Key Messages
General

World Health Summit 2011: Today’s Science – Tomorrow’s Agenda

The World Health Summit is the annual conference held by the ‘M8 Alliance of the Academic Health Centres and Medical Universities’ together with the National Academics. It is one of the world’s foremost gatherings of leaders from academic medicine, governments, health-related industries and non-governmental organizations to exchange views on the most pressing global health challenges. After a highly successful inaugural conference in 2009, on the occasion of the 300th year anniversary of the Charité - Universitätsmedizin Berlin, and a likewise effective following Summit in 2010 the World Health Summit is now being held annually. The main objective of the World Health Summit, meanwhile, is to address key challenges regarding medical research, global health and health care delivery with the aim of shaping the political, academic and social agendas.

Bringing together all stakeholders involved in health research and health care, the World Health Summit presents an unprecedented opportunity for constructive interactive partnerships. There is an urgent need for a cross-sectored 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 experiences and debating, we will be able to structure tomorrow’s agenda.

The M8 Alliance

The ‘M8 Alliance of Academic Health Centres 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 inter-national 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 adaptation in our rapidly changing living conditions, including demographic changes, urbanization, and climate change as priority areas of research.
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I. Health Workforce and Medical Education in a Globalized World

In times of increasing globalization, adapting learning objectives and the medical curriculum to the global needs is a key challenge in medical education. Academic health centres have a social responsibility to improve the health of the populations and societies they serve. Consequently, both research and medical education should focus on population needs and priorities in order to improve health outcomes and patient care. Regarding the workforce crisis in many developing countries, it will become crucial to enhance supply and quality of health workers. For this purpose, development partners should help by providing technical assistance and co-funding national workforce strategies.

The Global Health Workforce Crisis: An unfinished Agenda

Global Health Work Force Alliance
GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development

An adequate and performing health workforce is required for the achievement of the health MDGs. Many health systems, however, especially in fragile countries, fall short of basic staffing requirements. Progress can be made through the concerted action of stakeholders, including civil society. Government stewardship, ownership and commitment are key. Ghana, for instance, is tackling in a systematic manner its challenges through a comprehensive health workforce strategy. Improving supply and quality of health workers, and facilitating their retention through adequate supporting measures are crucial. The integration of non-allopathic providers and gender mainstreaming require specific attention.

Development partners have an important role to play through technical assistance and by co-funding national health workforce strategies through channels that allow harmonized, long-term and predictable support. Regional networks provide an opportunity for exchange of best practices and south-south collaboration. The Global Health Workforce Alliance provides a platform for collaboration at global, regional and country levels.
The Future of Medical Education in a Globalised World
Challenges, Experiences and Solutions

Monash University
Charité - Universitätsmedizin Berlin

We are seeing dramatic changes in the delivery of health care in numerous nations of the world, and these coincide with changes in education and the attitudes of the learners.

Although we can be sure of little, it is certain that changes are inevitable and that the bastion of medicine needs to change.

This session raises hope that solutions are apparent. This session explored the acute need for medical systems of the developed world to ensure that it becomes a net exporter of medical knowledge and workforce to assist emerging nations; the ways in which innovative approaches to health care profession curricula can make substantial inroads into preparing a workforce ready to deliver team-based, comprehensive health care in a globalised world, and how the establishment of international standards can help communicate about health care education for the 21st century to make sure that institutions, courses and graduates remain relevant to an international, global health environment.
Learning Objectives in Medicine:
The intrinsic Quality Control

German Rectors Conference

‘Learning Objectives’ play a central role in the cycle of strategic curricular planning, implementation of courses, and the assessment of students. However, widely accepted blue prints harbor the risk of vague descriptions of learning outcomes which remain unfocused. The development of a national competence based on a learning objectives catalogue in medicine could be a solution to overcome such a problem. Furthermore, learning objectives can be used to track the curriculum and to ensure equitable outcomes for students, staff and institutions. Since the future generation of medical doctors will be confronted with global health issues, a stronger representation of these issues is required in the curriculum for a better understanding. Adapting the medical curriculum and its learning objectives to the global needs would represent quality control in its best sense.

Health Centers

Association of Academic Health Centres International

Regarding the ‘Social Responsibility of Academic Health Centres (ACH)’ the major theme emerging is the driving need to better align health professions’ education and biomedical and clinical research with the needs of society and population health. Specific points have been discussed. First, how can value be obtained at the intersections of research and population health? Second, strategies to increase an institution’s focus on social responsibility and methodologies to cultivate a community of clinical researchers have to be found. Finally, measuring health professions’ education regarding the social responsibility of the AHC is a considerable point in this overall context. It is apparent that - despite differences in cultures, languages, economies, health systems and needs - Academic Health Centres around the world, facilitated by the growing importance and relevance of the Association of Academic Health Centres International™, are restructuring health professions’ education to meet changing societal needs linking research to improved health outcomes, and transforming patient care based on population needs and priorities.
II. Strengthening Research for Health

Strengthening Research for Health’ is considered to be a driver for sustainable economic, social and human development in low- and middle income countries. Today, a mere 10 % of the world’s health research expenditure is spent on diseases that account for 90 % of the global burden of diseases. Although more than one billion people suffer from neglected tropical diseases (NTDs), the health research agenda in developing countries is still dominated by donor countries and global health initiatives. This situation has profound long-term effects on the research and innovation capacity of many countries which are not able to increase necessary investments in health in general and science as well as technology in particular. Taken this into account, by strengthening research for health, attention could be drawn to the more specific problems of these countries such as NTDs. Strengthened targeted research could help to close the research gap.

Strengthening National Governance of Research for Health in Low- and Middle-Income countries

GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development
Charité - Universitätsmedizin Berlin

The symposium addressed national research for health as a driver for development in low- and middle income countries. Carel IJsselmuiden (COHRED) advocated a move from supporting ‘health research’ with a disease focus in developing countries towards research for health and innovation. As an essential prerequisite for development, it is necessary to develop own research and innovating systems for low- and middle-income countries. Mario Rodríguez highlighted how Mexico succeeded in establishing a National Research Programme (the National Council of Science and Technology – CONACYT). In line with identified priorities (main health problems) research institutes work together under a coordinating body that administrates funds. A main challenge is to set suitable incentives for researchers in a situation of competition between governmental and external funds.

Using the example of insecticide-treated malaria bed nets in Tanzania, Hassan Mshinda demonstrated that a low-income country is able to invest considerably in basic research, create innovations, and successfully implement research. In Tanzania, the production of a low-cost health intervention has led to the employment of thousands of people.

To increase the health and innovation capacity of low-income countries, it is
inalienable for them to invest in health research, to strengthen research governance, to set priorities, to have sustainable core funding and to improve the research landscape with better job opportunities for researchers.

Currently, donor countries with a long track-record in supporting health research such as Great Britain reshape their strategy by focusing more on capacity building and implementation research. Instead of extracting their researchers from partner countries, the intention is to empower them.

• The capacity for research for health must exist within a country in order to measure health problems, understand their causes, and develop innovative solutions.
• A country must also be able to translate research information into service delivery, implementation as well as effective impact evaluations of innovations.
• Each country should have a National Research Strategy for Health and an effective governance framework to take care of and coordinate key elements of the National Health Research System.
• Bilateral donor institutions as well as the World Health Organization should ensure that countries are supported to do the right research.
• Strong partnerships that empower southern researchers should be encouraged.
Collaboration in Strengthening Capacity of African Countries to Conduct and Use Research

Keynote by Dr. Olive Shisana, CEO of the Human Sciences Research Council (HSRC), South Africa, and President of the ISSC and serves on the UNESCO High Panel on Science and Technology for Development

The biggest contributors to improved life expectancy are the application of health technology and scientific evidence to health problems. Northern countries have invested in developing infrastructure for research; therefore their researchers play a key role in generating knowledge and developing technologies to improve the health of their populations. Africa’s investment in research infrastructure is inadequate, especially that the continent is going through an epidemiological transition, where both communicable and non-communicable diseases co-exist. This provides opportunities for global collaboration in co-generating knowledge for application.

To sustain research capacity building in Africa and produce health knowledge, it is vital that

- Research agenda be set jointly
- Research resources be shared
- Funding for infrastructure be provided
- Incentives to collaborate be offered
- Knowledge produced in Africa be published globally
Strengthening Research Partnerships for Neglected Diseases of Poverty and Maternal New-born and Child Health

*World Health Organization/ TDR
UNICEF
GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development*

Symposium panellists discussed a conceptual framework for implementation research that UNICEF will use to improve the health of mothers and children in poor countries. This framework is based on the principles of health research priority setting and includes leading roles of scientists and policy-makers in the countries where the diseases occur. Implementation research could speed up progress to improve the health of women and children in low and middle income countries, the focus of the Millennium Development Goals 4, 5 and 6. How to increase this type of research was the topic of two events at the World Health Summit in Berlin, which were co-organized by the Special Program for Research and Training in Tropical Diseases (TDR) and UNICEF. Millions of dollars are spent on health innovations, but too often they never get to the people in low and middle income countries who really need them, even when they were designed for those groups. Implementation research (IR) is about figuring out how best to put in place what is already known to work – such as a drug that has been shown to kill a malaria parasite, a diagnostic tool that identifies who has tuberculosis or a strategy on how to treat a child with fever. It’s a field of study that is growing quickly because of the vast needs. Research capacity to undertake implementation and health systems research in low and middle income countries is increasing but not fast enough to address these questions. Meeting participants recommended that networks among these countries and with high income countries continue expanding to address this shortage and contribute to sustainable capacity.
Key messages:

- Put **stronger emphasis on research** into **cost-effectiveness** and how to increase **access to health care**
- **Identify what works best and what doesn't work in real time**
- Systematically **embed implementation research and operational research** in health programming
- **Develop better understanding of patient or client perspectives**, both in rich and poor settings, on issues of access, cost and quality of health care.

The funded research will:

- **Identify what works well and what does not**, with the goal of **increasing equity to basic healthcare for everyone**, even in the remotest and poorest areas of the world.
- Increase the use of current and new treatments, diagnostics, vaccines, strategies and health interventions.
- **Build stronger networks in implementation research** to foster links between the scientific community and public health programmes.

The research applications are being managed by the **Special Programme for Research and Training in Tropical Diseases (TDR)**, which is executed by WHO.
Product Development for Neglected Patients

*International Consortium on Anti-Virals (ICAV)*

*Drugs for Neglected Diseases initiative (DNDi)*

The session covered neglected patients and diseases and discussed Product Development Partnerships (PDPs) as a potential solution. Despite staggering needs of the disproportionately affected patients in developing countries, research gaps still exist and the classic research and development model fails to deliver life-saving drugs, vaccines, diagnostics, and health technologies. Therefore, several research organizations have been founded to address these gaps and have started to change the global landscape in this area of research.

In collaboration with them, they define which research gaps need to be addressed and which products are needed. Once the priorities are defined, the partner can be selected and networks can be created to guide research. For example, DNDi and ICAV efficiently work within PDPs to ensure the delivery of adapted therapies to the most in need. To conclude, with adequate political and financial support, PDPs can continue to build partnerships with private industry, academia, donors and developing countries in order to develop new health technologies and to ensure access for those who need them most. Future efforts will be needed to fulfil this ambitious goal.

These non-profit research organizations are partnerships, which network with a wide range of partners: academia, industry, civil society and patients but also with international institutions such as the WHO/TDR.
III. Translation and Efficiency: Roadblocks and Enablers

Medical advances can only arise from collaboration and mutual understanding between academia and health care, politics and the private sector. Regarding the translation process, the academic community is aware of its responsibility to deliver results based on a strong collaborative approach to improve global health. This compromises basic and preclinical research and the development of new therapies, but also the delivery of health services. Last but not least, efficient outcomes are only to be achieved by close inter-sectorial co-operation.

Translational Medicine Concepts and Implementation

*European Commission*
*King's College London*

One of the greatest challenges medicine faces today is to translate insights provided by the biotechnological revolution and research into clinical medicine. At a fundamental level, this includes the revision of diagnostic classification through identification of biologically-defined symptom clusters. Such validation of current clinical diagnoses is pivotal for the development of novel therapeutic (and preventative) strategies and the implementation of personalised medicine approaches. At a more applied level it involves the development of integrated and modular approaches to facilitate effective collaboration between academia, industry, non-profit organisations and governments. In this symposium we explored the challenges and promises associated with the development of translational medicine and therapeutics for academics, pharmaceutical industry as well as regulators and funding bodies. For example, we discussed how examination of endophenotypes based on symptom clusters using experimental medicine approaches might inform clinical medicine, their regulation as well as drug development by pharmaceutical industry. We explored models of collaborative translational research most appropriate for integrated translational strategies and provide examples of successful collaborations.
Access to Advances in Biotherapies - Scientific, Economic and Social Issues

German Cancer Research Center
Helmholtz Association
INSERM

Recent advances in biotherapy, pharmacogenomics and gene therapy have the potential to revolutionize innovative Research & Development in the pharmaceutical industry, to transform clinical practice through promoting the advent of "personalized medicine" in which drugs and drug combinations are optimized for each individual's unique genetic makeup, and to impact health services delivery systems as well as the long term dynamics of health expenditures. Despite three decades of huge progress in molecular genetics, in cloning of disease causative gene as well as technology breakthroughs in viral biotechnology, out of thousands of gene therapy clinical trials that have been initiated, only very few are now reaching regulatory approval.

We reviewed some of the major hurdles, and based on the current either positive or negative examples, we try to initiate drawing a learning curve from experience. Identify the major drivers for future successful achievement of human gene therapy trials was an objective of this session. Pharmaceutical innovation is less and less based on systematic biochemical in vitro screens and more and more on identification of biological targets and physiological mechanisms through fundamental research and this leads to new patterns of development strategies from firms and partnerships with public academic research. Biotherapies represent one of the fastest growing sector of health care (for example, they already account for more than half of cancer drugs expenditures in France since 2009) but their net impact on total health care costs remain uncertain. However, limitations in social acceptability of these technologies, inappropriateness of current regulation based on "standard" drugs and care, and economic uncertainties may impede their optimal diffusion.
Complexities of the Translational Pipeline in Therapy Development

**German Center for Neurodegenerative Diseases**
**Helmholtz Association**
**Charité-Universitätsmedizin Berlin**

Development of new therapies remains slow despite progresses in basic science and clinical studies. The establishment of interdisciplinary centres brings together neuroscientists, pharmacologists, epidemiologists and clinicians to foster the translation of research findings into new therapeutic strategies. To facilitate drug development and testing, ideally these centres would also have a direct relationship with industrial partners. In addition, we have to consider the prevention of failures of phase 3 trials after positive phase 2 studies. Thus, there is a need for new guidelines in preclinical and clinical phases of drug development for validated biomarkers as well as checklists for the identification of sources of errors and corrections of these errors throughout each phase of drug testing.

To fight e.g. against Alzheimer’s disease we also need multi-target therapeutic approaches instead of one-dimensional solutions, such as the one protein, one drug or one disease hypothesis used as the basis of most Alzheimer’s disease therapy studies. Furthermore, biomarker research needs to be intensified. By using specific biomarkers or cluster patients into more homogeneous clinical features criteria for identifying subpopulations of AD or PD patients can be found.
IV. Evidence, Innovation and Safe Access

Even the best medicine and best medical advance are useless if access is not given. On the one hand, many useful public health innovations are not realized because the patients who would benefit from them do not form a profitable market to induce their development and production. On the other hand, low- and middle income countries do not have an affordable access to essential drugs. Furthermore, we have to provide the right access to the right drugs.

Evidence to Policy Linkages — Today’s Evidence - Tomorrow’s Agenda

World Health Organization

In an ideal world, scientific evidence should be routinely used and translated into more effective and equitable political and government action to improve public health. This is especially important for developing countries which have to struggle with limited resources and competing priorities. In reality, however, strengthen the link between evidence and policy is often a difficult challenge and many barriers need to be overcome.

The contributions from panellists representing government, academia and international organizations of the World Health Summit 2011 should help to identify the barriers (and also the drivers) for strengthening links between evidence and policy, and also the important lessons which can be used to inform future efforts in this important area. Themba Moeti (Botswana) showed how thorough economic analysis using reliable data drove political support for antiretroviral roll out. Yot Teerawattananon (Thailand) explained how his country’s remarkable Health Intervention and Technology Assessment Programme delivered accurate but simple advice to ministers, strengthening trust and confidence between scientists and decision makers. Patricia Garcia (Peru) reported the incredible success of a syphilis prevention and treatment project (in Peru, syphilis is 20 times more common than AIDS). Hoda Rashad (Egypt) argued for the importance of supporting the very best science (not quick and dirty policy-relevant research). Finally, Annette Widmann-Mauz (Germany, member of the Bundestag) spoke of creating demand among parliamentarians for science-based advice. All agreed that scientists had to take more seriously their obligation to create an informed public discussion of science’s contribution to our wider culture. To link evidence to policy it is important, first, to involve policy makers from
the start, to keep them informed regularly and, as far as possible, to convince them that policy implementation can happen within existing resources. Second, you have to facilitate the access to the necessary evidence and present evidence in language which is accessible to policy makers, and which includes policy options. To build and strengthen decision makers’ and researchers’ capacity to confidently use and generate such evidence is also a central concern. Another key message of this session is to set the ‘right’ research questions (i.e. policy relevant research topics which can be addresses in a timely manner). After all you have to consider involving all stakeholders and interested parties including civil society and, furthermore, you have to be aware of the larger context of necessary political actions and the role of democratic processes.

Innovation for Diseases of Global Health
Importance - Adapting Innovation to Fit Local Conditions

World Health Organization
PATH

Three common threats to the different approaches to innovation in global health were identified.

1. **No magic bullets.** An exciting diversity of approaches to global health innovation exist today, ranging from for-profit and not-for-profit pharmaceutical companies, to public private partnerships and prize mechanisms, and to regional networks and various forms of South-South collaborations. However, there are no magic bullets and no quick fixes. The approach that is chosen to address a given innovation need must carefully match reality in terms of the context and infrastructure in that particular domain, the technologies that will be developed, and the timelines that matter to patients.

2. **Common challenges.** A set of challenges is common across all of the approaches mentioned above. All initiatives need continuous support and resources to be able to not just kick start but sustain over time the respective projects and approaches to generating innovation. In today’s world, sustained donor support can be hard to find. Increased capacity building is needed, especially for in-field evaluation or piloting of new technologies. This evaluation must be done in a rapid, dedicated and rigorous manner. Otherwise, new technologies and solutions will remain untested in real world
settings and will fail to reach patients in time to make a difference.

3. Common needs. Government support Both industrialized and developing country governments must show strong commitment and leadership in supporting the new approaches to innovation in global health. Industrialized country governments should increase their efforts to create the legal, financial, and regulatory environment that will enable novel approaches to global health innovation to thrive. Developing country governments in particular need to ensure that the systems are in place to deliver drugs and other health care technologies to patients in need, and to regulate their quality and use. Otherwise, the impact of global health innovation will remain small.

Strong collaboration between the public and private sectors Where possible and applicable, global health innovation should be sustained and driven by the markets themselves. There is huge value in leveraging the strengths of different partners (both public and private), in order to generate and implement innovative solutions. Some private firms are also able to utilize their already established innovative commercial technologies pro bono to help solve complex issues in developing countries e.g., utilization of SMS-based technology and ‘Google’ maps to improve supply chain issues of essential medicines in sub-Saharan Africa. In some cases, classic market failure may be present, with patients suffering from a particular disease being either too few, or too poor, or both, to generate sufficient demand for innovation. A classic example of this is the case of tropical neglected diseases. Here, various policy tools are commonly discussed to address these failures, as well as government support for these tools (e.g., donations or advance purchase commitments). In other cases, the failure may not be due to classic market failure, but to lack of technical knowledge and tools to address a given disease. In these cases initiatives focusing on innovation (e.g., “push” funding; inducement prizes), need to be able to connect to and work closely with the public and private sector players who will sustain the innovation that is induced.

Global enabling platforms The different approaches need to be embedded into the larger context of evolving global health governance, to ensure maximum efficiency and to avoid duplication of resources. Given the multitude of new players that have emerged in the global health domain in the past decade, the exact form and nature of this governance remain to be seen. However, especially given the complexity of on-going changes, the WHO will have an important role to play in both identifying the highest priority needs for new innovation and in convening discussions around innovation and its enabling factors.
Access to medicines in low- and middle-income countries – Opportunities and Concerns

UNITAID
Médecins Sans Frontières

The cost of medicines is increasing in developing countries. For example, patients on HIV treatment need to switch to newer drugs. Generic competition is increasingly restricted because of patent protection in key manufacturing countries. Developing countries need to use flexibilities enshrined in the TRIPS agreement and richer countries should refrain from demanding higher, TRIPS+ measures through free trade agreements. New tools such as the Medicines Patent Pool are also needed to deal with the new situation and show first positive results. Despite some increased efforts over the last years and innovative partnerships, there is still insufficient investment in innovation in areas of high public health need but lack of profitable market such as neglected tropical diseases or tuberculosis. New mechanisms are needed to stimulate innovation where it is needed most and in a way that does not lead to high cost. Mechanisms such as innovation prizes that delink the cost of R&D from the price of the product and a biomedical R&D treaty warrant further exploration and support. Although there is potential for many improvements in access to medicines in developing countries, there are today serious concerns about the future due to the current financial climate: the need to ensure affordability of tools is more important than ever but we also need more and more sustainable funding for global health. The airline tax that finances UNITAID has been a first example how governments can raise sustainable resources. With the likely establishment of a financial transaction tax it will be necessary that some of its revenues will go to supporting global health.
Counterfeit Medicines on Rise Worldwide
- How to Tackle the Booming Trade in Counterfeit Drugs

European Federation of the Pharmaceutical Industries and Associations

The panel heard dramatic eye-witness testimony of the dangers of counterfeit medicines and the risks run by those engaged in the fight against counterfeeters. The key conclusions of the panel were:

- Tackling counterfeiting is a shared responsibility that involves governments, law enforcement agencies, manufacturers, pharmacists and patients themselves.
- Robust legislation and enforcement are critical to success: the EU Falsified Medicines Directive and the Council of Europe Medicrime Convention were cited as key developments.
- Patients must be alerted to the dangers of counterfeit medicines and informed about how to purchase safely, particularly online.
- Tackling the criminals involved in counterfeiting requires robust action in both source and destination countries to tackle supply and demand.
- Manufacturers and other supply chain players must continue to work closely with enforcement agencies to ensure products carry protection against counterfeiting and robust action is taken to seize counterfeits at borders and in the supply chain.

All parties represented on the panel restated their determination to work in partnership to tackle this growing threat to patient health.
V. Infectious Diseases and Strategies

Outbreaks of infection diseases may occur everywhere in the world and cross borders easily. Recent examples are the French pandemic influenza and the EHEC outbreak in Germany. In this regard, vaccination campaigns as one of the most cost-effective public health care intervention are becoming increasingly important. In countries with limited access to health interventions, vaccines represent the key strategy to prevent the human suffering associated with infectious diseases and have already successfully contributed to the reduction of child mortality in these countries. Furthermore, opportunities could be identified to integrate neglected tropical diseases control programs into existing health platforms that deal with HIV/AIDS, tuberculosis, and malaria. Finally, public-private partnerships are needed to positively influence the development of new antibiotics.

Today’s Science – Tomorrow’s Agenda:
The Role of Vaccines in Saving Children’s Lives

Keynote by Dagfinn Hoybråten, the Chair of the GAVI Alliance Board. The GAVI Alliance (formerly the “Global Alliance for Vaccines and Immunization”) is a public-private global health partnership committed to saving children’s lives and protecting people’s health by increasing access to immunization in poor countries.

Impact of today’s science on human development

1. Science has delivered life-saving vaccines to prevent severe childhood illnesses
2. Great impact on the lives of millions and impressive progress towards the health MDGs: MDG4 is within reach in a number of countries
3. Vaccines have contributed significantly to progress made to date
4. Ensuring access to live-saving vaccines through innovation and increased financing at the heart of GAVI Alliance mission
5. Donor support has made a difference

Tomorrow’s agenda

- However, one child still dies every 20 seconds as a result of a vaccine-preventable disease. 23 million children remain unvaccinated
- MDG 4 will only be achieved if we reach more children with more vaccines as soon as possible
• Vote of confidence of donors for the Alliance and Decade of vaccines dynamics: a new era for vaccines
• Vision of GAVI and implementation
• With the science available, we can save more lives tomorrow together

Bridging Health Gaps with Vaccines

Max-Planck Institute for Infection Biology, Max Planck Society

Every four seconds, a child receives a vaccination. Vaccines are highly cost efficient and are often delivered at prices far below one euro. This holds true for many vaccines in use for decades and not subject to patent issues. Yet, with annual health spending below 25 euros in many ‘poor countries’ vaccine delivery depends on financial support from donor organizations. More recent vaccines still under patent restrictions are more costly and need innovative strategies to achieve an affordable price for developing countries, such as dual price systems and advanced market commitments. Delivery of available vaccines to everybody independent of financial income is primarily a matter of supply and pricing. Yet, vaccines are missing for major infectious diseases including HIV/AIDS, malaria, tuberculosis and hepatitis C. Development of new vaccines against these threats are a matter of accelerated R&D. Of the estimated 200 billion euros spent on health research, only 1% is earmarked for vaccines against these major threats. Research activities need to be stimulated by innovative incentives. Until 2005, the vaccine market was a small segment of the total pharmaceutical market amounting to a total of ca. 12 billion US-Dollars in revenues annually. This is currently changing and the vaccine market has become the fastest growing segment in the pharmaceutical industry.

However, this is mostly due to vaccines against novel targets, notably, for cancer therapy. Joint efforts by public and private sectors are needed to foster research and development for novel vaccines against diseases that pose an unequal burden on low income countries. In the long run, return of investment for R&D of novel vaccines as well as supply of available vaccines at an affordable price can be ensured by reducing
cost for treatment and loss of human resources. In highly contrast to the value of vaccines, are public concerns about vaccine safety, notably, in industrialized countries. To fulfill the expectations raised by the call to action for the new decade of vaccines stakeholders of all areas including national and international governmental and nongovernmental organizations, civil society, private sector, academia and philanthropic agencies, need to join forces to pave the way for provision of all vaccines to all.

Vaccines for the 21st Century: Roadblocks and Opportunities

*German Federal Ministry of Education and Research*

Besides anti-infectives, vaccines are often the most cost-effective tool to combat infectious diseases. Although research on new vaccines has been conducted for decades, there are many diseases for which vaccines are still not available or the existing ones are suboptimal in terms of efficacy, safety or pricing.

However, recent advances in biomedical sciences and translational medicine are now providing the knowledge-base and technological tools to develop a new generation of vaccines tailored according to specific clinical needs. New and creative partnering and business models also support an efficient vaccine development pipeline. Furthermore, research on vaccinology moved on and there is big hope that in future vaccination can help to prevent or even treat cancer and other chronic non infectious diseases. Therefore, vaccine development must not stagnate. To meet this challenge the German Federal Ministry of Education and Research founded the German Centre for Infection Research (GCIR) in this year. In the GCIR the strengths of 27 national excellent German institutions at 7 locations are bundled. One of the key areas in the GCIR is completely dedicated to the field of vaccinology.
Response to Global Emerging Infectious Outbreaks

Ecole des Hautes Etudes en Santé Publique (EHESP)  
European Center for Disease Control (ECDC)

Emerging diseases may occur everywhere in the world, and spread with no boundaries. Outbreaks of emerging diseases are particularly sensitive to globalization (e.g. movement of population and goods, change in land use, impact of global warming, increase in population density).

Key messages:

- Emergence of outbreaks of communicable diseases are not predictable
- Cost of emerging infectious diseases are huge in terms of resources, but also social and political burden
- Control of emerging infectious diseases needs an interdisciplinary approach
- Risk perception of population is a key measure to follow-up since gap between policy makers and population may be deeper than expected
- Coordination and involvement of community in response need preparedness and dedicated infrastructures at a regional level.
- Since time horizon of research is usually longer than that of response to emerging infectious diseases, research programs are difficult to implement during outbreaks, when there is a crucial need of better understanding and evaluation of evidence in health policy. Research needs to be planned and prepared ahead of an outbreak with dedicated funding “in case of”.

Four years after the Berlin Declaration on Tuberculosis – Lessons Learnt and Future Challenges

German Federal Ministry of Health
Koch-Metschnikow-Forum
Médecins Sans Frontières

- Tuberculosis is a major health threat in the WHO-Euro region. A successful TB control is complicated by increasing multidrug resistance and increasing HIV-TB comorbidity.
- The Berlin Declaration on Tuberculosis, adopted by the participants of the Ministerial Forum in Berlin in October 2007, is a good basis for international collaboration on TB control in WHO high priority countries.
- However, major goals in TB control (as agreed upon in the Stop TB Partnership and in the Millennium Development Goal #6) will not be reached by 2015, as an evaluation of activities and challenges revealed.
- Thus, WHO-Euro should ask all member states to stick to their self-commitments of the Berlin Declaration and to increase efforts to fight TB in their WHO region.
- A process should be initiated for developing strategies for the time after 2015 and to develop new goals in fighting the major global health threats like TB.
- Of major importance in this context is strengthening the collaboration between governments of high and low burden countries with non-governmental organizations, both supranational and regional ones.
Accelerating the Development of Antibiotics

European Commission

The alarming decline in antibiotic R&D has been well identified and runs the risk of potentially leaving health authorities without any therapeutic tool. We can blame a number of factors to explain such a decline:

1. Since the 1960s, public health authorities signalled a shift of interest towards cancer, neurological diseases away from infectious diseases.

   We have been victims of our R&D success: potent medicines have been on the market and are available at low prices.

2. There are clear difficulties in the regulatory approval process, due to extreme complexity of running clinical trials comparing existing and new products.

3. There are fundamental scientific challenges to identify new physiological pathways to attack infections and translate these discoveries into products.

All the above factors create an environment that is high risk and low market potential, which makes it difficult for the private sector alone to take up the challenge. What we need to succeed are clear public health priorities and public-private partnerships that will help us build a sustainable research pipeline from bench to bedside. Governments need to facilitate and support collaborations between academia and the private sector and put in place a series of tailored research incentives, such as research grants, tax credits, new exclusivity rights, accelerated regulatory pathways, and a clear path for market access, including pricing and reimbursement that rewards prioritized research.
Opportunities for Linking NTD Control with Control of AIDS, Tuberculosis and Malaria – Linking NTDs and the Big Three through School-Based Platform

Global Network for Neglected Tropical Diseases
Sabin Vaccine Institute

The Global Network for Neglected Tropical Diseases (NTDs) is an advocacy and resource mobilization organization dedicated to raising the awareness of NTDs and the funds needed to fight them. Founded in 2006, the Global Network is an initiative of the Sabin Vaccine Institute—an NGO established in 1993 to develop and expand access to existing vaccines and medicines for those living in poverty around the world. Findings show that NTD infections may promote susceptibility to or worsen the course of HIV/AIDS, tuberculosis, and malaria. Opportunities exist to integrate NTD control programs into existing health platforms, which can control or eliminate NTDs and can be done at a small fraction of the cost of treating ‘the big three’-HIV/AIDs, tuberculosis, or malaria. The United States, United Kingdom and other G8 member countries have made commitments to NTD programs that have resulted in enormous gains in the treatment and prevention of these diseases. Addressing NTDs will be essential to meeting the eight Millennium Development Goals (MDGs), meant to help lift the world’s poorest countries out of extreme poverty by the year 2015. Together with a broad coalition of allies, we support international organizations, public and private sector, and afflicted communities that are working to implement and integrate NTD treatment and elimination programs.
VI. Mother and Child Health

The First 1,000 Days - Food is not enough

*Médecins Sans Frontières
*Terre des hommes

The First Thousand Days from conception up to two years of age are very crucial for the physical and mental development of a child. A lack of food or micronutrients results in immediate vulnerabilities to infectious diseases and long-term irreversible handicaps like stunting or limited learning capabilities. To fulfill the right to health, high quality of food has to be guaranteed. Especially in poor countries, food supplies and the daily food intake often don’t meet the required quality demands in terms of nutritious value and contaminants.

Partner organisations of *Terre des hommes* in India and Africa exploit highly-nutritious local fruits and cereals. There are local recipes which are tested for efficacy to fight malnutrition but are neglected. To promote local products, agricultural policies need to include market prices for them and consider sufficient funds in the national budget to enhance local production. At the same time, information and education on nutrition needs to be promoted.

In the absence of sufficient locally produced diets, highly-nutritious ready-to-use foods (RUFs) cover the nutritional needs of children between 6 and 24 months, supplementary to breastfeeding. Therapeutic treatment programmes with ready-to-use foods (RUFs) allow the vast majority of seriously malnourished children to receive treatment at home, under the supervision of their mother or other caregiver, instead of being hospitalised. Médecins Sans Frontières and others have documented the successes that can be achieved through use of RUFs - high cure rates with high coverage, as well as low mortality and default rates.

Policies to overcome malnourishment need to be scaled up and enforce international regulations on quality of food adapted to the needs of infants and young children. It needs a multi-sectoral approach that embraces agriculture, health, education, and social policy. Investing into improved infant and child feeding are cost-effective compared to the short and long-term costs of childhood malnutrition.
A Healthy Start to Life

National University of Singapore
Monash University, Australia

Child mortality and morbidity are still unacceptably high and many causes of death and disease are preventable. It is clear that health at the start to life has also long-term implications for the risk of chronic disease. In recognition of the importance of a healthy start to life, we would recommend:

- The UN priorities in the areas of leadership and intervention be focused on women of reproductive age and young children and that evidence of the developmental origins of disease be disseminated widely to policy makers and the public.
- The investigation of melatonin as a cheap and safe neuro-protective agent, easily administered to mothers or babies to reduce perinatal brain injury resulting from acute or chronic hypoxia, thus addressing a worldwide burden of childhood morbidity and mortality.
- That partnership approaches that emphasize collaboration, participation, social justice and empowerment in young Indigenous women in Australia are effective in reducing the impact of tobacco on pregnancy outcome.
- All health workers should recognize their role in the fight against the epidemic of childhood obesity, not only to reduce the disease burden of obese children but also for the impact on the health of these children as adults.
Family Planning: The key to a sustainable future

Keynote by Mike Klag, Dean, Johns Hopkins Bloomberg School of Public Health, Baltimore, USA, the oldest and largest independent graduate school of public health in the world. He is chair of the Association of Schools of Public Health and chair of the NIH Advisory Board on Clinical Research.

For a variety of reasons, family planning has fallen off the agenda of funders and development agencies during the last 15 years. The Kampala Conference in 2010 was the first international conference in family planning since the Cairo Conference in 1995. Despite this neglect, population growth underlies many of the most important public health issues facing our world, including global warming, food and water security, rapid urbanization, and increasing death from natural disasters, among others.

Safe, effective and inexpensive methods of contraception are available but surveys indicate high levels of unmet need for family planning, both to limit and to space pregnancies. Access to contraceptives is limited in some countries because of national policies, poor supply chains, affordability, and other factors. Access to contraceptives empowers women and improves their economic condition. A variety of research demonstrates that, when their economic status improves, women make decisions that are beneficial to the health and wellness of their children and families.

“It is time for a recommitment to the support of family planning. Unless population growth, especially in sub-Saharan Africa, is checked, the vicious cycle of poverty and poor maternal and child health outcomes will be perpetuated.”
‘Preconception Care’ begins in adolescence and is provided before and between pregnancies and has also the potential to impact 136 million women who give birth each year and ensure that new-borns receive the healthiest start possible. Interventions to promote adolescent health and prevent teenage pregnancies, encouraging contraceptive use and appropriating birth spacing, optimizing weight and micronutrient status and screening for and managing chronic conditions have proven efficacy.

All healthcare providers can and should begin to provide ‘Preconception Care’ to all adolescent girls and women of reproductive age simply by asking them if they wish to become pregnant or could become pregnant.

Thus, the following key messages regarding ‘Preconception Care’ were recommended.

- Running programs to prevent first pregnancies in adolescence reduce risk by 15%. Comprehensive parenting programs prevent repeat teen pregnancies by 37%.
- Reproductive planning and effective contraception for women to space pregnancies 18-24 months apart results in fewer stillbirths, neonatal deaths, premature births and low-birth-weight babies.
- Ensure that women are taking a multivitamin supplement containing 400 µg of folic acid daily to prevent congenital anomalies (especially neural tube defects) and preeclampsia.

Finally, screening for chronic conditions, especially diabetes, and instituting early counselling and management reduces the risk of congenital malformation and perinatal mortality by 70%.

These interventions must now be scaled up to maximize delivery. For other preconception risks - notably mental health and partner violence infectious diseases - there is a need to develop innovative methods to detect and reduce risk in women of reproductive age, and maximize uptake of care by adolescents.
Access to Reproductive Health Supplies Challenges, Barriers and Opportunities in Developing Countries

DSW (Deutsche Stiftung Weltbevölkerung)

The lack of access to reproductive health (RH) supplies is a key driver of the more than 75 million annual unintended pregnancies and high maternal mortality rates throughout the developing world. The lack of political support for family planning (FP) in developing countries is a huge obstacle in achieving better access to RH supplies. In developing countries, FP is often perceived to be an instrument of population control. Thus, a strong base of support is essential for advocacy. Donors should invest in capacity-building initiatives at national level that ensure effective RH supplies advocacy to achieve an increase in domestic health spending. The functionality and efficiency of in-country supply chains is essential. Some improvements in terms of policy environment and data visibility can be seen. However, it is also important to invest in building supply chain capacity by training staff and providing sufficient resources. The Reproductive Health Supplies Coalition has launched the HANDtoHAND Campaign that aims to reduce unmet need for family planning by 100 million new users of modern contraception by 2015. UNFPA is managing a new procurement mechanism “Ensuring universal access to reproductive health”, supported by the BMZ, improves access to quality, affordable RH supplies in developing countries, reduces delivery times, and offers enhanced information for planning and tracking. The German Government has also launched a new initiative that doubles the amount of bilateral funding for RH and FP and uses innovative approaches to work closely with civil society and the private sector to contribute to making RH a priority of partner countries. The most unintended pregnancies are to women who have an unmet need for modern contraception. The reasons for non-use of modern contraceptive methods, however, have changed. Whereas in the 1980’s main reasons for non-use were lack of knowledge, the high cost and no access to supplies, nowadays the fear of health risks and side effects of certain methods are the main reasons for non-use. Maternal deaths in developing countries could be slashed by 70% and new-born deaths cut in half if the world doubled investment in family planning and pregnancy-related care. Increased investment in supplies would reduce maternal deaths by enabling more women to avoid unintended pregnancy and its related health consequences. International donors and developing country national governments should invest in Family Planning and RH supplies because without investing, developing countries risk to worsen their progress on Millennium Development Goal (MDG) indicators that are already lacking behind, especially for MDG 5 that aims at reducing the maternal mortality ratio by and achieving universal access to RH by 2015 – which is the most off-track of all the MDGs.
VII. Promoting Health, Preventing Non-communicable Disease

Non-communicable diseases (NCDs) are the leading causes of death globally. Especially cardiovascular diseases are on the rise, mostly due to smoking, obesity, or diabetes. The combined burden of these largely preventable diseases is rising fastest among lower-income countries where NCDs have serious socio-economic consequences and are closely linked with poverty. Prevention will be crucial and the aim of policy makers, for instance, in the case of alcohol should also be to change social norms. Regarding cancer, translation gaps exist and not enough research on prevention is conducted. Furthermore, mental diseases are emerging and research to find new and innovative treatments, is necessary. Last but not least, the response to AIDS has revealed the need to go beyond the public sector to include civil society and private sectors as legitimate and crucial players in health systems strengthening.

Promoting Health, Preventing NCD - UN High-Level Meeting. What Comes Next?

World Health Organization

Non-communicable diseases (NCDs) are the leading causes of death globally, killing more people each year than all other causes combined. Of the 57 million deaths that occurred globally in 2008, 36 million – almost two-thirds - were due to NCDs, comprising mainly cardiovascular diseases, cancers, diabetes and chronic lung diseases. The combined burden of these largely preventable diseases is rising fastest among lower-income countries. About one-fourth of global NCD related deaths take place before the age of 60. The greatest impact of NCDs and their shared risk factors fall increasingly on low- and middle-income countries, and on poorer people within all countries. NCDs have serious socio-economic consequences and are closely linked with poverty. Unless the NCD epidemic is aggressively confronted, the mounting impact will continue and the global goal of reducing poverty will be undermined. Because of the enormous magnitude of NCDs on health and socio-economic development, NCD prevention has recently been discussed by the United Nations General Assembly in a high-level meeting attended by Heads of State and Government. The Political Declaration, which was endorsed during this meeting, represents a turning point in the global struggle against NCDs. The Declaration urges countries to take effective action to prevent and control NCDs and their negative impact on socio-economic development.
Social Marketing and Communication in Alcohol Prevention

Federal Centre for Health Education

In order to tackle the alcohol issue it is necessary to reduce alcohol consumption in all age groups – especially amongst young people and older chronic users of alcohol.

In many countries a combination of targeted measures is aiming at improving the knowledge about health risks related to alcohol, promoting a critical attitude towards alcohol, changing the social norm about alcohol use with the aim of reducing the alcohol abuse.

Successful prevention and good social marketing share the same principles, concepts and scientific basis as other forms of public health intervention but with an added focus of making the healthy choices not only easy but also desirable.

There is no magic bullet but a full toolbox. Successful prevention a well as Social Marketing is: ‘Educating & Easy, Emotional and Engaging’, ‘Enduring & Evaluated’ and

‘Evidence based (though innovative)’. This leads to Efficiency!
Cardiovascular Diseases - Challenges in Developed and Developing Countries

German Center for Cardiovascular Research
Helmholtz Association
INSERM

1. Cardiovascular diseases are becoming the leading cause of morbidity and mortality worldwide, with rates slowly declining in the Western World, but steeply increasing in developing countries.

2. Whereas the majority of established risk factors (e.g. abnormal lipids, smoking, overweight, low physical activity, diabetes, hypertension) appear to be the same worldwide, the relative importance of single risk factors appear to differ (e.g. higher importance of low HDL-C and high triglycerides in Indians, lower cut-off values for body-mass-index).

3. The genetic underpinning of cardiovascular diseases clearly varies between different parts of the world. For example, a common (prevalence 4%)

4. Polymorphism in the gene for myosin binding protein C confers a 5-8-fold higher risk for heart failure in India, but is essentially absent in other parts of the world.

5. Large international cooperative studies such as INTERHEART (2004) are needed that systematically compare the epidemiology, genetic basis, clinical presentation and drug response in various regions of the world.

6. Necessary measures differ in developing and developed countries. The main focus in developing countries will be on country-specific analyses of the problem, adapted public health strategies to increase awareness of the problem and better access to medicines. The latter includes consideration of complex issues such as the “polypill”.

7. A major focus in developed countries will remain the refinement of existing therapeutic strategies. But benefit will be also derived from individualizing cardiology: To better discriminate high and low risk patients, to define individual causes of a disease and to develop cause-specific therapeutic approaches (e.g. in inherited cardiac diseases).

8. Research funding can booster this process on different levels. (i) Establishing structures at academic institutions that foster the training of the next generation of scientists at the interface between basic science and clinical medicine, the
“translational scientist”. (ii) Funding large, international investigator-driven epidemiologic, genetic and therapy studies. (iii) Providing a framework that allows researchers to develop their ideas in a protected environment.

9. Recent programs in the US and the EU have taken this direction with a focus on national and international networking. Whereas this can be seen as a necessary first step, more effort is needed (i) to establish permanent funding perspectives instead of the usual 5-year programmes and (ii) to strengthen the bottom-up approach for individual, investigator-driven projects. The past 10 years have seen increased funding for established researchers and large networks without comparable increases in funding young researchers in the critical phase between their PhD thesis and professorship or similar. In consequence, we are training more and more PhD students, but offer only carrier perspectives to a decreasing fraction of them. This results in a loss of talent.

10. The German Centre for Cardiovascular Research is a new government-funded initiative that tries to improve some of the current shortcoming in the cardiovascular research landscape in Germany by fostering (i) national collaboration, (ii) coordination and visibility of cardiovascular research, (iii) strengthening a number of translational research centres, and (iv) providing a long-term funding perspective for investigator-driven, collaborative clinical studies, registries and cohorts, for the establishment of a national experimental development pipeline for new therapeutics and a training program.
There is increasing awareness that cancer is a global public health problem. However, controlling cancer is complex and requires multi-sectored approaches to reduce risk exposure to populations as well as strengthening health systems at all levels of care to increase access to treatment and care. Current knowledge about causes of cancer and strategies to control cancer is not sufficiently translated into practice – translation gaps exist. Current cancer research priorities are mainly treatment oriented with low priority of the knowledge needs for comprehensive cancer control – there are knowledge gaps in prevention and palliative care and translation of research findings into various settings. The UN and WHO have taken the initiative to increase the awareness and to stimulate national efforts for effective cancer control. This new development on the political arena requires a new priority setting of cancer research to bridge the knowledge gaps.

What we know and what we don’t know

- Most causes of cancer are well known: behavioural, carcinogens, infections
- >90% of literature about cancer treatment in high income settings
- Prevention research is scarce.

Research gaps (WHO paper)

- Evidence based interventions of risk reduction strategies: what works in which setting?
- Evidence based early detection and treatment regimens: what works in low and middle income countries?
No Health without Mental Health

National Institute of Mental Health Centre for Global Mental Health

Mental disorders contribute thirteen percent of the global burden of disease and are leading causes of disability worldwide. Mental health awareness and attention to mental health problems can help to address key ‘Millennium Development Goals’. There is increasing intergovernmental and policymaker awareness of, and investment in, Global Mental Health. Scaling up of community-based services remains a significant challenge.

Since the Lancet Series on Global Mental Health (2007), awareness has grown of the gross inequity in the provision of care and respect for human rights of persons living with mental disorders, between ‘rich and poor countries’. The treatment gap for mood disorders exceeds 75% for low and middle income countries (LMIC), while 90% or more of people with psychosis have never been treated in sub-Saharan Africa.

A key priority is scaling-up evidence-based packages of mental health care, to be delivered by non-specialists in general healthcare settings. The evidence that ‘task-shifting’ is both feasible and effective has strengthened.

This has informed the WHO Mental Health Gap Action Plan Intervention Guide (mhGAP-IG), to be piloted and rolled-out in selected LMIC. Much mental disorder burden occurs in the context of health priority areas, for example maternal and child health and HIV care. The Grand Challenges in Global Mental Health initiative sought to identify specific barriers that, if removed, would help to solve the most important problems in the areas of mental, neurological, and substance use (MNS) disorders. Through engagement of the largest global Delphi panel to date, the initiative identified research priorities that, within the next decade, could lead to substantial improvements in the lives of people living with neuropsychiatric disorders. A secondary goal was to further galvanize a global mental health movement whose stakeholders include committed researchers and funders.
Burden of Chronic Diseases — Mental Health and Challenges of the 21st Century

Keynote by Ulf Wiinberg, President and CEO of H. Lundbeck A/S

The prevalence of mental diseases is constantly increasing within Europe, leading them to be the main contributors to the overall burden of disease as assessed by the WHO.

The escalating burden of mental diseases with related mounting costs to the society that is today in crisis makes “Mental illnesses: The Great Depression of the 21st Century Health Care”. Several societal challenges remain unsolved in terms of proper diagnosing, treatment and management. Additionally tackling the stigma and discrimination related to these diseases prevents that appropriate and rightful attention is given by all stakeholders. Therefore should it not be the primary objective of all European Health Care Systems to sustain that continued research is done to find new and innovative treatments for all of the mental diseases?
Healthy Ageing

Monash University
Johns Hopkins Bloomberg School of Public Health
Kyoto University Graduate School of Medicine

Ageing populations are a global phenomenon which the United Nations have identified as a major challenge for the 21st Century. Globally, there are 650 million people aged 60 years and above, most of whom live in developing countries. By 2050 this number will increase to over two billion people. While many governments are concerned with the potential burden this may bring in terms of health and social costs, ageing populations were actually a cause for celebration. It reflects substantial improvements in life expectancy. Many older people continue to contribute significantly as elders and productive members of their communities. Yet, unfortunately across and within countries inequalities exist and life expectancy is closely tied to socioeconomic status. Healthy ageing policies and programs are now advocated to reduce health expenditure and to optimise the quality of life as we age. In our symposium we focused on the importance of healthy lifestyles, reducing disability and managing chronic illness in primary care settings in promoting healthy ageing. We also examined the importance of understanding the ecology and culture of communities to inform the delivery of health enhancing services for older people.
HIV and Chronic Care

Keynote by Dr Paul De Lay, who joined UNAIDS in February 2003 and was appointed the Deputy Executive Director, Programme, in June 2009. He holds the rank of Assistant Secretary-General of the United Nations (ASG).

Non communicable diseases are increasingly being recognized as major contributors to morbidity and mortality, changing the way health systems must be organized across the world. The transition from dealing with acute infectious diseases to now also providing chronic non-communicable disease care delivery systems is a similar transition to the one which has taken place in the response to HIV over the past decade. UNAIDS has called for taking HIV and AIDS out of isolation. The response to HIV has, in fact, changed from an emergency response to the long term management of a chronic disease.

The AIDS response has led to enormous progress towards scaling up access to treatment and reaching out and including people at risk of HIV infection or who are already infected. This has required a strong human rights focus and continues to be a catalyst for change in the health systems of many affected countries. The response to AIDS has revealed the need to go beyond the public sector to include civil society and private sectors as legitimate and crucial players in health systems strengthening. Past experiences provide an opportunity to learn from and further strengthen HIV responses and an increasingly integrated approach is needed to maximizes efficiencies and achieve positive health beyond HIV, in the broader health system.
Structures for a New Chronic Disease in Low- and Middle-Income Countries

Social Health Protection Systems and HIV: Developing Fair and Sustainable Financing

World Health Organization
GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development

More than 100 million people fall into poverty each year due to direct payments for health care services. Countries with lacking or insufficient social health protection systems – particularly in sub-Saharan Africa – are also those countries, which bear the largest burden of the global HIV/AIDS pandemic.

Due to the increased effectiveness of antiretroviral therapy (ART) drugs, AIDS has turned from a lethal to a chronic disease. Hence, it is essential to ensure long term financing of ART coverage. Integration/redirection of financial flows coming from global vertical health financing instruments – such as the GFATM and PEPFAR grants for financing of ART treatment in resource-poor countries – into national / domestic health financing systems (i.e. contribution and/or tax-based national systems) would strengthen and stabilize national health financing structures while at the same time ensuring sustainable financing and provision of ART treatment for AIDS-Patients.

Germany, due to its 125 years of experience with (reforming) national social health protection systems, is in a position to support efforts of low and middle income countries to integrate ART coverage into national health financing systems.
Urbanization is increasing dramatically across the world, especially in low- and middle-income countries. This poses special challenges to the environment with strains on delivery of clean water and sanitation, indoor and outdoor air quality, and the impact of climate change on urban settings. In general, climate change and mega disasters will pose a fundamental threat to human biological and social wellbeing. Therefore, more technical as well as financial support for adequate health adaptation is needed. This also involves the development and finding of efficient communication and policy options when it comes to disasters such as Fukushima.

Impact of Global Change on Human Health - Change of Common, Non-Communicable Diseases in the Context of Environmental Health

Helmholtz Zentrum München - German Research Center for Environmental Health
World Health Organization

We live today in an increasingly interconnected world of unprecedented ‘global changes’. These environmental, demographic, social and economic changes exert increasing influence on global health. On the environmental front, biodiversity loss, climate change, changes in the nitrogen cycle and chemical pollution, are all proceeding at unprecedented levels. Human-induced climate change, for example, endangers human health via rising temperatures, extremes of weather, impacts on urban air quality, changes in infectious disease patterns, impairment of regional food yields, and the consequences of sea-level rise and population displacement. A complex interplay of socio-economic and demographic factors, such as population growth, urbanization, changes in family structures, labour conditions, economic instability, consumer behaviours and consumption patterns affect in particular non communicable diseases and health inequities.

The situation is complex, as the impacts of global changes on human health differ between different countries, societies and economic sub-groups. Of the 57 million
Global deaths in 2008, 36 million, or 63 per cent, were due to non-communicable diseases, principally cardiovascular diseases, diabetes, cancers and chronic respiratory diseases. Total annual deaths from non-communicable diseases are projected to rise to 52 million in 2030. Chronic obstructive pulmonary diseases are foreseen to become killer number three in 2020. A multitude of lifestyle factors, such as diet, pollution, smoking and infections contribute to the rise of that disease. Over four million deaths occurred from diabetes in 2010. Changes in cultural-environmental influences on bodily energy balance over recent decades, sometimes interacting with underlying genetic factors, influence the development of diabetes type II.

The economic costs are substantial. For example the annual costs of cardiovascular diseases (CVD) are estimated to be €168 billion per annum in 25 European Union countries. However, in particular in middle- and low-income countries they cause poverty, contribute to inequalities and hinder economic and sustainable development. Ability already exists to counteract the non-communicable disease epidemic as well as some of the large-scale environmental changes, thus saving millions of lives, preventing untold suffering and reducing enormous costs. Knowing how to reduce such diseases and counteracting the changing climate is not the problem; the problem is lack of action. The greatest reductions in non-communicable diseases will come from population-wide interventions to address lifestyle and environmental risk factors such as tobacco use, unhealthy diet, and lack of physical activity, harmful use of alcohol, air and chemical pollution. Many of these can be low-cost and present an opportunity for the economy. Seven particular areas of common trans-disciplinary action with co-benefits for health and the environment are suggested to be strengthened:

1. The overall reduction of consumption and healthy food to become the attractive economic norm
2. The reduction of greenhouse gas emissions in multiple sectors (healthcare, transportation, electricity generation, agriculture and housing), while aiming at health and environment benefits;
3. The promotion of core public health functions as a mean of adaptation to climate change and other global environmental changes;
4. The protection of health throughout the course of life – for example starting with healthy early childhood development;
5. Interdisciplinary collaboration for research and health impact
assessment (e.g. health professionals linking with those in transportation, urban planning, architecture, agriculture, land conservation, energy, and other fields);


7. Education of government and health professionals as well as the capacity development of a multidisciplinary workforce.

Ensuring Public Health in the Times of Climate Change: Mission Impossible?

Federal Foreign Office - Forum on Global Issues
German National Academy of Sciences
Leopoldina
Potsdam Institute for Climate Impact Research

The key question regarding human-induced climate change is no longer whether and why it is happening … rather, what is the scope and extent of the risk posed to human populations, now and in future? The risks to population health and survival and to social stability from unabated climate change are more extensive than is generally appreciated. A change in global climatic conditions, and shorter-term variability, endangers nature’s life-supporting systems. In particular, adverse climatic influences on regional food yields, on freshwater availability, and on the natural constraints on infectious diseases will cause widespread illness, suffering, and premature death. Climate change thus threatens the international pursuit of ‘global health’ – especially gains in population health in lower-income regions (e.g. the Millennium Development Goals). Further, if food insecurity, water shortages, and loss of living space result, population health will be threatened by tensions, displacement, and conflict. Health-care systems and public health programs will come under increasing demand-stress. The economic impost of expanded emergency services, health-care facilities, surveillance, and prevention programs will escalate – impeding other social and economic development. Climate change mitigation offers ‘win-win’ opportunities (via ‘health co-benefits’) for societies to enhance their own population’s health. Meanwhile, adaptation strategies are needed to lessen the adverse health impacts of unavoidable climate change. Most
important, the current limp and inadequate international policy discourse on the rationale and timetable for abating climate change must incorporate a new, heightened, recognition of the fundamental threat posed to human biological and social wellbeing, health and survival.

1) The need for a vision of what a green and healthy future looks like
- Recognizing the risks (i.e. a proper risk assessment for climate risks to health)
- Understanding the barriers to overcoming these risks (initial costs, difficulties in changing infrastructure, human behaviour, overcoming vested interests)
- Presenting a positive vision of where we want to be (greener, sustainable economies, where people are also properly protected from environmental, including climate, risks)

2) The need for a plan to reach that vision
- Example of indoor air pollution, or urban transport?
- Example of what we are doing on health adaptation (definition of minimum package of interventions, obtaining political agreement through regional frameworks e.g. in Africa, defining national adaptation plans, backing with technical support, monitoring and evaluation)
- Proposals for what needs to be done on healthy mitigation (identification and promotion of sectoral policies that reduce greenhouse gas emissions and health risks)

3) The need for the means to implement that plan
- Need for financial and technical support for health adaptation, to address the current weaknesses in health systems to protect from climate-sensitive risks, and the near absence of support from the climate funds (Germany is exception as one of first to provide significant support, bilaterally - although still much lower than goes directly or indirectly to other sectors)
- Need for national and international mitigation policies and support to take account of health harms and especially co-benefits

Bottom line is that we do need a green and low carbon future to sustain health - but there are lots of different ways to go green. We should be aiming towards a future that is not just green and good for polar bears, but good for people as well.

Where to now?
Urban Environmental Public Health in Low-Income Countries

Johns Hopkins Bloomberg School of Public Health  
National University of Singapore

By 2030, 60% of the world’s population will live in urban areas, many in low-lying coastal settings. Environmental exposures in low-income country urban areas, including indoor and ambient air pollution, unsafe water, and poor sanitation, will provide unprecedented challenges to public health. These challenges will be compounded by climate and sea level changes that will threaten these vulnerable populations. Rapid urbanization threatens provision of sanitation and safe water in addition to other health and social services. The increase in extreme weather events will directly impact water and air quality and the delivery of services. However, maturing technologies could buffer the impact of urbanization and climate change. Improvements in efficiency of fuel combustion, use of cleaner fuels and technologies for provision of clean water offer the potential to mitigate these public health challenges. The session reviewed these challenges and called for international collaboration, innovation, and the political will for addressing them.

Health Effects of Major Disasters: Prevention and Preparedness

Kyoto University Graduate School of Medicine  
WHO Collaborating Centre for Research on the Epidemiology of Disasters

Every year about 400 natural disasters occur in the world. Two of the most devastating this year were the tsunami in the Tohoku region in March and the tragic drought-related famine in the Horn of Africa later on. Today, Thailand is suffering from major floods. These and other catastrophes such as the Haiti earthquake or the cyclone in Myanmar have underlined the need for preparedness and prevention especially as climate related disasters are increasing substantially every year. The health hazards which are caused by such disasters range from immediate injury and death to wide ranging health problems such as disease outbreaks and mental health problems. Secondary effects of natural disasters such as the water pollution to the Fukushima nuclear plant also bring with them serious after effects linked to nuclear facility damage. In the session “Health Effects of Major Disasters: prevention and preparedness” with the recent and ongoing tragedies as a trigger, the role of medicine and public health sectors in preventing and preparing for the health effects of major disasters were highlighted. Hence, the session was aimed to a wide audience from all disaster prone countries with vulnerable populations and where preparedness and prevention should be health priorities. Specifically, this session focused on two areas.
First, regarding the health risk communication we have to enhance public understanding of ‘risk’. It is important to answer the question of what the public health sector can do to enhance public understanding of risk from natural disasters. Second, finding policy options for and advising policy-makers on specific actions regarding areas such as mental-health, radiation and other types of hazards, and health issues related to mass displacement after disasters are indispensable.

This session reviewed the challenges in developing interventions with specific focus on the prevention of home injuries among children, falls in the elderly, and motor vehicle crashes. Particular attention was focused on policy and environmental interventions that are beneficial to the prevention of both injuries and the increasing burden of chronic diseases. Speakers agreed that one of the greatest challenges we face today is widespread implementation of strategies we know work. We need to do a better job of translating good science into effective programs and policies that are economically, socially and politically acceptable and sustainable.

Building a Safer Environment: Translating Science into Practice and Policy

Monash University, Australia
Johns Hopkins University, Baltimore

Injuries are a leading cause of death and disability around the world. Thereby, the physical and social environments affect the safety of populations. Creating safer environments at home, around the community, on the roadways, and across the lifespan requires a multi-faceted approach that incorporates education, community mobilization, and advocacy for changes in organizations and in public policy.
IX. Governance for Health in the 21st Century

Strong health systems are the basis of development. Governments around the world are struggling with the challenges of providing good-quality healthcare under conditions of increasing financial constraints. Emphasis was given to more community, national and regional level participation processes, and greater involvement by a range of stakeholders across all levels of governance. The development of institutions, financial facilities and mechanisms for global health should be closely linked to accountability mechanisms, and seen in the context of democracy/human rights. Moreover, Global health can no longer be regarded as a charity of developed countries towards the low- and middle income countries, but as a challenge both within countries as well as beyond national borders to reduce health inequalities and ensure health services for all.

Governance for Health in the 21st Century - Democratizing Global Health

Global Health Europe
World Vision International

We need to invigorate international governance arrangements in order to incorporate a broader range of actors and ensure transparency and accountability in global health initiatives. Emphasis was given to more community, national and regional level participation processes, and greater involvement by a range of stakeholders across levels of governance. We also need to look beyond institutional processes when we think about policy processes and enable policies to be debated at local levels. National level parliamentarians could be more involved in global health policy networks and governance processes at regional and international levels. Specific suggestions were made about the role of parliamentarians within WHO governance processes. National level governments could encourage greater participation by NGOs and private organizations at international forums, e.g. at the Rio Summit on the Social Determinants of Health where some countries had a range of representatives present.

We must recognize the strengths of communities: women, families and communities often play an important part in global health in LMICs through voluntary activities, advocacy, time, knowledge and counseling. At the same time, from the
perspectives of LMICs, exclusion and non-participation can occur especially at an international level due to the affordability of time, money and technology required to participate. Global health governance should adopt a human rights and health discourse, tackling global health inequalities and the social determinants of health, considering sectors other than health in global health governance and strategies. We need to think in terms of co-development between HICs and LMICs, and embrace ‘reverse innovation’, rather than always in terms of aid and international development. ‘Reverse innovation’, rather than always in terms of aid and international development.
Financial facilities and mechanisms for global health should be closely linked to accountability mechanisms, and seen in the context of democracy/human rights.

Taxation and demand side financing, or government investment in global health goods and services - should be recognised as one of the key policy instruments to tackle inequities. Countries should be careful to maintain counter-cyclical fiscal responses and protect social services in times of fiscal pressures. However, many of the poorest countries need to be supported through stronger financing mechanisms. Risk pooling, repayment mechanisms and fair structures at the national level are required.

There are many innovative financing models being tried, especially for research and development. Some ‘vertical’ approaches include advance market commitment (AMC), international finance facility for immunization (IFFI) and success in mobilizing international solidarity levies. Some innovative strategies to increase research and development have been proposed and exist, however more risk taking sponsors are sought for initiatives.

The current verticalism in funding approaches is not sustainable without existing health systems. We need to ‘marry’ vertical funding [i.e. funding for specific diseases or health projects e.g. GAVI] with horizontal [i.e. funding for health systems] and diagonal approaches [i.e. improvements in health outcomes through improved health systems].

Resources should be focused on the best interventions to increase efficiencies and reduce wastage.

There is a great variety in country level spending on health (from less than 1% to over 15%). Too often, services are paid for through out of pocket payments (OPP) at the point of service delivery. There are approximately 50 countries with GDP<$1000 per capita which cannot generate sufficient funds domestically to develop and sustain...
adequate health services (noting cost of basic package $40-80 pa). Stronger mechanisms of global financing support are required linked to further progress in development of institutions of regional and global governance for Health. Although short term considerations of the global financial upheaval have created challenges for replenishment of funds such as Global Fund and PEPFAR, this should not detract us from a broader and more powerful long term goal of establishing improved tools and mechanisms to improve global equity and ensure basic health services for all.

In this regard the current review of the WHO is considered important. Democratising global health means having a more democratic, inclusive, transparent and accountable WHO. Several participants felt the coordinating and financing role of the WHO has been weakened over recent years with the emergence of a plethora of new organisations. The increase in voluntary contributions to the WHO has also posed problems for this organisation in setting priorities. The forum would like to see the re-emergence of a stronger WHO, from the perspectives of global governance and regulation for health, coordination and financing. We hope the current review of the WHO will help to reposition the organisation to more powerfully perform its centrally important global role.

Role of Germany in Global Health

Berlin School of Public Health
Charité Universitätsmedizin Berlin

There is a growing interest in Global Health in Germany. Closely connected to Global Health are the concepts of International Health and Public Health. International health, traditionally, has focused on infectious diseases as well as on maternal and child health in developing countries. Public Health, on the other hand, deals with population health and prevention within regions. Many, particularly Public Health experts from United States, claim that Public Health cannot be separated from Global Health anymore and that both terms are in fact identical. In Europe, a new network of academic institutions, the European Academic Global Health Alliance (EAGHA), has defined key objectives for Global Health in the European Union.

In Germany, Global Health is often used synonymously with International Health. However, the term ‘Global Health’ implies addressing health issues that transcend national boundaries such as trade patterns,
climate change, or migration. For example, the spread of non-communicable diseases and risky lifestyle patterns is not restricted to certain regions of the world. More debate is needed within universities and between disciplines on the scope and aims of Global Health. National think tanks and academic centres for Global Health may be a useful tool. However, the added-on value of a national German initiative beyond the existing European initiative needs to be defined. In addition to academic debates, responsibilities for Global Health on the political level as well as the cooperation between different institutions have to be discussed. Global health can no longer be regarded as a charity of developed countries towards the low- and middle income countries but as a challenge both within countries as well as beyond national borders to improve the health of all.
The Case for Europe as a Leader in Research and Innovation for Global Health

Global Health Europe
Graduate Institute of International and Development Studies

Strengthening research and innovation for global health (‘health issues which transcend national boundaries and governments’) is central to meeting the EU’s commitments to tackle a range of global health challenges (including addressing deep health inequities within and beyond Europe; and achieving the Millennium Development Goals); and enabling the EU to achieve its goals for economic growth and prosperity.

Recommendations include ensuring that Horizon 2020 (the EU’s 8th Framework Programme for Research and Innovation), due to come into operation in 2014, will give explicit attention to:

- Programmes that tackle major challenges, such as non-communicable diseases, antimicrobial resistance, pandemics and ageing and that encompass health promotion and disease prevention as well as diagnosis and treatment.
- Special mechanisms to promote and support research that is cross-sectoral and interdisciplinary, involving both technological and social innovation.
- Research that acknowledges the ‘right to health’ and European values in health such as equity, solidarity, and access to health care.
- Recognition that attention to global health is a matter of ‘enlightened self-interest’ for the EU.
- Sustaining coherence and momentum in areas where the EU has already made major commitments (e.g. in relation to health-in-all-policies, development policies), or major investments (e.g. capacity building for research and development in low- and middle-income countries, research on the social determinants of health).
- Ensuring the inclusion of stakeholders in priority setting research agendas. Innovation stimuli which take into account the special needs of pharmaceutical development (which include long lead times, high intensity of investments, high attrition rates, and balancing the factors that support innovative small- and medium-size enterprises and large pharmaceutical companies).
- A ‘grand challenges’ approach to developing global health, which involves cross-sectoral research
• conducted by multinational consortia within and beyond the EU. Several mechanisms were highlighted, including flagship research programmes and establishing ‘Networks of Excellence’ and EU ‘Global Health Chairs’.

• Utilisation of ‘reverse innovation’, i.e. high-countries learning from low- and middle-income countries.

• Better definition and measurement of the impact of research, development and innovation.

Ensuring the Effectiveness of EU Expenditure on Global Health

Ecole des Hautes Etudes en Santé Publique
Association of Schools of Public Health in the European Region
European Academic Global Health Alliance

There should be coherence between the approach taken by the EU Member States in their bilateral cooperation, and action by the EC. Having EU Member States individually following different principles and the EC setting its own rules that are inconsistent with the approaches taken by individual states is unhelpful. The resulting harm may offset many of the benefits from increased resources and is undoubtedly inefficient. There should not be disparities in aid policies and Europe should act as one.

To ensure the effectiveness in international assistance, there is a need to move away from donor preferences, and address the countries’ development strategies. With its comparative advantage in ODA contributions, the EU could play a catalytic role in the efforts for a change of attitude. This needs to be accompanied by improved reporting of health sector results at country level which will serve accountability to both recipient and donor countries’ citizens.
X. Health Economics and Management

As in evidence-based medicine where the scientific method is applied to medical practice, the current and best evidence should also be used in public health policy and management decision-making. In order to achieve better outcomes evidence based medicine and evidence based management should be implemented together. Furthermore, health care reforms worldwide are directed towards the goal of better outcomes for lower costs. In this context, prevention is seen as a key factor. However, many health care reforms in countries such as the Netherlands have not led to the envisioned cost reduction. Finally and most important, during times of economic crisis it has become crucial for long-term sustainability that countries in general and especially in the developing world do not respond with major cuts in health care spending. Investment in health has to be further supported and the pharmaceutical industry can help by giving discount and cutting prices.

From Evidence Based Medicine to Evidence Based Management

_Ecole des Hautes Etudes en Santé Publique_  
_European Health Management Association_

Management is a discipline which remains mainly apart from empirism and experimentation. In healthcare, management as a discipline should take advantage and inspiration from epidemiology and biostatistics. Evidence based medicine has profoundly reshaped modern medical practice, so will Evidence based public health policy and management. Evidence based public health policy and management is a raising discipline. As best outcomes in healthcare and public health are often associated with strong coordination, appropriate management practices in healthcare may improve health outcomes. It is time to jointly implement evidence based management and evidence based medicine to provide better service to patients and better health to the population. To introduce Evidence based management in practice, it has to be incorporated within master and postmaster education. Evidence based management approach needs development in research in collaborative groups in a similar way as within medicine (e.g. Cochrane collaboration).
Countries around the world are struggling to afford rising health care costs, leading many to consider various reforms to slow the growth in future health care spending. Many are emphasizing the important role of health care providers in improving the value of care delivered throughout the health care system. Chinese public hospital reforms initiated in 2009 include optimizing resource allocation and reforming the management system and governance mechanisms. Dutch healthcare reform is in its early days for passing final judgment, but it seems clear cost reduction is not one of them. In the U.S., with the implementation of the 2010 Affordable Care Act, safety net providers must adapt to their new role in health care system by capturing the market for newly insured low income patients while adjusting to the loss of direct subsidies and meeting new requirements to provide higher quality patient care. Moreover, two public payment reforms in the U.S. – the Medicare Shared Savings program for Accountable Care Organizations and a bundled payment pilot program – aim to incentivize providers to reduce inefficiencies in care delivery. English policymakers have experimented for 20 years with giving general practitioners budgets with which to purchase specialist care for their patients, with the intention of reducing unnecessary referrals and encouraging preventative measures. In Singapore, resources from the people, private and public sectors are being drawn together into an integrated solution for preventive health to achieve better health outcomes. Taken as a whole, countries have been implementing various reforms with varying objectives and results.
Austerity Measures and Healthcare

MSD SHARP & DOHME

As a large number of developed countries are going through a major financial crisis, budgets need to be balanced and healthcare spendings are a potential victim of cost-cutting efforts.

Investing in healthcare is an important pillar of our economic development and future growth. Rather than seeing health expenditures as costs, governments should focus on the relation between health outcomes and economic growth.

Some governments have clearly ring-fenced healthcare from their austerity measures, such as the UK. At the OECD Health Ministerial at the end of 2010, the health ministers from developed economies called for not jeopardizing healthcare by cutting public health expenditures.

The situation nevertheless calls for drastic measures and the pharmaceutical industry is ready to contribute to this effort. Through price cuts and discounts, pharmaceutical companies have already contributed more than 7 billion euros of savings in the five European countries most severely hit by the financial crisis.

However, the pharmaceutical industry’s contribution should be proportionate with its share of healthcare expenditures, which, on average, is between 10 to 15% of total healthcare costs. Unfortunately, what we see today is that pharmaceutical expenditures are disproportionately targeted for cost savings.

Medicines bring tremendous value to healthcare systems and pharmaceutical innovation is one of the key contributors to health gains and life expectancy increases in the last 60 years. The industry is also a source of high value jobs and is one of the largest net contributors to the EU external trade balance (52 billion euros).

Lastly, we should not forget that the cost of healthcare is insignificant compared to the cost of disease. The cost of disease will grow and challenge government budgets, with or without additional reductions in the cost of innovative medicines.

Investing in health is key for the sustainability of our economic model, in particular as our countries face a major demographic challenge.
Contact

**World Health Summit Secretariat**
Charité – Universitätsmedizin Berlin
Campus Charité Mitte
Charitéplatz 1
10117 Berlin, Germany

T: +49-30-450-572122
F: +49-30-450-572911
M: worldhealthsummit@charite.de

www.worldhealthsummit.org