

U.S. HIV Investment in Cambodia Small Program, Big Opportunity

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Key Data²

71,000 people living with HIV

0.6 percent prevalence rate
among adults 15–49 years old

651 new annual HIV infections

1,800 annual
AIDS-related deaths

80 percent of HIV+ adults
and children receive ART

75 percent of HIV+ pregnant
women receive ART for
prevention of mother-to-child
transmission (PMTCT)

Progress toward UNAIDS's
90-90-90 goals³

83 percent (58,000) of
people living with HIV
know their HIV status

97 percent (57,000) know
their status and
are on treatment

81 percent (53,000) are
on treatment and are
virally suppressed

Introduction

Cambodia is heralded worldwide as an HIV success story. The southeast Asian nation may be the first country to target virtual elimination of HIV by 2025, after achieving control⁴ of its HIV epidemic more than a decade ago. Beyond a vaccine or a cure, virtual elimination of HIV is the next frontier for the global fight against the pandemic. Few countries are at a position in their HIV epidemics to set virtual elimination as a near-term goal.

However, Cambodia faces crucial challenges in its drive for virtual HIV elimination, including finding the remaining people living with HIV who are yet to be diagnosed, retaining current patients on antiretroviral treatment (ART), achieving viral suppression of those on treatment, and preventing new infections. Further, its weak health sector, lack of skilled health workers, and reliance on external funding, which has decreased in recent years, raise concerns about the long-term sustainability of Cambodia's success. Its efforts to overcome these challenges will serve as important lessons for other countries.

The U.S. government invests a very small amount annually in the Cambodia HIV response through the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and the Global Fund to Fight AIDS, Tuberculosis, and Malaria (Global Fund), but the potential benefits of the small investments far exceed the costs. In January 2017, the authors traveled to Cambodia to understand the U.S. government's HIV investment, how that investment is driving further gains against the HIV epidemic, the return on investment, and what challenges and opportunities lie ahead.

Striving for Virtual Elimination

Cambodia's HIV epidemic started in the early 1990s and by the late 1990s, the percentage of people living with HIV (prevalence rate) reached almost 2 percent of the Cambodian population. Because its HIV epidemic started later compared to its neighbors, the government and its partners borrowed lessons from others, including Thailand, and rapidly implemented a program that achieved epidemic control in the early 2000s. The rate of new infections dropped by more than 25 percent between 2001 and 2011.⁵

An estimated 71,000 Cambodians are currently living with HIV with an overall prevalence rate of 0.6 percent among adults 15–49 years old.⁶ There is slightly higher prevalence among young women 15–24 years old (0.2 percent) versus young men (0.1 percent). In 2015, there were an estimated 651 new HIV infections.⁷ Nearly 1800 Cambodians 15 years or older died of AIDS-related causes in 2016.⁸ Most people living with HIV live in Phnom Penh (the capital), Siem Reap, Battambang, Banteay Meanchey, Kandal, and Kampong Cham provinces.

Cambodia's HIV epidemic is concentrated in key population groups, which have much higher prevalence rates than the general population: 2.3 percent for men who have sex with men (MSM), 3.2 percent⁹ for female entertainment workers (FEWs), 5.7 percent¹⁰ for transgender persons, and nearly 25 percent for people who inject drugs (PWID). These figures are much lower than they were at the peak of the epidemic, for example 40 percent prevalence for FEWs,

COUNTRY BACKGROUND

In 1975, communist Khmer Rouge forces led by Pol Pot overthrew the government. During the Khmer Rouge regime, Cambodians suffered starvation and genocide. After the removal of Pol Pot from power in 1978, political turmoil and civil war plagued the country until the Paris Peace accords of 1991, which established a cease-fire and democratic elections. In-fighting and guerrilla warfare by Khmer Rouge persisted through 1999.

Cambodia is a constitutional monarchy with an elected parliament. The government is led by the Cambodian People's Party (CPP), which won the most recent national election in 2013, with strong opposition from the Cambodia National Rescue Party (CNRP).¹⁴ Communal elections were held in June 2017 and national elections are expected in 2018.

The country has been in recovery since the end of the Khmer Rouge and has experienced explosive economic growth in the last 10 years. The economy has been increasing at an estimated 7 percent per year, which is slightly higher than China's growth estimated at 6.6 percent.¹⁵ In 2016, the World Bank designated Cambodia as a lower-middle-income country with a gross national income (GNI) of \$1070 per capita. Nearly 18 percent of Cambodia's nearly 16 million people are below the national poverty line.

Cambodia relies heavily on textiles, tourism, and agricultural activities for its sources of income.¹⁶ The country is continuing to face challenges rebuilding after the end of the Khmer Rouge regime. Cambodia has a long way to go to meet its Sustainable Development Goals especially with more than 50 percent of the population younger than 25 years of age.¹⁷ [However] Cambodia is also among the most corrupt countries in the world; it is ranked 156 out of 176 countries for public sector corruption.¹⁸

and the population sizes of these groups are believed to be quite small.

The government's virtual elimination goals are outlined in the Strategic Plan for HIV/AIDS and STI Prevention and Control in the Health Sector in Cambodia. Targeting virtual elimination also puts Cambodia on track to reach UNAIDS's 90-90-90 goals¹¹ by 2020, which corresponds to 90 percent of people living with HIV knowing their status, 90 percent of those who are diagnosed being on treatment, and 90 percent of those who are on treatment being virally suppressed and unable to pass on the virus to others. By 2025, Cambodia is aiming to achieve 95-95-95, fewer than three new infections per year per 100,000 population, and less than 5 percent mother-to-child HIV transmission rate.¹²

Cambodia has been tremendously successful reaching its 90-90-90 goals, particularly in putting patients on treatment, but has struggled in testing and new case identification. Approximately 57,000 or 80 percent of Cambodians living with HIV were on ART at the end of 2016.¹³ In 2015, 83 percent of people living with HIV knew their status, nearly 91 percent of those were on ART, but only 64 percent of those on ART were virally suppressed. As of the end of 2016, the percentage of people living with HIV who knew their status remained at 83 percent, but the percentage of those are on ART increased to 97 percent. Cambodia also made progress in achieving viral suppression, with an increase to 81 percent in 2016.

Governance and Financing

Government of Cambodia

Cambodia's HIV success is a point of pride for the government and people and can be credited to many factors including its political leadership, adoption of successful models from its neighbors and other countries, and its creativity to adapt to changing epidemic circumstances. The success is a testament to sustained champions in government, including messages from the prime minister and first lady on condom use and prevention over the last 25 years. Between political will and donor financing, the HIV program is well-funded and seen as the gold standard, but there is little crossover between HIV and the rest of health system.

The National AIDS Authority serves as the coordinating body working across the health and other sectors. The National Centre for HIV/AIDS, Dermatology and STD Control (NCHADS) is the technical lead within the Ministry of Health for "recommending and implementing

policies and strategies for the health sector response to HIV and AIDS as well as STDs [sexually transmitted diseases].”¹⁹ NCHADS also manages the Global Fund HIV funding disbursement. The Ministry of Health itself is seen as ineffective and there is little coordination between NCHADS and other parts of the ministry. There have also been corruption issues, particularly related to the ministry’s role as principal recipient of the Global Fund malaria²⁰ and health systems strengthening grants²¹, which have affected HIV programming.

The government has been quick to adopt new policy guidelines but slower to move toward full implementation. For example, Test and Start guidelines that instruct providers to put patients on ART as soon as they test positive for HIV were approved in August 2016, but implementation did not start until December. The government also has been adaptive in responding to the variations in its HIV epidemic. In its 2015–2020 HIV strategic plan, the government created new models for reaching different geographies (Phnom Penh, other urban areas, and rural areas) and populations affected by HIV. NCHADS has adjusted its strategies to reach key population groups with different prevention interventions and other services based on risk factors.

The government increased its HIV funding from \$4.6 million in 2009 to \$8.2 million in 2015, representing approximately 17 percent of the HIV response.²² It will purchase \$1.5 million²³ worth of ART in 2017 through UNICEF to take advantage of bulk pricing.

Approximately 60 percent of all health expenditures are out of pocket. However, many Cambodians are very poor and unable to afford health services. In recognition, the government and development partners collaborated to create the Health Equity Fund (HEF) system. Patients utilizing the HEF do not pay for services. An estimated 25 percent of people living with HIV who are on ART benefit from the HEF, which covers some HIV-related fees, but not ART. In 2014, the total HEF expenditure was \$11,557,675.²⁴ The national government had previously contributed 40 percent of the HEF annual cost, while donors supported 60 percent. Those percentages have now switched. The HEF could become a model social safety net in the future but a nationwide framework has yet to be created.

U.S. Government

The U.S. government reestablished full diplomatic relations with Cambodia in 1993 following several decades of intermittent relationships due to the ongoing political conflict in Cambodia.³¹ U.S. foreign assistance

HEALTH EQUITY FUNDS

The HEF system is a financial mechanism for improving poor Cambodians’ access to health services.²⁵ Established by nongovernmental organizations in the early 2000s, the HEFs have since become a national social health protection system.²⁶ Cambodia employs a “pre-identification” system that aims to identify poor individuals before they seek hospital care with local governance structures identifying poor households eligible for the HEF. Village representative groups (VRGs) conduct household interviews, draft lists of poor households after community feedback, which then must be reviewed and approved by Commune Councils. Poor households are entered into a national database and receive HEF cards with photos of the household for use at public health facilities.²⁷ “Post-identification” is also available to poor individuals who arrive at hospitals without HEF cards.²⁸

The HEF covers both direct and indirect healthcare costs, including travel and caretaker food expenses.²⁹ Use of the HEF has significantly increased health service utilization by Cambodia’s poor (by 2011, use of hospital services more than tripled and exceeded use by nonpoor), improved quality of healthcare (financially incentivized when linked with HEFs), reduced household healthcare debt, and improved confidence in public health facilities and services.³⁰

activities include programs for health, education, governance, economic growth, and demining. The U.S. government started its HIV program in Cambodia in the early 2000s. Compared to the large programs in Africa, the U.S. government invests a very small amount annually in Cambodia through PEPFAR. Over time, the level of investment has decreased from a high of \$19 million per year to \$12 million for FY 2017.

PEPFAR previously funded direct service delivery in support of the national system. Until 2013, PEPFAR funded approximately 90 percent of prevention services for key population groups. However, in its 2015 Country Operational Plan (COP), PEPFAR outlined a strategy to shift from direct service delivery to a technical assistance approach focused on high burden provinces for greater efficiency and impact in line with global PEPFAR objectives. PEPFAR transitioned out of 9 of the 15 provinces in which it was working to focus on Phnom Penh, Siem Reap, Battambang, Banteay Meanchey, Kampong Cham, and Pursat provinces. PEPFAR detailed a further shift in its 2017 COP to eliminate all site-level activities and focus on assisting the government with scale-up of priority activities nationwide.³² Its key strategic objectives include increasing sustainable financing from the government of Cambodia and strengthening national systems to find those not yet diagnosed and get them on treatment and rapidly identify and respond to new infections.

Other Donors

Approximately 75 percent of the national HIV response is funded by PEPFAR and the Global Fund. The Global Fund has invested more than \$453 million in Cambodia, with nearly \$249 million for HIV.³³ Global Fund HIV resources purchase 83 percent of antiretroviral drugs (ARVs), 99 percent of HIV test kits, and 100 percent of condoms and viral load commodities. The Global Fund also supports the majority of key population service delivery at community sites and HIV-focused facilities. In late 2016, the Global Fund announced \$41.6 million for HIV in Cambodia, as part of its 2017–2019 funding allocations.³⁴

Other development partners involved in the HIV response include the World Health Organization (WHO), UNICEF, UNAIDS, and the Clinton Health Access Initiative (CHAI), which account for approximately 2.5 percent of HIV funding.³⁵ In addition, the Australian Department of Foreign Affairs and Trade (DFAT), German and French Embassies, World Bank, Japan International Cooperation Agency (JICA), and Korean International Cooperation Agency (KOICA) engage on health systems strengthening

activities not specifically related to HIV. Both the German and French Embassies have been active on the Global Fund Country Coordinating Committee (CCC).

Since a peak in 2010, external support for Cambodia's HIV response has decreased each year—from \$55.6 million in 2010 to \$38.7 million in 2015.³⁶ Overall total funding for HIV has decreased since 2010, since the incremental increases from the government have not offset the lost external support. There are concerns that Cambodia's attainment of lower-middle-income status will lead some partners to further redirect funding to countries with more critical need.

Challenges to Achieving Virtual Elimination

Despite its successes, Cambodia faces major challenges in its ability to achieve virtual elimination and sustain success in the face of decreasing donor support. In many ways, Cambodia has more in common with countries in sub-Saharan Africa than Thailand. It is still in a postwar recovery period, has a weak health sector, limited government capacity in the number of skilled healthcare workers, attrition largely due to low salaries, low investment in country infrastructure, corruption, and a youth bulge. Years of donor health money has made it easy for the government to focus elsewhere.

Cambodia must create its own way toward virtual elimination as there are no HIV-specific models upon which to draw. Unlike polio and malaria, there are currently no global guidelines defining virtual elimination of HIV, how to achieve it, nor how to sustain it once achieved. An effort is currently underway at the WHO to create such guidelines. Cambodia and its partners are not only attempting something that has not yet been achieved but helping to establish what it takes to achieve virtual elimination of HIV for the world, including the financial and human resources needed to identify the last remaining undiagnosed and initiate them on treatment.

Finding and getting those individuals on treatment is critical to whether Cambodia achieves its virtual elimination goal. Cambodia has been very successful with initiating patients on ART after diagnosis. The challenge is finding the other 17 percent of people living with HIV (just over 12,000) in Cambodia who don't yet know their HIV status.³⁷ Finding these individuals is proving difficult.

It is unclear what risk factors are driving newly identified infections. PEPFAR's 2016 program data was unable to identify risk for 73 percent of those newly diagnosed.³⁸

Individuals tend not to self-identify as a member of a key population group; only 9 percent were identified in PEPFAR program data as falling in one of the groups. Asian Epidemic Model³⁹ analysis indicates that more than half of new 2016 infections were through heterosexual transmission. A 2014 cluster of more than 200 infections was linked to infusions and unsafe injections by unlicensed medical practitioners (see sidebar). Officials in Phnom Penh also mentioned that husbands will visit FEWs without their wives knowing, contract and pass on the virus, which will be diagnosed much later when both are very sick and unable to connect the sexual encounter to the infection.

Lack of HIV knowledge among Cambodians is an issue in ascertaining risk and properly linking those at high risk to testing and further services. Recent surveys have found that health care providers and ordinary Cambodians have little knowledge about how HIV is transmitted and the key risk factors. The Cambodian Demographic Health Surveys (DHS) conducted in 2010 and 2014 found that overall knowledge about HIV prevention decreased among the general population between the surveys.⁴⁰ Less than 40 percent of young people 15–24 years old in 2014 could correctly identify ways of preventing the sexual transmission of HIV and could reject major misconceptions about HIV transmission. The situation appears to be getting worse, with the percentage down from 44.2 percent in 2010.⁴¹ Further, multiple concurrent sexual partnerships have increased and condom use in those partnerships decreased twofold between the 2010 DHS and 2014 DHS. During the visit to Phnom Penh, there were no visible signs or placards with HIV prevention messages or information on testing or treatment services.

Understanding how and why Cambodians are getting infected with HIV will be key reaching the 95 percent diagnosis goal by 2025. Complicating matters is that most newly diagnosed are severely immunosuppressed, indicating a long-term infection. Recency tests are one newly emerging technology that can be helpful by extrapolating how old the HIV infection is, which can assist with identifying the risk factors that were present at the time of infection and with contact tracing.

Stigma and discrimination continue to be a barrier to attracting key populations into testing and services. Police crackdowns on drug users have driven people away from services. Law enforcement sometimes conflates condom use with sex work, which may negatively affect overall condom use. The National

INFUSION CULTURE

Health service delivery in Cambodia is characterized by the persistent demand for and routine supply of unneeded medical injections and infusions—particularly in the vastly preferred private sector.⁴² The Cambodian government estimated that 50 percent of these medical injections are unnecessary, and concerns around unsafe injection practices have been reported for over a decade.⁴³

An affinity for superfluous injections and intravenous drips has long been observed in Cambodia. In Cambodia's fragmented health system this poses a particular threat as the overuse of these procedures accompanies weak regulation of the health facilities outside the public sector that patients most often visit. Despite national policies and clinical guidelines, the Cambodian government has struggled to regulate services outside of the sparsely utilized public sector.⁴⁴

In late-2014, an unusual, localized HIV outbreak in Roka, a small commune in Battambang province, brought attention to the risks associated with this “infusion culture.” The CDC reported that most of these 242 new, confirmed cases of HIV could be traced back to a single strain of the virus that was primarily spread by way of unsafe injection practices by an unlicensed health practitioner. The Cambodian government responded by cracking down on unlicensed providers and drafting new policies aimed at reducing demand for injectables and improving safety.^{45, 46}

AIDS Authority indicated that it will work to educate law enforcement personnel about condom use and work more in tandem to ensure HIV goals are not subverted.

Several experts we spoke with wondered if the Asian Epidemic Model, which is used to estimate the number of people living with HIV in the Asian region based on regional factors, is overstating the number of remaining undiagnosed cases in Cambodia. Based on the program data and challenges in finding new patients, some experts wondered whether the estimated number of undiagnosed actually exist.

Sustaining Success

Cambodia offers an opportunity to learn what systems, policies, and resources are needed to not only achieve virtual elimination of HIV, but also to sustain that success into the future. As donor funding continues to decline, the country will need the capacity to finance, manage services, and monitor for new cases to ensure that the epidemic remains controlled.

PEPFAR states that a country has reached sustainability of an HIV response when it “has the enabling environment, services, systems, and resources required to effectively and efficiently control the epidemic.”⁴⁷ Per this definition, Cambodia is doing well in creating an enabling environment and is incrementally increasing its domestic investment in HIV, but still has a long way to go in terms of services and systems. According to the 2016 Sustainability Index and Dashboard (SID) completed for the country,⁴⁸ Cambodia has reached or is approaching sustainability in planning and coordination, policies and governance, and technical and allocative efficiencies. However, the score for the other 12 elements were either “yellow” or “red,” indicating emerging sustainability that requires some investment or unsustainable and in need significant investments, respectively.⁴⁹ In the 2016 SID, domestic resource mobilization, commodity security and supply chain, and private-sector engagement all were cited as unsustainable; however, only one element was cited as unsustainable in the 2017 SID.

Financial Capacity

Cambodia’s overall capacity to finance its HIV response was raised repeatedly as a key concern for the sustainability of the country’s HIV success. The country never finalized its investment case for HIV, touted by UNAIDS, to make the business argument for HIV investment to the Ministry of Finance and others. There also is no shared vision for how financial responsibility should or will transition to the government as donors reduce their resources. Both PEPFAR and the Global Fund

have downward financial trajectories, but no defined plan for transition or an end goal. PEPFAR reportedly developed a blueprint for its transition in 2015, but it was never shared with the government or other partners, nor was it finalized. Further, it is unclear whether there will be a future, precipitous drop-off in U.S. support. The U.S. government’s level of investment has stayed between \$15 million and \$19.25 million from FY 2006 through FY 2012 and has since been steadily reducing. The Trump administration’s FY 2018 budget request would cut the HIV funding for Cambodia by more than half to \$5 million.⁵⁰ There is no defined benchmark for success in Cambodia nor a cogent plan for how the U.S. government’s relationship with the country should evolve to reach that point.

Weak Public Health Sector and Siloed HIV Care

One area that repeatedly came up in discussion during the trip was Cambodia’s weak public health sector. HIV services remain siloed from the rest of the health system, compounding HIV case detection, leading to quality of care concerns, and reducing the ability to institute a chronic care approach to HIV patient management. According to PEPFAR, “Sustainable epidemic control requires those on life-long treatment be systematically monitored and assisted in immediately resolving any problems they encounter to adhering to their treatment regimen and remaining virally suppressed.”⁵¹ Under the SID National Health System and Service Delivery domain, four out of the five elements were indicated to require additional investment to support emerging sustainability. The government argued that human resources for health should be listed as unsustainable in addition to commodity security and supply chain in the 2016 SID; all were indicated to show emerging sustainability in the 2017 SID.

Availability and quality of care are also issues. In 2013, there were only 0.17 physicians per 1,000 people,⁵² and many doctors subsidize their income outside of their public clinics. The government does not conduct any oversight to ensure that private providers implement national guidelines. The infusion culture noted above is also a quality-of-care concern.

Retaining HIV patients in care and on treatment, while sustaining their viral suppression, will determine Cambodia’s success in controlling and eliminating HIV. Patients with undetectable HIV viral loads are unable to pass on the virus. Cambodia has introduced an approach called Boosted Integrated Active Case Management

(B-IACM) to help track and retain key population patients through the HIV care cascade. B-IACM also includes contact tracing to identify and help connect to services those who might have been exposed to HIV by that individual.

Meeting the future health needs of HIV patients as they remain on treatment for decades will also influence Cambodia's ability to sustain HIV epidemic control and elimination. Cambodia faces an increasing burden of noncommunicable disease with rising rates of cardiovascular disease, cancer, and respiratory diseases, while malnutrition and stunting persist as critical issues, especially for children. People living with HIV are more susceptible to these infections and conditions⁵³ making it more important to have their ongoing chronic care integrated into the overall health system as opposed to siloed, standalone HIV care. Further, with approximately 50 percent of the population 24 years old or younger, now is the time for Cambodia to build decentralized primary and chronic health care systems that enable it to care adequately for its future population.⁵⁴

Monitoring to Avoid a Second Wave of Infection

Surveillance and monitoring will be continuously needed to identify new cases when they occur to deter or contain a resurgence of the HIV epidemic, but Cambodia's capacity to do so was cited as needing additional investment in the 2016 and 2017 SIDs. HIV data systems have been separate from other health data collection but effort is being made to integrate the systems. Cambodia also will need to monitor for drug resistance among current patients on ART and those newly diagnosed with HIV.

In addition, Cambodia has yet to develop an effective mechanism for directly supporting civil society organizations that provide the outreach and service delivery to key population groups, which will be important as donors transition their support.

Remarkable progress has been made against HIV and the world has a lot to learn about the partnership that has brought the country beyond HIV epidemic control to target virtual HIV elimination. However, the success is fragile given the weak health system and reliance on external donor support. The country needs to look beyond achievement of its 2025 goals and plan for success through an incremental transition [plan] of external HIV support to domestic ownership of the full response as well as an approach that builds the entire health system to support HIV detection and care into the future. Prevention efforts must continue to avoid a second wave of infections with health education on transmission and infusion risks.

For the U.S. government, the potential benefits of its small investment in Cambodia's HIV response far exceed the costs. PEPFAR and the Global Fund should:

Continue its partnership with Cambodia as the country seeks to achieve and

1 sustain virtual elimination of HIV. The lessons from that process will yield benefits back to the U.S. epidemic as well as to PEPFAR programs worldwide. Continuing investment in Cambodia provides the opportunity to learn how to sustain epidemic control, understand the pitfalls, identify best practices, and clarify the costs of reaching the last HIV positive patients who are yet to know their status.

2 Define for themselves what it means to be successful in Cambodia and what their future engagement will ideally look like. Both programs should consider what their downward funding trajectories mean for how they support Cambodia. PEPFAR, especially, should define what its thresholds for transition (e.g., financial, programmatic) will be and whether transition equates to an exit strategy or to a partnership that is focused on technical collaboration aimed at achieving virtual elimination of HIV in Cambodia. Creation of well-articulated financial and programmatic transition strategy in Cambodia should be linked to Cambodia's national strategies and coordinated with the government and other stakeholders.

3 Avoid cutting off its HIV support abruptly, which would likely leave gaps in Cambodia's national HIV response. PEPFAR should continue to catalyze efforts for Cambodia to take on full financial responsibility for its HIV program but phase-out strategies should be country appropriate and managed in close consultation with the government and other partners.⁵⁵

4 Support strengthening of Cambodia's health sector to enable the country to sustain quality healthcare to people living with HIV and integrate HIV service delivery as a larger chronic care approach. The U.S. government should consider whether ongoing support for HIV surveillance and case detection can be merged with global health security goals to detect and contain infectious disease outbreaks.

Notes

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