

DIRECTIONS

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IN GLOBAL HEALTH

FEATURING
A conversation
with PATH
president and
CEO Chris Elias
(page 8)

Ensuring access to family planning

PATH helps middle-income countries implement a total market approach

Over the past few decades, governments in many developing countries have relied on support from international donors to provide free contraception to all segments of the population. Although donors are continuing to fund these efforts in low-income countries, many are phasing out support for some middle-income nations. The shortfall is forcing some governments to search for new ways to provide family planning for all.

One solution is a “total market approach” to ease the burden on the public sector while promoting universal access to high-quality contraceptives. This approach refers people who can pay for family planning services to the private sector—including social marketing groups, nongovernmental organizations (NGOs), private doctors or clinics, and pharmacies. It reserves public resources for those most in need.

In Nicaragua and Vietnam, PATH is helping national governments pave the way for a total market approach. We are evaluating stakeholder networks and perspectives on family planning and then using the findings to facilitate implementation. This work is bringing the public and private sectors together for the first time to plan how the government will ensure equitable and sustainable access to contraceptive products and services.

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PATH/Mike Wang



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A catalyst for global health

Diagnostic technologies

Project name

PATH Diagnostics Group:
Point-of-care diagnostics

Location

United States

Methods

Clinical studies, demonstration projects, prototype testing, technology development

Funders

National Institute of Biomedical Imaging and Bioengineering at the National Institutes of Health; US Agency for International Development, HealthTech Cooperative Agreement

For more information

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The transformational potential of point-of-care tests

Designing diagnostic methods to meet the needs of the developing world

DIAGNOSTIC TESTS ARE A STANDARD part of health care in wealthy countries. But in many health care settings—including clinics in developing countries, private homes, or natural or man-made emergencies—maintaining or accessing the laboratories most diagnostic tests require can be uneconomical, impractical, or unaffordable.¹

Point-of-care testing—performed at or near the site of patient care—offers the possibility of quickly generating a result to guide treatment, in some cases without the need for expensive facilities or highly trained staff. If accurate and reliable, results delivered rapidly at the point of care could one day transform health services, especially for people in low-income countries.

PATH researchers are developing innovative point-of-care diagnostics

with the potential to dramatically improve outcomes for people in low-resource settings. This work—and that of colleagues in several other US point-of-care research centers—may help make it possible to bypass the need for central diagnostic laboratories on the way to accurately identifying disease and delivering effective treatment.

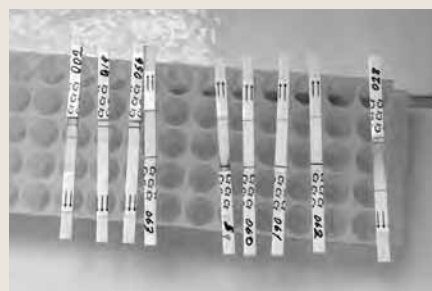
Tests suited to the setting

Diagnostic tests used in high-income nations are generally inappropriate for use in developing countries. They are often too expensive, require infrastructure or specialized training that is not widely available in poor countries, or target diseases that are not priorities in low-resource settings. Lack of diagnostic capability has been a major barrier in efforts to detect, control, and treat major infectious

Rapid strip tests from PATH

Although point-of-care tests may one day transform patient care, so far only one technology is in wide use in developing countries: the immunochromatographic strip test. Often called rapid strip tests, many require little equipment and minimal training to administer.

PATH's diagnostics team has developed rapid strip tests for a number of infectious diseases common to developing countries, including malaria, HIV, and Chagas disease. The tests use relatively inexpensive, off-the-shelf components and remain stable for months at ambient temperatures—a crucial feature in areas where power supplies are inconsistent and temperature control is difficult.



PATH/Mike Wang

diseases that are common in poor countries, such as HIV/AIDS (especially in infants), tuberculosis (especially drug-resistant forms), and malaria.²

Nonprofit organizations, academic institutions, and private companies are all working to develop and introduce high-quality diagnostic technologies designed for low-resource settings. Most agree on factors, such as affordability and length of time to obtain test results, that influence adoption of these technologies. Groups differ, however, in the emphasis they place on other factors.

The PATH perspective

PATH researchers believe that in most cases point-of-care diagnostics should be as simple to use as possible to increase the likelihood of widespread implementation. The need for simplicity means that tests should be fully disposable and require no or minimal instrument support, external reagents, or significant training to administer.

One of the few technologies that meets these criteria and is also in wide use—in wealthy and poor countries—is the immunochromatographic strip test. PATH's team has developed several of these rapid strip tests for use in developing countries (see sidebar). In most cases, the tests work by detecting the antibodies a person makes after infection with a pathogen. In light of their relatively low cost, rapid strip tests work well. But they may not be sensitive enough to diagnose some diseases reliably or soon after infection.

Instrument-free alternatives

As an alternative, PATH researchers are working on more sensitive nucleic acid assays, which can directly detect the pathogens that cause disease. To ensure the new tests are appropriate for



PATH/Mike Wang

New tests for rapid detection of sexually transmitted infections promise to help improve treatment and reduce transmission.

low-resource settings, PATH is developing platforms that do not require instruments, power, or external reagents to amplify and detect the pathogens in nucleic acids from patient samples. For amplification, nucleic acid assays usually require the use of instruments that run through a cycle of temperatures. PATH's idea is to replace them with exothermic reactions, using inexpensive chemicals similar to those found in “ready-to-eat” meals or camping hand warmers to provide the needed heat.³

To keep the tests instrument-free, PATH researchers are working on two methods to detect the nucleic acids. One method uses the turbidity of a solution to indicate a result. A clear solution, for example, could indicate a negative result. The other method involves labeling the amplified nucleic acids with immunoreagents and using strip tests to detect them.

Leapfrogging the central lab

Stand-alone diagnostic tests that require no special instruments or complex ancillaries prompt an

intriguing question: Can we use point-of-care diagnostics to help build health care systems designed specifically for conditions in developing countries? Instead of following the infrastructure-rich model of high-income countries, can we leapfrog the central lab, much as mobile phones have leapt over infrastructure-heavy landline systems?

The challenges to such a model are substantial. Biological samples, after all, may be harder to handle than electrons. But effective, affordable tests that are targeted to use in low-resource settings may one day change the way health care is delivered in places and situations that don't match the predominant model in the developed world. ■

REFERENCES

1. Hawkins K, Weigl B. Microfluidic diagnostics for low-resource settings. *Proceedings of SPIE*. 2010;7593–7620.
2. Weigl B, Boyle D, de los Santos T, Peck R, Steele M. Simplicity of use: a critical feature for widespread adoption of diagnostic technologies in low-resource settings. *Expert Review of Medical Devices*. 2009;6(5):461–464.
3. Weigl B, Domingo G, LaBarre P, Gerlach J. Towards non- and minimally instrumented microfluidics-based diagnostic devices. *Lab on a Chip*. 2008;8:1999–2014.

Behavior change

Project names

Breaking Gender Barriers in China and Kenya; Gender, Violence and Rights Initiative; Integrated HIV/AIDS Program in the Congo (ProVIC); SILCS diaphragm; woman's condom

Locations

Global

Methods

Behavior change communication, capacity-building, technical assistance, training

Partners

Chemonics; EngenderHealth; GBV Prevention Network for the Horn, East and Southern Africa; InterCambios Latin American Network for the Prevention of Violence Against Women; International HIV/AIDS Alliance; Medical Research Council, South Africa; Raising Voices

Funders

Bill & Melinda Gates Foundation, Nike Foundation, United Nations Development Fund for Women, United Nations Trust Fund to End Violence Against Women, US Agency for International Development, US President's Emergency Plan for AIDS Relief, anonymous donor

For more information

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Addressing gender's impact on health

Tackling inequitable societal norms and violence to strengthen communities



PATH / Mike Wang

Stigma against women seeking HIV testing is a barrier to diagnosis and treatment among high-risk groups.

GENDER INEQUITY HAS A SIGNIFICANT impact on the health of women, men, children, and communities. Unequal expectations for and treatment of women and men affect their risks of illness and death and their access to health care. In many countries, especially in low-resource areas, women face higher rates of interpersonal violence and communicable diseases such as HIV.

PATH addresses gender inequities throughout our projects to improve health outcomes for both women and men. We partner with community groups to strengthen responses to gender-based violence, engage men and women to address harmful gender norms and influence attitudes about gender roles, and incorporate gender realities and challenges into health

technologies and interventions to ensure they meet community needs.

Tools to combat gender-based violence

Violence against women by intimate partners can have manifold health consequences for a woman, her family, and her community.¹ The issue is increasingly being recognized by governments, public health systems, social service groups, and community organizations working to provide comprehensive responses. PATH works closely with the United Nations Trust Fund to End Violence Against Women, providing technical assistance with monitoring and evaluating community engagement and capacity-building initiatives in Africa, Asia, and Latin America and the Caribbean. We conduct rigorous monitoring and evaluation

to identify and support effective approaches for transforming gender norms and preventing gender-based violence. We also engage with partner organizations in several countries to provide technical assistance to help them strengthen prevention and response approaches to violence.

As part of a project to improve HIV/AIDS services in the Democratic Republic of Congo, we have trained staff to integrate gender-related issues into their work and scale up efforts to curb violence. Studies show that gender-based violence and sexual violence, including as a weapon of war, are normative in the region and not fully recognized as a health risk among service providers. Violence in particular heightens women's vulnerability to HIV and often results in stigmatization, making it challenging for them to access health services.

PATH has worked with service providers and counselors to provide women and men with clear guidance on HIV testing; address potential stigma against women seeking testing; ensure confidentiality around testing; and engage men in their partners' pregnancies and childbirth to build support for prevention of mother-to-child transmission of HIV. We have used training modules adapted from PATH's violence-prevention work in Latin America and Kenya to further enhance service providers' capacity to address barriers to HIV testing and treatment.

Challenging gender norms

Growing evidence suggests that involving men in changing gender norms and supporting equitable relationships can have an impact on HIV risk by strengthening communication between partners and decreasing support for violence. Through projects in several countries, PATH works with women, men, and adolescents to encourage attitudes

toward gender and relationships that lead to healthy practices.

In Ethiopia, PATH and our partners evaluated the impact of group education and community engagement activities aimed at addressing harmful male gender norms and related behaviors among young men ages 15 to 24 years. Before the activities, support for equitable gender norms was low among many young men, with more than half believing women should tolerate violence to keep their families together and half agreeing that women should always obey their husbands.² Almost 40 percent of the young men reported being physically violent toward a primary partner in the past six months.

An evaluation after the intervention showed increased support for more equitable gender norms and a decrease in partner violence. The great majority of participants reported positive changes in their behavior and said the activities increased their knowledge of HIV/AIDS, helped them negotiate condom use, and taught them improved partner communication. Most female partners interviewed said they had also observed clear and positive changes in their partners' behavior.

Integrating gender issues into technology development

Gender and stigma also must be considered when developing health technologies for specific populations. PATH identifies gender-based constraints—such as women's unequal socioeconomic status and decision-making power in relationships—and engages women in the technology development process to create strategies that address these constraints and maximize health.

To develop contraceptive products that meet women's needs, for example, we engaged circles of



PATH promotes and evaluates community efforts to prevent gender-based violence.

women—sisters and friends—in communities in Thailand and South Africa to provide feedback on our prototypes for a woman's condom and a one-size-fits-most diaphragm. We asked the women to test the products with their partners in real-life situations, then incorporated their feedback into solutions that will be acceptable and comfortable for women and their partners.

Keeping gender at the forefront

Addressing inequitable gender attitudes and stigmas can improve utilization of health services and help to lessen the impact of disease, especially for vulnerable populations. As increasing evidence highlights the critical effect of gender inequity on health outcomes, incorporation of gender into global health activities is a key strategy to more effectively improve health for women, men, and children. ■

REFERENCES

1. Heise L, Ellsberg M, Gottemoeller M. Ending violence against women. *Population Reports*. 1999;27(4):1–44.
2. PATH, EngenderHealth, Miz-Hasab Research Center, Hiwot Ethiopia, Promundo. *Promoting Gender Equity for HIV and Violence Prevention: Results From the PEPFAR Male Norms Initiative Evaluation in Ethiopia*. Washington, DC: PATH; 2010.

Information systems

Project name

Collaborative Requirements
Development Methodology

Locations

Kenya, Rwanda, Senegal,
and Vietnam

Methods

Collaborative stakeholder
engagement, information
architecture development,
private sector-collaboration,
user-driven design

Partners

Project Optimize, Public Health
Informatics Institute,
WHO Health Metrics Network,

Funder

Rockefeller Foundation

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Starting at the end-user

PATH and partners work toward better health information systems

HEALTH WORKERS IN MANY PARTS of the world have long waited for information technology to enhance care by bringing needed data to their clinics—or perhaps to their fingertips via handheld devices. Despite numerous and sometimes brilliant efforts to use information technology to improve care, the design and development of health information systems in developing countries has remained stubbornly ad hoc, fragmented, inconsistent, and nonstandard.

The global health community is working to resolve this problem. In 2008, the World Health Organization (WHO) and the Health Metrics Network—a global network of multilateral organizations, donors, private

foundations, and nongovernmental organizations—called for developing a model information architecture to guide countries in strengthening their health information systems.¹ Developing these common architectural building blocks will provide countries, donors, and developers with reusable system components, reducing the cost and time required to create individual architectures, plans, and solutions.

PATH and our partners have been working to develop such a model—one that will support the design and development of sustainable, scalable, and affordable national health information systems. To begin the process, PATH started at the end: with the system end-users.



PATH/Hana Bilak

Discussions with health workers and software engineers are critical to determining information system requirements.



PATH / Hana Bilak

PATH has gathered information from health workers in Kenya, Rwanda, Senegal, and Vietnam.

Collaborative approach to user-driven design

Working closely with the Public Health Informatics Institute and other partners, PATH developed and validated a methodology to determine and document end-user requirements, the specific functions that the information system must perform to meet users' needs. Defining system requirements is the most important step in developing or acquiring any information system.²

PATH's approach is called the Collaborative Requirements Development Methodology, or CRDM. This approach addresses a common shortcoming of many other methods to gather user requirements—namely, that the health care workers who will use the new systems and the software engineers who will build them do not understand each other.

Speaking the same language

To facilitate understanding, the project team worked diligently to use plain language instead of technical jargon to communicate with both health care workers and software engineers. Project staff adapted a system of symbols, using basic shapes such as squares and diamonds, to construct visual models and diagrams that illustrate the sometimes complex processes health care workers use in their work. The team found that both health care workers and engineers could quickly comprehend the diagrams, making it easier for specialists in two very different fields to understand each other.

As a first application, the project team used the new methodology for six months in four diverse countries: Kenya, Rwanda, Senegal, and Vietnam. Because most effective health interventions require essential medicines or supplies, the team focused on determining and validating user requirements related to the supply chain. Supply chain management also represents a good opportunity to apply a common methodology to investigate core processes, functions, and requirements that cut across all segments of the health care system. The CRDM for the supply chain may thus be applied to other functions of the health care system, such as laboratory services and human resources.

The first trial of the CRDM produced a documented set of 12 business processes and 208 requirements common to national supply chain systems in the four targeted countries. After broad stakeholder review, the findings were published in fall 2010.

Using the requirements

The next step will be to conduct an implementation project that builds on the recent work to determine

user requirements. PATH has already gained valuable experience with introduction of information technologies to improve health in developing countries—such as work in Tanzania to test new uses of mobile phone technology to improve care for tuberculosis patients. The phones may prove useful for reporting routine program data, thereby reducing the workload of community health workers.

While awaiting broader projects to pilot new health information systems, health care workers and software engineers are already using the newly identified requirements to:

- Evaluate software already on the market.
- Compile technical specifications and write new software.
- Assess health information systems already in place and develop plans to enhance existing applications.
- Build products that are more in line with user needs.

The CRDM represents a step forward in determining and documenting end-user requirements. Work in Kenya, Rwanda, Senegal, and Vietnam suggests it can be applied across countries, cultures, and segments of the health care system. Already, engineers and developers eager to fulfill the promise of information technology are moving beyond end-user requirements to develop systems for developing countries that better help health care professionals do their work. ■

REFERENCES

1. World Health Organization (WHO). *The Health Metrics Network Framework*, 2nd ed. Geneva: WHO; 2008. Available at: www.who.int/healthmetrics/documents/hmn_framework200803.pdf.
2. Association for Public Health Laboratories (APHL). *Requirements for Public Health Laboratory Information Management Systems*. Washington DC: APHL; 2003. Available at: www.aphl.org/documents/global_docs/reqs_for_phlms.pdf.

A decade of progress

PATH president and CEO Chris Elias reaches a milestone and reflects on critical issues in global health

As a medical student 30 years ago, Chris Elias spent two months working in a refugee camp in Thailand for people fleeing war in neighboring countries. Over the next two decades, he had a diverse range of experiences and responsibilities in global health, culminating in his appointment as PATH's president and chief executive officer in September 2000.

During the past decade at PATH, Chris has continued working to improve health for the world's poorest and most vulnerable people—on a much larger scale and with a rapidly growing set of resources. Since he joined the organization, PATH has grown from 300 to more than 900 employees, and the annual budget has quintupled to more than \$250 million, supporting work in more than 70 countries.

On the occasion of his tenth anniversary with PATH, Chris reflected on recent progress in global health, on current and future challenges, and on the critical need to maintain work-life balance—even with a schedule that includes 200,000 miles of travel each year.

Chris, what are your thoughts about the world's efforts over the past decade to improve global health?

We've seen dramatic progress, both in reduction in maternal and child mortality and in commitments from countries. Communiqués from G8 meetings now commonly talk about global health, which wasn't true ten years ago. Development assistance for health has more than doubled during the decade. These investments in global health are really paying off. While there is still much work to be done, many countries are on track to meet the Millennium Development Goals.

One important health trend over the decade has been a growing burden of chronic disease in developing countries. What is your perspective on this?

Despite good progress with infectious disease and maternal and reproductive health problems, we're seeing explosive growth in the disease burden in low- and middle-income countries related to chronic diseases, such as diabetes, hypertension, and asthma. The good news is that identifying solutions for these problems may be less expensive than it's been for infectious diseases. Because lucrative markets in industrialized countries are already driving innovation for many chronic diseases, we won't need to invest as heavily in discovery as we have needed to do for diseases like malaria. We will, however, need to adapt these innovations to local conditions and lower price points.

The past decade has also seen increased international concern about terrorism and security issues. How do you view the relationship between global health and security?

We should improve global health for many reasons. The principal reason is that it's the right thing to do. In the 21st century, we should not live in a world with such tremendous inequities in health. It's also the smart thing to do. Development assistance for health promotes economic development and self-sufficiency and improves international relations and security. Finally, there is a very clear connection to personal health security as we have seen with emerging infections and pandemics, such as SARS in 2003 and H1N1 influenza last year.

What other global health issues are especially striking to you as we close the decade?

We now have the fattest pipeline of new health technologies for poor countries that we have ever seen. We must also invest

in the system innovations needed to ensure that these new tools will be adopted and delivered to all who need them. Otherwise, we could face what I call an “innovation pile-up” as new technologies are presented to poorly prepared health systems. Although we have successfully worked through public-private partnerships to incent companies to produce tools for poor countries, if we don’t follow through to get those tools out and into use, those companies will be reluctant to work on these kinds of projects again.

How can we afford additional investments in global health in a time of worldwide economic crisis?

You have to keep perspective on how many resources actually go into global health. Most Americans think we spend between 10 and 15 percent of our national budget on foreign assistance. It’s actually about 0.2 percent. When you ask how much we should spend, most people say 3 to 4 percent. The data are extremely clear on the highly cost-effective nature of interventions such as vaccines. These are modest investments that have a huge impact in saving people’s lives and pulling people out of poverty. We need to keep telling that story.

Chris, who has inspired your work? Who are your heroes?

I’ve had many important mentors throughout my career, beginning with my late father. Rather than single out one or two individuals, let me tell you about my biggest heroes. The people who inspire me the most are the honest technocrats who manage health programs in poor countries—people with titles like district health officer or national family planning program director. They usually have some technical training but not much formal management training. They have huge responsibilities but chronically insufficient resources. They work with very weak health systems. They don’t have enough staff, and their computers sometimes don’t work. They’re underpaid or sometimes not paid at all. And yet they’re there, doing so much with so little. They also understand that complex interface where global meets local. We need to listen carefully to their insights and their needs.

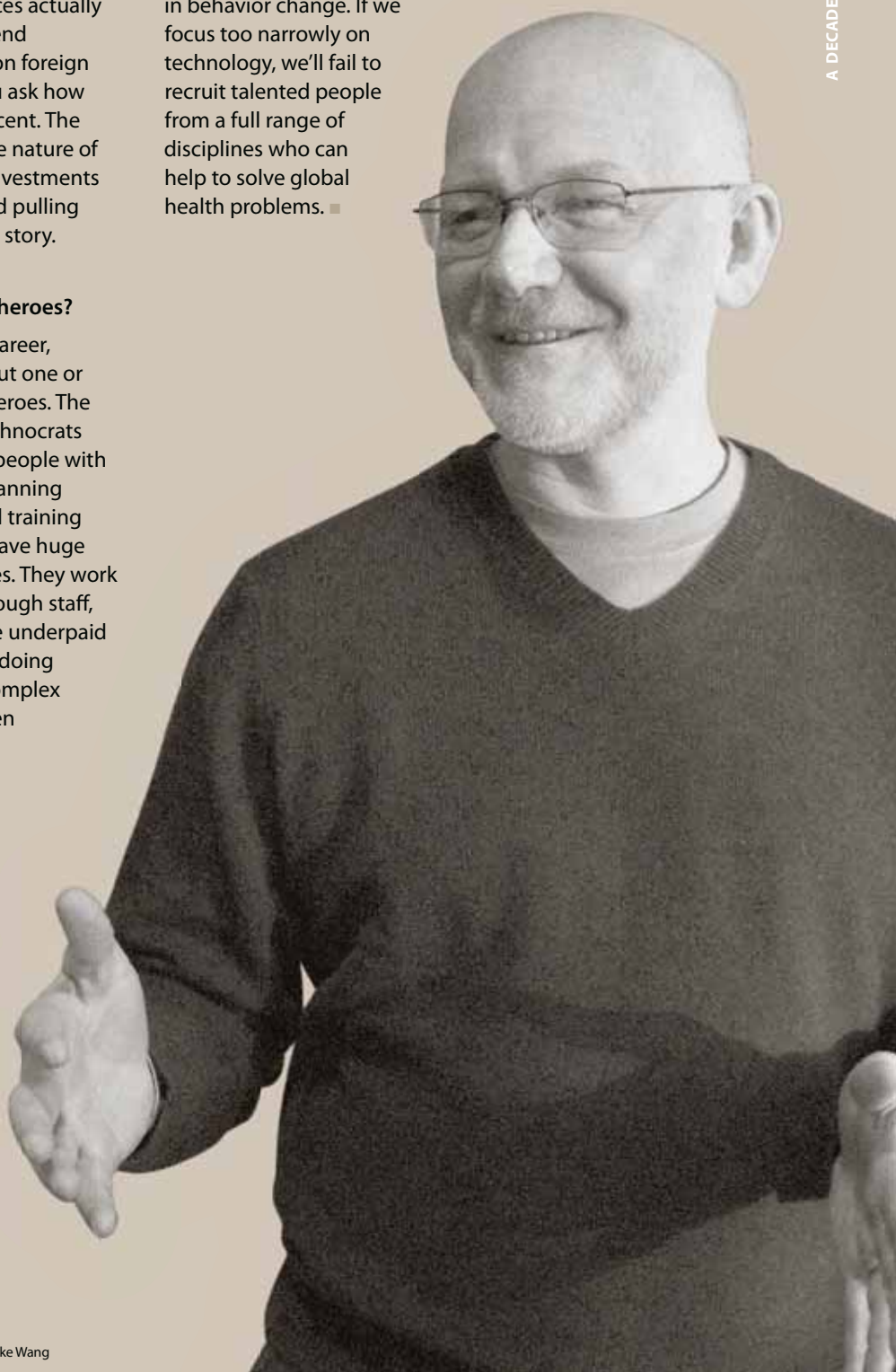
In light of your busy schedule and frequent international travel, how do you stay healthy and maintain work-life balance?

The main way I stay healthy is regular exercise. My family jokes that I actually measure my exercise to the day. My goal is to work out at least 50 percent of days, and as of today, it’s 50.2 percent. Exercise is also the main way I manage jet lag. If I can get up in the morning and run, it’s much easier to make it through a busy day. In today’s hyperconnected world, where everybody expects their email to be answered right away, there are days and weeks when you have to sprint. You build up an oxygen debt, and then you need to rest, or it’s not sustainable. Balance doesn’t come every day,

but you can’t put it off for long. Like most things, it gets easier with practice. I actually feel more energetic about the work now than I did ten years ago, but that’s mainly because of the great work that PATH staff and partners are doing around the world.

Finally, Chris, could you share some thoughts or concerns about the future of work to improve global health?

Our biggest risk is to mistakenly equate innovation only with technology. I’m a big technology enthusiast, but we sometimes think about innovation too much in terms of gadgetry. We also need innovation in human resources for health, in delivery of services, in behavior change. If we focus too narrowly on technology, we’ll fail to recruit talented people from a full range of disciplines who can help to solve global health problems. ■



Ensuring access to family planning, *from page 1*

Getting started in Nicaragua

Family planning programs have been remarkably successful in Nicaragua, where 70 percent of women now use modern contraception.¹ The government has been the main provider of products and services, with two-thirds of users receiving contraceptives free of charge.²

The planned phaseout of family planning support from the US Agency for International Development in 2011 has the potential to reduce contraceptive use, especially for vulnerable groups such as adolescents and low-income women.³ Although nearly 30 percent of users already receive contraception through the private sector, many Nicaraguans cannot afford or access services from these providers.

Because communication and coordination between the public

and private sectors in Nicaragua has previously been quite limited, PATH partnered with the Ministry of Health to study private-sector stakeholders' perceptions of the current family planning program and of the proposed total market approach. In early 2010, project staff used standardized questions to interview 24 individuals from six stakeholder categories—including commercial service providers, NGO providers, and product distributors.

The findings have for the first time provided a complete picture of the family planning environment in Nicaragua, especially in regard to private providers. The study also found no opposition to public-private partnerships from the perspective of private-sector stakeholders, who were nevertheless skeptical that the national government would support this approach. The project team has consequently focused on strategies to mobilize potentially powerful advocates and to increase the power of stakeholders who are already supportive.

Dissemination of the survey findings has already had a positive effect. Three NGOs identified through the study as influential actors in family planning were subsequently invited to join a longstanding national committee on contraceptive security. Stakeholder input has also led project staff to gather additional information—such as how clients choose providers—that is important for developing a total market plan.

Laying a foundation in Vietnam

Although the Government of Vietnam instituted user fees for many health services in the late 1980s, family planning has remained free for all, which has helped Vietnam increase contraceptive prevalence.⁴ Because support from development partners for contraception is waning, the government is weighing alternative approaches as it develops a new ten-year population and family planning strategy.

To evaluate stakeholder networks and perceptions concerning a total market approach, PATH interviewed 38 representatives from 12 stakeholder groups, including government, donors, community groups, product manufacturers and distributors, and service providers. Project staff analyzed key data using PolicyMaker software, which provides a systematic analysis of stakeholders' policy positions and helps in designing strategies for managing the politics of reform. The team also used a software tool called UCInet to describe and compare relationships of the various stakeholders.

The results showed strong support for a total market approach among almost all stakeholders. Many, however, expressed concerns that the government would oppose this approach, though participating public-sector representatives expressed support for major components of the policy shift. At a November 2010 stakeholder meeting, the head of Vietnam's family planning program expressed a commitment to include the private sector in population and family planning work moving forward.

Public- and private-sector stakeholders from the November meeting are now planning to





Nguyen Ba Quang

In Vietnam, a total market approach may help to ensure continued access to family planning for all women.

work together to form a first-ever national contraceptive coordinating committee. Stakeholder input is also prompting project staff to establish stronger links with the commercial sector, purchase pharmacy sales data, and conduct research on which family planning users the government can charge without jeopardizing contraceptive use.

Meeting challenges and putting plans in motion

PATH's studies of stakeholder networks and perceptions in Nicaragua and Vietnam have helped to engage a range of groups at the outset of a major policy reform process. The results will be useful for meeting the challenge of translating the concepts of a total market approach into the cultures and political realities of these nations.

Moving forward, PATH will assist the governments of Nicaragua and Vietnam in determining which sector and type of provider will serve each population segment and in

developing an operational plan for how services will be provided. The team will also document changes in processes and policies in each country through interviews with government officials and other stakeholders. Finally, project staff will continue to coordinate work with members of the Market Development Approaches Working Group of the Reproductive Health Supplies Coalition (housed at PATH), which has launched similar projects in Honduras and Madagascar. ■

REFERENCES

1. National Institute of Development Information, Nicaragua. *Nicaraguan Survey of Demography and Health, 2006–2007: Preliminary Report*. Managua, Nicaragua: Ministry of Health; 2007.
2. Quesada N. *Nicaragua: Contraceptive Market Segmentation Analysis and Georeference Tools Used to Identify Gaps in FP Services*. Presentation to the Ministry of Health of Nicaragua, August 13, 2009. Arlington, VA: USAID | DELIVER.
3. Sharma S, Gribble JN, Menotti EP. Creating options in family planning for the private sector in Latin America. *Revista Panamericana de Salud Pública*. 2005;18(1):37–44.
4. Committee for Population, Family, and Children (Vietnam) and ORC Macro. *Vietnam Demographic and Health Survey*. Calverton, Maryland: Committee for Population, Family and Children and ORC Macro; 2003.

Systems strengthening

Project name

Enhancing Equity and Sustainability of Public-Sector Family Planning

Locations

Nicaragua, Vietnam

Methods

Advocacy, public-private partnerships, stakeholder analysis

Partners

General Office for Population and Family Planning, Ministry of Health, Vietnam; Ministry of Health, Nicaragua

Funder

Fred H. Bixby Foundation

For more information

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News and notes

Mass meningitis vaccination campaign begins in Africa

The Meningitis Vaccine Project—a partnership of PATH and the World Health Organization (WHO)—has developed a vaccine that may eliminate epidemic meningitis in sub-Saharan Africa. Earlier this year, MenAfriVac™, a meningococcal A conjugate vaccine that costs less than US\$0.50 per dose, was licensed and then prequalified by WHO for purchase. On December 6, national immunization campaigns will bring the new vaccine to more than 20 million people in Burkina Faso, Mali, and Niger. For more information, see www.path.org.

PATH to stabilize vaccines for pandemic influenza

PATH received a \$5.2 million contract from the US Department of Health and Human Services to stabilize influenza vaccines. Stabilization will allow health programs to better contain a pandemic at its point of origin by extending the product's shelf life, making stockpiling and rapid deployment of the vaccines possible.

Ultra Rice® for Burundi food aid

PATH, in collaboration with World Vision and with funding from the US Department of



WHO/Burkina Faso

Children and young adults in Burkina Faso are among the first to receive the new meningitis vaccine.

Agriculture, will incorporate Ultra Rice into food aid for Burundi. The micronutrient-fortified grains—produced with technology advanced by PATH—will boost the nutritional quality of US-supplied rice.

Malaria prevention paying off

Increased funding for malaria prevention over the past decade has saved the lives of nearly 750,000 children in 34 African countries, according to a new report by PATH, Johns Hopkins University, Tulane University, and WHO. Published by the Roll Back Malaria Partnership, the report argues that increased funding is vital for sustaining progress. For more information, see www.rollbackmalaria.org.

PATH offices to join in new space

PATH's offices in Washington, DC, and Bethesda, Maryland, will merge and relocate in January 2011. The combined office will be in the eastern part of Washington's central business district at 455 Massachusetts Avenue NW and will house approximately 150 staff.

Programs based in the new office will include the HIV and Tuberculosis Global Program; Malaria Vaccine Initiative; Maternal and Child Health and Nutrition Program, which includes the Infant and Young Child Nutrition Project; Vaccine Development Program; Global Campaign for Microbicides; and Global Health Technologies Coalition secretariat.

Ultra Rice is a registered trademark in the United States of Bon Dente International, Inc.

PATH is an international nonprofit organization that creates sustainable, culturally relevant solutions that enable communities worldwide to break longstanding cycles of poor health. By collaborating with diverse public- and private-sector partners, we help provide appropriate health technologies and vital strategies that change the way people think and act. Our work improves global health and well-being. For more information, please visit www.path.org.

Directions in Global Health shares information about PATH's programmatic work with colleagues around the world. To subscribe, please send your contact information to publications@path.org. To learn more about PATH's work, visit the PATH website or subscribe to one or more of our electronic newsletters. These include *News From PATH* and several topic-specific e-newsletters. To subscribe, go to www.path.org/sign-up.php#news.

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