under 25 years of age (National AIDS Program, 2015). Only an estimated one-third of people who inject drugs have access to prevention services (UNAIDS, 2019). In 2017, HIV spending in Myanmar reached US$109.5 million, of which the government contributed 19% (Ministry of Health and Sports, 2019). This contribution marks a six-fold increase in government spending from 2012.

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 87% (208,800) of people living with HIV know their status
- 86% (180,000) of people who know their status are on antiretroviral therapy
- 94% (170,000) of people on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 11,000 ▼
- Prevalence among:
  - People who inject drugs: 19%
  - Men who have sex with men: 8.8%
  - Female sex workers: 8.3%

HIV FINANCING

- Total spent in 2017: US$109.5 million
- 19% funded by government
- 80% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$93 million
- Domestic gap (optimistic): 59%
- Domestic gap (pessimistic): 76%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020b; Global Fund, 2017; HIV and AIDS Data Hub for Asia Pacific, 2017; Htun Nyunt, 2020.

Macroeconomic Environment

After the February 1, 2021, military coup, nearly all COVID-19 testing and treatment stalled, and the vaccination campaign virtually ceased in May due to supply shortages (Loy, 2021; Kyaw, 2021). Although vaccination campaigns have resumed, fear, lack of trust, and resistance to the junta may lead to widespread rejection of the vaccine (Paddock, 2021). While figures surrounding caseloads and fatalities are likely severely underestimated due to low testing, the Johns Hopkins University Center for Systems Science and Engineering (2021) estimates that the rate of new cases may have peaked July 14, 2021, at 7,083 per day. Prior to the pandemic, the economy was expected to grow by 6.3% in 2020 (IMF, 2019); however, the growth rate is now estimated to have decreased to 3.2%, resulting in a gross domestic product (GDP) of US$70.8 billion (see Table 1) (IMF, 2021). Ability to collect revenue is estimated to have decreased by 1.1 percentage points (relative to GDP), resulting in a loss of US$1.2 billion in 2020. General government expenditure also decreased by 0.5 percentage points (relative to GDP), or a decrease of US$100 million in public spending.

Government Health and HIV Spending

Government priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained low, although it did slightly increase from 2.3% in 2012 to 3.5% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 6.0% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 4.2% of the health budget each year, resulting in US$33.0–38.1 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to just 3.5% from 2021 to 2023, and HIV spending falls to 2.4% of the total health budget. The result is a 66% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Myanmar, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$70,830	$58,124	$58,090	$59,538
General government expenditure	$15,333	$12,737	$12,840	$13,275
Domestic health spending, *optimistic*	$916	$761	$767	$793
Domestic health spending, *pessimistic*	$916	$445	$448	$463
Domestic HIV spending, *optimistic*	$38.1	$31.7	$31.9	$33.0
Domestic HIV spending, *pessimistic*	$22.3	$10.8	$10.9	$11.3

Discussion

With total HIV resource needs estimated at US$93 million in 2020, the optimistic scenario results in a funding gap of 59% (Global Fund, 2017). Under the pessimistic scenario, the gap could grow to 76%. Violence and repression following the February 1, 2021, coup threaten access to HIV services, particularly harm reduction, supply of antiretrovirals, and the safety of health workers (UNAIDS, 2021). The public health system has been severely strained by the coup and the COVID-19 pandemic. Medical doctors and nurses were among the first to participate in the civil disobedience movement (Ratcliffe, 2021a). Additionally, public hospitals have been occupied by the military and used as staging grounds (Paddock, 2021). Some services have moved into communities, with some health workers providing home-based care; however, arrests and warrants for healthcare workers are increasing (Ratcliffe, 2021b). The World Health

Organization has also reported a surge in attacks on health workers and facilities (Paddock, 2021). Physicians for Human Rights (2021) reported at least 12 deaths, 32 injuries, and 157 arrests among health workers as of May 2021.

Most recently, Médecins Sans Frontières has been ordered to suspend health services in Dawei, Tanintharyi, leaving more than 2,100 people living with HIV without care (Mahase, 2021).[10] A correspondence published in the *Lancet* in April 2021 by Aung et al. indicates particular concern for patients with chronic illnesses who have multiple unmet needs, which include people living with HIV. Essential HIV services (including HIV testing), delivery of antiretroviral therapy, viral load testing, and adherence counselling have been reduced or suspended because of closed facilities and the disappearance of providers in many towns throughout Myanmar (Aung et al., 2021). Civil society groups have increased activities in an attempt to fill HIV service delivery gaps, but these efforts are unlikely to fully meet testing and treatment needs. Other barriers to care include stay-at-home orders due to COVID-19, lack of public transportation, and real or perceived danger in moving freely through the streets to access services.

Prior to the coup, Myanmar boasted one of the best performances in the region in regard to meeting UNAIDS' 90-90-90 targets, achieving the second target (90% of all people with diagnosed HIV infection received sustained antiretroviral therapy). It was one of the few countries to finance more than 80% of its antiretroviral procurement as well as 100% of the methadone provided through the national methadone maintenance treatment program (Htun Nyunt et al., 2021). In response to COVID-19, the Ministry of Health and Sports developed a specific contingency plan for HIV to ensure maintenance of essential services (Htun Nyunt et al., 2021). The adaptations included take-home methadone maintenance treatment for up to 14 days, covering 72% of people who inject drugs. Efforts were made to secure antiretroviral supply chains, improve warehouse storage, and extend multi-month dispensing up to six months for all stable patients. An analysis comparing 2019 and 2020 program data found that mitigation efforts were successful, and there was widespread support across stakeholders to scale up innovations (Htun Nyunt et al., 2021).

The pandemic, combined with the February 2021 coup, has caused extreme disruption to basic health services, with serious implications for antiretroviral retention and epidemic control, threatening sharp reversal of recent positive trends. Currently, the priority is to maintain essential, lifesaving health services.

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Nepal

September 5, 2021

HIV Situational Context

In 2020, an estimated 30,000 people were living with HIV in Nepal (UNAIDS, 2020). Adult prevalence among the general population was low at 0.1%. Since the epidemic's peak in the early 2000s, the rate of new infections has decreased from more than 4,400 in 2000 to less than 1,000 in 2020 (see Figure 1), and AIDS-related deaths have decreased from 17,000 in 2007 to less than 1,000 in 2020 (UNAIDS, 2020). The epidemic is now concentrated among key populations. The main route of transmission is sexual, which causes 80% of new infections (NCASC, 2020a). Though not typically tracked as a key population, the proportion of ever reported HIV infections is high among clients of sex workers (31.6%), migrant workers (11.2%), and partners of migrants (8.4%) (NCASC, 2020a). In 2020, domestic financing was equal to US$4.3 million or 27% of total HIV spending (UNAIDS, 2020).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 83% (25,000) of people living with HIV know their status
- 80% (20,000) of people who know their status are on antiretroviral therapy
- 90% (18,000) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: < 1,000 ▼
- Prevalence among:
  - People who inject drugs: 2.7%
  - Men who have sex with men: 5%
  - Transgender people: 8.5%

HIV FINANCING

- Total spent in 2020: US$16 million
- 27% funded by domestic government
- 73% funded by external sources

DOMESTIC RESOURCE GAP*

- 2021 total resource needs: US$29.5 million
- Domestic gap (optimistic): 83%
- Domestic gap (pessimistic): 91%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020; HIV and AIDS Data Hub for the Asia Pacific, 2020; Global Fund, 2017

Macroeconomic Environment

Recognizing the increasing seriousness of the COVID-19 pandemic, the government instituted a nationwide lockdown from March to July 2020. However, following the easing of restrictions, the country experienced a surge in new cases that peaked in late October 2020. After the massive COVID-19 outbreak in India in mid-April 2021, Nepal once again experienced a dramatic surge. The rolling seven-day average of daily new confirmed cases increased from 422 on April 15 to over 8,900 on May 12 before starting to decline. As of September 15, 2021, the moving average was down to just over 1,000 (Our World in Data, 2021). Nepal began its vaccination program in January 2021; by September 2021, the program had administered enough doses to fully immunize 17.7% of its population (Reuters, 2021).[11]

[11] Assuming two doses per person confers immunity.

Nepal's economy has been severely affected by the pandemic, with tourism and private consumption greatly curtailed. Further, as much of its labor force is informal, Nepal is especially vulnerable to economic and labor shocks (World Bank, 2020). In terms of mitigation efforts, the government has implemented a Preparedness and Response Plan with support from the World Health Organization and increased investments in health and social support programs with a stimulus package equal to 2.5% of gross domestic product (GDP) (Post Report, 2020). Prior to the pandemic, the economy was expected to grow an impressive 6.3% in 2020 (IMF, 2019); it is now estimated to have contracted by 2.1%, resulting in a GDP of US$30.0 billion (see Table 1) (IMF, 2021). Ability to collect revenue is estimated to have decreased by 4.1 percentage points relative to GDP, resulting in a loss of US$1.9 billion. General government expenditure shrank by 3.1 percentage points (relative to GDP), resulting in a US$1.7 billion decrease in public spending. Finally, gross government debt has increased, from 35% of GDP to 42% of GDP.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained low—4.6% in 2018, up from 4.3% in 2000 (WHO, n.d.). To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 6.4% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending amounts to 1.1% of the health budget each year, resulting in US$5.9–7.7 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 4.6% from 2021 to 2023, and HIV spending falls to 0.8% of the total health budget. The result is a 49% decrease in dollars available for HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Nepal, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$30,049	$30,591	$31,938	$33,957
General government expenditure	$8,241	$8,799	$10,080	$10,623
Domestic health spending, *optimistic*	$531	$567	$649	$684
Domestic health spending, *pessimistic*	$531	$403	$462	$487
Domestic HIV spending, *optimistic*	$5.9	$6.3	$7.3	$7.7
Domestic HIV spending, *pessimistic*	$4.2	$3.2	$3.7	$3.9

Discussion

Based on an HIV resource needs estimate of US$29,475,063 in 2021, HP+ estimated an 83% domestic funding gap under the optimistic scenario and a 91% funding gap under the pessimistic scenario for health (Global Fund, 2017). Nepal is considered by the U.S. President's Emergency Plan for AIDS Relief to be a tier 1 country, meaning that Nepal is at or near epidemic control. Indeed, the country experienced a steep decline in new infections from 2010 to 2018 (over 50%) compared to the regional average of 9% (Avert, 2020). Success has no doubt been helped by meaningful steps to increase rights for key populations and provide harm reduction services. For example, among the Asia region, Nepal has one of the highest rates of awareness of HIV status among people who inject drugs, at 95% (Avert, 2020).

Still, challenges persist in closing remaining treatment gaps. Multi-month dispensing, though recommended by national guidelines, has yet to be implemented (U.S. Department of State, 2021). Among the Asia region, viral load coverage was lowest in Nepal during fiscal year 2020, and regional operational program guidelines report that the government of Nepal has regressed in taking ownership of the country's HIV response. COVID-19-related interruptions in service delivery and implementation have created a new set of challenges. For example, pre-exposure prophylaxis initiation was significantly delayed by interruptions in the supply chain; the country reached only 3% of its fiscal year 2020 targets (U.S. Department of State, 2021). Roll-out of index testing has been similarly disrupted.

Despite COVID-19 interruptions, Nepal achieved significant progress transitioning to tenofovir/lamivudine/dolutegravir (TLD)—a more effective, efficient, and convenient antiretroviral therapy—with an average of 77% of clients on TLD at the end of fiscal year 2020 (U.S. Department of State, 2021). Additionally, multi-month home delivery of antiretroviral therapy reached 24% by the end of the year (Mahler and Sundararaj, 2021). People who inject drugs were also able to receive home-delivered opioid substitution therapy services during the nationwide lockdown (NCASC, 2020b). The EpiC project, which is funded by the U.S. Agency for International Development, supported the adaptation to virtual services, ensuring providers and community workers had access to mobile devices and data. More than 11,000 patients received virtual care, and test positivity grew three-fold higher in the course of a year, suggesting that virtual services may increase case finding (Meara, 2021). Given the country's challenging domestic resource gap, such patient-centered innovations should be assessed for efficiency gains and expanded at scale to close remaining treatment gaps.

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Pakistan

August 19, 2021

HIV Situational Context

In 2020, an estimated 200,000 people were living with HIV in Pakistan (UNAIDS, 2020a). The general adult prevalence rate was low at 0.2%. Pakistan's epidemic is concentrated among several key populations including people who inject drugs, sex workers, and transgender individuals (see Figure 1). The rate of new infections has risen by 84% since 2010 (UNAIDS, 2020a). Recent epidemiological data showed that 45% of all new infections occurred among men who have sex with men, followed by people who inject drugs at 26%, and sex workers at 6% (Global Fund, 2020). The epidemic remains geographically concentrated in Pakistan's two most populous provinces, Punjab and Sindh, which together account for 91% of the burden (Global Fund, 2020). The HIV financing landscape significantly changed between 2013 and 2019, as domestic funding increased from 36% of US$10 million in total funding in 2013 to nearly 85% of US$8.5 million in total funding in 2019. However, the majority of this domestic funding was financed by domestic private resources (HIV and AIDS Data Hub for Asia Pacific, 2020).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS*

- 22% (45,000) of people living with HIV know their status
- 53% (24,000) of people who know their status are on antiretroviral therapy

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 25,000 ▲
- Prevalence among:
  - People who inject drugs: 38%
  - Transgender people: 8%
  - Male sex workers: 11%

HIV FINANCING

- Total spent in 2019: US$8.5 million
- 19% funded by domestic government
- 66% funded by domestic private sources
- 15% funded by external sources

DOMESTIC RESOURCE GAP**

- 2020 total resource needs: US$70.7 million
- Domestic gap (optimistic): 98%
- Domestic gap (pessimistic): 98%

* Data not available for patients on antiretroviral therapy with suppressed viral loads; however, Assir et al. (2018) found that in a sample of patients, 78% were virally suppressed.
** Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020a; Global Fund, 2017; HIV and AIDS Data Hub for Asia Pacific, 2020

Macroeconomic Environment

COVID-19 cases and deaths have remained relatively low in Pakistan compared to its neighbors despite a series of waves. However, the low case rate may be an artifact of Pakistan's low testing, which ranked 160th in the world (Imran et al., 2021). Pakistan saw its peak of daily cases on June 16, 2021, at an average of 5,883 new cases per day. Despite a slow start, the government has administered more than 46.4 million doses of the COVID-19 vaccine, enough to fully cover 10.7% of the population

(Reuters, 2021).[12] Still, the impact on the already fragile health sector and economy has been damaging.

Prior to the pandemic, the economy was expected to grow modestly by 2.4% in 2020 (IMF, 2019); however, it is now estimated to have contracted by 0.5%, resulting in a gross domestic product (GDP) of US$275 billion (see Table 1) (IMF, 2021). The economic contraction is largely due to the fall in international demand for textiles, apparel, and agricultural products. In response, the government has issued a National Action Plan for Preparedness and Response to Coronavirus Disease and tried to mitigate the worst economic effects of the pandemic through a stimulus package that amounted to 2.9% of GDP (World Bank, 2021). Ability to collect revenue is estimated to have decreased by 1.1 percentage points (relative to GDP), resulting in a loss of US$4.2 billion in 2020. Gross government debt is estimated to have grown by 8.0 percentage points relative to GDP in 2020, reaching 87.6% of GDP, further compressing an already tight fiscal space.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained low—5.3% in 2018, down from 5.9% in 2000 (WHO, n.d.). To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 5.3% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.05% of the health budget each year, resulting in US$1.69–1.71 million available annually. Under the pessimistic scenario, the overall health budget is still 5.3% from 2021 to 2023, and HIV spending remains at 0.05% of the total health budget.[13]

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Pakistan, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$274,825	$285,661	$296,959	$310,355
General government expenditure	$63,812	$61,708	$64,119	$64,436
Domestic health spending, *optimistic*	$3,362	$3,251	$3,378	$3,395

[12] Assuming two doses confers full immunity.
[13] Because the COVID-19 health spending increase was very modest, and pre-pandemic HIV spending very low, the optimistic and pessimistic scenarios are virtually the same.

Indicator	2020	2021	2022	2023
Domestic health spending, *pessimistic*	$3,362	$3,246	$3,373	$3,389
Domestic HIV spending, *optimistic*	$1.69	$1.63	$1.70	$1.71
Domestic HIV spending, *pessimistic*	$1.69	$1.63	$1.69	$1.70

Discussion

With total HIV resource needs estimated at US$70,700,697 in 2020, both the optimistic and pessimistic scenarios result in a large funding gap of 98% (Global Fund, 2017). Even the optimistic scenario is concerning given the country's growing HIV epidemic and significant debt burden. The weak and fragmented public health system often leaves patients turning to the private sector, which can be cost-prohibitive (Abdullah et al., 2021). The private sector is poorly regulated and has directly impeded progress in meeting HIV goals in Pakistan. For example, in 2019, the reuse of dirty needles in Sindh province resulted in a tragic outbreak of pediatric HIV, estimated to have affected more than 1,500 new patients (Al Jazeera, 2021). Other barriers to care include severe stigmatization and criminalization, resulting from a highly conservative culture and legal code. Sex work, drug use, and male-to-male sex are all criminalized. And although 2018 saw the passage of the Transgender Persons Protection of Rights Act, many transgender individuals are still unwilling to visit government-run antiretroviral therapy centers due to fear of stigmatization from health workers (UNAIDS, 2020b).

As a result, civil-based organizations play an essential role in providing prevention and treatment services to key populations. In response to COVID-19-related service interruptions, groups such as the Pakistan Association of People Living with HIV have coordinated to triage and ensure an uninterrupted supply of antiretrovirals and delivery to patients' homes (UNAIDS, 2020c). However, more work and resources are necessary to expand capacity; community-based organizations have historically faced difficulty with registration and renewal processes (Global Fund, 2020).

The government has taken some steps to improve service quality by integrating HIV care under a "one-stop-shop" model. Piloted in Peshawar and Ratodero, plans to expand integrated services to urban areas with high HIV burden are underway; services will include adult and pediatric care, family planning and sexually transmitted infection services, as well as treatment, diagnostics, and coinfection management (Global Fund, 2020b). Additionally, there are plans to pilot self-testing and opioid substitution therapy. Although opioid substitution therapy has historically faced strong opposition from the Ministry of Narcotics Control, the prime minister has recently shown interest in supporting an opioid substitution therapy pilot (Global Fund, 2020b).

Due to extremely tight fiscal space, the government must look for patient-centered efficiency gains, including telemedicine, multi-month dispensing, and differentiated service delivery. Concurrently, the government must begin to give HIV a higher priority in the national and provincial budgets to curb the growing epidemic and risk of general transmission. Finally, much work needs to be done to transform the harmful environment of stigmatization that impacts policymakers and service providers, especially surrounding gender, sex, and drug use.

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Papua New Guinea

September 9, 2021

HIV Situational Context

An estimated 55,000 people were living with HIV in Papua New Guinea as of 2020, an increase from the estimate of 42,000 in 2015 (UNAIDS, 2020a). The HIV incidence rate is 0.61 per 1,000 people of adult age (15–49 years), while among all ages it is about 0.39 per 1,000, the highest in the Pacific region (UNAIDS, 2020b). Papua New Guinea's epidemic has been called "mixed" as it has an urban component, as infection is highest among key populations such as sex workers, men who have sex with men, and transgender people, as well as a rural component, characterized by high levels of unprotected sex and frequent partner turnover (UNAIDS, 2019). In the 2018 Integrated Bio-Behavioral Surveillance study, HIV prevalence among female sex workers was estimated to be between 11.9% and 19.6%. For men who have sex with men and transgender people, the HIV prevalence was estimated between 7.1% and 8.5% (Kelly-Hanku et al., 2018). In 2019, the domestic government financed 32% of the US$23.8 million HIV response, with the remaining 68% funded by external sources (see Figure 1) (UNAIDS, 202

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 70% (36,470) of people living with HIV know their status
- 88% (32,018) of people who know their status are on antiretroviral therapy
- 10% (3,061) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 3,400 ▲
- Prevalence among:
  - Sex workers: 15.5%
  - Men who have sex with men: 7.7%

HIV FINANCING

- Total spent in 2019: US$23.8 million
- 32% funded by domestic government
- 68% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$55 million
- Domestic gap (optimistic): 80%
- Domestic gap (pessimistic): 85%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS 2020a; Global Fund, 2017

Macroeconomic Environment

Papua New Guinea's economy has experienced erratic growth over the last decade, averaging about 4.9% (with a range between a high of 13.5% in 2014 and a low of -0.3% in 2018) (World Bank, 2021a). The economy is led by two resource-intensive sectors. The first revolves around agriculture, fishing, and forestry and is predominately informal. The second concerns mineral and energy extraction, which drives the country's export earnings (World Bank, 2021b). As a result of the COVID-19 pandemic, lockdowns, and constrained demand, the economy contracted by 3.9% in 2020, as opposed to pre-COVID-19 projections of 2.6% growth (World Bank, 2021c). A moderate recovery is anticipated in 2021 and 2022 (1.2% and 4.0%, respectively), but the economy overall by 2023 will have shrunk by about 9% (World Bank, 2021c). The government

implemented a crisis relief package amounting to about 2.2% of gross domestic product (GDP) (World Bank, 2021c).

Papua New Guinea was only mildly affected during the first onset of the pandemic. It did not experience the initial surge in infections, nor did it undergo the "second wave" that many other countries experienced. A rapid rise in the level of infections did start in February 2021, reaching between 1,200 and 1,800 cases a day for most of March; however, infections have started to decrease, and as of September 2021, there are 18,200 cases in Papua New Guinea, with only 194 recorded deaths (Reuters, 2021). The vaccination campaign has been slow, with 134,444 vaccine doses administered—enough to fully cover only 0.8% of the country (Reuters, 2021).[14] The current COVID-19 crisis, along with economic instability, including increased unemployment, has created an uncertain environment for vulnerable households (World Bank, 2021c).

Government Health and HIV Spending

The structure of Papua New Guinea's economy makes it susceptible to external shocks, which complicates efforts to plan investments in health over the medium term. In addition, the impact of COVID-19 has stretched the health sector to its limits. Spending on health has been limited over the past decades and has not reached the World Health Organization recommendation of 5% of GDP. For 2018, the last year for which data is available, Papua New Guinea spent 7.4% of GDP on health (WHO, n.d.). In the wake of the impact of COVID-19, the government put in place a supplementary budget of US$116.4 million for 2020 to address the challenges of COVID-19 across sectors.[15] Supplements for the health sector accounted for 28% of the total, or US$33 million.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 9.6% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 2.0% of the health budget each year, resulting in US$10.0–10.9 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 7.4% of general government expenditure from 2021 to 2023, and HIV spending falls to 1.5% of the total health budget. The result is a 41% decrease in dollars available for HIV by 2023.

[14] Assuming two doses confer immunity.
[15] Using an exchange rate of 1 PNG Kina to US$0.28.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Papua New Guinea, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$23,840	$24,130	$25,099	$25,944
General government expenditure	$5,671	$5,105	$5,244	$5,224
Domestic health spending, *optimistic*	$544	$490	$503	$501
Domestic health spending, *pessimistic*	$544	$377	$388	$386
Domestic HIV spending, *optimistic*	$10.9	$9.8	$10.1	$10.0
Domestic HIV spending, *pessimistic*	$8.4	$5.8	$6.0	$6.0

Discussion

With HIV resource needs estimated at US$55 million in 2020, the optimistic scenario results in a sizable funding gap of 80% (Global Fund, 2017). Under the pessimistic scenario, the gap could grow to 85%. Along with Kazakhstan and Indonesia, Papua New Guinea falls under the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) tier 3 "Protect the Investment" designation, indicating that the country has faced historical challenges in achieving UNAIDS' 90-90-90 benchmarks (U.S. Department of State, 2021). Treatment interruption remains a challenge for Papua New Guinea. During fiscal year 2020, Papua New Guinea experienced patient loss across all PEPFAR-supported sites, with loss ranging from 1–10% (U.S. Department of State). Similarly, decreases in viral load coverage have been observed; in fiscal year 2020, from the first to the fourth quarter, there was a 20% drop in coverage, bringing coverage down to 41%.

Despite these challenges, Papua New Guinea still met or surpassed targets for new and continued treatment of people living with HIV. The country is also successfully transitioning to tenofovir/lamivudine/dolutegravir (TLD), with 90% of eligible people living with HIV transitioned as of January 2021 (U.S. Department of State, 2021). COVID-19-related service interruptions have forced HIV service providers to adapt to ensure continuity of care. The resulting innovations have included expansion of three-month multi-month dispensing across clinics, home delivery of antiretrovirals, and mobile screening and support for patients (ASHM, 2020). Additionally, in July 2020, the Department of Health conducted a virtual refresher training for antiretroviral prescribers for the first time; the training reached providers who had not received refresher training in over three years (UNAIDS, 2020c). Papua New Guinea should continue to leverage these adaptations and explore other efficiency gains to mobilize domestic resources. Six-month multi-month dispensing should be implemented, and measures to assess quality of care and ensure patient-centered care should be implemented to improve treatment adherence.

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Philippines

August 5, 2021

HIV Situational Context

Although the Philippines has a low HIV prevalence rate among the general population (0.2%), the rate of new infections (0.29 per 1,000 adults 15–49 years of age) is one of the highest in the world (UNAIDS, 2020). In 2020, there were an estimated 17,000 new infections, up 13% from 2019 and 3.4 times greater than 2010 (see Figure 1) (UNAIDS, 2020). These trends contribute to an increase in overall burden and AIDS-related deaths. The latest financing data from 2017 show that of the US$26.8 million spent on HIV, 19% was funded externally. While 81% was financed domestically, the private to public split is not reported. In 2013, the domestic private contribution was less than 1% (HIV and AIDS Data Hub for Asia Pacific, 2020).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 65% (78,000) of people living with HIV know their status
- 62% (48,000) of people who know their status are on antiretroviral therapy
- 16% (7,706) of people on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 17,000 ▲
- Prevalence among:
  - People who inject drugs: 29%
  - Men who have sex with men: 5%
  - Transgender people: 3.9%

HIV FINANCING

- Total spent in 2017: US$26.8 million
- 81% funded domestically
- 19% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$133.8 million
- Domestic gap (optimistic): 76%
- Domestic gap (pessimistic): 82%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020; Global Fund, 2017; HIV and AIDS Data Hub for Asia Pacific, 2020

Macroeconomic Environment

The Filipino economy was hard hit by COVID-19, with travel restrictions severely impacting the country's vital tourism sector. Although the final quarter of 2020 saw glimpses of recovery, the growing surge in COVID-19 cases that began in March 2021 and worsened in April has further dampened the country's economic outlook (Biswas, 2021). As of July 30, 2021, there was an average of 6,003 new COVID-19 cases per day (Reuters, 2021). The country has administered more than 19.3 million doses of the vaccine, which can fully cover about 9% of the population.[16] As the virus continues to spread across the region, the government is preparing to impose another lockdown, which may cost the economy an estimated US$4 billion (Morales, 2021). In terms of mitigation efforts, the government has issued two recovery packages (Bayanihan I and II), together totaling more than US$7 billion (IMF, 2021a).[17] Of these funds, nearly US$1 billion went to the health sector.

[16] Assuming two doses equate to full coverage.
[17] Using an exchange rate of 1 Philippine peso to US$0.02.

Prior to the pandemic, the economy was expected to grow by 6.2% in 2020 (IMF, 2019); however, it is now estimated to have contracted by 9.6%, resulting in a gross domestic product (GDP) of US$341 billion (see Table 1) (IMF, 2021b). Ability to collect revenue has remained level at 20.6% of GDP, but the large economic contraction resulted in a loss of US$12.1 billion in 2020. Still, the large stimulus packages have resulted in an increase in general government expenditure, which has grown an estimated 4.1 percentage points (relative to GDP), or by US$621 million. In addition, gross government debt is estimated to have grown to 51.7% of GDP in 2020, further constricting fiscal space in the short term.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has remained stable—6.6% in 2018, the same as in 2006 (WHO, n.d.). To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 8.7% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.3% of the health budget each year, resulting in US$31.5–36.7 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 6.6% of general government expenditure from 2021 to 2023, and HIV spending falls slightly to 0.3% of the total health budget. The result is a 42% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Philippines, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$340,724	$351,706	$373,870	$399,884
General government expenditure	$89,893	$97,387	$101,248	$104,746
Domestic health spending, *optimistic*	$7,817	$8,469	$8,804	$9,108
Domestic health spending, *pessimistic*	$7,817	$6,428	$6,682	$6,193
Domestic HIV spending, *optimistic*	$31.5	$34.1	$35.5	$36.7
Domestic HIV spending, *pessimistic*	$23.9	$19.7	$20.4	$21.1

Discussion

With total HIV resource needs estimated at US$133,839,429 in 2020, the optimistic scenario results in a sizeable funding gap of 76% (Global Fund, 2017). Under the pessimistic scenario, the gap could grow to 82%. Even the optimistic scenario is concerning given the country's growing HIV epidemic.

In addition to shrinking fiscal space, COVID-19-related supply chain and movement restrictions have negatively affected access to HIV services. The Global Fund reports that prevention services for men who have sex with men decreased 74% in Metro Manila compared to 2019 (UNAIDS, 2021). More broadly, HIV testing decreased by 61%, and enrollment in HIV care fell by 28% (UNAIDS, 2021). Other barriers to care include lack of public transportation and the fear of discrimination while passing through checkpoints.

In the face of these challenges, civil society organizations and the government have instituted models of online counseling, telemedicine, psychosocial support, and mobile clinics to maintain service delivery during the pandemic (UNAIDS, 2021). The Department of Health issued a new guideline recommending the use of courier services to enable at-home delivery or local pick-up of antiretrovirals. Distribution of pre-exposure prophylaxis and condoms was delegated to the community level to improve ease of access. The Department of Health also plans to manage antiretroviral distribution through a digital platform to improve quality of care during and post COVID-19 (Arkeh, 2021).

Aside from COVID-19-related service challenges, the Philippines also grapples with decentralization of funds to local government units, upcoming political elections, and the concentrated epidemic among people who inject drugs—an underserved group. The recent Supreme Court Mandanas ruling, to be implemented in 2022, will give local government units additional revenue and operational responsibilities. However, these funds will not be earmarked for health, so there is a risk that health and HIV services may be punted to local government units before appropriate channels are outlined (World Bank, 2021). National elections, scheduled for May 2022, are also expected to disrupt service delivery, mainly due to the mandated procurement and hiring ban. The Department of Health has historically faced procurement challenges resulting in stock-outs and must hence be careful in preparing for this added complication to ensure a stable supply of antiretrovirals. Finally, due to President Duterte's extreme crackdown on drug-use and crime, there is virtually no government provision of opioid substitution therapy or needle syringe program; the prevalence rate among people who inject drugs has grown to an astounding 29% (Rowe, 2020).

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Tajikistan

August 24, 2021

HIV Situational Context

Tajikistan faces a concentrated HIV epidemic, with an adult prevalence rate of 0.2% (UNAIDS, 2020a). Key populations, especially people who inject drugs, are disproportionately affected (see Figure 1). The primary mode of transmission is sexual, and over the last decade, the share of new infections has steadily increased among women, rising from 31% in 2011 to 42% in 2019 (Alexandrova, 2021; Global Fund, 2020). Additionally, a growing share of new HIV infections in Tajikistan can be attributed to people with a history of outbound migration (there has been a large efflux of labor migration to Russia), with this share growing from 12.3% in 2013 to 17.3% in 2017 (Global Fund, 2020). However, the Integrated HIV Bio-Behavioral Survey conducted in 2020 showed that the prevalence of HIV among labor migrants is only 0.4%. In 2020, total expenditure on HIV was US$12 million. Of this amount, the domestic government financed 24%, while 71% was funded by external donors (UNAIDS, 2020a).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 68% (9,500) of people living with HIV know their status
- 84% (8,000) of those who know their status are on antiretroviral therapy
- 86% (6,900) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: <1,000 ▼
- Prevalence among:
  - People who inject drugs: 12.1%
  - Prisoners: 3.1%
  - Sex workers: 2.9%

HIV FINANCING

- Total spent in 2020: US$12 million
- 24% funded by government
- 71% funded by external sources

DOMESTIC RESOURCE GAP*

- 2021 total resource needs: US$12.4 million
- Domestic gap (optimistic): 74%
- Domestic gap (pessimistic): 80%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020a; Global Fund, 2020

Macroeconomic Environment

Tajikistan appears to have weathered the COVID-19 pandemic relatively well thus far; however, controversy has arisen regarding the accuracy of case reporting (Ibragimova, 2021). After peaking in May 2020, new cases in the country gradually declined until late June 2021. As of August 4, 2021, there were an average of 34 new cases per day, 17% of the 2020 peak (Reuters, 2021). The country has thus far vaccinated nearly 2 million people, of which about 420,000, or 7.2% of the population, have been fully vaccinated (Reuters, 2021).[18] To help mitigate economic shocks, the government provided free COVID-19-related medical care and sick leave benefits, among other measures, to vulnerable households through emergency cash transfers supported by emergency World Bank loans (IMF,

[18] Assuming two doses equate to full coverage.

2021b; World Bank, 2021). Prior to the pandemic, the economy was expected to grow by 4.5% in 2020, and Tajikistan is one of the few countries to have met pre-pandemic estimates, resulting in a gross domestic product (GDP) of US$8.5 billion (see Table 1) (IMF, 2019; IMF, 2021a). Ability to collect revenue is estimated to have decreased by 2.9 percentage points relative to GDP, resulting in a loss of US$242 million in 2020. Despite fiscal stimulus measures, general government expenditure is estimated to have decreased slightly, resulting in a decrease of US$118 million in public spending.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has increased gradually over recent years, rising from 4.3% in 2006 to 6.1% in 2018 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 7.8% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 2.0% of the health budget each year, resulting in US$3.8–4.1 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 6.1% from 2021 to 2023, and HIV spending falls to 1.6% of the total health budget. The result is a 37% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Tajikistan, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$8,482	$8,906	$9,307	$9,679
General government expenditure	$2,516	$2,563	$2,600	$2,726
Domestic health spending, *optimistic*	$195	$199	$202	$211
Domestic health spending, *pessimistic*	$195	$157	$160	$167
Domestic HIV spending, *optimistic*	$3.8	$3.9	$4.0	$4.1
Domestic HIV spending, *pessimistic*	$3.0	$2.4	$2.5	$2.6

Discussion

Based on a total HIV resource needs estimate of $12,378,643 in 2021, HP+ estimates a 74% domestic funding gap under the optimistic scenario, versus an 80% funding gap under the

pessimistic scenario (Global Fund, 2020). The Republic of Tajikistan has made substantial progress in combatting the AIDS epidemic and is considered by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) to be a tier 1 country, or a country at or near epidemic control (U.S. Department of State, 2021). By the end of fiscal year 2020, the country had achieved the highest antiretroviral retention rate among the Asia region. However, significant barriers exist in closing the remaining treatment gaps, chiefly stigmatization and criminalization. For example, sex work is illegal and the country has yet to remove HIV criminalization laws (Global Commission on HIV and the Law, 2018). Although the 2017 Health Code protects people living with HIV from discrimination and upholds confidentiality, law enforcement officers are still able to demand patient HIV status from health workers with no justification (Alexandrova, 2021). Fear of stigmatization and criminalization may contribute to late diagnoses and low case finding yield. For example, in 2019 more than half of new diagnoses were made after patient CD4 count were less than 350 cells/mm^3 (UNAIDS, 2020b). Further, during fiscal year 2020, less than one-quarter of the PEPFAR target to enroll new patients in treatment was reached (U.S. Department of State, 2021).

Another well-documented issue is that prior to COVID-19, civil society organizations were only allowed to provide initial testing, and patients were forced to seek confirmatory testing and care from Republican AIDS Centers (Johnson, 2020). To receive government care, patients are required to present identification cards and must register with the state. In response to COVID-19, the Ministry of Health issued an order to allow community-based dispensing of antiretrovirals. Advocates will press for institutionalization and scale-up after the COVID-19 pandemic subsides. Other innovations in service delivery have included the piloting of rapid saliva testing and self-testing, which reached more than 2,800 at-risk individuals (U.S. Agency for International Development, 2020). Additionally, mobile clinics, donated by Russia, have been deployed to provide free basic primary healthcare, HIV screening, and COVID-19 testing (UNAIDS, 2020c).

Despite the stigma surrounding sexual transmission of HIV, the Republic has done well in promoting harm reduction for people who inject drugs. For example, in 2017, Tajikistan had 273 needle-syringe programs operating across the country, the highest volume across the Eastern Europe and Central Asia region (Avert, 2020). Opioid substitution therapy is less robust and apparently underutilized, with 15 sites serving only 650 patients as of January 2020 (Global Fund, 2020). To capitalize on hard-fought gains, the government must support a more enabling environment that allows community-based, patient-centered care to reach remaining vulnerable groups without the risk of stigmatization or criminalization to the patient.

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Thailand

August 12, 2021

HIV Situational Context

Thailand has served as a regional and global example in making progress toward ending the HIV epidemic. From a peak of 160,000 new infections in 1991, then 57,000 deaths in 2003, in 2020 there were fewer than 7,000 new infections and 12,000 deaths (see Figure 1) (UNAIDS, 2020a). Still, the adult prevalence rate ranks among the highest in the region at 1%, and as in neighboring countries, key populations in Thailand are disproportionately affected. In 2018, more than 60% of new infections were attributed to key populations, with men who have sex with men accounting for 40% (Avert, 2019). The primary mode of transmission is sexual (90%), followed by unsafe drug injection. The latest expenditure data available show that of the $295.7 million spent on HIV, 92% was financed by the domestic government, while 8% was funded by international sources (UNAIDS, 2021).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 94% (470,000) of people living with HIV know their status
- 83% (390,000) of people who know their status are on antiretroviral therapy
- 97% (380,000) of patients on antiretroviral therapy have suppressed viral loads

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 6,600 ▼
- Prevalence among:
  - People who inject drugs: 20.5%
  - Transgender people: 11.0%
  - Men who have sex with men: 11.9%

HIV FINANCING

- Total spent in 2019: US$295.7 million
- 92% funded by domestic government
- 8% funded by external sources

DOMESTIC RESOURCE GAP*

- 2020 total resource needs: US$317.3 million
- Domestic gap (optimistic): -6%
- Domestic gap (pessimistic): 7%

* Resource gap estimates do not include external or donor funding.
Data sources: UNAIDS, 2020a; HIV and AIDS Data Hub for Asia Pacific, 2020; National AIDS Committee, 2017; Global Fund, 2017

Macroeconomic Environment

Throughout 2020 until mid-April 2021, Thailand effectively controlled the COVID-19 pandemic, with low caseloads and nearly zero deaths. Strict border closures and quarantine policies largely shielded the country of nearly 70 million. The country's strong health system and widespread health insurance coverage also contributed to the low case rate (Shadmi et al., 2020). However, like the rest of the world, Thailand is now grappling with a surge in COVID-19 cases due to highly contagious variants. By August 20, the cumulative caseload had surpassed 1 million (Xinhua, 2021). Although procurement of vaccines stalled at first, more than 25 million doses were administered as of August 18, enough to fully cover 18.1% of the population (Reuters, 2021).[19] Similar to other largely tourism-driven economies, Thailand suffered immensely from COVID-19 travel restrictions. Prior to the

[19] Assuming two doses confers immunity.

pandemic, the economy was expected to grow moderately at 3.0% in 2020 (IMF, 2019); however, it is now estimated to have contracted by 6.1%, resulting in a gross domestic product (GDP) of US$510.4 billion (see Table 1) (IMF, 2021a). Though ability to collect revenue will remain stable at about 21% of GDP, the economic contraction resulted in a revenue loss of US$14.8 billion in 2020. Still, large stimulus packages (totaling 9.6% of GDP) have resulted in an increase in general government expenditure of an estimated US$8.1 billion (IMF, 2021b). Following these packages, gross government debt is estimated to have grown significantly to 50% of GDP in 2020 and is expected to reach 60% of GDP by 2022, further constricting fiscal space in the near term.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) increased impressively to 15% in 2018, compared to 12.7% in 2000 (WHO, n.d.). To understand country capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 17.1% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 1.5% of the health budget each year, resulting in US$337.8–358.5 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 15% from 2021 to 2023, and HIV spending falls slightly to 1.3% of the total health budget. The result is a 23% decrease in dollars available to HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Thailand, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$510,412	$515,312	$538,310	$560,037
General government expenditure	$129,155	$140,155	$129,954	$137,069
Domestic health spending, *optimistic*	$22,130	$24,015	$22,267	$23,486
Domestic health spending, *pessimistic*	$22,130	$21,065	$19,532	$20,601
Domestic HIV spending, *optimistic*	$337.8	$366.6	$339.9	$358.5
Domestic HIV spending, *pessimistic*	$296.3	$282.1	$261.5	$275.9

Discussion

With total resource needs estimated at US$317,344,903 in 2020, HP+ estimates a surplus in domestic funding of 6% under the optimistic scenario, versus a 7% funding gap under the pessimistic scenario (Global Fund, 2017). This favorable funding situation complements strong achievement in epidemic control. Thailand was one of only three countries in the region to achieve viral load suppression of 95% or greater in sites supported by the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) during fiscal year 2020 (U.S. Department of State, 2021).[20] The country also exceeded all test and treat targets for fiscal year 2020. Thailand has been a leader in pre-exposure prophylaxis (PrEP) implementation as well. In 2018, PrEP was integrated into the country's national health system and included under the universal health coverage benefits package (UNAIDS, 2018; PrEPWatch, 2021). Of note, in fiscal year 2020, young people (20–29 years of age) and men who have sex with men made up most of the new PrEP patients (U.S. Department of State, 2021).

Still, challenges persist in closing remaining gaps, especially among key populations. Vulnerable groups, such as transgender individuals and people who inject drugs face stigma, discrimination, and criminalization (National AIDS Committee, 2017). For example, in fiscal year 2020, Thailand had the lowest rate of linkage to treatment for transgender individuals, at 53% (compared to the regional average of 76%) (U.S. Department of State, 2021). Another vulnerable population that is poorly monitored is the more than 4 million overseas migrants, many of whom are undocumented and left unprotected by Thai health insurance. Finally, the country is also behind most of the region in transitioning to tenofovir/lamivudine/dolutegravir (TLD) (U.S. Department of State, 2021).[21]

COVID-19 has presented its own set of challenges in HIV service delivery. Expansion of recency and index testing has been delayed, along with viral load literacy activities (U.S. Department of State, 2021). Movement restrictions and fear of contracting COVID-19 have also impacted care-seeking behavior. For example, a survey of Thai sex workers revealed that nearly half of the respondents experienced difficulty in accessing sexually transmitted infection screenings (UNAIDS, 2020b). In response to these issues, civil society organizations have partnered with hospitals to integrate sexually transmitted infection testing and HIV counseling with COVID-19 services. Other groups, such as the Institute of HIV Research and Innovation, have adapted to offer telemedicine services including digital follow-ups and the option to e-fill antiretroviral prescriptions (Green, 2021). In fact, telemedicine HIV services have been available since 2018 via the LINKAGES and EpiC projects supported by the U.S. Agency for International Development and PEPFAR (EpiC, 2020). In October 2020, the National Health Security Office and the Social Security Insurance Scheme unified antiretroviral guidelines to allow six-month multi-month dispensing supply for all eligible people living with HIV (UNAIDS, 2020c). Among the Asia region, Thailand reported the highest volume of six-month multi-month dispensing in fiscal year 2020 (U.S. Department of State, 2021).

Thailand has made commendable progress toward ending the HIV epidemic and enjoys the fiscal space necessary to enact innovative measures to close remaining gaps. Closing these gaps will require strategic prioritization directed toward young and vulnerable populations. Utilizing

[20] The others being Myanmar (Burma) and Lao PDR.
[21] Other lagging countries are Kazakhstan and the Philippines.

civil society to reach these groups is essential, which will require, in turn, advocacy and political will. For example, some groups working with sensitive key populations, such as people who inject drugs, continue to face operational challenges (Amnesty International, 2017). To fulfill commitments outlined in the 2017–2030 National AIDS Strategy, including reducing new infections to less than 1,000 per annum, Thailand needs an enabling environment that empowers civil society and reduces stigmatization and criminalization (National AIDS Committee, 2017).

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Vietnam

August 6, 2021

HIV Situational Context

In 2020, there were an estimated 250,000 people living with HIV in Vietnam (UNAIDS, 2020). The adult prevalence among the general population is 0.3%. Since the epidemic's peak in the early 2000s, the number of new infections has decreased from more than 20,000 to 6,100 in 2020, and AIDS-related deaths have decreased from 9,600 to 3,800 (see Figure 1) (HIV and AIDS Data Hub for Asia Pacific, 2020). However, among key populations, epidemic control has remained challenging and rates have increased in some regions. The main route of transmission is through injecting drugs followed by sexual transmission (Safarnejad et al., 2017). Controlling transmission among people who inject drugs has long been a national priority, but the share of new infections among men who have sex with men has grown significantly from 7% in 2010 to 21% in 2017 (UNAIDS, 2019). In 2013, Vietnam graduated to (lower) middle-income country status and has since experienced a subsequent decline in donor funding across development projects, including health and HIV. Still, in 2017, external funds made up more than half of the US$83 million-program (UNAIDS, 2018).

Figure 1. HIV Situational Snapshot

PROGRESS TOWARD 95-95-95 TARGETS

- 85% (213,097) of people living with HIV know their status
- 73% (155,974) of people who know their status are on antiretroviral therapy
- 97% (94,127) of patients on antiretroviral therapy have suppressed viral loads*

EPIDEMIOLOGY AND KEY POPULATIONS

- New infections: 6,100 ▼
- Prevalence among:
  - People who inject drugs: 12.7%
  - Sex workers: 3.1%
  - Men who have sex with men: 13.3%

HIV FINANCING

- Total spent in 2017: US$83 million
- 42% financed domestically
- 58% funded by external sources

DOMESTIC RESOURCE GAP

- 2020 total resource needs: US$99.5 million
- Domestic gap (optimistic): 58%
- Domestic gap (pessimistic): 65%

* Among those tested in 2020.
** Resource gap estimates do not include external or donor funding.
Data sources: HIV and AIDS Data Hub for Asia Pacific, 2020; UNAIDS, 2020; Global Fund, 2017

Macroeconomic Environment

Initially, Vietnam's handling of COVID-19 was heralded as a rare success story. Quick containment, contact tracing, and targeted testing contributed to the low caseload and death rate during 2020 and the first quarter of 2021. Additionally, the country saw the highest gross domestic product (GDP) growth in the Asia region and was one of the few to escape contraction, largely due to the increase in demand for rice exports (Dabla-Norris and Zhang, 2021; Savic, 2020). However, like the rest of the world, Vietnam saw a resurgence of COVID-19 cases in April 2021. On August 8, the country broke its daily record for a second time, with 9,690 new cases reported (Reuters, 2021a). In response, the government has issued movement restrictions in one-third of the country's cities and provinces,

including the capital city Hanoi (Reuters, 2021b). Thus far, the country has administered only about 9.4 million doses of vaccine, enough to fully immunize just 4.9% of the population (Reuters, 2021c).[22] Prior to the pandemic, the economy was expected to grow by an impressive 6.5% in 2020 (IMF, 2019); however, it is now estimated to have grown just under 3%, resulting in an estimated GDP of US$339.3 billion (see Table 1) (IMF, 2021). Ability to collect revenue is estimated to have decreased by 4.8 percentage points (relative to GDP), resulting in a loss of US$18.8 billion in 2020. Finally, general government expenditure has decreased by 5.1 percentage points (relative to GDP), resulting in a decrease of US$20.6 billion in public spending.

Government Health and HIV Spending

Priority to health (measured by public health expenditure as a proportion of general government expenditure) has increased steadily over recent years, rising from 8.9% in 2012 to 9.3% in 2018 (WHO, n.d.). To understand the country's capacity to increase domestic government spending on health and HIV given the economic and health impacts of COVID-19, Health Policy Plus (HP+) projected future funding levels based on two scenarios (see box). The results from these scenarios (see Table 1) represent the upper and lower bound estimates of potential health and HIV funding that could be available over the next three years. Under the optimistic scenario, HP+ estimates that 11.1% of general government expenditure is available to health in 2020, an amount that remains level through 2023. In addition, HIV spending represents 0.5% of the health budget each year, resulting in US$41.5–44.7 million available annually. However, under the pessimistic scenario, the overall health budget is deprioritized to 9.4% from 2021 to 2023, and HIV spending falls to 0.4% of the total health budget. The result is a 29% decrease in dollars available for HIV by 2023.

Optimistic scenario: Increases in government health spending during COVID-19 continue; HIV spending as a percentage of government health spending remains constant from 2020 to 2023.

Pessimistic scenario: Government health spending, which increases initially due to COVID-19 in 2020, returns to pre-pandemic levels as a percentage of general government expenditure from 2021 to 2023. HIV spending as a percentage of government health spending declines over time due to COVID-19-related shifts.

Table 1. Macroeconomic and Fiscal Projections (USD Millions), Vietnam, 2020–2023

Indicator	2020	2021	2022	2023
Gross domestic product projections	$339,252	$352,075	$375,411	$400,939
General government expenditure	$76,142	$71,725	$76,854	$82,008
Domestic health spending, *optimistic*	$8,429	$7,940	$8,508	$9,078
Domestic health spending, *pessimistic*	$8,429	$6,706	$7,186	$7,668
Domestic HIV spending, *optimistic*	$41.5	$39.1	$41.9	$44.7
Domestic HIV spending, *pessimistic*	$35.1	$27.9	$29.9	$31.9

[22] Assuming two doses equate to full coverage.

Discussion

Based on an HIV resource needs estimate of US$99,507,934 in 2020, HP+ estimated a 58% domestic funding gap under the optimistic scenario and a 65% funding gap under the pessimistic scenario for health (Global Fund, 2017). Vietnam has achieved near epidemic control despite the challenging situation of decreasing donor funding (U.S. Department of State, 2021). In 2019, HIV treatment was included under the country's Social Health Insurance scheme, supporting coverage for 48,000 patients (U.S. Department of State, 2021). As of 2020, an estimated 90% of people living with HIV had a Social Health Insurance card, and 106,000 of the 140,000 patients on antiretroviral therapy were expected to be covered through Social Health Insurance (PEPFAR, 2020). Testing and prevention services still need to be integrated into Social Health Insurance (UNAIDS, 2019). In 2017, only 14% of the total HIV program expenditure was allocated for key population prevention (UNAIDS, 2018). Further, in 2017, prevention for men who have sex with men only reached 28.7%, falling significantly short of the 70% target (U.S. Department of State, 2021).

COVID-19 has further challenged HIV service delivery, in particular case-finding. In the fall of 2020, Gilead Sciences, Inc. conducted a survey across 10 Asian countries including Vietnam to assess the impact of COVID-19 on HIV services. The survey found that nearly half of respondents experienced a disruption in visits to HIV facilities in 2020, with the largest impact affecting testing and dispensing of medicines. Specifically, the Northern Economic Zone of Vietnam reported low case-finding during fiscal year 2020, and all U.S. President's Emergency Plan for AIDS Relief-supported sites in the country fell short of the U.S. Department of State's (2021) treatment targets. The U.S. Department of State (2021) also notes that COVID-19 revealed weaknesses in Vietnam's capacity for procurement and forecasting of antiretrovirals.

Despite these challenges, COVID-19 has prompted service delivery innovations including the expansion of three-month multi-month dispensing as well as the rapid and successful scale-up of pre-exposure prophylaxis (PrEP) (Cassel, 2020). In fiscal year 2020, there were more than 8,000 new PrEP initiations (U.S. Department of State, 2021). Further innovations include community-based testing, self-testing, and assisted partner notification (UNAIDS, 2019; Nguyen et al., 2019). To capitalize on these gains, the government of Vietnam and implementing partners can continue to optimize case-finding strategies leveraging community-based outreach, while employing community monitoring to safeguard against stigmatization. There is a need for continued advocacy to ensure prevention and testing efforts are financed sustainably, whether through integration under Social Health Insurance or via new strategies such as public–private partnerships, social enterprises, or social contracting (UNAIDS, 2019). Finally, efficiency gains can be sought by strengthening supply chain capacity and continuing decentralization of testing down to the district level.

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