Investing Further in Health: Guyana

April 2020

Guyana's National Health Strategy, Health Vision 2020, aims to reduce health inequities and improve access to high-quality health services (Ministry of Health, 2013). Health Vision 2020 acknowledges that achieving universal health coverage will require a renewed focus on primary healthcare, increased financial risk protection, and improved access to health services. However, current levels of financing for health are inadequate to meet the needs of the country and the ambitious goals it has set. Nonetheless, Guyana has an opportunity to build upon recent progress and further increase domestic investment in health to achieve its universal health coverage goal.

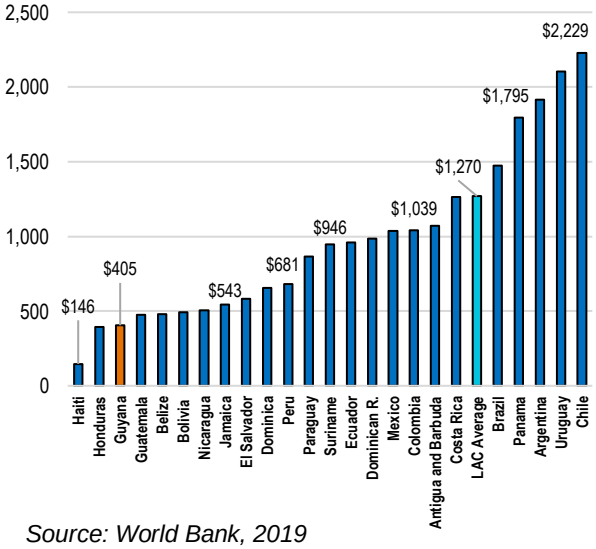
Health investments have a high return on investment (RoI). There is a large body of evidence that shows the positive association of health investments and development (Basta et al., 1979; Bleakley, 2003; Bleakley, 2010; Lucas, 2010). The RoI for each US dollar of government spending on health has an estimated return of US$4.3 (Reeves et al., 2013). A 2016 meta-study identified a very favorable RoI for public health interventions with an economic return of 14 to one (Masters et al., 2017). Investing in health will generate savings to the health system and foster prosperity as well as economic growth.

Greater investment of public resources to achieve the overarching target of universal health coverage. The Regional Strategy for Universal Access to Health and Universal Health Coverage advises countries in Latin America and the Caribbean (LAC) to allocate six percent of their gross domestic product (GDP) toward public spending on health. A recent international study estimates that upper-middle-income countries like Guyana will need to spend an average of US$536 per person in total health expenditure to achieve the health-related Sustainable Development Goals (SDGs) by 2030 (Stenberg et al., 2017). Government health expenditure as a percentage of GDP increased from 1.7 percent in 2010 to 3 percent in 2017 (World Bank, 2019), but continues to be well below the six percent regional target. Total health expenditure as a percentage of GDP fell over the same period and overall spending levels are not on pace to meet the estimated 2030 per capita need. In fact, Guyana's health expenditure per capita is US$405 (Purchasing Power Parity - PPP), about 75 percent of the US$536 target and the lowest among upper-

Why should Guyana invest further in health?

1. **Health investments have a high return on investment.**
2. **Greater investment of public resources to achieve the overarching target of universal health coverage.**
3. **Public spending on health reduces poverty by decreasing out-of-pocket payments and catastrophic health expenditure.**
4. **Economic growth creates fiscal space for greater government health expenditure.**
5. **Investing in global health security is essential to protect lives and the economy.**

Figure 1. Total health expenditure per capita in international dollars, 2017



Source: World Bank, 2019

Figure 2. Sources of health expenditure in Guyana

Source: World Bank, 2019

middle-income countries in the region (Figure 1). Despite this, growth in fiscal space gives Guyana the opportunity to fill this gap and make progress toward health spending targets.

Public spending on health reduces poverty by decreasing out-of-pocket payments and catastrophic health expenditure. In 2006, the last time the official national poverty rate was calculated, 36 percent of Guyanese were classified as poor and 18 percent as living in extreme poverty (UNDP, 2018). Among Amerindians, one of the country's most vulnerable groups, 77 percent were classified as poor (UNDP, 2018). Particularly for poor and vulnerable groups, out-of-pocket expenditures on health can be significant and sometimes impoverishing. In 2017, out-of-pocket expenditure represented 32 percent of total health expenditure, matching the regional average for upper-middle-income countries in Latin America and the Caribbean (Pan American Health Organization [PAHO], 2019; World Bank, 2019). Catastrophic expenditure occurs when out-of-pocket health expenditure represents a substantial percentage of household expenditure—usually 25 percent of total expenditure (PAHO, 2019). However, Guyana has made progress in reducing out-of-pocket expenditure on health, from 43 percent of total health expenditure in 2010 to 32 percent in 2017 (Figure 2). By increasing government expenditure on health, Guyana can further reduce the financial burden of health services on the country's poorest and most vulnerable populations.

Economic growth creates fiscal space for greater government health expenditure. From 2010 to 2017, Guyana's GDP (in 2010 constant US$) grew from US$2.27 billion to US$2.97 billion—an increase of 31 percent. Over the same period, total government expenditure increased from US$703 million to US$1.03 billion, a 47 percent increase. Government health expenditure grew by 125 percent from US$39.6 million to US$88.5 million and as a share of total government expenditure from 5.6 percent to 8.5 percent (World Bank, 2019). Guyana has experienced sustained economic growth over the past few years, and the International Monetary Fund (IMF) projects GDP to grow by 52% in 2020 from the 4.4 percent observed in 2019 (IMF, 2020a). Due to the discovery of massive oil reserves off the coast of Guyana, the country's GDP is expected to rise from US$3.4 billion in 2016 (current US$) to US$13 billion by 2025 (Seefeldt, 2019). Population health has been directly linked to income growth in developing countries, where investments in health can lead to a more productive, educated, and therefore wealthier population (Bloom & Canning, 2008). By harnessing this economic growth and continuing to prioritize health within the government budget, Guyana can make significant progress toward meeting universal health coverage and the SDGs.

Investing in global health security is essential to protect lives and the economy. Although it is too early to quantify the impact of COVID-19 at the national level, the global economy is projected to contract by minus3 percent in 2020. As economic activity normalizes, a rapid recuperation and grow by 5.8 percent is expected in 2021 (IMF, 2020b). In fact, getting the COVID-19 pandemic under control is required to save livelihoods. The course of the global health crisis and the fate of the global economy are inseparably intertwined and fighting the pandemic is a prerequisite for the economy to rebound (Georgieva & Ghebreyesus, 2020). Epidemic preparedness is an investment to protect the economy (WHO, 2018a) and effective policies and investments to protect lives are essential to achieve human and economic health.

Conclusions

Guyana's Health Vision 2020 reflects the government commitment to achieve UHC, increase health expenditure and reduce out-of-pocket expenditures. To realize this vision, Guyana must increase its efforts to close health financing gaps, promote financial risk protection, reduce poverty, and spur further economic growth.

Investing Further in HIV

April 2020

HIV continues to pose a public health challenge for Guyana, which has one of the highest HIV prevalence rates in Latin America and the Caribbean. Since 2010, new HIV infections increased by 23 percent and AIDS-related deaths increased by 33 percent. In 2018, Guyana adopted the World Health Organization's (WHO) "Treat All" policy to initiate all identified people living with HIV on treatment. There was a large increase in annual domestic funding for HIV programming from US$1.3 million to US$2.2 million in 2017; however, this increase may not be aligned with potential gaps in the HIV response.

HIV has important economic impacts. The income of HIV-affected households is about 35 percent to 50 percent lower than that of non-affected households; and in some countries, HIV is also associated with a six percent increase in the likelihood of unemployment (Yamey et al., 2016). HIV, whether affecting students or caregivers, can also negatively impact educational outcomes including school attendance, behavior, and completion rates (Guo, 2012; Pufall, 2014), in turn affecting future economic productivity. By helping to avert these negative impacts, each dollar spent on HIV treatment and prevention can have a major positive economic impact.

Investing in HIV has high economic and social returns. The projected economic returns of the Fast-Track strategy to end the AIDS epidemic by 2030, a declaration adopted by the United Nations General Assembly, indicate that in the LAC region, HIV programming could yield US$2.6 in benefits for every dollar invested when considering productivity gains during 2017–2030 (Lamontagne, 2019). Spending on treatment yields a particularly high return on investment. For every dollar spent on antiretroviral therapy (ART), LAC countries obtain almost US$4 of returns in economic benefits (Forsythe et al., 2019). The Copenhagen Consensus (2015) reported that each dollar spent on HIV treatment generates up to US$10 in return through better health and higher productivity. Variations on the return of investment reflect differences in services compared, country contexts and the inclusion of social returns.

Why should Guyana invest further in HIV?

1. **Investment in HIV has important economic impacts.**
2. **Investing in HIV has high economic and social returns.**
3. **The government of Guyana should take ownership by filling the gaps in funding.**
4. **More resources are needed to sustain the progress Guyana has made in reducing prevalence among key populations and to achieve epidemic control.**
5. **Investing in key populations is critical to ensure progress is made in containing the HIV epidemic.**
6. **Investing now in prevention—in addition to treatment as prevention—reduces the number of new cases and future resource needs.**

The government of Guyana should take ownership by filling the gaps in funding. Although the Guyanese government has had a steady increase in domestic funding, there are large funding gaps that are yet to be filled. The government must take ownership and allocate the resources needed to fill these gaps or risk losing the gains that have already been made.

Each dollar spent on HIV treatment generates up to US$10 through better health and higher productivity if other social benefits are considered.

Source: Copenhagen Consensus Center

More resources are needed to sustain the progress Guyana has made in reducing prevalence among key populations and to achieve epidemic control. Adult HIV prevalence in Guyana declined from 2.4 percent in 2004 to 1.5 percent in 2010 and further to 1.4 percent in 2018 (Guyana Presidential Commission on HIV/AIDS, 2015; UNAIDS, 2019).

The country has also made significant gains in reducing prevalence among key populations. Prevalence among men who have sex with men, for example, fell from 19.4 percent in 2004 to 5.5 percent in 2014. Despite this progress, Guyana's overall HIV prevalence rate has remained steady at around 1.5 percent over the last decade, one of the highest rates in the region (World Bank, 2019). Furthermore, with the number of new cases increasing, more resources will be needed to treat people living with HIV and reduce transmission.

Investing in key populations is critical to ensure progress is made in containing the HIV epidemic. Key populations continue to be disproportionately burdened by HIV with a prevalence much higher than the 1.4 percent of the general population. Without addressing this high HIV prevalence among key populations, including men who have sex with men (4.9 percent), sex workers (6.1 percent), prisoners (1.7 percent) and transgender communities (8.4 percent), epidemic control cannot be achieved (UNAIDS, 2020.

Guyana needs to mobilize domestic resources to ensure that key populations are not left behind, protect gains, and invest further to achieve epidemic control.

Investing now in prevention—in addition to treatment as prevention— reduces the number of new cases and future resource needs. Prevention programs are often the first entry point for HIV testing and treatment and can lead to greater control of the epidemic. International evaluations have demonstrated that HIV prevention programs that benefit groups at high risk and that are implemented at scale are cost-effective, providing good value for money in low-resource settings (Vassall et al., 2014). Currently, HIV prevention services for key populations have been provided with donor's funding; however, these services are not provided on an adequate scale or with sufficient intensity to reach the people who need them the most. In 2016, only 3 percent of the country's HIV budget was spent on prevention services (Guyana Ministry of Public Health, 2018). Ultimately, further investment in prevention efforts is critical to ensure a comprehensive response.

Conclusions

Guyana must invest further in HIV to reduce HIV-related deaths and the number of new infections, as well as to sustain the progress the country has made in reducing the number of new cases among key populations. Reductions in external financing create financing gaps that threaten to reverse gains, particularly for key populations. Investing now in prevention will reduce the number of new cases and future resource needs. In contrast, the cost of inaction will be more infections, more lives lost, and a greater burden to the health sector

Investing Further in Tuberculosis

April 2020

Despite Guyana's progress toward reducing the incidence of tuberculosis (TB) (Figure 3), the country has the highest TB-related mortality rate in Latin America and the Caribbean, with an estimated 18 TB-related deaths per 100,000 population in 2018 (WHO, 2019). Addressing Guyana's TB mortality burden is a critical action item in Guyana's health agenda (Edwards et al., 2019). Of high concern is the high proportion of multi-drug-resistant (MDR) TB cases, as well as a TB-HIV co-infection rate of 16 percent (PAHO Guyana, 2019).

TB can have catastrophic financial impacts on households. When a family member has TB, the family suffers a decrease in income due to lost earnings. For low- and middle-income countries, household income is estimated to decline by an average of 39 percent when a member of the family has TB (Tanimura et al., 2014). With the poverty rate in Guyana relatively high (36 percent in 2006) (UNDP, 2018) and out-of-pocket health expenditure at 32 percent of total health expenditure in 2017 (PAHO, 2019; World Bank, 2019), catastrophic costs are a serious threat. Catastrophic health expenditure for TB can be devastating, pushing households into poverty.

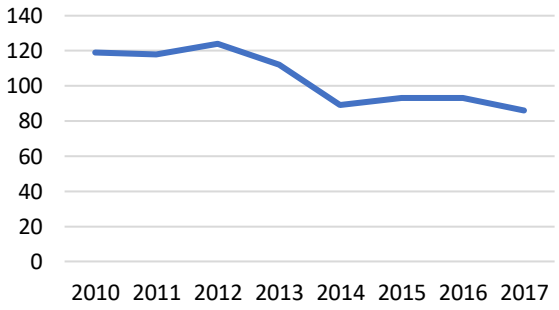
Spending on TB yields a high return on investment. Ultimately, it is more cost-effective to invest in TB now to prevent the spread of the disease than to pay for treatment later when the disease, and potentially drug resistance, has spread. As Figure 4 shows, the government should invest more in TB programs today to make up for the upcoming funding gaps to successfully eliminate TB in Guyana. Evidence on the cost-effectiveness and benefits of expanded financing for TB control suggests that such investments will yield a high economic return (Reid et al., 2019). Each dollar spent on TB generates up to US$30 through better health and higher productivity and up to US$43 if other social benefits are considered (Copenhagen Consensus, 2015). TB should be prioritized, as treatment has a large return on investment.

Each dollar spent on TB generates up to US$30 through better health and higher productivity and can reach up to US$43 if other social benefits are considered.

Why should Guyana invest further in TB?

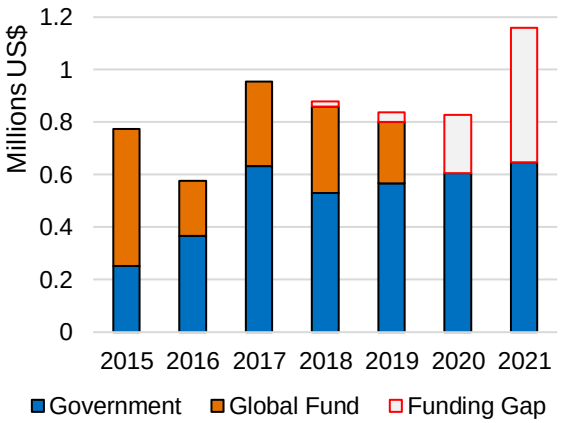
1. **TB can have catastrophic financial impacts on households.**
2. **Spending on TB yields a high return on investment.**
3. **Investment in screening and ensuring adherence through DOTS among populations at high risk can produce impressive results.**
4. **Investment in TB treatment success can prevent new cases.**
5. **Under-investment enables for the emergence of drug resistance, increasing the long-term costs of TB treatment.**

Figure 3. Incidence of tuberculosis per 100,000 population



Source: World Bank, 2019

Figure 4. Funding for tuberculosis, by source



Source. Guyana: country funding landscape table submitted to the Global Fund

Investment in screening and ensuring adherence through DOTS among populations at high risk can produce impressive results. In Guyana, the annual number of new cases of TB in prisons fluctuated between year2002 to 2009 and peaked at 42 new cases in 2012; however, in 2015, there were only nine new cases, the lowest in the previous 15 years. This reduction was due to intensive screening and success with directly observed treatment, short course (DOTS) in the prisons. Due to a greater emphasis on DOTS, the 2017 cohort of TB patients in the prisons had a treatment success rate of 91 percent (PAHO Guyana, 2019). If this type of success can be replicated among other populations at high risk, Guyana has the potential to move closer toward the goal of eliminating TB, as its incidence is already on a downward trend (Figure 3).

Investment in TB treatment success can prevent new cases. At 71 percent, the TB treatment success rate for 2016 was below the regional average of 75 percent (PAHO, 2018). The treatment success rate for MDR-TB cases was even lower, at 60 percent. To achieve the WHO target for treatment success of 90 percent by 2030, greater investment is needed, specifically, investment in human resources (Baker et al., 2017) to prevent loss to follow-up and ensure standardized treatment with supervision, patient support and adherence through DOTS.

Under-investment allows for the emergence of drug-resistance, increasing the long-term costs of TB treatment. The emergence of MDR-TB poses a major health threat and could put the progress Guyana has made in TB control at risk. Drug resistance emerges when drugs are of poor quality, patients stop treatment prematurely, anti-TB medicines are used inappropriately, and prescriptions are incorrect (WHO, 2019). Although MDR-TB is treatable and curable with the use of second-line drugs, these are extremely expensive. A review of 50 countries found that the mean treatment cost per patient in lower-middle income countries was US$273 for drug-sensitive TB, increasing to US$6,313 for MDR-TB (Laurence et al., 2015). Treatment options for MDR-TB are limited and require up to two years of treatment, often involving hospital stays, which put a burden on both households paying for expensive treatment and on hospitals which have to invest more time and resources toward patients with MDR-TB. The average MDR-TB patient in Guyana has to spend about 25 days in the hospital for treatment, compared to six days for the average patient (WHO, 2019).

Conclusions

Guyana must increase investment to prevent economic losses from avoidable TB-related mortality and morbidity. TB can have devastating financial impacts on households. Improving TB treatment success rates requires further investment, particularly through a focus on populations at high risk. Under-investment in TB allows for the emergence of drug resistance, increasing the long-term cost of TB treatment. For the national health system, it is more cost-effective to invest in TB prevention to ensure that DR-TB does not spread. Overall, spending on TB has a high return on investment, and Guyana will benefit from investing in a TB-free future.

Investing Further in Malaria

April 2020

Although there is a downward trend of malaria morbidity and mortality rates in Latin American and the Caribbean, malaria incidence is currently on the rise in Guyana (Figure 5). Malaria cases peaked in 2013, declined sharply the following year, and have been on the rise since 2015. A 5 percent increase in new cases was recorded in 2016 and again in 2017, suggesting control over the malaria epidemic is slipping and greater investment is needed to manage the situation.

Malaria control is affordable and investing in malaria pays off. Sustained malaria control is a low-cost intervention that brings countries closer to elimination. The cost to protect one person with an insecticide-treated bed net for one year is US$2.10. Similarly, diagnosis and treatment each cost less than one dollar, with one rapid diagnostic test at US$0.53 and treating one case of malaria with a full course of effective treatment at US$0.90. (Macepa, 2016). Sustained control could avert costs to the public health system and to households of treating resurgent malaria, while bringing countries one step closer to malaria elimination.

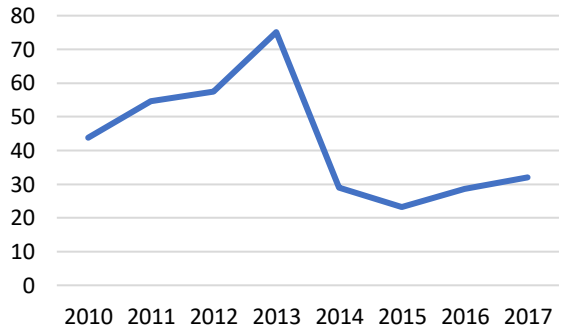
Spending on malaria yields a positive return on investment. The prevention and treatment of malaria are among the most cost-effective public health interventions. Tools to prevent and decrease malaria transmission are cost-effective with a cost of US$5–8 per case averted (Laxminarayan & Raykar, 2014). Other studies show that every dollar spent on malaria control brings a return of US$2–5 (Titus, 2012). The Copenhagen Consensus (2015) also reported that the benefit for every dollar spent can reach up to US$36 if the social benefits are considered. The prevention and treatment of malaria are among the most cost-effective public health interventions available today.

Investing in malaria saves both lives and money. Malaria control has a positive impact on the economy. It has been estimated that for each 10 percent reduction in malaria incidence, there is an additional 0.3 percent growth on the GDP. Malaria-free countries have five times greater economic growth than countries with malaria or reduced malaria (Gallup & Sachs, 2001).

Why should Guyana invest further in Malaria?

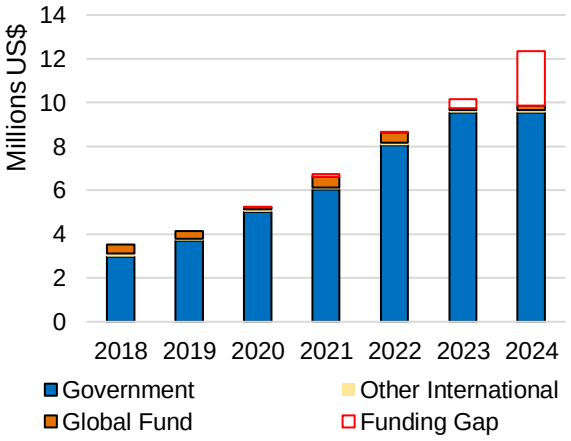
1. **Malaria control is affordable and investing in malaria pays off.**
2. **Spending on malaria yields a positive return on investment.**
3. **Investing in malaria saves both lives and money.**
4. **Stagnation in investment leads to a backslide in gains and an increase in the incidence of malaria.**
5. **Malaria control can create access to areas of land and natural resources that were previously inaccessible.**
6. **Investment in surveillance of malaria cases is important to accurately identify the number of cases and prevent a resurgence.**

Figure 5. Incidence of malaria per 1,000 population, Guyana



Source: World Bank, 2019

Figure 6. Funding for malaria, by source



Source. Guyana: country funding landscape table submitted to the Global Fund

Stagnation in investment leads to a backslide in gains and an increase in the incidence of malaria. Further investment is necessary to sustain the gains made from 2010 to 2015 and ensure that incidence remains on a downward trend. Currently, Guyana is on track to achieve a 20 to 40 percent reduction in cases by 2020 (WHO, 2018b); however, the country needs greater investment to reduce incidence and eliminate malaria by 2030 (WHO, 2018b). Despite the increase in domestic funding, the funding gap is increasing each year (Figure 6), suggesting that the resource needs will not be filled with the current level of domestic investment.

Malaria control can create access to areas of land and natural resources that were previously inaccessible. Malaria transmission has been linked to migration from the coast to hinterland regions to engage in economic activity associated with extractive industries, specifically gold mining (PAHO, 2017). When the gold price is high, mining operations increase, as do malaria cases. The geography of endemic areas continues to be a challenge for the prevention, early diagnosis, and treatment of malaria. However, if control over the malaria epidemic is achieved in these rural regions, these lands will become more accessible (Yamey et al., 2016). Safer environments allow for increased access to natural resources and greater productivity.

Malaria control is a highly cost-effective intervention, with a cost of just US$5–8 per case avoided. The benefit for every dollar spent can reach up to US$36 if the social benefits are considered.

Source: Copenhagen Consensus Center

Investment in surveillance of malaria cases is important to accurately identify the number of cases and prevent a resurgence. According to a rapid assessment of the malaria situation in Guyana conducted by PAHO/WHO in 2015, 42 percent of cases in 2013 and 44 percent of cases in 2014 were under-reported at the national level (PAHO, 2017). Accurate reporting contributes to better informed decisions by policymakers and can help ensure that the proper investments are being made for malaria control.

Conclusions

Guyana must invest further in malaria to reduce incidence, which is currently increasing. Spending on malaria has been proven to yield a positive return on investment. Investment in surveillance could help prevent a resurgence. Malaria control will likely lead to greater access to land with natural resources and stimulate economic productivity.

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