

DIRECTIONS

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IN GLOBAL HEALTH



Ensuring a healthy start for newborns in India

PATH's Sure Start project has changed behaviors and built community capacity to save lives

A healthy pregnancy and safe childbirth are beyond reach for many women in India. In two of the country's largest states, PATH's Sure Start project effectively intervened at the community level to improve maternal and newborn health. The massive seven-year effort has helped to bring the joy of new life to millions of women and families who have too often had babies die from lack of health services or from use of unsafe birth practices.

Through partnerships with numerous nongovernmental organizations and other groups, Sure Start implemented innovative solutions in rural communities in the state of Uttar Pradesh and urban slums in the state of Maharashtra. The project covered a population of 24.5 million. Interventions empowered and encouraged community leaders and organizations, health workers, family members, and expectant mothers to adopt best practices to improve health outcomes.

CONTINUED ON PAGE 4 »

Sharing PATH's
work with global
health colleagues



PERSPECTIVE: Kent Campbell reflects on the strategy for eliminating malaria
PAGE 2 »



Innovative malaria
control work in Zambia
and Senegal
PAGE 3 »



Stopping tuberculosis
through advocacy and
other methods
PAGE 6 »

IN BRIEF
PAGE 7 »
NEWS AND
NOTES
PAGE 8 »

Charting a strategy for eliminating malaria

Having robust data for planning and evaluation is the backbone of all effective public health interventions. A major challenge for current efforts to eliminate malaria has been that the disease typically occurs in places where little information has historically been collected on causes of illness or death.

PATH and our partners are now developing innovative systems to collect real-time data on malaria transmission, enabling countries to know exactly where the disease is occurring and the best ways to fight it. As countries move closer to eliminating transmission, knowing where infections are occurring is more important than ever. Technological advances—especially the broad availability of cell phone networks, even in the most remote areas of Africa—have made possible the virtually instantaneous collection and transmission of health program data. This has enabled geographic mapping of malaria transmission trends and rapid response to potential outbreaks.

Countries that provide nationwide coverage with bednets, insecticide spraying, medicines, and diagnostics can quickly reduce malaria illnesses and deaths and limit disease transmission to concentrated areas. Because people who carry the malaria parasite may not have any noticeable symptoms, the remaining infections may be difficult to detect. Yet as long as some parasites persist in a community, malaria transmission can resurge.

The Malaria Control and Evaluation Partnership in Africa (MACEPA, a program at PATH) is piloting a rapid reporting system to track and eliminate these remaining reservoirs of transmission. Health workers armed with rapid diagnostic tests (RDTs) for

malaria use smartphones to send data every week to a centralized server on 17 key indicators, including confirmed and suspected malaria cases and the number of courses of malaria treatment and RDTs in stock. These affordable, portable, and easy-to-use technologies are the key to success.

Receiving timely data from the field enables a national malaria control program to respond to potential outbreaks before they grow. It allows district, provincial, and national officials to target resources to areas where they are needed most, and it prevents stockouts of lifesaving commodities. The system generates actionable intelligence to help a country target resources, with the objective of eliminating malaria parasites once and for all.

Rapid reporting is currently being piloted in Zambia and Senegal (see related article on page 3). Both countries have made remarkable progress in fighting the disease and are using this system to carve out malaria-free regions. They now have a real possibility of being free of malaria within a decade. Best practices from Zambia and Senegal will be documented and shared with other country programs in Africa for adoption in malaria control efforts.

The results to date highlight that you need to know where you are to get somewhere new. Being able to closely track infections at the community level is exciting new territory for the malaria community and is a critical step on the path toward eliminating the disease.

Kent Campbell, MD, MPH, is the director of the Malaria Control Program at PATH.



NEW ON PATH.ORG

What does it take to save a life?

www.path.org/surestart/

In India, PATH helps to make childbirth safer. See our special feature on the Sure Start project.

It takes two to electrochlorinate

www.path.org/blog/2012/03/it-takes-two-to-electrochlorinate/

When PATH and partner Cascade Designs, Inc., got together, it was synergy at first sight. See how a public-private partnership is working to provide safe water.

Technologies for vaccines

www.path.org/media/slideshow-vaccine-technologies/

PATH improves access to vaccines in low-resource settings. This slideshow highlights some of our solutions.

Helping children's dreams come true

www.path.org/media/i-am.php

Every year, vaccines help millions of children grow up. This video takes an inspirational look at one of public health's most successful interventions.

Zambia and Senegal lead work to stop malaria

PATH helps countries adopt innovative methods to eliminate disease transmission

In the past decade, Zambia and Senegal have become leaders in the fight against malaria. Both countries now see elimination of the disease as an achievable goal.

The Malaria Control and Evaluation Partnership in Africa (MACEPA), a program at PATH, has worked with Zambia since 2005, when the country implemented the Scale Up for Impact (SUFU) approach to reduce its malaria burden. More recently, Senegal has implemented a SUFI-based program with great success in the northern part of the country. This approach involves rapidly deploying a package of proven malaria interventions at high levels of coverage. Adoption of aggressive SUFI programs by African nations has dramatically reduced childhood deaths due to malaria, saving nearly 1 million children over the past ten years.

MACEPA's collaboration with Zambia and Senegal has recently expanded to explore strategies to eliminate malaria transmission. These include creating community-based information systems and conducting targeted diagnosis and treatment campaigns.

Rapid reporting in Zambia

In 2011, the Zambia National Malaria Control Centre and MACEPA piloted a rapid malaria reporting system as part of a three-step process to establish five malaria-free zones by 2015. The steps are:

- Establishing an effective information system.
- Conducting "test and treat" campaigns.
- Introducing surveillance.

In the new rapid reporting system, health facility workers use smartphones to submit information on malaria burden to a centralized



Smartphones are a key element of new rapid reporting systems to identify malaria cases.

server, which health officials access via the Internet. This real-time information enables a quick response to malaria cases and targeting of interventions and commodities to areas of active transmission. The system is now used by more than 400 clinics in Zambia.

Test and treat campaigns

The first test and treat campaign in Zambia was completed in December 2011. In this campaign, 73 two-person teams embarked on a month-long mission to test and treat people in districts along Lake Kariba. One team member was a community health worker who administered diagnostic tests for malaria. The other worker collected and reported data.

Malaria experts used data from the reporting system to evaluate campaign results. A series of new campaigns began in May 2012.

By the end of 2013, the Lake Kariba area may be ready for the third step in the approach. This will involve surveillance of people with confirmed malaria and testing of household members and neighbors.

Applying the approach in Senegal

In the Richard Toll District of Senegal, malaria transmission is low

and more focal. This area is an ideal place to target the malaria-causing parasite with rapid reporting and test and treat campaigns.

Community-based health workers in the district recently began using smartphones to submit malaria data and started conducting test and treat campaigns. Once workers determine that local transmission is no longer occurring, they will move to other districts, with the ultimate goal of ridding Senegal of malaria.


Leading the way

Zambia and Senegal have shown that the SUFI approach dramatically reduces the malaria burden, and other countries are also succeeding with SUFI. Now, with committed governments and pioneering methods of data collection, diagnosis, and treatment, Zambia and Senegal are leading the way to elimination of malaria. ■

FOR MORE INFORMATION

Contact Cristina Herdman, communications officer, at cherdman@path.org.

This project is funded by the Bill & Melinda Gates Foundation.

 Read more about PATH's work to control malaria at <http://sites.path.org/macepa/>.

Ensuring a healthy start for newborns in India

» CONTINUED FROM PAGE 1

A key feature of Sure Start has been its ability to transform men and mothers-in-law into advocates for safe birth. Another has been its work to mentor frontline health workers called accredited social health activists, or ASHAs, who led mothers' group meetings and other activities to educate women and family members about safe birth practices. Through these novel approaches, the project has contributed to improvements in health behaviors and increases in use of health services.

A community-based approach

Childbirth in India carries high risks. Every year, about a million babies and 78,000 women die during or soon after delivery.

Start Start aimed to increase the odds of survival through community-based interventions. It sought to build household skills in essential maternal and newborn care, especially in recognition of danger signs; increase families' use of health services before and after delivery; facilitate access to skilled birth attendants; develop community-level health networks; and strengthen linkages between communities, health care systems, and public and private service providers.

Sure Start was designed to complement and add value to India's National Rural Health Mission (NRHM) and the planned National Urban Health Mission. The government launched the NRHM in 2005 to provide accessible, affordable, high-quality health care to rural populations, especially poor women and children in states with weak health infrastructure and poor health indicators.

Transforming rural communities

In Uttar Pradesh, the project team planned interventions in the seven rural districts with the highest rates of neonatal mortality and home births and especially poor health service delivery systems. People in these areas had low awareness and practice of healthy behaviors.

ASHAs were at the heart of the intervention in Uttar Pradesh. Sure Start project staff built the capacity of ASHAs to teach their communities best practices for pregnancy, childbirth, and baby care; to run mothers' group meetings, which provided a forum for women to receive information and support; and to make periodic home visits before and after births. Gently, but persistently, ASHAs changed age-old traditions that endanger mothers and newborns.

Five lead partners and 55 subpartners led the work in Uttar Pradesh, which reached a population of 23 million.

Key activities included:

- Mentoring 7,450 ASHAs across seven districts and training 2,773 ASHAs on how to conduct effective postnatal visits.
- Revitalizing 2,811 Village Health and Sanitation Committees (VHSCs), many of which were previously inactive or ineffective. These committees create plans to address health needs, help with emergency transport, and facilitate health service delivery.
- Establishing 6,871 mothers' groups at the village level and increasing participation of pregnant women from 40 to 54 percent between 2008 and 2010.
- Undertaking a media campaign, *Pehla Ek Ghanta* (the first one hour), which included setting up billboards and outfitting 750 rickshaws with messages about the importance of the first hour after birth.
- Completing an innovative communications campaign to motivate more than 200,000 fathers-to-be to support maternal and newborn health. The campaign featured a letter from the unborn baby to its father.

Health-related indicators in the project area improved from 2007 to 2011. For example, the percentage of pregnant women who had complete antenatal checkups rose from 13 to 25 percent, and the proportion of institutional deliveries increased from 24 to 57 percent.

Meeting special needs in urban slums

In Maharashtra, interventions covered a population of 1.6 million people in urban slums of seven cities: Mumbai, Navi Mumbai, Pune, Nagpur, Solapur, Nanded, and Malegaon. These slums have experienced rapid in-migration of workers from rural areas and have inadequate health infrastructure.



An accredited social health activist speaks with a pregnant mother in a Sure Start program home visit in the state of Uttar Pradesh.

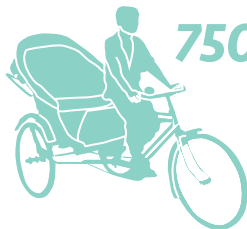
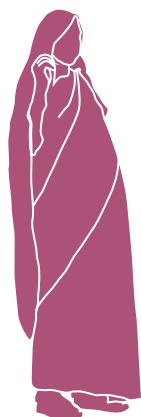
SURE START ACTIVITIES IN UTTAR PRADESH, INDIA

7,450

accredited
social health
activists
mentored,

2,773

trained



750

Educational
media campaign
ads placed
on rickshaws

6,871

mothers'
groups
established



200,000+

letters written
to fathers-to-be

2,811

emergency transport
systems improved
by Village Health
and Sanitation
Committees



PATH implemented the project in Maharashtra through six nongovernmental organizations and a municipal corporation. Two cross-site partners provided support for behavior change communication, management information systems, and media relations.

All cities received a set of core interventions that formed a “common minimum program.” Community-based health workers visited eligible women in their homes at least once every three months to ensure early registration of pregnancy and provision of antenatal care. They also provided opportunities for behavior change communication based on each woman’s specific needs and stage of pregnancy. Health workers had a checklist for each trimester of pregnancy and a set of flash cards with key messages. To avoid overloading women with information, health workers limited communication to what was needed at that point in time.

During a minimum of three antenatal home visits and two postnatal visits, health workers promoted intake of iron and folic acid, birth preparedness, nutritional improvements, institutional delivery, thermal care for the newborn, and early and exclusive breastfeeding. They also facilitated use of government programs to help pay expenses for institutional deliveries.

Sure Start also supported implementation of city-specific health improvement models. These models focused on quality of care, public-private partnerships, convergence of HIV/AIDS services with those for maternal and newborn health, volunteerism, community-based health insurance, a prepaid card system for hospital services, and an emergency health fund.

Activities and outcomes in Maharashtra included:

- Obtaining examinations for 26,823 pregnant women through 131 clinics in Navi Mumbai. Subsequently,

2,728 high-risk cases were referred to specialist clinics in 20 health posts, which also managed care for 732 newborns.

- Forming 97 health funds in Nagpur with provisions for maternal and newborn care. The funds have helped 1,160 families, including 127 mothers and newborns.
- Facilitating support for 12,000 pregnant women through 170 self-help groups in Solapur.

Project areas recorded substantial improvements in health-related indicators from 2008 to 2011. For example, the percentage of women registering pregnancy within 12 weeks rose from 41 to 54 percent, and the proportion of women with three or more antenatal checkups increased from 70 to 83 percent. The proportion of institutional deliveries rose from 78 to 88 percent.

Changing the long-term outlook

Sure Start reached 24.5 million people in India with novel interventions to change behaviors and increase use of services to improve maternal and newborn health. The project transformed attitudes and behaviors of key stakeholders, including fathers and mothers-in-law, and empowered AHSAs to help their communities by leading mothers’ group meetings and other interventions. The results provide hope for additional, sustained improvements in maternal and newborn health under the most difficult circumstances in India. ■

FOR MORE INFORMATION

Contact W. Sita Shankar, director of maternal and child health/nutrition in India, at sshankar@path.org.

This project has been funded by the Bill & Melinda Gates Foundation.



Read more about PATH’s work on safe birth and newborn care at www.path.org/our-work/safe-birth.php.

Gathering forces to stop tuberculosis

PATH leads advocacy, communication, and social mobilization to improve disease control

In March 2012, PATH took new steps to improve global control of tuberculosis (TB). We provided two weeks of intensive training in advocacy, communication, and social mobilization for TB control to civil society leaders and former TB patients from five African countries. During an event at PATH's Washington, DC, office to mark World TB Day, we also provided a forum for the group to launch the Africa Coalition on Tuberculosis (ACT!).

ACT! will link leaders and advocates from across Africa to mobilize support for ensuring universal access to rapid TB diagnosis, appropriate and respectful patient-centered care and treatment, and effective new drugs and vaccines. PATH will help to advance the coalition's work, which is broadly supported by the Stop TB Partnership.

Taking a comprehensive approach

Each year, more than 9 million people are affected by TB, and nearly 1.4 million people die from

the disease. PATH works with partners to bring internationally recommended TB control strategies to more people. We work in countries around the world to:

- Expand high-quality, patient-centered treatment.
- Strengthen health delivery systems.
- Involve the private sector in TB control.
- Address the threat of drug-resistant TB.
- Improve care for people with TB and HIV co-infection.
- Implement airborne infection control practices.
- Identify and evaluate promising TB-related technologies.

Building networks for change

Advocacy, communication, and social mobilization (ACSM) is a set of interventions to help communities mobilize political commitment and resources for TB control. It also educates the public about TB to improve case detection and treatment adherence and to combat stigma and discrimination.

PATH has supported community leaders and governments in designing, implementing, and evaluating ACSM activities. As part of this effort, PATH developed an innovative training curriculum that helps people learn to address the social and political roots of the disease. The training is intensive and highly participatory. Participants work in small groups, hold lively discussions, and share knowledge and experiences. The training also gives participants opportunities to develop comprehensive action plans for their countries.

PATH has conducted ACSM trainings in every region of the world. We currently work extensively in India, Tanzania, Mexico, the Democratic Republic of the Congo, Vietnam, and Eastern Europe/Central Asia. PATH provides targeted assistance to many other countries.

As a result of ACSM training, several countries have developed plans to incorporate ACSM activities into their national TB control strategies. In addition, health care providers and managers who have undergone the training have conducted workshops in their own countries, building capacity to teach and practice ACSM skills and creating a foundation for greater sustainability. ■

Harnessing technology to control TB

Effective use of technology is a critical part of PATH's work to improve TB control. In India, for example, PATH has helped to strengthen laboratory networks for diagnosing TB, especially its drug-resistant forms. We have also helped the Chinese National TB Reference Laboratory demonstrate the operational feasibility, cost-effectiveness, and impact of new, innovative diagnostic technologies. These range from new types of microscopes for diagnosis from sputum smears to new types of tests, such as the GeneXpert® assay for rapid diagnosis and screening for drug resistance.




PATH/Gabe Bienczycki

FOR MORE INFORMATION

Contact Svitlana Okromeshko, program officer, at sokromeshko@path.org.

This project is funded by the US Agency for International Development.

 Read more about PATH's work on TB, including our training for TB control professionals and activists, at www.path.org/projects/tuberculosis-acsm.php.

Historic vaccine introduction in Ghana

On April 26, 2012, Ghana made history. It became the first country eligible for support from the GAVI Alliance to introduce two vaccines at the same time. The pneumococcal and rotavirus vaccines will help to protect Ghana's children against pneumonia and severe diarrheal disease, which together account for about 20 percent of deaths among children under five years of age.

PATH played a major role in the introduction as the lead partner in the Accelerated Vaccine Introduction (AVI) initiative. Launched by the GAVI Alliance, the initiative unites scientific, public health, policy, and management expertise to help national governments address all aspects of successful immunization, including vaccine procurement, policies, financing, training, logistics, and delivery.

PATH and our AVI partners have conducted research to better understand how to use pneumococcal and rotavirus vaccines in real-world settings. We have also generated strategic forecasts of vaccine supply and demand to help with introduction planning.

Introducing two new vaccines at the same time requires far greater planning than launching a single vaccine. Preparations include significant expansion of the country's cold chain capacity, careful training of staff, and clear communication to the public about the benefits of both vaccines.

Through advocacy and communications, PATH staff have increased visibility of the need to introduce pneumococcal and rotavirus vaccines in developing countries. In Ghana, this included organizing a major international media tour and field trips around the launch. Our outreach efforts

have informed and engaged global donors and built political will for introduction. ■

FOR MORE INFORMATION

Contact Doune Porter, program officer, at dporter@path.org.

This project is funded by the GAVI Alliance.



PATH

A video produced by GAVI and PATH offers a glimpse of the behind-the-scenes heroes of the joint vaccine introduction in Ghana and the people and communities for whom the new vaccines will matter most.

📺 Watch the video at www.path.org/blog/2012/04/ghana-introduces-vaccines/

PATH launches a new child health initiative in Africa

The tremendous physical, intellectual, and emotional growth of children between birth and age two years makes this time an essential window of opportunity to support their health and development needs. To help children get the best possible start in life, PATH is leading a new project in two African countries to improve critical health and nutrition services as well as child development practices.

The Window of Opportunity project focuses on four districts in South Africa and one in Mozambique. It aims to improve antenatal and newborn care, infant nutrition, early childhood development practices, and the quality of health services planning and provision in a target population

of nearly 4 million. The five-year effort is supported by a \$25 million grant from the BHP Billiton Sustainable Communities Trust.

PATH will partner with governments, civil-society organizations, and local health and social services departments to strengthen health and development systems, improve the quality and range of clinical and community-based services, and increase behaviors among caregivers and communities that enhance the health and development of young children. Aiming for measureable improvements in targeted health indicators, the project will support ongoing efforts by both countries to meet commitments related to the Millennium Development Goals.

Initial work has included detailed assessments of health and

development needs and opportunities in each district. We are using the findings—together with our engagement with stakeholders and government at every level—to tailor our support for women and children.

By building community ownership and capacity and tailoring activities to local needs, we will ensure that the gains we see in child health and development outcomes are sustained beyond the life of the project. ■

FOR MORE INFORMATION

Contact Scott Gordon, project director, at sgordon@path.org.

This project is funded by BHP Billiton Sustainable Communities Trust.

🌐 Read more about PATH's work in maternal and child health and nutrition at <http://sites.path.org/mchn/>.


NEWS AND NOTES

PATH NEWS

Introducing our new CEO


PATH welcomes new president and CEO Steve Davis in June 2012. Davis is a proven business leader, social innovator, and global health advocate. He brings a long-standing commitment to human rights and a belief in the power of technology to transform lives. His experience as a leader and strategic thinker in the global development sector will build on PATH's institutional strengths and extend our partnerships, amplifying our impact on global health.

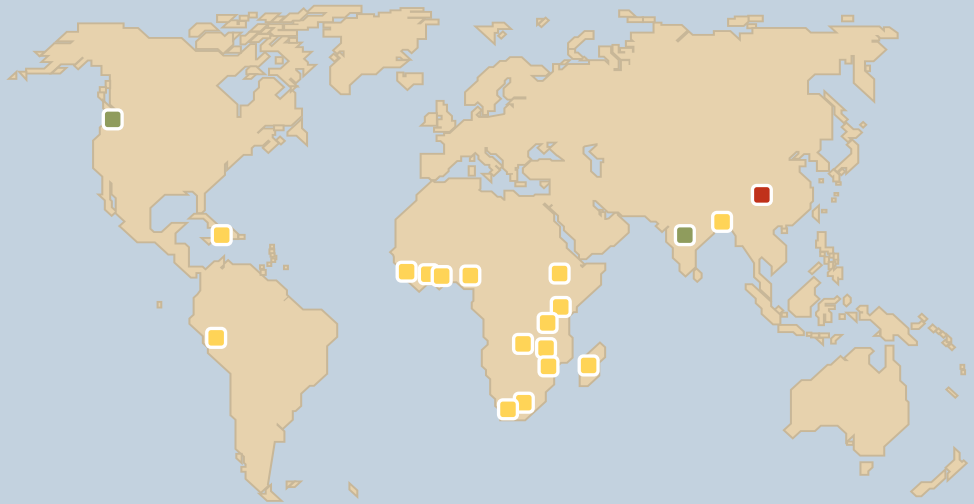
Davis previously led Corbis, a global digital media company, for 14 years. He also led the Infectious Disease Research Institute as interim CEO and advised top international organizations as global director of social innovation for McKinsey & Company. As a member of PATH's board of directors for nine years and interim leader of our India program, Davis has deep knowledge of PATH and the health needs of developing countries.

 Read more about Davis' appointment at www.path.org/news/pr120326-new-president.php.

PATH leads consortium to strengthen nutrition programs

Under PATH's lead, eight organizations are collaborating to provide a one-stop shop of expertise for improving and scaling up nutrition programs in developing countries. The consortium focuses on maximizing the quality and impact of the UK Department for International Development's nutrition interventions for women and children.


 Read more at www.path.org/news/an1203220-nutrition-consortium.php.



PROGRAM NOTES

■ INDIA, UNITED STATES: Drug development program focuses on neglected diseases

PATH has created a new drug development program through our affiliation with OneWorld Health, a nonprofit research institution headquartered in California. The program focuses on expanding the availability of effective, low-cost drugs for malaria, diarrheal diseases, kala-azar (visceral leishmaniasis), and other illnesses to reach some of the world's most vulnerable people.

 Read more about the program at www.path.org/news/pr111216-owh.php.

■ CHINA: Japanese encephalitis vaccine nears prequalification

A Japanese encephalitis (JE) vaccine developed in China is on track to receive World Health Organization (WHO) prequalification, a designation that makes it easier for other countries to import

it. PATH and our Chinese manufacturing partner, Chengdu Institute of Biological Products, submitted the vaccine dossier to WHO in January. The vaccine has been used safely in China for more than 20 years. Prequalification will make the vaccine more readily available to other countries in Southeast Asia and the Pacific, where JE is widespread.

■ MULTICOUNTRY: New resources on infant and young child nutrition

The PATH-led Infant & Young Child Nutrition Project, funded by the US Agency for International Development, updated its website, www.icycn.org, to provide colleagues with a wealth of tools and resources to continue reducing the global burden of malnutrition for mothers and children. The revamped website also provides a legacy for the five-year project, which reached mothers and children in 16 countries with stronger health systems, policies, and interventions to enhance nutrition.

PATH is an international nonprofit organization that transforms global health through innovation. We take an entrepreneurial approach to developing and delivering high-impact, low-cost solutions, from lifesaving vaccines and devices to collaborative programs with communities. Through our work in more than 70 countries, PATH and our partners empower people to achieve their full potential.

Directions in Global Health shares information about PATH's programmatic work with colleagues around the world. To subscribe to this newsletter, please send your contact information to publications@path.org. To subscribe to other PATH publications—including *News From PATH*, our organizational e-newsletter—go to www.path.org/sign-up.php#news.



MAILING ADDRESS: PO Box 900922, Seattle, WA 98109 USA
STREET ADDRESS: 2201 Westlake Avenue, Suite 200, Seattle, WA 98121 USA
www.path.org | info@path.org