Pocantico II

The Global Challenge of Health Systems

September 20–21, 2007

THE ROCKEFELLER FOUNDATION

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This report was written by members of the Rockefeller Foundation's staff based on materials prepared for this meeting and the discussions that took place there. It reflects the views of the authors and not necessarily those of other conference participants or of the Rockefeller Brothers Fund.

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Oceanus Fountain in the forecourt of Kykuit

Kykuit is a property of the National Trust for Historic Preservation and is administered by the Rockefeller Brothers Fund as a center for the Fund's philanthropic programs.

Introduction

FOR NEARLY A CENTURY, the Rockefeller Foundation has been a trailblazer in philanthropic innovation to address the needs of the poor around the world. During the last decade, the field of global health has undergone a dramatic transformation with unprecedented funding and new institutional models, and some progress is being made against priority diseases like tuberculosis. Yet, the nature of the problem has changed as well: pressure on global and national health systems is increasing, driven by demographic and epidemiologic shifts, rising health costs, and disease-based approaches. Developed last century, the current knowledge base, professional cadres, and social institutions of health and medicine are struggling to confront these new challenges, and large swaths of the population suffer without access to essential care while millions of people each year are thrown into poverty by catastrophic health expenditures.

There is renewed interest at the national and international level in building and strengthening health systems. New opportunities exist in the growing importance of health in the international agenda, the increasing amount of resources for this sector, and the emergence of new business models and information technology.

While the 1990s saw increased attention and effort devoted to vertical disease programs, governments and the donor community are beginning to focus on health systems. This transition provides a unique opportunity to shape thinking on health systems on the world stage. Health spending will continue to rise rapidly at rates far outstripping economic growth, and much of this growth is likely to be in the private sector.

On September 20–21, 2007, 25 of the top leaders in global health joined with officers and trustees of the Rockefeller Foundation to review trends and opportunities in global health, and to discuss new initiatives and programmatic opportunities for the Foundation. Judith Rodin, President of the Rockefeller Foundation, welcomed the participants with an introductory speech that explained the new ways of working in the Foundation, and invited this group of leaders to take on the global challenge of health systems. At dinner, the Deputy Secretary General of the United Nations, Dr. Asha-Rose Migiro of Tanzania, spoke of the importance of global health to Secretary General Ban Ki Moon's agenda. She asked the group for advice and support in making the U.N. system more effective in improving health throughout the world.

Over the course of the two days, the group focused on ways to improve capacity of countries to support their health systems, improve the effectiveness of the large disease-focused global initiatives, and support U.N. and national efforts to achieve health equity. The group examined five specific areas, which will be described in greater detail in the following report:

Surveillance systems and the threat of new pandemics. With the ongoing threat of new diseases—and the impact of globalization and travel in accelerating the spread of such diseases—the group agreed it was important to help build country capacity in health surveillance and rapid response, particularly in the regional epicenters of emerging pandemics, as well as to increase linkages between animal and human health.

New competencies for public health professionals. The group recognized the need to update cadres of leaders and health workers facing new paradigms in complex health systems, identified new dimensions for the work of public health professionals, and suggested more experiential learning in Schools of Public Health Schools on new area—from traditional epidemiology to the financing and management of health services and the social determinants of health. The group agreed on the importance of Rockefeller focusing on this area, given its historical role in the field of public health around the world.

Access and distribution of health products and technologies. The group agreed that, without a good grasp of supply chain management, there was a risk of an "innovation pileup" in the next 5 to 10 years as the Public/Private Partnerships' initiatives in research and development bear fruit, and discussed how to ensure that health systems can best get those innovations to the target populations and on the need to build on a fuller understanding of what has worked effectively in the past (from smallpox to river blindness) and in other sectors (e.g., Wal-Mart).

eHealth—the use of information technology to strengthen health systems. In this frontier area, the group discussed ways that IT could improve health services and public health in the developing world, where wireless connectivity is increasing and there is little legacy system fragmentation. Participants called for an overall architecture of information and a set of "open standards" to ensure that such systems can quickly and effectively be deployed and scaled, and for new capabilities and partnerships to support eHealth in the developing world.

The role of the private sector in developing country health systems. The private sector is a major component of health care systems throughout the developing world—in many developing countries 80 percent of health care delivery is provided by the private sector—yet it has been neglected in global health and policy thinking. The group discussed the need for a better understanding of the dimensions of, and the challenges and opportunities to engage the private sector on expanding access to care, improving training and quality, and exploring new risk-pooling mechanisms in poor countries (i.e. health insurance).

The participants agreed that the Foundation should support efforts to rethink the overall global architecture of health institutions and specific national and local issues in ensuring improved national and local health systems. In identifying specific recommendations, the group sought steps that would leverage the unique attributes of the Rockefeller Foundation—its heritage of leadership in identifying early the essential needs of the poor and excluded, and its ability to catalyze movements and work with others to make a substantial difference.

The meeting took place in Pocantico, New York—where 10 years earlier some of the same leaders had met to address the institutional challenges of the time. Many the participants voiced the hope that this conference, "Pocantico II," would have a similar impact in a radically different environment. This summary report is an effort to document the rich discussions of the meeting and to share its insights and key recommendations with the larger audience of stakeholders with whom the Rockefeller Foundation will work to chart together a new course in global health.

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The Global Challenge of Health Systems: Summary of Pocantico Discussions

JUDITH RODIN, President of the Rockefeller Foundation, opened the discussion by asking participants to be as bold as possible in identifying new directions and next steps in the field of Global Health. Her sentiments were echoed by U.N. Deputy Secretary-General Asha-Rose Migiro, whose keynote address highlighted U.N. Secretary-General Ban Ki Moon's call to rethink approaches to Global Health in order to achieve the ambitious U.N. Millennium Development Goals (MDGs).

The group started by reviewing overall trends in Global Health, given the tremendous growth in the field over the past ten years. Following that discussion, the group focused on five specific areas where participants saw the need for increased attention:

- **Pandemic threats and public health surveillance.**
- **Defining new competencies for public health professionals.**
- **Ensuring access to technologies and social innovations.**
- **Using information technology to improve health care delivery and health systems.**
- **Leveraging the private sector.**

Overall Trends in Global Health

The discussion on global trends focused both on the accomplishments and impact of recent history and an assessment of the current situation and challenges.

Building on a Decade of Accomplishment and Growth

The field of "international health" was different in 1997. At the time of "Pocantico I," many Foundations were choosing to leave the health care field, the key international organization, the WHO, was facing internal organizational challenges, the rate of HIV infection was accelerating rapidly throughout the developing world, with limited programs of control prevention, and there was an accelerating global health crisis, with very clear inequities in health by income cohort.

Over the past 10 years, the field of Global Health has been affected by three major overarching trends:

- Enormous growth in financial support, leading to an increase in the number of global players as well as the launch of very large, vertically focused disease initiatives.
- The launch of many Public/Private Partnerships (PPPs)—bringing the expertise of the private sector to the priorities of the public sector.
- Ever-accelerating globalization of the world, increasing travel, commerce and migration—and increasing the importance of the Global Health field.

The past decade has seen substantial growth in philanthropic activity in health. A set of new major funds and a number of very large foundations—The Global Fund for AIDS, TB and Malaria, and the expanded Gates Foundation and Warren Buffett—are now focused on health issues. The decade has seen systematic research leveraging PPPs focused on neglected diseases, including IAVI, GAVI and the Medicines for Malaria venture. Each of these initiatives focuses "vertically" on one or a few specific diseases in order to maximize the likelihood of producing effective medical advances.

The advent of PPPs has enabled the field to fuel development and innovation. As a result of the ongoing work, the field now talks of an "innovation pileup" in the coming years, as many of these innovations come on line and need to be brought to the target population.

"Globalization"—and the resulting growth in travel and migration—has reduced the ability for countries to think that there are "walls" that separate threats in one part of the world from the other. While historically, "International Health" denoted health in the developing world. But increasingly, all threats are global. Significantly, globalization increases demands on the health systems in both North and South. All face a "Triple Threat" of new infections, the growth of noncommunicable diseases and an ongoing exchange of risks. For the "North," the demand growth comes primarily from new infections that start in the "South" but quickly migrate globally because of travel and migration. For the "Global South," the threat stems both from noncommunicable diseases exacerbated by products typically imported from the "North," such as tobacco, as well as from industrialization and economic growth, increasing risks from pollution, industrial accidents and the like. This shared and ongoing transfer of risk will likely continue to increase demand across all parts of the development spectrum.

As a result, there will be continued appreciation of the fact that Health is not just a national issue—but in fact a cornerstone of foreign relations and economic development.

The Implications: The Situation in 2007

The three overarching trends have both spearheaded the benefits and opportunities as well as highlighted a set of challenges for the field today:

- The growth in the number of global initiatives has resulted in substantial benefits, but suggests the need for improved coordination among the global institutions.
- The growth in the number of vertical initiatives has pushed development on specific diseases—but has also put pressure on individual countries' public health systems.
  - It underscores the need to work to improve those systems.
  - It highlights the need to improve both the human and technical competencies used to manage them.
- The expected results of the work of PPPs in drug development in turn suggests the need to plan and ensure access by the poor and most vulnerable to those anticipated innovations.
- The continued impact of globalization increases the threat of new diseases and rapid pandemics—and the need to ensure improved surveillance of new medical threats.
- The clear benefits of working with the private sector on drug-development PPPs highlights the expertise of the private sector and suggests that they can be utilized in areas beyond drug development as well.

The Need for Improved Coordination of Global Institutions. In her keynote address, Deputy Secretary-General Migiro spoke of the importance of working together on the critical and emerging global health challenges, particularly in strengthening health systems. She emphasized the importance of global health to Secretary-General Ban Ki-Moon's agenda, to the achievement of the MDGs, and to a more secure world. She also welcomed the group's thoughts on how the U.N. could best address these challenges in the context of unprecedented attention to global public health issues, combined with new and powerful actors in the global health arena.

The group heard from the Deputy Secretary General of the United Nations, Dr. Asha-Rose Migiro of Tanzania. She spoke of the importance of global health to Secretary-General Ban Ki-Moon's agenda, to the achievement of the U.N. Millennium Development Goals (MDGs), and to a more secure world. She emphasized the importance of working together on the critical and emerging global health challenges, especially the need to strengthen health systems. She also welcomed the Group's thoughts on how the United Nations could best address these challenges in the context of unprecedented attention to global public health issues, combined with emerging new and powerful actors in the global health arena.

Several of the leaders from developing countries spoke about the challenges they face dealing with the demands of both the global organizations and the "verticals." Others spoke about the benefits of reorganizing the way they work together. Some went so far as to suggest that many of the global initiatives were duplicative.

Indeed, looking at the challenges faced by developing countries—and the large growth of global, well-funded vertical institutions, some believe that there is a need for a fundamentally different architecture bringing together global initiatives with the needs of different local health systems. Some believe in the need to rethink the way global health institutions are structured and work together in order to better serve the needs and capabilities of the "Global South."

Historically, many of the global institutions, particularly those within the U.N. system, sought to ensure a balance between the two super-powers of the cold war. This required them to avoid taking sides between the capitalist system that—at the extreme—sought to utilize the private sector as much as possible and a communist system that believed that only government could provide health services. With the end of the Cold War and the economic growth that many developing countries are experiencing, some say there is an opportunity to redefine the overall architecture of the global health system. There is a need to examine how global institutions interact and compete—and the impact that they have on national and local health systems. There is a desire to focus on creating equitable and sustainable health systems bridging public and private sectors.

Recently a number of initiatives have been launched to help strengthen health systems, including those by Prime Minister of the United Kingdom and a network of Ministers of Foreign Affairs. The Rockefeller Foundation itself is supporting a joint initiative of the United Nations and the Council on Foreign Relations to rethink the architecture of international health institutions.

While there was agreement that there needs to be a new architecture, there was concern that the search for a new architecture needed to ensure that it would do more good than harm. People lauded the job that international organizations were doing—both in tracking and monitoring as well as in developing and recommending programs. Similarly, the group supported the efforts of the verticals in advancing research and treatment in many previously neglected priority diseases. While supporting that, there was a sense that global health would benefit enormously from stepping back and evaluating whether there

were better ways of defining the architecture of international organizations. As one meeting participant put it, "no one funds thinking—and that's what we really need more of."

Ensuring the Benefits of Global Vertical Disease Initiatives: The Need to Build Capacity of National and Local Health Systems. Both poor and middle-income countries have felt the positive impact of the past decade's growth in health care investment. Many countries report that their health systems need greater capacity to deal with the opportunities provided—but also demands placed—by investment by global partners. Indeed, the focus of specific global verticals often diverts attention from pressing needs in other parts of the health system.

Countries in the developing world still need to improve their capabilities—both the capabilities of their overall health system as well as the capabilities and size of their health workforce. There is a clear need to invest in achieving a better understanding of health systems, and how countries can improve their ability not just to provide services but also to monitor and improve outcomes. There remains a need to expand systems of civil registration of vital statistics.

There was agreement that improvements in country capabilities and health systems would help address many of the demands of the "verticals"—and that these improvements were going to be needed to address the unseen but expected challenges of the next 10 years.

The group believed that the Rockefeller Foundation should carve out a role in health systems architecture and that it should be in RF's historically advantaged areas of promoting innovative and strategic thinking. In particular, the group felt that too much of the historical work on health systems had been at too high a level to have a real impact—and that RF could focus on addressing the complexity of different countries and local health systems:

- Seeking global solutions—but thinking thorough local complexity through both micro and macro lenses. A new research agenda is needed, as well as funding commensurate with the importance and complexity of health systems. The group felt that the Public Health field needed an overall platform—similar to the "Cochran Collaboration" that focuses on large, meta-analysis of clinical studies—that was focused on research in how to improve the effectiveness of Health Systems.

- Improving the capacity of health systems, health workers, as well as national stewardship of the health system. This would build on recent Foundation work on health workforce and platforms such as the International Network for Clinical Epidemiology (INCLEN)—and seek to develop approaches to help health system leaders and managers deal with the demands of the global verticals. Initiatives here include improving the competence of public health professionals, the training and recruitment of health workers, and the understanding of how best to improve the health of citizens.

The Building Blocks of Better Health Systems: Public Health Competencies and Superior Technology. In order to have real impact on health systems, the Foundation should move beyond design issues to identify the new competencies that such systems require of public health professionals and how to leverage Information Technology to improve the delivery of care and the health system at large:

- Assessing the impact of the demands on country public health systems on changing competencies required to be an effective public health professional—and the training needed for those competencies.

- Leveraging Information Technology—which is an increasingly important part of the delivery of health care in the developed world—to the needs of public health systems in the "Global South"—and using that technology to drive improvements in health systems' efficiency, quality and equity.

Achieving the Goals of Global Vertical Initiatives: Ensuring Access to Essential Products and Innovations. The investment in development by the Public/ Private Partnerships is likely to yield many new innovations and technologies, both vaccines and treatments. In order to ensure that these innovations reach the target populations, there is a need to figure out how to use existing health systems both to distribute the products (i.e., supply chain) and to promote adoption and adaptation.

The group agreed that Rockefeller could create enormous value by designing improved approaches and demonstrating the effectiveness, and recommended a set of steps to do that.

The Global Nature of "Threats:" The Need for Improved Surveillance. With the growth in travel and migration, the group agreed there would continue to be the rising threat of global pandemics. While new diseases may be emerging at roughly the same rate as before, the trends of globalization speed their spread and thus increase the threat of new pandemics. Globalization trends make it essential for health systems to improve surveillance and develop appropriate rapid response approaches.

The Lessons of the PPPs: Leveraging the Private Sector. In the past decade, the Foundation was instrumental in enlisting the private sector in launching numerous Public/Private Partnerships—particularly ones focused around the development of new drugs and vaccines. There was agreement that RF had only scratched the surface in how the private sector can be effectively leveraged to improve health outcomes—from utilizing Federal Express, which knows how to profitably manage a "cold chain" for delivering vaccines—to utilizing insurance and managed care expertise in developing ways to ensure appropriate risk sharing.

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The group agreed that the Foundation should support efforts to rethink the overall global architecture of health institutions and specific national and local issues in ensuring improved national and local health outcomes. But, in order to maximize its effectiveness in addressing the issues facing Global Health in 2007, the group thought Rockefeller should focus on the specific salient areas of need:

1 Surveillance systems—to track and respond to new diseases and outbreaks—monitoring the overall system rather than measuring specific diseases.

2 Defining the Required Competencies for Public Health Professionals—to ensure local expertise in managing the health system.

3 Ensuring access to technologies/social interventions—to ensure that the supply chain of health systems can respond to the opportunities likely to be presented by the "Verticals."

4 Using Information Technology to improve health care delivery and health systems by ensuring platforms for eHealth in the developing world.

5 Leveraging the Private Sector—using the sector that has historically been ignored by global health, but increasingly is seen as an essential tool in the financing and provision of health services.

The group examined all five areas in detail to discuss potential programs and set priorities. In identifying specific recommendations, the group sought steps that would leverage the unique attributes of the Rockefeller Foundation, specifically its heritage of leadership in identifying early the essential needs of the poor and excluded, and its ability to catalyze others and make a substantial difference despite comparatively limited financial resources.

The recommendations in each of the areas followed a consistent pattern, suggesting the types of initiatives where the leaders judged Rockefeller uniquely capable:

"Thinking" and Convening

- Assessing the economics and systems aspects of a problem to identify what needs to be done, and then experimenting and piloting approaches to demonstrate effectiveness. Bringing policymakers, public health professionals and other stakeholders together to set standards and policies.

Capacity Building

- Developing tools for training and knowledge sharing, as well as supporting the establishment of permanent institutions in the field, which can have an ongoing impact long after Rockefeller has moved to other initiatives.

Documenting Impact

- Developing programs to track the effectiveness of initiatives to help program managers adjust and improve programs.

The one area that was missing was the area of "scale-up." There was general agreement that the Rockefeller ability in thinking, convening, tool development, institution building and measuring would encourage others to scale up programs along the lines that RF's work points.

Pandemic Threats and Public Health Surveillance

Emerging infectious diseases have caused significant global human and economic loss and disproportionately threaten the health and livelihoods of poor people. Given the increasing interdependence of health—and the expected growth in new diseases and the impact of travel and migration on the speed of pandemic spreads —the group saw the need to to improve monitoring, speed identification of new diseases—and quickly identify ways to respond to them.

There was agreement on the unintended impact of historical approaches to surveillance:

- A sense in the "Global South" that the real goal of surveillance has been to "protect the North" from the diseases that arise in the South—as opposed to protecting the globe. Noting the recent stance in Indonesia over Avian influenza virus strains and vaccines, participants pointed out that when a country identified a new disease and isolates the virus which enables the production of a vaccine against that disease, they then have to pay full price for the vaccine that they have enabled.

- An awareness that the identification of new diseases leads to economic displacement where the disease is first identified—and thus unintended incentives that can prevent the sharing of information.

- A focus on specific diseases in surveillance programs—rather than a focus on monitoring overall public health. "We all live in our disease ghettos, instead of thinking about the overall system," one person said.

- A need for capacity in monitoring within the health systems of developing countries. Indeed, some pointed out that often the

private sector parts of a health system are the first to identify a new disease—but there the knowledge remains and there is often no way to capture that knowledge within the overall health system.

- A disconnect between monitoring and mechanisms to develop responses—particularly the need for rapid and low-cost deployment of diagnostic tools and vaccines.

There was agreement on the need to overcome these hurdles to ensuring cooperation and open exchange of information.

To underscore the fact that surveillance seeks to protect all, there was a desire to compensate the country providing the information about a new disease. Some suggested that when a country identifies the new disease, they should be paid for that information and that the DNA of the virus they identified is as much an economically exploitable asset as that country's natural resources. By rewarding the provision of information and equalizing incentives for sharing information—either through paying for the IP inherent in the provision of a new virus or through ensuring that the information provider feels the benefit of that information, one can begin to overcome the reluctance to share information.

To overcome the economic disincentives against reporting a new outbreak, there is a need to understand the economic impact of the potential displacement and a need for risk sharing and insurance so that the displaced sector of an economy does not bear the brunt of the cost of a new threat arising from that sector. This includes poor communities and villages whose livelihoods often depend on small scale poultry rearing.

There is a need for an "information architecture" that defines what needs to be tracked about the overall public health in order to move from a disease-focused surveillance to an overall health focus.

There is a need for tools and training in order to increase capacity in the developing world for monitoring and surveillance—and to enable all parts of a health sector to identify new information that needs to be shared across the system.

There is a need for increased links between the human medical field and a veterinary and agricultural science field—in order to speed an ecological understanding of diseases that jump from either animal to human or from agricultural to metropolitan area.

The group suggested that Rockefeller had the following opportunities for action:

"Thinking" and Convening

1 Determine how best to develop local capabilities in the Global South to improve surveillance—both within the overall health system and throughout the private and public sectors delivering health care today.

2 Work with global and national health institutions and policymakers to set a new architecture of what information we need to be tracking to ensure early detection of new diseases or outbreaks—from the individual patient to the population at large, leveraging information that already is resident, and needs to be shared:

   - Individual records
   - Service records
   - Resource tracking and records
   - National health accounts
   - Census
   - Surveys

3 Support regional networks and PPPs focused on developing new approaches in the identification of new diseases and in the development of appropriate responses.

4 Pilot new approaches to linking surveillance and rapid response, focused in a particular

area to enable one to assess the impact of such a system of tracking and response.

Capacity Building

5 Create new IT tools for training, overall monitoring and tracking—such as Wikis—to train and develop professional capacity in public health surveillance.

6 Improve tools for assessing the economic impact of displacement caused by surveillance—to build tools for compensating those who are displaced—and thus increase incentives for tracking to be effective.

Documenting Impact

7 Evaluate system resilience through integrated approaches to modeling.

Defining the Required Competencies for Public Health Professionals

In many ways, the Rockefeller Foundation actually created the field of Public Health in the early 20th century, in starting schools from China to Africa to South America—as well as supporting schools in the North. Given its historical role and the current challenges that the field faces, the group felt that the Foundation has a unique opportunity to support the Public Health field at the start of this century.

This is an enormously challenging time for Public Health. Many Schools of Public Health focus on academic work, but their students—who will seek to develop and implement programs and policy—often graduate without the tools to be innovative and effective in a changing world. As a result, in many countries, traditional PH professionals have become less effective in catalyzing sustainable social change. The group agreed on the need to work toward a new paradigm for professionals, including physicians, at local and national levels.

Historically, Public Health officials and education had focused on demography and epidemiology, but with current demands on public health, professionals require additional competencies including: health systems, organizational development, technology management, the economics of health, and an ability to assess the impact of health on overall development.

Academically, the Public Health field has gone through waves, first focusing on environmental issues such as hygiene, water, etc., and then focusing on issues of disease and epidemiology. Now, there is a need to synthesize the two and assess and affect the totality of prevention and intervention. Public Health professionals need the ability to better understand all the different ways to improve the health of the public—and ensure the continued economic development of a country.

To do that, the group supported seeking to make curriculums more experiential, ensuring ways to affect professionals both at the launch of their careers and at middle and senior levels and developing tools to improve knowledge sharing:

- People pointed out that business, law and public policy schools utilize case studies as a way of providing people with a base of experiential learning. Indeed, a number of people went so far as to suggest that schools of public health only award degrees to students after they have solved or addressed a specific public health problem—much as Ph.D.s are only awarded to students who have advanced their field through academic insight. According to people who are close to several Deans of Schools of Public Health, there was substantial support for revamping their curriculums to better reflect current needs and a willingness to work jointly on that.

- In addition to improving the curriculums for people entering the public health profession, people agreed on the need to improve training

and capabilities of people in the middle of their career—or nonpublic health professionals who assume positions of authority in public health systems. To this end there was support for building programs to train senior and mid-career professionals similar to what INCLEN did for clinical epidemiology and the evidence-based movement.

- There is also a need to build on the knowledge base of what works and what does not work in Public Health. New and better health systems research is needed with government funding equivalent to that supporting biomedical research. Also, just as the case study method can be an effective tool for learning, there was support for using it as a tool of professional understanding of what has worked and why in a complex system such as Public Health. For example, only now are academics studying and writing the definitive case studies of why and how the world was able to eradicate smallpox and polio. Historically, many people just thought they were addressed because of the development of effective vaccines—but now people are realizing that there was a whole set of required decisions and steps—from financial investment and prioritization, to launching distribution systems, to ensuring that all target populations were fully treated. The group supported building tools to enable Public Health professionals to expand the base of knowledge of what works and to enable global access to it.

There was agreement that the Global Health community was looking for the leadership of the Rockefeller Foundation to address the capability, capacity and knowledge gaps of Public Health Systems.

The group recommended that RF should pursue a public health renaissance through the following specific initiatives:

"Thinking" and Convening

1 Recreate and update the original Rose-Welch report, which the Rockefeller Foundation had developed a century ago, and which first launched schools of public health.

2 Bring together the deans of schools of Public Health and related stakeholders, and launch a cross-institutional effort to improve overall curriculums.

Capacity Building

3 Advance the research agenda for health systems and engage governmental funding equivalent to that supporting biomedical research.

4 Support an initiative to bring together a knowledge base of effective public health tools—reviewing the success and failure stories of the field.

5 Develop an ongoing program in health systems for training mid and senior level Public Health officials, particularly those who do not have public health professional training.

6 Seek to build or support new schools of public health in the South with emphasis on health systems strengthening.

7 Help support additional Public Health institution building the Global South (i.e., platforms, networks). A large number of the people who came from the South—even if they had received training in the "North" felt that the institutions that had been created in their regions had been critical to the development of both capacity in public health professionals as well as in improving and increasing the status of the overall profession.

Ensuring Access to Technologies and Social Innovations

In recent years, there have been many innovations with the potential to improve health, but they have not been accessible to all. Expanding the distribution of important existing technological and social innovations including those created and developed at the "bottom of the pyramid" has the potential to significantly benefit poor and vulnerable people. To do that, the group agreed on the need to overcome barriers to access including affordability, appropriateness, and the necessary delivery systems.

The investment and work of the PPPs on drug development over the past decade is likely to yield an "innovation pileup" in the next few years, with new treatments for many important diseases. If the people most affected by these diseases are to capture the value from that investment, foundations need to take steps now to ensure that the target populations will receive them.

The group agreed that there would not be one particular approach that systems could develop that would enable improved economic distribution and "take-up" of new innovations and "take-up" among the target populations—and that the time was now when organizations and companies needed to think about how these innovations were going to be distributed.

People agreed that the first step was to learn what had worked in the past and why. For example, people complained that prior to the launch of the HPV vaccine, there was not sufficient planning about how to get it to the populations that needed it most in the developing world. There was a fair amount of comment about using new tools of dissemination and analysis. Even though the case method of analysis has its detractors, there was strong belief that it could be a helpful tool for public health professionals in figuring out what kind of steps are most effective. For example, there was continued excitement about trying to ensure focus on figuring out why certain tools work and others do not, not just for high-cost pharmaceutical and vaccine interventions but also for lower-cost innovations such as bed nets.

The group identified the following challenges:

- A need for better information among local public health authorities about innovations about to come online or already available.
- A need for a better ability to track and measure what innovations are reaching target populations.
- A need for a better understanding of what types of approaches have worked in the past and why.
- A need for a better sense of what works within different types of health systems.
- The need for further experimentation and analysis of the economics of "the last mile" and why certain types of products—e.g., Coca-Cola—are available in resource poor remote settings—and yet essential health innovations and technologies, regardless of actual cost, are not available.
- The need for a better understanding of the economics of different health systems and how to better leverage those economics to ensure the distribution and take-up of new innovations.

The group recommended that the Rockefeller Foundation focus on the following approaches to help ensure access to innovations:

"Thinking" and Convening

1 Engage at individual country level—and understand what can work and not work—and then develop lower-cost pilots—across

different population segments/target groups and the expected pileup of innovations—to understand how to affect an individual country's system to deliver those innovations.

- The purpose of these pilots would be to identify effective tools and approaches—and enable others to use that learning to invest in and scale up those approaches.

2 Work with the private sector—particularly companies with substantial success in distributing the products in the developing world, to get a better understanding of what types of approaches have worked. Seek to establish a set of PPPs on improved social marketing and distribution.

Capacity Building

3 Develop education tools—leveraging "Web 2.0" technologies such as "Wikis" and "social networking"—to create a database of information about what innovations are likely to come on or are already available—in order to help public health professionals get a better understanding of the tools that they could use and how to use them.

4 Promote such educational tools across countries to enable an expansion of both the knowledge base and the benefits.

5 Develop an inventory of likely products/innovations coming on line—and create a framework to understand, track and support planning for its distribution.

Documenting Impact

6 Create an "IMS for the Global South"—IMS is the company that tracks prescribing patterns and drug penetration in the United States and Europe and parts of Asia. The information is used extensively by pharmaceutical companies and health system managers seeking to understand how doctors are using their products—and how patients are complying with their prescriptions. RF could invest in creating an organization focused on tracking the use and penetration of different interventions throughout the developing world.

- One could envision either working directly with IMS to set up some kind of "Information Public/Private Partnership" focused on tracking in the developing world—or building a business plan to create an NGO such as INCLEN or INDEPTH to do such tracking in the Global South.

Using Information Technology to Improve Health Care Delivery and Health Systems—eHealth

Information and communications technology (ICT) and health are two of the largest and fastest growing sectors in the economy, yet they barely overlap. Until recently, there has been little policy attention to the potential of ICTs for improving health in developing countries, and the results are fragmented efforts in telemedicine, electronic health records and public health informatics.

The group strongly believed that eHealth tools, when properly deployed, could create substantial value in resource-constrained settings:

- The tools can enable an up-to-date knowledge base that health professionals can use for training and tracking.

- The tools can bring important information to the public—including making them better consumers of health.

- The tools can reduce cost and improve the coverage of training health professionals; for example, Brazilian health authorities have

been able to use "distance learning" tools to train thousands of health professionals across the country which would have been impossible without ICT.

- They can strengthen and improve care of patients; In Kenya, for example, a basic EMR (Electronic Medical Record) has been shown to enable improved and increased care of patients in several clinics, using open standard platforms like OpenMRS.

- They can reduce the cost of health care—and thus enable better health care delivery within the budget constraints of remote and resource-poor settings.

There was agreement that in order for the developing world to be able to take advantage of the systems, the following was required:

- A set of open standards that would enable people to build interoperational or integrated systems—in this regard, the "Global South," without many legacy systems, is at an advantage over the "North."

- A new architecture of what information we need to be tracking—from the individual patient to the population at large:

  - Census
  - Surveys
  - Individual records
  - Service records
  - Resource tracking and records
  - National health accounts

- A platform of connectedness that one could build upon. There was particular excitement about the potential of cell phone networks that are already in place and growing fast in developing countries—but there was also optimism that given the ever-declining cost of IT, there was likely to be substantial Internet connectivity within the next 10 years.

- A demonstration to the private sector that they would have sufficient tools to ensure that eHealth systems would be deployed profitably in the "Global South."

The group recommended:

"Thinking" and Convening

1 Convene a group of key stakeholders—Medical, Government, the Private Sector and Civil Society to set standards for using health care information and to define the needed health information architecture:

   - What needs to be tracked
   - What can be shared and what needs to remain private
   - Who will have access
   - How the date will drive decision making and insight

2 Create a specific, pilot Business Plan for health information systems:

   - Show how it can benefit the health system
   - Show how it can drive the health system itself
   - Leverage the Conference Center in Bellagio to develop and align the global agenda for eHealth

Capacity Building

3 Determine requirements for adopting technologies. What steps will be required to implement it and what tools will be required to train medical personnel in using it.

4 Create a Public/Private Partnership focused on eHealth in the developing world. Enable it to define a set of open standards and monitor the implementation and value created by initial set of implementations.

Documenting Impact

5 Develop approaches to track the implementation of such systems and assess and share the value created by it (e.g., a Global Observatory for eHealth).

Leveraging the Private Sector

The health sector reform of the 1990s led to decentralization and privatization of many health services (private sector includes informal and nonprofit providers). Today, private expenditure accounts for most health expenditures in developing countries (e.g., 70 percent in Uganda; over 80 percent in Cambodia), more so among the poor. Yet the culture of health professionals and systems evolved a century earlier cannot see well beyond the public lens of governmental services (the pharmaceutical industry being a recent exception). This neglect could be costly to the poor at a time of growing health spending around the world. While the public health community does debate the value that the private sector provides in developing world health, its existence cannot be ignored and the sector needs to be engaged with better evidence and solutions. Some believe that new capacity and novel models in the private sector can lead to broader coverage, greater efficiency and better quality of health services for the poor in developing countries.

The panel agreed both on the importance of the private sector, and that the sector—for-profit institutions delivering care in the developing world—had received scant attention from global health authorities. They agreed that it was essential to figure out how to leverage the sector more effectively, ensure they are receiving adequate training and monitor their delivery of care if we are to improve health in resource-poor settings.

Significantly, the panel focus on the private sector came last even as all the previous panels had highlighted the importance of the topic. In surveillance, the private sector was seen as often the first identifier of new diseases or health shifts. In the discussion of public health competencies, there was a focus on public health systems doing a better job of working with their private sector—and training professionals to do that. In the discussion of access to innovation, people pointed to the need to enlist the private sector in supporting both distribution and "take-up" of new innovations. Finally, in the discussion of eHealth, people agreed on the need to attract the private sector.

Working with the private sector was seen as important for two opposing reasons: Number one, there was a need to develop approaches to training professionals and to monitoring care provided in order to assess and improve care and two, there was a belief that there were competencies that only the private sector had and that the public sector was yet to acquire. For example, the group felt that private health care management and insurance companies had an understanding of how to manage risk sharing and practice management, which could help in improving the appropriate balance of costs and benefits in the public sector.

Still, there is today very limited understanding of how the private sector works in the Global South and how the public health system can best utilize it. One person pointed out that in preparation for "Pocantico II" they had sought to look up peer review articles on the private health care sector in the developing world—and found only five published papers.

As a result, the panel agreed on the importance of:

- Building more evidence—and building on the limited set of papers already published.
- Improving how public health authorities use that evidence to affect policy with the private sector. There was a desire to develop better approaches to reviewing evidence and

understanding about the private sector—and more rapidly utilizing it.

- Figuring out how to ensure that the private sector continue to improve the care it is providing—and appropriately serve the poor in any given country.

Although evidence is limited, there was agreement that there are several types of private sector institutions in the developing world. In particular, in many countries there is a segment seeking to serve the elite/wealthier populations in a country—providing the kind of hospital and medical care considered by their patients to be superior to those available through the government system; and there is another segment, for example, drug peddlers, who are typically badly trained and usually serving the hardest to reach, poorest part of the population.

Within that taxonomy, there was agreement that the public health authorities should seek to figure out how to expand the reach of the "elite" private sector, ensuring that it serves more than just the elite—and how to improve the care provided by the "drug peddler" segment—and best monitor and regulate the institutions.

Within the theme of improving health systems and building local capabilities and capacity, the group thought that the Foundation should consider supporting the following:

"Thinking" and Convening

1 Develop approaches for countries to monitor and regulate their Health Care Private Sector in order to improve services and ensure care to all population groups in a country. In particular, the group recommended figuring out how to leverage local professional societies as the most effective way to develop the capacity to regulate the private sector.

2 Leverage private sector expertise with risk sharing and practice management by seeking to set up a Public/Private Partnership with insurers and others in health management.

Capacity Building

3 Support the development of systems and tools to improve training with the private sector, leveraging RF efforts in Public Health Competencies.

Documenting Impact

4 Pilot the rollout of systems to monitor and regulate a country's private sector in health in order to answer, on an ongoing basis:

   - The efficiency of the private sector
   - The level of services to different segments of the population

Looking for Leadership

There was clear support and understanding that the Foundation must catalyze efforts with regard to improving health systems—in the four basic topic areas discussed—generating better thinking, convening the right partners, measuring effectiveness and ensuring institution building. There was agreement that the Rockefeller Foundation had always been able to take superior strategic views and effectively "punch above its weight."

As one person's summary reflections concluded:

> *[You have] a rich agenda of public health and health care system initiatives…There are huge opportunities in the systems approach given the disease-focus of larger funding flows. The ultimate impact of these disease-targeted activities will be dependent on the strength of the underlying health systems. If called, each of us can be counted upon to assist RF's future endeavors. We look forward to RF's well-deserved leadership in the years ahead.*

Opening Address

Judith Rodin, President, The Rockefeller Foundation

GOOD AFTERNOON AND WELCOME. It is a great privilege to have you—leaders in the field of global health—participating in this conference.

Over the last decade, you have shepherded the great progress that has been made in public health. And on behalf of the Rockefeller Foundation, I want to express our deep appreciation for your support and guidance as we choose and chart our next set of activities in global health.

At the inaugural meeting of the Rockefeller Foundation's board in 1913, Frederick Gates, John D. Senior's most trusted aide, said this:

> *If science and education are the brain and nervous system of civilization, health is the heart. It is the organ that pushes the vital fluid to every part of the social organism.*

Over the Foundation's storied history, public health has, indeed, been the heart of our work, providing the steady pulse that has animated so many of our successes and milestones in the field:

- Establishing the very field of public health and spurring efforts to spread its benefits around the world.
- Founding the first Western medical institution in China, the Peking Union Medical College, which will celebrate its 90th anniversary next month.
- Leading control efforts against 20th-century's scourges of the poor like hookworm, malaria and yellow fever.

Just a decade ago, the Foundation helped redefine the global health agenda from this very hall, convening a meeting—attended, in fact, by many of you—that helped steer remarkable transformations in global health.

It helped catalyze new leadership, institutions, arrangements, and helped deliver previously unimaginable resources—by engaging partners: governments, other foundations, the private sector—to combat diseases that are ravaging the physical, economic and social well-being of hundreds of millions of poor and vulnerable people.

Today, many believe that the field of global health is at another inflection point. The very nature of wellness and illness around the world is changing—as are the health systems evolving to address them—all driven all by powerful global forces. While globalization has sparked tremendous advances, its benefits haven't been universally shared. We have learned that globalization can be unequal, unsustainable and often unpredictable—sometimes affecting all of us, not just the poor and vulnerable.

We face new health vulnerabilities in the new, globalized world:

- New viruses that can travel more rapidly, transforming local afflictions into worldwide epidemics;
- A modern lifestyle that travels just as fast, contributing to swelling epidemics of noncommunicable diseases;
- And a human resources crisis—identified by the Joint Learning Initiative led by many in this room—that is intimately linked to transnational labor economics and migration.

But the script of globalization is not fully written. And we at the Foundation are working to harness its forces to enhance opportunities,

expand the benefits of globalization for more people around the world, and ensure that the negative consequences of globalization are more clearly understood and managed.

As we at the Rockefeller Foundation take a global perspective, we expect our future work to continue to address compelling, pressing global problems: we will search for innovation and, since innovation emerges unpredictably, we will operate in a way that keeps us flexible and nimble—open to new ideas and new ways of working.

But think for a moment about our challenge.

If we seek to produce or catalyze efforts to bring about significant change in the lives of poor and vulnerable people around the world with only $200 million a year to spend, we have to focus on efforts that can produce outstandingly disproportionate results.

So, my plea and challenge to you in this meeting is not to set the next decade's global health agenda—though that is a critical and important task.

But to think with us and with one another about what is the most crucial role for the Rockefeller Foundation to play in this mapping of critical needs—where, by virtue of our own history, convening power and financial resources, we could unleash major and significant cascading changes in social systems, in government policies and private action with our investments.

We know that there is a fundamental need to transform health systems around the world—both the global system and also local systems on the ground.

This need should be seen against the backdrop of vertical disease-control programs that have found only mixed success and emerging health spending trends that compel us to change how we design and deliver services in the developed and developing world.

While, this meeting is organized to build on that knowledge with regards to four issues I urge you to think deeply about these challenges in your discussion.

You will be talking about:

- Approaches to better prepare for pandemic threats in regional epicenters
- Competencies required by public health professionals in the 21st century and how to build them
- How to leverage the advantages of technology and innovations in medicine for the poor and vulnerable, including eHealth, a possible new frontier for technology in the global South
- And, finally, beyond the product-development partnerships of the last decade, if there are new or more robust roles for the private sector to play in financing and furnishing health services for the people who need them most

Are these fertile enough areas? Can we have the kind of impact I just described? Are there better fits for the Foundation?

Over the course of our history, the Rockefeller Foundation has been privileged to collaborate with leading experts and stakeholders like yourselves. While our program focus and strategy may be evolving, one thing remains constant. Now, as at our founding, the Foundation focuses on identifying and supporting breakthrough solutions, and on understanding where and how we can maximize our impact—unleashing and leveraging the impact of others.

At the outset of the Rockefeller Foundation's foray into the field of public health, Wickliffe Rose—who shaped the Foundation's early efforts to build a system of public health, not just wipe out one disease—said that the Rockefeller Foundation should be "a partner, but not a patron."

I think it is in that spirit that we begin this dialogue on the challenges and opportunities we face together. We appreciate your willingness to participate. We welcome you again—and thank you for coming.

Keynote Address

Asha-Rose Migiro, Deputy Secretary-General, United Nations

LADIES AND GENTLEMEN: Thank you all very much. And thanks to President Judith Rodin from the Rockefeller Foundation for inviting me to this important event.

I am very pleased to be here tonight at this beautiful estate for what I trust will be an open and frank discussion about how we can best work together on the critical challenges we face in the area of global health.

The Secretary-General and I are both fully committed to work in this area. Indeed, the SG has launched and is chairing an Africa MDG Steering Group to mobilize the U.N. system and major development partners, including the Bretton Woods Institutions, to support African countries' efforts to achieve the Millennium Development Goals. We want to make sure that this initiative, which will have in part a health focus, ties in with other global health programs.

Health, development and global security are inextricably linked. Investment in health is a cornerstone of economic growth and development, and a prerequisite for meeting many of the Millennium Development Goals. Moreover, the security of all countries is today increasingly dependent on the capacity of each to act effectively, and collectively, to contain and to minimize health threats.

Today, we are faced with unprecedented challenges. WHO's 2007 World Health Report shows how the world is at increasing risk of disease outbreaks, epidemics, industrial accidents, natural disasters and other health emergencies, which can rapidly become threats to global public health security.

To overcome these challenges, we all need to do better together. At the midpoint towards the MDGs—the time to act together is now. MDGs 4, 5, and 6—aiming at reducing maternal and child mortality and combating the scourges of AIDS, malaria and tuberculosis—are where we still face enormous challenges. These three goals are in many ways critical for the achievement of all the other goals.

We need to redouble our efforts and come up with a common agenda and objectives that look comprehensively at how to strengthen, and in many cases build, health systems as a whole. Indeed, while progress has been made against specific diseases in some cases, I am always hearing complaints that global health funding cannot be disbursed quickly enough or equitably because of bottlenecks related to shortages of trained health staff and limited system capacity. In some cases, successful interventions aimed at tackling a particular disease can even mean that scarce resources are drained away from tackling other diseases. In short, we need to move from "silos to systems."

The timing for such action could not be better. Global health is a field now enjoying unprecedented attention, combined with emerging new and powerful actors.

There are now more than 100 health agencies and Global Health Partnerships involved in Global Health—these include U.N. agencies, civil society, foundations, the private sector, governments, and so on. Some such as GAVI and the Global Fund to Fight AIDS, TB and Malaria have been very successful in raising the profiles of targeted diseases or thematic areas.

In addition, an unprecedented level of resources is now available for global health. The Gates Foundation, for example, has become a leading donor and is advancing the maternal, newborn and child-survival agenda.

Also, health is attracting substantial political interest. One example of this is the Global Business Plan for MDGs 4 and 5 led by the Norwegian Prime Minister. In addition, Prime Minister Gordon Brown and Chancellor Merkel launched

on 5 September an international health partnership aimed at directing medical assistance more effectively to some of the world's poorest countries.

This enormous interest in health presents us with an unparallel opportunity to make headway towards the three MDG health targets and ultimately towards the MDGs as a whole.

But along with all of these new players, resources and partnerships comes certain risks. The global health environment is increasingly complex and fragmented, and there is no clear system for how to coordinate action.

I know very well from my experience as a Minister in government that national governments are concerned about the number of new and parallel initiatives and the transaction costs associated with them. In my own country, Tanzania, we have worked hard to develop local capacity, including for the health system. But it is very difficult to resist donor initiatives—with all the resources and expertise and so on—even if their programs are disease-specific.

Perhaps one question to ask before we launch a new initiative is: can the same objective be reached through re-calibrating and exploiting ongoing programs? At the end of the day, we must not add to the burden that countries already face in responding to multiple donors and we must maximize the impact of our resources.

Here we can learn from the global response to AIDS. UNAIDS has galvanized support for the "Three Ones" principle—one national plan, one coordination mechanism and one monitoring system—to improve coordination in the HIV sector. We need to promote similar principles to mobilize governments and their development partners around the formulation and implementation of MDG-focused national plans and budgets.

Linking all these new initiatives with the need for genuinely country-owned programs is a challenge we have to tackle. Indeed, we must make the Paris agenda of aid harmonization and alignment fully operational and work together to reshape the global health landscape so that we can work towards our areas of comparative advantage.

This means involving not only big players with big funds, but the host of other actors that can and do contribute to this area—including the private sectors and the NGOs.

And, at all times, we need to measure the results of our work by what counts—our collective progress in decreasing mortality across the board, particularly among women and children in the countries where it is needed most.

Encouragingly, in July I attended an informal meeting of the heads of eight agencies working on global health—and this too was the thrust of the discussion: how we can better pool our expertise and resources. I was delighted that the outcomes of that discussion included commitments for all the involved agencies to work together, to better define their individual and collective accountabilities for better and faster results, and to engage emerging global initiatives on health-systems strengthening in a coordinated manner.

These are impressive commitments that we must build on. I am optimistic that it can be done. We have the technical know-how. We have the financial resources. And, judging by your presence here tonight, and your commitment to examine honestly how we can better serve the needs of the poor, there is no shortage of goodwill. What we collectively now need is an urgent, sustained and dedicated effort to translate all our words and intentions into action on the ground.

So, as we set about our discussions tonight, let us keep these thoughts in our minds. I would welcome your ideas on how you see the role of the U.N. system in addressing these challenges and how support can be further mobilized to address the health-related MDGs.

I would also encourage you, during your discussions, to think about what role the SG and I could play in advancing any of the objectives discussed at this retreat—we would welcome your suggestions and ideas on this critical issue and stand ready to be engaged and help as needed.

Once again, let me thank you for kind attention. I look forward to working with you all on this critical agenda.

Meeting Reflections

Lincoln C. Chen, M.D., President, China Medical Board

THESE REFLECTIONS ADDRESS the health strategies of the Rockefeller Foundation (RF), responding to the RF President's opening invitation to the participants. Initially, I had thought that these reflections (pulled together during lunch) would not necessarily match participant commentaries. But the thrust of the many interventions in the past hour brings my reflections much closer to a group consensus than I had originally imagined.

Pocantico II has brought together more than 30 global health leaders, demonstrating yet again that when the RF calls, the best come! If the host had been the "John Doe Foundation," attendance would have been very different. Carefully selected participants came from all the world's developing regions, leaders of foundations and international agencies, and RF trustees and staff. Invitation to four RF alumni (three former staff and one former Trustee) was a welcomed expression of inclusion. Pocantico II was adroitly crafted covering a lot of ground in just 1.5 days. After a welcoming speech by the RF President, Judith Rodin, there was an opening panel exchange on the changing context of global health. The U.N. Deputy Secretary-General stimulated a dinner discussion on U.N. reforms in global health. Today, we had five panel sessions on specific areas of program work, concluding with an open session for programmatic suggestions.

The President eloquently articulated RF's strategy. She recounted RF's rich legacy and achievements in global health. RF's overarching goal is to harness the power of globalization to benefit the poor. With an annual budget of $200 million for all sectors, RF has been restructured into a matrix—to avoid silos, disciplinary boundaries and rigidity, and to encourage "agility, nimbleness and leverage." Her message was very clear: RF is serious about global health. There is no question of whether. The purpose of Pocantico II is to seek advice: What to do? How to do it?

Global Health Trends

Global health was described as a "complex system" that is dynamic, interactive, unpredictable and sometimes chaotic. The field has experienced a highly surprising and entirely unexpected turn around over the past decade—from weak aid levels, rigid institutions, feeble energy and low visibility to global health prominence embraced by presidents and prime ministers, the major theme of G8 and U.N. gatherings, expanding press and media coverage, entry of celebrities like Bono, and growing NGO activism. Unimaginable a decade ago, aid budgets in health have doubled and several billion-dollar initiatives have been launched.

Some of the turnaround was sparked by newly emerging diseases like HIV/AIDS. Some has been driven by moral imperatives of what Bill Foege has called "spectacular inequities." Global health is recognized as "good politics" on a global stage, a field of cooperation and contestation. Promoting global health in an increasingly inequitable globalizing world is a visible demonstration of moral and political leadership.

The critical importance of country capacity to manage change was underscored. Where country capacity is strong, many threats and fragmented international responses can be brought into effective coherence. Dr. Viroj, a Thai health economist, trained by Ann Mills at the London School of Tropical Medicine and Hygiene was cited as an example of strengthening national capacity to positively impact upon health policies in Thailand. Worries were expressed about management of these complexities at the global level. WHO

was crafted for an earlier era, and buffeted by the Cold War, finds itself increasingly constrained in managing global governance. Noteworthy was the founding of PAHO in 1902 which was merged into the WHO and the failed experiment with the League of Nations in the 1930s.

We need to understand better and achieve consensus over the changing conceptual base of global rather than international health. We have entered a new world of transnational risks that require transnational cooperation. The challenge is to resolve the "sovereignty paradox" where national governments have health responsibilities but alone are incapable of tackling the problems. Solutions must come from international cooperation, so-called "sovereignty sharing," through mechanisms for joint work. Some warned of "dead end sovereignty sharing." Southern countries naturally fear that once their absolute sovereignty is compromised, it may not be easily regained in a world of asymmetry in the exercise of political power.

Upon reflection, should we have been surprised over these dramatic developments? Careful examination of health history should have led us to anticipate the turnabout. After all, the last great era of accelerating globalization towards the end of 19th century also fueled massive health shifts. The five cholera pandemics that accompanied accelerating trade swept across Europe and North America profoundly changing the health landscape. Public fears propelled political action. International health cooperation, crystallized by the first 1852 conference, sparked the process of global health governance—direct ancestors to the International Health Regulations, the WHO and recent global initiatives. Why shouldn't globalization and technologic transformation in our modern times have sparked similar health dynamics?

More changes will come! The technological revolution is hardly over; new platforms for collaborations are just beginning; and the private sector is increasingly engaged. The political and moral discourse on global health reaffirms the values of global solidarity and human rights.

The "Philanthropic Paradox"

RF's health challenge is what I would call—following the sovereignty concept—a "philanthropic paradox." In economics, if the 20th is America's century, some say the 21st is China's century. In global health, if the 20th is Rockefeller's century, will the 21st be the Gates' century? The paradox is that Rockefeller has built a deservedly giant reputation, but bigger players with lots more money are flooding into the health space—e.g., Gates, Wellcome, Slim.

Under these circumstances, RF has two choices. The simplest is to withdraw and leave the playing fields to those with more money. This is equivalent to RF taking marbles off the table and going home. But the cost is to lose all the brand name, reputation and social capital that RF has built over a century. The tougher choice is for RF to stay on the playing field. But it will have to craft a fresh strategy to use less money and depend more on RF's brand name, knowledge, contacts and reputation. To stay in the game, the asset base of RF's health work has to be reconfigured—an asset rearrangement I will talk about at the end.

Actually, RF has been navigating this philanthropic paradox since 1950. RF enjoyed a dominant position in health in the first half of the 20th century when nearly 50 percent of the Foundation's budget was devoted to health and RF activities dwarfed other actors. In those decades, RF even considered the merger of its health division with the League of Nations. RF staff member, Fred Soper influenced the final text of the WHO constitution by insisting that PAHO retain its autonomy. Since 1950, RF's political and financial space has shrunk. WHO became the formal intergovernmental agency for global health, and governmental aid donors dominated health aid flows. In recent decades, RF adjusted mostly by downsizing and focusing on major initiatives such as "university development" and the "great neglected diseases."

Pocantico I in 1996 illustrated this historical RF struggle. By the mid-1990s, RF's health

program had gone into declining downward spiral. There was one lone RF health officer left holding the fort. RF provided a $25,000 grant to David Bell and me then at Harvard to review global health governance during the final legs of the Nakajima era and before the Brundtland era at the WHO. Our assessment was presented at Pocantico I in 1996 when global health leaders gathered to discuss how to strengthen the global system. I still remember vividly Ken Prewitt, previously departed RF vice president, scolding the group: "Sixteen of you turned down my search for new RF health director. What is RF doing wrong? If we don't get a turnaround, RF will be out of health completely!"

To achieve consensus on global health governance and in recognizing the dangers of "dead end sovereignty sharing," RF funded a series of regional consultations led by Mexico's Jaime Sepulveda, the recently appointed director at Gates Foundation. The resultant regional and global consensus was published in The Lancet. At that same time, I accepted an invitation to join the RF staff. Fortunately for all of us, Julio Frenk, a Pocantico participant, joined the Brundtland administration, giving RF an opportunity to channel its support for major reforms in WHO.

The turnaround of RF health program during the five years 1997–2002 has been truly spectacular—but inadequately recognized. Seth Berkeley launched the International AIDS Vaccine Initiative (IAVI) with $5 million, now having mobilized more than $700 million a decade later. Seth's Public Health School Without Walls (PHSWOW), the topic of our second panel today, developed capacities hugely appreciated in Uganda and Vietnam. Tim Evans created the RF health equity program that produced many breakthroughs too numerous to cite here. Few today know that Tim's Bellagio conference on vaccines seeded the billion dollar Global Alliance on Vaccination and Immunization (GAVI). I still remember when Tim and I had to call on Dr. Brundtland to fire a final warning shot over WHO's bow that it would be held accountable for immunization failures unless WHO reversed its proprietary position. Ariel dragged me and Bill Foege to South Africa to gain the support of the "TB mafia" to support the TB Drug Alliance. RF invested altogether $15 million in a partnership that has now garnered more than $200 million. The Alliance is on the verge of developing four to five new anti-TB drugs with the potential to save millions of lives. Tim and Ariel also launched the Joint Learning Initiative to landscape and advocate for workforce development. RF invested $2 million to launch an initiative that now commands $30 million by a Global Alliance that is being called upon to shape billions of dollars over the coming decade.

The key lesson from Pocantico I and II is that RF health programs, struggling with the philanthropic paradox, have experienced periods of decline but also bursts of revitalization. In the revitalized periods, RF was able to make truly spectacular breakthroughs, even with very modest resources. Indeed, an important RF lesson is that philanthropic breakthroughs need not be constrained by the size of the wallet. Leadership and brand name can trump dollars!

Looking Ahead

Ariel Pablos-Méndez has put on the table five potential program areas—two in public health on pandemics and educational competencies and three in health care on promoting access, eHealth, and the private sector. Participants in the last session offered other candidates, for example women's health. Several suggested more systematic landscaping and deliberations on RF program theme. In moving forward, if history is to be a guide for the future, RF should pay particular attention to program focus, institutional learning and its people.

While each of the panel discussions was lively, we were obviously only scratching the surface. After all, any one of the themes could have constituted an entirely new program! For the future, just an ad hoc series of RF global health activities would be disappointing. RF must articulate a program niche to focus its financial and staff

resources and also to signal external constituencies where RF intends to concentrate its efforts. These constituents are not just grant-seekers but also potential co-investors. An explicit articulation of RF's niche and focus, including how it intends to work globally and relate locally, is an imperative. To construct a coherent portfolio, RF health program leaders will require some sense of delegated budget authority. If health, or any other sector, simply competes ad hoc for pooled central funds, RF will find it difficult to mount a sustained program. Establishing niche and focus communicates to external constituencies how RF intends to translate its values, vision and mission.

RF's productivity will be dependent upon its learning and decision-making system. These have internal and external dimensions. "Nimbleness," an admired quality of staying alert to new opportunities, could be balanced by a term like steadfastness or durability to encourage sustained problem-solving engagement. "Leveraging" is appropriate to a foundation seeking to maximum good, but it could be balanced by emphasizing partnership, as the RF President did when she quoted Wickliffe Rose: "not patronage but partnership." In other words, to overcome the philanthropic paradox, RF must pursue "philanthropic sharing."

Two additional terms are problem-solving and passion. RF's history of success comes from its devotion to solving real-world health problems using an iterative action-learning cycle. The field of public health was developed because RF learned that hookworm control needed public health professionals. RF's Nobel Prize in developing yellow fever vaccine came because the field pushed for vaccine development. "Philanthropic passion" is exemplified by Frederick Gates, who quoted by the RF President was a Baptist minister who fervently believed in good health—to the point where controlling disease would actually also solve social problems! Passion also was a hallmark of Abraham Flexner, a humanist in medical education and Wickliffe Rose, a philosopher in disease control.

These leaders were neither doctors nor the president of RF. It is unnecessary for health leaders to be a doctor or for an organizational leader to be publicly identified with all aspects of a multisectoral foundation. Key is that RF health leaders were empowered to pursue their philanthropic passion with authority and enterprise. After all, good programming is produced by good people. Here RF is blessed with having attracted back Ariel Pablos-Méndez, an acknowledged global health professional, scientist and leader with an outstanding record in philanthropy, the academy and WHO. Ariel commands trust because he has always worked collaboratively, and he has the skills to navigate philanthropic sharing for tackling RF's philanthropic paradox.

In advancing RF programs, Ariel has laid out a rich agenda of public health and health care system initiatives. He echoed the overwhelming suggestions of participants that RF should concentrate on building the capacity of health systems at both the national/local and global/regional levels. There are huge opportunities in the systems approach given the disease-focus of larger funding flows. The ultimate impact of these disease-targeted activities will be dependent on the strength of the underlying health systems.

If called, each of us can be counted upon to assist RF's future endeavors. We look forward to RF's well-deserved leadership in the years ahead.

Participant Biographies

Participants from left to right: Karl Brown, Lincoln Chen, Mirta Roses Periago, Arnon Mishkin, Yunkap Kwankam, Sally Stansfield, Nils Daulaire, Neil de Crescenzo, Paulo Buss, Harvey V. Fineberg, Tara Acharya, Tim Evans, Julio Frenk, Ariel Pablos-Méndez, Seth Berkley, Charlanne Burke, David de Ferranti, Mark Walport, Jim Yong Kim, Anne Mills, Chris Elias, Suwit Wibulpolprasert, Jo Ivey Boufford.

Not Pictured: Laurie Garrett, Margaret Hamburg, Asha-Rose Migiro, Robert C. Orr, Joy Phumaphi, Judith Rodin, John W. Rowe, K. Srinath Reddy.

Tara Acharya, Ph.D.

DR. TARA ACHARYA is an Associate Director at the Rockefeller Foundation, working in the areas of Innovation for Development; the impact of Pandemics on Health and Livelihoods; and Access to Technologies. She was previously a consultant to the Rockefeller Foundation and to the Bill & Melinda Gates Foundation, working on science and technology innovation for global health, with a focus on the growing role of developing countries in innovation. Prior to this, she was a research associate at the University of Toronto, where she worked on biotechnology solutions for the Millennium Development Goals, and on the Gates Foundation's Grand Challenges in Global Health. Her prior experience is as a scientist in the biotechnology industry, at Genaissance Pharmaceuticals and at Celera Genomics. She is on the Board of Directors of a New York-based organization called Sanctuary for Families which helps rehabilitate families that are the victims of domestic abuse. Tara also volunteers for the Indian Institute for Natural Resources Management, an NGO based in India which helps train women in skills for self-employment and economic generation activities. She has a Ph.D. in Biochemistry and a Master's in Public Health, both from Yale University.

Seth Berkley, M.D.

SETH BERKLEY, President, CEO and founder of the International AIDS Vaccine Initiative, a global not-for-profit organization, operational in 24 countries, working to ensure the development of safe, effective, accessible, preventive HIV vaccines for use throughout the world. He is a medical doctor specializing in infectious disease epidemiology and international health. Prior to founding IAVI in 1996, Dr. Berkley was the Associate Director of the Health Sciences Division at the Rockefeller Foundation. He has worked for the Center for Infectious Diseases of the U.S. Centers for Disease Control,

the Massachusetts Department of Public Health, and for the Carter Center, where he was assigned as an epidemiologist at the Ministry of Health in Uganda. In Africa, Dr. Berkley played a key role in Uganda's national HIV sero-survey and helped develop its National AIDS Control programs. He is an adjunct Professor of Public Health at Columbia University and an adjunct Professor of Medicine at Brown University, sits on a number of international steering committees and corporate and not-for-profit boards and has consulted or worked in over 25 countries in Asia, Africa and Latin America. The author of over 85 publications, Dr. Berkley has written extensively on infectious disease and frequently serves as a media commentator on health technology development, AIDS and global health issues. He received his undergraduate and medical degrees from Brown University and trained in Internal Medicine at Harvard University.

Jo Ivey Boufford, M.D.

JO IVEY BOUFFORD, M.D., is President of The New York Academy of Medicine. Dr. Boufford is Professor of Public Service, Health Policy and Management at the Robert F. Wagner Graduate School of Public Service and Clinical Professor of Pediatrics at New York University School of Medicine. She served as Dean of the Robert F. Wagner Graduate School of Public Service at New York University from June 1997 to November 2002.

Prior to that, she served as Principal Deputy Assistant Secretary for Health in the U.S. Department of Health and Human Services (HHS) from November 1993 to January 1997, and as Acting Assistant Secretary from January 1997 to May 1997. While at HHS, she served as the U.S. representative on the Executive Board of the World Health Organization (WHO) from 1994–1997. From May 1991 to September 1993, Dr. Boufford served as Director of the King's Fund College, London, England. She served as President of the New York City Health and Hospitals Corporation (HHC), the largest municipal system in the United States, from December 1985 until October 1989.

Dr. Boufford was awarded a Robert Wood Johnson Health Policy Fellowship at the Institute of Medicine in Washington, D.C. for 1979–1980. She served as a member of the National Council on Graduate Medical Education and belongs to several advisory bodies. She was President of the National Association of Schools of Public Affairs and Administration in 2002–2003. She was elected to membership in the Institute of Medicine (IOM) in 1992 and is a member of its Executive Council, Board on Global Health. She has been a Fellow of The New York Academy of Medicine since 1988 and a Trustee since 2004.

She received an Honorary Doctorate of Science degree from the State University of New York, Brooklyn, in May 1992. Dr. Boufford attended Wellesley College for two years and received her B.A. (Psychology) magna cum laude from the University of Michigan, and her M.D., with distinction, from the University of Michigan Medical School. She is Board Certified in pediatrics.

Karl Brown

KARL BROWN joined the Rockefeller Foundation in 2006. As Associate Director of Applied Technology, Brown is focused on the application of information technology to the programmatic work of the Foundation. He is working on exploring and nurturing imaginative uses of technology by Rockefeller grantees, and improving collaboration and knowledge management within the Foundation.

Prior to joining the Rockefeller Foundation, Brown worked as the Chief Technical Officer of GNVC, an NGO that fostered entrepreneurship in Ghana. Previously, Brown was a technical team leader with Trilogy, where he developed and deployed enterprise systems and consumer-facing Web sites for Fortune 500 companies such as Ford and Nissan.

Brown received a Bachelor of Science in Computer Science from Stanford University and a Master of International Affairs from Columbia's School of International and Public Affairs.

Charlanne Burke, Ph.D.

DR. CHARLANNE BURKE is a Senior Research Associate at the Rockefeller Foundation, working in the areas of Public Health Competencies for the 21st Century; the impact of Pandemics on Health and Livelihoods; the Foundation's search portal and activities, and various ongoing projects around AIDS care in the clinical setting in Africa. She has a Ph.D. in anthropology, and has lived and worked in southern Africa, where her research focused on youth in Botswana, their perceptions of ill health, and the impact of witchcraft on their school careers. In 1995 and 1996, she worked with researchers in Columbia's School of Social Work on projects related to HIV, drug use, and violence in New York City.

Paulo Buss, M.D., M.P.H.

PAULO BUSS, M.D., M.P.H. is Full Professor of Health Planning of the National School of Public Health at the Oswaldo Cruz Foundation, since 1977.

Elected by their colleagues and appointed by the President of the Republic of Brazil, he became President of the Oswaldo Cruz Foundation in January 2001 to a mandate until December 2008. Dr. Buss was elected twice as Director of the FIOCRUZ National School of Public Health (1989–1992 and 1998–2000) and Deputy Director of the same Institution (1985–1989).

He is Full Member of the National Academy of Medicine since May 2005. He was President of the Latin American and Caribbean Association of Public Health Education (1998–2000) and of the International Federation for Cooperation among Health Systems and Services Research Centers (1990–1994). He founded (1979) and was the first Executive Secretary of the Brazilian Association of Collective Health (ABRASCO) (1979–1983).

Dr. Buss was the Brazilian Representative at the WHO's Executive Board (2005–2007), is Member of the Executive Board of the International Association of National Institutes of Public Health (IANPHI) (2006–2009) and Vice President Elected President of the World Federation of Public Health Associations (WFPHA) (2006–2010).

He has published more than 90 papers in national and international journals; is the author of three books and 30 chapters of books; and has made more than 300 conferences in scientific institutions in Brazil and abroad.

He was awarded with several Medals and Honorable Mentions. In 2002 he was granted with the Medical Merit Honor, the highest health award in Brazil, conferred by the President of the Republic.

Lincoln C. Chen, M.D., M.P.H.

LINCOLN CHEN is President of the China Medical Board of New York. Started in 1914, the Board was endowed by John D. Rockefeller as an independent foundation that seeks to advance health in China and Asia by strengthening medical education, research, and policies.

During 2001–2006, Dr. Chen founded and directed the Global Equity Initiative in Harvard University's Asia Center. In an earlier decade of 1987–1996, Dr. Chen was the Taro Takemi Professor of International Health and Director of the university-wide Harvard Center for Population and Development Studies. In the five years 1997–2001, Dr. Chen served as Executive Vice-President of the Rockefeller Foundation, and in 1973–1987, Dr. Chen worked as Representative of the Ford Foundation in India and Bangladesh.

Dr. Chen serves on many boards, councils, and committees. In 2001–2007, Dr. Chen has been Chair of the Board of Directors of CARE/USA. In 2006, he was elected the first Board Chair of the Global Health Workforce Alliance in Geneva. He also serves as a Board member of the Social Science Research Council in New York and of Secretary-General's Global Advisory Board to the U.N. Fund for International Partnership (Ted Turner's U.N. Foundation), BRAC Foundation USA, and the Public Health Foundation of India. In 2004–2007, he was the Special Envoy of the WHO Director-General in Human Resources for Health.

Dr. Chen is a member of the National Academy of Sciences' Institute of Medicine, the American Academy of Arts and Sciences, the Council on Foreign Relations, and the World Academy of Arts and Sciences. He graduated from Princeton University (B.A.), Harvard Medical School (M.D.), the Johns Hopkins School of Hygiene and Public Health (M.P.H.). He was trained in internal medicine at the Massachusetts General Hospital.

Nils Daulaire, M.D., M.P.H.

DR. NILS DAULAIRE is president and CEO of the Global Health Council, the world's largest membership alliance of health professionals and organizations dedicated to advancing policies and programs that improve health around the world. The Council, founded in 1972, has built a global coalition in more than 100 countries that promotes improvement and equity in health for all the world's citizens.

Before assuming leadership of the Council, Dr. Daulaire served as Deputy Assistant Administrator for Policy as well as Senior International Health Advisor for the U.S. Agency for International Development, where he oversaw an integrated global strategy that encompassed programs totaling over $1 billion annually.

As the U.S. government's top international health expert, Dr. Daulaire developed close personal relationships with health and political leaders around the world. He was the lead U.S. negotiator on health at the Cairo International Conference on Population and Development in 1994, the Beijing World Conference on Women in 1995 and the Rome World Food Summit in 1996. He has represented the U.S. at five World Health Organization (WHO) annual assemblies.

A Phi Beta Kappa and summa cum laude graduate of Harvard College, Dr. Daulaire received his M.D. from Harvard Medical School with residency training in family medicine at the University of Colorado. He received his Master's in Public Health in international health from Johns Hopkins University. He is board certified in preventive medicine and public health, and is a member of the National Academy of Science's prestigious Institute of Medicine.

Prior to his time in Washington, Dr. Daulaire's two decades of fieldwork in maternal and child health included five years' residence in Nepal, where he served as the senior adviser to the Ministry of Health. He has also served in Mali as a technical adviser on primary and community health, and has worked extensively in Haiti, Bangladesh, and other low-income countries. He has provided technical assistance to more than 20 countries in all the regions of the world, and speaks seven languages.

He is an expert in child health and survival, having directed multiple pioneering child health research projects, especially in the areas of community-based management of childhood pneumonia and Vitamin A supplementation, and has been published in the Lancet, BMJ, JAMA and others. He has also written and lectured extensively on issues of the relationship between global health and international security.

Dr. Daulaire has testified before Congress on numerous occasions and has appeared widely in the media as an expert on global health issues. He was a principal technical adviser and commentator on the Emmy Award-winning 2005 PBS documentary series, "Rx for Survival: A Global Health Challenge." Under his leadership, the Global Health Council has become one of the world's most respected organizations dedicated to bringing better health to all.

Neil de Crescenzo

NEIL DE CRESCENZO is Group Vice President, Healthcare and Life Sciences, for Oracle Corporation, where he leads the company's strategy and execution plans in these industries. He brings over 20 years of operational and IT leadership across health care and life sciences to his work with clients and partners worldwide. Oracle is the world's leading supplier of enterprise software, with $15 billion in revenues and 65,000 employees. Oracle technology can be found in nearly every

industry around the world and in the offices of 98 of the Fortune 100 companies.

Prior to joining Oracle, Mr. de Crescenzo held a number of leadership positions at IBM Corporation for a decade, working with health care and life sciences clients worldwide. Prior to entering the information technology industry, he held leadership positions in health care operations at medical centers and a major health insurer. Mr. de Crescenzo held a number of executive positions in finance, operations, IT and quality management at the University of Massachusetts Memorial Medical Center, which has over $700 million in revenues, and the Lahey Clinic, one of the leading multispecialty group practices in the United States with 382 physicians on staff and $679 million in revenues. He was also a board member of the Group Practice Improvement Network, a collaborative organization formed by the largest multispecialty group practices (such as the Mayo Clinic, Cleveland Clinic, and Lahey Clinic) to develop and share best practices for quality improvement. Mr. de Crescenzo subsequently was a Director at Blue Cross Blue Shield of Massachusetts, a $5 billion in revenues health insurer, in its New Health Ventures division, which developed new technologies and processes to advance effective medical management and health insurance processes. Mr. de Crescenzo began his career in investment banking, working with U.S. and European clients in the areas of corporate finance and mergers and acquisitions.

Mr. de Crescenzo has been a keynote speaker at numerous industry conferences worldwide and is quoted frequently on industry issues. In 2005, he was named one of the Top 25 Most Influential Consultants by Consulting Magazine. Mr. de Crescenzo has a B.A. in Political Science from Yale University and an M.B.A. in High Technology from Northeastern University.

David de Ferranti, Ph.D.

DAVID DE FERRANTI is currently the Executive Director of the Global Health Financing Initiative at the Brookings Institution in Washington, D.C., and a Senior Fellow there.

Previously, he spent 25 years at the World Bank, where he was its Vice President in charge of its work on health, education, nutrition, and other social services in developing countries.

He also served as the Bank's Regional Vice President for Latin America, with responsibility for all its activities in that region, with a $25 billion loan portfolio, 700 professionals in 14 locations, and a $160 million budget. He retired from the Bank in 2005.

Prior to the World Bank, he held management positions at Rand, the think tank, and in the U.S. government.

In addition to leading initiatives on health policy, financing, systems, and services delivery issues, his research, writing, and management experience have included concentrations on Africa and Asia, as well as Latin America. He has also led work on economic policy, education, nutrition, population, finance, poverty reduction, urban and rural development, transport, environmental protection, and water supply and sanitation.

He holds a Ph.D. in Economics from Princeton University, and a Bachelor's Degree from Yale University.

He is board chair of the Center on Budget and Policy Priorities and a board member of nine other organizations. He was a board member of the Rockefeller Foundation for the maximum time limit, 10 years. He is an adjunct professor at Georgetown University.

Christopher J. Elias, M.D., M.P.H.

DR. CHRISTOPHER ELIAS is president of PATH, an international, nonprofit, nongovernmental organization based in Seattle, Washington. PATH creates sustainable, culturally relevant solutions that enable communities worldwide to break longstanding cycles of poor health. By collaborating with diverse public- and private-sector partners, PATH helps provide appropriate health technologies and vital strategies that change the way people think and act.

As president, Dr. Elias is responsible for PATH's strategic, programmatic, financial, and management operations. PATH has worked in more than 100

countries in the areas of health technologies, maternal and child health, reproductive health, vaccines and immunization, and emerging and epidemic diseases.

Dr. Elias serves on the boards of the Global Alliance for Improved Nutrition, Ibis Reproductive Health, and the Washington Biomedical and Biotechnology Association, among others. He is also a member of the Policy Advisory Committee for the International AIDS Vaccine Initiative and the Advisory Committee for the Department of Global Health at the University of Washington.

Prior to joining PATH, Dr. Elias was a Senior Associate in the International Programs Division of the Population Council. For six years, he served as the Country Representative in Thailand, where he managed reproductive health programs throughout Southeast Asia.

Dr. Elias earned his undergraduate and medical degrees from Creighton University; completed postgraduate training in internal medicine at the University of California, San Francisco; and received a Master's of Public Health degree from the University of Washington, where he was a fellow in the Robert Wood Johnson Clinical Scholars Program.

Dr. Timothy Evans

DR. TIM EVANS, of Canada, is the Assistant Director-General for Information, Evidence and Research. Previously, Dr. Evans was the Assistant Director-General for Evidence and Information for Policy. He has a Bachelor of Social Sciences from the University of Ottawa and a D.Phil. in Agricultural Economics from the University of Oxford, as well as a Doctor of Medicine from McMaster University in Canada.

Dr. Evans trained in internal medicine at the Brigham and Women's Hospital at Harvard University. He was an assistant professor of international health economics at the Harvard School of Public Health. From 1997–2003, Dr. Evans was Director of Health Equity at the Rockefeller Foundation.

Harvey V. Fineberg, M.D., Ph.D.

HARVEY V. FINEBERG is President of the Institute of Medicine. He served as Provost of Harvard University from 1997 to 2001, following 13 years as Dean of the Harvard School of Public Health. He has devoted most of his academic career to the fields of health policy and medical decision making. Dr. Fineberg helped found and served as president of the Society for Medical Decision Making and also served as adviser and consultant to the U.S. Centers for Disease Control and the World Health Organization. At the Institute of Medicine, he has chaired and served on a number of panels dealing with health policy issues, ranging from AIDS to vaccine safety. He is the author, co-author, and co-editor of numerous books and articles on such diverse topics as AIDS prevention, tuberculosis control, assessment of new medical technology, clinical and public health decision making, and understanding risk in society.

Julio Frenk, M.D., M.P.H., Ph.D.

As senior fellow, JULIO FRENK counsels the Gates Foundation on global health issues and strategies. Prior to his work with the Foundation he served for six years as the Minister of Health of Mexico, where he led an ambitious reform to provide universal health insurance. This program expanded access to quality care and financial protection for 50 million Mexicans, most of them poor, who were uninsured.

Dr. Frenk's career has also included executive positions at the World Health Organization and the Mexican Health Foundation. He was the founding Director-General of the National Institute of Public Health of Mexico, was a Visiting Professor at Harvard University, and was awarded the position of National Researcher in his country. He is a member of several professional associations including the National Academy of Medicine of Mexico and the Institute of Medicine of the National Academy of Science in the United States. Among the 29 books and monographs he has authored are two best-selling novels for youth explaining the functions of the human body.

Dr. Frenk holds a medical

degree from the National University of Mexico, as well as a Master's of Public Health and a joint doctorate in Medical Care Organization and in Sociology from the University of Michigan. In sum, Julio Frenk has gained substantial experience over a 25-year career covering leadership positions in all major aspects of public health: research, teaching, independent policy analysis, institution building, international cooperation, and national public service.

Laurie Garrett

LAURIE GARRETT is currently the Senior Fellow for Global Health at the Council on Foreign Relations in New York. Garrett is the only writer ever to have been awarded all three of the Big "Ps" of journalism: the Peabody, the Polk and the Pulitzer. During her time as Senior Fellow for Global Health at the Council on Foreign Relations, Garrett has written several reports and articles including: "HIV and National Security: Where are the Links?," A Council Report (Council on Foreign Relations Press, 2005); "The Next Pandemic?" (Foreign Affairs, July/August 2005); "The Lessons of HIV/AIDS" (Foreign Affairs, July/August 2005); and "The Challenge of Global Health" (Foreign Affairs, January/February 2007). Garrett is also the best-selling author of "The Coming Plague: Newly Emerging Diseases in a World Out of Balance" and "Betrayal of Trust: The Collapse of Global Public Health." Garrett is a member of the National Association of Science Writers, and served as the organization's President during the mid-1990s. She currently serves on the advisory board for the Noguchi Prize, François-Xavier Bagnoud (FXB) Center for Health and Human Rights and the Health Worker Global Policy Advisory Group. She is an expert on global health with a particular focus on newly emerging and re-emerging diseases; public health and the effects on foreign policy and national security.

Laurie Garrett lives in Brooklyn Heights, New York City.

Margaret A. Hamburg, M.D.

MARGARET A. HAMBURG, M.D. is Senior Scientist, Nuclear Threat Initiative, Washington, D.C. NTI is a charitable organization working to reduce threats from nuclear, biological, and chemical weapons. Dr. Hamburg began her service with NTI as the founding Vice President for Biological Threats, developing the strategic plan and grantmaking portfolio in that area.

Before joining NTI, Dr. Hamburg was the Assistant Secretary for Planning and Evaluation, U.S. Department of Health and Human Services. Prior to this, she served for almost six years as the Commissioner of Health for the City of New York. Dr. Hamburg is a graduate of Harvard College and Harvard Medical School.

She has been elected to membership in the Institute of Medicine, the Council on Foreign Relations, and is a Fellow of the American Association of the Advancement of Science and the American College of Physicians. Dr. Hamburg is on the Board of the Rockefeller Foundation, The Rockefeller University, Doctor's of the World, The Trust for America's Health, and Henry Schein, Inc. She serves in numerous other capacities, including the CIA's Intelligence Science Board, The American Society for Microbiology Public and Scientific Affairs Board (Chair of Global Health Committee), the IOM Board on Global Health (Chair) and the Scientific Advisory Committee of the Communicable Disease Surveillance and Response Department of the WHO.

She is a former member of the U.S. Secretary of Health and Human Services' Council on Public Health Preparedness, the Harvard University Board of Overseers and the Visiting Committee for the Harvard School of Public Health.

Jim Yong Kim, M.D., Ph.D.

JIM YONG KIM holds appointments as François Xavier Bagnoud Professor of Health and Human Rights at the Harvard School of Public Health and Professor of Medicine and Social Medicine at Harvard Medical School. He is chief of the Division of Social Medicine and Health Inequalities at Brigham and Women's Hospital, a major

Harvard teaching hospital; director of the François Xavier Bagnoud Center for Health and Human Rights; and chair of the Department of Social Medicine at Harvard Medical School.

Dr. Kim returned to Harvard in December 2005 after a three-year leave of absence at the World Health Organization (WHO). While on leave, Dr. Kim was director of the WHO's HIV/AIDS department, a post he was appointed to in March 2004 after serving as adviser to the WHO director-general. Dr. Kim oversaw all of WHO's work related to HIV/AIDS, focusing on initiatives to help developing countries scale up their treatment, prevention, and care programs, including the "3x5" initiative designed to put three million people in developing countries on AIDS treatment by the end of 2005.

Dr. Kim has 20 years of experience in improving health in developing countries. He is a founding trustee and the former executive director of Partners In Health, a not-for-profit organization that supports a range of health programs in poor communities in Haiti, Peru, Russia, Rwanda, Lesotho, and the United States.

An expert in tuberculosis, Dr. Kim has chaired or served on a number of committees on international TB policy. He has conducted extensive research into effective and affordable strategies for treating strains of TB that are resistant to standard drugs. While at WHO, Dr. Kim was responsible for coordinating HIV efforts with the TB department.

Dr. Kim trained dually as a physician and medical anthropologist. He received his M.D. and Ph.D. from Harvard University. Dr. Kim has been recognized on numerous occasions as a global leader and distinguished professional, including being awarded a MacArthur "Genius" Fellowship in 2003; being named one of America's 25 best leaders by U.S. News & World Report in 2005; and being named as one of the 100 most influential people in the world by Time magazine in 2006. He was a contributing editor to the 2003 and 2004 World Health Report, and his edited volume "Dying for Growth: Global Inequity and the Health of the Poor" analyzes the effects of economic and political change on health outcomes in developing countries.

Robert M. Kolodner M.D.

On April 19, 2007, ROBERT M. KOLODNER M.D. was appointed to the position of National Coordinator for Health Information Technology (HIT). He had served as the Interim National Coordinator for HIT beginning in September 2006. Dr. Kolodner leads the Office of the National Coordinator (ONC) in making steady progress towards advancing the President's Health IT initiative. His experience in patient care, health IT, and government is invaluable to such efforts.

Dr. Kolodner came from the Veterans Health Administration in the Department of Veterans Affairs (VA), where he had been serving as Chief Health Informatics Officer, involved with the development and oversight of VistA—VA's electronic health records systems—and My HealtheVet—VA's Personal Health Record for veterans.

Dr. Kolodner was a key clinical leader for the Decentralized Hospital Computer Program, VA's health care information system starting in 1983. In 1993, Dr. Kolodner moved to Washington, D.C., into a health IT management position leading all health automation activities in VA.

Since 1997 Dr. Kolodner has served in several different health IT leadership positions in VA overseeing, promoting, and guiding VA activities related to the establishment of a lifelong, comprehensive, computerized clinical record for military personnel and our nation's veterans.

Dr. Kolodner received his undergraduate degree from Harvard College and his medical degree from Yale University School of Medicine. He completed a clinical fellowship in Medicine at Harvard University School of Medicine and his Psychiatric residency at Washington University School of Medicine. Dr. Kolodner has medical specialty board certification in psychiatry.

He is a member of numerous professional societies, task

forces and editorial boards. He has authored and co-authored articles, book chapters and books in medical and medical informatics literature and has lectured on medical informatics throughout the United States.

Prof. S. Yunkap Kwankam

PROF. S. YUNKAP KWANKAM is Coordinator eHealth at WHO, Geneva Switzerland, where he is responsible for coordination of eHealth work across the Organization. He oversees programs on the use of ICT in health, including coverage of development of frameworks and tools to support policy and practice in ICT-based knowledge management and sharing in countries; assistance to countries in building national capacity for effective and efficient use of ICT in health systems; and development of the evidence base and best practices in eHealth. He also directs the development and implementation of WHO eHealth policies, and provides authoritative advice on eHealth to countries. Before coming to WHO in 2001, he was Professor of Electrical Engineering at the University of Yaounde I in Cameroon and Director of the Center for Health Technology.

Dr. Asha-Rose Migiro

DR. ASHA-ROSE MIGIRO of Tanzania took office as Deputy Secretary-General of the United Nations on 1 February 2007. She is the third Deputy Secretary-General to be appointed since the post was established in 1997.

Dr. Migiro served as Minister of Foreign Affairs and International Cooperation from 2006–2007—the first woman in the United Republic of Tanzania to hold that position since its independence in 1961. Before that, she was Minister for Community Development, Gender and Children for five years.

As Foreign Minister, Dr. Migiro spearheaded Tanzania 's engagement in the pursuit of peace, security and development in the Great Lakes Region. She served as Chair of the Council of Ministers' meetings of the International Conference of the Great Lakes Region, a process that culminated into a Pact on Security, Stability and Development in the Great Lakes Region.

Dr. Migiro was also Chair of the Southern African Development Community (SADC) Ministerial Committee of the Organ on Politics, Defense and Security Cooperation and President of the U.N. Security Council during its open debate on peace, security and development in the Great Lakes Region. As Chair of the SADC Organ, Dr. Migiro coordinated SADC assistance to the democratic process, including elections, in the Democratic Republic of the Congo (DRC), as well as support for national elections in Zambia and Madagascar. At the time of her appointment, she was chairing an important SADC Ministerial Troika Meeting ahead of the national elections in the Kingdom of Lesotho.

Prior to Government service, Dr. Migiro pursued a career in academia. She was a member of the Faculty of Law at the University of Dar-es-Salaam, where she rose to the rank of Senior Lecturer. She headed the Department of Constitutional and Administrative Law from 1992 to 1994, and the Department of Civil and Criminal Law from 1994 to 1997. Her work was published widely in local and international journals.

Dr. Migiro served as a member of Tanzania's Law Reform Commission in 1997 and as a member of the U.N. Committee on the Elimination of Discrimination against Women in 2000.

Dr. Migiro obtained a Master of Laws from the University of Dar-es-Salaam in 1984 and a Doctorate in Law from the University of Konstanz in Germany in 1992.

Dr. Migiro was born in Songea, Tanzania, on 9 July 1956. She is married to Professor Cleophas Migiro and has two daughters. In addition to English, she speaks Kiswahili, basic French and German.

Professor Anne Mills

ANNE MILLS is Professor of Health Economics and Policy at the London School of Hygiene and Tropical Medicine and Head of the Department of Public Health and Policy. She has over 30 years' experience in health-economics related research in low- and middle-

income countries, publishing widely in the fields of health economics, health systems, and malaria. She has had extensive involvement in supporting capacity development in low- and middle-income countries, for example through guiding the creation of the Alliance for Health Policy and Systems Research, and chairing its Board. She founded, and is Head of, the Health Economics and Financing Program, which together with its many research partners, has an extensive program of research focused on increasing knowledge of how best to improve the equity and efficiency of health systems in low- and middle-income countries. She has advised a number of multilateral and bilateral agencies, notably the U.K. Department for International Development and the World Health Organization. She acted as specialist adviser to a House of Commons Select Committee enquiry into the use of science in U.K. international development policy. She was a member of the Commission on Macroeconomics and Health, and co-chair of its working group "Improving the health outcomes of the poor." She wrote the communicable disease paper for the Copenhagen Consensus and was a member of the U.S. Institutes of Medicine Committee on the economics of antimalarial drugs. In 2006 she was awarded a CBE and elected Foreign Associate of the Institute of Medicine.

Arnon Mishkin

ARNON MISHKIN is a Partner with The Mitchell Madison Group and has extensive experience consulting to not-for-profit educational, philanthropic and health institutions, as well as with government agencies. Prior to joining Mitchell Madison, he was a Vice President and Director of The Boston Consulting Group, and the Principal of Mishkin Associates:

Mr. Mishkin has substantial experience supporting efforts of the Rockefeller Foundation and working in the field of global health. Among other health initiatives, he helped develop the business plan and strategy for the International Partnership for Microbicides, led the team designing the strategy and governance for the INDEPTH network of community health care tracking sites, identified ways to ensure regional implementation of the findings and goals of the Joint Learning Initiative on Human Resources for Health, and supported the WHO efforts to establish a global clinical trials registration program.

For the Foundation itself, he helped evaluate RF's efforts in developing public/private partnerships in health care and designed an approach to help the Foundation continue to monitor all their initiatives, across several fields.

Following the 2001 World Trade Center attack, Mr. Mishkin led a cross-industry, cross-consulting firm study assessing the economic impact on the N.Y.C. economy and identifying steps to ensure the rapid revitalization of the city.

In addition to his work with not-for-profit organizations, Mr. Mishkin consults for health care companies, particularly in the pharmaceutical industry.

Mr. Mishkin earned a B.A. from Yale University and an M.B.A., with distinction, from Harvard Business School.

Dr. Robert C. Orr

DR. ROBERT C. ORR was appointed Assistant Secretary-General for Strategic Planning and Policy Coordination in the Executive Office of the Secretary-General in August 2004.

His responsibilities include advising the Secretary-General on a full range of strategic issues, running the Secretary-General's cabinet-style Policy Committee, and leading the Secretariat's efforts to complete the U.N. reform agenda agreed by world leaders at the 2005 World Summit. Dr. Orr also serves as the Chair of the Counter-Terrorism Implementation Task Force, which coordinates 23 U.N. entities involved in counter-terrorism activities.

Dr. Orr joined to the United Nations from Harvard University where he served as the Executive Director of the Belfer Center for Science and International Affairs at the Kennedy School of Government. Prior to this, he served as Director of the Council on Foreign Relations in Washington, D.C.

From 1996 to 2001, Dr. Orr

served in senior posts in the Government of the United States, including Deputy to the U.S. Ambassador to the United Nations and Director of the USUN Washington office, where he was instrumental in securing an agreement to have the United States pay nearly $1 billion in arrears to the United Nations. He also served as Director of Global and Multilateral Affairs at the National Security Council, where he was responsible for peacekeeping and humanitarian affairs. Prior to this government service, Dr. Orr worked for the International Peace Academy in New York, and with the United States Agency for International Development (USAID) in Nairobi, Kenya.

From 2001 to 2003, Dr. Orr co-directed a bipartisan commission on post-conflict reconstruction sponsored by the Center for Strategic and International Studies in Washington and the Association of the United States Army.

Dr. Orr has published extensively on post-conflict issues, the United Nations, peacekeeping, and democracy promotion. His publications include "Winning the Peace: an American Strategy for Post-Conflict Reconstruction" (CSIS Press, 2004) and "Keeping the Peace: Multidimensional U.N. Operations in Cambodia and El Salvador" (Cambridge University Press, 1997).

Dr. Orr received his Ph.D. and M.P.A. in International Relations from the Woodrow Wilson School at Princeton University, and his Bachelor's Degree from the University of California Los Angeles (UCLA). He speaks Spanish and Mandarin. Dr. Orr is married and has two children.

Ariel Pablos-Méndez, M.D., M.P.H.

ARIEL PABLOS-MÉNDEZ, M.D., M.P.H., a physician and epidemiologist, is Managing Director at the Rockefeller Foundation and a creative leader in global public health.

As an Assistant and later Associate Professor of Clinical Medicine and Public Health at Columbia University in New York, Dr. Pablos-Méndez worked on the emergence of multidrug resistant tuberculosis in New York City in 1991 and, in 1997 led the Global Surveillance Project on Anti-Tuberculosis Drug Resistance at WHO. In both instances, his research brought about significant and successful policy changes.

His affiliation with the Rockefeller Foundation started in 1998, when Dr. Pablos-Méndez spearheaded the program "Harnessing the New Sciences" on product development for diseases of poverty through public/private partnerships. In 2000, his vision and leadership drove the creation of the Global Alliance for TB Drug Development (New York). He also led a rethinking of the Rockefeller Foundation's program in AIDS and a program for the treatment of mothers with AIDS and their families (MTCT-Plus) in 2001. In 2002, Ariel championed the creation of the international Center for the Management of IPR in Health R&D (MIHR, Oxford, England). In 2003, he managed the Joint Learning Initiative on Human Resources for Health. Ariel served as Deputy and interim Director of the Health Program at the Rockefeller Foundation until 2004.

As Director of Knowledge Management & Sharing at WHO from 2004 to 2007, Dr. Pablos-Méndez worked to establish the principles and practice of KM as a core competence of public health, fostering shared learning and social entrepreneurship to help bridge the know-do gap in global health. His team developed a global KM strategy, advanced the agenda on Knowledge Translation, established WHO Press, launched the Global Health Library, a Global Health Histories initiative, and WHO's eHealth unit, which produced the first global eHealth report in 2006.

In 2007, Dr. Pablos-Méndez returned as Managing Director to the Rockefeller Foundation, where he is currently working on various new initiatives for global health.

Dr. Pablos-Méndez received his M.D. from the University of Guadalajara's School of Medicine (Mexico) and his M.P.H. from Columbia University's School of Public Health. He remains affiliated with Columbia University, was elected to the

American Society of Clinical Investigation in 2003, and serves in several international health advisory committees and editorial boards.

Joy Phumaphi

JOY PHUMAPHI is Vice President, Human Development Network, The World Bank. Joy, a Botswana national, began public service in Botswana as a local government auditor. From 1994 to 2003, she went on to serve in Parliament and as a representative to the Southern African Development Community. She entered the Cabinet with responsibility for lands and housing and developed the first national housing policy. Joy subsequently served as Minister for Health where she restructured the ministry to make it more focused on results while overseeing revision of the Public Health Act and putting into action a multisectoral plan to combat HIV/AIDS. In 2003, Joy joined the World Health Organization as the Assistant Director General for Family and Community Health Department, managing a staff of over 1,100 globally. She is in the Board of GAVI. She has served as a member of the U.N. Reference Group on Economics and a U.N. Commissioner on HIV/AIDS and Governance. She is a member of the UNDP advisory board for Africa. Joy is a distinguished Afgrad Fellow who serves as a member of the Africa-America Institute Campaign Committee.

Joy holds a Master of Science degree in Financial Accounting and Decision Sciences from Miami University, Ohio.

Joy joined the Bank and became the Vice President of the Human Development Network on February 5, 2007.

Prof. K. Srinath Reddy

PROF. K. SRINATH REDDY is presently President, Public Health Foundation of India and until recently headed the Department of Cardiology at All India Institutes of Medical Sciences (AIIMS).

Having trained in cardiology and epidemiology, Professor Reddy has been involved in several major international and national research studies including the INTERSALT global study of blood pressure and electrolytes, INTERHEART global study on risk factors of myocardial infarction, national collaborative studies on epidemiology of coronary heart disease and community control of rheumatic heart disease. He is Coordinator of the Initiative for Cardiovascular Health Research in the Developing Countries, a global partnership program which promotes research for prevention of cardiovascular diseases in developing countries. He has served on many WHO expert panels and is on the Board of the World Heart Federation. He edited the National Medical Journal of India for 10 years and is on editorial board of several international and national journals. He has more than 210 scientific publications in international and Indian peer-reviewed journals.

Prof. Reddy was awarded the WHO Director General's Award for Global Leadership in Tobacco Control at the 56th World Health Assembly in May 2003 and was conferred the prestigious Padma Bhushan award by the President of India on the occasion of the 57th Republic Day of India, in 2005. The Royal Society for the Promotion of Health, U.K., awarded him the Queen Elizabeth Medal in 2005. He was elected Foreign Associate Member of the Institute of Medicine (U.S. National Academies) in 2004.

Judith Rodin, Ph.D.

JUDITH RODIN has served as president of the Rockefeller Foundation since March 2005. Trained as a research psychologist, Dr. Rodin was previously the president of the University of Pennsylvania, and earlier the provost of Yale University.

The Rockefeller Foundation was established in 1913 by John D. Rockefeller, Sr., to "promote the well-being" of humanity by addressing the root causes of serious problems. The Foundation supports work around the world to expand opportunities for poor or vulnerable people and to help ensure that globalization's benefits are more widely shared. With assets of more than $3.7 billion, it is one of the few institutions to conduct such work both within the United States and internationally.

Judith Rodin was born and raised in Philadelphia, Pennsylvania. She graduated from the University of Pennsylvania, and received her Ph.D. from Columbia University. A pioneer in the behavioral medicine movement, she taught at New York University before embarking on 22 years on the faculty at Yale, where she ultimately held appointments in both the School of Arts and Sciences and the School of Medicine. Named president at Penn in 1994, she was the first woman to serve as president of Ivy League institution.

During the decade of her leadership, Penn doubled its research funding and tripled both its annual fund raising and the size of its endowment; launched a comprehensive, award-winning and internationally acclaimed neighborhood revitalization program; attracted record numbers of undergraduate applicants and created Penn's most selective classes ever; and rose in the leading national ranking of research universities from 16th to fourth.

Dr. Rodin serves on a number of leading nonprofit boards, as well as on the boards of AMR Corporation, Citigroup and Comcast Corporation. She is the author of more than 200 academic articles and chapters and has written or co-written 12 books, including most recently "The University and Urban Revival." She served on President Clinton's Committee of Advisers on Science and Technology. A member of a number of leading academic societies, including the Institute of Medicine of the National Academy of Sciences, she has received 14 honorary doctorate degrees.

Dr. Mirta Roses Periago

DR. MIRTA ROSES, a citizen of Argentina, was elected Director of the Pan American Health Organization (PAHO) in September 2002 by the Ministers of Health of the Americas for a five-year term. She took office on February 1, 2003, becoming the first woman to hold that position in the worlds' oldest public health agency, founded in 1902.

Dr. Roses received her medical degree from the National University of Córdoba in 1969, and a graduate degree in public health with a specialization in epidemiology, and the title of Specialist in the Infectious Diseases from the University of Buenos Aires. She also pursued studies in tropical medicine at the Federal University of Bahia, Brazil. She joined PAHO in 1984 as Coordinator of the Epidemiology Unit of the Caribbean Epidemiology Center (CAREC), located in Trinidad and Tobago, and subsequently served as PAHO/WHO Representative in the Dominican Republic and in Bolivia. In 1995, she was appointed Assistant Director of PAHO, joining the World Health Organization's Director Program Management Group and Global Program Management Group, which she chaired for two periods.

Dr. Roses has been the recipient of numerous honors—among them, honorary doctorates from the National University of Córdoba in Argentina, the Universidad Peruana Cayetano Heredia, and the Universidad Autonoma Metropolitana, Mexico. She has been awarded Ecuador's National Order of Honorato Vasquez with the degree of High Official, and Nicaragua's Order of Jose de Marcoleta, and Pedro Joaquin Chamorro Order of Liberty; and the recognition by the Legislature of the Autonomous City of Buenos Aires in Argentina.

John W. Rowe, M.D.

DR. JOHN ROWE is a Professor in the Department of Health Policy and Management at the Columbia University Mailman School of Public Health. Previously, from 2000 until his retirement in late 2006, Dr. Rowe served as Chairman and CEO of Aetna, Inc., one of the nation's leading health care and related benefits organizations. Before his tenure at Aetna, from 1998 to 2000, Dr. Rowe served as President and Chief Executive Officer of Mount Sinai NYU Health, one of the nation's largest academic health care organizations. From 1988 to 1998, prior to the Mount Sinai-NYU Health merger, Dr. Rowe was President of the Mount Sinai Hospital and the Mount Sinai School of Medicine in New York City.

Before joining Mount Sinai, Dr. Rowe was a Professor of Medicine and the founding Director of the Division on Aging at the Harvard Medical School, as well as Chief of Gerontology at Boston's Beth Israel Hospital. He has authored over 200 scientific publications, mostly on the physiology of the aging process, including a leading textbook of geriatric medicine, in addition to more recent publications on health care policy. Dr. Rowe has received many honors and awards for his research and health policy efforts regarding care of the elderly. He was Director of the MacArthur Foundation Research Network on Successful Aging and is co-author, with Robert Kahn, Ph.D., of "Successful Aging" (Pantheon, 1998). Currently, Dr. Rowe leads the MacArthur Foundation's Initiative on An Aging Society and chairs the Institute of Medicine's Committee on the Future Health Care Workforce for Older Americans. Dr. Rowe was elected a member of the Institute of Medicine of the National Academy of Sciences and a Fellow of the American Academy of Arts and Sciences. In addition, Dr. Rowe serves on the Board of Trustees of the Rockefeller Foundation and is a former member of the Medicare Payment Advisory Commission (MedPAC). Dr. Rowe is also Chairman of the Board of Trustees at the University of Connecticut and the Marine Biological Laboratory in Woods Hole, Massachusetts.

Dr. Sally Stansfield

SALLY STANSFIELD is the Executive Director of the Health Metrics Network (HMN), a global partnership founded to improve the supply and use of information to improve decision making for health in developing countries. For HMN's global network and for its host, the World Health Organization, Dr. Stansfield manages the technical and financial contributions of HMN partners to accelerate reform of health information systems for improved health outcomes.

Prior to 2006, Dr. Stansfield was the Associate Director for Global Health Strategies of the Bill & Melinda Gates Foundation. She draws upon more than 30 years of clinical and public health practice, experience in research agencies, universities, governments, non-governmental organizations, and multilateral agencies. Dr. Stansfield's areas of expertise include public health research, policy, strategic planning, program design and development, evaluation, and the development of health information systems. She has designed and managed programs for the U.S. Centers for Disease Control, the U.S. Agency for International Development and Canada's International Development Research Centre and has advised governments in Bangladesh, Cambodia, DR Congo, Ethiopia, Malawi, many other countries, primarily in Asia and Africa.

Her many awards include the Alpha Omega Alpha medical honorary, the International College of Surgeons Award for Scholarship, the Public Health Service Distinguished Service Commendation, a Fulbright Fellowship, and the Yale Tercentennial Medal.

Dr. Mark Walport

MARK WALPORT was appointed as Director of the Wellcome Trust in June 2003. He heads one of the world's largest biomedical research charities, which spends some £400 million a year in pursuit of its mission to foster and promote research with the aim of improving human and animal health. Before joining the Trust, he was Professor of Medicine and Head of the Division of Medicine at Imperial College London where he led a research team that focused on the immunology and genetics of rheumatic diseases. He was appointed a member of the Council for Science and Technology in 2004.

Suwit Wibulpolprasert, M.D.

DR. SUWIT WIBULPOLPRASERT is a general practitioner, a public health specialist, administrator and policy advocator. He began his career as a director and a practitioner in four rural district hospitals in Thailand from 1977 to 1985. Later he was the Director of the Northeastern Public Health College, the Director of Technical Division of the FDA, the Director of Bureau of Health Policy and

Plan, Assistant Permanent Secretary and Deputy Permanent Secretary of the Ministry of Public Health, respectively.

Dr. Suwit's main interests are in health policy and planning, and international health. He has been extensively involving in research and development in the areas of human resources for health; health economics and health care financing; international trade and health; health promotion; health information; and pharmaceuticals. He has published more than 100 papers, reports and books locally and internationally.

In Thailand, Dr. Suwit is the editor of a local journal for para-medical personnel and had produced radio and television programs on health and social issues for more than 15 years. He is currently the President of the Folk Doctor Foundation; the evaluation Board member of the Thailand Research Fund; and the Board member of the Health Systems Research Institute, the Thai Health Promotion Foundation, the National Health Security Board, the Thai Medical Research Council, the National Nanotechnology Centre, the Mahidol University Council, and the National Science and Technology Board. Besides all these works, he has run seven full marathons!

As part of his international involvements, he represents the country in many international health forums and the World Health Assembly. He also represented Thailand and the South-east Asia Region as a member and Vice Chair of the governing board of the Global Fund to Fight AIDS, TB, and Malaria from mid-2001 to March 2004. Besides, he was the President of the Intergovernmental Forum on Chemical Safety from November 2003 to September 2006 and a member and Vice Chair of the WHO Executive Board during 2004–2007. At present, Dr. Suwit chairs the Boards of the Health Metrics Network and the Mekong Basin Disease Surveillance Network; the Steering Committee of Asia Partnership on Avian Influenza Research and Steering Committee of the Asia-Pacific Action Alliance on HRH. He is also a member and Chair of the Program Coordinating Board of the UNAIDS, and member and chair of the Program and Policy Committee of the interim Board of the Global Health Workforce Alliance.

Dr. Suwit served as a Deputy Permanent Secretary at the Ministry of Public Health, Thailand, during 2000–2003. Currently, he serves at the highest rank of government official (PC 11) as a Senior Adviser in Disease Control; and is also responsible for health policy and international health works of the ministry.

Meeting Agenda

Background

THE FIELD OF GLOBAL HEALTH has undergone a dramatic transformation during the last decade with unprecedented funding and new institutional models. While some problems are now being addressed, "open source anarchy" has ensued and new challenges and opportunities are emerging. For nearly a century, the Rockefeller Foundation has been a trailblazer in philanthropic innovation to address the needs of the poor. Ten years ago, a series of conferences in Pocantico helped redefine the global health agenda and the role the Foundation could play. While we are proud of the achievements over the past decade, we are now searching new paths in global health while reinventing ourselves to serve the needs of the poor better.

We therefore have the following Meeting objectives:

- Present RF new operating model to global health community.
- Review trends and opportunities in global health.
- Discuss new initiatives and programmatic opportunities for RF.

Structure of the Discussion

In the past few months, we have identified a number of areas to explore and develop. We wish to get your input on each of those areas with you, to get a better understanding of:

- The importance of the area for poor and vulnerable people.
- The opportunity for the Rockefeller Foundation to have an impact.
- Where within the area to focus and how to engage in collaboration and partnership.

As you can see from the agenda, we have a lined up a series of panels for various areas of interest. We have asked each panelist to provide brief remarks, after which we will open the floor for general discussion.

Agenda: New Initiatives for Global Health

Day 1: Thursday, September 20, 2007

Noon	**Arrive at Pocantico Conference Center**
12:30–2:00	**Lunch: Welcome and Introduction by Judith Rodin**
2:30–4:30	**Panel on Trends in Global Health**

Panel: Trends in Global Health
The field of global health has been radically transformed in the last decade. Driven by concerns about AIDS, the arrival of new philanthropy and other players, the field has seen a significant increase in resources for previously starved public health programs on priority problems. At the same time, noncommunicable diseases and associated risk factors have doubled the burden and challenge for developing countries. There is increasing recognition of the weakness and importance of health systems, with increasing expenditures not always realizing equitable coverage, quality and efficiency of health services. The institutional landscape has also evolved without a clear architecture. How will the world tackle these and new challenges? What opportunities are emerging for developing countries? What are our roles and should they change?

Nils Daulaire (moderator), Tim Evans (the last 10 years), Suwit Wibulpolprasert (global health on the ground), Laurie Garret (do we need a new architecture?), Julio Frenk (what the next 10 years may bring)

6:00	**Dinner, followed by Keynote Address by Dr. Asha-Rose Migiro, Deputy Secretary-General, United Nations**

Day 2: Friday, September 21, 2007

9:00–10:30	**Panels on Public Health**

Panel: Pandemic Threats and Public Health Surveillance
Emerging infectious diseases have caused significant global human and economic loss and disproportionately threaten the health and livelihoods of poor people. Our hypothesis is that surveillance of these problems should be coupled with response capabilities in a way that strengthens the overall local and national health information system. We would like the panel's and the group's input on how we can strengthen this capacity in a comprehensive and synergistic manner. How can nations collaborate better across borders in sharing information and response teams? What is the role of new information and communication technologies to gather, share, analyze and display surveillance data in developing countries? How do we work across disciplinary boundaries to address animal health—a common denominator for many pandemics?

Suwit Wibulpolprasert (moderator), Mirta Roses, Sally Stansfield, Mark Walport

Panel: New Competencies for Public Health
This is an enormously challenging time for PH. Some Schools of Public Health focus on academic work, but their alumni—who must develop and implement programs and policy—often lack the tools to be innovative and effective in a changing world. As a result, in many cases, the traditional PH paradigm has become less effective in catalyzing sustainable social change. We would like to work towards a new paradigm for PH professionals, including physicians, at local and national levels. We would like your input on the definition and scope of PH in today's society. What competencies are required of PH professionals in the 21st Century and how to support novel institutional mechanisms?

Paulo Buss (moderator), Jo Boufford, Lincoln Chen, Srinath Reddy

11:00–1:15 Panel on Health Care

Panel: Access to Technologies and Social Innovations for the Poor
In recent years, there have been many innovations with the potential to improve health, but these innovations have not been accessible to all. Expanding the distribution of important existing technological and social innovations has the potential to significantly benefit poor and vulnerable people, including those created and developed at the "bottom of the pyramid." To do that, we need to overcome barriers to access including affordability, cost/benefit, appropriateness, and lack of mechanisms to deliver them. The Foundation is interested on identifying and demonstrating how to overcome these barriers. What are successful models, and how can these models be replicated and scaled up?

Chris Elias (moderator), Seth Berkley, Paulo Buss, Jim Kim

Panel: eHealth—ICT for Health in the Global South
Information and communications technology (ICT) and health are two of the largest and fastest growing sectors in the economy, yet they barely overlap (the health sector invests less in ICT than the construction field). Until recently, there has been little policy attention to the potential of ICTs for health in developing countries, and the result are fragmented efforts in telemedicine, electronic health records and public health informatics. We are interested in how eHealth can improve the efficiency, quality and equity of health services. We will hear from a number of private sector companies as well as look to get your views on the landscape of this new frontier for technology in global health. How can we engage the ICT professionals and corporations as part of the solution to public health and primary care challenges in the global South? What new platforms and public/private partnerships need to be developed?

Robert Kolodner (moderator), Neil de Crescenzo, Yunkap Kwankam, Sally Stansfield

Panel: The Role of the Private Sector in Health

The health sector reform of the 1990s led to decentralization and privatization of many health services (private sector includes informal and nonprofit providers). Today, private expenditure accounts for most health expenditures in developing countries (e.g., 70 percent in Uganda; over 80 percent in Cambodia), more so among the poor. Yet the culture of health professionals and systems, evolved a century earlier, cannot see well beyond the public lens of governmental services (the pharmaceutical industry being a recent exception). This neglect could be costly to the poor at a time of growing health spending around the world. While there remains a debate in the public health community about the value that the private sector really provides in developing world health, their existence cannot be ignored and the sector needs to be engaged with better evidence and solutions. We would like your input on what changes/interventions in policy, new capacity and novel models in the private sector can lead to broader coverage, greater efficiency and better quality of health services for the poor in developing countries.

David de Ferranti (moderator), Tim Evans, Anne Mills, Joy Phumaphi

2:30–3:15	**Other ideas or issues and group conclusions**
3:15	**Summary Reflections: Lincoln Chen**
3:30–4:00	**Closing Remarks: Ariel Pablos-Méndez**

Participants

Dr. Tara Acharya, The Rockefeller Foundation
Dr. Seth Berkley, International AIDS Vaccine Initiative (IAVI)
Dr. Jo Ivey Boufford, New York Academy of Medicine
Mr. Karl Brown, The Rockefeller Foundation
Dr. Charlanne Burke, The Rockefeller Foundation
Dr. Paulo Buss, FIOCRUZ
Dr. Lincoln Chen, China Medical Board
Dr. Nils Daulaire, Global Health Council
Mr. Neil de Crescenzo, Oracle Corporation
Dr. David de Ferranti, The Brookings Institution, Global Health Financing Initiative
Dr. Christopher J. Elias, PATH
Dr. Tim Evans, World Health Organization (WHO)
Dr. Harvey V. Fineberg, Institute of Medicine (IOM) of The National Academies
Dr. Julio Frenk, Ministry of Health
Ms. Laurie Garrett, Council on Foreign Affairs
Dr. Margaret A. Hamburg, Nuclear Threat Initiative/Global Health and Security Initiative
Dr. Jim Yong Kim, Harvard Medical School/Harvard School of Public Health
Dr. Robert M. Kolodner, United States Department of Health and Human Services
Professor S. Yunkap Kwankam, World Health Organization (WHO) EIP/KMS
Dr. Asha-Rose Migiro, United Nations
Professor Anne Mills, London School of Hygiene and Tropical Medicine
Mr. Arnon A. Mishkin, Mitchell Madison Group
Dr. Robert Orr, United Nations
Dr. Ariel Pablos-Méndez, The Rockefeller Foundation
Ms. Joy Phumaphi, World Bank
Professor K. Srinath Reddy, Public Health Foundation of India
Dr. Judith Rodin, The Rockefeller Foundation
Dr. Mirta Roses Periago, Pan American Health Organization, Regional Office of the WHO
Dr. John W. Rowe, Columbia University
Dr. Sally Stansfield, Health Metrics Network, WHO
Dr. Mark J. Walport, Wellcome Trust
Dr. Suwit Wibulpolprasert, WHO/Thailand Ministry of Public Health

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