

GATES

*philanthropy
partners*



Impact Report 2019

Contents

05

Polio Eradication

Polio was once a widespread threat. Today, there are just two countries that have yet to defeat this disease. Learn how global eradication efforts are working to wipe out polio, once and for all.

20

Universal Flu Vaccine

Scientists are making progress toward a flu vaccine that can be given once and protect for life. The goal? Shielding the most vulnerable from seasonal flu and heading off the next pandemic.

29

Cardiovascular Health

Cardiovascular disease is the world's biggest killer. By scaling proven prevention and treatment approaches, we're betting that more than 100 million lives can be saved within the next three decades.

36

Our Collective Impact

Together, we're fueling innovations and interventions that will shape the future. See how your giving is yielding powerful results.



Sue Desmond-Hellmann visits a cold storage facility in Abuja, Nigeria, to see how vaccines are stored at the appropriate temperature to remain effective prior to delivery.

LETTER FROM SUE DESMOND-HELLMANN

Giving is personal. It is also aspirational. Giving is rooted in the belief that challenges can be overcome, innovation can create solutions, and people—whether across the road or across the globe—can live healthy, productive lives. Above all, to give is to be optimistic that change is possible.

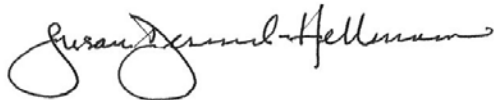
Together, we are transforming optimism into action.

Our partnership has had some great successes since we shared our 2018 Impact Report. One of our first grants, highlighted in last year's report, expanded a program that brings contraceptives to more women in Indonesia. Acknowledging its effectiveness, the government of Indonesia has now committed to provide access throughout the country by dramatically increasing the scale of the program. Your giving means millions more moms and babies will have healthier lives.

The past year has not been without its challenges, however, as we have seen increased polio case counts in Afghanistan and Pakistan. The total number is still incredibly low, but any upward trend is a concern. Starting on page 16, Bill Gates and our polio program director Jay Wenger talk about remaining challenges to eradication and how partners around the world are working to overcome them.

Whether it's innovation, empowerment, or disease eradication—we are ambitious. So are you. I'm proud of what we've accomplished so far. And we've only just started on our journey together.

Thank you for giving with us.

A handwritten signature in black ink, reading "Sue Desmond-Hellmann". The signature is fluid and cursive, with the first name "Sue" being particularly prominent.

Sue Desmond-Hellmann

Board Chair, Gates Philanthropy Partners

CEO, Bill & Melinda Gates Foundation

Toward the future.

We're investing in a future in which every person—no matter where they live—has the chance to live a healthy and productive life. This report looks toward the future that we are shaping as partners in this work.

Our work together is tackling complex problems. From boosting high school graduation rates in the United States to eliminating sleeping sickness in the Democratic Republic of the Congo, progress takes strong organizations, dedicated people, givers, and time.

Polio

Eradication

*The permanent, global end to polio is
imminently achievable. Eradication will ensure that no child
anywhere suffers from this debilitating disease.*



Polio vaccinators are on the front lines of the quest to wipe out polio. During house-to-house immunization campaigns, they must knock at the door of every household and vaccinate every child under age five.



Khalida Nasreen is a polio vaccinator from Orangi Town, a slum near Pakistan's capital city.

MEET KHALIDA: A VACCINATOR ON THE FRONT LINES OF POLIO ERADICATION

Khalida Nasreen navigates her black dune buggy through the dusty streets of Orangi Town, keeping an eye on those around her through the rear-view mirror. She moves quickly through this neighborhood on the outskirts of Karachi, Pakistan's capital. There, she will spend the day riding between patchworked homes and businesses that make up this slum, which has had a spate of unrest and ongoing community frustration over the lack of sewage systems to support the town's estimated 2.5 million people. Khalida is equipped with a small cooler used by polio vaccinators throughout the world, which is marked with the signature Rotary campaign sticker that declares, "End Polio Now." Her mission for the day is to vaccinate each child in the town against polio.

The world is on the cusp of eradicating polio, a highly infectious disease that can lead to paralysis or even death. There is no cure for polio; immunization against the virus is the only protection available. That means reaching every child, in every village, town, and city across the world, with polio vaccine. Fortunately, oral polio vaccine—the type carried by Khalida and other community vaccinators on the front lines of stopping polio's spread—is easy to administer. Each child requires just two drops of the vaccine in each immunization round.

The impact of this simple vaccine has been astounding, helping to extinguish the virus from most of the world. In 1988, polio paralyzed roughly 1,000 children every day across 125 countries. Today, as a result of global eradication efforts, the number of new annual cases has decreased by more than 99 percent, and there are now only two countries that have not stopped wild polio, Afghanistan and Pakistan. Reaching all children, everywhere, with polio vaccine remains the key—and the challenge—in this final push to wipe out the disease forever.

Behind each dose of vaccine are years of rigorous planning and coordination to ensure that vaccinators like Khalida have the right tools at the right time, coupled with the knowledge to help build trust with communities and communicate the benefits of immunization.




Every day, around the world, vaccinators like Khalida go door-to-door to administer the oral polio vaccine to children. They are the local heroes of polio eradication efforts.



In Jalalabad, Afghanistan, mothers bring their children to a local health clinic for checkups and vaccinations.



Polio vaccinations are even conducted on trains, such as this one at Karachi Cantonment railway station in Karachi, Pakistan.



It is an astonishing feat for vaccine vials to travel from manufacturing sites around the world to the coolers carried by vaccinators—then via camels through deserts, on wooden boats across rivers, in backpacks to reach high mountain villages, or, like Khalida, by dune buggies.

MEET KHALIDA: A VACCINATOR ON THE FRONT LINES OF POLIO ERADICATION

(Continued)

At the global, national, and local levels, logistics teams must work through operational challenges and infrastructure concerns to get vaccines to communities that need them and to ensure each child receives the vaccine.

This global orchestration begins at production, when tiny vials of polio vaccine start a complex journey. UNICEF procures more than 1.3 billion doses of oral polio vaccine annually that must be carefully transported to countries and administered to children around the world. Once vaccines are produced, and throughout the transit process, they must be stored at specific temperatures—if the vials become too hot, the vaccine will lose its ability to offer protection against polio. It is an astonishing feat for vaccine vials to travel from manufacturing sites around the world to the coolers carried by vaccinators—then via camels through deserts, on wooden boats across rivers, in backpacks to reach high mountain villages, or, like Khalida, by dune buggies.

While vaccines travel to their final destinations, social mobilization teams meet with trusted authorities in communities, such as religious leaders, to recruit their help in sharing health information and announcing vaccination campaigns. Before a vaccinator like Khalida knocks on the door of a home, they receive coaching on how to provide information, answer questions, and allay fears—building the soft skills that accompany training in administering the oral vaccine.

With eradication on the horizon, vaccinating every child against polio has never been more urgent. In the last steps to eradication in Pakistan and Afghanistan, vaccinators must ensure children are fully immunized in the face of fierce challenges, including weak health systems, economic or political instability, population movement, and misinformation about vaccines. It is the will and sacrifice of vaccinators that drive progress in communities around the world. They are the local heroes who champion our universal goal to protect children everywhere from this devastating disease and to eradicate this virus for good.

INTERVIEW WITH JAY WENGER

Director, Polio, Bill & Melinda Gates Foundation

Why is it important to eradicate polio?

Eradicating polio will mean that no child will have to suffer from this preventable disease again. It's highly infectious, and we know that reaching eradication is entirely possible.

Partners around the world, including governments and countless health workers, have reduced polio cases by 99.9 percent—from hundreds of thousands to less than 100 in three decades. They've ensured over 18 million people are walking today who would have otherwise been paralyzed by polio.

We also know that eradication will free up tremendous financial and human resources and provide lessons learned for tackling other diseases. In fact, we're already seeing the program's infrastructure and reach benefit health more broadly. For example, our colleagues at the World Health Organization estimate that 1.5 million childhood deaths have been prevented because of the delivery of vitamin A—an important nutrient for children under five—during polio immunization campaigns. Health workers providing polio vaccine have also supported the delivery of services to tackle other vaccine-preventable diseases, such as measles.

What will it take to reach eradication?

Grit, resilience, and continued commitment. Progress against polio has been incredible thanks to a unique public-private partnership called the Global Polio Eradication Initiative, which brings together donor governments, local governments, the private sector, and key stakeholders like Rotary International.

The final steps to eradication are proving to be the most difficult. Wild polio remains in some of the hardest-to-reach areas of the world. We are working with our partners on how to reach every child with vaccines. We have to factor in population movements, insecurity, and in some cases, parental refusals.

We must stay one step ahead of this disease. To do so, a key factor is ensuring continued political and financial support to get us across the finish line.



Joseph Karinga, manager for a vaccine storage facility in Kenya, ensures his stock is refrigerated and managed according to international guidelines.

What keeps you optimistic?

The frontline vaccinators and health workers. They continue to show incredible resilience and commitment to securing healthier lives for children in their communities and around the world. In India, which the world thought would be the toughest place to eradicate this disease, vaccinators—many of whom were local women—went door-to-door and heavily contributed to ridding the country of the virus. That country, which was seemingly insurmountable, was declared polio-free in 2014, along with the entire region of Southeast Asia. I believe every country and region can attain that same achievement; the African region is expected to be next, since Nigeria passed the three-year mark without any wild polio in August 2019.

I'm also confident that the Global Polio Eradication Initiative partnership will continue to learn and innovate in these final steps to eradication. We've never seen coordination and collaboration of this level for public health. It's truly remarkable when we think about how many children are reached every year and where some of these vaccination campaigns are happening with such success across the world—from dense urban environments to remote mountain regions and rainy floodplains, as well as areas where local health systems are chronically weak.



Campaigns in which vaccinators go door-to-door to administer the oral polio vaccine can reach millions of children in a matter of days. This five-year-old girl was immunized in her home during a door-to-door campaign in Adia, Cameroon.

The success of the polio eradication program in all but two countries around the world gives me confidence that we can overcome the final challenges ahead to end polio once and for all.

NOTE FROM BILL GATES

From climate change to the AIDS crisis, there are a lot of pressing challenges facing the world right now, and so I'm often asked, "Why are you focusing on eradicating this one disease, which only impacts a handful of people?"

I have two answers to that question.

The first one is that fighting polio is sort of like fighting a fire. If you don't extinguish all of it, it will keep spreading. In fact, projections show that if we stopped trying to eradicate polio today, then by the year 2029, there wouldn't just be a handful of new cases cropping up anymore. As many as 200,000 children would be infected annually.

But I'm also committed to eradicating polio because it's possible. We've not only cornered the last few cases of polio to two countries over the past 30 years, we've also sharpened the tools—and formed the alliances—needed to finish the job.

Today, thanks to the Global Polio Eradication Initiative, we have a global surveillance system that can identify where polio lives even before children contract it. In countries like Nigeria, frontline health workers have spent years building relationships with local communities, so they are trusted to administer the polio vaccine.

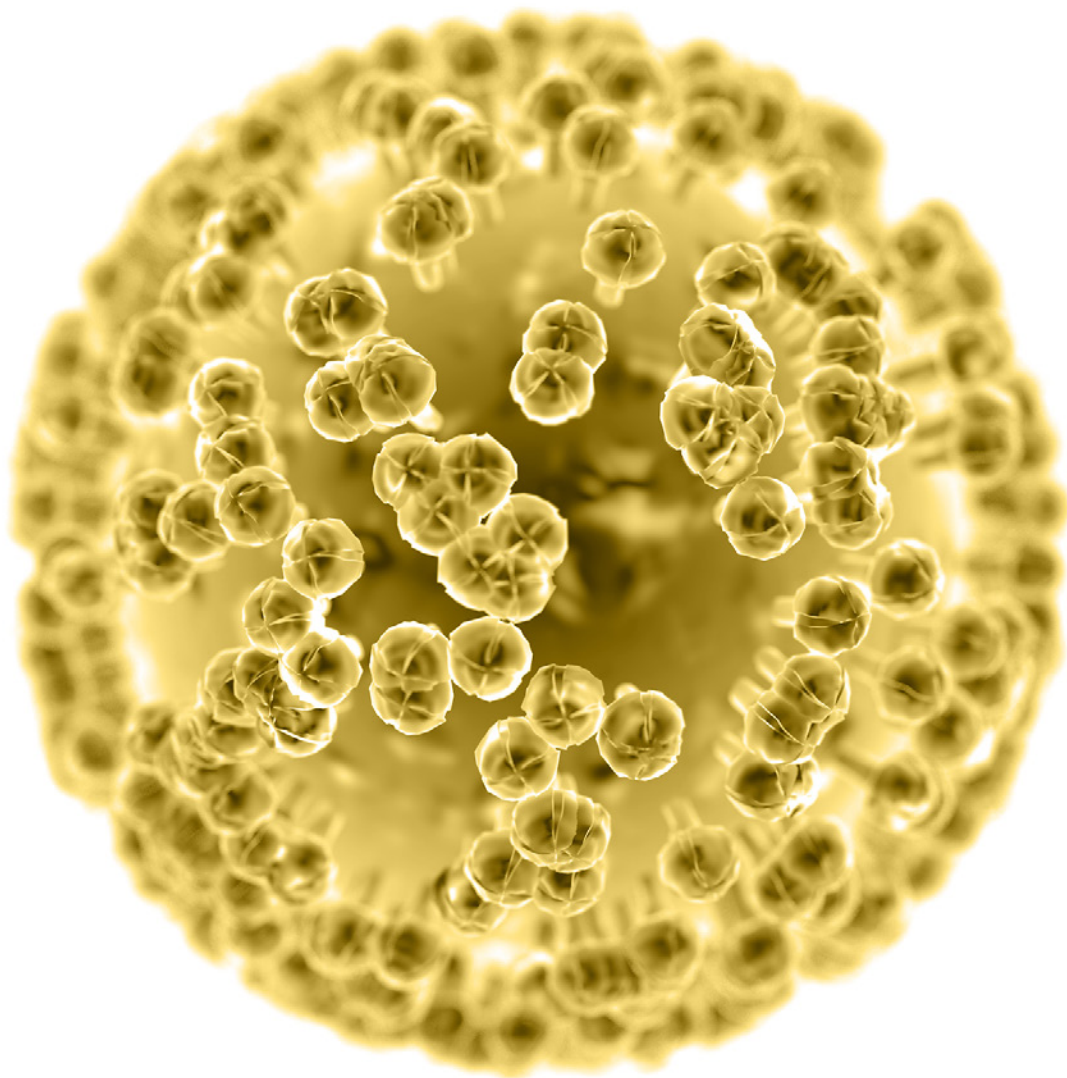
With all the resources we have today, children should not have to worry about being paralyzed by polio simply because of where they are born. Together, with help from a broad alliance—including surveillance officers in Nigeria, community vaccinators in Afghanistan, and epidemiologists in Geneva—we can make the vision of a polio-free world a reality.

Bill Gates




Universal Flu Vaccine

*Science is moving us toward a long-standing dream:
a flu vaccine that offers lifetime protection.*



Visible only under a microscope, the flu virus is just 120 nanometers in diameter. (A sheet of paper, by comparison, is 100,000 nanometers thick.)



Current influenza vaccines all suffer from the same problem: the flu virus mutates and makes it necessary to change the vaccine from year to year. The challenge of a universal flu vaccine is to create a vaccine that could be given once and protect for life.

A CONVERSATION WITH KEITH KLUGMAN

Director, Pneumonia, Bill & Melinda Gates Foundation

Keith Klugman is excited about influenza research. As the director of the pneumonia program at the Bill & Melinda Gates Foundation, he and his team posed a tough question to scientists, researchers, and entrepreneurs from around the world: How can we make a transformative, game-changing universal influenza vaccine? Responses came in through Grand Challenges, a grantmaking initiative that focuses on scientific questions that, if solved, could change the world as we know it.

If it seems strange that a pneumonia expert is excited about the flu, consider this: Pneumonia is the world's leading cause of death among children under age five, with more than 99 percent of those deaths occurring in the developing world. "That's why we have a pneumonia program at the Gates Foundation," Klugman observes. "Having said that, there are a few causes of pneumonia that can be prevented. And one of them is pneumonia that is caused by flu."

Seasonal flu vaccines already exist and are safe for children, pregnant women, the elderly, and others who are at high risk. Immunization saves countless lives every year. But, as Klugman notes, "Current influenza vaccines all suffer from the same problem: the flu virus mutates and makes it necessary to change the vaccine from year to year. The challenge of a universal flu vaccine is to create a vaccine that could be given once and protect for life." In order to do so, the science needs a breakthrough—something unexpected that fundamentally alters how we think about the flu.

Unfortunately, flu vaccine innovation has stagnated for decades. The research falls into two groups: one group is working to make incremental improvements to existing vaccine technologies to broaden their protections, and the other is seeking to break the mold with an entirely new universal flu vaccine that would protect against multiple strains of the virus. Researchers in the second group are on the vanguard of influenza vaccine research, exploring the microscopic composition of our cells to learn the roles that proteins, antibodies, and our very DNA play in combatting this disease.

The work that scientists are undertaking is important, but risky, because success is not guaranteed. Novel ideas are just that—new, unexplored, and lacking in evidence to show that they work.

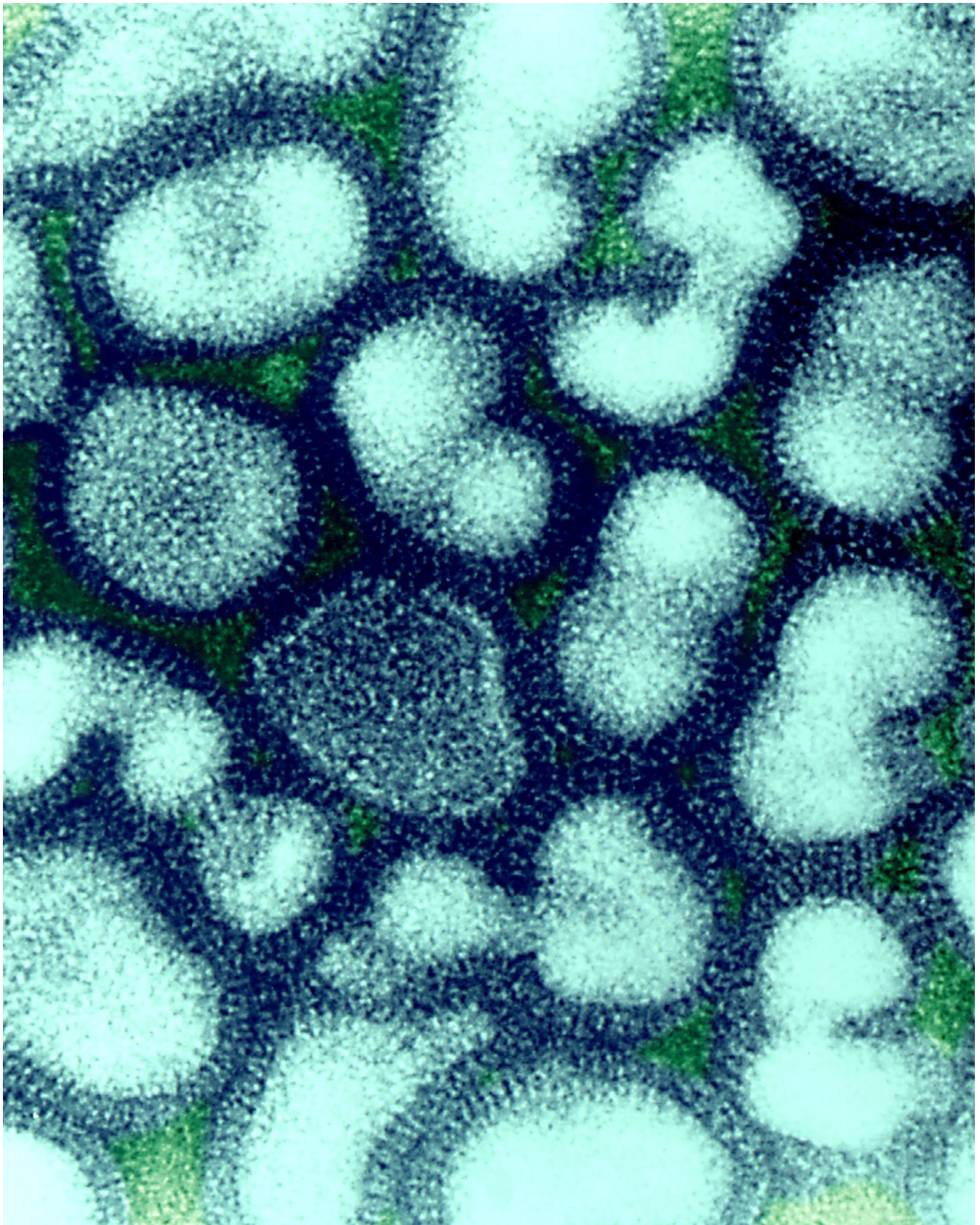
With funding from Gates Philanthropy Partners, scientists across five countries have returned to their laboratories to uncover the secrets of the influenza virus—and search for the common thread that would make a universal vaccine possible. Success would not only mean protecting the most vulnerable individuals from seasonal flu with an affordable vaccine, but also preventing flu outbreaks on a global scale. “The influenza virus is a shapeshifter that causes both seasonal flu and pandemics, which is when a new strain infects people around the world,” Klugman explains.

The most severe influenza pandemic in recent history occurred just over 100 years ago, in 1918. Commonly known as the “Spanish Flu,” one-third of the world’s population was infected with the virus and upward of 50 million people died—more than the total death toll during World War I. And the next global pandemic? It, too, will likely be a fast-spreading threat that could

kill millions, mostly in developing countries. A universal vaccine would mean the end of influenza pandemics and protection for everyone.

The work that scientists are undertaking is important, but risky, because success is not guaranteed. Novel ideas are just that—new, unexplored, and lacking in evidence to show that they work. So why invest in research and development when the funding could be used to buy treatments?

For Klugman, the answer is twofold. “We believe in the importance of technology and the ingenuity of people in science. We think we can come up with scientific advances which could benefit everyone,” he says. “But if we were only to fund successful projects, we would have failed. And the reason that we would have failed is that we were not adventurous enough, and we didn’t take enough chances.”



The beauty of a transmission electron micrograph of influenza viruses belies the deadly potential of this disease. (Photo By BSIP/Universal Images Group via Getty Images).



DNA sequencing—the extraordinary process of mapping nucleotides—requires specialized expertise and laboratory equipment.

Our collective belief is that innovation is catalyzed through rigorous collaboration, and we hope this Grand Challenge will stimulate creative thinking beyond the traditional influenza community.




In Beijing, China, a mother brings her infant to be immunized.

Cardiovascular Health

Our hearts are the engines that power our bodies. But, for millions of people around the world, this critical engine is weakened by disease.





At our core, our work is about tackling preventable diseases that imperil the lives of people in the poorest parts of the world—and with a disease of such scale, we must act together.

INSIGHTS FROM JENNIFER ALCORN

Deputy Director, Philanthropic Partnerships,

Bill & Melinda Gates Foundation

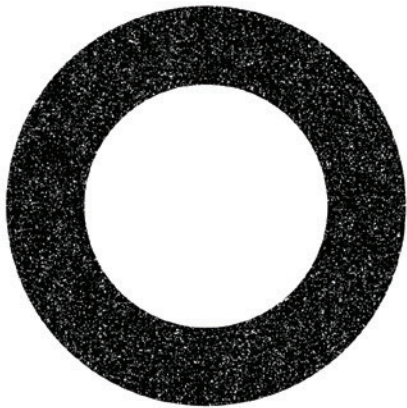
Your heart is a miraculous machine. Every day, while you are eating, exercising, talking, and even reading these words, your heart pumps one and a half gallons of blood through 60,000 miles of your veins. (For some perspective, the circumference of the Earth is just under 25,000 miles.) This muscle is the engine that pushes blood—like fuel—throughout our bodies and brains.

Unfortunately, for many individuals, this critical pump is weakened by disease. The data on cardiovascular disease is astounding. Globally, 1.4 billion people—that's about 18 percent of the world's population—have high blood pressure, putting them at risk for cardiovascular disease. For me, what's even more staggering is that only one in seven people affected by high blood pressure receives treatment. It is devastating—but not surprising—that approximately 17 million people die from cardiovascular disease every year. It is the deadliest human disease. And, it's both preventable and treatable.

While we at the Gates Foundation are intrigued by how things like our cardiovascular system works—or doesn't—we are most interested in how to overcome the systemic constraints that prevent people from living healthy and productive lives. Most of our work focuses on the most neglected diseases and the barriers that inhibit people living in poverty from reaching their highest potential. Whether it's addressing diseases like malaria and tuberculosis or the devastating impact of childhood malnutrition and pneumonia, we seek solutions to complex, multifaceted issues. If you've ever heard Bill and Melinda Gates talk about data, particularly data pointing to where and how lives can be saved, you know it is their "North Star" and the driving force behind the strategies that shape the foundation's goals.

In addressing cardiovascular disease, partnership is our avenue to making an impact. There are existing solutions to treat and prevent diseases of the heart, and we can use our expertise and resources to partner with nonprofits and other donors to bring those solutions to the ground. At our core, our work is about tackling preventable diseases that imperil the lives of people in the poorest parts of the world—and with a disease of such scale, we must act together.

1.4 billion people globally—most under the age of 70—have high blood pressure. Only one in seven of them receives treatment.

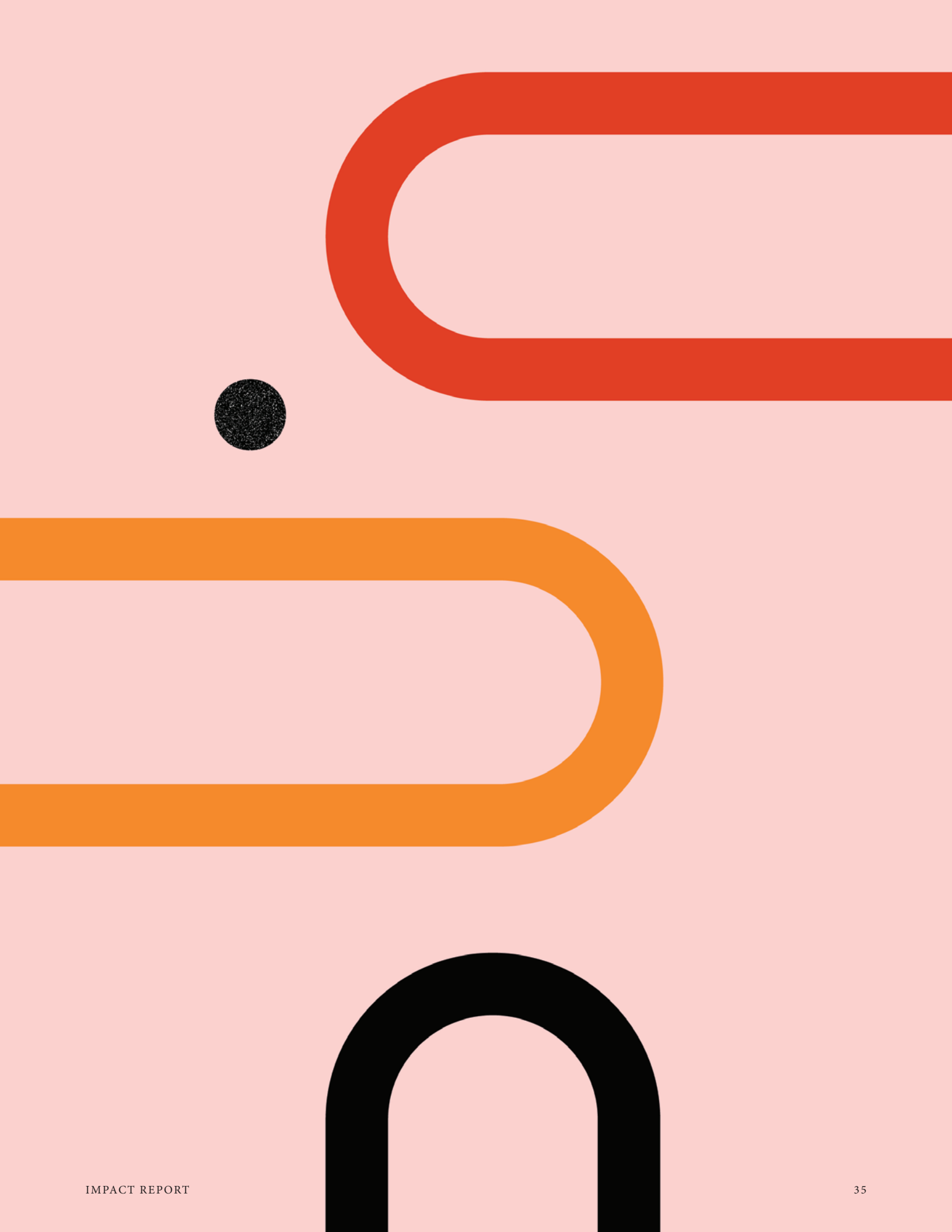


Partnership is how our work with Resolve to Save Lives (Resolve) began. The global experts at Resolve have an extraordinary goal to significantly reduce cardiovascular disease: to save 100 million lives within 30 years. We believe they can do it.

Resolve is working in countries where the highest burden of cardiovascular disease exists, where tools for treatment and prevention are limited, and where lives can be saved when government policies are strengthened. Focusing on three proven interventions—controlling high blood pressure, reducing sodium intake, and removing trans fats (artificially created fats) from the global food supply—their results so far are incredible. In 2019, India announced it would reach 150 million people across 100 districts by scaling its high blood pressure initiative. More than 40 countries are working to eliminate trans fats. Thailand is achieving elimination this year and the European Union seeks to limit use by 2021. Other countries are following these leads.

These are early steps in a complex, multi-year initiative to address a disease that spans the globe. Resolve is collaborating with a range of partners—including governments, development banks, clinicians, and policy makers—to galvanize action. These are partnerships for our collective future. The majority of individuals with cardiovascular disease are under the age of 70, so incremental change—country by country—will impact the lifespan of millions.

A healthy heart allows all of us—no matter where we live—to enjoy a life filled with work, play, learning, and relationships. We believe everyone in the world should have access to the care, treatment, and information they need to realize their fullest potential, but we must link our aspirations and our expertise to unlock those opportunities.



Our Collective Impact

You are the partner in Gates Philanthropy Partners. Through our shared giving, we are transforming optimism into action.



Since 2016, we've distributed more than \$29 million in grants to 21 high-performing organizations, benefiting families and communities across 17 countries.

GRANT DISTRIBUTION



US Education

\$370,000 TOTAL GRANTED TO DATE

\$250,000 Charter School Growth Fund

\$120,000 College Success Foundation: District of Columbia



Newborn & Child Health

\$498,073 TOTAL GRANTED TO DATE

\$498,073 FHI 360



Disease Elimination & Eradication

\$2,800,000 TOTAL GRANTED TO DATE

\$300,000 The END Fund

\$550,000 Institute of Tropical Medicine Antwerp

\$1,100,000 UNICEF

\$850,000 World Mosquito Program



Empowerment & Opportunity

\$7,733,000 TOTAL GRANTED TO DATE

\$1,000,000 The Challenge Initiative

\$3,000,000 DKT Democratic Republic of the Congo

\$1,958,000 DKT International

\$720,000 Johns Hopkins University Center for Communication Programs

\$1,055,000 Population Services International



Global Health Innovation

\$18,435,262 TOTAL GRANTED TO DATE

\$537,529 Foundation for the National Institutes of Health

\$176,566 Harvard University

\$412,448 The Helmholtz Centre for Infection Research

\$420,329 Oregon Health & Science University

\$124,988 The Scripps Research Institute

\$554,935 University of Cambridge

\$549,356 The University of Chicago

\$659,111 The University of Tokyo

\$15,000,000 Vital Strategies

\$1.00

Smallest Gift Received

\$15.05 Million

Largest Gift Received

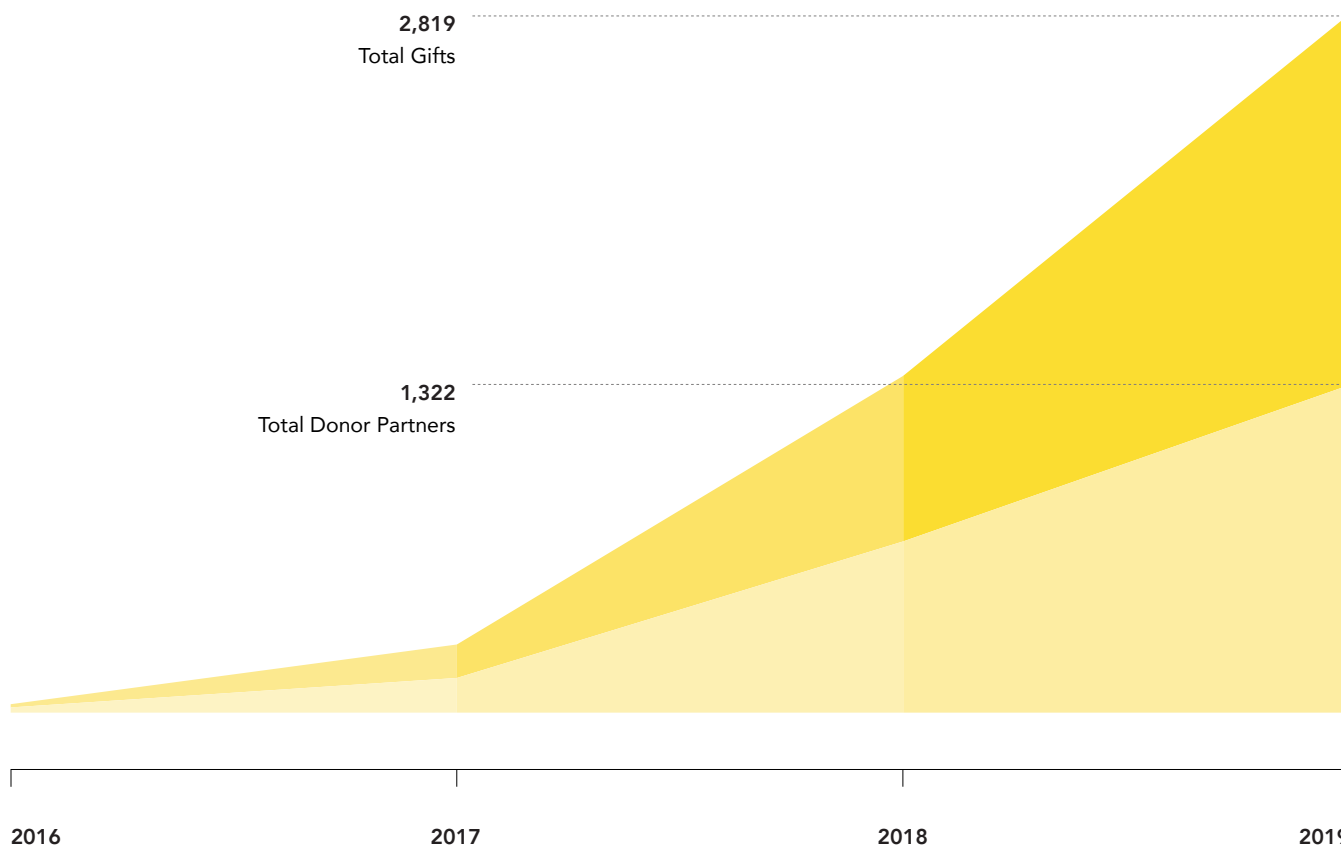
\$46.97 Million

Total Gifts Received

1,322

Total Number of Donor Partners

ANNUAL PARTNER GROWTH



It takes you.

*Poverty, stigma, inequality...some problems are too big to solve alone.
It takes commitment to accelerate progress on the world's toughest problems.
It takes a community to make a transformative impact. It takes you.*