Global Health Technologies Coalition Outside Witness Testimony for the Record
Appropriations Committee
US Senate
April 24, 2014
Kaitlin Christenson, Coalition Director, Global Health Technologies Coalition

FY 2015 Hearing: Driving Innovation through Federal Investments

Chairwoman Mikulski, Ranking Member Shelby, and members of the Committee, thank you for the opportunity to provide testimony on the impact that investment in research and development (R&D) has in improving our nation. I am submitting this testimony on behalf of the Global Health Technologies Coalition (GHTC), a group of nearly 30 nonprofit organizations working together to advance US policies that can accelerate the development of new global health innovations—including new vaccines, drugs, diagnostics, microbicides, multi-purpose prevention technologies, and other tools—to combat global diseases and improve health. The GHTC members strongly believe that to meet the world's most pressing global health needs, it is critical to invest in research today so that the most effective solutions are available now and in the future. In addition to having lifesaving impacts for those in the developing world, innovations in global health play a significant role in improving our own nation's economy and keeping Americans healthy. My testimony reflects the impact that investments in global health R&D contribute to the United States' economy, and is a reflection of the research and experiences of our member organizations, which include nonprofit advocacy organizations, policy think-tanks, implementing organizations, product development partnerships (PDPs), and many others.[1]

Innovation as a job creator

Global health R&D brings lifesaving tools to those who need them most; however, the benefits are much broader than preventing and treating disease in the developing world. It is also a smart economic investment in the United States, where it drives job creation, spurs business activity, engages academic institutions, and benefits the health of American citizens. Sixty-four cents of every US dollar invested in global health R&D benefits US-based researchers, many of whom conduct their research at American universities. Across the nation, the life sciences field is responsible for more than seven million jobs and contributes $69 billion annually to the US gross domestic product. One example of the many states impacted by global health R&D is Maryland, which is home to nearly 500 bioscience companies and 50 research-intensive federal institutes and centers. In 2010, Maryland's life sciences sector supported 71,600 jobs and the average salary for this sector was $91,000 annually, more than 70 percent above the state's average income. Maryland is home to both the Food and Drug Administration (FDA) and the National Institutes of Health (NIH). The US government is involved in 200 of the 365 global health products currently in the pipeline, and both agencies play an important role in the development and roll out of these lifesaving products. Additional examples of vital global health R&D organizations in Maryland include Aeras and the International Partnerships for Microbicides, both working to develop live-saving health tools for the developing world. Another global health hub is Washington State, which employees nearly 3,000 people in the global health sector.

[1] Global Health Technologies Coalition. http://www.ghtcoalition.org/coalition-members.php.

This $4 billion industry generates $143 million in tax revenue annually for state and local governments. Outside the state, Washington global health organizations support more than 17,000 employees.

Innovations in global health create jobs in the US and leverage American investments abroad. One such example is innovative New Jersey-based company Temptime, which partnered with the international nonprofit PATH and the US Agency for International Development (USAID) to develop a temperature-sensitive sticker called a vaccine vial monitor (VVM), which measures heat exposure over time. Most vaccines require careful storage and transport to protect them from potentially harmful heat exposure, which can reduce or eliminate a vaccine's effectiveness. In the past, health workers in developing countries had no way to know whether vaccines had been exposed to heat, forcing them to discard vaccines if they were at risk of being ineffective, resulting in significant vaccine wastage each year. The stickers, which are based on technology originally developed for use in the US food industry, have been used on more than 3.5 billion vaccine vials and are now required on all vaccines procured by the United Nations Children's Fund. It is estimated that between 2002 and 2012, VVMs have helped save more than 150,000 lives and save the global health community an estimated $5 million per year by ensuring that undamaged vaccines are not discarded. In addition to this significant public health impact, the partnership between PATH and Temptime has driven job creation here at home. Temptime began as a very small company. Following the success of the VVM partnership, Temptime has hired dozens more employees and has made global health technologies a vital part of its portfolio.

Promoting America's Global Reputation

America's ingenuity and innovative entrepreneurial spirit has played a major role in internationally-hailed global health successes, such as the eradication of smallpox and the development of antiretroviral drugs for HIV/AIDS. The US government remains the largest funder of global health R&D in the world and US investments in global health research are central components of US foreign policy to increase national security and strengthen US relations around the world. We must ensure that the investments made to date are not lost and that America's position as a leader in global health is maintained. Investments made today contribute to the health of Americans tomorrow, and we must continue to lead on these innovations.

Keeping Americans Healthy

Infectious diseases still claim the lives of nearly 9 million people each year, and emerging health threats such as drug resistance pose a threat to human health across the globe. We believe that in today's globalized world, the health of Americans is interdependent with the health of populations abroad. Health threats know no borders, and protecting the wellbeing of Americans now requires a global effort. In today's world, infectious diseases are often merely a plane ride away, or in some instances, a threat in the United States. For example, both dengue fever and Chagas disease have made resurgences in some states, and malaria and drug-resistant tuberculosis (TB) cases are on the rise. While advancements have been made, new technologies for the effective treatment and prevention of these diseases are greatly needed. For instance,

newer, more robust, and easier to use antiretroviral drugs—particularly for infants and young children—are needed to treat and prevent HIV, and even an AIDS vaccine that is 50 percent effective has the potential to prevent one million HIV infections every year. Drug-resistant TB is on the rise in the United States, however the only vaccine on the market is insufficient at 90 years old, and most therapies available today are more than 50 years old and extremely toxic. US health research in these areas have a direct impact in making sure Americans have access to modern and effective drugs and treatments. The Department of Defense (DoD) plays an especially unique role in the advancement of new health technologies because America's men and women in uniform are stationed in the developing world and experience diseases like malaria, dengue fever, and leishmaniasis alongside local communities. Research at Walter Reed Army Institute contributed to the development of the first-ever malaria vaccine candidate, RTS,S, and the US Military HIV Research Program is involved in the development of a safe and effective HIV vaccine. Not only would these developments equip our troops, they would save civilian lives at home and abroad.

Sequestration

The Centers for Disease Control (CDC), DoD, NIH, and USAID all make significant contributions to global health R&D, and research at each of these agencies faced significant consequences as a result of sequestration. Sequestration slashed the NIH's overall budget by $1.71 billion compared with fiscal year (FY) 2012. As a result, the NIH estimated that 703 fewer grants were funded. Sequestration also impacted the agency's ability to renew funding for ongoing grants, and the total number of research grants awarded dropped by 1,357. The work of the NIH helped lead to the development of the first-ever microbicide gel effective in preventing HIV/AIDS and new drugs to treat malaria and TB. Cuts of this magnitude not only severely impacted US researchers (through programs like the Fogarty International Center and at more than 100 NIH-supported universities conducting global health research), but also severely limit the impact previous investments are able to have. Similarly, the CDC saw a cut of 5 percent, or $285 million of its FY 2013 budget. These cuts impacted the agency's ability to protect the health of Americans at home—and also hindered its ability to ensure global disease detection. CDC's Center for Global Health saw a cut of $18 million due to sequestration, while the National Center for Emerging and Zoonotic Infectious Diseases saw a cut of $13 million. Both of these centers support groundbreaking global health research and product development. In almost all instances, game-changing discoveries result from years of incremental research to understand how disease starts and progresses. Therefore, the uncertainty of sequestration and short-term budget fixes makes planning for the future almost impossible. The economic benefits of the US investment in research are wide reaching, and the federal agencies must be assured of the funding they need to continue vital health research in the spirit of protecting global public health, patients' lives, scientific careers, and the domestic economy.

Recommendations

Support for global health research that saves lives around the world—while at the same time promoting innovation, creating jobs, and spurring economic growth at home—is unquestionably among the nation's smartest investments. In keeping with this value, the GHTC respectfully requests that the Committee do the following:

- Sustain and support US investments in global health research and innovation across the US agencies that support global health R&D, including CDC, DoD, FDA, NIH, and USAID.
- Request that agency leaders at CDC, DoD, FDA, NIH, and USAID work with leaders at other US agencies to develop a cross-US government global health R&D strategy to ensure that US investments in global health research are efficient, aligned, and streamlined.

On behalf of the members of the GHTC, I would like to extend my gratitude to the Committee for the opportunity to testify.