

2018

Activity Report

BUILDING
PUBLIC
HEALTH
SYSTEMS
GLOBALLY



Cover Photo:
Quito, Ecuador launches its
Partnership for Healthy Cities
project, focused on healthier
food in schools.
Photo: Juan Carlos Bayas

Activity Report

BUILDING
PUBLIC
HEALTH
SYSTEMS
GLOBALLY

JINAN, CHINA
NEW YORK CITY
PARIS
SÃO PAULO
SINGAPORE

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**From the
Chairman of
the Board**



It has been another incredible year for Vital Strategies. We branched out into new areas of public health, and in new directions within existing programs, all toward furthering our mission of a world where every person is protected by a strong public health system.

Our unique, data-driven approach brings the best practices to bear on some of the world's most vexing public health challenges. We apply the wealth of knowledge that comes from a team of experts from across a variety of fields to bring attention to the causes and hazards of air pollution; to empower governments to count every life and use data strategically; to reduce the prevalence of cardiovascular disease; to make the world's roads safer; and to combat the epidemic of non-communicable diseases.

Our work in 2018 has reinforced our reputation for working with governments and local organizations to help rapidly propel ideas from concept to implementation, without compromising quality. The result is an organization that expanded from \$60 million in funding in 2016 to a budget of \$122 million today. Our team members live and work in 73 countries, and we now have offices in New York City, Singapore, Paris, São Paulo, and Jinan, China.

I am certain that we will continue to apply our expertise to even more challenges in the years ahead, and to improve the health and quality of life for people around the world.

I would like to thank our donors, partners, and the management and staff of Vital Strategies for their continued support and dedication to our work.

Sincerely,



Louis James De Viel Castel
Chairman of the Board



Our Vision

We envision a world
where everyone is
protected by a strong
public health system.

OUR DISTINCTIVE APPROACH

Vital Strategies bridges the gap between public health needs and their solutions, with a focus on rapid, large-scale impact.

PUBLIC HEALTH INTELLIGENCE

Strengthening the collection and use of data to inform government action.

STRATEGIC COMMUNICATION AND ADVOCACY

Mounting campaigns that use storytelling and rigorous research to influence policies and behavior.

INSTITUTIONAL STRENGTHENING

Building government expertise, especially for policy development, legal analysis and regulatory enforcement.

2018 in Review

A Growing Global Impact

\$600 million+

in grants administered through our programs over the course of our history.

\$122 million

Annual Budget

73

Countries Reached

\$20 million

For “STOP,” an initiative through Bloomberg Philanthropies to monitor the tobacco industry’s efforts to hook the next generation of users.

\$9.1 million

One-year commitment through Bloomberg Philanthropies to address overdose prevention in the United States, Vital Strategies’ first U.S.-based initiative.

73

Countries Reached

422

Global Staff

3 New Offices

registered in Singapore, Brazil and France





Countries



1,100 appearances
in global and national
media outlets

\$53.8 million+
worth of government media
investments in tobacco and
road safety campaigns

54 cities
have signed on to the Partnership
for Healthy Cities

150 organizations
pledged to "Quit Big Tobacco,"
a Vital Strategies-led effort to
encourage advertising agencies
and public relations firms to stop
working with tobacco clients

42 million
media impressions per month

360 patients
recruited for Stage 2 of the
STREAM trial at 12 sites in
seven countries

50,000 people
received support for high blood
pressure treatment in India

Inspire
We launched a worldwide
coalition mobilizing clinicians,
public health professionals and
organizations to advocate for
clean air policies that protect
people from air pollution

**78 strategic communication
campaigns**
in 79 countries for tobacco
control, road safety and
obesity prevention

82 countries
have identified 5,000 prepared-
ness gaps through the Joint Exter-
nal Evaluation Process, which is
supported by the Resolve to Save
Lives Prevent Epidemics team

500,000 social media posts
and news items analyzed to
document public discourse on air
pollution in Southeast Asia

Taking on Lead Poisoning
Our program in Peru focuses on
lead poisoning, the world's leading
environmental cause of childhood
cognitive damage

2018 in Review

Through new initiatives, major publications, influential partnerships and strong advocacy, Vital Strategies made significant contributions to global health in 2018.

January

In two high-profile publications, Vital Strategies leadership pushes the global public health conversation. CEO and President José Luis Castro talks NCDs and the parallels between the tobacco and food industries in *The Financial Times*. And Dr. Tom Frieden, CEO and President of Resolve to Save Lives, writes “U.S. life expectancy is dropping. Here’s how to fix it,” an op-ed in the *Washington Post*, with a focus on the impact of cardiovascular disease and opioid addiction.

Recruitment begins for the second phase of the STREAM clinical trial, which is testing a less intensive and shortened treatment for multi-drug resistant tuberculosis (MDR-TB) at 13 sites in seven countries.



February

An anti-tobacco social media campaign asks the 600,000+ residents of Banjarmasin, Indonesia to “Say No to Cigarettes” (#KadaHandakRokok), and becomes the top trending topic on social media locally. Another campaign, #PackWarning85, accelerates the momentum for larger warnings on cigarette packaging in India, highlighting scientific evidence on the effectiveness of larger pack warnings ahead of a Supreme Court hearing on the larger warnings.



March

The mayor of Partnership for Healthy Cities site Quito, Ecuador announces that six school districts, reaching 13,000 children, will replace all junk food with fresh options and traditional, unprocessed dishes, as well as limiting advertising and training teachers on the importance of eating more fruits and vegetables.

Vital Strategies releases its sixth Tobacco Atlas, a triennial report published in partnership with the American Cancer Society, which tracks the tobacco epidemic and the tobacco industry’s influence. (tobaccoatlas.org)

May

The World Health Organization calls for a total elimination of trans fat from the global food supply by 2023 and releases REPLACE, a step-by-step technical guide to eliminate trans fat.

In honor of World No Tobacco Day, advertising agencies and public relations firms commit to stop working with tobacco clients, as a part of our Quit Big Tobacco campaign. Health organizations also pledge not to work with firms who have tobacco clients.



April

South Africa implements a tax on sugary drinks, after more than a year of advocacy to counter industry interference. South Africa becomes the second country, behind Mexico, to pass such a tax to address the country’s obesity epidemic.



June

PreventEpidemics.org is launched at the Aspen Ideas Festival. The website spotlights gaps in countries’ epidemic preparedness and highlights actions governments, donors, activists, and organizations can take to fill them.

India commits to eliminating trans fat from its food supply by 2022, a year in advance of the WHO goal.

Jamaica calls for restriction of sugary drinks in schools and public health facilities, a policy that went into effect Jan. 1, 2019.

In a letter published in *The Lancet*, José Luis Castro joins colleagues to call for bold action on noncommunicable diseases in the lead-up to the United Nations General Assembly High-Level Meeting on NCDs.

July

More than 40 countries vote to ratify the WHO Framework Convention on Tobacco Control Protocol to Eliminate Illicit Trade in Tobacco Products, Products, which aims to prevent tax evasion and reduce access to tobacco products.

In partnership with ministries of health in Ghana, Tanzania, Rwanda, Kenya, Zambia and Malawi, Vital Strategies launches the first Medical Certification for Cause of Death e-learning course designed specifically for physicians in the African region.

Experts call for action on the leading sources of air pollution in Indonesia at a symposium called "The Air We Breathe." The event culminates in Indonesia's government committing to develop evidence-based policy recommendations for mitigating health effects of air pollution.

November

Twelve million people in China are newly protected from the harms of secondhand smoke when Xi'an Municipal Government implements its regulation to make all indoor public places, workplaces and public transport 100 percent smoke-free. The new law brought to 100 million the number of people in China protected by smoke-free legislation.

Results from Stage 1 of the STREAM Clinical Trial are released at the 49th Union Conference on Lung Health. The trial, which was conducted at seven sites in Mongolia, South Africa, Uganda, and Vietnam, demonstrated that a shorter, more affordable drug regimen for MDR-TB was just as effective as the longer, costlier regimen.

Vital Strategies launches an overdose prevention program as a part of Bloomberg Philanthropies' new \$50 million initiative to reduce deaths from drug overdose, now the leading cause of death for people under 50 in the U.S. More than 70,000 people in the United States died from an overdose in 2017, exceeding the number of AIDS-related deaths at the height of the epidemic.

On the World Day of Remembrance for Road Traffic Victims, Vital Strategies coordinates eight global cities to hold events, generating tremendous coverage about the toll of road traffic crashes.

September

On the final day of the 12th Asia Pacific Conference on Tobacco or Health (APACT), more than 100 people gather in Garuda Wisnu Kencana, Bali, to promote a smoke-free Bali and protest against tobacco industry marketing targeting youth.

At the United Nations General Assembly, the World Health Organization launches SAFER, a new road map to support governments working to reduce the harmful use of alcohol.

Vital Strategies issues "Trouble Brewing," a new report which debunks misconceptions about alcohol use, exposes industry tactics to market to youth and women and derail regulation, and emphasizes the urgency of implementing evidence-based policies.



August

Vital Strategies wins a role in Bloomberg Philanthropies' new \$20 million investment to expose and stop Big Tobacco's deceptive practices.

Drink driving dropped to 2 percent in Addis Ababa, Ethiopia, following road safety mass media campaigns paired with enhanced enforcement operations. Drink driving had been observed at 10 percent three years earlier. Speeding rates also dropped.



December

The final tally of Vital Strategies' media mentions for 2018 comes to over 1,100 articles in 861 media outlets, including the Associated Press, The New York Times, The Wall Street Journal and Washington Post, garnering an average of 42 million media impressions a month.

October

Peru publishes a 30-year trend analysis on the country's causes of death. The report shows that in spite of significant health gains, Peru's persistent leading cause of death has been pneumonia. This led to a government commitment to prioritize pneumococcal vaccines for older adults.

Vital Strategies launches Inspire, a coalition that mobilizes clinicians, public health professionals and organizations across the globe to advocate for aggressive clean air policies.



**Message from
the President
and CEO**



The World's Healthiest Future Is Dense, Urban and Green



José Luis Castro

José Luis Castro
President and CEO

*More and more, cities are going
to be looked upon to take the lead
and to prove the potential for
real change, because they must
and because they can.*

Currently, half of the world's population lives in cities, and by 2050, that number will grow by 2.5 billion more people—and close to 90 percent of that increase is occurring in Asia and Africa.

The transition to urban life has also tracked with the shift in the global burden of disease. With progress on reducing infectious diseases, people are living longer, and infant mortality rates are at historic lows. At the same time, rates of noncommunicable diseases such as cancers, diabetes, and heart and lung disease have risen rapidly. Premature deaths from these noncommunicable diseases disproportionately affect low- and middle-income countries.

It can be easy to look at these issues and think that urbanization exacerbates the problems. But really, the solution will rely on cities.

Repeatedly, cities are proving their potential to drive large-scale innovations in public health. We have helped mayors and other local leaders pioneer smoke-free laws protecting people from working in restaurants and offices filled with smoke and inspiring people to quit. We've helped them keep sugary drinks and junk food out of schools where teachers were once paid to promote them. We have worked with city leadership where road crashes are the leading cause of death among young adults to redesign intersections, promote seat-belts and

helmets, and reduce drink driving. In all of these initiatives, progress has been carefully proven and documented to be modeled elsewhere.

At Vital Strategies, we believe that the world's healthiest future will be urban, dense and green. We have led work with 54 global cities that signed on to the Partnership for Healthy Cities, an initiative that enables each city to deliver a smart, proven intervention of its own choice to address noncommunicable diseases and injuries. We've seen how cities can pilot programs that are eventually adopted by national governments. And conversely, we've seen how essential cities are to implementing national programs and policies.

Cities will not be able to solve issues as complex and large-scale as climate change or tobacco use on their own, but they will increasingly be looked to as the incubators for ideas that governments might be hesitant to take on, whether it's a policy to ban smoking in public places or bold innovations in public transportation. More and more, cities are going to be looked upon to take the lead and to prove the potential for real change, because they must and because they can. The examples laid out in this report demonstrate how urban centers have taken up the charge, and how Vital Strategies has supported these efforts through the expertise and partnership for which we've become known.

Road Safety

Vital Strategies is working in 10 cities to reduce road crashes through the Bloomberg Philanthropies Initiative for Global Road Safety, which aims to protect vulnerable road users, especially pedestrians. This approach also advances urban design that promotes physical activity, like bike lanes and sidewalks. Vital Strategies coordinates the initiative's global partners to align various governmental departments' efforts in infrastructure, enforcement, communication and surveillance. Our experts also advise cities on road crash surveillance, on strategic communication campaigns, and on changing the media narrative around road safety.

A Mayor Nearly Lost His Life in a Crash: Now He's Making Accra's Roads Safer

One Sunday in November, several patients at Accra Regional Hospital received an unusual guest at their bedsides: the mayor had come to visit.

In honor of the World Day of Remembrance for Road Traffic Victims, an annual observance that aims to galvanize action on road safety, Mayor Mohammed Adjei Sowah visited traffic crash survivors in the hospital.

Traffic crashes are the leading killer of youth around the world. For Mayor Sowah, action on road safety is a mission born of personal experience. Eighteen years ago, he and a friend were riding a motorbike when they were struck by a car. Neither was wearing a helmet. Mayor Sowah still suffers from chronic back pain as a result.

Ninety percent of the world's 1.3 million annual road deaths occur in low- and middle-income countries, and cities like Accra bear an oversized burden. According to Ghana's National Road Safety Commission, between 2011 and 2015 there were 13,616 road-related incidents in the city, 951 of which were fatal. Pedestrians struck by cars are the most likely to die.

"These deaths are not inevitable," Mayor Sowah said. "And we are fighting hard to reduce them."

Vital Strategies surveillance experts are working with Ghana's National Road Safety Commission to examine its road injury and mortality database, which led to the first Accra-specific analysis showing where and when the most serious crashes were



taking place, and who was most at risk of injury or death. Using this information, our team helped the city develop a pedestrian safety action plan and an overall road safety strategy.

For the first time, the city has been able to review detailed maps showing high-risk locations, such as the Lapaz highway crossing, an intersection that accounts for 16 percent of all road crashes in Accra. The giant thoroughfare is surrounded by residential neighborhoods and shopping districts, and running was often the only way to make it from one side to the other.

In July 2018, our team joined Mayor Sowah as he announced a major redesign of the Lapaz highway crossing, with support from the Partnership for Healthy Cities. And in December 2018, the redesign was complete. There are now wider medians and curb cuts for wheelchairs, and pedestrian crossing times were increased from 18 to 41 seconds. These improvements significantly reduce the risk of crashes and ensure safer crossings for the city's growing population.

GROWING IMPACT



Addis Ababa, Ethiopia

In Addis Ababa, we're working with city officials to improve data collection and crash surveillance. A new electronic crash registration system has increased the number of fatal crashes recorded by the police commission from 35 percent to over 80 percent. In addition, we helped the city develop its first comprehensive road safety report, which has been used to identify high-risk intersections and corridors.



Bangkok, Thailand

Thailand's roads are among the deadliest in the world, in large part due to speeding. We worked with Bangkok's municipal government to introduce 10 new speed cameras at dangerous intersections and mount campaigns that encourage helmet use and reduce drink driving.



Bogotá, Colombia

Hard-hitting and sustained communication campaigns, paired with enhanced enforcement operations by police, have changed how road users behave in Bogotá. Speeding decreased from 39 percent to 21 percent from 2015 to 2018. In all, the Road Safety program's interventions have helped prevent an estimated 190 deaths in that time.



São Paulo, Brazil

In 2014, 1,249 people lost their lives on the roads of São Paulo. Through redesigned pedestrian areas, effective campaigns and enhanced enforcement, the death toll is gradually declining. In 2017, the number of people killed was 797.

Tobacco Control

As a main partner in the Bloomberg Initiative to Reduce Tobacco Use, we help governments adopt lifesaving tobacco control policies. Countries that once had high smoking rates are banning tobacco advertising and smoking in public spaces. In 2018, we worked with governments to support 55 media campaigns, promoting policies across 11 low- and middle-income countries including China, India, Brazil and Indonesia. Social media campaigns recruited more than 800,000 advocates, leading to activities such as “die-ins” at shopping malls, and doctors championing tobacco taxes. Since 2007, we have enabled more than 300 media campaigns in over 40 countries.

How Youth in the Philippines Have Helped Build a Movement to Counter Big Tobacco

On Aug. 22, 1,000 students marched through Iloilo to protest the tobacco industry’s influence across the Philippines.



Chanting “They Lie, We Die!,” they walked from the city’s convention center to a commercial district, accompanied by activists and government officials.

This student demonstration was a part of a greater movement built city by city in response to the tobacco industry’s push to hook new customers in low- and middle-income countries.

According to The Tobacco Atlas, 15.7 million adults use tobacco daily in the Philippines, and more than 100,000 people are killed by tobacco-caused disease in the country each year. As tobacco demand has shrunk in high-income countries, the industry has turned to aggressive marketing to children in low- and middle-income countries, many of which have weak anti-tobacco policies. An estimated 94,000 Filipino children ages 10 to 14 now use tobacco daily.

In 2017, following advocacy efforts by partners in the Bloomberg Initiative, including Vital Strategies, Philippine President Rodrigo Duterte issued an executive order banning smoking in public places nationwide. Vital Strategies helped amplify the ban by orchestrating a campaign for social media and earned media, and the order was met with broad public support.



But months later, seeing that many cities had yet to implement the new rules, the anti-tobacco advocacy group Smoke-Free Philippines envisioned the Caravan: a traveling road show to promote tobacco taxes and smoke-free public places.

With years of experience in the Philippines, including support for nationwide anti-tobacco campaigns and tobacco-control policies such as graphic health warnings on cigarette packs, Vital Strategies worked closely with advocates to make the Caravan a reality.

The Caravan officially embarked to its first destination, Baguio City, in late 2017 and visited 13 cities in 2018, hosting different local events including mural competitions, dance and fitness sessions, panel discussions, media events, workshops and concerts. The hashtags #RaiseTobaccoNow and #Save1MillionLivesNow helped amplify the message across cities to extend its reach well beyond the physical settings.

Despite the tobacco industry's continuing efforts to undercut tobacco control policies, the community mobilization and publicity earned by the Caravan yielded successes, including pushing through a tobacco tax and five cities passing smoke-free ordinances.

GROWING IMPACT



Xi'an, China

Tobacco kills nearly 2 million people every year in China. In 2018, the city of Xi'an officially went 100 percent smoke-free, bringing to 100 million the number of people in China protected by legislation which bans smoking in public places. Vital Strategies supported the law's implementation with a media campaign addressing smoke-free environments in restaurants.



Banjarmasin, Indonesia

Teaming up with the University of Technology Sydney, Vital Strategies' tobacco control team in Indonesia made popular the "Kada Handak Rokok" ("Say no to cigarettes") campaign by transforming the river city's landmark tower, colorful boats, billboards and costumes.



Kampala, Uganda

Despite a national smoke-free law in Uganda, enforcement in the capital was weak, and tobacco use stayed high. Through an enforcement drive, increased police fines, and meaningful messages and campaigns about the harms of smoking, Kampala is making public places healthier and helping its citizens give up a deadly habit.

Cardiovascular Health

Through the Resolve to Save Lives initiative, Vital Strategies is working to address the world's leading killer: cardiovascular disease. Resolve to Save Lives aims to save 100 million lives over the next 30 years by improving the treatment of high blood pressure, eliminating artificial trans fat and reducing salt intake. In 2018 the initiative supported the WHO launch of REPLACE, an effort to end use of artificial trans fat. Resolve to Save Lives also partnered with governments in India, China and elsewhere to expand hypertension services to more than 100,000 people, and made progress on reducing sodium intake in China.

Accelerating Blood Pressure Control



**Across India,
200 million adults
have hypertension,
yet only one in four
of these adults
are aware of their
condition, and just
one in 10 has their
blood pressure
under control.**



To address the high burden of hypertension, the government of India has adopted the 25 by 25 goal, which aims to reduce prevalence of high blood pressure by 25 percent by 2025.

In the state of Punjab in northwest India (population 28 million), one in three adults is afflicted with hypertension. Diets high in salt and trans fat are a significant contributor to developing hypertension, and without treatment the condition can lead to serious disability, and even death, from cardiovascular disease.

The India Hypertension Management Initiative, a joint venture of the Government of India, Indian Council of Medical Research, WHO and Vital Strategies' Resolve to Save Lives, aims to accelerate the achievement of India's 25 by 25 goal.

The India Hypertension Management Initiative was established Jan. 1, 2018 in five districts in Punjab—Hoshiarpur, Gurdaspur, Pathankot, Bathinda and Mansa—covering a total of 6 million people. In its first year, the initiative enrolled 150,000 patients, ensuring access to necessary treatment and monitoring in the state. As the first to implement such a program, Punjab is now leading the world in the effort to improve blood pressure control and surveillance. By year's end, the initiative launched in four additional districts in Kerala and three in Madhya Pradesh, extending its reach to an additional 15.8 million people.

With Vital Strategies' support, India has made unprecedented progress in its efforts to reduce the burden of hypertension.

Obesity Prevention

Through mass media, advocacy campaigns and local partnership, we provide support for policies such as: taxation on sugary drinks and junk food; clear front-of-pack food labeling; restricting marketing of unhealthy food and beverages to children; and promoting healthy food policies in schools and other public institutions. Focused in six countries—Mexico, Brazil, Jamaica, Barbados, Colombia and South Africa—our work has already helped lead to taxes on sugary drinks and high-calorie processed foods in Mexico, restriction of sugary drinks in schools in Jamaica, and a sugary drinks tax in South Africa that is supported by 76 percent of the population.

How Triangle-Shaped Food Labels Could Prevent Obesity in Brazil

Fabiano Luder is 42 and lives in Curitiba, Brazil, known for its botanical garden and dynamic architecture. But Fabiano's ability to enjoy his city became more difficult when he was diagnosed with Type 2 diabetes. He has since developed serious complications—and has undergone four amputations related to his condition.

“The cause of my diabetes,” Fabiano said, “was my diet at the time. With clearer information on food labels, perhaps my life would be different.”

Fabiano's story is part of the “Right to Know” campaign, which supports clear front-of-pack nutrition warning labels in Brazil. Developed by the Alliance for Adequate and Healthy Diet with support from Vital Strategies, the campaign features testimonials from Type 2 diabetes patients, hypertension patients, young people, parents and doctors.

The people featured in the campaign urge policy-makers to approve clear labels and support the black triangle warning label, proposed by the Brazilian Institute for Consumer Rights, known as Idec, and the Federal University of Paraná. The triangle is a commonly recognized warning symbol in Brazil, and the black and white design allows consumers



**"With clearer information
on food labels, perhaps my
life would be different."**

FABIANO LUDER

Diabetes patient

to easily identify products high in fat, salt or sugar in otherwise colorful packages. A national study concluded that with the black triangles model, 76 percent of Brazilians would understand what they are eating. A competing proposal favored by the food industry uses a green, yellow or red "traffic light" icon, but the study found this to be much less informative than the black triangle.

Over half of Brazil's population is overweight or obese, including a third of children between 5 and 9 years old, contributing to NCDs such as diabetes, heart disease, cancer and others. Experts attribute much of the problem to unhealthy processed foods and drinks.

The new front-of-pack food label model using the black triangle is currently under consideration by Anvisa, Brazil's National Health Surveillance Agency. Vital Strategies has seized this pivotal moment to help move Brazil one step forward towards stopping its obesity epidemic before the next generation suffers the consequences.

"What has happened to me," Fabiano says in the ad, "I do not want to happen to my daughter."



GROWING IMPACT



Cape Town, South Africa

In April 2018, South Africa implemented a tax on sugary drinks. We supported these efforts through national mass media campaigns. In addition, Cape Town joined the Partnership for Healthy Cities to focus on reducing the availability of sugary beverages within municipal buildings, and to run a strong media campaign featuring firsthand stories from victims who regularly consumed sugary drinks and are sick as a result.



Jamaica

We worked with the government on communication campaigns to rally parents and the public around a new policy to restrict sugary beverages in Jamaica's schools.

Civil Registration and Vital Statistics

Advances in epidemiology and technology mean that for the first time, counting every human life is possible. We bring these advances to 20 countries through the Data for Health Initiative, funded by Bloomberg Philanthropies and the Australian government's Department of Foreign Affairs and Trade. Improvements to civil registration and vital statistics systems mean births and deaths can be registered even in remote areas. Accurately identifying causes of death helps health authorities focus resources where they are most needed. As a result, more people get the benefits of registration—from voting to education—and much-needed data are available to inform government policies.

How Rwanda Counts Its People

In Rwanda, a country with a fragile past, defining the population and its needs is critical to foster stability and rapid growth. The country needs to understand how to distribute resources and to know what is causing people to die.

Citizens of Rwanda need birth certificates that they can use in multiple places for school enrollment and other processes, and death certificates for managing estates of those who have died and ensuring property inheritance rights.

For three years, Vital Strategies has been collaborating with the government of Rwanda, through the Data for Health Initiative, to improve its CRVS system. When work began, the government had vision and motivation, but limited technical and financial resources. There was no standardized death reporting, and current registration systems had multiple barriers. For example, if a parent needed to register a child for school, the parent would have to travel to a village where a record was kept, or to find witnesses to verify the child's birth. For death registration, different hospitals used different forms of



Why CRVS?

A well-functioning civil registration and vital statistics system registers all births and deaths in a country, issues birth and death certificates, and tracks causes of death, and then compiles and disseminates this data to inform decision-making.

certification, making validation difficult and complex for bereaved families.

Vital Strategies is helping the country develop a strategic plan aiming to record every birth and death by 2025. This involves coordinating several government ministries, local government and private workers in the field.

In 2018, 700 in-house physicians at public hospitals—the vast majority of all the country—were trained on how to properly record medically certified causes of death. All civil registrars, in each of the country's 416 sectors, were trained on birth and death registration using standardized tools.

And in a pilot district, the country's front-line health workers have been trained to conduct verbal autopsies, or interviews with family members to better understand the circumstances surrounding a death so that the cause of death can be established. This is critical in Rwanda, where 70 percent of deaths occur at home.

"In the past, it was very difficult for people to obtain proof of a birth or death, and the burden was on them," explained James Mwanza, who manages Vital Strategies' CRVS work in Rwanda. But the rapid standardization of the birth and death registration system and data centralization have led to monumental progress. "Now birth certificates can

be issued by the health facility where the birth takes place or by front-line health workers in communities who have the authority to facilitate registering these events."

Mwanza is most proud that this progress will be sustainable when Vital Strategies' work is done. "At this stage of Vital Strategies' cooperation with Rwanda, all the support is fully institutionalized for continuation going forward," he said. "There is a lot of enthusiasm, a lot of desire and determination by the Rwandan government to 'leave no one behind.'"

GROWING IMPACT



Bangladesh: Officers trained all eight divisional hospitals on medical certification of cause of death, resulting in more than 26,000 deaths certified to international standards.



Brazil: The Ministry of Health investigated more than 110,000 deaths that had an uninformative cause of death in 60 cities, providing the government with more complete and accurate cause-of-death data to inform policies and programs.



Peru: The online death certification and registration platform reached nearly 100 percent coverage of hospital deaths in Lima. Expansion is underway in close to 200 hospitals around the country.



The Philippines: Vital Strategies supported the development of an automated system for coding death certificates, which has processed nearly 1 million death certificates since implementation began in July 2017, cutting in half the time before data are available for policy analysis.

Partnership for Healthy Cities

Through the Partnership for Healthy Cities, Vital Strategies provides technical support to 54 cities around the world that have committed to fighting injuries and noncommunicable diseases such as cancer, heart disease and diabetes. The prestigious global network was spurred by WHO's 2016 appointment of Michael R. Bloomberg as WHO Global Ambassador for NCDs. Each city is committed to implementing evidence-based policy interventions, ranging from making cities safer for cyclists to enforcing smoke-free laws and improving the food sold in public places.

A Global Network to Prevent NCDs

In a world where more than half the population now lives in urban settings, cities are uniquely positioned to prevent noncommunicable diseases (NCDs) and injuries, and to be engines of change at the national level too. That's the story behind the public health interventions implemented by cities in the Partnership for Healthy Cities, a prestigious global network with the mission of preventing NCDs such as heart disease, cancer and diabetes, as well as road traffic injuries and fatalities. Combined, these are responsible for almost 80 percent of global deaths. The cities below demonstrate just a few ways that mayors and other urban leaders in the Partnership are utilizing their special role in saving lives and protecting their citizens' health.

Montevideo, Uruguay

Because of the city's work with the Partnership, new restaurant menu regulations came into force in Montevideo, Uruguay: Now 10 percent of every restaurant menu must include no-salt-added options. Also, an educational video linking high salt consumption to cardiovascular disease is in circulation in clinics and other public spaces throughout the city, reaching an estimated 80,000 people.

Santo Domingo

In the Dominican Republic, of the more than 3,000 people who die each year from road traffic crashes, 21 percent are pedestrians and cyclists. At two Partnership workshops in Santo Domingo, the urban mobility experts at the World Resources Institute worked with the city to examine cycling, transport and crash injury data to create safer spaces for cyclists and to encourage physical activity. The resulting Bicycle Action Plan will link current bike routes to waterfront paths and improve both commuting and recreational cycling.

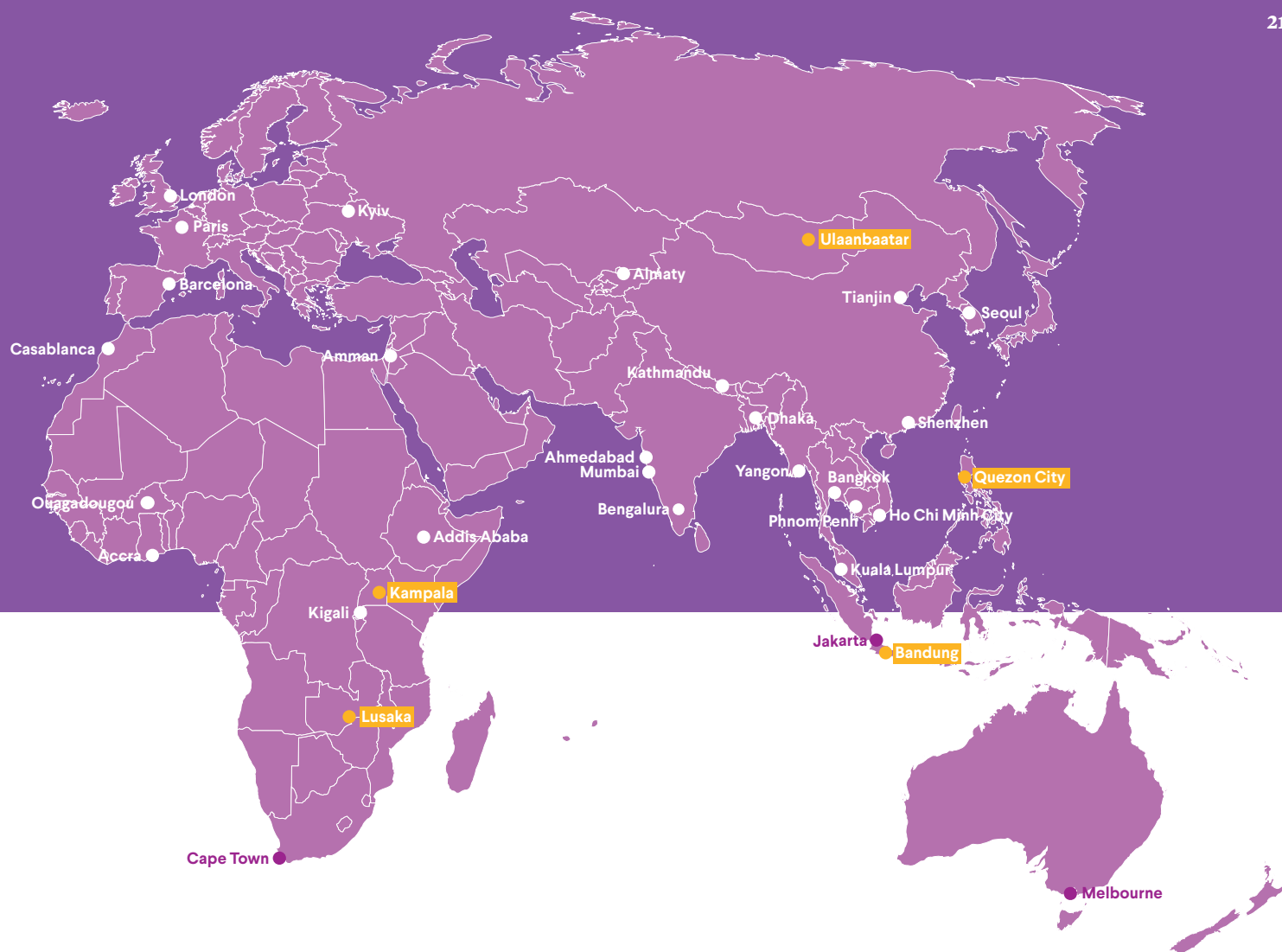
Quito

Quito will provide 13,000 children with access to healthier foods in schools, prohibit marketing of unhealthy foods at schools, and collect baseline health information to measure program outcomes.

Ulaanbaatar

The capital city is enforcing seat-belt laws—which were previously largely ignored—through trainings of local traffic police, and has launched a powerful radio and TV campaign about the dangers of not buckling up.





Lusaka

Walking to and from school each day in Lusaka can be deadly for children of any age, with cars speeding by and little protection in the way of crosswalks or barriers. At just one pair of schools—Northmead Primary and Secondary—one child died and 11 were injured over the past two years in car crashes that took place during their daily commute between classes and home. In November, Northmead completed a Partnership-supported project featuring raised zebra crossings, textured rumble strips, footpaths, bollards and new signage near the schools.

Kampala

Despite a national smoke-free law in Uganda, enforcement in the capital was weak, and tobacco use stayed high. Through an enforcement drive, increased police fines, and meaningful messages and campaigns about the harms of smoking, Kampala is making public places healthier and helping its citizens give up a deadly habit.

Quezon City

A television PSA that aired in Quezon City brought public awareness to the links between sugary drinks, junk food and noncommunicable diseases. Quezon City passed an ordinance in 2017 prohibiting sales and promotion of sugary drinks and junk food in and near schools, but enforcement has been difficult. City inspectors recently found that 70 percent of elementary schools and 90 percent of high schools are still selling and promoting them. The PSA informs people of the dangers of these products.

Bandung

We helped build public support for a 100 percent smoke-free bill amid strong enforcement of an existing ban on smoking in government buildings, hotels, restaurants and schools, with new signage posted and inspections. Vital Strategies supported social media campaigns promoting the city's smoke-free work, and public events have included an outdoor World No Tobacco Day art fair.

Data Impact

Our Data Impact program, part of the Bloomberg Philanthropies Data for Health Initiative, helps governments translate data into public health action: developing robust systems of key indicator monitoring; establishing new institutional units in ministries of health for advanced data analysis and policy development; and building capacity for data use among government staff at all levels. The program works in 17 countries on more than 60 activities. A key component is the Data to Policy program, which provides mentoring for health ministry staff in techniques needed to develop data-driven, evidence-based policies.

In Peru, a Landmark Report Reveals Causes of Death

In October, Peru's Ministry of Health, with support from Vital Strategies, published what has been called one of the most important technical documents in the country's recent history.

The report, which analyzes trends in the causes of mortality over the past 30 years, was covered widely by the media and is already informing public health decision-making.

One major finding: Pneumonia is the country's leading cause of death and has been for at least 30 years—even though many types of pneumonia can be prevented by vaccination.

"We now have a document that shows that there are many deaths, and we have a way of preventing them. It is a very tangible fact that we can see," said William Valdez, an epidemiologist, who is country coordinator in Peru for Vital Strategies supporting the Ministry of Health. "Because the report is public, policymakers now must commit to doing something."

For example, after the report's release, the vice minister of health was questioned on a radio news show about how the country is going to address pneumonia. This led her to commit to prioritizing

“After several weeks the knowledge that there was a lot of interest including from people outside the health sector was so fulfilling.”

DR. WILLIAM VALDEZ
Epidemiologist

Photo: Paola Flores

vaccination among older adults, just as vaccination for children is already a priority.

More generally, the report found that mortality in Peru decreased a remarkable 43 percent between 1986 and 2015, but that this gain in health has been unevenly distributed, with smaller gains among people living in rural areas and along the coast. And while the national rate of mortality from cancer has remained relatively constant compared to other disease groups, this masks inequity—there has been a significant decrease in cancer mortality in cities and an increase in rural areas.

The report is an example of how Vital Strategies supports governments around the world. In this case, staff embedded in the Ministry of Health in Lima, including Dr. Valdez, led the data analysis, coordination and work. Experts in New York and Lima provided guidance on how to correct underreporting in the data, how to visualize the data and how to communicate the information so that it is understandable to the public and policymakers. This strategy not only drives immediate work, but also

builds capacity among staff in Lima, who are now better equipped to take on the next project.

Media coverage led to new conversations on critical health concerns, such as road safety, after the report showed that traffic crashes are the leading cause of death among youth in Peru and are more prevalent in rural areas. Data showing that cervical cancer has increased in rural areas led to a call for screening and detection services.

“We presented the report at the launch, but we did not know what impact it would have,” Dr. Valdez said. “After several weeks, we saw that there was a lot of interest, including from people outside the health sector, and that was so fulfilling.”

GROWING IMPACT



Brazil: Vital Strategies supported the creation of the first-ever state-level “Saude Brasil” report, which provides a data-driven assessment of the country’s health situation. This was accomplished through an intensive multi-month engagement with teams from each of Brazil’s 27 states.



Ecuador: We helped Ecuador’s National Statistics Office establish the Observatory for Social and Health Development. Our team was instrumental in developing the conceptual framework and structure for an interconnected information system of social and health data.



Peru: Vital Strategies supported the design and launch of “Causes of Mortality in Peru 1986–2015,” as well as the development of an interactive “Mortality Atlas” available to the public on the Ministry of Health website.

Environmental Health

The challenges of outdoor and household air pollution, and access to safe drinking water and sustainable transportation, will intensify with climate change, population growth and urbanization. We provide technical expertise and consultative services to address the global burden of environmental risks and harms. In 2018, Vital Strategies began developing an air quality management road map to help cities assess local conditions and contributors and to implement policies to address air pollution. In 2018, we worked with governments in Asia to reduce air pollution and promote clean household fuels, and launched Inspire, a global coalition of clinicians to advocate for clean air.

A Public Health Approach to Address Air Pollution in Southeast Asia

The first time Asura was exposed to smoke from forest fires was in her mother's womb.

Like many children born in Indonesia and across Southeast Asia, her village was often clouded in the haze from nearby burning peatland forests. Asura was born with birth defects affecting her physical and cognitive development. Today, she is unable to speak and is highly vulnerable to respiratory illnesses.

Throughout the region, peatland forests are burned to clear land for palm oil production, creating fires that often burn for months. The subsequent toxic smoke is a major source of pollution affecting the health of millions of people in Indonesia and the neighboring countries of Singapore and Malaysia.

The 2015 haze episode alone was estimated to cause 100,000 deaths in the region, with the sum of the economic, social and environmental losses exceeding \$16 billion.

Air pollution is particularly hard on children. Their developing lungs, immune and nervous systems are especially vulnerable to exposure to toxins. The impact of air pollution during fetal development is similar to the effects of maternal smoking.

Since 2017, the Vital Strategies Environmental Health division has been working to integrate public health approaches—focused on assessing and reducing human health effects from air pollution—into ongoing efforts to abate forest and peatland fires in Southeast Asia.

The 2015 haze episode alone was estimated to cause 100,000 deaths in the region, with the sum of the economic, social and environmental losses exceeding \$16 billion.

URBAN AIR QUALITY INNOVATIONS

We launched a new Urban Air Quality Innovations initiative to help cities rapidly and economically enhance and use air pollution exposure data to identify and address key sources.

In Jakarta, we are working with the governor's office on its first formal plan to improve air quality.

In India, we partnered with the government to assess the reach of a clean household fuels scale-up program and offer guidance on ways to improve the program going forward.

Hazy Perceptions: We conducted a media scan in south and southeast Asian countries to better understand the gap between online discourse on air quality and the facts about risks to health. The study, to be released in 2019, analyzed 530,000 pieces of content over four years, from 2015 to 2018, in India, Sri Lanka, Nepal, Philippines, Papua New Guinea, Indonesia, Thailand, Malaysia, Singapore, Mongolia and Pakistan.

LEAD POISONING PREVENTION

In Peru, we partnered with the government to enhance childhood lead poisoning surveillance and prevention. This will allow us to target intervention efforts in the coming months to ensure that the most vulnerable populations are being prioritized.



Epidemic Preparedness

The Resolve to Save Lives Prevent Epidemics team provides technical support, mobilizes resources, and catalyzes political will for countries to improve their ability to find, stop and prevent deadly infectious disease threats. The team focuses on seven key areas: emergency preparedness; emergency response operations; national laboratory systems; disease surveillance; national legislation, policy and financing; human resources, and risk communication. In 2018 we provided technical assistance to countries in Africa on critical preparedness measures and unlocking millions in preparedness dollars, and launched the world's first website to clearly show how prepared each country is for the next epidemic. The site also provides tools for journalists and advocates to improve their country's preparedness score.

Nigeria's Path to Preparedness

An increasing population, tropical climate and complex socio-economic challenges leave Nigeria, Africa's most populous country, at risk for major disease outbreaks.

An increasing population, tropical climate and complex socio-economic challenges leave Nigeria, Africa's most populous country, at risk for major disease outbreaks.

To mitigate this risk, the federal government, with support from Resolve to Save Lives, has taken several proactive steps including aligning preparedness plans and financing sources, creating a strategy and plan for a yellow fever lab network, and the developing the National Action Plan for Health Security.

This actionable plan to find, stop and prevent public health threats was developed with the participation of nearly every federal ministry, ranging from health and agriculture to the defense and justice departments. The Nigeria Centre for Disease Control, which coordinated the process, received support from WHO, Vital Strategies' Resolve to Save Lives initiative, the U.S. Centers for Disease Control and Prevention, and Public Health England.

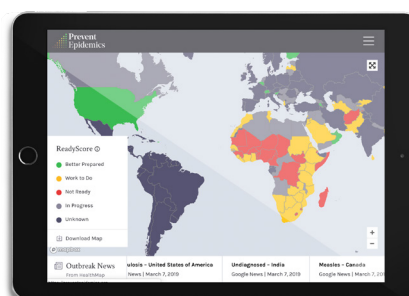




“The real measurement will be in how well functioning the health system is and how strong these capacities are,” said Christopher Lee, Resolve to Save Lives’ senior technical officer, who helped the Nigeria CDC coordinate the development of the national action plan. “The improvements are going be, fewer Nigerians with infectious diseases, and fewer health systems that are disrupted by the transmission of these kinds of diseases.”

Nigeria’s National Action Plan for Health Security integrates multiple work plans and acts as an “overarching” plan; it can be used to create linkages and monitor progress on major health security initiatives. With support from Resolve to Save Lives, Nigeria CDC undertook the process of aligning the action plan with a \$90 million World Bank loan specifically for preparedness efforts under the Regional Disease Surveillance Systems Enhancement (REDISSE) project. By ensuring that these two plans were synergized, Nigeria can better fund their crucial activities to prevent epidemics.

One of those key preparedness activities is working to control outbreaks of yellow fever, an acute viral hemorrhagic disease, transmitted by mosquitoes, that is endemic to Nigeria. In 2017, the country experienced a serious outbreak, and response was hindered by a limited laboratory capacity to rapidly



PreventEpidemics.org

We launched a new website that spotlights gaps in preparedness and highlights actions that countries, donors, activists and organizations can take to fill them. The site allows users to view preparedness details for their countries, including the ReadyScore, which measures a country’s ability to find, stop and prevent health threats.

confirm yellow fever cases so that emergency vaccination campaigns could be triggered. Together, Nigeria CDC and Resolve to Save Lives have partnered to fill this gap through development of a strategy and financial support to create a yellow fever lab network extending to all states in Nigeria.

The idea is that other countries will be encouraged to follow the example shown by countries like Nigeria, which have taken proactive steps to strengthen their ability to stop and prevent epidemics and keep their citizens safe and healthy.

Learn more at www.preventepidemics.org

GROWING IMPACT



Advancing Policy Globally

The Epidemic Preparedness team built international consensus for policies that prevent epidemics, resulting in new approaches and goals that are now globally agreed upon. Vital Strategies also developed the “Step Up” approach, which supports countries’ efforts to improve their preparedness scores to accelerate action to make them less vulnerable to epidemics.



Madagascar

We provided catalytic funding to Madagascar that has already helped the country improve its preparations for plague and demonstrated that funding in response to emergencies can build long-term capacity.



\$90 million

We supported epidemic preparedness across sub-Saharan Africa including: unlocking \$90 million in World Bank funds to fill preparedness gaps in Nigeria; establishing an implementation acceleration team in Uganda to support a national action plan, and helping Rwanda prepare for Ebola.

Improved Lab Capacity

We partnered with Africa CDC to support improved lab capacity in five African countries.

Overdose Prevention

More than 70,000 people in the United States died as a result of overdose in 2017, exceeding all other forms of accidental injury deaths. Millions more struggle with substance use. We see decisive government action as a key to addressing the crisis. As part of a new initiative launched in late 2018 and funded by Bloomberg Philanthropies, Vital Strategies is partnering with governments and affected communities in affected U.S. states to build tailored, science-backed solutions focused on significant and sustainable reductions in overdose deaths. We will assist local partners in gathering data, reforming policy, innovating programs and mobilizing communities at the neighborhood, municipal, county and state levels.

Helping States Reduce Overdose Deaths

In 2017, drug overdose accounted for 70,000 deaths in the United States—more than deaths from road crashes and gun violence combined.

In recent years, communities and policymakers have struggled to contain what has become the leading cause of death for people under 50.

The current drug crisis has taken many forms—from morphine to prescription products, and more recently, heroin and synthetic fentanyl. Each wave has been driven by policies, systems, stigma and misconception, and solutions must be comprehensive.

With a \$50 million investment, Bloomberg Philanthropies has made a commitment to address these challenges. As the lead partner in this initiative, Vital Strategies is, for the first time, responding to a public health problem in the United States.

Our work will start by focusing on two U.S. states where the situation is most critical. The initiative was kicked off in November in Pennsylvania in partnership with Governor Tom Wolf. In 2017, Pennsylvania had the highest number of overdose deaths in the country.



Pennsylvania State Capital

The second focus state is Michigan, where 11.4 million prescriptions for painkillers were written in 2015 alone—that's 115 prescriptions per 100 people. Between 1999 and 2016, Michigan saw a 17-fold increase in overdose deaths.

Through this initiative, Vital Strategies will work with the two states to implement evidence-based solutions across sectors, stakeholders, and levels of government to reduce harms and save lives. The program will focus on leveraging resources, catalyzing policy and practice reform, and tailoring solutions to respond to the unique needs and challenges of communities suffering from the overdose epidemic.



**Among people under 50,
overdose is the leading cause
of death in the country.**



**Pennsylvania
had the highest number
of overdose deaths in
the country in 2017.**

Maternal Health

In 2006, we embarked on a groundbreaking partnership with the government of Tanzania to help reduce Tanzania's unacceptably high maternal death rate by improving access to emergency obstetric care. Since then, our dedicated team of Tanzanian professionals has helped change the health landscape for mothers and newborns. Thamini Uhai, the local organization that manages the work, uses a task-shifting approach that brings quality comprehensive emergency obstetric care—including cesarean section and blood transfusion—to local health centers so more women can access the care. As we transition ownership of the program in 2019 to the Tanzanian government, one of the team's most recent innovations, birth companionship, is set to scale up around the country.

Birth Companions in Tanzania: Building Trust and Improving Care

A woman arrives at a health center in Kigoma region, western Tanzania, bleeding profusely. She had given birth at home, but the placenta had been retained—a life-threatening complication—and she was frightened.

“She was in critical condition,” said Magdalena Metta, the Thamini Uhai Birth Companionship Coordinator. But Magdalena and the birth companions based at the clinic calmed the woman, comforting her and helping communicate her needs to the health provider. Instead of enduring a frightening experience alone, she had supportive women helping her relax while the providers did their work. She was saved.

For many women in Kigoma, local medical facilities were a daunting place, particularly during labor and delivery. The environment was stressful, health care providers could be intimidating, and women believed they would receive more comforting care at home—even though their lives and their babies' lives would be at risk in case of an obstetric complication. But a new project has dramatically shifted how care is provided.

In 2017, Thamini Uhai, a nongovernmental organization based in Kigoma, Tanzania and affiliated with Vital Strategies, launched a pilot birth companionship project. Women in communities surrounding nine public health facilities could have a female companion of their choice stay by their side throughout labor and delivery. Previously, women could only have a health provider with them in the labor and delivery rooms, and a severe shortage of



providers in rural parts of Tanzania meant women often labored with little human contact.

Magdalena joined the program in 2016. With a master's in public health and a passion for maternal health, she saw that the birth companionship project was unique. "I had to be a part of it," she said.

The Thamini Uhai team worked with the community, health providers, health authorities and international experts to design the program. Women are encouraged to choose their own female companion, or one of the 30 "on-call" companions trained by Thamini Uhai and based at the facilities. Now, more than 80 percent of women delivering at the nine facilities have had a companion with them throughout childbirth, and 30 percent of those with companions brought someone from home.

"The women love having a birth companion with them because they are there to help and comfort them," Magdalena said. "Once you have a good experience you want someone else to have the same. They tell each other, 'I've been to these facilities, and you should try it.'"

She hopes the pilot will be taken on across the country. "Once it gets to scale," she said, "it's going to spread like fire."

"The women love having a birth companion with them because they are there to help and comfort them."

MAGDALENA METTA

Thamini Uhai Birth
Companionship Coordinator

Research

The Research Division aims to generate high-quality evidence to guide important public health decisions. Our work aims to build the institutions required to ensure the impact of our research is sustainable. We invest in capacity building through webinars and symposia at international conferences; training the researchers of the future, including training in key issues related to clinical trials and operational research; providing technical assistance that enables partners in low- and middle-income countries to strengthen their public health systems; and equipping affected communities to understand and participate in the research we conduct and to participate in translating research results into more effective programs and policies.

Proving the Efficacy of a Shorter Treatment for Multidrug-Resistant TB



Despite being one of the oldest diseases known to infect humans, tuberculosis remains one of the world's most challenging infectious diseases and is one of the top 10 causes of death globally.



In 2017, roughly 10 million people fell ill with TB, and 1.6 million people were killed by the disease. While significant progress has been made in monitoring, detection and treatment, the challenge of drug-resistant strains of TB has threatened to derail progress. Roughly half a million patients with multidrug-resistant TB (MDR-TB) struggle every year to take a cocktail of medicines that have serious side effects over an extended period that can be as long as 24 months. By the end of their treatment, patients may have consumed up to 14,000 pills.

In 2012, researchers began recruiting patients for STREAM, the first large-scale multi-country clinical trial to examine shortened treatment regimens for MDR-TB. STREAM, which is being implemented by Vital Strategies and The Union and is funded by USAID, aims to provide evidence regarding the efficacy, safety and cost of shorter, more tolerable regimens.

Stage 1 of the STREAM trial sought to determine whether a nine-month treatment regimen that demonstrated cure rates exceeding 80 percent during a pilot program in Bangladesh could achieve similar success in other settings. Seven sites in Vietnam, Mongolia, South Africa, and Ethiopia participated in Stage 1.

At The Union's conference in The Hague in

October 2018, researchers shared the final results of Stage 1 of the trial, which show that the STREAM regimen, lasting nine to 11 months, is statistically non-inferior to the 20-month regimen that was recommended by WHO when the trial began. In other words, the shorter regimen has been shown to be at least as effective as the 20-month regimen. These results were reviewed carefully by the WHO and played a key role in WHO's recently issued revised MDR-TB treatment guidelines, which now recommend the use of a nine-month regimen for the treatment of MDR-TB.

Despite the significant contribution of played by the Stage 1 results in the issuance of guidelines that incorporate shorter treatment regimens, further research regarding more tolerable regimens remains urgent. Stage 2 of the trial, currently being conducted at 12 sites in seven countries (Georgia, Moldova, Mongolia, Ethiopia, South Africa, Uganda, and India), is expected to contribute important evidence for future policy decisions regarding injectable-free, all-oral MDR-TB regimens.

Learn more at www.treattb.org

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