



Working toward Transformational Health Partnerships in Low- and Middle-Income Countries

September 2012



Table of Contents

| | |
|--|-----------|
| TABLE OF CONTENTS | 2 |
| EXECUTIVE SUMMARY | 3 |
| HIGHLIGHTS | 4 |
| ADDRESSING UNMET NEEDS AND SYSTEMIC ISSUES | 5 |
| INCREASING IMPACT | 5 |
| INVOLVING KEY STAKEHOLDERS AND ASSEMBLING COMPLEMENTARY ASSETS | 6 |
| INTRODUCTION | 7 |
| WHY PARTNERSHIPS..... | 7 |
| SCOPE AND PURPOSE OF THIS PAPER | 8 |
| METHODOLOGY..... | 8 |
| DIVERSITY OF GLOBAL HEALTH PARTNERSHIPS | 9 |
| FRAMEWORK FOR EVALUATING GLOBAL HEALTH PARTNERSHIPS..... | 10 |
| CURRENT STATE OF GLOBAL HEALTH PARTNERSHIPS | 11 |
| ARE GLOBAL HEALTH PARTNERSHIPS ADDRESSING KEY UNMET HEALTH NEEDS? | 11 |
| ARE GLOBAL HEALTH PARTNERSHIPS ADDRESSING KEY SYSTEMIC ISSUES? | 12 |
| <i>Health System Infrastructure</i> | 13 |
| <i>Availability of Treatment</i> | 13 |
| <i>Research and Development</i> | 13 |
| <i>Prevention, Awareness, and Outreach</i> | 14 |
| ARE GLOBAL HEALTH PARTNERSHIPS INVOLVING THE APPROPRIATE STAKEHOLDERS? | 16 |
| ARE GLOBAL HEALTH PARTNERSHIPS LEVERAGING THE ASSETS OF ALL PARTNERS? | 17 |
| <i>Private Sector Assets</i> | 17 |
| DO PARTNERSHIPS HAVE THE CAPACITY TO REACH SCALE AND SUSTAINABILITY? | 21 |
| <i>Reaching Scale Global Coverage</i> | 21 |
| <i>Reaching Scale Measuring Impact and Resource Allocation</i> | 21 |
| SUMMARY ASSESSMENT OF THE CURRENT STATE AND OPPORTUNITIES | 23 |
| CRITICAL SUCCESS FACTORS FOR INCREASING THE IMPACT OF GHPS | 24 |
| REFERENCES | 25 |
| ACKNOWLEDGEMENTS | 26 |
| <i>Company Representatives</i> | 26 |
| <i>Stakeholder Representatives</i> | 27 |

Executive Summary

Global health partnerships (GHPs) have emerged to become a dynamic and significant vehicle for collaboration to address global health challenges. This report summarizes the contribution of GHPs to meeting global health needs with a focus on low- and middle-income countries and provides perspectives on how to increase the impact and scale of GHPs going forward. The findings are based on interviews with leaders from the private sector and stakeholder groups, an assessment of more than 220 partnerships, a survey of pharmaceutical industry executives, and a multi-stakeholder roundtable convened in Geneva in December 2011.

Why Global Health Partnerships (GHPs)?

- » Using a dynamic and significant vehicle for collaboration in addressing unmet health needs and systemic issues across a broad range of therapeutic areas.
- » Developing innovative approaches to the growing disease burden presented by non-communicable diseases (NCDs) in developing countries.

Benefits of GHPs

- » Extending reach and scale, involving key stakeholders (e.g., nongovernmental organizations (NGOs), government, and other private sector actors), and assembling complementary assets.
- » Sharing knowledge and resources to improve effectiveness and reducing risk.
- » Reducing duplication of investment activities and attracting funding by building a common brand.

Current Challenges

- » Prevalence of single-company endeavors in partnership with NGOs, governments, and academics, with very few GHPs capitalizing on the collective expertise that a multicompany partnership can deliver.
- » Difficulty tracking outcomes and measuring overarching impact of the partnerships.

Critical Success Factors for Increasing Impact of GHPs

- » Adopt a health needs-based approach.
- » Engage in broad-based partnerships and multicompany partnerships.
- » Ensure aligned partnerships to maximize shared resources and expertise.
- » Use existing country systems and promote local ownership.
- » Establish more comprehensive measures to track outcomes and impacts.

Note: GHPs reviewed in this report are mainly industry-led, cross-sector partnerships, e.g., Sanofi's e-diabete partnership and Eli Lilly's MDR-TB partnership in contrast to broader public-private partnerships, e.g., The Global Fund to Fight AIDS, Tuberculosis and Malaria, which are not the focus of this report.

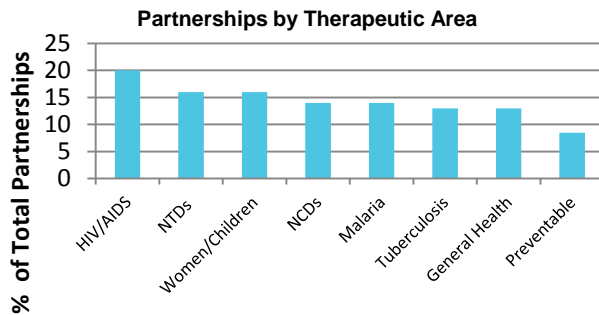
Highlights

BSR conducted an assessment of GHPs to determine the contribution of the pharmaceutical industry to global health needs in low- and middle-income countries. Highlights from this assessment are below.

ADDRESSING UNMET HEALTH NEEDS

20% of GHPs focus on HIV/AIDS
 16% on neglected tropical diseases (NTDs)
 16% on women and children

14% of GHPs focus on NCDs
 14% on malaria
 13% on tuberculosis



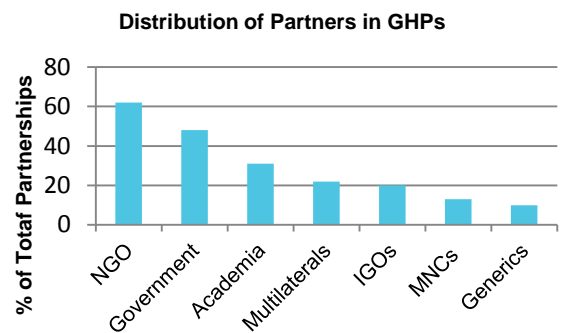
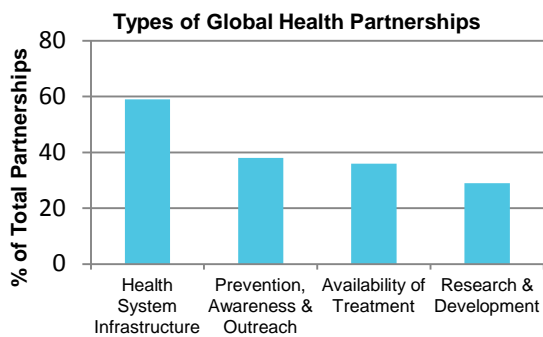
65% of research-based pharmaceutical companies expect to increase their commitment to GHPs focused on NCDs over the next five years.

ADDRESSING SYSTEMIC ISSUES

50% of GHPs focus on strengthening health system infrastructure, of which 79% focus on training healthcare workers

INVOLVING KEY STAKEHOLDERS

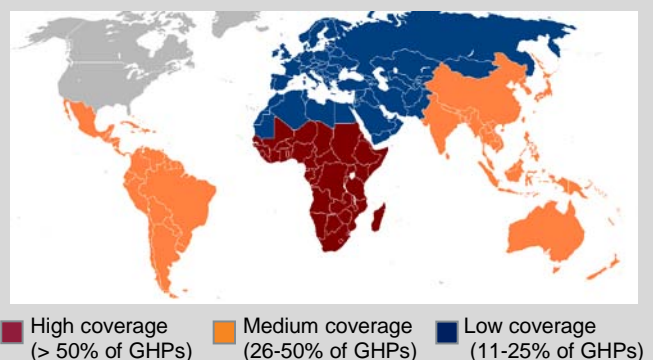
62% of GHPs involve NGOs
 90% of pharmaceutical companies expect to engage increasingly with government



ADDRESSING KEY UNMET HEALTH NEEDS

Reaching Scale | Measuring Impact
 65% of GHPs focus on sub-Saharan Africa, an area that companies expect will remain a major focus over the next five years.
 79% of respondents identified impact measurement as one of the most critical success factors of GHPs.

Geographic Distribution of Partnerships in 2012



ADDRESSING UNMET NEEDS AND SYSTEMIC ISSUES

GHPs play a key role in meeting many of the most critical health needs in low- and middle-income countries. Highlights from the more than 220 GHPs examined include the following:

- » HIV/AIDS partnerships are creating pediatric treatment centers, training healthcare professionals, and working with community implementation partners to reduce stigma, promote prevention, increase rates of diagnosis, and to assist patients to comply with treatment regimens.
- » Malaria-focused partnerships—and others focused on tropical diseases—are facilitating technology transfer agreements for research on new compounds, training community health workers, providing education and outreach on prevention, enabling donations and differential pricing arrangements for no- and low-cost medication, and providing professional education and best practice sharing for healthcare professionals and policy makers.
- » Partnerships focusing on noncommunicable diseases (NCDs) are contributing to primary health systems that provide the foundation for diagnosis and continuous care across a range of chronic diseases.
- » For diabetes and cardiovascular diseases, in particular, insufficient capacity of primary health systems poses a critical challenge to diagnosis and management. In the absence of a robust primary care system, populations are often underdiagnosed and untreated until the disease state becomes acute, resulting in increased complications, more challenging (and expensive) treatment regimens, and reduced life expectancy. Beyond primary care, partnerships are also addressing capacity building needs associated with tertiary care settings and supporting relatively high-technology and specialist needs for testing, diagnosis, and treatment of breast and cervical cancers. On the research and development (R&D) front, partnerships are vehicles for licensing compounds that enable local manufacturing of treatments for cardiovascular disease and diabetes.

Partnerships focused on HIV/AIDS (20 percent of partnerships surveyed), malaria (14 percent), or other neglected tropical diseases (16 percent of partnerships surveyed) comprise 50 percent of the total partnerships surveyed. Only 14 percent of all GHPs focus on NCDs. Concurring with this analysis, input from stakeholders and companies alike confirm that there is an increasing need for GHPs to focus on the unique challenges presented by NCDs in developing countries.

These examples point to the broad range of disease areas addressed by GHPs, but there is a hidden challenge for companies related to investing in GHPs going forward. Given the disproportionate and growing disease burden presented by NCDs in developing countries, it is critical to global health goals that GHPs increase their focus on NCDs—and address the specific ways in which diagnosis, treatment, and managed care for these diseases is adapted for low-resource environments. At the same time, companies must maintain and continue scaling the legacy partnerships (e.g., HIV and malaria) where continued investment is critical to ensuring long-term disease control. This implies a careful balancing act and, moreover, an overall increase in resources dedicated to GHPs.

INCREASING IMPACT

GHPs are addressing health areas of great need, and one of the challenges moving forward is measuring the impact of that work. Companies and stakeholders alike pointed to the difficulty in tracking outcomes (e.g., number of physicians trained in diabetes care) and the even larger challenge of determining overarching impact (e.g., reduction of workplace absenteeism attributed to diabetes). Some of these challenges were attributed simply to a lack of resources allocated to unlocking this difficult puzzle. Other challenges reside with the implementation partners—NGOs and other GHP partners that often lack the internal capability to effectively collect the data required to assess for impact.

This feedback highlights two significant opportunities: (1) for GHPs not currently measuring health impact to begin to do so, and (2) for GHPs already measuring health impact to expand their impact measures beyond those metrics most easily gathered to other metrics that will help to illuminate more fully the total impact achieved by partnerships.

In order for GHPs to scale in size and scope and to drive further progress on global health goals, it will be critical for a greater number of GHPs to demonstrate best practice in monitoring and evaluation methods, and to better communicate results to stakeholders. In the long-run, impact measurement should move from measurement of intermediate outcomes (e.g., number of physicians trained) to highlighting the end impact that GHPs achieve as they improve wellness and extend lives. Setting standards to establish a baseline from which progress will be measured is the first step, yet one that companies cannot take alone. It remains critical that impact measures reflect the input and capabilities of companies, stakeholders, and GHP implementation partners. Finally, data-driven discussions about GHPs and their impact will be needed to continue to innovate in addressing health needs in low- and middle-income countries.

INVOLVING KEY STAKEHOLDERS AND ASSEMBLING COMPLEMENTARY ASSETS

High-impact partnerships (or “transformational partnerships” as defined later in this paper) cut across therapeutic areas, build primary-care systems, and develop local capacity for prevention, diagnosis, and treatment across a full range of diseases. Developing transformative partnerships requires investments that most companies would find difficult to pursue with a single partner. In this way, multicompany partnerships hold significant promise.

The current landscape of GHPs reveals a prevalence of single-company endeavors working together with a variety of noncompany partners (including NGOs, governments, and academics). These partnerships have made significant contributions to global health in terms of the range of perspectives and diverse approaches to global health challenges. However, in light of the specific challenges posed by NCDs and the fact that 15 percent or fewer of all GHPs involve more than one research-based pharmaceutical company, there is an increasing need to move away from this prevailing model and capitalize on the collective expertise that a multicompany partnership can deliver. Our survey found that nearly two-thirds (65 percent) of companies expect to move toward multicompany partnerships within the next five years.

Moreover, GHPs must bring together complementary assets, not only from private sector actors, but also from other key partners. For example, governments provide funding, set national agendas, and are primarily responsible for developing health system infrastructure. Local and international nongovernmental partners facilitate the sharing of knowledge and good practices and the delivery of healthcare services to communities through their strong local relationships. Finally, companies have three important assets: cash and product, research and development capabilities, and employee skills and time.

However, overall funding for GHPs has been scrutinized by stakeholders as current funding levels are unlikely to fully address healthcare needs in low- and middle-income countries. Stakeholders consider private sector investments to be meaningful, but few are perceived as large enough to drive progress towards systemic health issues. With public funding in decline throughout the world, the role of the private sector in driving global health outcomes will be increasingly debated. Moreover, it is likely that companies will increasingly share an increasing burden of the responsibility (with governments) to expand health care access in low- and middle-income countries.

Fortunately, company expectations are aligned with the need to increase private sector investment in GHPs, and these increased investments will likely include the full suite of company assets. In particular, there are opportunities to develop innovative approaches for leveraging employee skills and time in ways that build local capabilities and at the same time serve the company’s increasing need to build internal global networks and linkages with local markets.

Introduction

WHY PARTNERSHIPS

Over the past decade global health partnerships (GHPs), as a form of public-private partnerships (PPPs), have emerged with surprising force and speed as an innovative system to address global health challenges.

While there is much debate around the term, we consider GHPs to be formalized initiatives established to address global health problems, in which the research-based pharmaceutical industry and government agencies or nongovernmental organizations (NGOs) have a voice in collective decision making.¹ GHPs are a heterogeneous group that includes a diverse range of initiatives operating at a variety of scales and through various means.

In this paper, we use a working classification of partners that includes:

- » Research- and development-based pharmaceutical, biotechnology, and vaccine companies
- » Public sector agencies, e.g., ministries of health
- » Local partners, including NGOs and for-profit service providers
- » International and multilateral organizations, including international NGOs or organizations formed among three or more nations, e.g., the World Health Organization (WHO)

Recognizing the complex and varied nature of global health challenges, GHPs came onto the scene as a means of bringing together the complementary resources and capabilities from the public, civil, and private sectors. As collaborative and cross-sector initiatives, GHPs have demonstrated many benefits, including:

- » Extending reach and scale
- » Sharing or reducing risks
- » Sharing knowledge and resources to improve effectiveness
- » Reducing duplication of investment or activities
- » Attracting funding by building a common brand²

Recognizing these benefits, companies are investing in GHPs in order to achieve global health outcomes. In 2012, the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) catalogued 220 of these partnerships in its GHP directory. Recognition of their benefits in addressing key health issues in low- and middle-income countries has led to an increase in the number of partnerships. In 2006, 64 were operating. Today, the number is more than 220.

At the same time, it is recognized that partnerships stand alongside other industry commitments as a key contribution of the industry to improving health in low- and middle-income countries. For instance, in 2010, 102 research and development projects for diseases of the low- and middle-income countries were supported by pharmaceutical companies or conducted in partnership with product development partnerships (PDPs).³ Beyond partnerships, each innovator company maintains a portfolio of access to health programs that are pursued independently (e.g., technology transfer agreements and product donations). Therefore, while this report focuses on GHPs' current impact, it is important that we recognize

¹ Buse, Kent and Andrew M. Harmer. *Seven habits of highly effective public-private health partnerships: Practice and potential*. *Social Science & Medicine* 64 (2007) p. 3

² McKinsey & Company. *Public-Private Partnerships: Harnessing the public's sector's unique ability to enhance social impact*. http://mckinseyonsociety.com/downloads/reports/Global-Public-Health/Public_Private_Partnerships_Enhancing_Social_Impact.pdf

³ International Federation of Pharmaceutical Manufacturers & Associations. *The IFPMA Status Report: Pharmaceutical Industry R&D for Diseases of the Developing World – 2010*. http://www.ifpma.org/fileadmin/content/Innovation/Research%20and%20Dev/About%20RD/Status_RnD_for_DDW_10Nov2010.pdf

partnerships as just one of many vehicles utilized by pharmaceutical companies to improve global health outcomes.

SCOPE AND PURPOSE OF THIS PAPER

In developing the 2012 global health partnership directory, IFPMA sought to better understand the impact of GHPs and their overall contribution to health in low- and middle-income countries. To this end, IFPMA tasked BSR (Business for Social Responsibility) with examining and assessing the impact of GHPs and identifying the critical success factors necessary to improve that impact.

Recognizing the diversity of global health needs, we examined partnerships across a range of system issue areas including: availability of treatment, health system infrastructure, research and development, and awareness and prevention. In addition, our analysis encompasses partnerships across a range of therapeutic areas including HIV/AIDS, malaria, tuberculosis, neglected tropical diseases (NTDs), brain disorders, preventable diseases, NCDs, women's and children's health, and general health.

The purpose of our analysis is to understand where GHPs have been most successful in driving significant impact, to identify where gaps in GHPs remain, and to highlight and share best practices for achieving global health objectives across the current and future landscape of GHPs.

METHODOLOGY

From November 2011 through May 2012, BSR conducted a landscape assessment of global health partnerships involving the research-based pharmaceutical industry.

Our research scope included:

- » Gathering stakeholder feedback on trends in global health needs, including insights on priority disease areas and approaches.
- » Evaluating the current contribution of GHPs to meeting the health needs of low and middle income countries.
- » Determining the critical success factors of GHPs to promote long-term, sustainable partnerships.
- » Identifying challenges related to forming, managing, and scaling partnerships, including impact measurement.

Our methods included:

- » One-on-one interviews with executives from eight research-based pharmaceutical companies, representing input from the United States, the EU, and Japan.
- » One-on-one interviews with five external stakeholder representatives from academia, patient organizations, NGOs, multi-stakeholder health partnerships, and health program delivery organizations.
- » A survey of 20 research-based pharmaceutical companies.
- » An in-person roundtable with IFPMA members and external stakeholders held in Geneva in December 2011.
- » A review of more than 220 individual partnerships—as submitted to the GHP directory⁴—relevant to low- and middle-income countries. The analysis of individual partnerships was made possible by the launch of a new information request that sought to gather a consistent set of metrics around each of the various partnerships submitted to the directory.
- » A literature review of partnerships across a range of industries, and of GHPs specifically, to ensure that our findings and recommendations are based on best practices for PPPs and health programs in low- and middle-income countries

⁴ BSR evaluated partnerships submitted to the 2011 GHPs directory and as such analyzed a snapshot in time. However, the directory is continuously updated and, therefore, represents a rolling repository of partnership information.

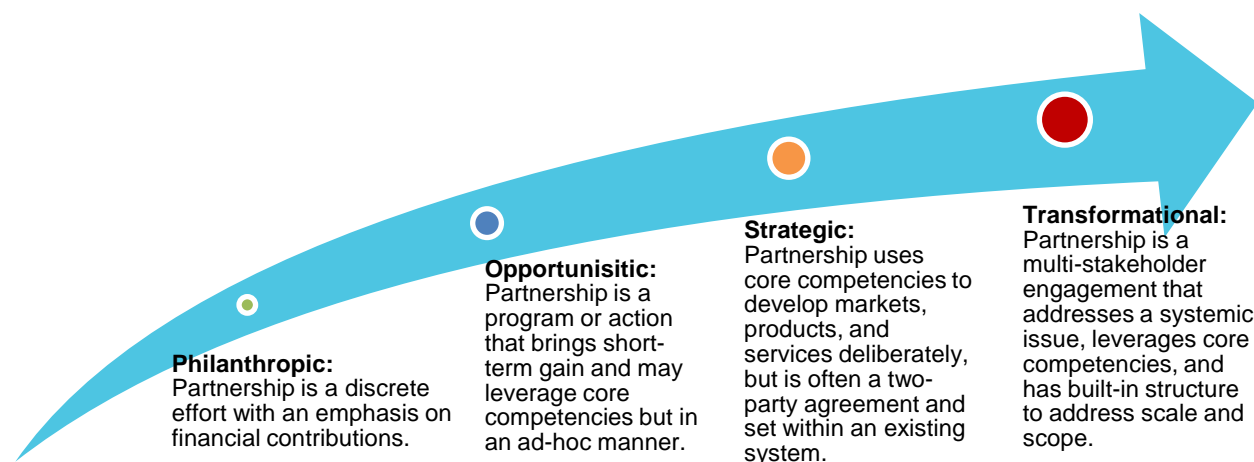
In total, we assessed 220 partnerships for quantitative and qualitative measures of impact, recognizing that limitations in the available data presented challenges to reliance on quantitative measures alone. Given that GHPs are highly diverse, not only across disease areas, but also in terms of objectives, scale, and scope, we integrated our quantitative assessments with qualitative insights gathered from the in-person roundtable and interviews. The heterogeneity of GHPs poses legitimate challenges to quantitative assessment, but at the same time confirms that there is still greater need for GHPs to produce and report on quantitative measures of impact.



FRAMEWORK FOR EVALUATING GLOBAL HEALTH PARTNERSHIPS

Our analysis of GHPs builds on the recent work of the UN Global Compact (UNGC) LEAD Initiative, which developed a typology for PPPs and pointed to cross-industry best practices for driving impact through partnership. The UNGC framework identifies four major types of partnership—philanthropic, opportunistic, strategic, and transformational—each of which contribute to sustainable development through different means and on different scales.

Four Types of Public-Private Partnerships in the UN Global Compact Taxonomy

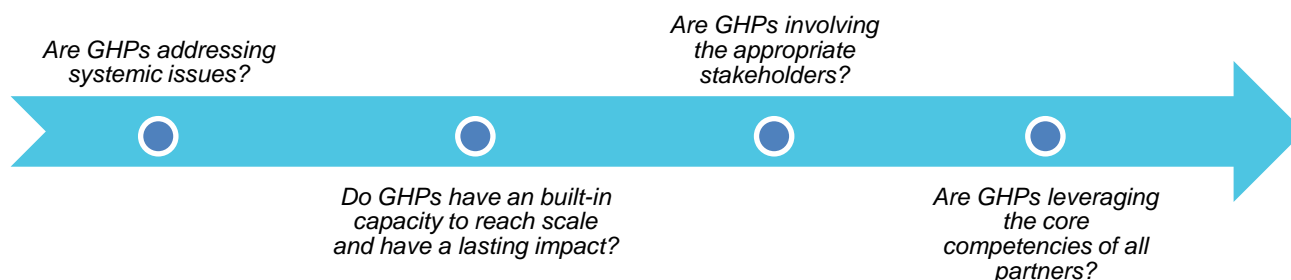


Although any single GHP may have characteristics of one or more of the partnership types, UNGC's cross-industry assessment reveals that the most impactful partnerships are those that are transformational—driving long-term, system-wide impact—and therefore meet the following criteria:

- » Addresses systemic issues.
- » Leverages core competencies.
- » Involves appropriate stakeholders.
- » Creates capacity to reach scale and have a lasting impact.⁵

While we acknowledge the important contributions of all GHPs, in light of the above, we recognize that the most impactful GHPs are those that meet the criteria of transformational partnerships. We have therefore focused our analysis on the impact that GHPs are having today and how current GHPs align with the transformational criteria of the UNGC framework and long-term, sustainable global health outcomes. Our assessment examines GHPs for their alignment with the four key criteria for transformational partnerships described below.

UN Global Compact Criteria for Transformational Partnerships



⁵ UN Global Compact. *Catalyzing Transformative Partnerships Between the United Nations and Business*. http://www.unglobalcompact.org/docs/issues_doc/un_business_partnerships/Catalyzing_Transformational_Partnerships.pdf

Current State of Global Health Partnerships

ARE GLOBAL HEALTH PARTNERSHIPS ADDRESSING KEY UNMET HEALTH NEEDS?

GHPs are a response to the complex and diverse global health needs in low- and middle-income countries. As such, it is not surprising that their areas of focus are as diverse as the needs they tackle.

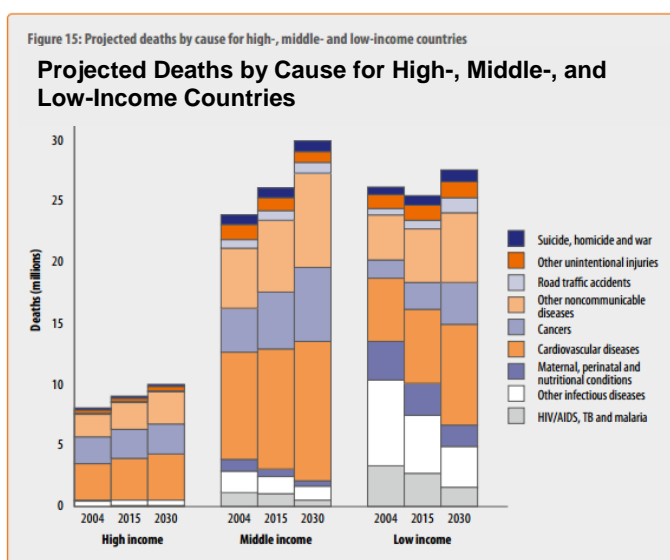
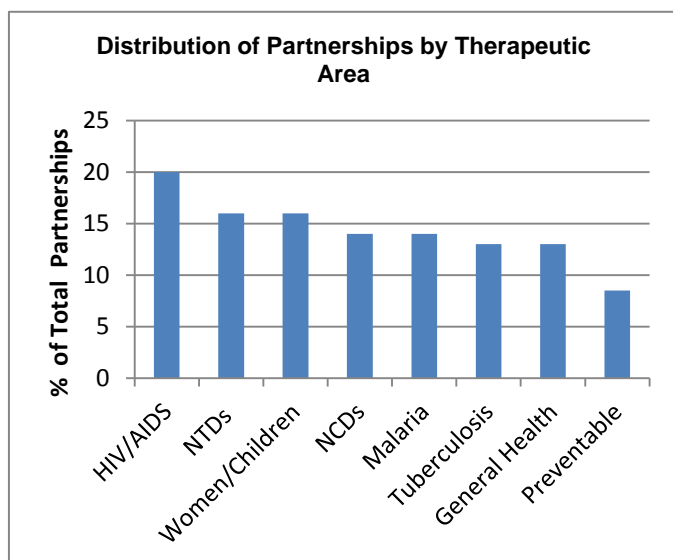
Currently, GHPs have a strong focus on HIV/AIDS (20 percent of partnerships surveyed), NTDs (16 percent of partnerships surveyed), and women and children's health (16 percent of partnerships surveyed). HIV/AIDS partnership activities include development of pediatric treatment centers and training for healthcare organizations.

GHPs focused on malaria are also a significant priority, representing 14 percent of partnerships. These partnerships include technology transfer agreements for research on new compounds, training for community health workers, education and outreach on prevention, donations and differential pricing arrangements for no- and low-cost anti-malarial medication, professional education, and best practice sharing for policy makers.

Beyond HIV/AIDS, malaria and NTDs, some GHPs respond to global health trends that indicate that NCDs are of increasing importance. Fourteen percent of all partnerships currently focus on NCDs. Partnerships focusing on NCDs provide a range of interventions, including improvements in assessment, clinical management, and education related to diabetes and depression; licensing of compounds for manufacturing cardiovascular disease treatments; and education, testing, diagnosis, and treatment of breast and cervical cancers.

Gaps

Over the next decade, deaths in low- and middle-income countries due to HIV/AIDS, TB, malaria, and other infectious diseases, as well as maternal, perinatal, and nutritional conditions, are expected to decrease in absolute terms, while deaths related to cancers, cardiovascular disease, and other NCDs are expected to increase.⁶ In light of changing patterns of mortality, GHPs could increase their focus on causes of death that are projected to increase. The challenge will be to maintain commitment towards health outcomes around the above health needs while responding to the changing landscape of global health needs.



Source: World Health Organization, *Causes of Death*

⁶ World Health Organization. *The Global Burden of Disease 2004 Update*. http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

Future Trends and Recommendations

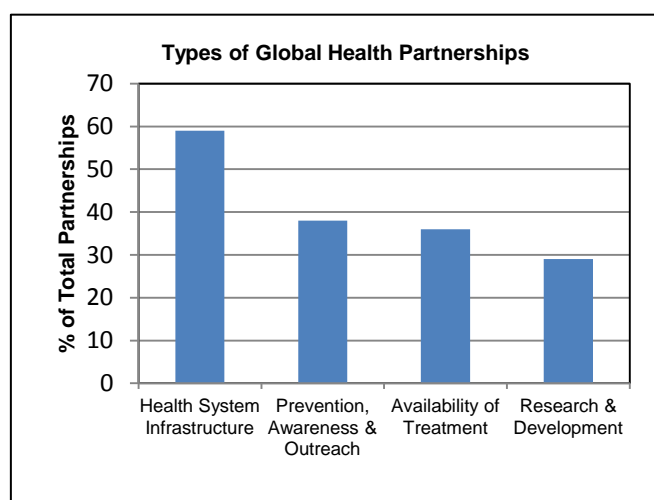
Given the growing burden of NCDs in developing countries, it is critical to global health goals that GHPs increase their focus on NCDs—and address the specific ways in which diagnosis, treatment and managed care for these diseases is adapted for low-resource environments.

GHPs could play a role in improving primary health care systems that are on the front lines—particularly in low- and middle-income countries—by engaging communities with support for prevention, diagnosis, and treatment across a range of diseases. While advanced care often requires specialized approaches reflecting the practice of medicine for a specific disease area, companies and other stakeholders recognize that most systemic health challenges require approaches that address a range of disease areas.

Companies indicate that they will increase their commitment to NCDs. Of the 20 pharmaceutical companies we surveyed, 13 (65%) indicated that they expect to increase partnership commitments toward NCDs while maintaining commitments across other therapeutic areas.

For maximum impact, it will be important to design these future investments such that they prioritize the strengthening of primary healthcare systems and work across multiple disease areas (beyond the silos of what products are in-focus for the commercial entity).

ARE GLOBAL HEALTH PARTNERSHIPS ADDRESSING KEY SYSTEMIC ISSUES?



In low- and middle-income countries, achieving global health goals has been a slow process. The challenge is often attributed to one or more of the following systemic issues:

- » Inadequate health system infrastructure (a trained health workforce, operating health information systems, and adequate physical infrastructure);
- » Limited availability (or absence of) of treatment;
- » Inadequate research and development focused on key global health issues and insufficient in-country capacity for research and development; and
- » Limited health awareness and outreach to support prevention and care.

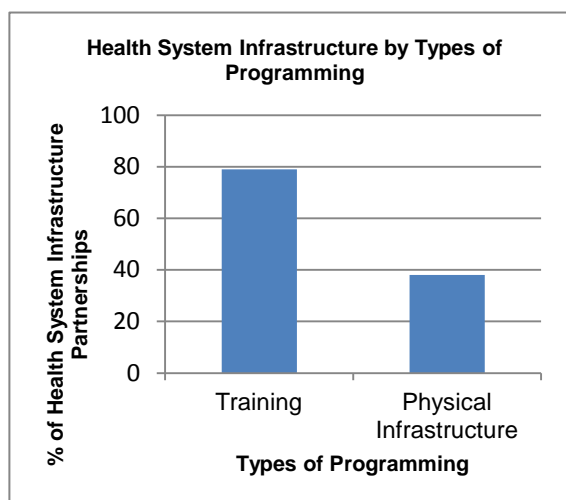
In light of these systemic challenges, our landscape assessment reviewed and classified 220 partnerships according to four categories of systemic issues: availability of treatment; health system infrastructure; research and development;⁷ and prevention, awareness, and outreach.⁸

Currently, the majority of GHPs we analyzed are focused on developing health system infrastructure. The remaining three systemic issues are addressed in almost equal measure.

⁷ Throughout the assessment, a distinction was made between general R&D activities (including partnerships) within a company and R&D partnerships that are primarily and explicitly addressed at creating treatments for diseases in low- and middle-income countries. General R&D partnerships were excluded from the assessment.

⁸ Note that some partnerships have more than one focal area (e.g., availability of treatment and prevention, awareness, and outreach).

Health System Infrastructure

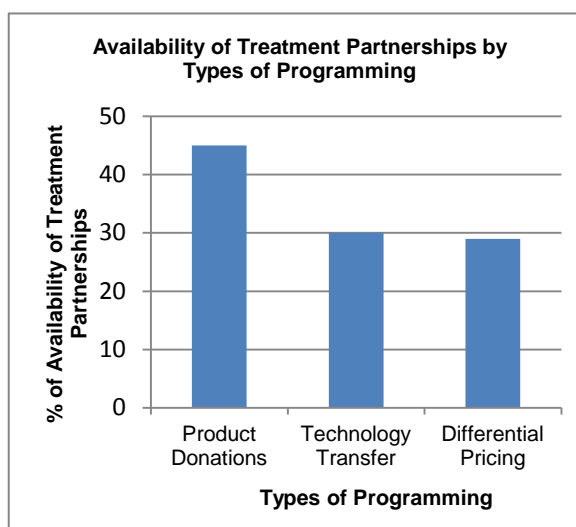


Among the aforementioned systemic issues, stakeholders and companies alike point to weak health systems infrastructure as the greatest challenge that GHPs can address. Our research found that many GHPs do indeed address health systems infrastructure gaps. In a survey of over 220 partnerships, 59 percent of partnerships focus on strengthening health system infrastructures, with 79 percent of those focused on training. Such findings are encouraging and point to an alignment of global health partnerships with health system infrastructure challenges.

Moving forward, GHPs that already provide training can increase their overall impact by taking multidisease approaches (supporting needs of primary healthcare systems), or supplementing the partnerships with other effective interventions in promoting awareness and prevention (further detailed below).

Availability of Treatment

Availability of treatment focuses on providing patients with means of accessing medicines and healthcare. Thirty-six percent of partnerships analyzed have a focus on improving availability of treatment with the majority of programs exhibiting a strong emphasis on product donation. While some availability of treatment partnerships do include capacity building aspects, during one-on-one interviews, stakeholders indicated a need for greater capacity building alongside the donations. Stakeholders assert that, while product donation meets an immediate need, combining this with capacity building programs can create long-term, sustainable solutions for addressing health needs in a region.

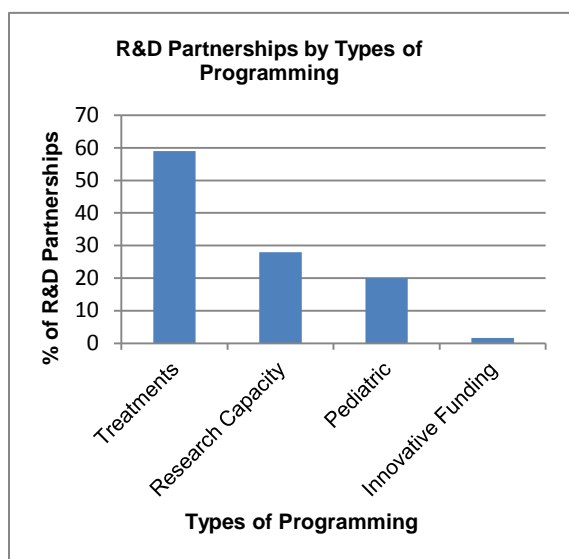


Research and Development

Nearly a third of the GHPs surveyed address research and development (R&D), with most (59 percent) of the R&D-based partnerships focused on the development of new treatments. However, only 20 percent of R&D partnerships focus on building local research capacity—a systemic gap in the current global health landscape. R&D partnership activities include sharing of patent libraries to screen compounds that may be useful in treating NTDs, identifying and training private practitioners to conduct clinical trials in sub-Saharan Africa, and funding for tuberculosis-specific research at company R&D centers, among others.

Building research capacity in low- and middle-income countries is especially important for R&D partnerships to achieve their transformational potential. Through R&D partnerships, low- and middle-income countries can develop the capacity to meet local health needs through local innovation and manufacturing—with a cost structure and scale that may produce commercial opportunities for local firms, thereby contributing to a virtuous cycle of improved health outcomes and economic growth. IFPMA has identified 50 successful technology transfer initiatives by research-based pharmaceutical companies since 1985.⁹

⁹ International Federation of Pharmaceutical Manufacturers & Association. Technology Transfer: A Collaborative Approach to Improve Global Health. http://www.ifpma.org/fileadmin/content/Publication/IFPMA_Technology_Transfer_Booklet_2011.pdf



While a great deal of capacity building is supported by companies through independent initiatives, including technology transfer programs linking an individual R&D-based pharmaceutical company to specific suppliers, there are opportunities for GHPs to increase their focus on local R&D capacity building as well. Examples include the GlaxoSmithKline-FioCruz Collaboration to Develop New Medicines for NTDs in Brazil and the Novartis-Ifakara TB Research Partnership in Tanzania.

Prevention, Awareness, and Outreach

More than one-third of GHPs (38 percent) surveyed include a focus on awareness-raising, prevention, and outreach—another key gap in the systemic challenge of improving global health outcomes. These activities include communication and education about diseases, such as:

- » Increasing knowledge and awareness of risks (through information and awareness-raising) or knowledge and awareness of services to help prevent risks, e.g., through awareness of breast cancer and the importance of screening;
- » Changing attitudes and motivations, e.g., building and reinforcing healthy eating habits;
- » Increasing physical or interpersonal skills, e.g., using condoms or teaching assertiveness skills to suggest to sexual partners that condoms be used;
- » Changing beliefs and perceptions, e.g., through interventions aimed at increasing testicular self-examination in men by raising their awareness of risk and normalizing self-examination; and
- » Influencing social norms, e.g., by changing public acceptance of breast-feeding.¹⁰

Addressing Key Systemic Issues | Sanofi's "e-diabete" partnership

Africa is home to 825 million people. In 2010, an estimated 12.1 million - or 3.2% - of the adult population had diabetes. The disease accounts for 6% of all deaths in people aged 20–79 in the region, and its prevalence is constantly increasing in Africa. Therefore, the management of diabetes in Africa is an issue which is made worse by the lack of health professionals (HCPs) particularly in French-speaking Africa and the focus on infectious diseases.

It is thus urgent for professionals to know how to diagnose and treat the condition, wherever they operate in the healthcare organization. Appropriate education is necessary to prevent complications, like amputation and cardiovascular pathologies in people with diabetes.

Since 2009, the UNFM has worked in close partnership with the RAFT Network, Senghor University (Senegal) and Sanofi to develop "e-diabete," a unique interactive training program. The second Thursday of each month, HCPs attend educational teleconferences to interact directly and exchange experiences with the teachers, who are local and international diabetes experts. 70 % of the lectures are conducted by African experts. The use of a low-speed internet technology allows integrating remote health care centers.

Participation in the teleconferences is increasingly extending to include not only diabetologists but also internists, nurses, cardiologists, surgeons and others HCPs, so that all healthcare professionals are

¹⁰ The National Health Service. *The effectiveness of public health campaigns*. <http://www.nice.org.uk/niceMedia/documents/CHB7-campaigns-14-7.pdf>

aligned when administering primary care to the diabetic patients, in order to improve early diagnosis of diabetes and reduce risks of associated complications (e.g. amputations) and premature death.

Gaps

While the majority of GHPs are addressing health system infrastructure, which is the most critical and systemic barrier to improving health, there are cross-cutting opportunities to increase investment in local capacity building. Stakeholders point to capacity building with local R&D organizations as especially important. For global health solutions to be sustained over the long-term, there is a need for greater local capacity so that countries can develop innovative medicines and manufacturing for their own markets.

Likewise, there is a perception that product donation programs achieve greater impact when accompanied by rigorous capacity building and training for implementation partners.

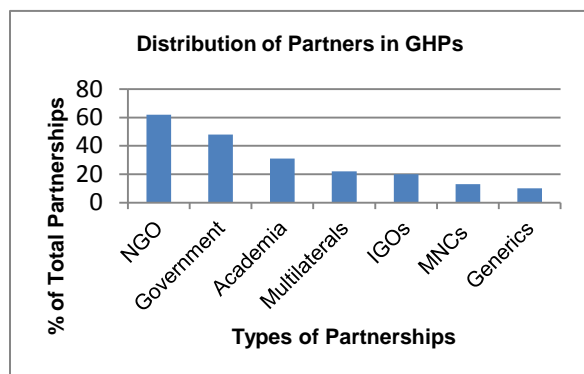
Finally, some stakeholders encouraged research-based pharmaceutical industry partners to make larger monetary commitments to GHPs. They cited as examples the Lilly NCD Partnership (\$30M/5 years) and Takeda's commitment to the Global Fund (\$10M/10 years) as examples of some of the large, well-recognized private sector commitments, noting that they were unaware of industry contributions to partnerships in excess of \$10M/year—a level of funding that TB Alliance's CEO Mel Spigelman cited as a level he believed could move the needle on TB. While companies and stakeholders alike recognize governments as the primary responsible parties for funding health-related private public partnerships, it is clear that companies can do more to improve stakeholder awareness around the level of funding that industry contributes to GHPs.

Future Trends and Recommendations

The vast share of companies surveyed (70 percent) expect to maintain a strong focus on developing health system infrastructure through their investments in GHPs. For these investments to yield maximum impact, it will be important that health system infrastructure investments cut across various disease areas, and are aligned with the needs of primary care systems.

In addition, there remains a need on the part of both governments and pharmaceutical companies to build local capacity that would enable local innovation (R&D) and manufacturing. Local capacity building is important for creating sustainable solutions that reduce dependencies and generate opportunities for economic growth (which is itself a contributor to improved health outcomes). The pharmaceutical industry is making contributions in this area through the creation of and participation in GHPs, as well as through technology transfer. Governments play a key role in supporting this by allocating significant funds and creating an enabling environment for public and private sector investments in health system infrastructure and innovation and R&D.

ARE GLOBAL HEALTH PARTNERSHIPS INVOLVING THE APPROPRIATE STAKEHOLDERS?



Transformational partnerships are defined by their strength to bring together a range of stakeholders—and their complementary capabilities—to solve systemic challenges. Nowhere is this truer than in addressing the complex and varied dimensions of global health challenges.

Research-based pharmaceutical companies cannot meet global health needs on their own. Doing so requires political will at the national level, in particular to adequately fund healthcare systems and to create the enabling environment for partnerships to operate.

It also requires other partners such as NGOs, which are critically important to adapting interventions to the local environment, serving as implementation partners, and building health system capacity. So too, multilateral organizations play key roles in identifying global health priorities, measuring impact, and galvanizing support (and resources) for large investments.

We assessed partnerships for the various kinds of stakeholders engaged in GHPs. Almost half (48 percent) of partnerships engage with government and more than half (62 percent) involve partnerships with NGOs. For example, GlaxoSmithKline's Mobilizing for Malaria program focuses on generating political commitment while increasing the number of NGOs engaged in tackling malaria. These trends confirm the critically important role of governments and NGOs in partnerships; the former are ultimately responsible for the well-being of their citizens, and the latter bring implementation capabilities and social legitimacy that cannot be assured by private sector action alone.

Addressing Key Systemic Issues | GlaxoSmithKline's Mobilizing for Malaria Initiative

In 2005, GlaxoSmithKline (GSK) gave a grant of US\$1.5 million over three years to a new partner, the Malaria Consortium, to launch the Mobilizing for Malaria initiative. In 2009, GSK extended its support for the initiative for an additional year. The aim is to increase awareness, generate political commitment, and secure sustained funding to combat the disease. It will increase the number of NGOs engaged in tackling malaria and give more African communities the knowledge and tools they need to prevent transmission of malaria. National Coalitions Against Malaria were launched in Belgium, Cameroon, Ethiopia, France, Mozambique, and the UK, bringing together advocates from the public sector, NGOs, the media, private sector and the political, academic, and scientific community.

Gaps

GHPs represent a rich and diverse range of programs and are typically led by a single research-based pharmaceutical company. Given the systemic nature of health challenges and the fact that only 15 percent of GHPs today involve more than one multinational research-based pharmaceutical company, there is a need to capitalize on the collective expertise that a multicompany partnership can deliver and drive up this percentage.

Future Trends and Recommendations

To maximize impact, partnerships must cut across therapeutic areas, build primary care systems, and develop local capacity for prevention, diagnosis, and treatment across a full range of diseases. Developing these transformative partnerships requires investments that companies cannot and should not pursue alone. Involving the right stakeholders is essential to the development of effective and sustainable partnerships that promote global health impacts.

Toward this end, partnerships should continue to involve government and NGO partners. In a survey of 20 multinational companies, 90 percent of survey respondents expect to see increased partnership with government, and 70 percent expect to see increased partnerships with NGOs. As mentioned above, partnerships can also help build local capacity by increasingly involving generic drug manufacturing companies.

ARE GLOBAL HEALTH PARTNERSHIPS LEVERAGING THE ASSETS OF ALL PARTNERS?

Another equally important characteristic of transformational partnerships is that each actor leverages its core competencies and assets. In conversations with stakeholders, we gained a snapshot of the assets partners have to offer in GHPs. One-on-one interviews shed further light on some of the gaps in leveraging these assets. However, further research is needed to fully understand the extent to which current partnerships leverage a wide range of company and partner assets. Below we highlight our early findings.

Private Sector Assets

For the pharmaceutical industry, we have identified three core assets that can be leveraged in GHPs including providing cash and product, research and development capabilities, and employee skills and time.

Asset 1: Cash and Product

Private sector investments are significant and lead to important contributions to global health outcomes. These not only include corporate investments in GHPs but also donation programs, R&D funding to address unmet health needs, and investments in support of some PDPs. In January 2012, 13 companies collectively announced donations of 14 billion treatments over the next 10 years toward the elimination or control of nine NTDs.

Asset 2: Research and Development Capabilities

R&D capability is perhaps the industry's most important contribution to improving health. Some GHPs are leveraging it to develop innovative products for lymphatic filariasis, HIV/AIDS, cervical cancer, tuberculosis, and malaria, among others.

Asset 3: Employee Skills and Time

Stakeholders and companies can provide specialized knowledge and skills from which NGO partners would benefit. This includes organizational development and analytical skills that many pharmaceutical industry professionals developed through their tenures in the private sector. In particular, NGO implementation partners may require support in developing business cases and rationale, conducting multi-stakeholder dialogue and cooperation, project planning, financial management, impact

measurement, as well as support for marketing, communications, and other general management functions.

To facilitate the sharing of this expertise, companies such as Pfizer (see below) contribute staff time and expertise to support the organizational development needs of some NGOs for a specified period.

Leveraging Research and Development Capabilities | WIPO Re:Search

Recognizing the need for more progress in neglected disease research, WIPO Re:Search was formed in 2011 through the efforts of several of the world's leading pharmaceutical companies, the World Intellectual Property Organization (WIPO), and BIO Ventures for Global Health. The sharing of intellectual property and know-how developed by these companies, along with other providers, can be a driving force for innovation in the search for new treatments for these devastating neglected diseases.

WIPO Re:Search provides access to intellectual property for pharmaceutical compounds, technologies, and—most importantly—know-how and data available for research and development for NTDs, tuberculosis, and malaria. By providing a searchable, public database of available intellectual property assets and resources, WIPO Re:Search facilitates new partnerships to support organizations that conduct research on treatments for NTDs, ultimately improving the lives of those most in need.

Leveraging Employee Assets | Pfizer's Global Health Fellows (GHF) Program

The Global Health Fellows (GHF) program, Pfizer's signature international corporate volunteer program, places its highly skilled colleagues in short-term individual and team-based fellowships with leading international health organizations to strengthen health service delivery in emerging, developing markets. During assignments the fellows transfer their professional expertise in ways that promote access, quality, and efficiency of health services.

As the program approaches its 10th anniversary in 2013, a major milestone includes fielding more than 300 Pfizer colleagues in nearly 45 countries with 40 NGO and international development partners, including GBCHealth, the International AIDS Vaccine Initiative, Population Services International, and the U.S. Agency for International Development.

Post-program surveys conducted in 2011 point to a range of positive outcomes:

- » 100 percent of partner organizations reported that the program accelerated sustainable change in their communities;
- » 59 percent reported that the fellows improved the effectiveness of the health services they provide; and
- » 67 percent reported that the fellowships increased the efficiency with which they deliver services.

The Pfizer Fellowships have been credited with helping organizations to implement management standards and systems that enhance services and ultimately set them on a path to recognition for their achievements and access to sources of funding. For example, in 2012 Pfizer was awarded the Health Volunteers Overseas' Golden Apple Award recognizing the contribution of 14 Pfizer fellows who volunteered more than 14,000 service hours with the Christian Medical College (CMC) Hospital in Vellore, India, a major multispecialty teaching and research hospital that provides both in-patient and extensive outreach services to more than 2.5 million patients. With the long-term support of the Pfizer fellows, the CMC received accreditation of both its hospital standards and its laboratories from national accrediting boards. As a result, the CMC has become a preferred hospital among patients and insurance companies and stands out as a model for other institutions across India.

In addition to assets contributed by the private sector, it is important to note some of the key assets that organizations from other sectors bring to GHPs:

- » Government organizations, for example, play a key role in providing overall funding for healthcare systems, setting national priorities, and developing healthcare infrastructure.
- » Local implementation partners leverage their rich networks and connections with communities to ensure that partnership approaches are adapted to local context and on-the-ground realities.
- » International partner organizations (e.g., multilaterals) play a key role in developing and sharing knowledge of good practices, influencing policy makers to take action, convening stakeholders together around a common agenda, and coordinating policy approaches across various geographies.

Gaps

Funding is currently a challenge and is insufficient to fully address healthcare needs in low- and middle-income countries. The level of private sector investment is considered significant, but few are perceived as large enough to drive progress on systemic health issues. Furthermore, while research and development capabilities are being applied through some partnerships, stakeholders have posited that more can and should be done to promote local research and development capabilities.

Future Trends and Recommendations

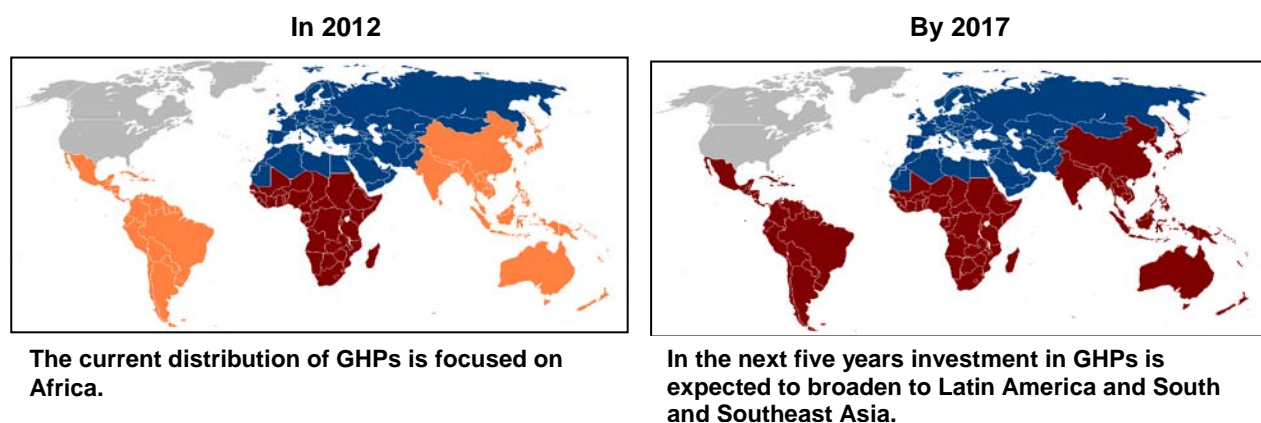
With increased pressure on public funding, the private sector will be increasingly seen as a potential source for further financial resources to increase health care access in low- and middle-income countries. Company expectations are aligned with the need to increase private sector investment in GHPs, and these increased investments should include the full suite of company assets. In particular, there are opportunities to develop innovative approaches for leveraging employee skills and time in ways that build local capabilities and at the same time serve the company's increasing need to build internal global networks and connections to local markets. Additionally, greater financial investment is needed by the pharmaceutical industry to scale up programming to more regions and address new systemic issues.

In a survey of 20 R&D pharmaceutical companies, the majority of companies reported that total financial investment in partnerships is expected to remain approximately the same with a significant portion (40 percent of those surveyed) expecting investments to increase significantly.

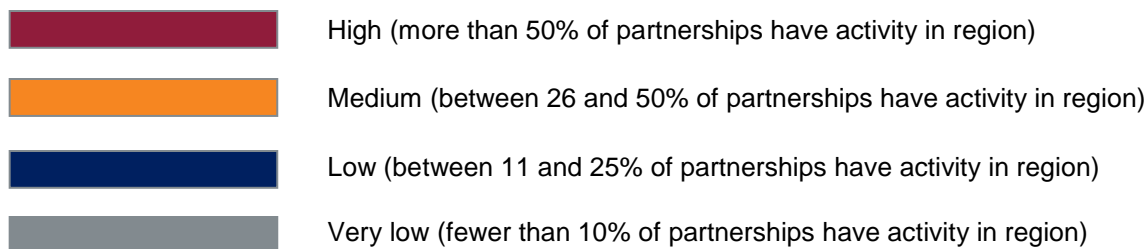
DO PARTNERSHIPS HAVE THE CAPACITY TO REACH SCALE AND SUSTAINABILITY?

Reaching Scale | Global Coverage

Percentage of Partnerships with Activities in Each Region



Legend – Level of Activity



Health challenges affect low- and middle-income countries globally. However, currently GHPs are primarily focused on sub-Saharan Africa. In a survey of GHPs, 65 percent of partnerships were found to be focused on sub-Saharan Africa with fewer than 37 percent of partnerships focused on South Asia, East Asia, and Latin America combined. As partnerships scale up, they will expand to new regions. In a survey of R&D-based pharmaceutical companies, the majority of respondents expect investments to be maintained in sub-Saharan Africa and to expand in South Asia, East Asia, and Latin America.

Reaching Scale | Measuring Impact and Resource Allocation

In order for regional- and country-level programs to scale up and realize their full potential benefits for people, they must demonstrate their impact and justify their need for increased funding. Many companies and stakeholders alike pointed to the difficulty of tracking outcomes (e.g., number of physicians trained in diabetes care) and the even larger challenge of determining overarching impact (e.g., reductions in workplace absenteeism attributed to diabetes).

Some of these challenges were attributed simply to a lack of resources allocated to assessment. Other challenges reside with the implementation partners: NGOs and other GHP partners often lack the internal capability to effectively collect the data required to assess their impact.

Stakeholders also emphasized the importance of evaluating success factors and of analyzing in detail the aspects of a GHP that can be replicated or scaled up to increase impact. For example, randomized trials can demonstrate which programs are relatively more effective. Positive deviants research (e.g., ethnographic studies focused on why certain patients in a partnership fully adhere to treatment regimes as opposed to their peers who do not) can reveal how GHPs adapt partnership programming to local conditions and behavior. Finally, patient feedback can provide additional insights into the impact of

partnerships. Stakeholders and companies alike emphasized the importance of evaluating the return on investment of partnerships and measuring nonfinancial aspects.

Beyond building a case for scaling up, partnerships require sufficient resources. Single-company partnerships are restricted by the resources and capabilities of a single organization. Multicompany or multi-stakeholder partnerships allows companies and organizations to share findings and leverage greater resources to address health needs at a global level. Some partnerships have demonstrated the effectiveness of this approach in building scale, for example, Roll Back Malaria and Merck's River Blindness Initiative. Where multicompany initiatives are not viable (due to a competing commercial interest), companies can increasingly share best practices by measuring impact and GHP success factors through alternative methods (e.g., industry forums or working groups) or by addressing systemic issues in healthcare delivery, which are acknowledged by companies and stakeholder to be precompetitive.

Reaching Scale Example

Over a decade, The Global Alliance to Eliminate Lymphatic Filariasis (LF) has become the most rapidly scaled-up medicine administration program in public health history. The WHO reported that during 2008, more than 496 million people were treated worldwide. In a study published in October 2008 in *PLoS Neglected Tropical Diseases*, researchers found that the LF elimination effort has prevented 6.6 million children from acquiring the disease.

Gaps

Stakeholders identified limited impact measurement as the primary constraint to reaching scale. Measuring benefits enables GHPs to justify scaling their initiatives. Furthermore, partnerships often lack the resources to scale up programming. Greater collaboration among companies through noncommercial ventures would allow them to share best practices to measure impact. Finally, the geographic concentration of current partnerships in sub-Saharan Africa reflects the need for a wider geographic scale.

Future Trends and Recommendations

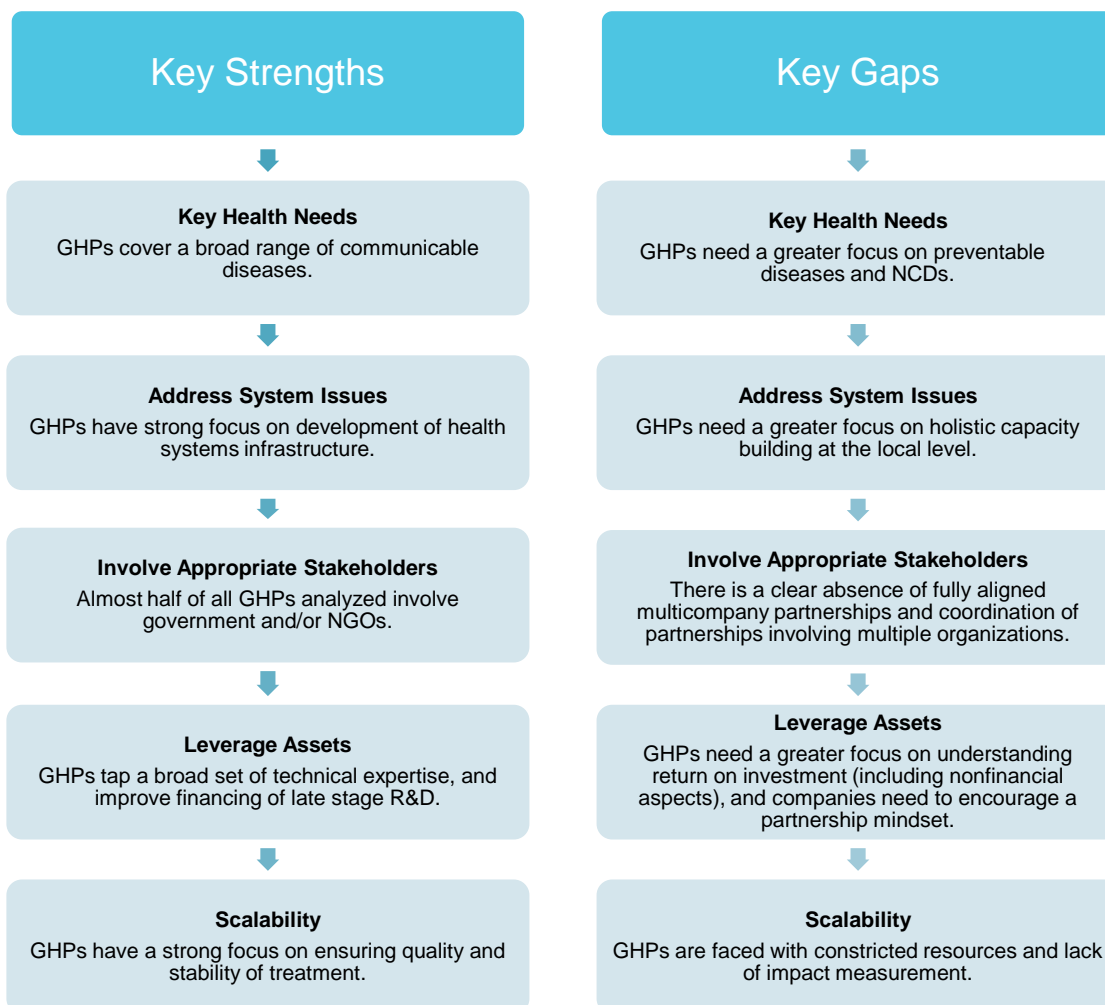
In one-on-one interviews with stakeholders and research-based pharmaceutical companies, impact measurement was identified as one of the areas for improvement. In order to promote scalability, partners should understand and measure the impacts of their partnerships as well as the challenges and lessons learned. At the corporate level in pharmaceutical companies, impact measurement is imperative to promote the business case for a partnership and therefore promote its scalability and sustainability. At present only half of the partnerships surveyed are measuring impact at any level.

In the immediate future, partnerships should move toward greater impact measurement. Finding partners with internal capacity and expertise to systematically and effectively conduct baseline and end-line examinations is a first step for impact measurement. In the long run, GHPs should move toward comprehensive measurement of outcomes (e.g., improved health behavior and decreased mortality) rather than outputs (e.g., number of healthcare professionals trained) and evaluation systems in order to track and communicate the impact of GHPs.

Summary Assessment of the Current State and Opportunities

GHPs demonstrate a new way of bringing together public and private capabilities with the potential to address some of the most complex and challenging global health issues. In some instances, they integrate the components of transformational partnerships, which focus on systemic challenges, involve governments and NGOs, and increasingly take a broader partnership approach.

Despite their many gains, GHPs are a work in progress, with the potential to evolve and become more effective and efficient. Compared to the four transformational criteria described by the UNGC, we identify the following strengths and gaps related to GHPs:



Critical Success Factors for Increasing the Impact of GHPs

Although in many instances GHPs include characteristics of transformational partnerships, gaps remain. Based on our research and discussions with industry and stakeholders, we believe the following success factors represent practical and significant improvements that can be made to help GHPs bridge these gaps and improve and expand their impacts:

FACTOR 1: TAKE A HEALTH-NEEDS-BASED APPROACH

In a BSR survey of 30 R&D-based pharmaceutical companies, 78 percent of respondents identified taking a health-needs-based approach as critical to the impact of GHPs. As companies adapt their partnership portfolio to an evolving global disease burden, companies will need to balance carefully how they grow new programs on the one hand, while they sustain and scale legacy partnerships on the other. While legacy partnerships may continue to target health needs that are increasingly being met (e.g., HIV/AIDS in certain geographies), controlling the disease remains imperative to the long-term consolidation of public health achievements to date. Finally, partnerships that focus on multiple diseases are more likely to address systemic health challenges.

FACTOR 2: ENGAGE IN BROAD-BASED PARTNERSHIPS

Partnerships that involve more than one industry partner can leverage greater resources, facilitate greater knowledge sharing, and lead to greater scaling of programs. Multicompany partnerships also have greater opportunities to address primary health needs rather than focusing on specific therapeutic areas.

FACTOR 3: ESTABLISH ALIGNED PARTNERSHIPS

In aligned partnerships there are clearly defined roles and responsibilities, agreed-upon objectives and targets, and clear communication lines between partners. Partnership alignment is critical to ensuring that all parties share a common set of expectations, that partner assets are used to their greatest potential, and that the partnership is built for sustainability and scale. Of those companies surveyed, 89 percent of respondents identified aligned partners as a critical success factor of effective GHPs.

FACTOR 4: USE EXISTING COUNTRY SYSTEMS AND PROMOTE LOCAL OWNERSHIP

By working within existing country systems and promoting local ownership, partnerships are more likely to develop sustainable activities and knowledge. Furthermore, working within existing country systems is often far more efficient and therefore sustainable and scalable.

FACTOR 5: MEASURE IMPACT

Measuring impact provides justification for increased industry commitment and can lead to the scaling of successful programs. In a survey of R&D-based pharmaceutical companies, 79 percent of respondents identified impact measurement as one of the factors most critical to the success of GHPs. In the long run impact measurement should move from measurement of intermediate outcomes (e.g., number of physicians trained) to highlighting the end impact that GHPs achieve as they improve wellness and extend lives. Setting standards and establishing a baseline from which progress will be measured is the first step. A second critical step forward in measuring impact is to form partnerships only with those organizations that have the capability to measure and report on impact.

References

BSR. Summary of IFPMA Roundtable Discussion on Partnerships for Global Health. Held on December 12, 2011, in Geneva, Switzerland.

Buse, Kent and Andrew M. Harmer. *Seven habits of highly effective public-private health partnerships: Practice and potential*. *Social Science & Medicine* 64 (2007) 259–271.

Health Development Agency. *The Effectiveness of Public Health Campaigns*.
www.nice.org.uk/niceMedia/documents/CHB7-campaigns-14-7.pdf.

International Federation of Pharmaceutical Manufacturers & Associations. *The IFPMA Status Report: Pharmaceutical Industry R&D for Diseases of the Developing World – 2010*.
http://www.ifpma.org/fileadmin/content/Innovation/Research%20and%20Dev/About%20RD/Status_RnD_or_DDW_10Nov2010.pdf

International Federation of Pharmaceutical Manufacturers & Association. *Technology Transfer: A Collaborative Approach to Improve Global Health*.
http://www.ifpma.org/fileadmin/content/Publication/IFPMA_Technology_Transfer_Booklet_2011.pdf

Institute of Health Metrics and Evaluation. *Financing Global Health 2011: Continued Growth as MDG Approaches*, p. 15. www.healthmetricsandevaluation.org/publications/policy-report/financing-global-health-2011-continued-growth-mdg-deadline-approaches.

McKinsey & Company. *Public-Private Partnerships: Harnessing the public's sector's unique ability to enhance social impact*. http://mckinseysociety.com/downloads/reports/Global-Public-Health/Public_Private_Partnerships_Enhancing_Social_Impact.pdf

The National Health Service. *The effectiveness of public health campaigns*.
<http://www.nice.org.uk/niceMedia/documents/CHB7-campaigns-14-7.pdf>

World Health Organization. *Everybody's Business: Strengthening Health Systems to Improve Health Outcomes: WHO's Framework for Action*. Geneva: WHO, 2007.
www.who.int/healthsystems/strategy/everybodys_business.pdf.

World Health Organization. *The Global Burden of Disease 2004 Update*.
http://www.who.int/healthinfo/global_burden_disease/GBD_report_2004update_full.pdf

World Health Organization. *The World Health Report 2010*. www.who.int/whr/2010/10_summary_en.pdf.

UN Global Compact. *Catalyzing Transformative Partnerships Between the United Nations and Business*.
http://www.unglobalcompact.org/docs/issues_doc/un_business_partnerships/Catalyzing_Transformational_Partnerships.pdf

USAID. *Sustaining Health Gains—Building Systems*. *Health System Report to Congress*.
http://pdf.usaid.gov/pdf_docs/PDACN511.pdf.

Acknowledgements

This report was written by Mark Little, Director, BSR; Cody Sisco, Manager, BSR; and Jennifer Schappert, Associate, BSR

The authors would like to take the opportunity to thank Eduardo Pisani (IFPMA), Pete Shelby (IFPMA), Morgane De Pol (IFPMA), Abigail Jones (Acumen Public Affairs), and Sarah Dolton-Zborowski (BSR), for their contributions and efforts in developing this report.

We would also like to acknowledge the contributions of the individuals and organizations listed below who provided valuable input throughout the research phase through interviews, surveys and attendance at the roundtable event.

Company Representatives

| | |
|----------------------------------|---------------------------|
| Abbott | Jeff Richardson |
| Astellas Pharma Inc | Akiko Ohta |
| Astellas Pharma Inc | Joe Barker |
| AstraZeneca | Yvonne Nasstrom |
| AstraZeneca | Maya Morris |
| AstraZeneca | Sophie Gregg |
| Bayer Healthcare | Ulrike Schroeder |
| Bayer | Dr. Ulrich-Dietmar Madeja |
| BIKEN | Yoshikazu Tada |
| Boehringer Ingelheim | Michael Rabbow |
| Boehringer Ingelheim GmbH | Bernd Mann |
| Bristol-Myers Squibb | John Damonti |
| Crucell | Olga Popova |
| Daiichi-Sanky / Ranbaxy | Hiroyuki Funakoshi |
| Eisai | Simon Collier |
| Eli Lilly | Tracy Sims |
| Eli Lilly | Jennifer Scroggins |
| GlaxoSmithKline | Jon Pender |
| Innovative Medicines SA | Val Beaumont |

| | |
|--|------------------------------|
| Kaketsuken | Kazuoki Chigita |
| Merck & Co. | Brenda Colatrella |
| Novartis | Dr Lyse Beauregard-Zollinger |
| Novartis | Dorje Mundle |
| Otsuka | Patrizia Carlevaro |
| Pfizer | Chris Gray |
| Pfizer | Cinthya Ramirez |
| Pfizer Inc. | Kimberley D. Lewis |
| Roche | Dianne Young |
| Sanofi Group | Martin Bernhardt |
| Sanofi Group Indonesia | Hanum Yahya |
| Takeda Pharmaceutical Company Limited | Koichi Kaneda |

Stakeholder Representatives

Stakeholder Organization

Representative

| | |
|--|---------------------|
| Bio | Lila Feisee |
| Caritas Internationalis | Robert Vitillo |
| DNDi | Jean-Pierre Paccaud |
| FDI World Dental Federation | Jean-Luc Eiselé |
| GAVI | Jon Pearman |
| Geneva Dialogues | Jean Freymond |
| Global Fund | Christoph Benn |
| Global Fund | Thuy Huong Ha |
| IAPO International Alliance of Patient Organizations | Jo Groves |
| IFRC | Dr Ayham Alomari |
| Medicines for Malaria Venture MMV | Andrea Lucard |
| Meridian Group | David Wofford |
| The NCD Alliance | Dr Téa Collins |

TB Alliance

UICC International Union against Cancer

World Heart Federation

WHO

WHO

WHPA

Mel Spigelman

Cary Adams

Johanna Ralston

Mario Raviglione

Melba Gomes

Dr. Julia Seyer