
# Accelerating US Progress in Combating Malaria Worldwide

## Recommendations for Maximizing Investments Toward a World Free From Malaria

PATH

PATH
455 Massachusetts Avenue, NW, Suite 1000
Washington, DC 20001

www.path.org

sites.path.org/advocacyandpolicy
advocacyandpolicy@path.org



Cover photo: PATH/Gabe Bienczycki.
Coumba Diouf (left) is a PATH-trained “community champion” in Senegal who educates her neighbors on recognizing and preventing malaria. Volunteers like Coumba are central to the “Zero Palu! Je m’engage!” (“Zero malaria starts with me!”) campaign, a national movement working toward a malaria-free Senegal.

# ACCELERATING US PROGRESS IN COMBATING MALARIA WORLDWIDE

## RECOMMENDATIONS FOR MAXIMIZING INVESTMENTS TOWARD A WORLD FREE FROM MALARIA

PATH/Gabe Bienczycki

In Sinafala village, Zambia, a health worker tests a child's blood for malaria. A sensitive field test is needed to rapidly detect low-level malaria infection.

## THE CASE FOR CONTINUED US LEADERSHIP AGAINST MALARIA

The Trump Administration and the 115th Congress have an unprecedented opportunity to build on the successes of the past and achieve a major win by making malaria history. Thanks to strong presidential leadership and bipartisan congressional support, the US government has made smart, strategic investments to combat malaria worldwide for more than a decade. These investments, alongside those of our partners, have yielded remarkable results in reducing the burden of the disease, strengthening health systems, and promoting economic growth in malaria-endemic countries, and we're closer than ever to the finish line.

Malaria prevention and treatment programs have averted 6.8 million deaths globally since 2000.[1] An estimated 263 million of the malaria cases averted by malaria control programs would have required care in the public sector, translating into $900 million in savings in government health care spending.[2] This progress could not have been accomplished without a sustained US commitment to combating the disease.

The work to defeat malaria is far from over, however. Malaria continues to have a devastating impact on people's health and productivity. Approximately 3.2 billion people remain at risk, and in 2015, there were an estimated 212 million new cases and 429,000 deaths worldwide.[1]

TABLE 1. **Estimated malaria deaths worldwide, 2000–2015.**

| | Estimated number of deaths | | | | | | | | Change (%) (2000–2015) |
|---|---|---|---|---|---|---|---|---|---|
| | 2000 | 2005 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | |
| All ages | 864,000 | 741,000 | 554,000 | 511,000 | 474,000 | 452,000 | 435,000 | 429,000 | -50% |
| Under 5 years of age | 753,000 | 616,000 | 428,000 | 387,000 | 351,000 | 330,000 | 315,000 | 303,000 | -60% |

Source: World Health Organization. *World Malaria Report 2016.*

More than 300,000 of these deaths are among children under five years of age; malaria still causes a child to die every two minutes. Malaria further deprives families of income and nations of human capacity and productivity by keeping adults away from work and children from school. Global gains in combating malaria are fragile, and a resurgence of the disease could be catastrophic.

From an economic perspective, what occurs in low- and middle-income countries affects the rest of the world. Because 95 percent of the world's consumers live outside the United States, it is clear that American prosperity is linked to the prosperity of other countries.[3] Therefore, the US commitment to making malaria history is also a pragmatic one. **As then President-elect Donald Trump's campaign was quoted as saying in a 2016 *Scientific American* article, the new administration could focus on eliminating this "lingering" disease once and for all**—to help "make lives better, safer, and more prosperous."[4] Continuing the momentum toward achieving ambitious global goals for control, elimination, and—ultimately—eradication of malaria is in the best interests of the US government and American people and will help ensure our future prosperity and security.

## US INVESTMENTS IN MALARIA: A HISTORY OF IMPACT

Previous commitments by the US government and its partners have led to tremendous gains in the fight against malaria. From 2000 to 2015, the number of malaria deaths decreased by 50 percent worldwide.[1] Among children less than five years old, the number of malaria deaths decreased from 753,000 to 303,000, as shown in Table 1. Much of this reduction in mortality has occurred in sub-Saharan Africa, where malaria is no longer the leading cause of death among children.[2]

An increasing number of countries are also moving toward elimination of malaria. In 2015, 33 countries were assessed as having fewer than 1,000 malaria cases—up from 13 countries in 2000—another sign of progress along the road to a world free from malaria.[2]

Many countries have benefited from improvements in coverage for malaria control interventions, such as insecticide-treated bednets, indoor residual spraying, intermittent preventive treatment during pregnancy, and effective diagnosis and treatment. Malaria interventions are highly cost-effective, in some settings costing only US$5 to $8 per case averted and generating millions in health care savings.[5] They have some of the highest returns on

## POLICY RECOMMENDATIONS

1. The world has never been closer to making malaria history. Therefore, we recommend that, in fiscal year (FY) 2019, the Trump Administration renew the long-standing US commitment to the global fight against malaria. This renewed commitment will build on the legacy of leadership by President George W. Bush to create the President's Malaria Initiative (PMI)—an effort that has been sustained by strong bipartisan support in Congress. The Trump Administration should focus efforts on (1) reducing malaria deaths and illnesses in specific countries and (2) incentivizing research and development to provide new tools to accelerate progress toward malaria control, elimination, and ultimate eradication. These tools need to include next-generation diagnostics and drugs, vaccines, novel insecticide formulations, and other vector control tools, as well as other innovative approaches. Strong surveillance systems are also needed, as are effective delivery systems for existing and new tools.

2. We recommend that PMI continue to focus on successful implementation of the current six-year strategy (2015–2020). It should also incorporate enhanced elimination goals and activities into future strategies—strengthening these activities at country, regional, and global levels—to support the longer-term goal of regional malaria elimination and, ultimately, eradication. As control efforts make progress, the push toward elimination should increasingly be reflected in all malaria-related programming by the US Agency for International Development and other agencies, including the Centers for Disease Control and Prevention, Department of Defense, and National Institutes of Health.

3. We recommend that Congress support the Trump Administration's commitment by fully funding PMI; upholding the US pledge to the Global Fund to Fight AIDS, Tuberculosis and Malaria; and increasing investments in critical areas such as research and development of new tools to eliminate malaria worldwide. Congress should also exercise its oversight of all relevant US agencies that are implementing malaria programs to ensure that the goal of elimination is a priority and that programs are monitored and evaluated to ensure efficiency, cost-effectiveness, and progress toward control and elimination goals—toward a world free from malaria.

investment in public health and have accelerated progress against the disease.

The US government has a legacy of bipartisan leadership in combating malaria. Building on the successes of the President's Emergency Plan for AIDS Relief (PEPFAR), President George W. Bush launched the President's Malaria Initiative (PMI) in 2005. PMI was initially created as a five-year, $1.2 billion initiative to strengthen the US government commitment to malaria control and reduce malaria-related deaths by 50 percent in 15 focus countries.[6] PMI is an interagency initiative led by the US Agency for International Development (USAID), co-implemented with the Centers for Disease Control and Prevention (CDC) within the Department of Health and Human Services, and coordinated across several other US agencies, including the Department of Defense and the National Institutes of Health.

In 2008, Congress passed the Tom Lantos and Henry J. Hyde US Global Leadership against HIV/AIDS, Tuberculosis, and Malaria Act, authorizing $5 billion in continued US government funding for malaria prevention and control and expanding the mandate of PMI.[7]

PMI is a true success story in US international assistance. In 2016 alone, PMI supported the procurement of more than 30 million insecticide-treated bednets, 44 million anti-malarials, and 77 million rapid diagnostic tests.[8] Action like this has helped bring about the gains seen between 2000 and 2015, including a more than twofold increase in the proportion of women and children sleeping under bednets.

This success has also supported the expansion of PMI from the 15 focus countries originally mandated to 19 countries in Africa, plus the Greater Mekong Subregion of Southeast Asia (as illustrated in Figure 1).

In addition, the US government's robust commitments to malaria control have leveraged resources through public-private partnerships—such as the Global Fund to Fight AIDS, Tuberculosis and Malaria—as well as partnerships with faith-based and for-profit organizations, such as Catholic Relief Services and ExxonMobil, and have generated local support and investment. These commitments have changed the trajectory of the disease worldwide and saved millions of lives.

## OPPORTUNITIES IN MALARIA CONTROL AND ELIMINATION

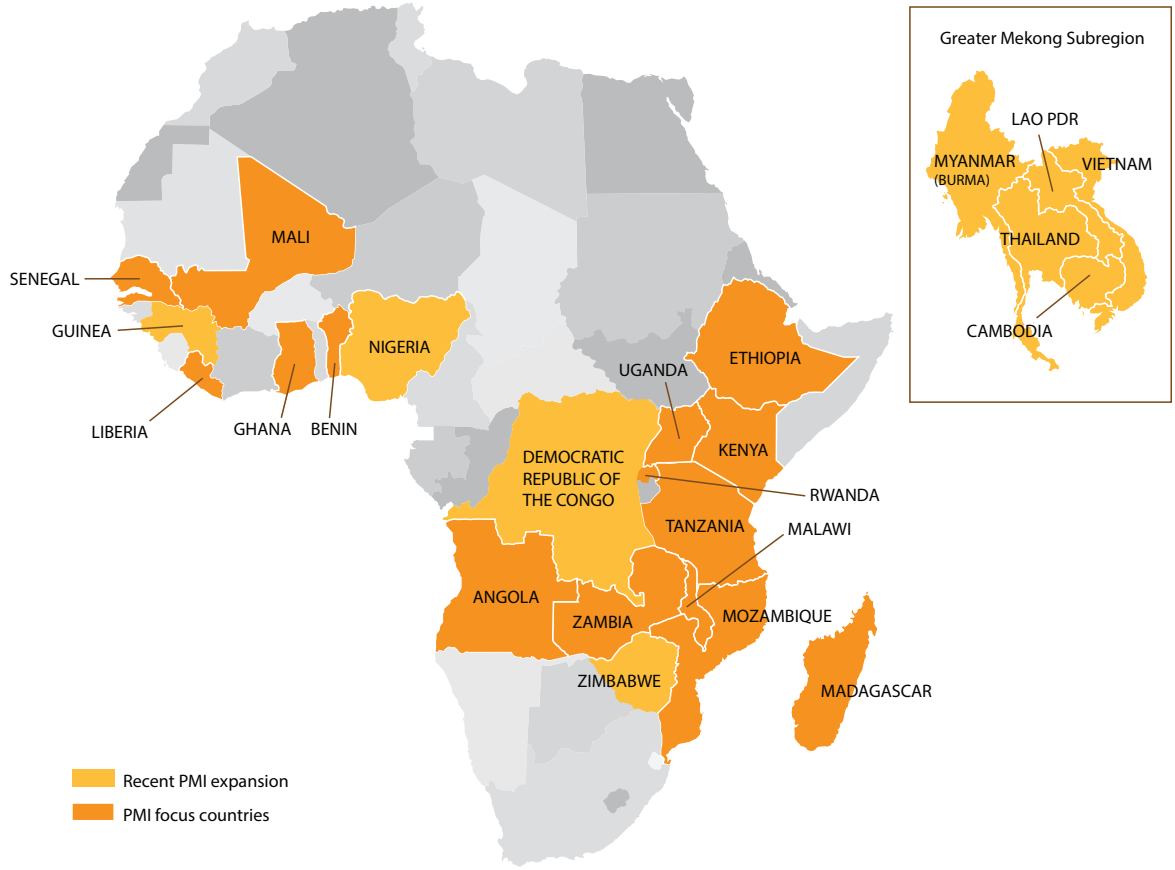
The tremendous gains made in the fight against malaria and US leadership have stirred global enthusiasm and commitment toward eliminating the disease once and for all. In 2015, Bill Gates, co-chair of the Bill & Melinda Gates Foundation, and Ray Chambers, the UN Secretary-General's Special Envoy for Financing the Health Millennium Development Goals and for Malaria, released a call to action that presented a vision for eradicating malaria by 2040.[9] Highlighting the need for a "serious conversation" about how eradication could be accomplished within the next 25 years, *From Aspiration to Action* calls for new tools and strategies, and increased resources, to achieve the goal of eradication. It stresses the importance of continued investment in research and development to ensure that strategies to combat malaria respond to changing needs and, based on modeling, illustrates how new tools and approaches could combine to accelerate progress toward eradication, as shown in Figure 2.

The need for new tools is clear, as the World Health Organization's *Global Technical Strategy for Malaria 2016–2030* also highlights, given that some existing tools are starting to lose their effectiveness against the malaria parasite and vector (mosquitoes); indeed, growing resistance to the current arsenal of drugs and insecticides poses a real threat to continued progress.[10] Continued investment is needed to develop new technologies to address these challenges and to ensure that the necessary strategies are in place to deliver both new and existing tools; research and development efforts should be fully incorporated into the global malaria response.

Although accelerating progress against malaria will require greater investment, the public health and economic benefits will far outweigh the costs, a point on which all recent analyses agree. In addition to the more than 10 million lives that could be saved, the Roll Back Malaria Partnership projects that achieving global targets for malaria efforts would generate an additional $4 trillion in economic output over the period 2016 to 2030.[11] While estimating the costs of achieving global targets for malaria becomes less reliable as the time horizon increases, WHO estimates the costs of achieving global targets for 2030 at just over $100 billion (for the period 2016–2030), plus an additional $10 billion over the same period for research and development.[10] This equates to a return on investment globally (benefits compared with costs) of 40:1 by 2030—and 60:1 for sub-Saharan Africa.[11] The lives saved would be in low- and middle-income countries that are critical to the future of the US economy as trading partners and as new opportunities for investment.

Efforts to stop malaria are also important for the health and safety of Americans. Any resurgence of malaria—as has happened recently in Venezuela and dozens of times in the last century[12]—presents a risk to Americans traveling

FIGURE 1. **The US President's Malaria Initiative has increased its role in Africa over time, starting with three countries in fiscal year 2006; today, PMI has 19 focus countries in Africa, plus the Greater Mekong Subregion of Southeast Asia.**



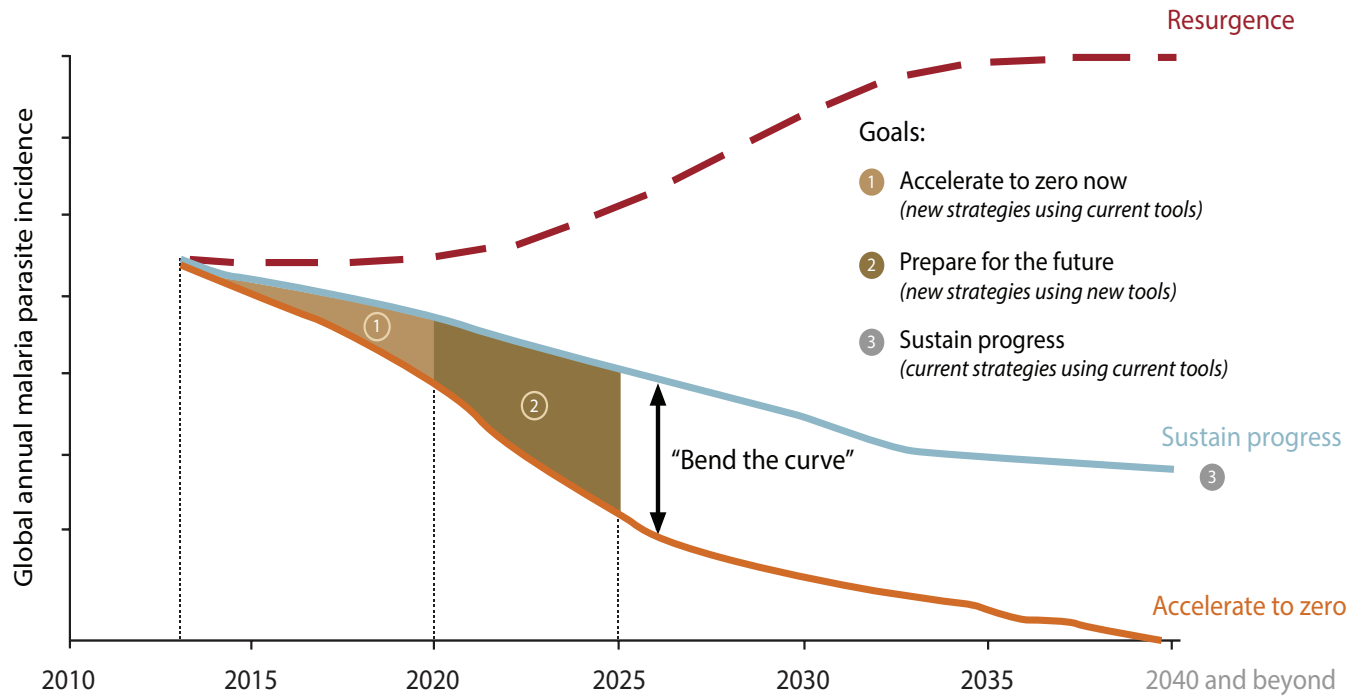

Source: President's Malaria Initiative.

abroad. Between 1,500 and 2,000 cases of malaria and about five deaths are reported in the United States every year, primarily in individuals who have traveled recently to malaria-endemic areas.[13] **Malaria also continues to threaten the lives of US military personnel serving in endemic regions; indeed, the military lost more person-days to malaria than to bullets in every military campaign fought in malaria-endemic regions in the last century.** Thus, inaction has the potential not only to reverse progress in combating malaria in endemic regions but also to put the health of more Americans at risk.

US investments in global health programs have contributed to the stability of many countries in Africa and therefore reduced the risk of violence. As noted in an editorial by former Senator Bill Frist regarding the impact of PEPFAR: "From 2004 to 2013, political instability and violence fell by 40 percent in countries that received PEPFAR

> "Perhaps we should focus on eliminating lingering diseases around the world like malaria … so that we can make lives better, safer, and more prosperous."
>
> – Donald J. Trump for President campaign[4]

FIGURE 2. **New strategies using new tools are needed to "bend the curve" and accelerate malaria eradication.**




Source: Bill & Melinda Gates Foundation. See Catherine Cheney, "Gates Foundation shapes investments to 'accelerate to zero' on malaria," *Devex*; October 25, 2016. (https://www.devex.com/news/gates-foundation-shapes-investments-to-accelerate-to-zero-on-malaria-88995; last accessed May 15, 2017.)

assistance versus just 3 percent in similar countries that did not. Measurements of the strength of the rule of law increased 31 percent versus just 7 percent."[14]

A 2017 National Academies of Sciences, Engineering, and Medicine report emphasized that US government investments in global health are necessary for the United States' security and economy. In particular, the report states the imperative of remaining committed to fighting malaria through PMI and collaborating with all relevant partners toward elimination of the disease.[15] It is critical that the United States continue to invest in combating malaria as a way to simultaneously further our health, economic, and security interests.

## CONTROL, ELIMINATION, AND ERADICATION

*Control* means reducing malaria to a level where it is no longer a public health problem. *Elimination* refers to reducing the incidence of malaria parasite infection to zero transmission through targeted efforts within a certain geographic area. Both control and elimination are steps on the path toward *eradication*, which is permanent reduction to zero of the worldwide incidence of malaria.

## PATH'S MALARIA PROGRAMS: INNOVATIVE APPROACHES FROM DEVELOPMENT TO DELIVERY

PATH's pioneering approaches to the control and elimination of malaria have contributed to the dramatic results seen over the past decade around the world. We recognize that it is essential to maintain robust malaria control efforts while advancing research and development of new technologies and approaches for elimination. We view the ultimate goal as eradication, which will require a wide range of innovative strategies and solutions. To expedite progress, coverage of current tools must continue to increase, and game-changing innovations must be developed to help accelerate countries from control through elimination and ultimately to eradication.

PATH is on the forefront of this global effort, developing diagnostics, drugs, strategies, and the world's largest pipeline of malaria vaccine projects.[16] By advancing innovative technologies and strategies, PATH will help ensure that the world is properly equipped to continue and ultimately win the fight against malaria. Our key areas of focus are outlined below.

### PATH's Center for Malaria Control and Elimination

PATH's Center for Malaria Control and Elimination (CMCE) works across PATH's malaria portfolio to align expertise and partnerships with the aim of accelerating the development of strategies and tools for elimination. Its expanding set of programs and projects include the Malaria Control and Elimination Partnership in Africa (MACEPA), which partners with countries to develop evidence-based approaches to eliminate the disease, and the PATH-led MalariaCare partnership, a five-year initiative to expand the use of new and existing tools for diagnosis and treatment of malaria and other febrile illnesses in Africa and the Mekong Region.[17] The CMCE also encompasses PATH's product development work on diagnostics, drugs, and vaccines.

### PATH's Diagnostics Program

PATH recognizes that there is an urgent need for better diagnostics to detect malaria. A sensitive field test is needed to rapidly detect low-level infection to identify all infected individuals. This requires improving access to current tests. The Bill & Melinda Gates Foundation and PATH have developed partnerships to advance a portfolio of next-generation rapid diagnostic tests and reference methods to enable consistent, standardized detection and measurement of low-level infections. In addition, PATH and GSK have collaborated with diagnostic partners to develop point-of-care tests for G6PD deficiency, a hereditary condition that needs to be identified before people can take certain anti-malarial drugs.[18] These tools will be essential in taking the world to the next level in fighting the disease.


PATH/Will Boase

In the lab at Kyarusozi Health Center 4 in Uganda, a health worker views a blood sample under a microscope.

### PATH's Malaria Vaccine Initiative

PATH is home to one of the world's most robust pipelines of malaria vaccine projects, managed by PATH's Malaria Vaccine Initiative.To date, no vaccine against malaria (or any other human parasite) has been licensed for use, although there are approximately three dozen vaccine candidates in development worldwide. Thanks to an innovative 15-year partnership between PATH and GSK, RTS,S—the leading vaccine candidate for the prevention of the disease in young children—has been recommended for pilot implementation by the World Health Organization (WHO). With support from Gavi, the Vaccine Alliance; the Global Fund to Fight AIDS, Tuberculosis and Malaria; and UNITAID, the WHO-coordinated pilots will further evaluate the potential impact of RTS,S on the burden of disease. Continued research and development—such as that which made RTS,S possible—is needed to develop even more highly effective vaccines that can contribute to the eventual eradication of the parasite—and thus the disease.

## RECOMMENDATIONS

The US government has been a world leader in the fight against malaria. Now we have reached a critical juncture, and there is both an opportunity and an urgent need to catalyze further progress. A renewed commitment on the

part of the US government has the potential to transform an already successful malaria control effort into an approach that will save millions of lives and help accelerate countries toward elimination, protect Americans, and contribute to economic development in our partner nations. We must therefore harness the current momentum in the fight against malaria and move our efforts across the finish line, or risk the resurgence of a disease with deadly and long-lasting consequences.

PATH has three primary recommendations for maximizing US government contributions and leadership to reach global malaria goals, as outlined below.

### Recommendation 1: Trump Administration

We recommend that the Trump Administration renew the long-standing US commitment to the global fight against malaria in FY 2019. This renewed commitment will build on the legacy of leadership by President George W. Bush to create PMI—an effort that has been sustained by strong bipartisan support in Congress. The Trump Administration should focus efforts on (1) further reducing malaria deaths and illnesses in specific countries and (2) incentivizing research and development to provide new tools to accelerate progress toward malaria control, elimination, and ultimate eradication. These tools need to include next-generation diagnostics and drugs, vaccines, novel insecticide formulations, and other vector control tools, as well as other innovative approaches. Strong surveillance systems are also needed, as are effective delivery systems for existing and new tools.

Ending malaria will require bold and decisive leadership from President Trump. By making this a priority commitment, this administration could be a global leader in the effort to eliminate and ultimately eradicate malaria, saving millions of lives and contributing to the overall security and prosperity of the United States.

### Recommendation 2: US Government Agencies

We recommend that PMI continue to focus on successful implementation of the current six-year strategy (2015–2020) and be adequately resourced to pursue the control and elimination goals articulated in the strategy. It should also incorporate enhanced elimination goals and activities into future strategies—strengthening these activities at country, regional, and global levels—to support the longer-term goal of regional elimination and, ultimately, malaria eradication. As control efforts make progress, the push toward elimination should increasingly be reflected in all malaria-related programming by the US Agency for International Development and other agencies, including the Centers for Disease Control and Prevention, the Department of Defense, and the National Institutes of Health.

PMI's current strategy includes elimination as a major goal of US malaria efforts. PMI should continue its effective coordination of all US malaria programs and ensure that elimination remains a high priority. PMI should continue to focus on empowering host countries to make combating malaria a top national priority and working with them to implement effective strategies. In addition, all relevant US agencies should work within the context of PMI to coordinate efforts and contribute according to their institutional strengths in the global effort to control, eliminate, and ultimately eradicate malaria, including the contributions of CDC's technical expertise to evaluate new solutions to the challenges posed by the highly adaptive parasites and vectors responsible for this disease.

### Recommendation 3: US Congress

We recommend that Congress support the Trump Administration's commitment by fully funding PMI; upholding the US pledge to the Global Fund to Fight AIDS, Tuberculosis and Malaria; and increasing investments in critical areas such as research and development of new tools to eliminate malaria worldwide. Congress should also exercise its oversight of all relevant US agencies that are implementing malaria programs to ensure that the goal of elimination is a priority and that programs are monitored and evaluated to ensure efficiency, cost-effectiveness, and progress toward control and elimination goals—toward a world free from malaria.

Any scale-back of funding would put at risk the tremendous gains made over the past 15 years. Increased investment is critical to eliminating malaria and represents a tremendous opportunity to save lives, advance economic prosperity, and increase social and political stability. Malaria elimination can be achieved, but a whole-of-government, coordinated approach is required.

## CONCLUSION

The world is at a critical point in the fight against malaria. If the United States and its partners continue to increase investments to reach control and elimination targets, we could eradicate malaria within a generation. If we do not, we will see a resurgence of the disease, and millions of lives will be needlessly lost. Unless malaria is eradicated altogether, interventions to keep malaria resurgences and outbreaks at bay will always be needed.

The call to action is clear: We need increased investment to address the greatest challenges on the path to eradication. We need adaptive solutions and the political will and leadership to see this through to the end. If the United States and the rest of the world follow through with essential investments in new tools and strategies—and strong malaria programs—malaria eradication is an achievable goal. Partners from around the world—representing the private sector, civil society, government, faith communities, multilateral institutions, and nonprofit organizations—share a vision of a world without malaria, and it is within our reach.


PATH/Gabe Bienczycki

## REFERENCES


1. World Health Organization (WHO), Global Malaria Programme. *World Malaria Report 2016*. Geneva: WHO; 2016. Available at http://www.who.int/malaria/publications/world-malaria-report-2016/report/en/.
2. WHO, Global Malaria Programme. *World Malaria Report 2015*. Geneva: WHO; 2015. Available at http://www.who.int/malaria/publications/world-malaria-report-2015/report/en/.
3. US Global Leadership Coalition. *America's Global Leadership: A Strategic Investment for US Jobs*. Washington, DC: US Global Leadership Coalition; 2011. Available at http://www.usglc.org/wp-content/uploads/2011/07/USGLC-Economic-Brief.pdf.
4. Gorman C. What do the presidential candidates know about science? *Scientific American*. September 13, 2016. Available at https://www.scientificamerican.com/article/what-do-the-presidential-candidates-know-about-science/.
5. African Leaders Malaria Alliance; Evidence to Policy Initiative of the Global Health Group at the University of California, San Francisco; Clinton Health Access Initiative. *Maintaining the Gains in Malaria Control*. Boston: Clinton Health Access Initiative; 2011. Available at https://globalhealthsciences.ucsf.edu/sites/globalhealthsciences.ucsf.edu/files/pub/e2pi-maintaining-the-gains-country-briefs.pdf.
6. Kendall A. *The US Response to the Global Threat of Malaria: Basic Facts*. Washington, DC: Congressional Research Service; January 5, 2012. Available at https://fas.org/sgp/crs/misc/R41644.pdf.
7. US Agency for International Development (USAID), Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS). *President's Malaria Initiative Strategy 2015–2020*. Washington, DC: USAID, CDC, and DHS; 2015. Available at https://www.pmi.gov/docs/default-source/default-document-library/pmi-reports/pmi_strategy_2015-2020.pdf.
8. USAID, CDC, and HHS. *PMI by the Numbers*. Washington, DC: USAID; April 2017. Available at https://www.pmi.gov/docs/default-source/default-document-library/pmi-reports/pmi-by-the-numbers.pdf.
9. End Malaria 2040 website. *From Aspiration to Action: What Will It Take to End Malaria?* Available at http://endmalaria2040.org/. Accessed May 30, 2017.
10. WHO. *Global Technical Strategy for Malaria (2016–2030)*. Geneva: WHO; 2015. Available at http://www.who.int/malaria/publications/atoz/9789241564991/en/.
11. Roll Back Malaria Partnership. *Investing for a Malaria Free World: Action and Investment to Defeat Malaria (2016–2030)*. Geneva: Roll Back Malaria Partnership; 2015. Available at http://www.rollbackmalaria.org/files/files/aim/RBM_AIM_Advocacy_pull-out_EN-lores.pdf.
12. Cohen JM, Smith DL, Cotter C, et al. Malaria resurgence: a systematic review and assessment of its causes. *Malaria Journal*. 2012;11:122. Available at https://malariajournal.biomedcentral.com/articles/10.1186/1475-2875-11-122.
13. Malaria Facts web page. CDC website. Available at https://www.cdc.gov/malaria/about/facts.html. Accessed May 30, 2017.
14. Frist B. The case for keeping America's AIDS relief plan [op-ed]. *The New York Times*, February 9, 2017. Available at https://www.nytimes.com/2017/02/09/opinion/bill-frist-the-case-for-keeping-americas-aids-relief-plan.html?_r=0.
15. National Academies of Sciences, Engineering and Medicine. *Global Health and the Future Role of the United States*. National Academies of Science; 2017. Available at http://nationalacademies.org/hmd/reports/2017/global-health-and-the-future-role-of-the-united-states.aspx.
16. Malaria web page. PATH website. Available at http://www.path.org/our-work/malaria.php. Accessed May 30, 2017.
17. PATH Malaria Control and Elimination Program website. Available at http://sites.path.org/malariacontrol/?_ga=1.13883191.1839113869.1481652932. Accessed May 30, 2017.
18. PATH Malaria Center of Excellence. T*ransformative Tools for Malaria Elimination*. Washington, DC: Center for Strategic and International Studies; December 2014. Available at http://www.malariavaccine.org/files/141203_PATH_TransformativeTools_Web.pdf.

www.path.org

PATH is the leader in global health innovation. An international nonprofit organization, we save lives and improve health, especially among women and children. We accelerate innovation across five platforms— vaccines, drugs, diagnostics, devices, and system and service innovations—that harness our entrepreneurial insight, scientific and public health expertise, and passion for health equity. By mobilizing partners around the world, we take innovation to scale, working alongside countries primarily in Africa and Asia to tackle their greatest health needs. Together, we deliver measurable results that disrupt the cycle of poor health. Learn more at www.path.org.

455 Massachusetts Ave NW, Suite 1000
Washington, DC 20001

June 2017