

PATH



India

Donor Milk deposit
&
Dispensing counter



PATH in India

PATH is a global organization that works to accelerate health equity by bringing together public institutions, businesses, social enterprises, and investors to solve the world's most pressing health challenges. With expertise in science, health, finance, technology, advocacy, and dozens of other specialties, PATH develops and scales solutions—including vaccines, drugs, devices, diagnostics, and innovative approaches to strengthening health systems worldwide.

India continues to be one of the most populous countries on the planet and, consequently, faces immense health challenges due to its growing population. Since 1978, PATH has been working with public and private partners in India to develop local solutions, support homegrown innovation, and share our technical expertise. PATH develops, introduces, and scales up cutting-edge technologies and methodologies to

tackle existing diseases and emerging health concerns. A few of our many successes in India include finding new methods to deliver nutritious food to schoolchildren, creating and implementing successful public-private partnership models to combat diseases, and expanding access to lifesaving vaccines for new mothers and their infants.

PROGRAM AREAS

Tuberculosis

Neglected
Tropical
Diseases
and Malaria

Vaccines

Maternal, Newborn,
Child Health &
Nutrition

Impact Lab &
Digital Health

Rice
Fortification

Tuberculosis

70,000

TB cases
diagnosed

India has the highest tuberculosis (TB) burden in the world. PATH is working hard to change this paradigm. Our Private Provider Interface Agency (PPIA) in Mumbai has resulted in diagnosis of more than 70,000 active TB cases. This groundbreaking and award-winning model engages private health care practitioners to provide high-quality TB diagnosis, treatment, and adherence support to marginalized populations in India.

PPIA model

The model was built on three interconnected pillars:



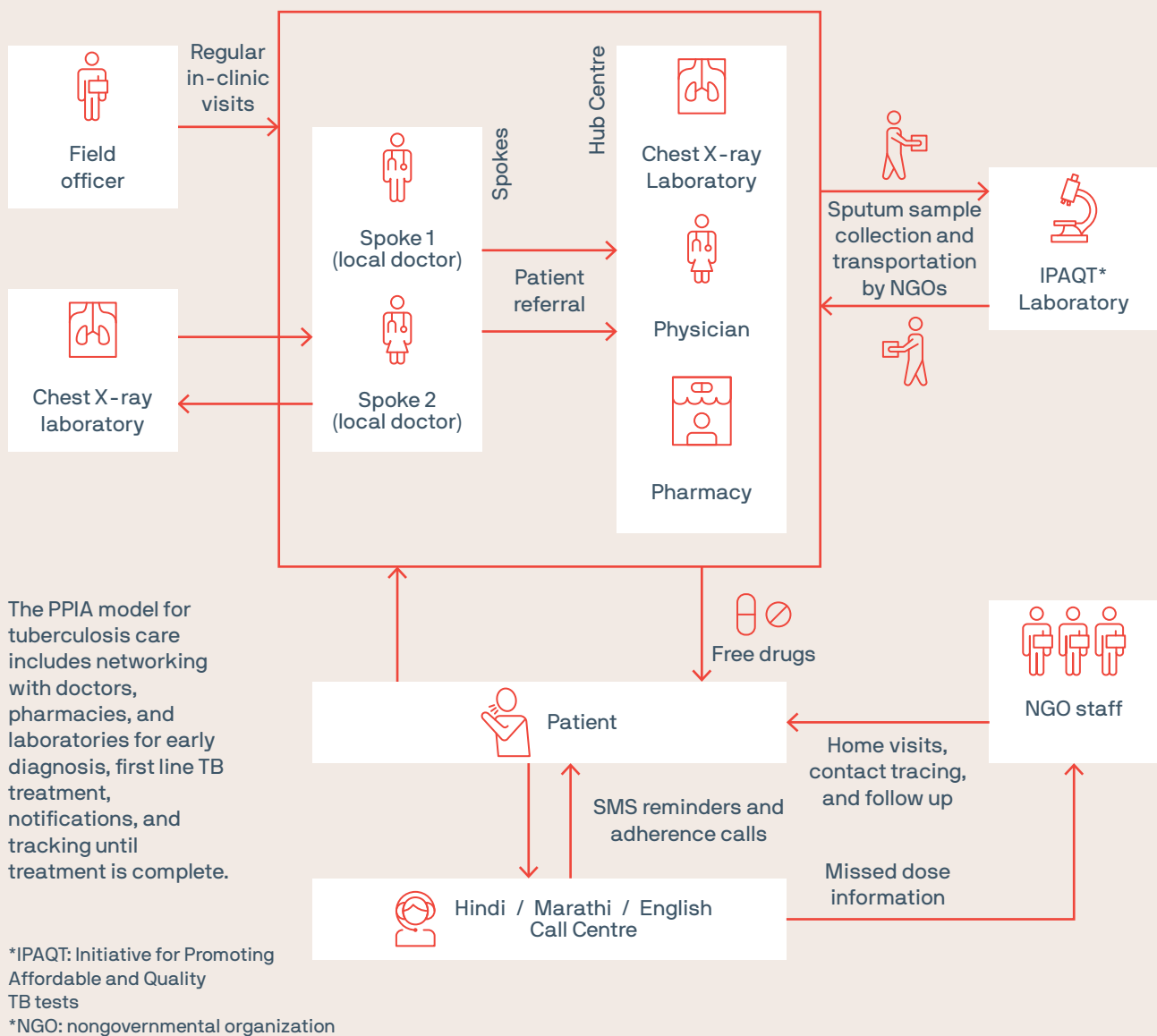
Patient-centric design
to improve access,
affordability and
support for patient
diagnosis and treatment.



Behavior change in the private sector to facilitate
patient access to free,
public sector diagnosis
and treatment.



Information and communication technology tools
to improve patient care
from diagnosis to
completion of treatment.



3.5 million
 people expected to be impacted by JEET project

Building on the success of PPIA, India's Revised National Tuberculosis Control Program is rolling out a private-sector engagement model to all parts of the country. PATH is supporting this ambitious scale-up effort, called the **Joint Effort for Elimination of Tuberculosis (JEET)** project, which will enable better notification, tracking, case management, and treatment of TB across India.

PATH provides technical support to various states and to the National TB Program in designing and institutionalizing sustainable private sector engagement models for TB control. We are also implementing innovative TB diagnostic and treatment adherence solutions and linking drug-resistant TB patients to public sector diagnostics.

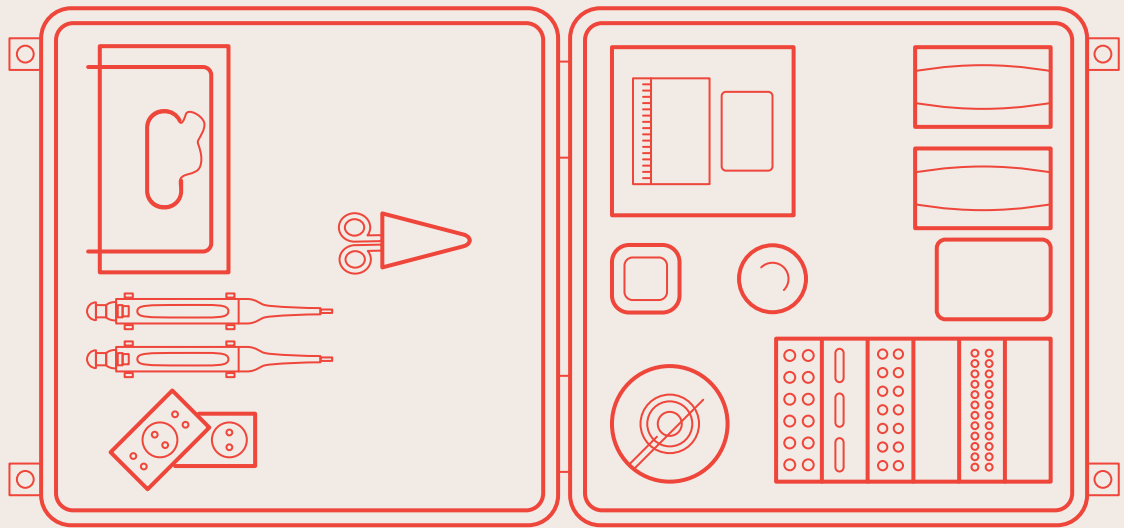
Neglected Tropical Diseases and Malaria

Enabling India
to move towards
elimination of
selected NTDs

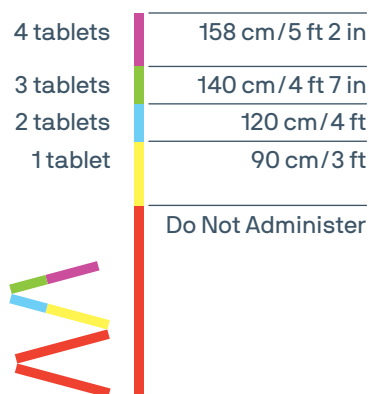
PATH works on neglected tropical diseases (NTDs) such as visceral leishmaniasis, lymphatic filariasis, an array of diseases manifesting as acute encephalitis syndrome, and malaria, which continue to affect millions of people in India. We provide strategic technical assistance to national and state policy makers and healthcare leaders to strengthen overall planning, implementation, monitoring, and supervision. This in turn helps to generate accurate and reliable data for decision-making, which leads to improve program management towards elimination or control of these diseases.



PATH provides support to the National Vector Borne Disease Control Program of India and the Uttar Pradesh Vector Borne Disease Control Program to **strengthen surveillance, track and train healthcare workers, and collect and analyze data** for these diseases.



The 'suitcase lab', currently under development, is an alternative field-adaptable diagnostic tool for areas with scarce health care facilities. Designed to provide techniques that are rapid, accurate and appropriate for low resource settings, it will be an asset for surveillance studies and will be conducive for leishmaniasis elimination programs.



A color-coded dose pole developed by PATH was introduced in selected mass treatment programs across India to help eliminate lymphatic filariasis.

Visceral leishmaniasis: PATH provides technical support to policy makers and state and local health care teams across Uttar Pradesh to find and treat hidden and new cases of this disease, also known as kala-azar. Part of our strategy includes use of a new drug, paromomycin intramuscular injection, developed by PATH. This novel treatment is expected to save thousands of lives. We are also in the process of establishing a 'suitcase lab' to help with more effective case detection in rural areas.

Lymphatic filariasis: PATH is supporting the introduction of triple drug therapy to boost efforts to help eliminate lymphatic filariasis, also known as elephantiasis from India.

Malaria: PATH is fighting malaria under a program designed to determine appropriate, India-specific use cases for radical cure therapy of *Plasmodium vivax* malaria while ensuring representation of all populations across India.

Vaccines

400 million

people expected
to be protected by
MenAfriVac®
by 2020

PATH develops and delivers lifesaving vaccines to women, children, and communities around the globe. The Center for Vaccine Innovation and Access houses PATH's work along the entire vaccine development and delivery spectrum. We do preclinical research on new candidates, conduct pivotal clinical evaluations and, ultimately, develop innovative approaches for new vaccine introduction and immunization system strengthening.

India has a large share of the global disease burden of diarrhea, which remains one of the leading causes of death among children. Rotavirus causes most cases of severe diarrhea. PATH, with our partners, developed the first- and second-ever Indian vaccines against this virus:

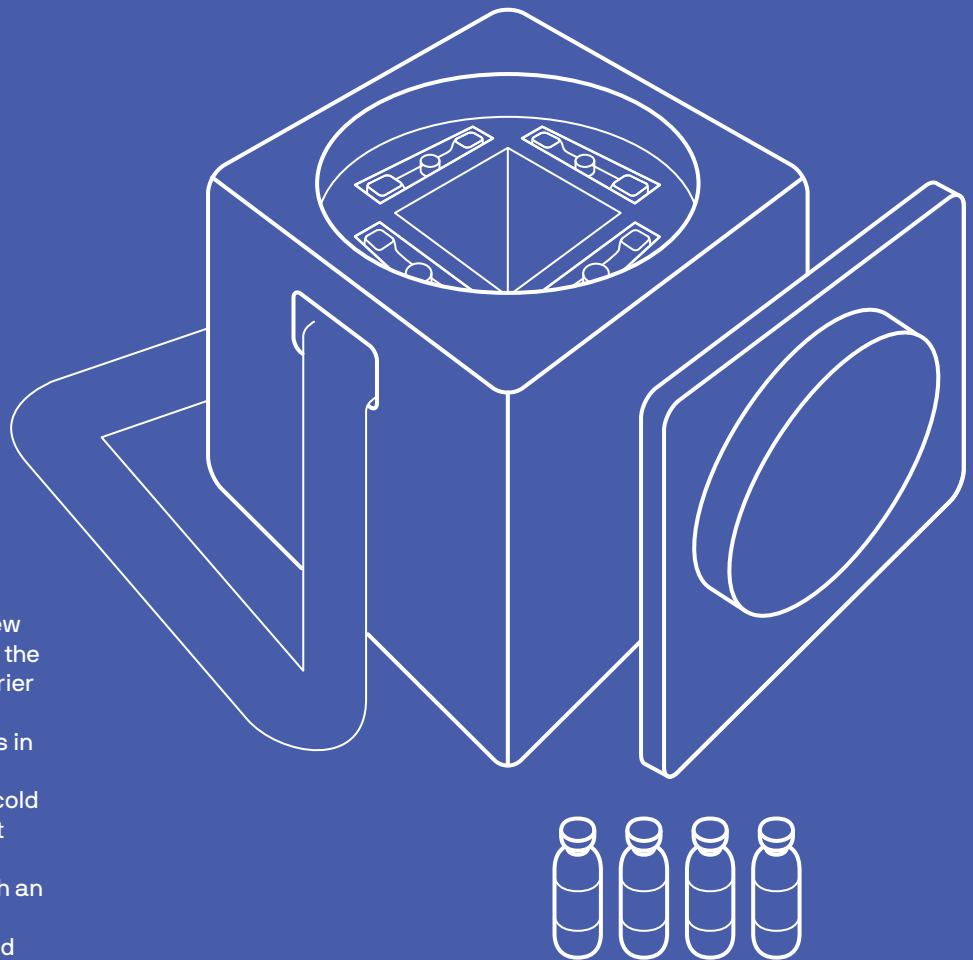
ROTAVAC®, in collaboration with Bharat Biotech and other partners, licensed in 2014.

ROTASIIL®, in collaboration with Serum Institute of India, licensed in 2017.

Both vaccines also achieved World Health Organization prequalification in 2018 and were introduced by the Government of India as part of the Universal Immunization Program. Approved for use worldwide, these vaccines are poised to improve the health of millions of children around the globe.



A suite of studies will assess the effectiveness, cost of delivery, and impact of ROTASIIL®, a new vaccine for severe diarrheal disease. The data generated will provide important information for policymakers.



PATH tests the scalability of new cold chain equipment, such as the freeze-preventive vaccine carrier depicted at right. In India, we consistently overcome barriers in cold chain technology while establishing new and reliable cold chain points in regions that get electricity for less than eight hours a day. In partnership with an Indian manufacturer, PATH supported the development and World Health Organization performance, quality, and safety prequalification of this carrier, which allows health workers to safely transport vaccines to and from immunization sessions. The device is currently being tested in local conditions.



PATH is working to strengthen the clinical research capacity of India in two key ways:

- We established **four advanced resource centers** across the country. Technology is at the core of this innovative program run by PATH's Clinical Development Training Program.
- In a related effort, we developed a **suite of five software tools called CReATE** (Clinical Research Advancement Towards Excellence) for clinical researchers.

PATH will continue to work with India's leading vaccine manufacturers to create and promote groundbreaking vaccines that can impact millions of lives.

Maternal, Newborn, Child Health & Nutrition



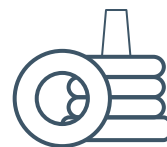
In addition to an unacceptably high number of infant deaths each year, India accounts for 40 percent of the global burden of low-birth weight babies and 17 percent of global maternal deaths.

Through health systems strengthening, PATH improves maternal, newborn, and child health and nutrition indicators. Our approach centers on expanding equitable access to high-quality, innovative, and affordable interventions and technologies. These include drugs, diagnostics, and devices with a focus on underserved populations.

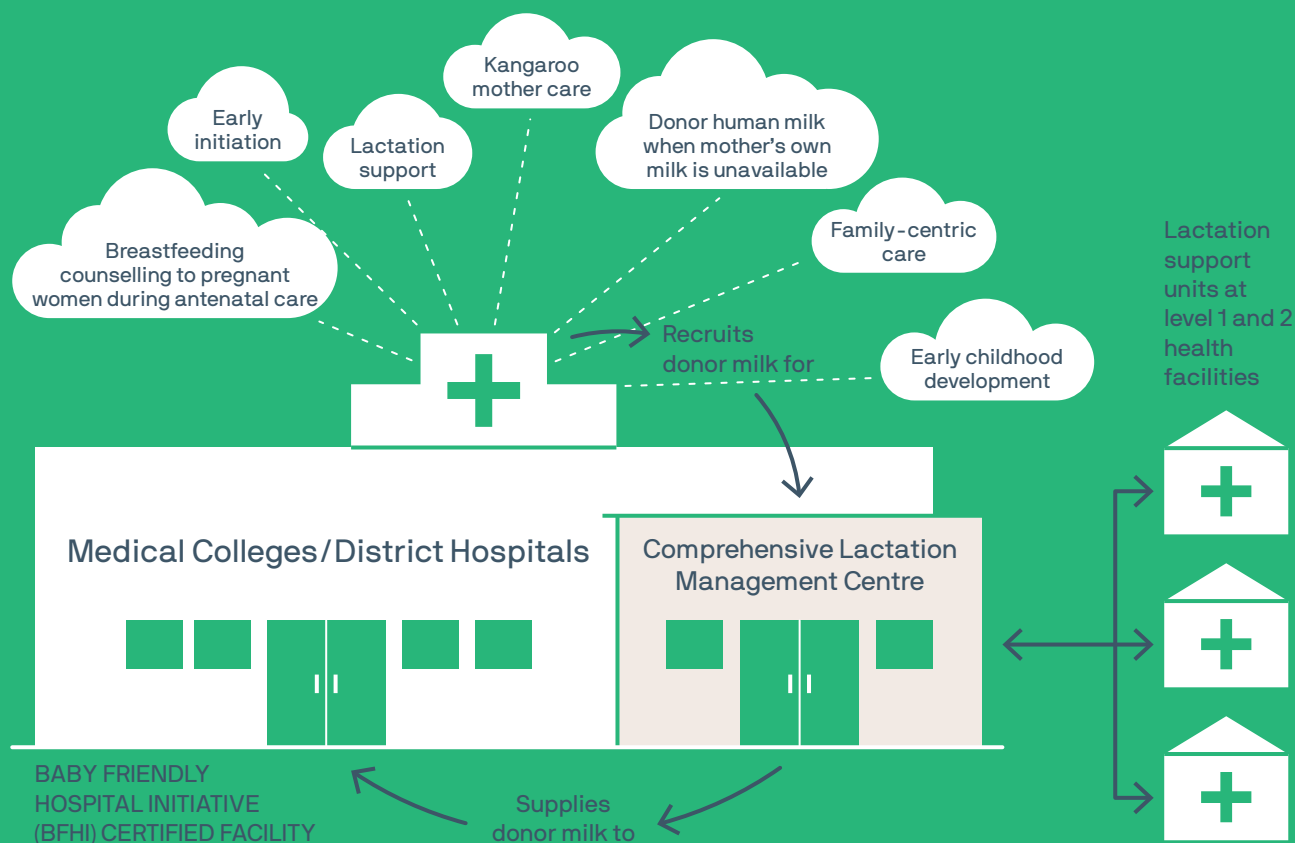
PATH collaborates with partners to help newborns get their best start in the first 1,000 days by:



Promoting an integrated newborn care and nutrition model, which supports breastfeeding, encourages kangaroo mother care (skin-to-skin contact), provides safe donor human milk for sick babies lacking access to mother's milk, enables family-centric care, and promotes optimal infection prevention and control processes.



Supporting policy makers and partners to help strengthen and scale up early childhood development care and practices. By integrating nurturing care into health systems, PATH is at the forefront of a movement to ensure young children not only survive but thrive.



PATH's Mother Baby Friendly Initiative+ model for scaling up maternal, newborn, and child health and nutrition interventions across health facilities.

PATH works with policy and technical leaders to adopt a systematic approach to create impact at scale through:



Formative assessments



Learning exchanges



Country-specific guidance

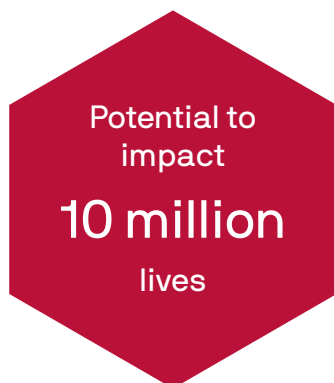


Technical assistance to health leaders



Easy-to-use tools and technologies and raising awareness among health care providers and families

Impact Lab & Digital Health



In partnership with Tata Trusts – Social Alpha, PATH has established a first-of-its-kind public health technology platform in India: Tata Trusts – PATH Impact Lab.

Since its inception in 2018, the Impact Lab has:

- Designed and implemented India's first intensive program focused on medical technology and digital public health: **Social Alpha Quest for Healthcare Innovations**
- **Propelled ten high-impact health care technologies** towards market entry, adoption, and scale-up (see next page)
- Designed and delivered **curated knowledge platforms** providing highly relevant information on the Indian innovation ecosystem

The Impact Lab is poised to become the system integrator and the go-to platform for entrepreneurs and innovators in public health working to alleviate the disease burden and health inequity in India and similar geographies.

Impact achieved:

10

INNOVATIVE
PRODUCTS
SUPPORTED

500

INNOVATORS
GUIDED &
MENTORED

7

LIFE-SCIENCE
INCUBATORS
LINKED

80

DOMAIN
EXPERTS &
MENTORS
ENGAGED

8

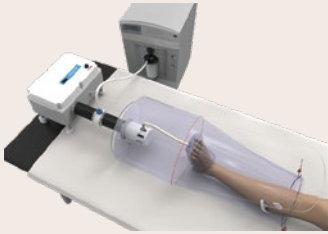
KNOWLEDGE
PLATFORMS
DELIVERED

5

KNOWLEDGE
REPORTS
PRODUCED

Quest for Healthcare Innovation

By Social Alpha in partnership with Tata Trusts PATH Impact Lab



YOSTRA LABS

Device for treatment of diabetic foot ulcer based on warm oxygen therapy.



VALETUDE PRIMUS HEALTHCARE

An optical module and novel processing reagent for high-sensitivity tuberculosis diagnosis at designated low-resource microscopy centers.



SENSIVISION HEALTH TECHNOLOGIES

Medical device to treat hypoxic ischemic encephalopathy in newborn children.



JEEVTRONICS

World's first hand-cranked defibrillator, which can be charged completely in a few seconds with easy cranking.



PERIWINKLE TECHNOLOGIES

Screening device for cervical health with biomarking hardware and automated image-based identification of abnormality.



CRIMSON HEALTHCARE

A continent ostomy management system for improving the quality of life of ostomates.



ALFALEUS TECHNOLOGY

Portable visual field perimeter, based on a virtual reality headset, to test for glaucoma.



BIOSCAN RESEARCH

Fast, portable, non-invasive brain hemorrhage detector that can detect an intracranial bleed within two minutes.



MODULE INNOVATIONS

USense device for rapid, low cost and point-of-care diagnosis of bacteria causing urinary tract infections.



SHIRA MEDTECH

Shira Clamp, a surgical instrument for making microvascular surgery easier, safer, and faster.

Rice Fortification

59%
of children
6 to 59 months
old in India
who are anemic

India has among the highest number of children suffering from malnutrition and anemia.

PATH is a pioneer of rice fortification technology. We have helped bring fortified rice—grains enhanced with essential vitamins and minerals—to the ‘mid-day meal’ school feeding program of several states. Our partnership with Akshaya Patra, the world’s largest mid-day meal provider, has served fortified rice to more than 650,000 schoolchildren across Gujarat, Karnataka, and Uttar Pradesh. The project aims to eliminate micronutrient malnutrition among these children, giving them the chance to reach their full physical and cognitive potential.

1 million
people across India
served nutritious food

PATH has worked globally and in India for more than two decades building evidence and establishing the operational feasibility and acceptability needed for economical scale-up of rice fortification.

PATH works with stakeholders at the national level and in multiple states to introduce fortified rice into the government’s food safety net programs, including the public distribution system and Integrated Child Development Services program, to benefit nearly 1 million Indians. To achieve this goal, PATH provided technical support to the Food Fortification Resource Centre of the Food Safety and Standards Authority of India. We are currently strengthening the domestic supply chain to expand the reach of this life-enhancing food product.





Partner with us

Our work depends on strategic partnerships with policy makers, donors, communities, businesses and nongovernmental organizations. We are continuously finding new, cost-effective ways to turn ideas into action and bring good health within reach of people and communities throughout India.

Because better health moves humanity forward.

Think you'd like to work with us?

Contact india@path.org

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On the cover: Women at a community meeting organised by PATH aimed at spreading awareness on vector-borne diseases and their control in a village in the state of Uttar Pradesh.

Photos, front cover: PATH/Mansi Midha; inside front cover: PATH/Anil Cherukupalli

Photos, inside back cover: PATH/Mansi Midha; above left: PATH/Mansi Midha; above right: PATH/Ruhani Kaur