



Charité Berlin  
**World Health Summit**

October 10th–13th, 2010 • Berlin, Germany



World Health Summit 2010  
Translation. Transition. Transformation.

# Congressum

**Deutsches  
Ärzteblatt**

# World Health Summit 2010 • Congressum

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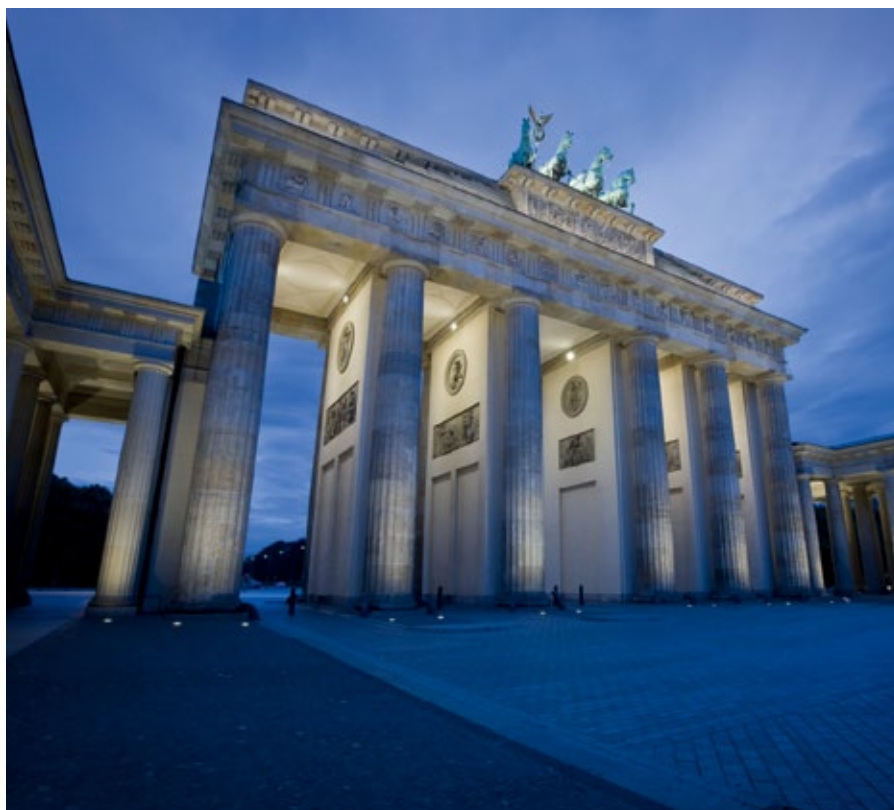
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“The World Health Summit of the M8 Alliance is for medicine and health what the World Economic Forum in Davos is for the economy. It should grow towards a strong tradition and an essential motor for health research”, said Germany’s Federal Minister of Education and Science, Annette Schavan. The World Health Summit has responded to this call and created an independent forum hosted by academic medicine to discuss upcoming challenges in health research and health care, which are of international relevance.

Today’s world is changing rapidly and fast and our health is threatened in many ways. Global warming, malnutrition, urbanization, ageing societies and the instability of our economies, are alarming examples for factors that bring about enormous changes in our environments regardless of where we live in this world. Health is the most vulnerable value that reacts to these changes of our environments and our societies – and it remains the most universally agreed human right. The World Health Summit has therefore initiated a high-level forum to jointly think, discuss and identify solutions for some of the major health challenges that we are facing in the next years and beyond. All sectors which have an interest in health, from a research side, from a providers’ or payors’ side or from the economic side must collaborate more closely and coordinate their strategies and action in an increasingly interdependent and globalized world where health threats know no borders and the toughest challenges for our health systems, as the increase of chronic diseases in ageing societies, are shared between all parts of the world but the resources to compensate are not between high-income and low- and middle-income countries. The key element is the cross-sectoral approach of academic medicine, governments, industry and civil society. Academia has to take over responsibility and leadership for the transition of our natural and social environments by developing innovative health care delivery models. We have to protect and develop our medical innovation capacities and translate our increasing scientific competence into prevention and improved treatment of diseases across global regions. We have to develop the cultural requirements to actively transform the agendas and collaborative efforts of policy, industry and science into better medicine and health care.



Stephen K. Smith

The second World Health Summit 2010 again took place under the patronage of German Federal Chancellor Angela Merkel and the French President Nicolas Sarkozy and with strong support of the governments. The Summit was organized by Charité – Universitätsmedizin Berlin, together with M8 Alliance of Academic Health Centers and Medical Universities, an international network of excellent medical faculties founded in 2009. Together with all partners we have managed to convene significant scientific institutions from different parts of the world to include prominent players from the fields of science, medicine, health economics, and civil society, as well as leading politicians.

Transition, Translation, Transformation has therefore been the key topic which guided the discussions at the World Health Summit 2010. The coalition of academic medicine, governments, industry and the civil society will continue to develop and monitor joint solutions to improve health worldwide.

This book summarizes some of the major discussions and presents the key messages of the World Health Summit 2010. Join us in our efforts to protect and improve health which remains our strongest currency we share around the globe and across all borders.



Detlev Ganten

Prof. Dr. Stephen K. Smith  
World Health Summit President  
Imperial College London

Prof. Dr. Detlev Ganten  
World Health Summit President  
Charité – Universitätsmedizin Berlin

# Welcome Messages



Angela Merkel

## Angela Merkel

Chancellor of the Federal Republic of Germany

Global challenges require joint action. This is particularly true when it comes to our health – for controlling and preventing disease and delivering health services raise highly complex issues for science and policy-making, the economy and society. The accelerating pace of change calls for innovative solutions. In a globalized world such solutions can be found only if we all work together.

Global responsibility and solidarity means that strong countries and strong partners must offer weaker partners a helping hand, joining forces with them to fight disease and to alleviate suffering. Serving the individual, after all, must be the motive for everything we do.

The health of every one of us is a precious asset that requires protection – in Germany, Europe and all over the world. Both the German Government's program and the UN Millennium Development Goals spell this out very clearly: putting the individual first must be a collective endeavor for all of us.

It was in this spirit of shared responsibility that the first World Health Summit was held in Berlin in 2009. Its resounding success both with the professional and the general public demonstrates that such a forum, with its interdisciplinary approach to health issues, can be a groundbreaking model for the future. In 2010, the year of the tercentenary of the Charité – Universitätsmedizin Berlin, the 2nd World Health Summit is again taking place in Berlin. As patron of this event, I am delighted that the Charité – Universitätsmedizin Berlin and its international partners have succeeded in establishing here a new tradition.

To the World Health Summit 2010 organizers and participants I wish a most stimulating and successful conference.

Angela Merkel

Chancellor of the Federal Republic of Germany



## Nicolas Sarkozy

President of the French Republic

We are facing extraordinary challenges in health care and research. The worldwide increasing burden of chronic diseases brings up an urgent need for effective prevention strategies. The changing climate and its health consequences calls for adaptation strategies with regard to infectious diseases as well as food and water safety in all parts of our world. Life-expectancy between rich and poor countries still exceeds 40 years – a health gap that calls for coordinated action. We need local research capacities and well functioning academic systems in regions where health care is deficient. The financial crisis directly affects health outcomes, particularly where costs of health care are covered out of the pocket. Economic downturn increases the risk that people will neglect health care, particularly prevention. Less preventive care is particularly dangerous at a time when ageing and a rise in chronic diseases are global trends.

We can tackle these problems, but we can only succeed together. We need joint solutions backed up by governments, industry, medicine and health care systems, and civil society. I am proud and honoured to support and patronize the World Health Summit at the Charité. The World Health Summit is an important step towards the solutions we need. The M8 Alliance as an international network of prestigious medical universities has established this high-level conference of decision-makers, that provides an excellent academic framework and essential perspectives to develop sustainable and successful strategies for health care, health governance and health research on a European and global scale.



Nicolas Sarkozy  
President of the French Republic



Nicolas Sarkozy

## Kofi Annan

Former Secretary-General of the United Nations

Public understanding of the causes of disease and sickness as well as the ability to address them has increased dramatically in my life time, but the health problems that remain are significant and come in many forms. They include the rapid spread of pandemics, the prevalence of scourges like HIV, Malaria and Tuberculosis, but also the ever widening gap in access to health services and opportunities, and as a direct result, in life expectancy between rich and poor.

All these are problems for each and every one of us, regardless of where we live, what we do or how healthy we may feel at the moment. We now live in a world where the outbreak of disease in a distant region is of direct and immediate relevance to our own well-being; where progress in less developed countries and regions is to everyone's economic benefit; and where ensuring that everyone gains from globalization and the many remarkable advances of medicine is of crucial importance to global long-term security.

Our responses to health challenges are thus bestcoordinated at the global level, including through meetings such as this 2nd World Health Summit. Coming from around the globe and many different sectors you represent an enormous repository of knowledge and experience. In meeting and talking to each other you have the unique chance to think big and act big. I wish you all the necessary courage and vision to do so and look forward to seeing the results.



Kofi Annan  
Former Secretary-General of the United Nations



Kofi Annan

# Summit 2010

## Key Facts

### Date 2010

October 10th – 13th, 2010

### Upcoming Summit 2011

October 23rd – 26th, 2011

### Venue

**Langenbeck-Virchow-Haus**

Charité - Universitätsmedizin Berlin

Campus Mitte

Luisenstrasse 58

10117 Berlin, Germany

### Number of Participants

1200

### Patronage

**Angela Merkel**

Chancellor of the Federal Republic of Germany

**Nicolas Sarkozy**

President of the French Republic

### Host

M8 Alliance of Academic Health Centers and

Medical Universities

### Organization

Charité – Universitätsmedizin Berlin, Germany

## Target Groups

The World Health Summit will bring together leading representatives from medicine, research, governments, industry, international institutions and nongovernmental organizations to address the most pressing issues that medicine and health care systems will face over the next decade and beyond. Their aim is to develop cogent and timely responses and solutions to achieve better health for populations worldwide.

## Profile

The World Health Summit is the annual conference of the M8 Alliance of Academic Health Centers and Medical Universities together with the National Academies. It is one of the world's foremost gatherings of leaders from academia, politics, industry and civil society to jointly develop strategies and take action to address key challenges in medical research, global health and health care delivery with the aim of shaping the political, academic and social agendas. After a highly successful inaugural conference in 2009, on the occasion of the 300th year anniversary of the Charité – Universitätsmedizin Berlin, the World Health Summit is now being held annually.

## Vision

Health is a Human Right (UN Declaration 1948). Health and personal wellbeing are our societies' most important values. However, compared to the immense rate of progress that we are facing in the medical sciences we are lagging enormously behind. At present more than half of the world's population is not receiving proper medical care. At the same demographic change in all parts of the world results in a rapidly rising burden of chronic diseases. We must clearly define our responsibilities and investments for the development of medicine to increase knowledge transfer from bench to bedside. We can make a difference. It is our responsibility to let today's science become tomorrow's agenda. Not only fine-tuned coordination of initiatives of academia with governments, the civil society and the private sector but also stable private-public partnerships, investments in health impose significant targets to improve health in our world.

## Purpose

By establishing the World Health Summit as one of the foremost international gatherings of its kind in healthcare, the M8 Alliance envisages the establishment of a sustainable high-level forum. Research, education and clinical care need to develop answers to health challenges in an increasingly complex environment of globalization and international interdependency. Bringing together all stakeholders involved in health research and health care presents an unprecedented opportunity for constructive interactive partnerships. There is an urgent need for a cross-sectoral approach and multidisciplinary research to unleash the power and creativity of academic medicine and to involve societies, governments and industries. By close collaboration in analyzing today's science and by extensively sharing international experience and debate, we will be able to structure tomorrow's agenda.

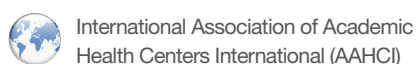
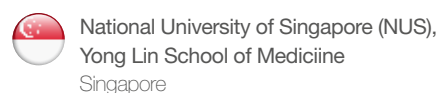
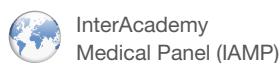
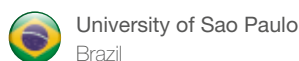
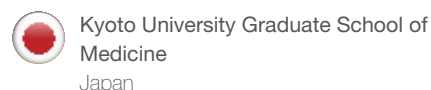
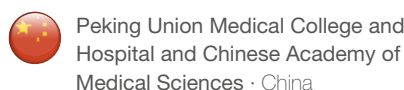
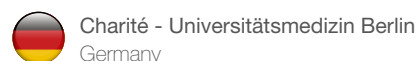


Charité Berlin  
**World Health Summit**



The “M8 Alliance of Academic Health Centers, and Medical Universities” is a collaboration of academic institutions of educational and research excellence that recognizes responsibility to improve global health and works with political and economic decision makers and civil society to develop science-based solutions for health challenges worldwide. This international network gives the World Health Summit an outstanding academic background. The M8 Alliance acts as a permanent platform for framing future considerations of global medical developments and health challenges. The M8 Alliance promotes the translation of research progress from the laboratory to the bedside and to populations, the transformation of our present medical care systems treating sick people to a true “health care system” with effective prevention of diseases and the transition of health-related solutions and adaptations in our rapidly changing living conditions, including demographic changes, urbanization, and climate change as priority areas of research.

It is the M8's vision to harness academic excellence to improve health worldwide.





# World Health Summit Leadership



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**Detlev Ganten**

Charité – Universitätsmedizin Berlin, Germany



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President Université Paris Descartes, France



Co-President 2010

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Principal Faculty of Medicine, Imperial College London, United Kingdom



Co-President 2011

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Co-President 2012

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# Funding Global Health: Can Innovative Mechanisms Save the Poor?

Panel Discussion



**Deutsches  
Ärzteblatt**

**M8Alliance**  
Alliance of Academic Health Centers and Medical Universities

Hosts

World Health Summit 2010  
Journal of German Medical Association (Deutsches Ärzteblatt)

Co-Host

M8 Alliance

Chairs

Detlev Ganten | President, World Health Summit | Charité - Universitätsmedizin Berlin | Germany  
Vera Zylka-Mehnhorn | Chief Medical Editor | Deutsches Ärzteblatt

Moderator

James Chau | Journalist and Moderator | China



DZ Bank, Pariser Platz

Global opinion leaders at the forefront of science, research, civil society, industry and policy-making came together in an event held in Berlin from 9th to 13th October. Deutsches Ärzteblatt hosted a forum session that focused upon innovative financing mechanisms.

The fact that the Federal Minister for Health, Philipp Rösler (FDP), not only personally delivered an address at the Berliner Charité on the occasion of the 2nd World Health Summit (WHS), but that he also spent more than two hours during the event's inaugural session listening to others' contributions, may well be considered significant: the WHS' potential advisory function pertinent to policy-making enjoys enormous credibility. Already. The science sector would like to intensify its influence on health-related political decision-making on a sustained and global basis, striving to establish this in its own right – independent of economic and political interests. It purports to diminish disparities in healthcare that prevail in the various countries, as well as within individual countries, according to the two Presidents of the WHS, Professor and Doctor of Medicine, Stephen K. Smith from Imperial College London and Professor and Doctor of Medicine Detlef Ganten from the Berliner Charité.

The average life expectancy in less developed countries, according to World Health Organization (WHO) findings, is more than 40 years below that prevailing in countries such as Japan, Australia or Switzerland (79-80 years), which offer good healthcare facilities. However, within industrialised countries, too, disparity can be significant. In a specific Glasgow neighbourhood, characterised by high unemployment and comparatively low levels of education, men



die at an average age of 53.9 years, predominantly as a result of an unhealthy lifestyle and various addictions, while the average life expectancy for British men stands at 79 years, reported Michael Marmot, Professor of Epidemiology at Imperial College London. Commissioned by the WHO, Marmot has researched social parameters that influence health. Zsuzsanna Jakab, Director General of the WHO, Europe, voiced her concerns regarding economic and structural inequalities within and between countries, conjoined with significant disparities in people's health and concomitant climate change, factors which she believed would increasingly give rise to social volatility.

The WHS does not consider itself a competitor to international institutions such as the WHO but a “new voice” in the arena. Bringing together roughly 1,200 participants, the WHS ensured that medicine, the health sciences, governmental bodies, non-governmental organisations (NGOs) and industry enjoyed representation and that they engaged in dialogue of an uncommon configuration in terms of both scope and structure.

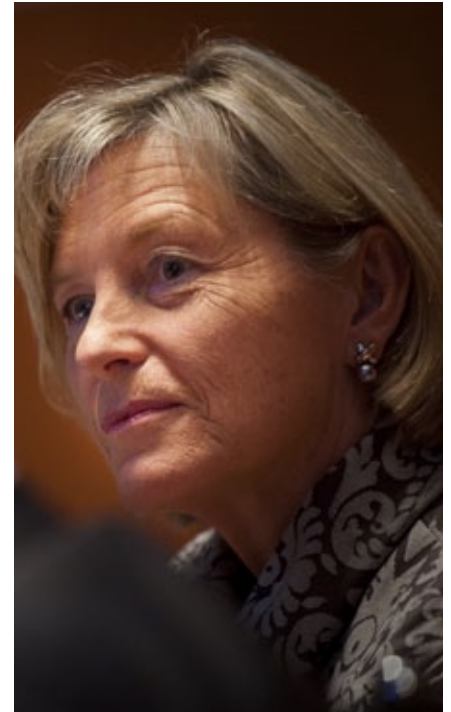
In comparison with the previous year, the spectrum of opinion leaders, representatives of national academies and decision-makers has become more representative in nature: over 70 countries enjoyed representation, among them a significantly larger number of African and South American countries than was the case in 2009. This was consistent with the objective of finding solutions to the most pressing global health problems using a multi-disciplinary and inter-institutional approach, and posing the question: how can science contribute to the quest for and configuration of a solution? “Medical science and healthcare research findings are of particular importance for less developed countries because they constitute an incontrovertible basis for rational prevention and treatment”, asserted Professor Mohammed Hassan from the Academy of Sciences for the Developing World. The three major focal areas of the WHS are:

- the incorporation of scientific innovations in new therapeutic approaches (“translation”)
- the policy-centric transformation of patient care into effective, prevention-orientated healthcare (“transformation”) and
- the resolution of problems through a process of demographic change and a thrust on the incorporation of chronic conditions in underfinanced systems (“transition”).

Minister for Health Rösler not only made it clear that the transfer of medico-technological advancements so as to establish good healthcare would be contingent upon inter-sectoral cooperation, but – further – that the system would deplete the financial resources available. Industry representatives endorsed his view. “We must switch from functioning as pill-sellers to fulfilling our roles as patient-centric healthcare providers”, declared Joe Jimenez, CEO of Novartis AG. And a further industry message followed: what is needed is a healthcare shift from competition to greater cooperation.

## Lively Deutsches Ärzteblatt Panel Discussion

The existing problems posed by the repercussions on health brought about by climate change may well be further exacerbated. Over the past few decades, the Earth has received a veritable “heat shock”, said Hans Joachim Schellnhuber, Professor of Natural Sciences at the Potsdam Institute for Climate Impact Research. Since as recently as 1980, global warming has averaged an increase of 0.2 degrees each decade. In the event of a sustained four or five-degree increase in temperature, inhabitants of some regions would be unable to withstand the extreme conditions in real physiological terms – quite apart from having to address the attendant problems of increased susceptibility to physical and psychological illnesses, and of famine and drought. Mass migration would result. “To which country are people supposed to belong if their country no longer exists?”, queried Schellnhuber.



Vera Zylka-Menhorn



Rifat Atun



Joelle Tanguy

One of the core issues examined by the WHS in Berlin addressed the avenues for global health financing to be adopted by the international community in the future. It was in this context that Deutsches Ärzteblatt (DÄ) assumed a media partnering role at the WHS.

One of the most important and successful global health donors is the Global Fund to Fight Aids/HIV, Tuberculosis and Malaria. Thus, the question emerged, according to the discussion moderator, James Chau (Chief Spokesman of the Chinese television channel CCTV-9), as to whether it might be logical to significantly expand the body's mandate. Rifat Atun, Professor for International Health Management at Imperial College London and engaged as a strategy expert at the Global Fund, concurred with this view, while also pointing out that the Fund was already under-financed: "For the next three years, donor countries are indeed making funds to the tune of 11.8 billion US dollars available to the Global Fund. However, a further sum of six million dollars is required simply in order to expand existing programmes", according to Atun.

Professor Peter Piot, Director of the Institute for Global Health at Imperial College London, called for financial resources to be deployed in a more targeted manner: "Why should the Global Fund invest money in middle-income countries if the governments of those countries do not contribute to the fight against Aids? We could save this money and use it to provide relief in more pressing scenarios."



Peter Piot

Dr. Joelle Tanguy, Managing Director of External Relations for the Global Alliance for Vaccines and Immunisation (GAVI), agreed that it was incumbent upon recipient countries to demonstrate political will and an engagement with regard to the health of their populations. "But they are already severely burdened by Aids/HIV, malaria and tuberculosis. They are not in a position to provide additional finances", asserted Tanguy. This is why, according to Tanguy, the imposition of a global tax is warranted. A levy on financial transactions (Robin Hood tax), specifically affecting banks, hedge funds and financial bodies (coffers), might merit consideration. Taxes on consumable goods or recreational activities are further possibilities. However, Atun warned of the need to maintain transparency: "If we are to introduce a new tax, people must be able to comprehend the exact use to which their contributions are to be put."

The participants in the DÄ panel discussion agreed that private-donation financing would play a substantial role in the future. "The established model is based upon the donation of funds and the subsequent identification of the disbursement of those funds", explained Atun. Donations made by individuals, on the other hand, were to be almost exclusively related to specific projects. "The focus of our work must thus change." The global economic crisis has weakened the healthcare system in many countries; the repercussions are palpable. While high individual payments in wealthy countries do not pose a hurdle in a patient's determination to consult a doctor or visit a pharmacy, they can often prove to be a real deterrent for patients in a country such as Uganda. "96 Percent of our cancer patients cannot afford any form of medical care", reported the Ugandan Vice President, Gilbert Balibaseka Bukenya.



As willing as many African countries are to reduce the burden of funding through their own efforts – by imposing higher tax surcharges or requiring increased individual payments or contributions to social health insurance – “without externally derived assistance, they will be unable to address the healthcare challenges they face”, emphasised the Minister for Health from Rwanda, Dr. Richard Sizibera.

Professor Michel D. Kazatchkine, Executive Director of the Global Fund, called for a greater sense of individual responsibility among recipient countries: “We cannot dictate from our offices in Washington which issues merit financing!” Decisive progress does not always involve high spends: mosquito nets, for example, are a simple measure in the prevention of malaria. Piot also asserted that recipient countries must demonstrate greater responsibility: “The mere stockpiling of money in the absence of political will can achieve nothing.”

Donor countries must, nevertheless, evaluate more searchingly for themselves what, in the context of healthcare, might be achieved by international development aid deployed in the respective recipient countries, asserted Tanguy.

Dr. Juan Garay, a health expert appointed within the European Commission, cast a critical eye over international development aid: “There are 100 global healthcare initiatives in progress around the world and countless bilateral agreements.” A great deal of time is wasted in recipient countries formulating reports and monitoring finances pertinent to the respective initiatives: “Donations founded on the best of intentions have unfortunately resulted in chaos in many places”, said Garay.



James Chau

## Innovative Financing Models

- Advance Market Commitment (AMC) aims to guarantee a constant supply of drugs and vaccines (for example, to counter pneumococcae and rotavirus), as well as to promote the expansion of relevant production capacities in the poorest countries of the world. In order to provide the impetus for pharmaceutical companies to develop drugs for neglected diseases, the placement of a fixed-rate bulk order for medicines that developing countries can also afford is guaranteed contingent to such drugs being successfully developed.
- Debt2Health is a debt transformation initiative led by the Global Fund to Fight HIV/Aids, Malaria and Tuberculosis. Targeted debt relief is intended to release financial resources within the developing country in question. Assisted by the Global Fund, these can then be transformed so as to implement urgent healthcare measures in the fight against Aids, malaria and tuberculosis.
- International Financing Facility for Immunisation (IFFIm), facilitates the knock-on financing of vaccination programmes. This is a financial institution that effects immediate-deployment borrowing on international financial markets based upon donor commitment. The IFFIm aims to accelerate access to funds for healthcare and vaccination programmes in the 70 poorest countries of the world. The funds provided by the GAVI Alliance serve to expand healthcare systems and to support vaccination programmes.
- UNITAID, an international facility for the purchase of drugs against Aids, tuberculosis and malaria, was founded in September 2006 and was originally an initiative conceived by Brazil (President Lula da Silva) and France (President Jacques Chirac), implemented in conjunction with the governments of Chile, Great Britain and Norway. Financing is effected by levying solidarity contributions on air tickets ([www.unitaid.eu/](http://www.unitaid.eu/)).

# PDP Research for Health Goods in Developing Countries

## Symposium



**Host** German Foundation for World Population (DSW)

**Chairs** Renate Bähr | Executive Director | German Foundation for World Population | Germany

**Panel** Ramesh Jaura | Executive President | Global Cooperation Council | Germany  
Hannah Kettler | Senior Program Officer | The Bill & Melinda Gates Foundation | United States  
Seth Berkley | President & Chief Executive Officer | The International AIDS Vaccine Initiative | United States  
Shing Chang | Drugs for Neglected Diseases initiative (DNDi) | Switzerland  
Christopher J. Elias | President | Program for Appropriate Technology in Health (PATH) | United States  
Zeda Rosenberg | CEO | International Partnership for Microbicides (IPM) | United States  
Dennis Schmatz | CEO | Medicines for Malaria Venture (MMV) | Switzerland  
Mel Spiegelman | CEO | Global Alliance for TB Drug Development (TB Alliance) | United States



Discussant

### Help organizations give a positive assessment of the interim result.

Millions of people are still dying in poor countries from treatable diseases. Many could be saved if it were possible to accelerate research on neglected diseases like malaria or tuberculosis or to make existing drugs for diseases such as HIV/AIDS that primarily affect people in developing countries available to local patients at affordable prices.

Here, so-called Product Development Partnerships (PDP) follow a new approach. These are international non-profit organizations that have set themselves the task to develop methods of prevention, diagnostics or medications for neglected and poverty-related diseases. They get science and industry together and usually are financed by public funds or private donations. One of the largest financiers of PDPs worldwide is currently the Bill and Melinda Gates Foundation. Since the beginning of the movement in 1993, the international research settings have changed dramatically in the opinion of many PDPs, and have brought the world a big step forward in achieving the millennium goals of the United Nations.

- PDPs fund research and development projects for neglected diseases.
- The resources of the PDPs are from public or private donations.
- The approach aims pragmatically towards the development of inexpensive products for neglected diseases.
- PDPs are charitable organizations, meaning they do not generate profits.

“PDPs are the right tool. But we still have a huge need for new treatment options in developing countries,” said Renate Bähr, Executive Director of the German Foundation for World Population (DSW) at the start of the symposium at the World Health Summit on 10 October in Berlin. She took it as a positive sign that the German Federal Government has announced to support PDPs in the next four years with 20 million Euro. “However, I hope,” said Bähr, “that the new activities of the federal government will be linked to the established development assistance programs.”

“Every life has equal value - no matter where someone was born,” explained the Senior Program Officer of the Bill and Melinda Gates Foundation, Hannah Kettler, the commitment of their organization. Fifty percent of their funds flow into global health projects and here, into the major neglected diseases. “New technologies have priority for us,” Kettler explained. The foundation has already invested around 3.5 billion U.S. dollars in PDPs. “This was an excellent investment,” so the Senior Program Officer. The supported projects are primarily result-oriented. The goal is to develop affordable and accessible products for people, particularly in developing countries.

The pragmatic approach of the PDPs was also emphasized by Christopher J. Elias, the president of the U.S. Program for Appropriate Technology in Health. “We develop technology that is useful and affordable.” This includes not only vaccines and diagnostics but also medical advice. PDPs were bridging the gap between need and research, between public and private sectors, between academic knowledge and product development. “PDPs help to more justly distribute the costs and risks that are associated with developing such products,” Elias emphasized.

Many approaches to research are currently focusing on the prevention and treatment of HIV/AIDS and the development of strategies to combat malaria and tuberculosis.

The International Partnership for Microbicides, for example, currently focuses its research on HIV prevention strategies for women. “We are testing anti-retroviral agents that can be applied vaginally, including gels or intravaginal rings,” said their CEO Zeda Rosenberg. “The women need products the use of which they can decide on for themselves - in contrast to condoms.” In addition, the organization also produces new combination preparations. “For this, we negotiated very innovative licensing agreements with pharmaceutical industry. That certainly was a difficult process. However, we now have established a good relationship to industry,” said Rosenberg. In addition, there is an urgent need to establish research centers in the less developed countries, so clinical studies could also be carried out on-site and with the subjects needing the medication.

Mel Spigelmann, CEO of the Global Alliance for TB Drug Development in the USA, stressed the need for new drugs and treatment regimens for tuberculosis: “Worldwide, two billion people are infected and everywhere, it is always the poorest of the poor who are affected.” Against this background, Spigelmann believes PDPs to be a tremendous achievement. “In the past, new technologies have been developed primarily for commercial reasons. This usually meant a high risk and usually, also high profits. In PDPs, this equation does not hold true anymore.” Since the donors limit the entrepreneurial risk, the profit margin is reduced as well. The result is a product with reasonable price, which is also affordable in poor countries. Asked about the risks of PDPs and possible conflicts of interest, Spigelmann emphasized: “The biggest risk is not to invest.”



Hannah Kettler

## *Every life has equal value – no matter where someone was born.*

Hannah Kettler

“Science and technology are key factors for global health,” confirmed Seth Berkley, President of the International AIDS Vaccine Initiative, with regard to the PDPs. He, as well, praised the pragmatic approach of these projects. “We focus on the product while academic research predominantly focuses on the expansion of knowledge,” said Berkley. “This also means that we end projects quickly if they show little promise for success.”

In the fight against malaria, the Medicines for Malaria Venture has brought together universities, governments and industry. “This has led to a great success in research,” said its chairman Dennis Schmatz. With the PDPs, humanitarian organizations had opened up research and development as an area of activity for the first time. However, this goes hand in hand with high quality standards: “Standards for developing countries must not be lower,” said Schmatz. In order to avoid conflicts of interest, he advises PDPs to have a strong scientific advisory board.

There is still a great need for research on neglected diseases, i.e. for diseases that primarily affect people in poorer countries. These include HIV/AIDS, tuberculosis, malaria and other tropical diseases.



Ramesh Jaura, Hannah Kettler, Mel Spiegelman

- PDPs should be collaborating with established humanitarian aid programs.
- PDPs have to counter possible conflicts of interest, e.g., by establishing scientific advisory boards that are as influential as possible.
- Governments should participate more in the support of PDPs in the incidence of diseases. Most politicians in Africa focus on fighting the infectious diseases known so far, non-communicable diseases play a secondary role. The political will is lacking.



# Progress in the Global Fight against HIV/AIDS, Tuberculosis and Malaria

## Symposium



### Host

The Global Fund to Fight AIDS, Tuberculosis and Malaria

### Chair

Rifat Atun | Director Strategy Performance & Evaluation Cluster |  
The Global Fund to Fight AIDS, Tuberculosis and Malaria | Switzerland

### Speakers

Martin McKee | London School of Hygiene and Tropical Medicine | United Kingdom  
Peter Piot | Director | London School of Hygiene and Tropical Medicine | United Kingdom  
Amiran Gamkrelidze | World Health Organization | Georgia

There is increasing evidence that the investments of the Global Fund to Fight AIDS, Tuberculosis and Malaria have changed the handling of these diseases on a worldwide scale. The fund with its seat in Geneva was founded as a public/private partnership in 2002. It pools the efforts of governments, civil society and private industry and has developed into one of the main financiers in the fight against HIV/AIDS, tuberculosis and malaria since its inception. According to the fund, 21.7 billion US dollar were spent on 600 projects in 150 countries since 2002.

- According to the fund, three million AIDS patients and 7.7 million tuberculosis patients could be treated to date. Furthermore, 160 million mosquito nets treated with insecticides have been distributed for the prevention of malaria.
- Antiretroviral therapy has lowered the number of deaths caused by AIDS in many countries. Prevalence and mortality rates of tuberculosis are also dropping, and according to the World Malaria Report 2009 of the World Health Organization (WHO), the number of people contracting malaria or dying of it decreased by up to 50 percent in some African high prevalence countries between 2000 and 2008.
- Nevertheless, the Millennium Goals of the United Nations (see text box) are still far from being achieved. Should investments in global health decrease, the progress achieved to date would be in danger as well.

At the World Health Summit in Berlin, Martin McKee of the London School of Hygiene and Tropical Medicine in London took stock of the goals achieved so far and arrived at mixed results. While in Europe, malaria is not a grave problem – most cases are “imported” – the disease flared up especially in the states of the former Soviet Union such as Georgia and Tajikistan. The situation is similar for HIV/AIDS. Admittedly, the incidence of the disease has markedly declined in Western Europe. “However, this is not a reason to relax,” said McKee. This is because the trend in the states of the former Soviet Union is steeply upwards also here. “In Ukraine, for example, the epidemic is out of control,” the scientist remarked. Also for tuberculosis, the all-clear can not be given. By now, the countries south of the Sahara show the highest incidence here, while multiresistant forms of tuberculosis cause the biggest problems in the states of the former Soviet Union. “The latter problem is largely home-made,” McKee criticized. “We did not create the healthcare systems we need to use existing medications



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*Fifteen years ago, we were thought to be dreamers.  
However, this symbiosis of science, politics and help programs works.*

Peter Piot

sensibly and effectively.” The problem with tuberculosis is the long duration of therapy and the complicated therapy regimen, which, as a rule, consists of three different preparations. “If you do not adhere to the schedule taking the medications, you risk the development of resistances,” so McKee. However, especially in poorer countries with poorly developed healthcare systems, interruptions of therapy happen again and again, or the use of inferior of counterfeit medications. This promotes the development of resistances. “So now countries that are financially badly off anyway now also have to shoulder the extremely high cost of medications for treating multiresistant tuberculosis,” said McKee.



Peter Piot

Peter Piot, Director at the London School of Hygiene and Tropical Medicine, sincerely appreciated the progress accomplished with the help of the Global Fund, especially in the fight against HIV/AIDS. “Fifteen years ago, we were thought to be dreamers. However, this symbiosis of science, politics and help programs works,” said the former Director of UNAIDS at the World Health Summit in Berlin. After all, at the conference on further financing of the fund in October 2010 in New York, donor countries had approved approximately eight billion Euros for the next three years. However, the problems are anything but solved. In Swaziland, for example, currently more than 40 percent of pregnant women are positive for HIV. It is true that worldwide, one million people have received their first treatment with antiretroviral medications in 2008. On the other hand, there are 2.7 million of new infections. “And the digging gets deeper,” Piot warned. “This is very sobering.” Even promising government-sponsored drug programs, such as in Brazil, have to face financial difficulty. “Costs have doubled there in the last years, because there aren’t any generic drugs available to treat resistant HIV strains.” The money for the fight against HIV/AIDS is still insufficient. “Without support from the outside, most of the affected countries will not be able to win this fight,” said Piot. “Besides, we have to pay attention to what is being done with the help funds. That is to say, they are not always used efficiently.” Furthermore, Piot supported the view that more funds should be invested in prevention and the information of groups at risk. In addition, the treatment of the HIV infected and AIDS patients needs to be improved, and the funding of HIV and AIDS programs needs to become more sustainable.

The results presented by Amiran Gamkrelidze, representative of the WHO in Georgia, were also ambivalent. Georgia was one of the first states of the former Soviet Union to receive money from the Global Fund. “Nevertheless, the situation is alarming,” Gamkrelidze said in Berlin. While the rate of new infections with tuberculosis has stabilized, it is still far above the European average. The same is true for the number of HIV infections. Although HIV/AIDS patients in Georgia have unlimited access to antiretroviral therapy, the number of AIDS cases is five times higher than the European average. The reason: late diagnosis and a badly functioning healthcare system. “Our biggest challenge is the lack of political commitment to the healthcare system,” Gamkrelidze criticized. Therefore, he suggested to link the amount of international financial aid to the contributions made by the affected states themselves. “The more a country contributes itself, the more help it gets,” so the WHO representative.

# The Future is Chronic: Sustainable Adaption of Health Care to Epidemiological Transition

## Working Session



**Co-Host** World Health Organization (WHO)  
World Heart Federation



**Chairs** **Ala Alwan** | Assistant Director-General for Noncommunicable Diseases and Mental Health | World Health Organization | Switzerland  
**Pekka Puska** | Director General | National Institute for Health and Welfare (THL) | Finland

**Speakers** **Hal Wolf** | Senior VP and Chief Operating Officer | Kaiser Permanente, The Permanente Federation | United States  
**Pierre Corvol** | President | Collège de France | France  
**Olivier Raynaud** | Senior Director, Global Health and Healthcare Sector | World Economic Forum | Switzerland  
**W. Philip T. James** | President | International Association for the Study of Obesity | United Kingdom

## Current Situation

While infectious diseases, according to a report by the World Health Organization (WHO) from 2002, globally are responsible for 40 percent of all deaths, the rate of so-called non-communicable diseases (NCDs), meaning the diseases that are not contagious, was at 60 percent - equivalent to 35 million deaths per year. Of these 35 million, around nine million die even before their sixtieth year, another 15 million short of their seventieth year, stressed Ala Alwan during the 2010 World Health Summit. The share of non-communicable diseases will rise to 73 percent worldwide, so the Assistant Director-General for Non-Communicable Diseases and Mental Health at the WHO in Geneva.

The most frequent NCDs leading to death include cardiovascular diseases, diabetes, cancer and chronic lung diseases. According to the WHO, the countries in the Western Pacific and Southeast Asia will be the ones most severely affected by cardiovascular and respiratory diseases, as well as by diabetes and cancer. Already now, chronic diseases account for 51 percent of all deaths in Southeast Asia, 89 million people will probably die of these diseases in the next ten years - with high probability, some 60 million in India alone. Already today, cardiac disorders take first place in the most common causes of death in India. Also international studies have produced alarming results: It has been said that by 2020, NCDs will account for 80 percent of the burden of disease in developing countries.

The reason for the high prevalence of NCDs in developing countries are their poor economic conditions and structures: Poverty is often associated with poor diet, smoking and excessive alcohol consumption, and the progress of urbanization is leading to poor air conditions. Lack of information on chronic diseases leads the population to incorrect and health-damaging behavior.



Olivier Raynaud

## Medical and Political Challenges

W. Philip T. James, International Association for the Study of Obesity, United Kingdom, pointed to the strong increase of non-communicable diseases in cities during the session "The Future is Chronic". People in metropolitan areas like Bangalore, Delhi, Bangkok or Manila - meaning in cities the population of which is able to participate in the economic growth of the countries - did not pay enough attention to healthy nutrition anymore, due to the changes in their lifestyle. High blood pressure and other cardiovascular risk factors have increased dramatically with the onset of urbanization, especially during the last decades, added Pierre Corvol, President of the Collège de France.



Pierre Corvol

The increase of non-communicable diseases in developing countries also has economic consequences, warned Alwan and Pekka Puska, Director General of the National Institute for Health and Welfare in Finland. According to the WHO report “Preventing Chronic Diseases - a vital investment,” China loses US\$ 558 billion of the national income between 2005 and 2015, due to cardiac disorders, stroke and diabetes. With this, the losses of the People’s Republic are much more severe than those of India (US\$ 236 billion), the Russian Federation (US\$ 303 billion) or those of the United Kingdom (approximately US\$ 35 billion). Also Vietnam as a rising economy is massively suffering from the socio-economic consequences of NCDs, according to Alwan’s statements. The issue now is to look for solutions on a global level and to intensify putting the subject on the agenda of health politics, stressed the WHO Director-General.

For Olivier Raynaud, Senior Director of the Global Health and Health Care Sector at the World Economic Forum in Davos, Switzerland, the center of the political challenge is to create awareness for the presence of NCDs - worldwide. This awareness is needed not only in the ranks of health politics and the medical profession, but also outside the health sector. In the future, the subject should be on the agendas of the respective prime ministers.

## Key Challenges

- Non-communicable diseases are particularly strongly increasing in developing countries
- The costs caused by non-communicable diseases for the individual economies are enormous
- There is a lack of steps towards prevention and information
- So far, global health policy has not sufficiently addressed the control of NCDs
- Models for the control of NCDs from industrialized countries cannot be transferred one-to-one to developing countries - new models are necessary

## Discussion and Possible Solutions

The speakers of the working session “The Future is Chronic” discussed possibilities to stop the rise in NCDs and to avoid further diseases, respectively. From Alwan’s point of view, strengthening the respective healthcare systems is of particular importance. At the same time, the Director-General thinks it important to collaborate across borders both in industrialized and in developing countries to stop NCDs. It is said to be necessary to bring the government as well as the private sector, the educational institutions and the families to the same table.

Various proposals aimed towards prevention and education/training. Pierre Corvol considers it crucial to initiate information campaigns for children, adolescents and their parents. At the same time, physicians are to be involved, since also they have knowledge on healthy nutrition and proper behavior to pass on to their patients. Civil servants and employees from the health sector who work in smaller health centers in rural areas should receive special training and continuing education in handling NCDs. Everybody should be informed what risks are associated with, e.g., poor diet, excessive alcohol consumption or lack of physical activity. Nutrition expert James pointed to the effect of simple campaigns to reduce tobacco, salt or fat. Especially in countries with little money, it would make sense to involve communities and staff from the health sector in such prevention campaigns.

The WHO has adopted a resolution on the prevention and control of non-communicable diseases already in May 2008. The action plan formulated therein, meant to be implemented between 2008 and 2013, is aimed primarily to draw more attention to the rise in NCDs, especially in developing countries. At the same time, the aim is to develop preventive measures and to implement them into national policies. In addition, global networks for the prevention and control of non-communicable diseases are to be formed.



Ala Alwan and Pekka Puska (from left)

Hal Wolf of Kaiser Permanente pointed to their own model as a possible approach to a solution. Kaiser Permanente, the largest non-profit “health plan” in the United States with 8.6 million members, favors population management, transparency, electronic medical files, registers and use the Internet for better control. This would help to continuously monitor the performance and success of specific actions and help decide on measures suitable for the prevention and management of chronic diseases.

In September 2011, highlighted Alwan, a high-level meeting of the General Assembly of the United Nations will take place, at which the heads of the states and the governments of the UN member states will address the topic.

## Key Messages

- NCDs are the leading killers both globally and in most developing countries.
- NCDs put a brake on development and undermine efforts to attain the United Nations’ Millennium Development Goals.
- NCDs are preventable and can be controlled. It is necessary to:
  - Stronger monitor NCDs and their determinants at a system level
  - Involve sectors and industries not directly involved in healthcare in preventing risk factors
  - Strengthening health systems to respond more effectively to the healthcare needs of people with NCDs



# Megacities: Opportunities and Challenges for Health

Working Session



## Co-Host

LSE Health & Cities  
BRAC University

## Chairs

Julian Le Grand | Chairman LSE Health |  
London School of Economics and Political Science | United Kingdom  
Timothy G. Evans | Dean | BRAC School of Public Health | Bangladesh

## Speakers

Ricky Burdett | Director | LSE Cities, London School of Economics | United Kingdom  
Victor G. Rodwin | Director of the World Cities Project | New York University | United States  
Hans Dohmann | Municipal Secretary for Health | Rio de Janeiro City Hall | Brazil  
Francisco Armada Perez | Technical Officer WHO Kobe Centre | World Health Organization | Japan  
Alfred Spira | Institute de Recherche en Santé Publique | France

## No Simple Solutions



Alfred Spira

In 2050, according to UN estimates, more than six billion people worldwide will live in so-called megacities. Depending on the definition, these are cities with more than three or five, eight or ten million inhabitants. Although the indications of size vary as much as the characteristics of the metropolises, they still have one thing in common: They hold both opportunities and risks to the health of their residents in readiness. On the one hand, the high population density can facilitate the spread of infectious diseases. Overpopulation, frequently great social disparities and high daily traffic density can cause stress-related illnesses; the risk of violence or traffic accidents increases. On the other hand, megacities create opportunities for economic and social advancement, with the accompanying positive effects on health. Most times, centers of highly specialized medicine are located in the megacities - including those in poorer countries.

The World Health Summit in Berlin has identified four areas of action, in which politicians and local authorities can affect the health of their citizens:

- Urban development: Development plans that provide for sufficient green space, as well as the expansion of local public transportation and safe walkways can help to create a healthier environment. Further requirements are sufficient schools and places of employment to prevent or alleviate poverty.
- Changes in behavior: Local authorities can contribute by orders or prohibitions to create a healthier environment. They could include a public smoking ban, the promotion of healthy nutrition or breastfeeding, as well as prevention programs to prevent alcohol and drug abuse.
- Promoting health: Screening and vaccination programs can help to prevent diseases and epidemics.
- Basic healthcare: Local authorities should create the conditions for all residents to have access to primary care, especially for those living in slums or the poorer neighborhoods, respectively.

“We are at a turning point,” said Ricky Burdett of the London School of Economics at the World Health Summit in Berlin. “In 2007, the ratio between urban population and rural population still was 50:50. In 2050, however, 75 percent of people will live in cities, and only 25 percent will still live on the countryside. Now everything depends on how we shape this living environment,” explained the architect and urban planner. Especially since currently 33 percent of urban dwellers live in slums. Mexico City served Burdett as a warning - a metropolitan area with around 16 million residents. “The city is still growing and slowly eats up all the green in its environment. Some people commute four hours a day between home and work - with serious consequences to their health.” According to Burdett, one of the major problems, particularly of the megacities in the poorer regions, is the wild, uncontrolled growth. Overpopulation, makeshift housing and pollution thus created unhealthy living conditions, in which diseases such as tuberculosis could spread quickly. However, the health consequences of social disparities can also be seen in western megacities such as London. “With every subway





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station that you are moving from the center further to the east, your life expectancy decreases by one year,” said Burdett. However, the local authorities can take countermeasures, including those in developing and emerging countries. In Bogota, bicycle paths were built on a large scale, and incentives were created for commuters to use the bus in order to combat the grid-lock. “Good city planning can help to improve the situation,” explained the architect. “This is not always a question of money.” Burdett sees the need for action in three areas in particular: the growth of cities, the illegal settlements and the deindustrialization. Currently, there is a fierce discussion on limiting the expansion of city areas by green belts. “For example, it was brave of the City of Seattle to say: Here, the city ends, and there, the fields begin,” said Burdett. One problem especially in megacities of the South are unstructured illegal settlements. Solutions would have to be found there to prevent this. In addition, local authorities would have to include the increasing deindustrialization in their urban planning. “What do we do with the industrial buildings and the industrial land when the plants are no longer needed? Do we create green lungs, living space? These are the questions we must ask ourselves,” said Burdett.

Victor G. Rodwin of the New York University presented some results of the World Cities Project that New York University pursues in collaboration with the International Longevity Center and the Hasings Center. According to Rodwin, the growth of megacities will predominantly take place in the developing countries - exceptions are Tokyo, New York and Los Angeles. In his opinion, New York, Paris, London and Tokyo have managed to create a relatively healthy environment for their population, in contrast to the megacities of the South. In all four cities, there are renowned medical schools and research institutions, as well as university hospitals. Nevertheless, these cities would have to continuously face new challenges to public health.



Ricky Burdett

Hans Dohmann, Municipal Secretary for Health of the megacity Rio de Janeiro, presented in Berlin the municipal basic healthcare program the city successfully applied in 2009, to allow access to healthcare also for the poorer population. Theoretically, the healthcare system of the State of Brazil could be used by the population free of charge, Dohmann said. Here, the municipalities are responsible for basic healthcare and emergency care. In 2009, however, only 3.5 percent of the 6.2 million inhabitants of Rio had access to primary care. Slum dwellers had been excluded entirely. "This is even though medical care should be available to all who need it," said the Municipal Secretary for Health. The local planners have, therefore, divided the city into ten regions, each of which should provide a health system of its own, from primary care to hospital care. These regions were in turn subdivided into

smaller micro-regions. "For in each of these micro-regions there are different conditions. And this way, an individual solution can be found for each micro-region," Dohmann explained. In the approach taken in Rio, public health services and non-profit organizations are working together. The goal is, so Dohmann, that a total of 35 percent of the population will have access to primary care by 2012. The important things are the availability of health centers also in the vicinity of the slums, and to have access to community workers who live in the respective district, know the environment and speak the language. "This also changes the relationship of the citizens to the state," said Dohmann. "We are evolving from a hospital-centered system to a system of primary care and, thereby, are improving the living conditions in Rio."

Francisco Armada Perez, WHO representative in Japan, pointed to the conflicting living conditions in megacities: "In megacities, there is a concentration of the political and the economic power of a country. At the same time, there is huge social disparity that can be quantified by parameters such as income, influence and health." As an example, he cited the tuberculosis rate in Osaka. "You find the best and the worst situation in a single city. In some parts of the city, the rate of tuberculosis resembles the one in Mumbai." The real challenge for local policy is, however, that cities of the same size do not share the same problems, nor the same solutions.

Alfred Spira of the French Institute de Recherche en Santé Publique appealed to the participants: "Act locally. We need to take simple steps." He is particularly impressed by the strict smoking ban of New York City. "This is a wonderful example of what can be done," said Spira.

*Good city planning can help to improve the situation.  
This is not always a question of money.*

Ricky Burdett

# The Efficiency Challenge: Improving Quality and Productivity in Health Care

## Working Session



Co-Host	National Institute for Health and Clinical Excellence (NICE)
Chairs	<b>Jim Easton</b>   National Director for Improvement and Efficiency   Department of Health   United Kingdom <b>Michael Rawlins</b>   Chairman   National Institute for Health and Clinical Excellence   United Kingdom
Speakers	<b>Rob Moodie</b>   Inaugural Chair Nossal Institute of Global Health   University of Melbourne   Australia <b>Doris Pfeiffer</b>   Chief Executive Officer   National Association of Statutory Health Insurance Funds   Germany <b>Robert Kocher</b>   Former Special Assistant to the President   United States <b>Peter C. Smith</b>   Professor of Health Policy   Imperial College Business School   United Kingdom <b>Penelope Dash</b>   McKinsey & Company   United Kingdom

## Current Situation

The cost of healthcare is rising faster than the gross national product in almost all industrialized countries. As a result, either more and more funds have to be raised for the medical care of the population, or appropriate steps are taken to mitigate these cost increases.

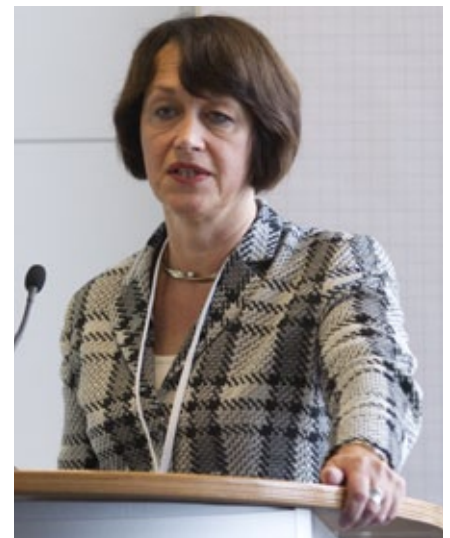
Therefore, a lot of money has been invested for decades in genetic engineering, modern treatment methods and information technologies, which promised to stabilize costs through higher quality and productivity in medicine. However, so far without success. Given the global economic slump, many countries now have to quickly find ways to stop or even reduce the rising expenses. Therefore, nearly every industrial nation is currently planning a healthcare reform, usually with the goal to slow the rise in cost by increasing quality and productivity.

## Key Challenges

- Demographic trends and innovative therapies are pushing up healthcare costs.
- There is a lack of ascertained knowledge as to how the cost increases could be prevented.
- In healthcare, incentives are lacking to work qualitatively better or more productively.
- Transparency in healthcare systems is not enough to judge the quality and efficiency of care.

## Discussion I

For Rob Moodie, Inaugural Chair Nossal Institute of Global Health, University of Melbourne, prevention is a key component to solve the problems in healthcare. Diseases of civilization such as diabetes and cardiovascular diseases are hard to convey to the population. However, it is exactly these illnesses that are causing the spiraling healthcare costs. This can only be counteracted by prevention that reaches the entire population. Moodie referred to the great successes that have already been achieved with appropriate prevention programs, for example, by vaccinations, HIV protection or anti-smoking programs. Successful prevention requires, above all, political regulations and information of the population. The best example for this is the global effort against smoking. On the other hand, programs that are directed against the interests of the market -such as obesity prevention or cancellation of expenses for drugs with poor efficacy- are difficult. Here, a clear political will is needed, as well as adequate financial resources, time and persistence until the prevention starts to work. Moodie stressed that people would have to learn to practice prevention for their entire life. For this reason, this could not succeed through individual programs. Prevention must become an essential component of healthcare.



Doris Pfeiffer



Michael Rawlins and Rob Moodie (from left)

Doris Pfeiffer, Chief Executive Officer of the National Association of Statutory Health Insurance Funds, Germany, is convinced that the rising healthcare costs do not mean that high-quality care will be unaffordable in the future. The German healthcare system, for example, offers far-reaching access to medical care. "It is a good system, but a very expensive one," Pfeiffer emphasized. The reason lies in providing the wrong financial incentives at times. The remuneration distinguishes between outpatient and inpatient care in order to have cost control by sector. This frequently leads to paying average costs without providing incentives for better quality. Pfeiffer explained that they wanted to change this. In inpatient care, the diagnosis related groups (DRGs) have shown that also flat-rate fees can be implemented without sacrificing quality. Insurers advocate paying more money for good services, but also less for poor services. On the other hand, the representatives of the medical profession are in favor of quality surcharges but reject reductions for poor quality. "The German system is not easy, but I think it worthwhile that we are working on it," said Pfeiffer.



Robert Kocher

"All of the German problems are also present in the United States," emphasized Robert Kocher, former Special Assistant to the President, United States. "They are just bigger in our country." Therefore, one of the essential objectives of the Accountable Care Act in the United States is to improve the quality and productivity in the healthcare sector substantially. For this, it is intended to leave payment per service behind and move towards a remuneration rewarding the quality and productivity. Appropriate incentives are supposed to change the patients' behavior, so that the patients pay more attention to quality. On the other hand, better networks and coordination are supposed to pay off for service providers. Higher transparency is needed to achieve this goal. For example, quality can only be judged correctly if all the data are available. Therefore, incentives are provided to keep treatment errors, hospital infections and relapse rates to a minimum. For this, special institutions are set up - the Medicare Innovation Center and the Patient Centered Outcomes Research Institute - that evaluate these data and track the development of productivity and quality in the system.



One of the key problems when working to improve the effectiveness of healthcare is the lack of knowledge about which steps will have which effect on the system. Peter C. Smith, Professor of Health Policy at the Imperial College Business School, United Kingdom, stated this in his presentation. In order to assess a measure, one must determine which amount of money is spent on which health goal. "I think a complete view of the activities and effectivities can hardly be obtained," said Smith. Therefore, the success of measures that affect the system is difficult to predict. It is important that all elements of healthcare - the incentives provided, the organizations, the individual service providers and patients - are organized in such a way that they warrant a high level of effectiveness.

## Discussion II

Healthcare has changed considerably in recent years. The measurability of medical services is increasingly in focus, as Smith stressed. This is not just about the quality of services, but also about the detection of errors. Especially the systematic analysis and reduction of error sources are becoming increasingly important and are some of the biggest challenges, so Kocher. Moodie stressed that much too little thought has been spent so far on how the system can contribute to avoid mistakes, or even the diseases. Prevention and screening examinations have a great potential here that is not yet used by health systems.

Moreover, the discussion has shown that particularly in the area of transparency, a lot still has to happen. Pfeiffer reported that it took a long time until German hospitals routinely recorded the data for quality reports. Smith sees the policy in the duty here. Without legal regulations, there will not be rapid rethinking with regard to quality reports. However, reports alone do not seem to be enough, as hardly a patient uses them for choosing his doctor or hospital. Yet, the problem is not the patients, so Michael Rawlins, National Institute for Health and Clinical Excellence, United Kingdom. They want the information to find the best medical treatment for themselves or their families. However, the reports are not so easily accessible that a layman can understand them. In part, it is already a problem to find the reports at all. Kocher believes that all the data and reports are not what the patients want. They want to know whether a doctor is well trained and has experience. In this regard, the numbers are not necessarily helpful.



Peter C. Smith

## Key Messages

- Greater transparency and a consistent analysis of efficiency and cost in healthcare are necessary.
- The effect of measures and reforms in healthcare needs to be evaluated scientifically.
- There must be incentives for efficient and high quality care.
- Prevention must become part of normal healthcare.



# Responding to the Increasing Complexity in Medical Research: Structural and Organizational Requirements

Working Session



WR | WISSENSCHAFTSRAT

## Co-Host

European Commission  
German Council of Sciences & Humanities

## Chairs

Ulrike Beisiegel | German Council of Science and Humanities | Scientific Commission | Germany  
Ruxandra Draghia-Akli | Director Health Directorate | European Commission | Belgium

## Speakers

Xue Zhang | China Academy of Chinese Medical Sciences | China  
Liselotte Højgaard | Chair | European Medical Research Councils | Denmark  
Heyo K. Kroemer | Dean, Medical Faculty | Ernst Moritz Arndt University of Greifswald | Germany  
Jörg Reinhardt | CEO | Bayer HealthCare AG | Germany

## Current Situation



Ruxandra Draghia-Akli

Research methods and strategies for the diagnosis and treatment of diseases develop rapidly. One example is molecular biology, the basis for personalized medicine. The development of new methods and applications mutually influence each other and require novel interdisciplinary approaches to gain insights and make them usable. Thus, the management of data from genome or proteome analyses (bioinformatics) is at the center of biomedical progress but cost-intensive. At the same time, research in the individual countries gets its direction from the clinical issues that health policy considers priorities there. However, there are many factors that have transnational consequences for human health such as climate change, urbanization or migration. A strong increase in chronic diseases in both highly and poorly industrialized countries is also one of these transnational developments. Another one is the rapid spread of pathogens from an initially localized area to other regions by travelers. For reasons of effectiveness already, a transregionally coordinated research that uses synergies is urgently required.

Emerging countries like China have to struggle with the multitude of their tasks in the planning and financing of research because they have the healthcare problems of both developed and poorly developed countries. In Europe, it is a big problem that research funding is highly fragmented. Within those member states with strong federalism such as Germany, regional responsibilities for research funding are an additional obstacle to comprehensive planning and financing.

## Key Challenges

- Which structures must be established at a national level to bring about the improved planning, promotion and implementation of medical research?
- Which are the international structures that should be developed or optimised in order to pool relevant medical research more effectively at a supra-regional level?
- How are rules which apply to clinical research, including pre-requisites for drug approval, to be coordinated at a supra-regional level?
- How may innovations in research be implemented more effectively in treatment paradigms?

*We should see medical research in Europe in a global context.*

Liselotte Højgaard

## Discussion and Possible Solutions

The problems in China are exemplary for the great challenges of emerging countries: There, chronic diseases (malignancies, metabolic syndrome, cerebrovascular and cardiovascular diseases) are rapidly increasing. In addition, there is a high burden of disease caused by infections, such as is characteristic of poorly developed nations. This diversity of national health problems must be reflected in the funding of research. Thus, China focuses on chronic diseases and tuberculosis, hepatitis and HIV/AIDS in its medium-term and long-term national programs, reported Prof. Dr. Liming Vi (Peking University) for the China Academy of Chinese Medical Sciences. Stem cell research, tissue culture, reproductive medicine and the search for new molecular target structures for drugs are among the scientific areas that are funded with priority.

For Europe, too much structural and organizational subdividing in the design and financing of medical research is considered an obstacle in mastering the tasks of the future. “The safety of medical tests and therapies, and the high quality of research in an environment as unbureaucratic as possible should be the focus of future research sponsorship,” said Prof. Dr. med. Liselotte Højgaard, Chair of the European Medical Research Councils in Strasbourg. “We should see medical research in Europe in a global context.” Global is not the opposite of regional. Exemplary for a stronger focus, also recommended for the future, on transregionally set up projects is the “Innovation Union” initiated by the European Commission: Responding to demographic change, the conditions for healthy aging are explored in a collaboration between public and private research sponsors (public-private partnership). According to the words of Højgaard, the European Union has responded to the known deficits in clinical applied research with the aim to enable every patient in Europe to have access to evidence-based treatment. This also took the recommendations of the World Health Summit 2009 into consideration.

Thus, the OECD countries (Organization for Economic Co-operation and Development) established the Global Science Forum (GSF), to plan and finance industry-independent clinical studies more strongly than before. The GSF is advised by the U.S. National Institutes of Health (NIH).

Højgaard called for establishing a European institute for medical research in the long term, based on the model of the NIH

- to streamline projects of individual European countries with those of the European Union, for example, regarding biobanking, bioinformatics and bioimaging,
- to help set up and promote collaborations with other continents,
- to develop guidelines under consideration of ethical aspects in areas in which this is useful for working together
- and to develop standards for research and medical practice.

The regionally and transregionally required structure adjustments to medical research would necessarily have to involve teaching, the speech concluded.

## Key Messages

- The promotion of medical and biomedical research must reflect health problems that subsist at a national level.
- The promotion of research cannot, however, remain within the confines of regional boundaries, but must present greater congruence than ever before with broad global health issues.
- Projects specific to individual European countries are to be aligned with European Union projects.
- Guidelines that govern ethical aspects are to be integrated.
- Common standards for research and good medical practice are to be developed.



Xue Zhang



Liselotte Højgaard

# Research Strategies Against Neglected Diseases – The German Role in a Global Play

Symposium



Federal Ministry  
of Education  
and Research

**Host** Federal Ministry of Education and Research Germany

**Chairs** Bruno Gryseels | Institute for Tropical Medicine Antwerpen | Belgium  
Helge Braun | Secretary of State | Federal Ministry of Education and Research | Germany

## Welcome

Helge Braun | Secretary of State | Federal Ministry of Education and Research | Germany  
**Development of Drugs for Neglected Diseases**  
Rolf Korte | Justus Liebig University Gießen | Germany

## PDPs: The Inside Perspective

Bruno Gryseels | Institute for Tropical Medicine Antwerpen | Belgium  
Martin Springsklee | Bayer Schering Pharma AG | Germany  
Stefan Kaufmann | Director | Max Planck Society | Germany  
Robin Shattock | St. George's University of London | United Kingdom  
Manica Balasegaram | Drugs for Neglected Diseases initiative | Switzerland  
Giorgio Roscigno | FIND - Foundation for Innovative New Diagnostics | Switzerland



Rolf Korte

## PDPs: The African Perspective

Awa Marie Coll-Seck | Executive Director | Roll Back Malaria Partnership | Switzerland

## BMBF Funding Concept for Neglected Diseases

Elvira Gottardi | Federal Ministry of Education and Research | Germany  
Joachim Krebsner | Federal Ministry of Education and Research | Germany

## PDPs: Funder's Perspective

Helge Braun | Secretary of State | Federal Ministry of Education and Research | Germany  
Diana Dunstan | Medical Research Council, EDCTP | United Kingdom  
Sue Kinn | Department for International Development | United Kingdom  
Ruxandra Draghia-Akli | Director Health Directorate | European Commission | Belgium  
Hannah Kettler | Senior Program Officer | The Bill & Melinda Gates Foundation | United States  
Nils Daulaire | Director of Global Health Affairs |  
U.S. Department of Health and Human Services | United States

## Ministry of Education and Research Sponsors “Product Development Partnerships” for the first time

Within the next four years, the Federal Ministry of Education and Research (BMBF) wants to fund research on vaccines and medications for developing countries with 20 million Euro. This was announced by the Parliamentary State Secretary in the BMBF, Helge Braun, at the World Health Summit in Berlin. With the money, so-called product development partnerships (PDPs) are to be supported. These are international non-profit organizations that have set themselves the task to develop methods of prevention, diagnostics or medications for neglected and poverty-related diseases. They get science and industry together and usually get their finances from public funds or private donations. Currently, one of the biggest financiers of PDPs worldwide is the Bill and Melinda Gates Foundation.

- Braun explained in Berlin that the BMBF wants to achieve the following goals with its funding initiative in particular:
- The health especially of women and children under five years should be strengthened. These are also two of the Millennium Goals of the United Nations.
- Primarily, new methods for the prevention, diagnosis and treatment of tropical diseases such as leishmaniasis or dengue are to be developed - a field that would not be economically lucrative for pharmaceutical industry without such funding.
- Moreover, the BMBF funds are to sponsor projects aimed at combating diseases associated with high child mortality. These include, for example, bacterial meningitis or diarrheal diseases.

The Global Fund to Fight AIDS, Tuberculosis and Malaria has saved six million lives so far, Braun said in Berlin. “We must not stop here, however,” he explained the new financial commitment of the BMBF to promote PDPs. Braun stressed that research for new diagnostics or therapeutic agents must take place together with the partners in the countries concerned.

Rolf Korte of the Justus Liebig University Gießen called for, above all, more effort in the fight against hitherto neglected tropical diseases such as schistosomiasis or onchocerciasis. Together with Chagas disease, dengue, leishmaniasis, leprosy, lymphatic filariasis, malaria and tuberculosis, these diseases are at the center of activity at the Tropical Disease Research platform (TDR) of the World Health Organization. “Every year, one billion people are infected with tropical diseases,” Korte explained. “Most of the diseases could be prevented or cured.” However, the affected patients are usually poor, so that investments in research and development of new drugs are not worthwhile for pharmaceutical companies.

There is an effective drug against schistosomiasis, but only ten percent of patients have access to it. In addition, diagnostics have to be improved, and dosage forms have to be developed that are suitable for children. “Because of the development of resistances, it is also important to develop new drugs,” stressed Korte. In the case of river blindness, WHO/ TDR and a pharmaceutical company are working to develop a new drug. “This is a good example for the fact that we can do something,” said the scientist. As Secretary of State Braun before him, he, as well, stressed the need for the affected countries to have a substantial influence on the research agenda. “There we have to strengthen the research capacities as well,” demanded Korte.

Martin Springsklee of Bayer Schering Pharma introduced a product development partnership of the corporation for a new combination preparation against tuberculosis. It is expected to reduce the duration of treatment from six to four months. “This is a small step in the right direction,” said Springsklee. Also he considers it extremely important to research and test new developments under the conditions of reality. “You have to go where the diseases occur,” he said. “If, for example, a phase III study shows side effects, you need to train the medical personnel on site accordingly. You need to build local capacities.”





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Stefan Kaufmann, Director of the Max Planck Society, argued to focus not only on the development of drugs, but also on the development of functioning health systems. “For this, we not only need money but also innovative strategies,” he said.

Bruno Gryseels of the Institute of Tropical Medicine Antwerp shared this view. “Tropical diseases are a difficult scientific challenge. It is, therefore, very important to improve the health systems of affected countries.” He also campaigned for a stronger involvement of the affected countries in the planning of research. “Here, 100 people from the West sit and talk about the problems of Africa. We need more experts from these countries.”

Awa Marie Coll-Seck, Executive Director of the Roll Back Malaria Partnership, thinks PDPs promising in the context of drug discovery for neglected diseases. Especially the Bill and Melinda Gates Foundation sponsors these partnerships. In contrast, only 16 percent of the funding came from government agencies, criticized Coll-Seck. “We can not leave this field to the foundations alone,” she emphasized. “States and civil society should be more involved in decisions on research planning and the allocation of funding. And developing countries should establish their own research agenda.”

Representatives of two non-governmental organizations (NGOs) argued in Berlin in favor of a monitoring agency for PDPs. Doctors Without Borders and the BUKO Pharma-Kampagne expressly welcomed the PDP support program of the Federal Ministry of Education and Research. At the same time, however, they drafted minimum standards that should be linked to the awarding of grants:

- Research and development should be guided by objectives of public health in the affected countries.
- In the developing countries, competencies must be encouraged and developed.
- Patients in developing countries must be able to share in new research results.

“The money from the German tax payer has to ensure both: innovations and access to them,” says a statement of the two organizations. They also promoted a greater involvement of civil society in the allocation of funds in both the donor and the recipient countries. “NGOs with relevant expertise and no links to the PDPs should also be involved in the discussion,” it said.

# Empowerment through Research: Capacity Building in Low Income Countries

## Working Session



supported by:



### Co-Host

German National Academy Leopoldina  
Academy of Sciences for the Developing World (TWAS)

### Chairs

Volker ter Meulen | Past President | German National Academy of Sciences Leopoldina | Germany  
Mohamed H.A. Hassan | Executive Director | Academy of Sciences for the Developing World | Italy

### Speakers

Nelson K. Sewankambo | Principal | Makerere University College of Health Sciences | Uganda  
Kathleen M. Metters | Senior Vice President External Discovery & Preclinical Sciences | Merck & Co., Inc. | United States  
Oumar Ibrahima Touré | Minister of Health | Mali  
Norbert Forster | Deputy Permanent Secretary | Ministry of Health and Social Services | Namibia

## Current Situation

Establishing sustainable medical research requires gaining scientific results, communicating them and making them usable for the patients by entering them into the treatment. This requires a public-private cooperation, also at the level of international authorities and institutions, and appropriate support by politics.

Medical research develops mainly in industrialized countries, and so usually research focuses dominate which are important for health care in these countries. Only about 10 percent of the funds that flow into medical research is spent on projects concerning those issues that affect 90 percent of the world's population.

Prof. Dr. Nelson K. Sewankambo of Makerere University College of Health in Uganda used the number of contributions published in international specialist journals to illustrate just how big the gap is between medical research in Africa and highly industrialized countries: In 2008, the entire African continent published 27,000 articles in international specialist media - about as many as the Netherlands alone during the same time period.

## Key Challenges

- Low or moderate-GNP countries do not invest sufficient autonomously generated capital in medical research.
- The structures and coordination that must subsist if scientifically qualified researchers are to carry out sustainable research are lacking.
- The evaluation of research and teaching is not sufficiently developed.
- Scientific findings are not put to sufficient use in the provision of public healthcare services.
- Research bodies often have no access to new technologies.

## Discussion

In order to build and to finance medical research in countries with low or moderate income for the long term, it is necessary to build cooperations with well developed countries and to integrate them into supranational research networks. The academies of science see their task in acting in an advisory function and in mediating during this process.



Fatoumata Sire Diakite,  
Ambassador of Mali in Germany



Kathleen M. Metters

In order to optimize clinical development of medications and to diversify the product range, industry has a growing interest in linking basic and applied research in cooperation with many international partners, said Dr. Kathleen Metters (Merck & Co, USA). Merck, for example, has launched a company program to do so (external discovery and preclinical sciences, xPDS). Thus, the now approved vaccine against rotavirus is the product of international cooperation. So far, this cooperation is mainly with Asian and European countries and the United States, a stronger cooperation with African nations is desirable.

The academies of sciences have an important role for advice on politics. Their supranational associations such as the Academy of Sciences for the Developing World (TWAS) participate in the debate on which is the appropriate international framework to discuss concepts for the promotion of medical research in poorly developed countries. The academies want to support the countries in creating a “critical mass” of well-trained researchers and professionals, as is necessary for sustainable medical care.

Prof. Dr. Mohamed H.A. Hassan, Executive Director of TWAS, thinks discussions of the topic global health and research funding not only among the G8 countries but also among the G20 countries to be expedient, as discussed in June 2010 in the specialist journal *Lancet* (*Lancet* doi:10.1016/S0140-6736(10)60997-X). Aside from the G8 countries, the G20 include emerging countries such as India, Brazil, Mexico, South Korea and South Africa. The G20 countries represent 85 percent of the global economy and two thirds of the world's population. Supporters of the proposal expect that a discussion on the G20 level will work more specifically than before on possible solutions to the problems of health care and the promotion of research and teaching while taking the economic and political conditions in the respective countries and regions into consideration.

Mohamed H.A. Hassan, Volker ter Meulen,  
Nelson K. Sewankambo (from left)

The success of such programs is favored by:

- the integration of national research institutions into networks
- the establishment of centers for healthcare research
- the establishment of centers of excellence, also with the help of external financial resources
- the structural networking of centers of excellence with universities, so as to not leave the burden of teaching and training to the universities alone and to not decouple them from research
- the continuous evaluation of the quality of facilities with duties in medical research and medical care.

There was a controversial discussion whether the benefit of such evaluations justifies the cost incurred by the peer reviewed institutions. Equally different were opinions on the issue whether the remuneration of the work of highly qualified scientists in countries with low economic power should be guided by international standards. It is feared that high remunerations may cause the development of “parallel societies”.

## Key Messages

- In order to develop medical research in low or moderate-income countries, cooperation with highly developed countries must be intensified, not least by means of supra-national research networks.
- Fundamental research and applied research must be conjoined and fostered by means of public-private partnership programmes.
- These countries must invest more autonomously generated capital in medical research.
- Universities should be networked with Centres of Excellence in order to reinforce university-based research and teaching.

# Universal Access to Health: Innovation in Infrastructure-Poor Settings

## Working Session



**Co-Host** Oswaldo Cruz Foundation  
Grameen America



**Chairs** Claudia Travassos | Oswaldo Cruz Foundation | Brazil  
Vidar Jorgensen | President | Grameen Healthcare | United States

**Speakers** Matthew Berg | Director of ICT for Millennium Villages Project |  
Earth Institute Columbia University | United States  
Pedro Garcia Aspillaga | Dean of the Faculty of Health | Saint Thomas University | Chile  
François Bompard | Deputy Head & Medical Director |  
sanofi-aventis, Access to Medicines Department | France  
Juan Garay | Health Team Coordinator | European Commission | Belgium

## Current Situation

The sobering fact first: universal access to health care does not exist. Especially in emerging and developing countries, there is still a large number of people who do not have the money for seeing a doctor, much less for getting in-patient treatment for a few days. Similarly, they do not have the money to buy the necessary medications. Often, diseases cause people to slide into poverty because there is no social health insurance paying the cost of medical treatment - patients are forced to pay for everything out of pocket or to borrow money from family and relatives. It is not possible for them to maintain a healthy lifestyle because they neither have the financial resources, nor have they been advised how to live healthy. Prevention is a non-existent word in the language of many people from developing countries.

“There are only few countries worldwide where the entire population has access to health care,” summarized Claudio Travassos of the Oswaldo Cruz Foundation in Brazil the situation – this is not even the case in the United States of America, so Travassos during the working session of the “Universal Access to Health: Innovation in Infrastructure-Poor Settings”.

At the same time, the global burden of disease is on the rise. Infectious diseases still play a major role in developing countries, and non-communicable chronic diseases are continuously increasing. Many health systems are overextended with the “new burden of disease”, physicians are not sufficiently prepared for the treatment of chronic diseases, not enough drugs are available for the treatment of these diseases.

In the long term, only universal access to health care can balance structural disparities between countries and reduce the burden of disease. Along the way, this requires innovative financing mechanisms, the use of various means of health information technology and an increased involvement of the patients themselves, it was said on the second World Health Summit in Berlin.

Juan Garay, Health Team Coordinator at the European Commission in Brussels, brought the challenges to the point: “Every year, eight million children die (child mortality), 16 million adults (adult mortality) and nearly half a million mothers (maternal mortality). That we can prevent!”, Garay emphasized during the working session. The funds made available have increased, especially in the areas of HIV/AIDS and malaria. There were around 100 initiatives worldwide engaged in global health. Countless people worked on thousands of projects. “In this, it comes to duplication of projects and to financing of individual projects that do not build on one another,” criticized the Brussels public health expert. In Garay’s opinion, this multitude of organizations particularly burdens those health care employees who work on-site in the countries in need and have to report to the respective initiatives. “Here, a chaos of reports is generated out of good will,” Garay believes.



Claudia Travassos



Francois Bompert underlined the problem of wide social strata of developing countries having limited access to medicines. Such access would depend particularly on the price of the drug and sufficient patient information on properly taking the medicine, says the Deputy Head and Medical Director of the Access to Medicines Department of sanofi-aventis, France. Without a stronger presence in the developing countries and adapting the price of medication to local conditions, the vicious circle of disease and poverty can not be broken, Bompert believes.



Pedro Garcia Aspillaga

## Key Challenges

- Not all people worldwide have access to health care
- With the increasing burden of disease - especially the rise of NCDs in emerging and developing countries - universal access to health care becomes more and more important
- Many patients slide into poverty due to the increasing burden of disease, the lack of access to health care and the high cost, also for drugs
- People in emerging and developing countries are frequently not informed about illnesses and self-help and do not know how they can prevent a disease
- Numerous international organizations bustle about the field of global health. Their actions are frequently not coordinated. Money disappears unnecessarily, or is used unwisely

## Discussion

Innovations – regardless whether at the level of funding, medication or in the field of telemedicine - can help to facilitate access to health care, the participants of the working session at the World Health Summit in Berlin agreed. In part, these do not have to be new medications or new equipment, but simply the integration of previously under-utilized resources.

### Example Telemedicine

In the opinion of Matthew Berg, Director of ICT for the Millennium Villages Project at Columbia University's Earth Institute in the USA, mobile phones are a great way to reduce the number of preventable diseases. Of Africa's population, 86 percent have access to mobile phones, according to Berg - more than the people who have access to basic health care. Especially in areas with poor infrastructure and a lack of health care workers, mobile phones are perfectly suited for forming an information platform for patients, and also for advising local health workers on-site regarding the diagnosis, for providing continuing education and for support. In Uganda, there is currently a project in collaboration with the local Ministry of Health testing the range of this form of telemedicine. According to Berg, this also involves winning and training programmers for the project.

### Example Medications

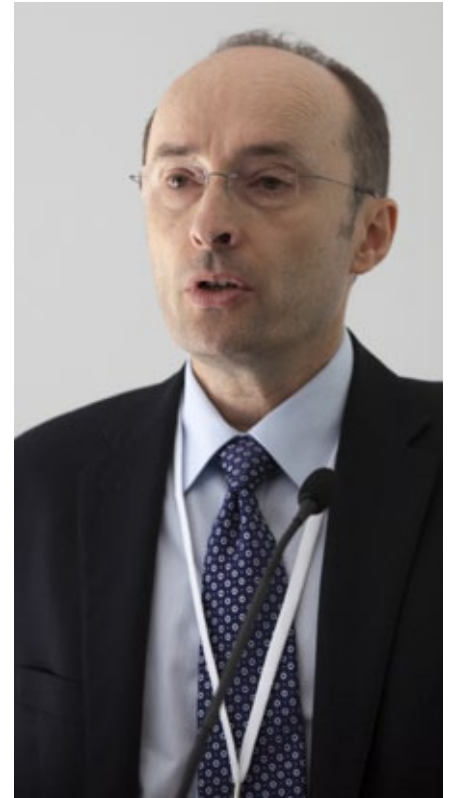
Bompert of sanofi-aventis reported on a special department within the pharmaceutical company that focuses exclusively on the improvement of access to certain medicines in developing countries. These include medicines for malaria, tuberculosis, sleeping sickness, mental illnesses, epilepsy and leishmaniasis. This involves, in particular, to offer these drugs more inexpensively and to inform the patients about medicines and prevention. "This is because medicines alone are not enough," emphasized Bompert. On-site, his company works with non-government organizations, foundations, scientists and governments.

### Example Financing

Vidar Jorgensen, President of Grameen Healthcare, USA, believes in the success and support for poor households through microfinancing or microinsurances, respectively. Here, the policyholder pays, in short intervals, small amounts of money to a microinsurance institution. In the event of a claim, the money is paid out to him, and he is so helped through the emergency situation. In the best-case scenario, the insurance company manages the money and does not have to pay because an emergency does not arise. Grameen Healthcare has focused in particular in offering health services in the so-called Grameen hospitals and in an eye hospital in India.

### Key Messages

- A number of exciting innovations from the developing world (for example, Tele-health and low-cost specialist centers) can serve as models for widening access and improving healthcare delivery globally.
- Communities can be empowered to participate in their own healthcare with self-care approaches, direct telephone and internet access, and community involvement.
- The public, private, and non-profit sectors must work together to identify innovations which can deliver high-value impact for relatively low cost.
- Ways must be found to bring together initiatives from different regions of the world in health diplomacy, development aid, and South-South cooperation.
- Representatives of all sectors should explore innovative public-private partnerships to deliver low-cost medicines to those most in need.
- Local infrastructure must be developed to support sustainable development of health systems, strengthening governance and streamlining fragmented aid programs.
- Evidence-based medicine should be used to define priority pathways for basic access to healthcare and define protocols for health workers to apply in delivering care in these areas.



François Bompard

*There are only few countries worldwide where the entire population has access to health care.*

Claudia Travassos

# Information Technology: New Horizons in Health Care

## Working Session



### Co-Host

The Bill and Melinda Gates Foundation  
American Medical Informatics Association

### Chairs

Edward H. Shortliffe | President and CEO |  
American Medical Informatics Association | United States

### Speakers

Balazs Szathmary | Senior Director, Global Strategy & Operations Healthcare and Life Sciences Industry Business Unit | Oracle | Germany  
Andreas Demetriades | Director General | Health Insurance Organization Cyprus | Cyprus  
Bill Crounse | Senior Director, Worldwide Health | Microsoft Corporation | United States  
Edward H. Shortliffe | President and CEO | American Medical Informatics Association | United States  
Deborah C. Peel | Founder and Chair | Patient Privacy Rights Foundation | United States

## Current Situation



Deborah C. Peel

Information technologies (IT) can be crucial in helping to make healthcare more efficient and transparent. Nevertheless, both the industrialized and the developing countries invest less than two percent of their healthcare expenditures in appropriate technologies. The high expectations of IT that, so far, could be met in hardly any project are one reason. If countries that invest heavily in IT are compared to those making little money available for IT, significant savings or improvements of other parameters such as life expectancy or child mortality attributable to IT can not be detected.

IT is becoming increasingly important in the organization of care. Medical therapies that are carried out within the scope of disease management programs or integrated care require a high degree of organization between outpatient and inpatient service providers. This coordination can hardly be imagined anymore without appropriate IT support. Also databases collecting and analyzing errors and also so-called near-errors (critical incident reporting systems) help to make care safer and to identify problems early.

## Key Challenges

- Information technologies should save the healthcare system costs in particular, but have only led to more investments so far.
- Data protection and data security are frequently not clearly regulated and delay the introduction of IT applications.
- Information technologies are creating a new level of transparency that is fended off by many players in healthcare.

## Discussion

Andreas Demetriades, Director General, Health Insurance Organization Cyprus reported on the development of an integrated IT system in Cyprus. “This was a unique opportunity to build an ehealth system from scratch, so to speak,” said Demetriades. The aim was to connect providers of medical services, those who pay them and the patients technologically in such a way that all relevant data can be recorded. This information should be used to forecast health trends and to then develop strategies based on these predictions as to how healthcare can respond. For this purpose, electronic files had to be designed for the patients, but also for the healthcare providers. “We had to contend with much opposition,” so Demetriades. “And that despite the fact that everybody realized the benefits of such a project.” There were problems especially regarding data security and patient privacy. “Above all, the doctors who had been expected to be the first to recognize the benefit had to be convinced. There were great concerns about presenting one’s own work so transparently. Therefore, incentives were created for healthcare providers to disclose their data. For example, only those who had provided the system with a complete

dataset on the treatment were allowed to invoice a service. In addition, there were doctors who generally objected to using computers. In order to accommodate security concerns, only the primary care provider is allowed to access all of a patient's data, and this only if the patient agrees. Hospitals and specialists only have access if they are currently treating the patient. Pharmacies can only view the patient's medication list, and this only when they need it to fill a prescription. "Today, the real problem is no longer in the data analysis," stated Demetriades. "It is rather in collecting the data."

Balazs Szathmary, Senior Director, Global Strategy & Operations Healthcare and Life Sciences Industry Business Unit at Oracle, Germany, has made the experience that nationwide projects are very complex and usually not successful. "They exceed the targeted time frame and budget, so that the implementations are often difficult or not even finalized." Local pilot projects would be much more promising but could not always be scaled up to a nationwide application. Therefore, Szathmary recommends regional IT projects with many participants. These need an infrastructure similar to more global applications so that an expansion is possible.



Balazs Szathmary

Data security and protection are important factors that need to be regulated primarily at the legal level. From Szathmary's point of view, this is a problem of the organizations and the legislator rather than a central problem of IT, even if IT must implement it eventually. The increasing success of electronic health records in the United States created by private parties (e.g., Google Health) shows that this is frequently of minor importance to the patient. These health records will become increasingly important. However, they are only of limited use for the physician, as the data recorded there are not reliable.

All the various health systems have essentially the same problems, noted Bill Crounse, Senior Director, Worldwide Health at Microsoft, United States, in his presentation. Regardless of whether the country is rich or poor - all are struggling with the rising cost of healthcare.



*Today, the real problem is no longer in the data analysis.  
It is rather in collecting the data.*

Andreas Demetriades



Bill Grounse

However, modern information technologies will change the way in which health services are brought to the patient, and adapt this to their lifestyles. For example, ehealth services can bring telemedicine methods of measurement for non-acute diseases or even treatments directly to the patient's home. Thus, significant savings can be made.

Moreover, the need for health information is steadily increasing. The people themselves want to learn even more about healthy lifestyles and their diseases. This includes information on prevention, but also on the maintenance of health records of their own. These requests must be handled by the healthcare system as well, since doctors will later be confronted with what the patients have read. Furthermore, the demand for transparency and quality reports that can also be understood by laymen is increasing. The patient sees himself increasingly as a customer and, therefore, wants to be informed accordingly. New compensation models that are oriented towards quality and not just on quantity anymore also require high transparency of the service providers towards the controlling institutions. All these are challenges that can be resolved by appropriate IT. However, the corresponding investments are necessary for this, which first have to be raised but will prove profitable in retrospect.

Aside from direct care for the patients, healthcare systems are increasingly geared towards offers of information and wellness, as Edward H. Shortliffe, President and CEO of the American Medical Informatics Association, presented. Information technologies play a key role in this. People increasingly want a health system that on the one hand, keeps them healthy, but also explains how to stay healthy on the other. A health information system that achieves these objectives will help to improve health, to support therapies and to reduce costs. For this, however, the health records of the patients have to be collected. This is not possible without a system security that is trusted by politics, healthcare providers and the public. The benefit of such a system must be recognized universally. Despite the enthusiasm of many users of health records and information services, there are still many who are not convinced. For this, it has to be ensured that personal security needs are addressed. The problem here: electronic health records are already more secure than paper records these days, it is just perceived differently.

Such a health information system would have the advantage that processes in healthcare can be analyzed on the regional and the national level. Disease registers could be used directly for scientific analysis, from which standards for therapy and prevention of diseases could be derived.

## Possible Solutions

Participants agreed that IT applications can make the healthcare system more efficient. However, this is not necessarily noticeable as direct cost savings but can also present itself as higher quality of treatment.

Essential for the use of IT in healthcare is the confidence of the insured and the service providers that the data are only used for medical purposes. For example, Deborah Peel, Patients Privacy Rights, has a highly critical view of the introduction of medical records. "I stand here today so that my children and grandchildren will still have the opportunity to get jobs regardless of their medical records." The problem is not security, which is quite high enough, but rather the question of who else has the key to the data. In the United States, this is a serious problem today already. Data theft would not be necessary here, because health information is easily bought in many of the States already these days. This leads to many Americans ceasing to participate in health screenings, for fear the results could end up with third parties. Shortliffe agreed with Peel, that the confidence of the people in data protection is essential, because only they have the right over the availability of their data. Crounse stressed that one must be very careful with this. Once the data are available, this can not be undone. "Therefore, there must be legal protection against discrimination based on such data."

## Key Messages

- Even if information technologies have not saved any money so far, they add to the quality of treatments, saving costs in the long term.
- Data protection and security must be regulated by law.
- The insured and the service providers must accept the information technology and be able to trust it.
- Financial incentives for service providers are needed so that they will actually use an IT system. Only then the completeness of the data will be reliable.

# How to Bridge the North-South Health Gap

## Panel Discussion



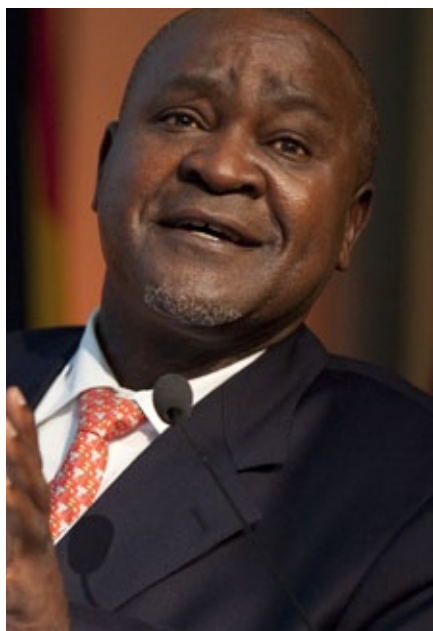
MAX-PLANCK-GESELLSCHAFT

**Co-Host** Max Planck Institute for Infection Biology — supported by Max-Planck-Society

**Chair** Stefan Kaufmann | Director | Max Planck Society | Germany

**Panel** Robert Sebbag | Vice President Access to Medicines | sanofi-aventis | France  
Michel Kazatchkine | Executive Director | The Global Fund | Switzerland  
Gilbert Balibaseka Bukenya | Vice President | Uganda  
Nina Schwalbe | Managing Director Policy and Performance | GAVI Alliance | Switzerland  
Heidi Larson | Policy Group Head, Institute for Global Health | Imperial College London | United Kingdom  
Bernard Schwartländer | UNAIDS | Switzerland  
Richard Sezibera | Minister of Health | Rwanda

## Current Situation



Gilbert Balibaseka Bukenya

Worldwide, an estimated 4.1 billion US dollars are spent annually on health – however, not evenly distributed across over all 193 of the world's nations. While industrialized countries raise an average of 6,000 US dollar per person for health, the rate in sub-Saharan Africa is a meager 25-50 US dollar. In order to make matters worse, of the 150 to 200 billion US dollar spent on research and development, just five percent flow into R&D on diseases of the poor.

Among the 1,400 new medications that recently entered the market, there are only seven for the treatment of malaria and tuberculosis, as compared to 180 for the treatment of cardiovascular diseases. Also in developing countries, there are more and more non-communicable diseases, since the lifestyle of the local population increasingly adapts to the lifestyle in the West. At the same time, the money and political will to invest in prevention, information and education is still lacking.

Simultaneously, it is endeavored to reach the Millennium Development Goals (MDGs) set in the year 2000, four of which aim to fight poverty-related infectious diseases (child mortality, reduction of lung diseases and diarrheal diseases, malaria, tuberculosis and HIV/AIDS as well as further diseases). An annual five million people still die of HIV/AIDS, tuberculosis and malaria.

It is necessary to close the gap between North and South, between developing and industrialized countries, it was said at the World Health Summit during the panel discussion “How to Bridge the North-South Health Gap”. The question is: How?

According to the explanations of Gilbert Balibaseka Bukenya, Vice President of the Republic of Uganda, worldwide it is still mostly the people in sub-Saharan Africa who suffer from infectious diseases such as HIV/AIDS and malaria. Furthermore, diseases such as cancer, diabetes and hypertension are on the rise. Until 2020, so Bukenya, 20 percent of cancer cases worldwide will occur in Africa. These days, 96 percent of cancer patients in Uganda die without a visit to a doctor, 85 percent of those live in rural areas. “Most of these patients are still young,” says Bukenya. One reason for this desolate state of affairs is the lack of public and private funding. At the same time, his country and other African countries are not prepared for these changes in the incidence of diseases. Most politicians in Africa focus on fighting the infectious diseases known so far, non-communicable diseases play a secondary role. The political will is lacking.

*Many treatments are simply too complicated –  
they do not agree with the conditions in southern countries.*

Bernard Schwartländer

The Rwandan Minister of Health Richard Sezibera confirmed the statements of the representative of his neighbor state. The massive lack of sensible distribution of resources leads to the sobering fact that officially, just 34 US dollars per person are spent on health, so Sezibera. In order to achieve the MDGs, his country needs more funding and help in improving and strengthening its own healthcare system.

This view was also shared by Nina Schwalbe, Managing Director for Policy and Performance of the Global Alliance for Vaccines and Immunization (GAVI Alliance) in Geneva. Without additional funding, not even the MDGs to date could be met. “In the fight against poverty-related infectious diseases, money is already lacking now,” Schwalbe believes.

## Key Challenges

- Governments of many developing countries do not put financial priority on strengthening their health systems
- There is not enough funding from international sponsors
- Changes in the incidence of diseases, increase of non-communicable diseases in developing countries
- At the same time, the focus is still on infectious diseases – lack of awareness for the changes in the situation

## Discussion

Bukenya thinks it necessary to adapt health systems like his to the new challenges – in particular, with regard to the increased incidence of non-communicable diseases. Campaigns are necessary to warn the population of the dangers associated with the new lifestyle. Also Heidi Larson of the Institute for Global Health at the Imperial College London thinks this point to be critical. “We know which challenges are ahead. What is missing is thinking for the long term and creating an awareness of the health challenges also within the population,” Larson emphasized. Bukenya also believes that European and North African countries should share their experiences in handling non-communicable diseases with sub-Saharan countries.

Dr. Bernard Schwartländer of the Joint United Nations Programme on HIV/AIDS (UNAIDS) pointed out the difficulty in transferring treatment programs to developing countries on a one-to-one basis. “Many treatments are simply too complicated – they do not agree with the conditions in southern countries,” so Schwartländer.



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Richard Sezibera, Stefan Kaufmann,  
Gilbert Balibaseka Bukenya (from left)

Michel Kazatchkine addressed a further problem during the discussion. According to the Executive Director of the Global Fund to Fight AIDS, Tuberculosis and Malaria, the call for more money is admittedly understandable. “However, the affected countries themselves have to decide and outline where the money should go,” says Kazatchkine. The Global Fund, GAVI or other institutions could not make these decisions by themselves from far away, the local politicians would have to be ready to cooperate. Robert Sebbag, Vice President Access to Medicines at sanofi-aventis, France, had similar comments. “We have the tools available to fight the diseases. However, we also need the political will of the affected countries, and good cooperations,” Sebbag emphasized.

We need a change in attitude from support for developing countries as a “good-will gesture” to working together based on the fact that industrialized countries will greatly benefit from growth and well-being of developing countries.

## Key Challenges

Innovative new strategies are needed to bridge the north-south health gap, a prerequisite for accomplishing the MDGs. Strategies can be:

- Push and Pull Programs: Programs which not only support research and development in a canonical way (i.e. support upon application before anything is done), but also research according to its success (i.e. support for what has been achieved, e.g. by a prize/award).
- Product Development Partnerships: Bring together academic and industry partners, so that each partner can do what he/she knows best.
- Global access to affordable medical-intervention measures: Guarantees supply of intervention measures at an affordable price.

*We have the tools available to fight the diseases. However, we also need the political will of the affected countries, and good cooperations.*

Robert Sebbag

# The Health Sector and Financial Stability

## Panel Discussion



**Co-Host** World Health Organization

**Chair** Susanne Weber Mosdorf | Assistant Director General | World Health Organization | Belgium

**Panel** Peter S. Heller | Economist, Fiscal Expert, and Public Speaker | Johns Hopkins University | United States  
Richard Sezibera | Minister of Health | Rwanda  
Mihály Kökény | Chair of the Executive Board | Former Minister of Health | Hungary  
Norbert Forster | Deputy Permanent Secretary | Ministry of Health and Social Services | Namibia  
Chien Earn Lee | Deputy Director of Medical Services | Ministry of Health | Singapore

## Current Situation

“Discussing money is one of the most difficult subjects,” Susan Weber Mosdorf, Assistant Director-General at the World Health Organization, Belgium, noted already at the beginning of the panel discussion “The Health Sector and Financial Stability”. The most recent global financial crisis had caused a huge budget gap in the coffers of many countries, which necessarily also caused massive cuts in the health sector, so Weber-Mosdorf at the World Health Summit 2010 in Berlin. This crisis, added Peter S. Heller, economist and financial expert at the Johns Hopkins University, USA, is basically a “post-crisis”. Previously, many countries such as Ireland or Spain had massively increased spending on health for short periods of time. According to Heller, many budgets are now confronted with a rise in services for direct pay. The service providers are faced with the Herculean task of having to provide even better services for the same money or less.

Basically, it is a central challenge for virtually all health systems throughout the world to achieve financial stability and to ensure good quality health services for long periods of time - may they be financed by taxes, premiums, or a mixture of both. The USA example also shows that high spending on health compared to the gross national product does not inevitably lead to the best results. Nevertheless, most emerging and developing countries with health spending between one and five percent based on the gross domestic product - including high levels of services for direct pay - are massively under-funded.

What options exist to address the financial crisis while not overtaxing patients, service providers, politics, and international organizations - asked the speakers and panelists at the 2nd WHS in Berlin - and found some solutions, although they are not easily implemented.

Mihály Kökény, former Health Minister of Hungary, explained why his country survives both the medical and political challenges of the crisis. On the one hand Hungary, having just recovered economically and politically from a difficult transformation process in the nineties, had to lower its health spending by a full percentage point from eight to seven percent, so Kökény. This was accompanied, according to the politician, by a very high proportion of direct pay by the Hungarian patients.

On the other hand, in Hungary as in many other countries around the world, non-communicable diseases become more and more important, cost money and require restructuring, reported the former minister.



Richard Sezibera

Heller reminded of the challenges that an aging population with an increasing burden of disease - particularly chronic diseases - has on the financial stability of health systems. Also technological advances have had health expenditures skyrocket within recent years, especially in industrialized countries, so the financial expert from the USA. Before the current crisis, meaning the post-crisis triggered by the global economic crisis, already the previous crisis characterized by rising health spending has had a negative influence. Employers had to pay higher premiums and the poor - such as in the USA - were even less able to afford insurance coverage than before. People from developing countries earning money abroad - including in the USA - who send large parts of their income back to their families could only send small amounts home anymore or, in part, no money at all, because they had either lost their jobs or had to pay more money for their own insurance coverage, reported economist Heller.

## Key Challenges

- Health spending has been rising for years - due to technological progress, the rise of chronic diseases and an aging population
- There are still many people in countries around the world without access to health care
- The amount certain countries spend is not necessarily an indicator of the quality of health care
- The global economic crisis of the last 2-3 years made many countries reduce their health spending; patients were also forced to pay for more services directly

## Discussion

Chien Earn Lee, Deputy Departmental Director of Medical Services at the Ministry of Health of Singapore, believes in the success of individual responsibility. "There is no free lunch when it comes to financing," the Asian emphasized during the panel discussion. Singapore spends four percent of its GDP on health, of which one percent came from the government, three percent

come out of the patients' pocket. The government has to provide for good access to health care and for effective mechanisms in health care, Lee stressed. For example, Singapore finances the "Medifund" by tax subsidies - a health insurance for the poorer population, which was introduced in 1993. In addition, any citizen is able to obtain a Medisave account - an account the funds of which are meant to ensure a basic insurance coverage. Here, a certain percentage of income is deducted from the bank account every month and transferred into the Medisave account. If patients want an even better and more extensive coverage than the one Medisave makes possible, they can switch to more extensive, more expensive rates.

Namibia is still far from conditions like those in Singapore, reported Norbert Paul Forster, Deputy State Secretary of the local Ministry of Health and Social Services. So far, his country still depends on external assistance. "However, we are willing to invest in our health care," Forster emphasized. For starters, the health budget would remain stable for the next three years.



Mihály Kökény



Peter S. Heller, Susanne Weber Mosdorf,  
Mihály Kökény, Chien Earn Lee (from left)

Richard Sezibera of the Ministry of Health in Rwanda thinks professionalization of the external assistance necessary. There are so many international organizations that some of them could merge to work more effectively.

At the same time he pointed out like Forster that everybody in his country would be willing to invest in their health - even the less advantaged. However, the total expenditure should not exceed five percent as compared to the gross domestic product. Further, Sezibera thinks more decentralization of hospitals and health centers and more training for staff of rural health centers sensible. Also, Sezibera does not exclude payment based on results.

## Key Messages

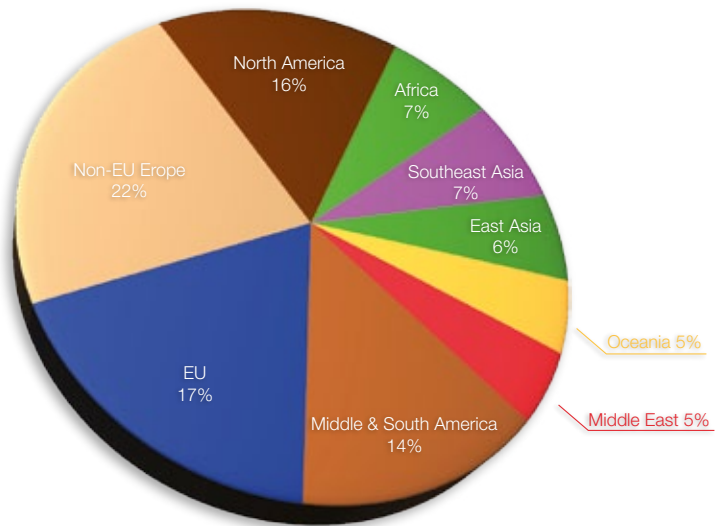
- Times of economic crisis present a dual challenge with respect to health. On the one hand, financing the ever-increasing costs of healthcare becomes even more difficult. On the other hand, population health outcomes are very sensitive to a downturn.
- Increases in spending do not automatically translate into better health system performance.
- While a number of micro-improvements (e.g., to provider productivity) are continuously needed, macro-components are critical. In particular, the design of financing is a key.
- Governments will have to look at health status determinants in a holistic way, often well beyond the scope of a health department, to ensure system stewardship is solid and avoid conflicting objectives (i.e. paying and providing for care).
- On the supply side, governments should evaluate the cost-effectiveness of delivery models.
- Governments also have to invest in prevention and patient responsibility to manage demand, keeping both efficiency and equity considerations in mind.



# Statistics

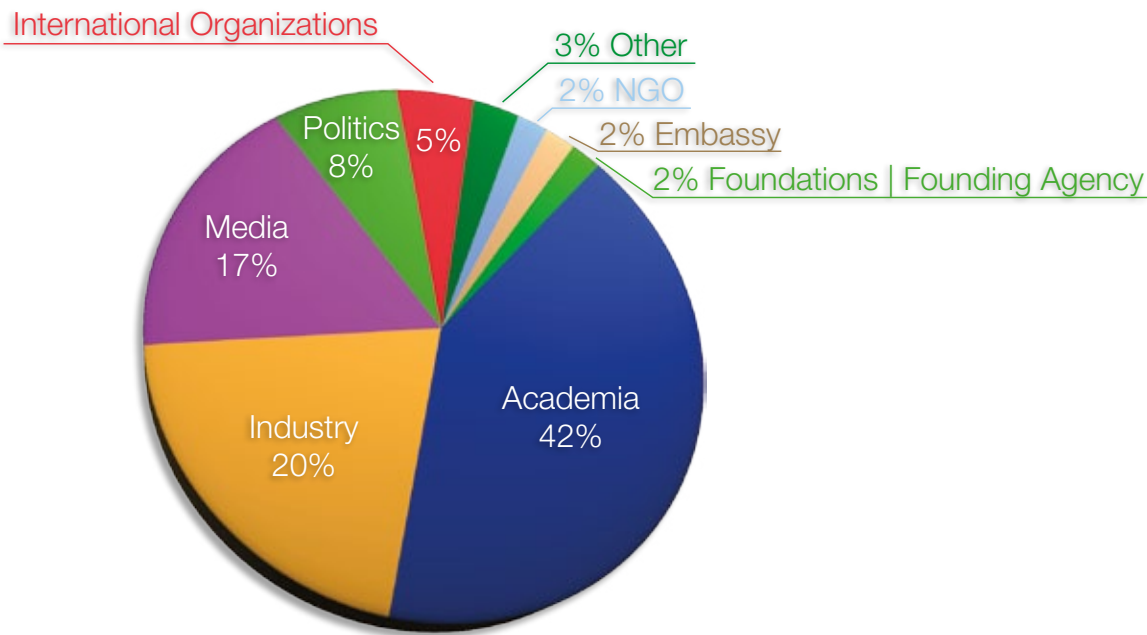
## Participants by Continents

The graph below shows the distribution of delegates over all continents.



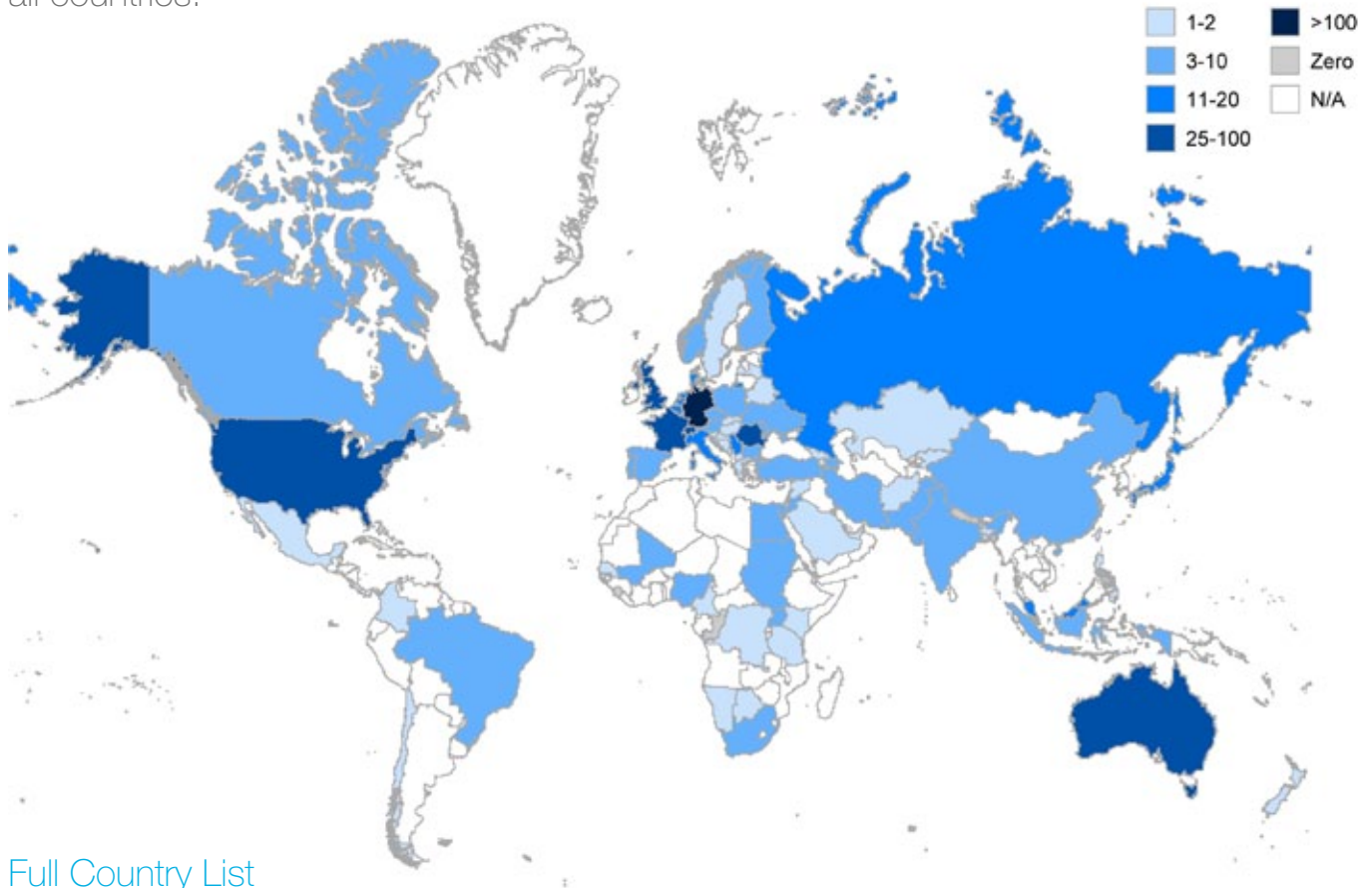
## Participants by Sector Affiliation

The graph below shows the distribution of delegates over sectors they are active in.



## Participation by Country

The map below shows the distribution of delegates over all countries.



## Full Country List

In alphabetical order

Afghanistan	Congo	Italy	New Zealand	Sudan
Armenia	Cyprus	Japan	Nigeria	Sweden
Australia	Czech Republic	Kazakhstan	Norway	Switzerland
Austria	Denmark	Kenya	Pakistan	Syrian Arab Republic
Azerbaijan	Egypt	Kyrgyzstan	Philippines	Taiwan, China
Bangladesh	Finland	Latvia	Poland	Tanzania, United Republic of
Belarus	France	Lebanon	Portugal	Turkey
Belgium	Georgia	Luxembourg	Romania	Uganda
Bosnia and Herzegovina	Germany	Macedonia	Russian Federation	Ukraine
Botswana	Greece	Malaysia	Saudi Arabia	United Arab Emirates
Brazil	Guadeloupe	Mali	Senegal	United Kingdom
Bulgaria	Guam	Mexico	Serbia	United States
Cameroon	Hungary	Moldova, Republic of	Singapore	
Canada	India	Montenegro	Slovakia	
Chile	Indonesia	Namibia	Slovenia	
China	Iran, Islamic Republic of	Nepal	South Africa	
Colombia	Israel	Netherlands	Spain	

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## Key

A – Academia

F / FA – Foundations

I – Industry

IO – International Organization

M – Media

NGO – Non Profit Organization

P – Politics

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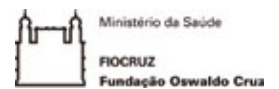
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