



Strengthening Data Systems and Public Health Intelligence to Improve Health for All

High-quality, trustworthy, country-owned data is the foundation of effective public health systems.

At Vital Strategies, we partner with governments and civil society to tackle the world's most urgent health threats by advancing local strategies and priorities. Strengthening public health data systems enables decision-makers to understand health trends, focus resources where needed, and engage the public.

Our vision for public health is simple: Data-informed **policies**, put into **practice** by strong institutions in dialogue with the public, create communities where all **people** can live healthier lives.



A doctor weighs, measures, and records the weight of a baby for birth registration. This step is essential to ensure every child is accounted for in Bangladesh's civil registration system. Photo credit: Juan Arredondo.

Building Next-Generation Foundational Public Health Data Systems

Millions of lives remain
uncounted worldwide.

Around 1 in 4 young children have not been registered at birth, often leaving them disconnected from services and social benefits. And in sub-Saharan Africa, fewer than 2 in 10 deaths have information on cause of death, leaving critical health needs and health inequities invisible. Strong **Civil Registration and Vital Statistics (CRVS) systems** ensure that every person is counted and connected and that governments have evidence to respond to health threats with effective policies. Our CRVS program has worked with over 30 countries, resulting in improved data for more than 25 million deaths and 24 million births and enabling 18 countries to publish national vital statistics reports for the first time.

In **Rwanda** and **Colombia**, linking birth registration to national digital ID systems and public infrastructure is driving inclusion and access to a lifetime of rights and services.

In **Bangladesh**, CRVS data revealed rising deaths from cervical cancer. In response, the government launched a nationwide HPV vaccination campaign.



Data entry clerks scan, digitize, and cross-verify information from paper-based civil records as part of Rwanda's national digital transformation initiative. The country is working to convert decades of handwritten documents into digital formats across 26 sectors and 418 districts. This ambitious effort aims to modernize the civil registration system, improve access to vital records, reduce administrative errors, and ensure more accurate, secure, and reliable documentation for all citizens. Rwanda plans to fully digitize its civil records by 2026. Photo Credit: Juan Arredondo.

Some of the world's greatest health threats stay invisible without disease-specific registries and surveillance.

Conditions like cancer are often detected late, when survival is lowest and treatment is most expensive. **Cancer Registries** make it possible to identify which cancers affect people most and measure whether prevention, screening and care programs work. We collaborate with ministries of health and partners in more than a dozen countries to establish and strengthen population-based cancer registries and use the data for national cancer control plans.

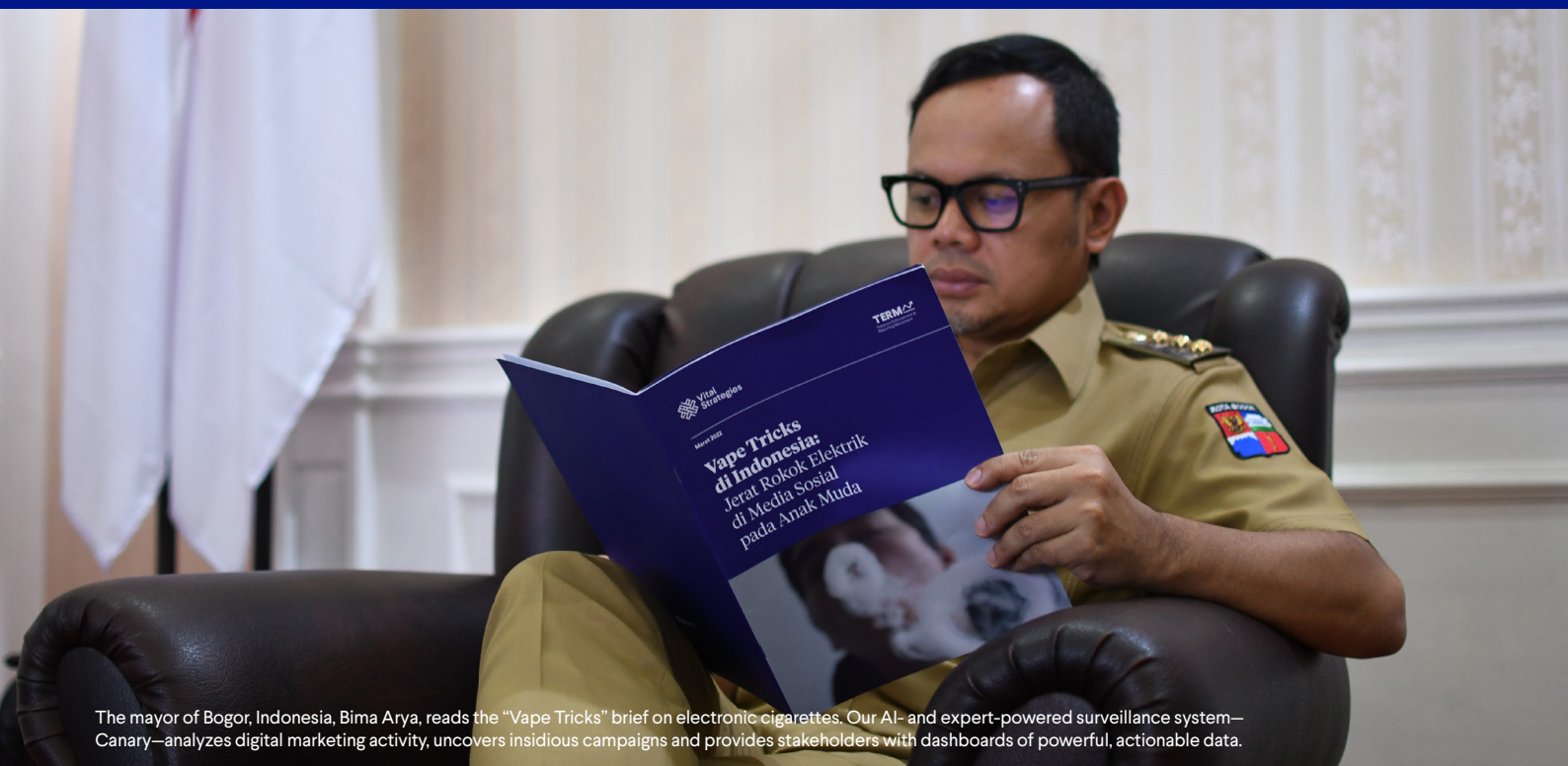
In **Rwanda**, we supported the Rwanda Biomedical Centre in developing a [digital module for cancer registration in DHIS2](#) that is now being taken up by registries worldwide.

In **Cameroon**, data revealed a rising burden of breast cancer, with most cancers diagnosed late. These findings led to Cameroon's first national breast cancer screening guidelines, and community engagement through [survivor testimonials](#).

In **Vietnam** and **India**, we are working with ministries of health and local health departments to enhance their systems of **noncommunicable disease surveillance**. We are also partnering with cities from **Vancouver** to **Paris** to **Helsinki** to **Osaka** on novel NCD surveillance methods, community engagement in data collection, and use of NCD data for decision-making.



A technician assists a patient undergoing an MRI scan at Butaro District Hospital. As part of its national public health strategy, Rwanda's Ministry of Health is working to expand access to early cancer detection, diagnosis, and treatment, key pillars in the country's broader push toward universal health coverage. Facilities like Butaro, a Level 2 teaching hospital and the national referral center for cancer care, play a critical role in delivering specialized services and reducing the cancer burden nationwide. Photo Credit: Juan Arredondo.



The mayor of Bogor, Indonesia, Bima Arya, reads the “Vape Tricks” brief on electronic cigarettes. Our AI- and expert-powered surveillance system—Canary—analyzes digital marketing activity, uncovers insidious campaigns and provides stakeholders with dashboards of powerful, actionable data.

Data digitization and artificial intelligence (AI) are transformational strategies for generating insights and making health systems smarter, faster and cheaper.

Vital Strategies works with governments to build next-generation public health data systems that **digitize data collection** and **integrate data sets within and outside the health sector** so that new data science and technology can be powered by **inclusive, culturally contextualized, comprehensive data**. AI has enabled us to identify patterns in previously untapped data sources such as **free-text medical records and social media** to support early detection of emerging health risks.

In **Brazil**, an AI application for analysis of primary care records enabled earlier identification of gender-based violence, shaping new prevention and response policies.

In **Buenos Aires, Argentina**, AI extracted and analyzed road crash data from police and hospital reports, cutting processing time 20-fold and enabling earlier trend detection, up-to-date reporting, and faster delivery of alerts.

In **Peru**, digitizing hospital cause-of-death records reduced the reporting lag from two years to two weeks, and set new security standards for sensitive information

In **South Africa, Indonesia, China, Mexico, Brazil, India and beyond**, we’re using AI- and expert-powered surveillance to detect and counter hidden threats on social media. Our monitoring system, known as Canary, produces country-level and issue-based reporting on tobacco marketing online and supports national dashboards, enabling policymakers to respond in near real-time and devise long-term solutions such as extending marketing bans to social media and fixing legislative loopholes, as happened in Indonesia. Canary is helping shield millions of children from harmful corporate tactics that could otherwise lead to a lifetime of harm.



Installing sensors to measure air quality in Jakarta, Indonesia

Climate change and environmental hazards are among the fastest-growing threats to public health.

We work with governments to integrate data across health, climate, environment, education, law enforcement, transport and other domains to make these risks visible and actionable.

In **Indonesia**, air pollution surveillance systems are generating [health impact assessments](#) showing substantial returns on investment from achieving carbon reduction targets, including lives saved and health care costs averted.

In 16 countries, we are helping governments build **lead poisoning** surveillance programs to pinpoint where exposures are highest and who is most at risk, using these findings to drive solutions that eliminate sources of lead.

In **China** and **Brazil**, our [Children's Environmental Health Indicators](#) platforms provide a comprehensive perspective to inform policy change and investments in environmental, climate and sanitation mitigation and adaptation strategies.

In **Brazil**, the [Children's Mental Health Promotion Platform](#) provides disaggregated, geo-referenced data on how local environments influence mental health, giving governments evidence to guide policies that protect children's well-being.



A child getting a blood lead test in India.



Zimbabwe Data to Policy participants and facilitators in Bulawayo.

Translating Public Health Intelligence Into Impact

In addition to supporting better data systems, we work with governments to translate data into evidence that guides policies, budgets and programs. We support a range of **policy-relevant data analyses**, from epidemiologic and cost-effectiveness studies to health impact estimation and economic modeling of health taxes. We also develop **digital tools like interactive dashboards and portals that provide data access and compelling visualizations**.

In **Senegal**, to support and provide transparency into the government's public health priorities, the Ministry of Health has for the first time created a public data portal focused on health indicators across multiple domains, including noncommunicable diseases, child health and epidemic response.

Our [Data to Policy Program](#) supports government officials using data to design and enact health policies. To date, D2P has supported the generation of nearly 200 policy briefs in 17 countries, of which about half have resulted in enactment of the policy recommendation. For example, in **Zimbabwe**, a D2P-supported policy analysis on maternal deaths catalyzed nationwide adoption of new technology for emergency obstetric care.

Centering the Public in Public Health

Public health data systems are strongest when responsive, transparent and accountable to the public. We have provided training to more than 500 government officials from more than 20 countries on data-driven communication techniques. We also build media capacity, training journalists to analyze and report health data. These efforts help ensure the public can understand health risks, track government action, and advocate for solutions.

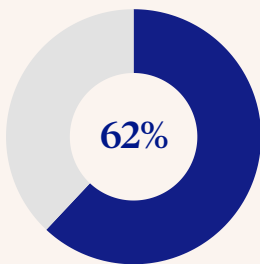
Our Behavioral Insights Lab has conducted public opinion surveys in **Mexico, Brazil, the Philippines, South Africa, Kenya and Colombia** that show strong public support for health taxes and provide evidence to overcome government hesitation and industry opposition.

In **Brazil**, through the More Data Better Health program, new ways of collecting and sharing health data with communities are ensuring that the public's perceptions and behavior are informing public health planning and assessments in areas ranging from primary health care to health disparities and climate anxiety.

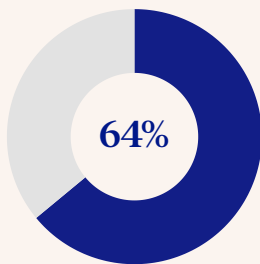


Data-Centered Leadership workshop in Papua New Guinea.

Public opinion data on government action on alcohol use in Brazil makes a compelling case for policies to reduce consumption.



agree that greater taxation on alcohol would effectively help reduce consumption



agree the government should remove any financial benefits given to the alcohol industry to help their business

Supporting Sustainable, Government-Led Public Health Data Systems

Resilient and responsive public health systems result when leaders understand data, institutions are equipped to analyze it, and practical tools are available to translate evidence into action. We partner with ministries of health, national public health institutes, and city and state health departments to strengthen data intelligence functions within their institutions.

Our **Data-Centered Leadership** program engages senior, non-technical government leaders, equipping them with skills to leverage data in decision-making.

We support ministries of health to establish **Advanced Analytic Units** focused on policy-relevant analysis and data-to-policy translation.

We have developed **technical toolkits** and other practical resources for building programs and processes, including [CRVS systems strengthening](#), [vital statistics reporting](#), [cancer registries](#), and [digital tool design](#).

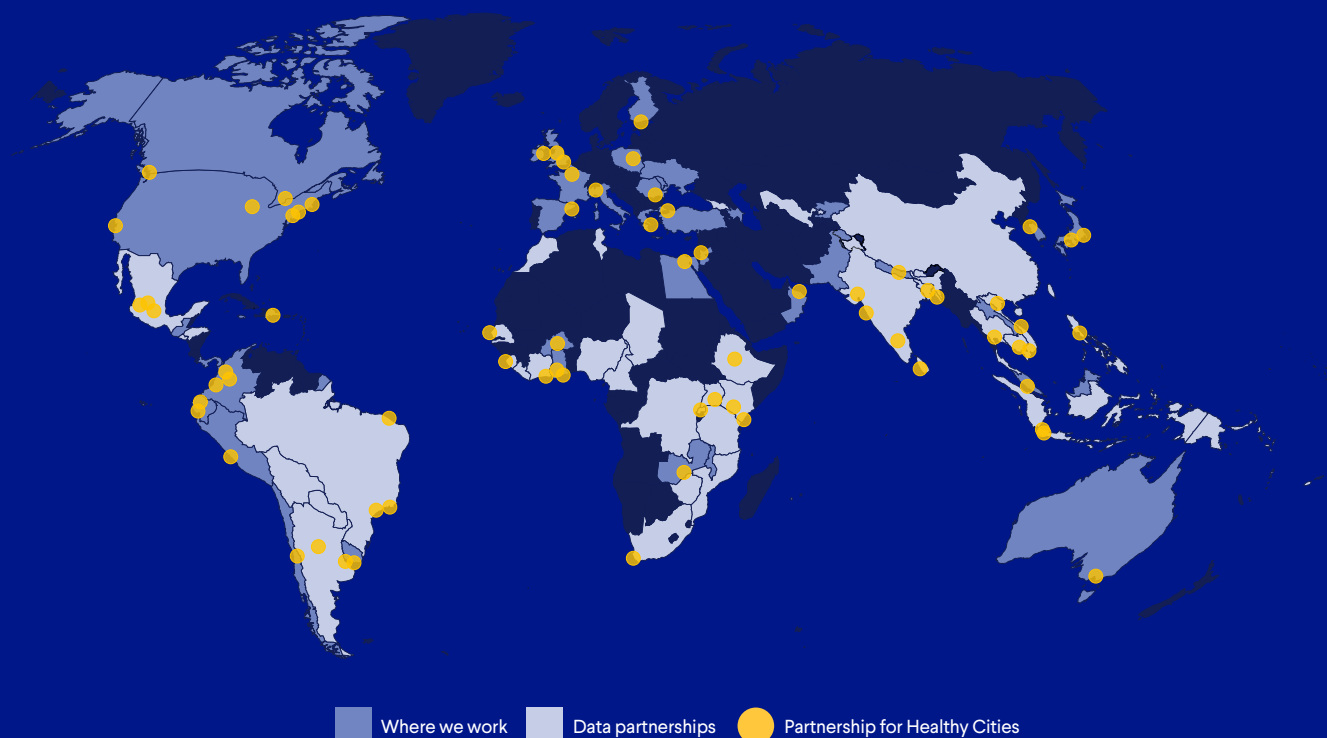
Our Data Systems and Public Health Intelligence Capabilities

Our teams, with deep expertise in epidemiology, data science, economic evaluation, health impact estimation, data visualization, social science research, operational research and data-to-policy translation, develop scalable and replicable solutions that can save lives and promote a healthier future for all people.

Our solutions include: surveillance system design and implementation; CRVS system improvement; data analysis for policymaking; digital analytic tools; data visualization and reporting; indicator framework design and implementation; behavioral science research; data integration; and population survey design and implementation.

The CRVS, cancer registry, and much of the data-to-policy translation work is supported as part of the Bloomberg Philanthropies Data for Health Initiative. Environmental health work is supported by the Bloomberg Philanthropies Lead Poisoning Prevention Initiative, the Clean the Air Fund, Norwegian Institute of Public Health, Open Philanthropies, Pure Earth and UNICEF. Work in Brazil is supported by Umané, Instituto Devive, Infinis, Galo da Manhã, Google.org, Instituto Cactus, RD Saúde and Instituto Ibirapitanga. Behavioral insights work is supported by Bloomberg Philanthropies and Open Philanthropy.

We apply our core approaches—data intelligence, strategic communication, policy solutions—to strengthen public health systems in more than 80 countries on six continents.



Vital Strategies partners with governments and local organizations to tackle the growing burden of noncommunicable diseases and injuries, using data and evidence to assess health and environmental threats and to move policy, practices and people. Our team of 400+ includes epidemiologists, policy experts, communicators, data analysts, and others who work in 80+ countries around the world. We focus on evidence-based policy solutions that drive high-impact, long-term, sustainable results.

For more detail:



Become part of the solution.
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