INVESTING

IN GLOBAL HEALTH RESEARCH AND DEVELOPMENT

PATH/Lesley Reed

To meet the global health needs of tomorrow, it is critical to invest in research today so the most effective health solutions are available when and where they are needed.

Despite significant gains in global health during the last decade, new and better tools and technologies are needed to save lives and improve health around the world. Research and development (R&D) is the bedrock of many global health successes, and ongoing investment is critical to developing the next generation of global health tools that can prevent, treat, and one day halt preventable deaths. New tools for both current and emerging health needs will ultimately provide low-income countries with the solutions to tackle their most pressing health challenges and chart a course for self-sustainment.

US INVESTMENT

US support for global health R&D connects American ingenuity with public health benefit. There are many US government agencies involved in global health R&D, each with an important role in the complex R&D pipeline. Congress must continue to fund global health R&D for new tools and technologies to save lives and improve the health of vulnerable populations around the world, particularly those of women and children. Further, this funding must be partnered with smart regulatory policy and should prioritize efficient global health R&D programming through collaboration with nonprofit product development organizations and other multisectoral R&D partnerships.

64¢

Sixty-four cents of every dollar the United States invests in global health research benefits US-based researchers.

Public-Private Partnerships

The public sector plays a critical role in R&D by mitigating risk and providing incentives for private-sector investment. Nonprofit product development organizations like PATH—with support from the US government, private donors, and the philanthropic sector—are central to advancing effective maternal, newborn, and child health innovations that are available, accessible, and affordable.

PATH's public-private partnerships come in many shapes and sizes, each focused on developing new innovations to overcome global health challenges. We partner with small biotechnology companies, multinational pharmaceutical companies, manufacturers, local nongovernmental organizations (NGOs), public health programs, private health providers, and local governments. No matter who the partner is, the collaboration must be mutually beneficial and must fulfill our mission to improve the health of people around the world.

PATH partnerships in research and development

Existing tools do not always meet the needs of people living in poor countries. Only strengthened investment in global health research to develop new solutions—combined with better access to existing methods to prevent and treat diseases—will lead to sustained successes in meeting the urgent global health needs of today and tomorrow.

For nearly 40 years, PATH has worked with the US government and public- and private-sector organizations around the world to develop simple and cost-effective solutions to global health challenges.

IMPACT

With support from the US Agency for International Development (USAID), PATH and New Jersey-based TempTime Corporation identified and developed an innovative way to monitor temperature-sensitive vaccines for heat damage. The vaccine vial monitor (VVM) changes color as it is exposed to heat, allowing health workers to know whether the vaccines can still be used or have been exposed to too much heat and should be discarded. Over the last 20 years, more than 6 billion VVMs have been used, helping to ensure vaccines are still potent when they are delivered and saving the global health community approximately US$14 million each year by preventing the discard of undamaged vaccines.

PATH partnered with the National Institutes of Health (NIH) and Standard Diagnostics, Inc., to develop a simple, rapid test to accurately identify exposure to the parasites that cause river blindness, a debilitating disease for which nearly 170 million people worldwide are at risk. Transmitted to humans through bites of blackflies, the disease causes intense itching, severe skin disfiguration, and eventually permanent blindness. Thanks to R&D funding from NIH, people living in remote areas can now get tested faster, which will improve lives and help eliminate the disease.

With support from the Department of Health and Human Services and USAID, PATH, the World Health Organization (WHO), Serum Institute of India, and other partners worked to get MenAfriVac®, a meningitis A vaccine, developed and delivered at an affordable price for low-income countries in the meningitis belt. Since the vaccine's introduction in 2010, more than 235 million people have been immunized and meningitis A has virtually disappeared in vaccinated areas. A study also found MenAfriVac can be kept at temperatures of up to 104°F for up to four days without losing potency, making it easier to deliver to remote communities.

MenAfriVac is a registered trademark of Serum Institute of India Pvt. Ltd.

Since 2000, there has been a 48 percent decline in deaths from malaria. However, still more than 430,000 people died from the disease in 2015, including more than 300,000 children under the age of five. New tools are needed. A safe and effective malaria vaccine would help close the gap and could save hundreds of thousands of lives. PATH has worked with partners, including the Kenya Medical Research Institute/Walter Reed trial site in Kenya, to bring a malaria vaccine candidate—RTS,S—through Phase 3 testing. The vaccine has now been recommended by WHO for large-scale pilot implementations in Africa.

From left to right: PATH/Patrick Mckern, PATH/Dunia Faulk, PATH/Dann Zehnung, PATH/Patrick McKern