

An Excerpt From

Pharmacy on a Bicycle
Innovative Solutions for Global Health and Poverty

by Eric G. Bing & Marc J. Epstein
Published by Berrett-Koehler Publishers

**INNOVATIVE
SOLUTIONS**
for **GLOBAL HEALTH**
and **POVERTY**



Pharmacy on a Bicycle

ERIC G. BING
and **MARC J. EPSTEIN**

More Praise for *Pharmacy on a Bicycle*

“So many of the solutions to the world’s most tragic health-care problems are simple and inexpensive—if we can get them to the people who need them most. Bing and Epstein show how that can be done by unleashing the entrepreneurial spirit of the world’s poor.”

—**Sir Fazle Hasan Abed, KCMG, founder and Chairperson, BRAC**

“Bing and Epstein show how people from around the world are creating successful innovative, ‘outside the box’ solutions to take health services the last mile. Stakeholders across the public, private, and nonprofit sectors will find the lessons shared in this book highly useful.”

—**Dr. Agnes Binagwaho, Minister of Health, Republic of Rwanda**

“Bing and Epstein tackle the most important problem vexing global development: how do we spread what we know works to places and people who need it? This book offers powerful frameworks and examples that spark practical insights into what it will take to truly solve many of our most challenging problems.”

—**Jeff Bradach, cofounder and Managing Partner, The Bridgespan Group**

“Drs. Bing and Epstein remind us that many of the deaths and much of the disease among mothers and children can be halted through simple and low-cost solutions. They combine their medical knowledge with cutting-edge business school methodologies to identify and summarize the opportunity for innovative solutions to combat disease and poverty. It’s a must-read for people who care deeply about the world’s poorest people.”

—**Peter Hotez, MD, PhD, Dean, National School of Tropical Medicine, Baylor College of Medicine, and President, Sabin Vaccine Institute**

“If you ever wondered why easily preventable and curable diseases cripple human potential across the developing world, this book has answers. Bing and Epstein are on a mission to make sure that access to basic health care is never a barrier for anyone to reach his or her full potential. This book will leave you with the hope that seemingly insurmountable development challenges can be transformed into solvable problems when creative partnerships are formed across sectors and mutual accountability is established.”

—**Ambassador Sally Cowal, Senior Vice President and Chief Liaison Officer, PSI**

“*Pharmacy on a Bicycle* is about saving lives—simply, effectively, and inexpensively. Through their focus on innovative and entrepreneurial solutions, Bing and Epstein show how to take health care the last mile—to a place that’s accessible, in a way that’s acceptable, and at a cost that’s affordable. Chock full of successful examples of ways this is already happening, it will leave you inspired and filled with hope!”

—**Rich Stearns, President, World Vision USA**

“While so much of the focus on health is a debate about the science, *Pharmacy on a Bicycle* is a timely reminder that simple, cost-effective solutions exist and can be scaled to provide access to quality care. A practical guide to successful program delivery—showing how millions of lives can be saved globally.”

—**Paul Bernstein, CEO, Pershing Square Foundation**

“Bing and Epstein have clearly and powerfully described the global health challenge of the coming decade. The treatments to save millions of lives already exist, but governments, companies, and NGOs must embrace a new paradigm to convert medical discoveries into real-world solutions. Bing and Epstein’s elegant framework for action provides clear guidance and a multitude of compelling examples to demonstrate that the power to save lives is already in our hands.”

—**Mark Kramer, Senior Fellow, Harvard University, and founder and Managing Director, FSG**

“This is the first book I know of that goes beyond inspiring stories of social entrepreneurs to provide a comprehensive and practical guide to the entrepreneurial process itself. Every policy maker and aspiring social entrepreneur will benefit from the practical steps to successful entrepreneurship articulated in this book.”

—**Kirk O. Hanson, University Professor and Executive Director, Markkula Center for Applied Ethics, Santa Clara University**

“We firmly believe that the world can dissociate health care from affluence. Change in policies is all we need to turn this dream into reality. *Pharmacy on a Bicycle* has many valuable propositions to make it happen.”

—**Dr. Devi Shetty, Chairman, Narayana Hrudayalaya Group of Hospitals, Bangalore, India**

“Bing and Epstein have written an extremely readable and absorbing book that will be essential for any organization interested in empowering underserved populations to improve their health and well-being. Bravo!”

—**Stanley S. Litow, Vice President of Corporate Citizenship and Corporate Affairs, IBM, and President, IBM International Foundation**

Pharmacy on a Bicycle

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Innovative Solutions for Global Health and Poverty

ERIC G. BING
and
MARC J. EPSTEIN



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Pharmacy on a Bicycle

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This book is dedicated to the many courageous patients and entrepreneurs in developing countries who have helped us see the possibilities that lie within everyone, regardless of external circumstances. They have inspired us and created impacts on our lives. It is our hope that through *Pharmacy on a Bicycle* we may do the same for others.

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Preface

Pharmacy on a Bicycle highlights the impact that can be created in global health when diverse groups of innovative and entrepreneurial people come together to achieve a common goal. This book was created in the same way, with different people with diverse perspectives from various parts of the world coming together for a shared and higher purpose.

As authors, we have very different backgrounds, education, and experience—a perfect combination to engage in this project. Marc has been a business school professor for most of his career with extensive work in both the for-profit and not-for-profit sectors. He has written books on innovation, governance, and accountability along with corporate sustainability and social, environmental, and economic impacts. He teaches a class called “Commercializing Technology in Developing Countries” that focuses on health. He takes his students to Rwanda or Liberia each year to find commercial solutions to the health and education challenges of the global poor.

Eric is a physician with an MBA who combines his training in health and business to help solve global health challenges. He leads global health at the George W. Bush Institute, a presiden-

tial center designed to move ideas into action, and is a professor of global health at Southern Methodist University. He has taught health care management, consulted for health ministries, and created and directed nongovernmental organizations and research centers in Africa, Latin America, and the United States.

We came together combining our joint competencies, education, and experience to try to alleviate suffering and poverty. Although our skills are quite different, we both recognized that the solutions to global health problems are less about the need for new scientific discoveries and more about logistics, dissemination, and implementation of *what we already know*. We can cure many of these diseases, yet people throughout the world still are dying.

Though *Pharmacy on a Bicycle* represents our own views and we are solely responsible for its content, we are indebted to many people who have worked hard to help the higher purpose of this book to save lives. We would especially like to thank our research and editing team, including our research and production manager Suraj Patel (George W. Bush Institute) and editor Troy Camplin, as well as research assistants Amit Suneja and Sneha Rao (Rice University), Tara Stevenson, Carina Heckert and Jessica Lott (Southern Methodist University), and Bryan Erickson and Devi Nair (Harvard University). In addition, we would like to thank health policy consultant Sharif Sawires for his scientific contributions and valuable insights. The hard work and dedication of this team cannot be overstated.

We are also incredibly grateful to many colleagues and friends for conversations on multiple continents over the years in which we've discussed and debated some of the ideas presented in this book, including Ahmed Abajobir, Jan Agosti, Ricardo Araya, Jerry Bender, Joan Benson, Trista Bingham, Deborah Bix, Kerri Briggs, Barbara P. Bush, Lisa Carty, David Chard, Karen G. Cheng, Thomas J. Coates, Pamela Collins, Cynthia Davis, Mark Dybul, Freddy Ford, Christopher H. Fox, Catherine Freeman, Gus Gill, Mike Grillo, Charles Hilliard, Jon Huggett, Brooke Jenkins, Jose

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We are appreciative of the many students, staff, faculty, and administration of Southern Methodist University, Rice University, Charles Drew University of Medicine and Science, and the George W. Bush Institute who have supported our efforts over the years. And we sincerely appreciate the Starkey Hearing Foundation, Bill and Melinda Gates Foundation, National Breast Cancer Foundation, Sharad Lakhanpal, and Gregg Mamikunian, as well as the Bush Institute development team, for their generous support of global health at the Bush Institute, which allowed Eric the time to research and write this book; and Rice University, for support of Marc's research and teaching activities in social entrepreneurship in developing countries.

Eric would particularly like to thank President George W. Bush and Mrs. Laura Bush for their leadership in global health and their encouragement and support of his global health efforts; and Mark Langdale and James K. Glassman for their leadership at the George W. Bush Presidential Center and Institute and support of his efforts as well.

We are grateful to Neal Maillet and the terrific team at Berrett-Koehler Publishers, whose efforts greatly improved this book.

And finally, we are particularly grateful to our families, who, whether in person or in spirit, have unconditionally loved, supported, and inspired us. In particular, we thank Marc's family: Joanne

Epstein, the Firestone family (Simcha, Debbie, Emily, Noah, and Maya), and the Zivley family (Scott, Judy, Amanda, and Katie). As well as Eric's family: Randy Kender, Bryan Erickson, Henry, Lorraine, Diana, Donald and Lorrie Bing, and Cora Bailey. This book and our lives are stronger and more complete because of them.

Eric G. Bing
Dallas, Texas

Marc J. Epstein
Houston, Texas
February 2013

Introduction

Why Pharmacy on a Bicycle

Dawa paced in front of Pemba's door, trying to hide his concern.¹ He had run out of his medication, and Pemba had been kind enough to share his. Both men had been told to never stop taking their medications because HIV was a virus that could quickly develop resistance, and then the drugs would no longer work. Now Pemba was beginning to run out of his supply as well.

Dawa and Pemba were running low on medicine because a *bandh*, or strike, was making it impossible to get to the pharmacy. In Nepal, during a *bandh*, it was wise to avoid going out in a car, because if you did, you could get your tires slashed, your windows broken, or your vehicle set on fire. The *bandh* was in its second week, and the men had nowhere to turn once their medications ran out.

Crises stimulate action. In dire straits, we become innovative and entrepreneurial. Which is what happened in this case. The Saath-Saath Project, a local HIV program, partnered with a hospital and some community health workers to create a pharmacy-on-a-bicycle brigade. If the patients couldn't go to the pharmacy, then the pharmacy would go to them.

It was a risky proposition. Would the *bandh* enforcers respect

the riders' mission? Nobody knew. But lives were at stake. That is why Suraj, a community health worker and person living with HIV himself, was one of the first to volunteer. Suraj set out early in the morning after loading his satchel with medications. By mid-day his pharmacy on a bicycle reached Dawa and Pemba—right before their pills ran out. Because of quick thinking, a partnership, and a bicycle, Dawa and Pemba didn't miss a single dose. This simple solution may have saved their lives.

If all we had to worry about was the occasional strike, most of our problems in global health would be solved. But a *bandh* that lasted thirty-two days only exacerbated Nepal's problems of deep poverty and a population living in hard-to-reach areas. Such problems are found in many developing countries, and regardless of whether they are caused by instability, conflict, geography or cost, they make it difficult to bridge the "final mile" in global health.

Over the last few decades the authors have examined health care in remote rural and dense urban settings across a variety of low- and middle-income countries in Africa, Asia, and Latin America. Some countries were stable, others were in civil war. We have spoken with presidents and health ministers, tribal leaders and CEOs, and patients and their families. We have worked alongside dedicated and compassionate clinicians—doctors, nurses, community workers, and traditional healers—and we have consulted with governments, businesses, NGOs, and donors. We have examined health care from a variety of perspectives, and we always reach the same conclusion:

Millions are dying of diseases we can easily and inexpensively prevent, diagnose, and treat.

Pharmacy on a Bicycle is a bold yet practical approach to alleviating problems in global health and poverty. Fortunately, we are not starting from scratch. There are many examples of successful programs that are already saving lives. We need to leverage these innovative and entrepreneurial solutions and create even more

to save lives by increasing access, use, and quality of care, while reducing costs.

In *Pharmacy on a Bicycle*, we show how we can save lives while saving money through a seven-point approach we call *IMPACTS* (Figure 1). Here are the key components:

Figure 1 The *IMPACTS* Approach

- I** Stimulating *Innovation and Entrepreneurship* to develop new solutions and reach populations in need in sustainable ways.
 - M** *Maximizing Efficiency and Effectiveness* to deliver quality products and services at reduced costs.
 - P** *Partner Coordination* to stimulate cross-sector collaboration and coordinate complementary roles.
 - A** *Accountability* that encompasses defining goals and targets and monitoring success.
 - C** *Creating Demand* for products and services.
 - T** *Task Shifting* to lower-level providers and to new settings to reach and serve more people at lower cost.
 - S** *Scaling* up programs to save even more lives.
-

Implementing the *IMPACTS* approach will help bring care to those who need it most.

How to Use This Book

This is a book about taking health care the last mile—sometimes quite literally—to a place that’s accessible, in a way that’s acceptable, and at a cost that’s affordable.

In other words, this book is about *solutions*.

There are people and organizations already doing many things that work. Now we need to scale those models to reach the masses of people who deserve quality health care. What works may come from governments, NGOs, businesses, or donors. All are part of the solution to the problems we face, and all have a role to play.

- **Government.** Governments can help create an environment, supported by sound policies, regulations, and resources, where basic, high-quality health care is expected. Ministries of health are the backbones of strong national health systems upon which services are built. Local and national government leadership and commitment are essential for success and financial sustainability.
- **Nongovernmental Organizations.** NGOs, including faith-based organizations, have long provided essential health care, social services, and advocacy in developing countries throughout the world. They are critical to providing quality care in diverse and hard-to-reach communities.
- **Businesses.** For-profit businesses offer not just resources but models of efficiency, innovation, entrepreneurship, and distribution: ways to create demand and reduce costs. In addition, local businesses, along with microenterprises, are often created and based within communities, and owners understand the local culture and needs. Microenterprises in health care, which include small clinics and pharmacies, can help distribute services and products to those in need. So too can traditional healers and traditional birth attendants, particularly in rural areas. For a variety of reasons, these smaller providers and traditional sectors may not be integrated into formal health care systems. But when given

appropriate training, support, and oversight, they can help us complete the final mile.

- **Donors.** International agencies, foreign governments, and foundations provide essential financial and technical support to country-led health programs. Such donors are essential to enable governments and local implementers to provide needed services.

Innovative partnerships that bring these sectors together can help save more lives. In addition, the approaches used by these sectors overlap and complement each other as they grow and evolve. For example:

- Effective governments in many developing countries are now adopting sound internal business strategies and practices to manage public resources to deliver health services.
- Many NGOs in low- and middle-income countries operate like businesses to ensure that their resources are effectively used and have real impact. Some NGOs are even creating for-profit spinoffs to enhance their chances of creating financially sustainable programs.
- Businesses, large and small, seek not only to be financially profitable, but also to create social good in the countries where they work. This approach goes beyond corporate social responsibility—it is part of their business model.
- Donors are increasingly requiring recipients to reduce costs, demonstrate impact, and achieve greater financial sustainability once support ends.

These new, blended approaches are also helping to change the perceptions of target populations from beneficiaries to customers. This change in orientation recognizes that a patient is a customer and that the customer is in charge. All people, regardless of income, are customers of health products and services. When customers perceive little value in or encounter barriers to using a

health product or service, it is likely that they won't use it—even if it's free and potentially lifesaving. Our job, therefore, is to find innovative and entrepreneurial ways to motivate customers to use health products and services that can save their lives.

Pharmacy on a Bicycle is filled with practical examples of innovative and entrepreneurial solutions to health care delivery in a wide variety of settings in developing countries. While this book focuses on low- and middle-income countries, many elements are readily applicable to populations in higher-income countries as well.² Innovation is much more than discovery; entrepreneurship is much more than maximizing profits. The innovator creates solutions. And the entrepreneur finds efficient, effective, and economical ways to get solutions to customers.

We encourage those readers who develop or manage health programs to read *Pharmacy on a Bicycle* with an entrepreneurial lens and find ways you and others can take some of these ideas to the next level to deliver health services. Regardless of your specialty, population, or setting, you may see a solution to a problem you're working on, even if it was developed to combat a different disease, for a different population, under different circumstances, or in a different country.

If you see a model that might work for you, *try it*. If you see a model that, with some modifications, might serve your needs, then *change it*. If you see several models you think could work well together, then *combine them*. And as with any other model, new or old, monitor it regularly and evaluate it periodically to ensure that it's producing the intended impact.

Regardless of your reason for reading this book, in presenting the *IMPACTS* approach and spotlighting successful real-world applications of its core points, we hope to activate your inner innovator and entrepreneur so that you can see existing solutions or create new solutions to the challenges you face.

We have divided the book into three sections:

Part 1: The Prescription includes four chapters that deal with the basics—the essential ingredients, the model, and the core elements of our approach.

- **Chapter 1** provides an overview of the issues, the *IMPACTS* approach, and the model that describes how to save millions of lives and billions of dollars in global health care.
- **Chapter 2** describes the roles innovation and entrepreneurship play in improving global health.
- **Chapter 3** describes how task shifting, maximizing efficiency and effectiveness, creating demand, and focusing on accountability can better deliver health services and products and improve outcomes.
- **Chapter 4** provides an overview of how to scale up interventions and the importance of coordinating the roles of partners to reach more people.

Part 2: *IMPACTS* in Motion provides three chapters of real-world applications of each point of the *IMPACTS* approach and how they are being used with different diseases and in different settings.

- **Chapter 5** focuses on applications in maternal and child health issues.
- **Chapter 6** reviews applications in some infectious diseases.
- **Chapter 7** discusses issues and applications to some non-communicable diseases.

Part 3: Moving Forward includes two chapters that show you how to move to the next steps in order to better deliver quality care to those who need it most.

- **Chapter 8** discusses the importance of priorities, planning, and monitoring progress to save lives.
- **Chapter 9** explains how organizations can influence their settings and environments to improve impact and provides recommendations for future steps.

Each chapter in Parts 1 and 2 is concluded by “Food for Thought” questions designed to help you discover ways to apply the concepts to your own setting. At the end of the book, you will find information on www.pharmacyonabicycle.com, a website where you can find and share additional innovative and entrepreneurial solutions for improving global health and alleviating poverty.

The organization of *Pharmacy on a Bicycle* will make it easy to find the important foundational components (Part 1: The Prescription), real-world applications (Part 2: *IMPACTS* in Motion), and recommendations for planning and next steps (Part 3: Moving Forward). How you choose to approach and combine them is up to you.

Now is the time. We can save lives by bringing low-cost, quality care to those who need it most, regardless of whether it is delivered by a community health worker on foot, by a doctor using telemedicine, by a nurse on a mobile phone, or by a pharmacy on a bicycle.

Every great dream begins with a dreamer. Always remember, you have within you the strength, the patience, and the passion to reach for the stars to change the world.

Harriet Tubman
Courageous Humanitarian,
Abolitionist (1820–1913)

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Part 1
The Prescription

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Saving Millions

Every four minutes over fifty children under the age of five die. That's almost 7 million children per year. And nearly one-third of these children die within the first month of life. In the same four minutes, two mothers lose their lives while trying to give birth to a child. And *nearly every time* these tragedies occur, they are happening in a developing country.¹

A Challenge We Can Solve

Pharmacy on a Bicycle is about innovative and entrepreneurial solutions to these global health calamities and about how all organizations—governments, NGOs, businesses, and donors—can use the solutions to maximum effect.

Nearly 7 million children could be saved by simple things such as providing a mother with prenatal care and encouraging her to give her baby breast milk and clean water, get postnatal care, and receive appropriate vaccinations.² A small dose of daily aspirin might reduce risk of death from heart attack or stroke and simultaneously cut the risk for some cancers.³

Deaths from cervical cancer could be cut with a simple drop of vinegar applied to the cervix to help a clinician identify potentially

cancerous cells,⁴ kids could learn better with inexpensive glasses,⁵ and depression could be relieved, or a suicide prevented, by talking with a trained lay counselor.⁶

If It's So Simple, Why Aren't We Doing It?

So why are people in developing countries continuing to die from diseases we rarely see in developed countries? Most poor outcomes are caused not by lack of effective medicines or medical know-how. The ability to prevent and treat many of these diseases inexpensively has been available for a very long time. But getting the right remedies to the right people in the locations where they are needed, in a way they will use them, and at a cost they can afford is continually a challenge.

This is not a scientific problem. It's a *business challenge*.

Solving the Puzzle

In order to save lives in global health, we need to increase health care access, use, and quality of services—all while reducing costs. These are all critical pieces of the puzzle (Figure 2). Fortunately, the tremendous progress made in these areas during the past two decades gives us reason to be hopeful.

Over the past twenty years, deaths for pregnant mothers and for children under five years old have plummeted by nearly 30 percent and 40 percent, respectively.⁷ More than 8 million people with HIV are now receiving life-sustaining antiretroviral drugs (ARVs), a twentyfold increase from just a decade ago.⁸

This progress is largely a result of business-oriented approaches to providing and using foreign health assistance. These approaches have focused on country ownership of

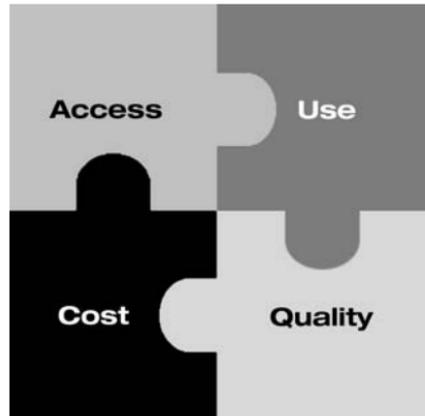


Figure 2 Solving the Health Care Puzzle

problems and solutions, clear objectives, specific targets, a framework for accountability, and a commitment to measurable results. These successful efforts have been supported by better coordination among donors, resulting in a more than fourfold increase in health-related development assistance.

The President's Emergency Program for AIDS Relief (PEPFAR), created by President George W. Bush in 2003 and continued by President Barack Obama, has committed \$45 billion to HIV prevention, treatment, and care since it began. PEPFAR is complemented by the Global Fund to Fight AIDS, Tuberculosis, and Malaria. The Global Fund is a multinational effort supported by a large number of countries and private donors, which have provided \$32 billion to support health care programs in developing countries. These institutions have helped jump-start global efforts to combat HIV/AIDS. Similar initiatives have helped curtail malaria, reduce maternal and child deaths, and build stronger health systems.⁹

Through strategic alliances, committed partners have not only provided financial resources, but have leveraged their networks and complementary business, technological, and scientific strengths to solve global health problems. Partners have come from a variety of sectors, including governments, international development organizations, foundations, and universities, and they have worked with local organizations and leaders in the communities that are afflicted.

These local partners intimately understand the subtle but critical factors that can mean success or failure of a program or business. Working together they have helped improve access to health services for some populations and conditions, increase the quality of care, and reduce the costs of providing these services.

This progress, coupled with additional technological and business model innovations in global health, helps to make saving lives now even more feasible.

Innovations in Global Health

Mobile Technology

Recent developments in technology, especially mobile devices, can make distributing solutions for global health challenges cheap and easy. It is estimated that in many low-income countries, up to 90 percent of the population has access to a mobile phone.¹⁰ The health care potential of mobile phones is huge, and will become even greater over time.

Effectively using mobile solutions can bring health services to people who need them. Mobile phones are now being used for patient education and awareness, treatment compliance, health care worker training, data collection, disease and epidemic outbreak tracking, and diagnostic and treatment support. These solutions can help increase access, use, and quality, while reducing costs. As a result, mobile technology has the potential to create leapfrog advances in health around the world.

Rapid Diagnostic Tests and Simplified Treatment

New technologies are emerging that allow easier, more effective prevention, diagnosis, and treatment. Rapid diagnostic tests for diseases such as malaria and HIV can be performed in the field, reducing the need for and burden on laboratories and technicians.

Many diagnostic tests require expensive equipment that are typically found only in larger, centralized laboratories, clinics, or hospitals. For most tests, the patient must travel to the testing center. Even after spending the time and money to make the journey and see a provider, the visit may not help them. Equipment may be broken, or there could be long backlogs of tests to be performed. Rapid diagnostics can remove these time-consuming delays and provide point-of-care decisions, improving health care access for rural communities. Further, combining medications into a single tablet whenever possible simplifies medication use and can improve medication adherence.¹¹ By simplifying treatments we can make it more likely that people will actually use the treatment, and that they will use it properly.

Franchises

An additional business approach that provides opportunities to scale global health effectively is the development of health franchises and networks. Franchises can standardize care at local clinics and pharmacies and help reduce costs through purchasing in bulk, improving supply chain management, and increasing quality with other systems of monitoring and support. When run by local entrepreneurs who know community needs, franchises can create local demand. Franchising and networks provide a solution that harnesses this entrepreneurial base while addressing many of the quality challenges faced by independently operated health clinics and pharmacies.

Challenges and Solutions

While there have been notable successes in global health, some very significant challenges remain:

- **Lack of Basic Health Care.** Most people in developing countries, particularly in rural settings, still don't have access to basic health care and are dying of preventable causes.
- **Fragmented Care.** Some of the successful outcomes in global health have benefited from focused attention and commitment to combatting specific diseases, such as AIDS, malaria, diarrhea, pneumonia, and smallpox. Efforts to prevent and treat these various diseases are often provided by different health systems and settings and by different caregivers, leading to care that is fragmented and that may not be sustainable over time. For example, successfully preventing HIV transmission from mother to child has little meaning if the child soon dies from malaria, pneumonia, or diarrhea—diseases that are not the focus of the HIV sector. Building upon the successful disease-specific systems and integrating care between sectors may help expand distribution of health products and services for more people, in more settings, more efficiently.¹²

- **Financial Sustainability.** There is an urgent need to create financially sustainable health programs, organizations, businesses and systems to ensure long-term impact on global health. As traditional donor countries' economies have struggled, willingness to maintain consistent levels of assistance has become more tenuous.¹³ Donors, like host countries and communities, want financially sustainable health solutions rather than temporary or quick fixes.

We can build upon these successes now to create significant impacts in health.

The *IMPACTS* Approach

Our *IMPACTS* approach (Figure 3) builds upon global health and management lessons learned in practice over the last three decades and integrates the key points that can make significant improvements in global health. The seven-point *IMPACTS* approach can help increase health care service distribution in ways that enhance access, use, and quality of care, while lowering costs. Though our focus is on health in low- and middle-income countries, the *IMPACTS* approach has application to higher-income countries whose most vulnerable populations can also fall through the gaps of overburdened health care systems.



Innovation & Entrepreneurship

Innovation and entrepreneurship are foundational to the *IMPACTS* approach. Innovation is the introduction of new, better ways of doing things. It can involve the creation of more effective processes, services, and products, as well as new technologies. Entrepreneurs are not just creators of new businesses, they are discoverers of opportunities and they can be found in all organizations, including governments, NGOs, businesses, and donor groups. In the context of global health care in low- and middle-income settings, entrepreneurs can find ways to get health products and ser-

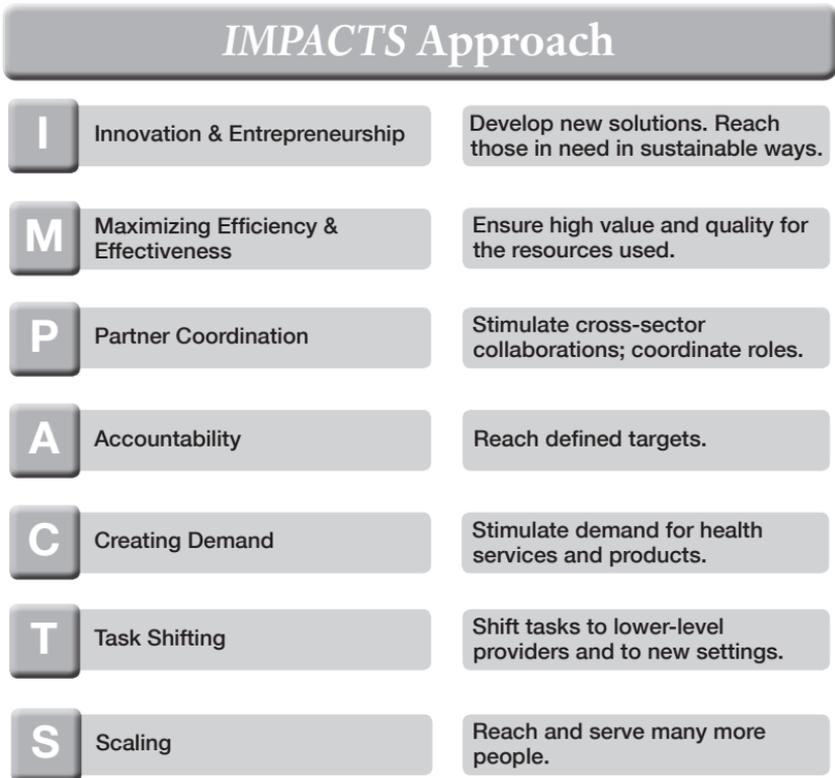


Figure 3 The *IMPACTS* Approach

vices to at-risk populations in ways they desire and at a cost that is financially sustainable.

Ongoing innovation and entrepreneurship is essential to continually finding ways to increase access to and use of services, while improving quality and lowering costs.

M Maximizing Efficiency & Effectiveness

To improve access and reduce costs, it is important to maximize the efficiency with which products and services are produced and delivered. The more efficient a process is, the fewer resources that are required to produce and deliver it. Maximizing efficiency goes hand in hand with maximizing the effectiveness (quality) of the product or service. Efficient and effective health services and products are key in global health.

For example, Aravind Eye Center, a network of specialized eye hospitals in India, uses processes to simultaneously maximize efficiency and effectiveness. The doctors perform thirty to forty surgeries per day by providing unequalled attention to processes. Assistants prepare patients for surgery, and when one patient is finished, another is already in the room, waiting to begin.¹⁴ The high volume of efficient surgeries reduces costs, improves surgeons' skills, and enhances the quality of care they can provide.

P**Partner Coordination**

Health care in developing countries relies on both the public and private sectors. Even in developing countries there is a private sector for health that includes not only businesses and NGOs, but also traditional health providers, birth attendants, and small clinical practices. In fact, half of all health care expenditures in Africa goes to the private sector.¹⁵

Unfortunately, in many developing countries, the public and private sectors are often poorly coordinated and regulated, resulting in gaps in services, lost opportunities, poor quality, and unsustainable systems. Like their wealthier counterparts, developing countries need strong public and private sectors that are supported, integrated, and regulated so health care is cost-effective, financially sustainable, safe, trusted, and accessible to the people who need it. Better coordination can help reduce gaps and redundancies among competing programs.

Partner coordination can be done on a large scale by a government or on a smaller scale by a local entrepreneur. For example, VisionSpring, a nonprofit organization, uses local entrepreneurs to sell low-cost eyeglasses to the poor on three continents. These entrepreneurs create partnerships with schools and businesses to provide inexpensive glasses so that students and workers can see better and be more productive.¹⁶ These partnerships benefit everyone, the individuals, the entrepreneurs, and the schools, businesses, and communities in which they live.

A

Accountability

Accountability measures let us know what works and what needs to be improved. The tools we now have for ongoing public health monitoring are considerably more accurate than those available just a few years ago. They enable earlier detection and the opportunity for more rapid effective responses. When something isn't working, we can identify problems faster and make quick adjustments. Using these tools, global health programs can more effectively establish accountability based on specific measurable goals combined with regular monitoring. This is applicable to all sectors involved: governments, nonprofits, businesses, and donors.

C

Creating Demand

Demand for a product or service can increase when people are knowledgeable about it and believe they will benefit from using it, and when it is culturally and socially supported. Making health products or services highly available without also creating demand for them is as futile to improving health outcomes as creating high demand while ignoring availability, accessibility, and affordability. For example, insecticide-treated mosquito nets are widely known to prevent malaria, but in some communities they were not used because a white net seemed to resemble a funeral shroud.¹⁷ It was only by providing green or blue nets that demand was created in some places. This is quite understandable. Would you put a coffin in your bedroom and sleep in it at night if someone told you that it would reduce your risk of getting cancer?

Stimulating interest and creating demand for services, as well as creating incentives for clinicians and community workers, is critically important to providing services in developing countries. When the government of Rwanda provided nonmonetary incentives to both pregnant women and community health workers to increase the use of health services, prenatal visits shot up by over 85 percent in just nine months.¹⁸

A critical way of creating demand is through engagement of influential people to champion a cause, a product, or a service. Some champions may be highly visible, such as a politician, sports figure, or musician. Others, such as village elders or religious leaders, may be less visible but highly influential in local communities and extremely important in creating demand for health care among families and individuals.

T**Task Shifting**

In task shifting in health, tasks are shifted from doctors to nurses and from nurses to community providers or patients. Tasks can also be shifted from the specialty sector to a nonspecialty sector. Task shifting helps reduce system bottlenecks and costs by increasing the supply of lower-level providers and settings where quality services can be provided (Figure 4).

In many clinical settings, tasks that doctors formerly performed, such as routine prescription of HIV medications, are now done effectively by nurses.¹⁹ Procedures that nurses formerly performed, like contraceptive implants, can be safely done by trained community health workers.²⁰

Task shifting can be effective not only for clinical services, but for clinical operations as well. For example, the Ugandan Ministry of Health is working to avoid clinic stock-outs by decentralizing supply management and empowering clinic staff through a program called mTrac.²¹ The program allows health workers to notify the National Medical Stores when supplies get low using text messages. In addition, the program allows the Ministry of Health to map real-time facility stocks using data submitted as text messages. As an incentive, staff members who send in results via text message get free airtime on their mobile phones. Through a complementary program, uReport, even community members can engage by anonymously sending a free text message when clinics run out of medications.²² Task shifting to different providers and settings has also been used to improve access to care for many

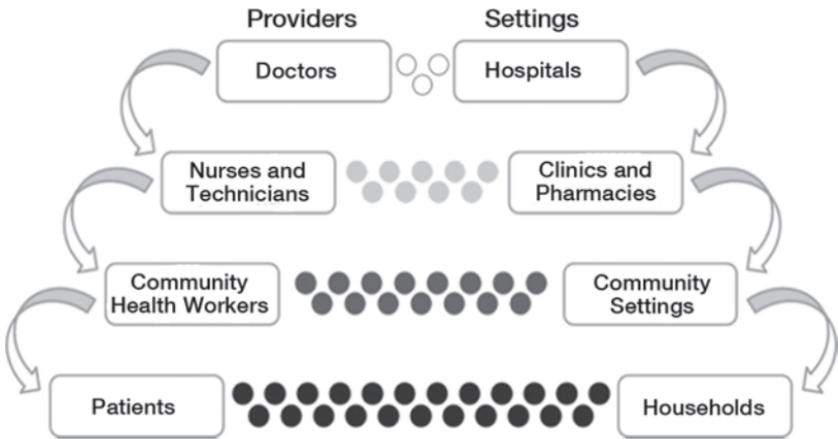


Figure 4 Task Shifting

health conditions, from family planning to clinical depression.²³

In order to shift tasks as well as to improve quality, tasks must be broken into smaller essential parts, and providers must be trained to execute them well and must be consistently supported and regularly supervised. Simplifying procedures and rules helps ensure fidelity by making it clear what is expected of everyone.

S

Scaling

There are many examples in all fields of quite remarkable high-quality innovations that have been developed for small groups of people—a school, health facility, or business. They are terrific, but they benefit only a few. There are also many examples of programs and institutions that have gone to scale and reach large groups of people, but with a relatively low level of quality. To be maximally effective in saving lives, we must take successful, high-quality programs to scale to reach more people.

The components of *IMPACTS* are interrelated and complement one another. For example, efficiencies can be improved by task shifting or better coordination in partner contribution. Improved partner coordination, demand creation, and task shifting can facilitate successful scaling. Likewise, scaling can lead to improved

efficiencies and help reach accountability targets. And all of these points rest on a foundation of innovative thinking and entrepreneurial action.

A Global Health Impacts Logic Model

We have developed a logic model to depict how global health organizations can have long-term impact. The logic model provides a clear articulation of an organization's intended impact and the critical activities that drive success (Figure 5). It serves as a visual representation of the relationships among the available resources, necessary activities, and desired results.²⁴ The logic model helps managers, leaders, and stakeholders understand:

- The causal relationships between the various alternative actions that can be taken
- The impact of these actions on the system, the individual, and the community

By carefully identifying these interrelationships and by establishing relevant performance metrics to measuring success, an organization can improve decision making and inform others, internally and externally, who control or influence resources.

The Global Health Impacts Logic Model describes drivers of global health, the actions managers can take to improve performance and the consequences of those actions on individual and community health. Continual feedback loops are also necessary to allow leaders to evaluate and improve their strategies. The logic model is a general framework that managers should customize to fit their specific needs and environment.

A fundamental component of this model is the distinction between short-term outputs, medium-term outcomes, and long-term results (impacts). Outputs and outcomes must be carefully defined and monitored to determine the effectiveness of processes in place to achieve impacts. Ultimately, program success can be seen in the social and economic effects on the community.

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