

# ABOUT THE CENTER FOR HEALTH MARKET INNOVATIONS

The Center for Health Market Innovations (CHMI) promotes programs, policies and practices that make quality healthcare delivered by private organizations affordable and accessible to the world's poor. Operated through a global network of partners since 2010, CHMI is managed by the Results for Development Institute with support from the Bill & Melinda Gates Foundation, the Rockefeller Foundation, and UKaid.

Details on more than 1200 innovative health enterprises, nonprofits, policies, and public-private partnerships in low- and middle-income countries can be found online at HealthMarketInnovations.org.

### **ABOUT THIS REPORT**

This report was compiled by the CHMI team at Results for Development: Maria Belenky, Donika Dimovska, Molly Jamieson Eberhardt, Rosa Kang, Gina Lagomarsino, Trevor Lewis, Dexter Ndengabaganizi, Rose Reis, and Alex Robinson. CHMI's global partners, listed below, contributed insights on new programs and practices.

### **RECOMMENDED CITATION**

Center for Health Market Innovations. (October 2012). Highlights: 2012. Results for Development Institute, Washington, D.C. Available at www.HealthMarketInnovations.org.

### **CHMI'S GLOBAL PARTNERS**

- ACCESS Health International / Indian School of Business, Bangladesh, Brazil, India
- MercvCorps, Indonesia
- Consultation of Investment in Health Promotion, Vietnam and Cambodia
- Institute of Health Policy, Management & Research, Kenya, Rwanda, Uganda, Tanzania
- Freedom From Hunger, Bolivia, Ecuador, Peru
- The Asia Foundation, Pakistan
- Philippine Institute for Development Studies, Philippines

### **CONTACT CHMI AT R4D**

#### **Results for Development**

1100 15th Street, NW, Suite 400 Washington, D.C. 20005 1-202-470-5711 chmi@resultsfordevelopment.org Cover Photo: Hadiza, a young woman in the north of Nigeria, lost her baby and nearly lost her life in childbirth. This report provides a summary of promising healthcare innovations that could save the lives of women and their families in poor communities.

### **GENEROUSLY FUNDED BY:**

BILL & MELINDA GATES foundation





# Table of Contents

Insid	e Health Markets	6
D	Diffusion of Health Market Innovations	8
D	Patabase at a Glance	10
Emer	ging Practices in Market-Based Health Models	12
P	rimary Care Franchises and Chains	14
	Spotlight: Urban Primary Care Chains in India	16
Н	lealthcare on the Move	17
	Spotlight: Public-Private Partnerships	18
lr	nnovating to Save the Lives of Women and Children	19
	Spotlight: Four New Approaches in Maternal and Child Health	22
В	rief: New Research on eHealth	24
Track	ting and Reporting Program Performance	26
Conn	ecting People to Scale Innovations	30
С	Creating Partnerships	32
	Networking in Countries.	32
	Making Online Connections	
	Working with Global Collaborators	33
C	CHMI Success Stories Across the Globe	34
How CHMI Can Help With Your Work		
		20

**HIGHLIGHTS 2012** 

CHMI enables
health systems around
the world to better utilize
private organizations to
deliver quality, affordable,
and accessible care,
especially for the poorest
and most vulnerable.

# Dear Colleagues,

We're excited to bring you this second annual edition of Highlights, with new observations about health market innovations around the world.

Since we launched the Center for Health Market Innovations in 2010, we've been providing comprehensive, up-to-date information about programs working to make quality healthcare delivered by private organizations affordable and accessible to the world's poor. We seek to identify practices that, if scaled-up or adapted to new settings, would improve healthcare for more poor people. And with renewed support from the Bill & Melinda Gates Foundation, continued support from the Rockefeller Foundation, and new funding from UKaid, we are setting our sights even higher.

### **WHAT'S NEW IN HIGHLIGHTS: 2012**

- Highlights of 80 newly launched programs in the past year, including a Somaliland pharmacy franchise and a Kenyan call center, on page 8.
- Insight into cutting-edge approaches to increase access to quality healthcare for the poor, including business models adopted by fast-growing primary healthcare franchises and chains, mobile healthcare, and programs striving to improve maternal health care, starting on page 13.
- A framework for reporting on program performance in key dimensions like quality, cost, and efficiency; selected results from a sample of close to 150 health programs, on page 28.
- Findings about how eHealth practices are diffusing globally from our recent publication in the Bulletin of the World Health Organization—the #1 most clicked-on article from a dedicated issue on information technology—on page 24.

# OTHER MILESTONES FROM CHMI'S PAST YEAR

• CHMI now profiles more than 1200 nonprofits, social enterprises, public-private partnerships, and policies in 105 countries. More than 200 profiles have been added since our last report. See a visualization of our database on page 10.

- In the past year, more than 100,000 unique visitors used CHMI to explore healthcare innovations. The majority of web visitors arrived from low- and middle-income countries, with India, the Philippines, Kenya, Indonesia, Bangladesh, and Uganda in the top 10 countries for visitor origin.
- Our partners in the Philippines, Indonesia, Kenya, and elsewhere in CHMI's global network have led the way in convening people who are implementing, studying, and funding market-based health programs. Highlights from these events start on page 32.
- To understand how CHMI is used and how it can be improved, the Gates Foundation commissioned a midterm survey of program managers, donors, investors, researchers, and policy makers. Turn to page 38 to view a summary of the findings.

# WHAT YOU CAN EXPECT FROM CHMI IN OUR NEXT PHASE

Going forward, CHMI will focus increasingly on fostering partnerships among program managers, donors, investors, researchers, and policy makers that lead to measurable scale-up, adaptation, or improvement of promising healthcare programs. Learn more about how CHMI can support your work on page 36.

We're also happy to share that the success of CHMI has led R4D to explore this model as an approach to identify new solutions in other sectors. As a result, the Center for Education Innovations (CEI), managed by R4D and funded by UKaid, will launch in mid-2013.

We hope you find this report useful. Please don't hesitate to contact me with your feedback.



Ging M. Lagarusine

**Gina Lagomarsino** glagomarsino@resultsfordevelopment.org

**Results for Development (R4D)** On behalf of the global CHMI network







# **Inside Health Markets**

**DURING THE PAST YEAR,** the CHMI database grew to include a total of over 1200 programs and policies, operating in more than 100 countries. CHMI program profiles are categorized into five kinds of Health Market Innovations: Organizing Delivery, Financing Care, Regulating Performance, Changing Behaviors, and Enhancing Processes. Each profile provides information about the program's operational design, including health focus areas, targeted populations, funding sources, and where available, results to date. In the aggregate, CHMI program profiles yield macro-level information about a wide range of potential solutions. This section synthesizes information from the CHMI database to reveal developments in health markets across the globe.



### **DIFFUSION OF HEALTH MARKET INNOVATIONS**

CHMI identified 80 new programs that launched in 2011-2012. The top three countries of operation for new programs were Kenya, the Philippines, and India.<sup>2</sup> One-half of all new programs use technology in some way, with one-quarter of these focusing on improving data collection. Twenty-three new programs are for-profit, and nearly one out of four programs are public-private partnerships, a larger percentage than among all profiled programs.

This may reflect an increasing focus on the part of CHMI's in-country partners on identifying and documenting public-private partnerships rather than the overall growth of these models; either way, the 224 documented examples on CHMI of public-private partnerships provide a host of ideas for governments and private partners collaborating to construct health programs.

### **EXAMPLES OF NEWLY LAUNCHED PROGRAMS INCLUDE:**

- BulshoKaab Pharmacies Network: Operating in Somaliland since 2011, BulshoKaab is a pharmaceutical franchise aiming to expand the availability of quality clinical health services in private pharmacies. Launched in the city of Hargeisa, BulshoKaab has expanded to 68 pharmacies over the last year, aiming soon to reach 150 pharmacies in four regions. PSI Somaliland supports the franchise with training and quality monitoring.
- Daktari 1525: Launched in 2012, Daktari 1525 is a Kenyan hotline service providing
  phone-based health consultations. Staffed by 50 registered medical doctors, the service offers
  information and advice, as well as facility referrals for appropriate diagnoses or prescriptions.
  Individuals can access the service at KES 20 (US \$0.23) per minute by dialing 1525 from
  a Safaricom line.
- Ross Clinics: Started in India in 2011, Ross is a chain of low-cost, low-overhead clinics, providing all components of primary care under a single roof. Clinics are located in under-served urban areas, and open seven days a week, twelve hours a day. Ross Clinics has served more than 5,000 patients through its six clinics.

Photo Above: Bike4Care provides health workers with bicycles, and isolated communities with bicycles plus bicycle ambulance trailers.

### **EXAMPLES OF PROGRAMS EXPANDING THEIR REACH INCLUDE:**

In the past year, several programs reported adding new services, opening facilities, or adapting their model in new countries to reach more people. Below, a few examples of programs that have expanded their operations in the past year.

### **SCALING OPERATIONS**

• Health insurance: Four insurance programs enrolled significant numbers of new members.

MicroEnsure's client rolls in Tanzania increased by about 20%, from 499,000 health insurance clients to 600,000, Hygeia's enrolled subscribers in Nigeria grew by about one-third, while Sampoorna Suraksha and eQuality Health Bwindi expanded in India and Uganda by about 460,000 and 4,000 members respectively.



Photo Above: Nigerian families enrolling in a community insurance plan offered by Hygeia.

• Health service delivery: At least nine networks of clinics added new facilities. The nonprofit franchise World Health Partners now covers more than 4,300 rural points of care in Bihar alone, plus 40 affiliated clinics and diagnostic centers. Through a public-private

partnership, IGE Medical Systems now operates 350 radiology units in government facilities in Bihar, an increase of 200 since 2011. The family planning franchise ProFam Cameroon now includes 80 facilities, up from 24. And the Indian pharmacy chain MedPlus continued its expansion, opening 200 more outlets.

### **PROVIDING NEW SERVICES**

 VillageReach's new health advice hotline launched in August 2011 with 6,000 registered users. Jacaranda Health opened its first static maternity hospital, allowing the nonprofit organization to provide delivery services to women who had accessed prenatal care from its mobile clinic.

### **CROSSING BORDERS**

• To date, we have identified just a handful of programs that have crossed borders to adapt their model to a new country. In 2012, the nonprofit program Operation ASHA was successful in taking its TB DOTS treatments model, originally developed in the slums of Delhi, to Cambodia. In addition, Singapore-based Viva Healthcare adapted its network of primary health clinics in India serving middle-income families to new chains in Indonesia, Kenya, Pakistan, Egypt, Philippines, and Vietnam, as well as a chain of generic pharmacies in Indonesia.



Photo Above: Shelly Batra is the cofounder of Operation ASHA, a nonprofit program that adapted its TB DOTS treatment model to Cambodia.

### DATABASE AT A GLANCE

As of September 2012, CHMI has identified over **1200 programs** in **105 countries**. Here, we've highlighted some of the interesting characteristics of the database. To learn more, explore the database at **HealthMarketInnovations.org/programs**.





### KENYA

CHMI has identified 185 programs in Kenya, with 75% of them focusing on HIV/AIDS, maternal & child health or, general primary care.



### **INDIA**

243 programs were identified in India, with a particular prevalence of public private partnerships (47 programs) and for-profit enterprises (45 programs).



**INDONESIA** 

Over 50% of programs identified in Indonesia use information technology, mostly phones and computers.



### **PHILIPPINES**

A full 34% of the programs identified in the Philippines are government-funded, compared to only 27% that are donor-funded.

### CHMI identifies programs that:



### ORGANIZE DELIVERY

Including 68 chains, 67 franchises, and 120 networks that reduce the fragmentation and informality of health care delivery.



### REGULATE PERFORMANCE

Including 22 programs that license and accredit private programs to set standards and promote quality care.



### **ENHANCE PROCESSES**

Including 317 programs that use information technology and 98 programs that use mobile clinics to improve quality and access, and lower the cost of care.



### FINANCE CARE

Including 122 microinsurance programs that give purchasing power to the poor.



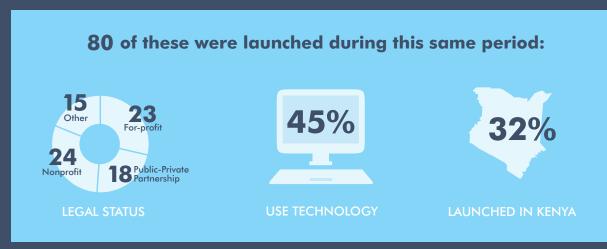
### CHANGE BEHAVIORS

Including 189 programs that train and incentivize providers to deliver better care.

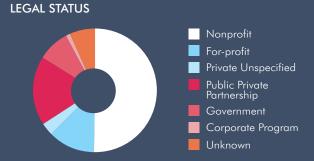
# PROGRAMS REPORTING RESULTS IN THEIR WORK: 147

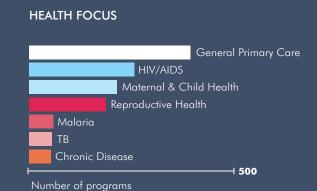
See p. 27 to learn more about Reported Results

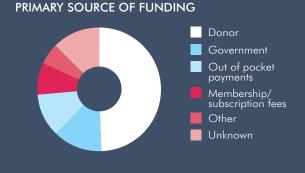
In the past year, CHMI has added 200+ PROGRAMS to the database



CHMI programs by **Legal Status, Health Focus,** and **Primary Source of Funding**)

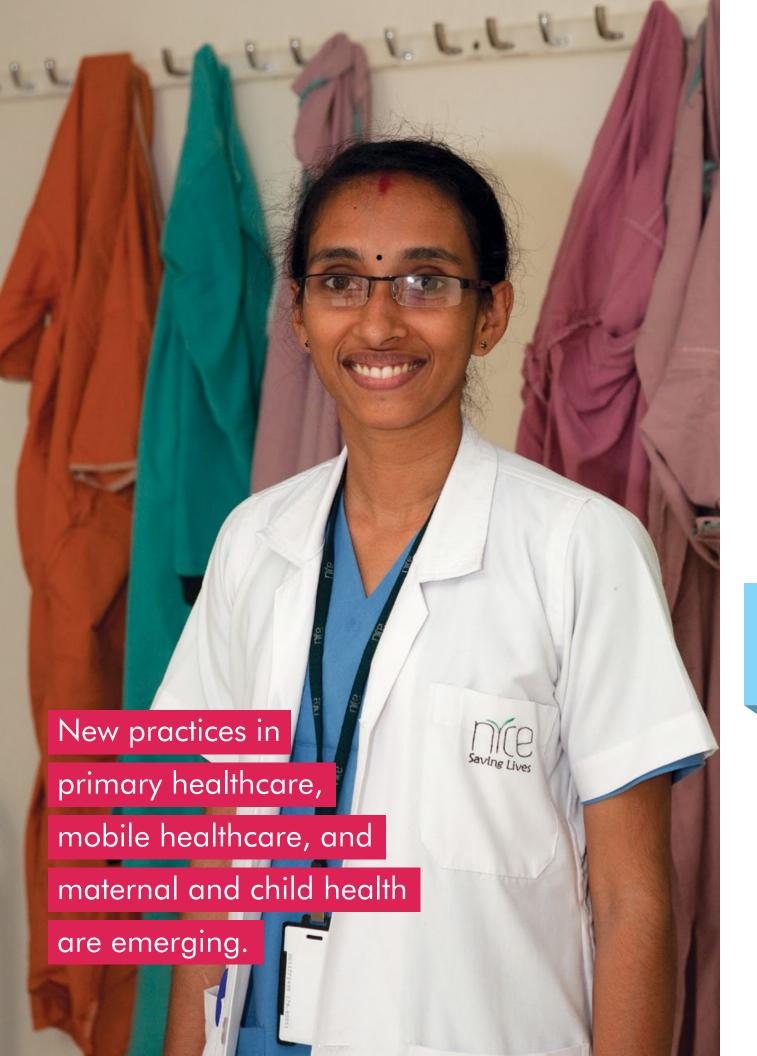






HealthMarketInnovations.org HIGHLIGHTS 2012





# **Emerging Practices in Market-Based Health Models**

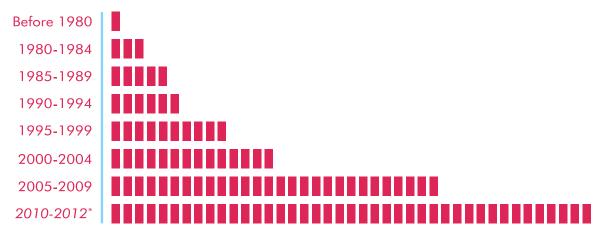
AS CHMI'S DATA SET HAS GROWN, new patterns of innovative practices are emerging. To provide information on topics relevant to program managers, funders, researchers, policy makers, and others, we've provided deep dives on three themes. First, we look at chains and franchises providing primary health services in low income communities. Next, we profile different mobile healthcare models extending services to populations outside the reach of static facilities. Finally, we summarize several common new approaches to provide quality health services to women and children around the world.



### PRIMARY CARE FRANCHISES AND CHAINS

A growing number of private organizations operate franchises or chains of clinics providing accessible, affordable, and quality primary care in low-income communities. Many of these companies are experimenting with new business models and operational strategies. CHMI has identified and profiled 42 such programs, with nearly one-third of these launching in the past three years.

### Number of Primary Care Chains and Franchises Profiled in the CHMI Database, By Date of Launch



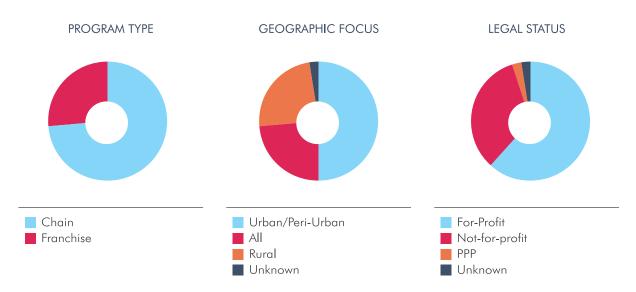
\*Note that this category represents less than 3 years, compared to 5 years for the others

Both franchises and chains consist of outlets operating under the same brand where services are standardized by a central organizer. Franchises, however, are operator-owned, whereas operators of clinics in chains are paid employees of a central organization.

Both of these models provide the advantage of allowing participating outlets to spread overhead costs, share managerial resources, standardize processes that improve the quality of care, and use common branding.

Photo Above: A clinical coordinator welcomes clients at Penda Health, a chain of primary care clinics in Kenya.

### Characteristics of Primary Care Chains and Franchises in CHMI's Database



About half of the primary healthcare franchises and chains that CHMI profiles are located in urban or peri-urban areas; 16 operate in India, and most are for-profit (see graphs above). While the majority of the programs focus on providing clinical services, nine operate primarily as pharmacies, which often act as primary care providers when patients seek health advice and services from pharmacists. Realizing this, several pharmacy chains are training their pharmacists to provide customers with a limited menu of basic health services.

Providing primary care services to low-income populations at an affordable cost is a challenging undertaking. To respond, organizations often experiment with new business models and strategies to reduce costs, increase customer volume, and more efficiently use resources—while also striving to improve quality.

### **COMMON APPROACHES AMONG FRANCHISES AND CHAINS INCLUDE:**

- One Stop Shops. A number of chains and franchises aim to offer a full range of health services in one location. In Peru, Por Ti, Familia gives patients access to doctors, pharmacies, and laboratory services in each location. Similarly, patients visiting Primedic clinics, in Mexico, can see a range of specialists.
- Multi-Service Models. Realizing time constraints force many people to forgo healthcare, Sehat First in Pakistan includes a general store in all of its clinics so that patients can pick up groceries and soap when visiting the doctor. Similarly, E Health Point in India sells clean water at its clinics. This allows these programs to increase patient volume, and use revenue from added products and services to reduce the costs of needed healthcare, while simultaneously providing an additional valuable service to the community.
- Hub-and-Spoke Models. Tiered systems of clinics help chains and franchises reach further into communities without stocking each location with all services. Five satellite Mi Doctorcito clinics refer up to a Por Ti, Familia anchor clinic. Similarly, each

- of Pathfinder Health India's Family Medical Health Centres will support five to 10 smaller outlets in poorer communities.
- Partners, operating in rural India, allow rural providers to share patient data such as blood pressure or heart rate with a qualified physician in Delhi through an Internet-connected computer. The physician can also be consulted via webcam on the diagnosis and treatment of a patient. Other increasingly more common technology solutions used by chains and franchises include electronic medical records and tracking systems to monitor stock levels of drugs and supplies.
- Membership Schemes. Membership schemes help programs promote preventive care—and avoid major month-to-month revenue fluctuations. In Mexico, Primedic patients pay a membership fee of approximately US\$10 and receive access to unlimited primary care consultations with doctors in internal medicine, pediatrics, obstetrics and gynecology, and family medicine.





Photo Top: Outside a Smiling Sun clinic in Dhaka. Photo Bottom: A Generics Pharmacy

Photo Bottom: A Generics Pharmacy storefront in Manila.

The size of primary care franchises and chains ranges greatly, from those that are on the cusp of launching, like India's Family Medical Health Centres, to others that have hundreds of clinics, like the Smiling Sun and World Health Partners franchises in Bangladesh and India, respectively. A number of franchises have numerous outlets across both urban and rural settings—particularly retail pharmacies like Farmacias Similares in Mexico and The Generics Pharmacy in the Philippines—while chains tend to have fewer outlets concentrated in urban and peri-urban areas. Clinical chains are often characterized by the provision of more extensive services such as maternal care and basic surgical procedures, which require larger facilities to accommodate more staff and equipment. Franchises, on the other hand, tend to focus on offering a limited set of basic services at a larger scale, often provided by low-skilled staff who are trained and monitored by the franchisor. The franchise business model is often contemplated by some clinical chains when they are looking to scale up some or all or of their services to new areas, especially rural settings.

As primary care chains and franchises continue to test out new approaches, the sharing of promising practices and experimentation with alternative business models will be crucial to ensure the diffusion of effective programs and the success of these business models as a whole. It is yet to be seen whether primary care franchises and chains have staying power and the potential to scale and deliver quality health services to large numbers of people in low- and middle-income countries.

### SPOTLIGHT

### **URBAN PRIMARY CARE CHAINS IN INDIA**

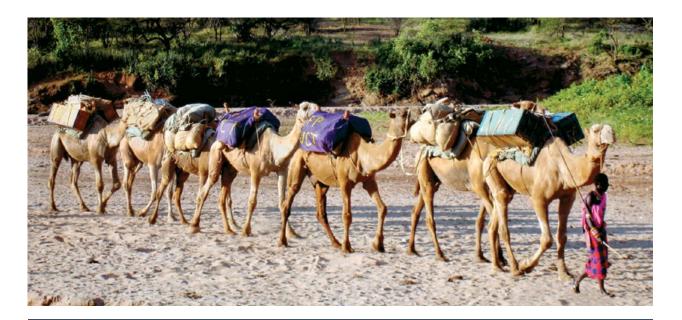
Millions of low-income families in urban Indian communities seek out healthcare in an ecosystem dominated by under-regulated clinics. CHMI network partner ACCESS Health International studied three chains that are striving to provide quality services in this market. All launched in the past five years, Kriti Clinics in Hyderabad, Swasth India in Mumbai, and Viva Sehat in Bangalore and Andhra Pradesh provide outpatient services in uniformly branded clinics for easy recognition. They dispense generic drugs and have computerized health management information systems. Both Swasth and Kriti work with government authorities to facilitate national health programs such as immunization. Aiming for high patient volume, their clinics are sited near dense neighborhoods of potential patients. In addition, to help keep costs of operation low, the employees of all three chains multitask. For example, the nurse doubles up as phlebotomist and a receptionist in Viva Sehat and Swasth. Swasth doctors also dispense medicines.

These chains have ambitious plans for growth. Swasth has seven clinics in Mumbai that have served more than 11,000 people and the company aims to serve 100,000 by 2014. Kriti aims to grow from two to four clinics serving the Hyderabad slums. Viva Sehat currently operates three clinics

in India, targeting southern states for growth to match the Singapore-based company's burgeoning chains in Indonesia, Kenya, Pakistan, and Vietnam, and soon, Egypt and the Philippines.



Photo Above: Swasth India runs self-sustaining primary care centers in slum communities.

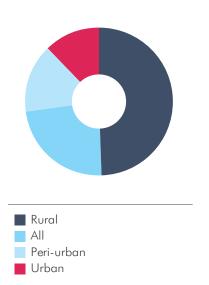


### **HEALTHCARE ON THE MOVE**

Mobile care extends healthcare to populations beyond the reach of static facilities. The mobile care model takes a range of forms, from a basic bicycle carrying health workers and medicine into rural villages to a fully mobile cardiac catheterization lab. It can serve many more people with the same equipment, help to recover operating costs, and more efficiently utilize staff time.

CHMI profiles close to 100 mobile care programs, with most operating in rural areas and delivering primary care service. Interventions with standardized procedures that are relatively easy to deliver, such as eye care, family planning services, and HIV/AIDS outreach and counseling, are often delivered through mobile services and therefore constitute a substantial number of profiled programs (see graph below).

## Mobile Health Programs by Target Geography



### **Mobile Programs by Health Focus**



Photo Above: Camels are used by Community Health Africa Trust (CHAT) to carry clinic supplies, enabling them to provide family planning and integrated health services to remote, nomadic communities in northern Kenya.

6 HealthMarketInnovations.org HIGHLIGHTS 2012

### MOBILE CARE PROGRAMS PROFILED BY CHMI COME IN THREE COMMON FORMS:

- **Health Camps.** Health camps—when clinics set up temporary locations to diagnose and refer patients to other facilities—are traditionally large-scale opportunities for hard-to-reach populations to access basic health education and preventive care. Health camps organized by the Islamia Eye Hospital in Bangladesh provide treatment for minor eye diseases and refer others to facilities.
- **Mobile Clinics.** Offering the same basic services as a primary health facility, mobile clinics return to each location on a periodic basis, enabling them to provide longer-term care for chronic conditions, maternity, and other specialty services. Kenya's Jacaranda Health runs regular mobile clinics that offer antenatal care and birth preparedness for women in urban slums, while Kolping Bolivia uses ambulances to transport doctors and counselors to peri-urban and rural neighborhoods around the city of El Alto, offering low-cost or free medical attention.
- Mobile Facilities. Mobile facilities are, in essence, traveling hospitals. Staffed with doctors and nurses, they are equipped with medical equipment on par with static primary care centers or hospitals, including laboratories and operating theaters. In Bihar, India, Arogya Rath is operating mobile medical units that offer the same facilities as a basic hospital, as well as more than 30 medications that are issued to patients free of cost. In Peru, Pro Mujer specialists provide dental and sonogram services out of vehicles converted into two consultation units, one for dentistry with an exam seat and accompanying dental instruments, and the other for gynecological exams.

### SPOTLIGHT

### **PUBLIC-PRIVATE PARTNERSHIPS**

In India, an ACCESS Health International case study describes contracting agreements between state governments and private providers delivering healthcare through mobile facilities.<sup>3</sup> Under Arogya Rath, 38 mobile medical units provide primary healthcare services in remote areas of Bihar. Private partners provide infrastructure, staff, and services; the units aim to serve at least 50 patients each day, 26 days in a month. Similarly, under "Deen Dayal Chalit Aspatal Yojana,"

92 mobile units provide services in Madhya Pradesh. Each unit is equipped with GPS and carries a doctor, nurse, lab attendant, pharmacist, and driver. Operating the units has required intensive management and maintenance. Among a series of recommendations, ACCESS suggests that these schemes budget separately for monitoring and evaluation, and define performance parameters in the contract, such as service quality.



Photo Above: Sailing Doctors travels up the Kenyan coast in a dhow providing basic medical care to people on remote islands.

Mobile care programs leverage a variety of different transportation methods, depending on the local topography, to deliver services. For example, off road trucks are used to traverse rough terrain (Mailafiya), boats navigate isolated rivers (Navio Abaré, Sailing Doctors), motorcycles pass through rural and unpaved roads (Health by Motorbike), and camels serve remote desert communities (Community Health Africa Trust, or CHAT).

As this model continues to evolve, a key question will be whether it will come to represent a long-term solution to reaching those in remote areas, or simply a useful tactic to fill the gap until static clinics adequately expand their reach.

Sustainable financing will be a key criterion. A majority (69%) of mobile care programs profiled by CHMI operate primarily through donor funding. While still rare, mobile services operated through public-private partnerships—such as those described in the box above—represent a novel approach that may help channel public resources to improve the availability of care in areas not reached by traditional government facilities.



# INNOVATING TO SAVE THE LIVES OF WOMEN AND CHILDREN

Providing quality maternal and child health services is an ongoing challenge, reflected in the stubbornly high rate of maternal mortality seen in many low- and middle-income countries—even those that have successfully met other Millennium Development Goal targets. As a response, many private organizations are experimenting with new approaches to provide quality health services to women and children around the world.



The CHMI database profiles 224 maternal and child health programs working across 48 countries. They are pioneering the implementation of new practices, ranging from vouchers improving access to basic health services, to chains of clinics that provide low-income mothers with affordably-priced services such as pre-natal care, deliveries, and newborn care. Observations from CHMI's data follow.

Photo Left: mothers2mothers is an NGO that helps prevent mother-to-child transmission of HIV.

The CHMI database **profiles 224** maternal and child health programs working across **48 countries**.

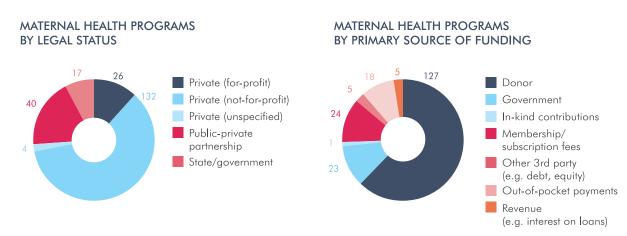
Photo Above: A mother and her infant in front of Jacaranda Health, a nonprofit maternity care organization in Kenya.

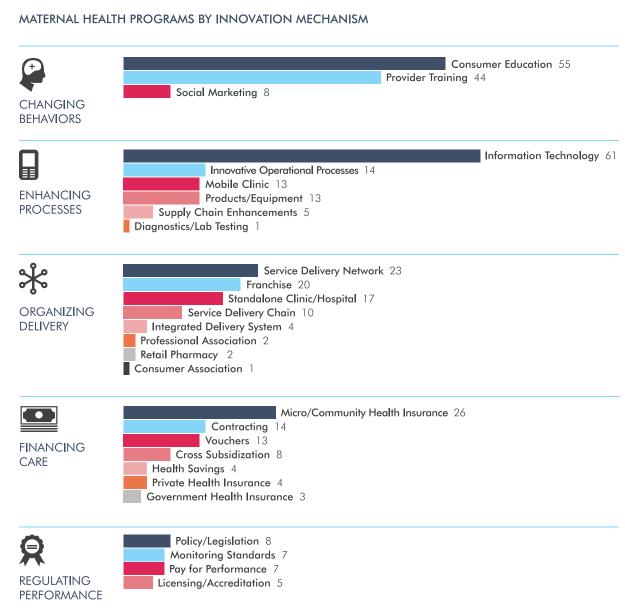


Photo Above: NICE Foundation provides specialized newborn care in Hyderabad.

- The majority of maternal and child health programs CHMI has documented are private, not-for-profit models (58%). Many of these provide education to mothers or train healthcare providers, and nearly one-third are now using information and communication technology as a way of collecting and delivering information to mothers and health workers. A small number of organizations have recently launched for-profit businesses that rely on technology innovations. Mobile phone-based savings plans for deliveries and pay-per-text subscription schemes are some of the newly developed for-profit models.
- A number of financing tools are used to mobilize funds for maternal and child health coverage for the poor.
   Micro-health insurance schemes, voucher programs, and contracting arrangements with private providers are the
   most common of the documented financing approaches used to pay for maternal and child health services. Larger
   hospitals and clinics with high patient volumes—like the NICE Foundation in India, CEGIN in Argentina, and Charis
   in Uganda—also cross-subsidize between the poor and wealthier patients.
- One-third of documented maternal and child health programs organize the delivery of healthcare, with most
  operating as franchises, chains, or networks of clinics. Many of these programs are adding technology on top
  of existing approaches, for example, by linking networks of midwives to medical specialists through mobile
  applications enabling live consultations, or by launching paperless clinics where all patient information is stored
  and tracked electronically.

### CHMI DATA SET AT A GLANCE: MATERNAL, NEONATAL, AND CHILD HEALTH





# SPOTLIGHT FOUR NEW APPROACHES IN MATERNAL AND CHILD HEALTH

### 1. GIVING PATIENTS PURCHASING **POWER TO ACCESS MATERNAL AND CHILD HEALTH SERVICES**

- Vouchers to increase utilization of care: **Vouchers for Reproductive Health Services Project, Cambodia.** Poor and vulnerable women are given voucher cards covering defined benefit packages such as delivery and antenatal care, as well as money for transportation and other allowances. The KfW-funded program contracts with public facilities and not-for-profit organizations to deliver these services, aiming to spur competition and quality improvement. Quality assurance is also provided through a continuum of training, accreditation, self-assessment, and supervision. CHMI profiles 13 Maternal, Neonatal, and Child Health (MNCH) programs that use vouchers to finance care.
- Saving schemes that use technology: Changamka Microhealth, Kenya. This social enterprise uses mobile money systems to help women steadily save money used to pay for quality antenatal, maternity, and postnatal services at participating facilities. Changamka also provides an electronic administration platform for voucher programs in the region. CHMI profiles 3 MNCH programs that encourage savings through technology.

### 2. PROVIDING LOW-COST **DELIVERY MODELS**

 High quality and low-cost service delivery chains: The Family Clinic, Indonesia. The Family Clinic is a nonprofit chain of five low-cost clinics in poor urban communities. To keep costs low, midwives provide most services, including maternal and child healthcare as well as family planning services. To keep patient volume high, The Family Clinics accept Jampersal, the government health insurance that covers deliveries for all Indonesian women. While most patients pay for services out-of-pocket, accepting government insurance for deliveries increases patient volume for all services. CHMI profiles 11 service delivery chains providing MNCH services.



• Mobile clinics: ProSmiling Terpadu, Indonesia. ProSmiling Terpadu serves women and their families in rural areas by hosting mobile health clinics in community locations like primary schools. In addition to providing primary care services and nutritional screening for children, ProSmiling clinics offer maternity care, including ultrasounds. CHMI profiles 16 programs that deliver MNCH services through mobile clinics. See page 17 for more on mobile care.

### 3. USING TECHNOLOGY TO **EDUCATE MOTHERS**

 Mobile phone-based support along the continuum of care: Kenya Integrated Mobile **MNCH Information Platform (KimMNCHip).** KimMNCHip sends SMS and voice messages to pregnant women who register and provide their due date. In the future, the project will also provide pregnant women with donor-financed, electronic vouchers to redeem in a collaborating clinic of their choice, and it will link primary healthcare workers to electronic medical records, checklists, and other job aids.

 Mobile phone-based advice for mothers: **Aponjon (MAMA Bangladesh).** Aponjon gives pregnant women, new mothers, and their families access to reliable and culturally relevant information about how to care for themselves and their babies. The USAID-supported mobile service delivers messages based on the subscriber's due date or the infant's age. It also gives advice on when to seek medical care, linking subscribers to health services. CHMI profiles 8 programs that use mobile phones to educate women about MNCH care.

### 4. USING TECHNOLOGY TO **IMPROVE THE PERFORMANCE OF FRONTLINE WORKERS**

• Clinical decision support software: **D-tree International, Global.** D-tree's mobile phone-based clinical decision support software helps clinic staff and community health workers accurately diagnose and treat patients. In addition

- to protocols that monitor the health of the mother and child during the antenatal period, D-tree is developing protocols to guide health workers through postnatal and neonatal care. Protocols help health workers identify complications and encourage women to deliver safely in facilities.
- Mobile phone-based information system: Maternal Health Reporter, India. Global Health Bridge developed this mobile phone-based health information system that enables community healthcare workers (CHWs) to provide uninterrupted care and follow up, even in rural areas, through SMS and recorded information. CHWs collect health information on their phones, receive reminders about patients, and store and retrieve clinical data instantaneously. CHMI profiles 48 programs that utilize mobile phones to deliver MNCH services.



Photo Left: A woman and her child at a ProSmiling Terpadu mobile health clinic. Photo Above: Global Health Bridge empowers health workers to deliver better healthcare at the community level.

HealthMarketInnovations.org **HIGHLIGHTS 2012** 

## BRIEF

# New Research on eHealth

CHMI currently profiles more than 300 programs utilizing information communication technology to improve their operations in 58 low- and middle-income countries (LMICs). A study analyzing approximately half of these programs—others have since been added to CHMI's database—was published in the May 2012 issue of the Bulletin of the World Health Organization.<sup>4</sup>

Not surprisingly, the study found that the use of such technology in health (eHealth) is becoming increasingly common, with a growing proportion of programs incorporating technologies into their models from the start. Of the programs CHMI profiles that launched between 1991 and 1995, only 8% are currently using information communication technologies in their work. Of the programs that launched between 2006 and 2011, 43% are utilizing eHealth to further their goals (see graph at right).

The study also found that the most common reason programs employ technology is to extend geographic access to healthcare, for example through telemedicine or health help lines. This is particularly promising given the shortage of health workers and the poor distribution of service providers in many countries. The study found that technology is used less frequently to enable financial transactions related to healthcare. Nevertheless, the growth in mobile

Percentage of Programs Currently Using Technology,
By Year of Launch

1991-1995

8% 92%

1996-2000

13% 87%

2001-2005

27% 73%

2006-2011

43% 57%

Percentage of all programs launched not currently using technology

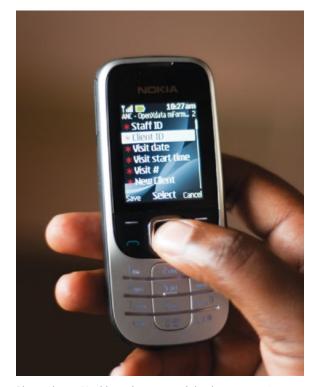


Photo Above: Health workers use mobile phones to register patients at Jacaranda Health.

payment technologies, such as M-PESA in East Africa, indicates that this may be a major area of opportunity for eHealth in the future.

For programs delivering services focused on HIV/AIDS, tuberculosis, and family planning and reproductive health, the main reason to utilize technology is to better reach patients in their daily lives, outside of traditional doctor visits. This may be because these types of services often require patients to interact frequently with lower level providers, who must ensure compliance with treatment protocols and provide education.

Meanwhile, for general primary and secondary care, which require health workers with strong diagnostic skills and specialized knowledge, technology is used to improve the quality of the doctor-patient interaction, either by enhancing the abilities of health workers or by connecting patients with doctors or specialists in other locations.

# While the study showed that eHealth has a variety of uses, a number of barriers remain to effectively using technology to improve healthcare:

- Program managers interviewed for the study cited problems with end user acceptance of technology; many health workers were not familiar with the new technology or lacked an incentive to adopt new tools. This barrier can be overcome with education about the benefits of eHealth, and training opportunities that help workers learn practical applications for technology.
- To ensure the continued growth of eHealth, programs should seek more diversified sources of revenue, such as from contracts with national and local governments, contributions from consumers at affordable rates, and support from investors to scale-up operations to new areas or for new services.
- In many low-and middle-income countries there is a lack of infrastructure, such as reliable electricity and internet access, to support eHealth. This barrier may be overcome over the next few years with the advent of new and cheaper technologies and investment from companies and governments.

While the growing use of technology in health programs promises to alleviate many common challenges in healthcare delivery, these remaining barriers will need to be addressed for technology solutions to be adopted by more programs, where appropriate.

### Technology-Enabled Programs by Primary Source of Funding

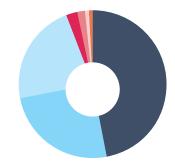






Photo Left: Riders for Health provides reliable transportation solutions so that health workers can reach rural communities on a regular basis, delivering commodities and providing services. Riders has reported promising results to CHMI.

# Tracking and Reporting Program Performance

### CHMI'S REPORTED RESULTS INITIATIVE IS A FIRST STEP

in identifying "what works"—the programs and practices that improve access, quality, and affordability of healthcare for the poor. Launched in June 2011, Reported Results is an effort to collect and publicize information about the performance of programs documented in the CHMI data set.

Reported results are clear, quantifiable, and self-reported measures of program performance catalogued across several key dimensions. CHMI collects results through regular program surveys. One year after the initial call for results, **reported results are available for close to 150 programs.** 

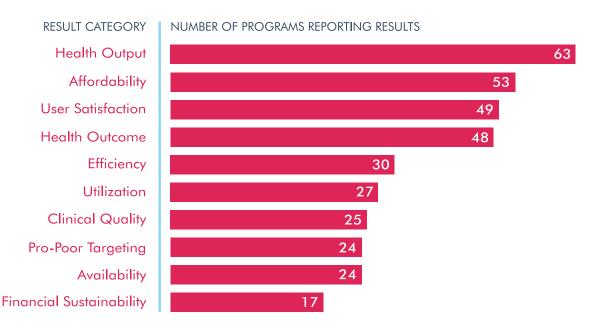
### **COLLECTING AND REPORTING RESULTS**

Programs reporting results to CHMI include a diverse set of organizations and initiatives that deliver and finance a broad range of health services. Results are reported in ten categories such as affordability of care, user satisfaction, efficiency, quality, and pro-poor targeting (see chart at right for results by category). What kind of results do programs typically report? Below are four examples of programs reporting quantitative results in several categories. Relying on internal data tracking mechanisms, these programs have submitted detailed information.

- World Health Partners, India, a clinical franchise that provides a range of primary care services in the Indian states of Bihar and Uttar Pradesh, states that they are lowering the cost of TB care. TB patient services range between Rs. 1,250 and Rs. 2,360 (US \$22.50-\$42.50), prices that they say are nearly one-third of the rate offered in other private facilities.
- In Bangladesh, Kollyani Primary Health Care Centres, a nonprofit clinic chain providing a range of primary care services, reports a doubling in the percentage of pregnant women receiving four antenatal care visits in the target area. During the same time period, the maternal mortality ratio fell from 8.2 to 6 per 1000 live births in the project area.
- MedicallHome offers hotline-based health services to over five million subscribers in Mexico. Staffed by qualified doctors around the clock, the hotline improves the efficiency of the healthcare system by resolving basic complaints over the phone and referring

- others to the appropriate level of care. The company estimates that 86% of patients perceive an emergency when they require only basic care, and only 14% of their callers typically require emergency attention. MedicallHome calculates that by referring patients to the appropriate level of care the company saves patients US \$19.7 million each year (7,878 cases with an estimated savings of US \$2,500 each).
- Karuna Trust, a public charitable trust managing 48 Primary Health Centres and seven mobile health clinics in India, reports improved child health outcomes for the target population. From 1996 to 2007, primary health centers saw a decrease in perinatal mortality by 40%, neonatal mortality by 60%, and under-5 mortality by 9%; overall infant mortality rates fell from 75.7% to 23.8%.

### Reported Results by Category\*



<sup>\*</sup>Programs may report results in more than one category.

### **Reported Results Categories and Definitions**

### **HEALTH ACCESS**

### **Affordability**

Quantitative evidence of the price of services and/or products in comparison to the average cost of accessing similar services in the local context, or as a proportion of income.

### **Availability**

Quantitative evidence of the ability of patients to access services and/or products. Measures can include: the number of facilities, providers, or hospital beds per segment of population; distance to nearest facility; staff absenteeism rates; and stock-out rates of medicines and/or medical supplies.

### **Pro-Poor Targeting**

The proportion of a program's clients who are poor or disadvantaged, including the criteria used to determine who is "poor."

### **OPERATIONS/DELIVERY**

#### **Clinical Quality**

Quantitative evidence of providing safe and effective care to the patient. Quality measures may include: adherence to established protocols, rates of appropriate diagnosis, and/or issuance of incorrect prescriptions, among others.

### **Efficiency**

Evidence of a change in operational processes leading to higher/lower cost-effectiveness, the operational cost or time to provide a product or service compared to its quality.

#### **User Satisfaction**

Qualitative or quantitative evidence of service quality as perceived by the patient, including the methodology used to collect this information.

#### **Financial Sustainability**

Quantitative evidence of ability to cover costs in the long-term, including a diversity of donor base or other secure revenue streams.

### **HEALTH STATUS**

### Utilization

Volume of clients served as a percentage of a defined target population.

### **Health Output**

Quantitative information about the number of health services/products provided and/or clients served/trained in a given time period.

### **Health Outcome**

Quantitative evidence of intermediate or long-term health outcome as demonstrated by changes in learning, actions, or health status of the target population. This includes modeled estimates of impact such as Couple Years Protection (CYPs) and Disability Adjusted Life Years (DALYs).

### **EXPANSION ACTIVITIES: PROMISING PRACTICES IN PERFORMANCE REPORTING**

In addition to collecting and reporting results, CHMI is exploring promising practices in performance reporting—and identifying what practices enable positive results. In partnership with the University of Toronto, CHMI is aiming to standardize performance reporting, starting by reviewing common indicators used by programs to measure their performance in each category. This analysis will inform the design of the CHMI database and efforts to systematically collect results, particularly around measures of efficiency, quality, and scale.

To understand what kind of practices yield positive results, CHMI also seeks to strengthen links between researchers and program managers. Eventually, these activities should lead to more systematic third-party evaluations, as well as the development of a comprehensive set of standardized health metrics.

For a list of all the programs with reported results, visit the **Reported Results page** on HealthMarketInnovations.org.



Photo Left: In Jakarta, the team behind Dengue Fever Insurance cards discuss a budding partnership with Bidan Delima, a network of accredited private midwives.

# Connecting People to Scale Innovations

CHMI MAKES CONNECTIONS BETWEEN PEOPLE WORKING TO IMPROVE HEALTH MARKETS. Over the past year, CHMI facilitated funding and operational partnerships that will enable organizations to deliver better services to more people.



### **CREATING PARTNERSHIPS**

CHMI works to connect people implementing, funding, and studying innovative programs to transfer good practices and encourage innovative programs to scale. CHMI uses three main approaches to facilitate partnerships between those striving to make health markets work better for the poor.

### **NETWORKING IN COUNTRIES**

Working across sixteen countries, CHMI's partner organizations regularly host targeted learning and networking events to foster connections among health innovators, donors, investors, researchers, and policy makers in their country and region. The events are designed to facilitate joint learning and create new partnerships that help promising programs grow and improve on their model. During the past year, CHMI partners hosted events ranging from competitions, to workshops, to high-level roundtables.

• Competitions to identify promising models. At a series of roundtables organized by the Philippine Institute for Development Studies (PIDS), leaders from government, industry, and academia ranked more than 30 innovative nonprofits, social enterprises, and public-private partnerships on criteria such as their ability to serve the poor and sustain their operations. Four winners of the first competition were invited to a high-profile national maternal health summit, where they pitched their programs to governors and business leaders. The Institute of Health Policy, Management & Research (IHPMR) hosted a similar competition in East Africa, recognizing outstanding health programs in that region and providing a platform for interactions.



Photo Above: Discussion at a roundtable in Manila.

Photo Top: CHMI's partner in East Africa convened a group of health innovators, donors, researchers, and other stakeholders in Nairobi, Kenya.

• Roundtables to share promising approaches. In the past year, CHMI partners have hosted roundtables convening health innovators in Kenya, Indonesia, Peru, Rwanda, and Tanzania. In Peru, Freedom From Hunger convened representatives of Microfinance Institutions (MFIs) from the region to discuss promising approaches in offering health products and services to their communities. At the meetings, participants exchanged information about promising practices and discussed opportunities



Photo Above: Discussing MFIs delivering health services in the Andean region.

### MAKING ONLINE CONNECTIONS

to address their common challenges.

More than 100,000 unique visitors accessed CHMI's website during the past year. The majority of web visitors arrived from low- and middle-income countries, with India, the Philippines, Kenya, Indonesia, Bangladesh, and Uganda in the top 10 countries for visitor origin.

Many of CHMI's 800 registered visitors used the website to identify programs of interest and contact them directly through the site. During the past year, over 300 messages were sent through the CHMI site. This includes at least 100 messages from program managers to peer innovators looking to identify potential partners, more than 50 messages from researchers contacting programs to learn more, and approximately 35 messages from funders looking to identify programs for support.

More than **800 people** have registered on CHMI and they have sent over **300 messages** to programs through the database in the past year.

WORKING WITH GLOBAL COLLABORATORS

CHMI works with a number of global collaborators with the common mission of facilitating learning and scale-up of promising market-based health programs. CHMI works with a wide range of collaborators, ranging from organizations that help programs identify partners and share lessons learned, to academic institutions that study and evaluate promising approaches, to organizations that help programs get funding through grants, investments, or micro-donations from global donation platforms.

Often these global collaborators will search for and contact programs through the CHMI database. In other cases, CHMI will highlight promising programs from the database to funders and other prospective partners.

### **CHMI SUCCESS STORIES** Across the Globe





# India 136 **United States** 109

## Kenya 99

South Africa 36 Rwanda 21 Uganda 17 Indonesia 16 Phillippines 16
Bangladesh 15 Pakistan 11



At a roundtable in Jakarta hosted by MercyCorps, a midwives accreditation network called Bidan Delima began a partnership with ACA Insurance, a company selling Dengue Fever Insurance. Midwives are now selling the insurance to families they serve, believing the product gives them an advantage **over competitors**—and a reason for private midwives to become accredited to deliver quality services.

# 2 INDIA, INDONESIA & TANZANIA Working with Global Collaborators

Four of seven programs CHMI referred to the Global Giving Open Challenge won a permanent place on the fundraising site. Participants had to raise at least \$4000 through at least 50 individual donors to earn their places. Since CHMI referred Global Health Bridge—a program that equips community health workers with mobile technology tools to improve quality and efficiency—Global Health Bridge has raised thousands of dollars from more than 280 donors.

### 3 PHILIPPINES **Networking in Countries**

After winning a competition hosted by the Philippine Institute for Development Studies (PIDS), Wireless Access for Health—a system that organizes electronic medical records, reduces patient wait time, and provides real-time data that can aid decision-making at the local level—was invited to attend a high-profile national maternal health summit. At the summit, Wireless Access for Health was "bid" on by two governors to work in their provinces.

### 4 EAST AFRICA & SOUTH ASIA

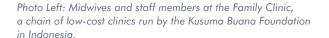
### **Making Online Connections**

Investors based in emerging economies—such as Aureos Capital's Africa Health Fund and Impact Investment Partners—have used CHMI to discover and initiate talks with new programs of interest. In addition, investment intermediaries such as Total Impact Advisors use CHMI to highlight prospects to global investors.

### 5 GLOBAL Working with Global Collaborators

Nineteen innovators were selected for the International Partnership for Innovative Healthcare Delivery (IPIHD), conceived by the World Economic Forum, Duke, and McKinsey, and housed at Duke Medicine. Four of the innovators selected to join the Network were discovered through CHMI: Operation ASHA (India, Cambodia), APROFE (Ecuador), LV Prasad (India), and Changamka (Kenya). Participants get access to know-how through private forums, including annual events with investors, mentorship from global **industry executives**, and insight into working within regulatory structures.

HealthMarketInnovations.org **HIGHLIGHTS 2012** 





# How CHMI Can Help with Your Work:

- LEARN ABOUT HEALTH MARKET INNOVATIONS.
   Find programs and policies that harness private providers and improve the quality, affordability, and accessibility of healthcare for the poor.
- 2. FIND OUT WHAT WORKS. Browse CHMI program profiles, case studies, and reported results—statements of impact in areas such as quality, cost, and sustainability.
- **3. CONNECT WITH INNOVATORS**. Explore the CHMI database to learn about innovative health programs. Then register with CHMI to send them a message and create new partnerships.
- 4. PROMOTE A HEALTH MARKET INNOVATION. Programs that serve the poor and improve the health market are eligible to be profiled by CHMI. Profiled programs can get global visibility, information about promising practices, and connections to potential partners.

Photo Right: Children near a BRAC Manoshi satellite clinic in Dhaka. With ClickDiagnostics, BRAC is implementing a mobile phone-based solution for data collection and screening for maternal, neonatal and child health.

# Resources

Over the past year, collaborators have used data from CHMI to shed light on innovative programs and global trends. Below is a selection of the resources they have created. To view these and other materials, visit HealthMarketInnovations.org/partnerresources.

### **Program Case Studies**

CHMI in-country partners have produced more than 60 case studies from 11 countries. Case studies range from a look into the Pro Mujer model in Bolivia, which provides primary health services alongside microloans to women, to a comparison of two different Indonesian programs that use modern technology-based teaching tools to enhance the education of health workers.

## Fostering Healthy Businesses: Delivering Innovations in Maternal and Child Health

Launched at the 2012 United Nations General Assembly, this report was issued by the Every Woman, Every Child Innovation Working Group (IWG). The report, which frequently cites CHMI program profiles, was prepared by the IWG's Task Force on Sustainable Business Models.

### Improving the Health of Mother and Child: Solutions from India

ACCESS Health International identified 16 providers of maternal and child healthcare services in India and documented their approach, impact, and challenges in a comprehensive compendium.

## Andes Microfinance and Health Landscape Study

To increase knowledge of the field of health and microfinance in the Andean region, Freedom from Hunger conducted a survey and landscape analysis of microfinance institutions that are providing their members with health services.

### **CHMI EVALUATION**

In March 2012, the Bill & Melinda Gates Foundation commissioned a quasi-baseline survey of CHMI with program managers, donors, investors, researchers, policy makers, and other key actors in health systems. Conducted by InterMedia, the evaluation aimed to set baseline performance data for CHMI. InterMedia conducted an online survey of nearly 600 people and in-depth interviews with 30 people to assess CHMI's use, usefulness, impact, and areas for future growth. The results provide insight into ways CHMI is working, and how it can expand its offerings to provide information and connections for people who create change in health markets.

The evaluation showed that awareness of CHMI is high. Seventy-four percent of those who took the survey said they had heard about CHMI. Half of those aware of CHMI had used its information products, like the website, or had participated in CHMI activities. A majority of users (95%) had a positive experience participating in CHMI activities or using CHMI products. More than half of those who had used CHMI products agreed that CHMI contributed to improved health status among the poor—speaking mostly to the potential of CHMI to achieve this impact in the future.

The feedback from the survey is being used to improve the way CHMI identifies and works to scale up health market innovations.



### PROGRAMS MENTIONED IN THIS REPORT

Programs providing comprehensive, up-to-date information and reporting results are more likely to be featured in CHMI's Highlights reports.

Anne Spoerry Sailing Doctors, 18 Aponion, 23 APROFE, 33 Arogya Rath, 18 Bidan Delima, 31, 35 Bike4Care, 8 BRAC Manoshi, 38 BulshoKaab Pharmacies Network, 8 Centro Ginecologico Integral (CEGIN), 20 Changamka Microhealth Ltd., 22, 35 Charis International Medical Centre, 20 Community Health Africa Trust (CHAT), 17-18 D-tree International, 23 Daktari, 15, 25, 8 Deen Dayal Chalit Aspatal Yojana, 18 Dengue Fever Insurance, 31, 35 E Health Point, 15 eQuality Health Bwindi, 9 Farmacias Similares, 16 Family Medical Health Centres, 15 Global Health Bridge, 23, 35 GVK Emergency Management and Research Institute (EMRI), 39 Health by Motorbike, 18 Hygeia Community Health Plan, 9 IGE Medical Systems, 9 Islamia Eye Hospital, 18 Jacaranda Health, 7, 9, 19, 25 Karuna Trust, 28 Kenya Integrated Mobile MNCH

Information Platform (KimMNCHip), 22

Kollyani Primary Health Care Centres, 28 Kolping Bolivia, 18 Kriti Arogyam Kendram, 16 LV Prasad Eye Institute, 35 Mailafiya, 18 MedicallHome, 28 MedPlus, 9 MicroEnsure, 9 mothers2mothers, 19 Navio Abaré, 18 NICE Foundation, 13, 20 Operation ASHA, 9, 35 Penda Health, 14 Por Ti, Familia, 15 Primedic, 15 ProFam Cameroon, 9 Pro Mujer, 18, 36 Prosmiling Terpadu, 22 Riders for Health, 27 Ross Clinics, 8 Sampoorna Suraksha, 9 Sehat First, 15 Smiling Sun Franchise Program, 16 Swasth India, 16 The Family Clinics, Kusuma Buana Foundation, 22, 37 The Generics Pharmacy, 16 VillageReach, 9 Viva Sehat, 16 Voucher for Reproductive Health Services Project, 22 Wireless Access for Health, 35 World Health Partners,

9, 15-16, 28

# CHMI GLOBAL COLLABORATORS

- Abt Associates
- Ashoka Changemakers
- Boston University
- DKT International
- Future Health Systems Consortium
- GlobalGiving
- Global Impact Investing Network (GIIN)
- Information Society Innovation Fund
- International Partnership for Innovative Healthcare Delivery (IPIHD)
- Johns Hopkins Bloomberg School of Public Health
- Marie Stopes International
- Microinsurance Network (MiN)
- Nossal Institute for Global Health
- RH Vouchers/ Population Council - Nairobi
- PharmAccess Foundation
- Population Services International (PSI)
- Private Sector Healthcare Initiative, UCSF
- Skoll Foundation
- USAID/SHOPS Project
- University of Toronto
- World Bank/IFC



Photo Above: Technicians train at GVK Emergency Management and Resource Institute (EMRI) in Hyderabad, India.

### **END NOTES & PHOTO CREDITS**

- Results for Development Institute makes every effort to ensure that the content of the CHMI Website is accurate and up-to-date, but does not offer any warranties as to the reliability, accuracy or completeness of the information. For more information please see http://healthmarketinnovations.org/about/ frequently-asked-questions/terms-use
- 2. This may be due to the presence of CHMI partners actively profiling health markets in these country. CHMI partners have operated in Bangladesh, Bolivia, Brazil, Cambodia, Ecuador, India, Indonesia, Kenya, Pakistan, Peru, the Philippines Rwanda, South Africa, Tanzania, Uganda and Vietnam.
- 3. ACCESS Health International's comparative case study of mobile medical units operated through public-private partnerships in Bihar and Madhya Pradesh was developed through interviews with public and private partners, field visits, and secondary research. Read the study at HealthMarketInnovations.org/partnerresources.
- Lewis T., Synowiec C., Lagomarsino G., Schweitzer J., E-Health in low- and middle-income countries: findings from the Center for Health Market Innovations. Bull. W.H.O. 2012 May; 90 (5): 332-40.

Cover photo: Lindsay Mgbor/DFID

- Page 4: Sam French / Development Pictures, courtesy of DFID
- Page 6: Allan Gichigi for CHMI
- Page 8: Photo courtesy of CooP-Africa Bike4Care
- Page 9: Top, Photo courtesy of Hygeia Community Health Plan; Bottom, André J.P. Fanthome
- Page 12: André J.P. Fanthome for CHMI
- Page 14: Photo by Jonathan Kalan
- Page 16: Top left, Nahiyan Kabir for CHMI; Left, Ida Pantig for CHMI; Bottom of the page, courtesy of Swasth India.
- Page 17: Photo courtesy of Community Health Africa Trust (CHAT)
- Page 18: Photo courtesy of Sailing Doctors
- Page 19: Top, Allan Gichigi for CHMI; Bottom, Photo by Andrew Topham, courtesy of mothers2mothers.
- Page 20: André J.P. Fanthome for CHMI
- Page 22: Alex Robinson for CHMI
- Page 23: Courtesy of Global Health Bridge
- Page 25: Allan Gichigi for CHMI
- Page 26: Photo courtesy of Riders for Health/ Tom Oldham
- Page 30: Oscar Siagian for CHMI
- Page 32: Top, Alex Kamweru for CHMI; Bottom, courtesy of PIDS
- Page 33: Maria Belenky for CHMI
- Page 36: Alex Robinson for CHMI
- Page 39: Nahiyan Kabir for CHMI
- Page 41: André J.P. Fanthome for CHMI





