



UniversitätsKlinikum Heidelberg

On the occasion of our 50th jubilee
Heidelberg Institute of Public Health

Who we are

demonstrated by our work in 2010/2011

Welcome

Welcome

to our institute, it's staff, students and partners worldwide. The Heidelberg Institute of Public Health (HIPH) celebrates its 50th jubilee anniversary this year. As the biennial report covers only the period of 2010/11, let me take this opportunity to briefly sketch our history.

Founded in 1962 by my predecessor Helmut Juszat as the "health wing" of the South Asia Institute of the University of Heidelberg, it had a focus on medical geography. Hans Jochen Diesfeld who followed Juszat in 1978 brought his expertise in tropical medicine and his interest in public health in low-income countries to the table and renamed the institute as "Department of Tropical Hygiene and Public Health". In 1990, he set up the first non-consecutive Master of Science in a medical field in Germany. Until today, it has remained with many improvements and additions, our flagship offer in postgraduate training.

A large federally funded research focus on tropical medicine brought the natural (biochemistry, molecular biology) and clinical (paediatrics) sciences of the university, clinicians and public health specialists together and paved the foundation of a long-term interdisciplinary cooperation around the topic of tropical medicine and public health in Heidelberg, with the

institute as the hub. The grant also provided two chairs, one in parasitology and one in tropical hygiene and public health along with two young research groups.

In 1997, Rainer Sauerborn was hired from Harvard University to become his successor. Under his leadership, the institute was awarded a "Special Research Center (SFB): Control of Tropical Infectious Diseases" funded by the German Research Foundation (DFG). It was in a way an extension and intensification of the previous research focus. It included the research groups from the European Molecular Biology Lab (EMBL), and the German Cancer Research Center (DKFZ), both situated in Heidelberg. After three successful three-year evaluations, the SFB concluded in 2011.

In formal teaching, Heiko Becher, epidemiologist and deputy of the institute, set up a doctoral school in epidemiology in 2002, again with the institute as the hub of a university-wide cooperation which included also the German Cancer Research Center. An international doctoral school (Graduiertenkolleg) in global health, coordinated by Rainer Sauerborn, is currently set up. In this joint doctoral programme the Karolinska Institute (Stockholm) and Umeå University in Sweden join the institute to establish an international PhD programme in global health.

The master level training program was expanded, modularized and integrated into the European teaching network tropEd. It now consists of a base module of three months and fourteen short courses from human rights to climate change and health. These short courses can be selected as stand-alone units or as part of a master's degree both at University of Heidelberg or any of the other 29 tropEd teaching institutions across Europe.

We have founded a consultancy group EVALuation & PLANning (EVAPLAN), which is quite successful in running both large implementation projects for various bi- and multilateral donors, and individual consulting mission both to governments and to aid organizations.

Research expanded on an ever improving track record of acquiring research grants from the European Union, the DFG, the Volkswagenstiftung, the Humboldt Foundation, the French Climate Research Program, the National Institutes of Health (NIH) and several private international foundations. A grant proposal to the Gates foundation has been recently submitted with the INDEPTH network.

The institute is well connected in professional networks in Europe, Africa and Asia with a number of "preferred partners", they are elaborated on from page 92 onwards.

In the 50 years of its existence, the institute has contributed to the various paradigm shifts from tropical medicine, as a sub-specialty of diseases specific to the tropics, to "tropical hygiene", seen as a public health focus on these countries looking particularly at prevention and classical hygiene. The next paradigm arising in the 80's was "international health", referring to health and health care in low- and middle-income countries. We live currently in the era of "global health", which deals with diseases, risk factors, health relevant behaviours, and policies going beyond national borders, and requiring the coordinated effort of policy, science and communities.



R. Sauerborn

Rainer Sauerborn
Chair and Director

Mission

To contribute to improved health in populations through research and teaching, both at home and in low- and middle-income countries.


Vision

As an academic institution, be at the forefront of public health research through fair and equitable partnerships across the globe.

Values

Excellence. Respect. Integrity.
Equitable partnerships.





"Only when we know
where we are coming
from, can we decide
where we want to go"

The Heidelberg Institute of Public Health

Thematic Groups

The Collaborative Research Centre (SFB 544)

Teaching

Service and Consulting

International Collaborations

National Collaborations

Funding

Institute's Life





The Heidelberg Institute of Public Health

Who we are

The Institute of Public Health (former Department of Tropical Hygiene and Public Health) was founded in 1962 and has steadily grown since. It is part of the medical faculty of the University of Heidelberg and receives public core funding. However, over half of the funds are competitively acquired for both research and teaching activities.

The institute currently boasts a staff of about 60 from over 30 countries and includes the chair, one additional full professor (C3), five assistant professors (scientists with 'habilitation'), one Mercator professor, research associates, support staff and a varying number of visiting scholars, post-doctoral fellows and doctoral students.

Our mission is to contribute to the improvement of health through research, teaching and direct services (consulting) in low- and middle-income countries and at home. To fulfil this mission, we attach great importance to linking our activities in two ways: on the one hand, we want to make sure that our staff teaches, evaluates development projects in the health sector of low- and middle-income countries and participates in research so that their insight and experience from different activities are enhancing each other. As an example, research results are fed immediately into lectures; and insights from policy evaluation help us in the design of our own research projects. On the other hand, we seek to look at health and health systems from an international perspective, linking experience in the North and South.

An example is our study of different ways to organize health insurance, spanning from our own Bismarckian social security to community-based insurance in Burkina Faso. A third linkage we cherish at the institute is the linkage between the different disciplines. Health economists, epidemiologists, anthropologists, political scientists,

sociologists, mathematicians, geographers, management specialists, and biologists work closely together with public health and clinical physicians.

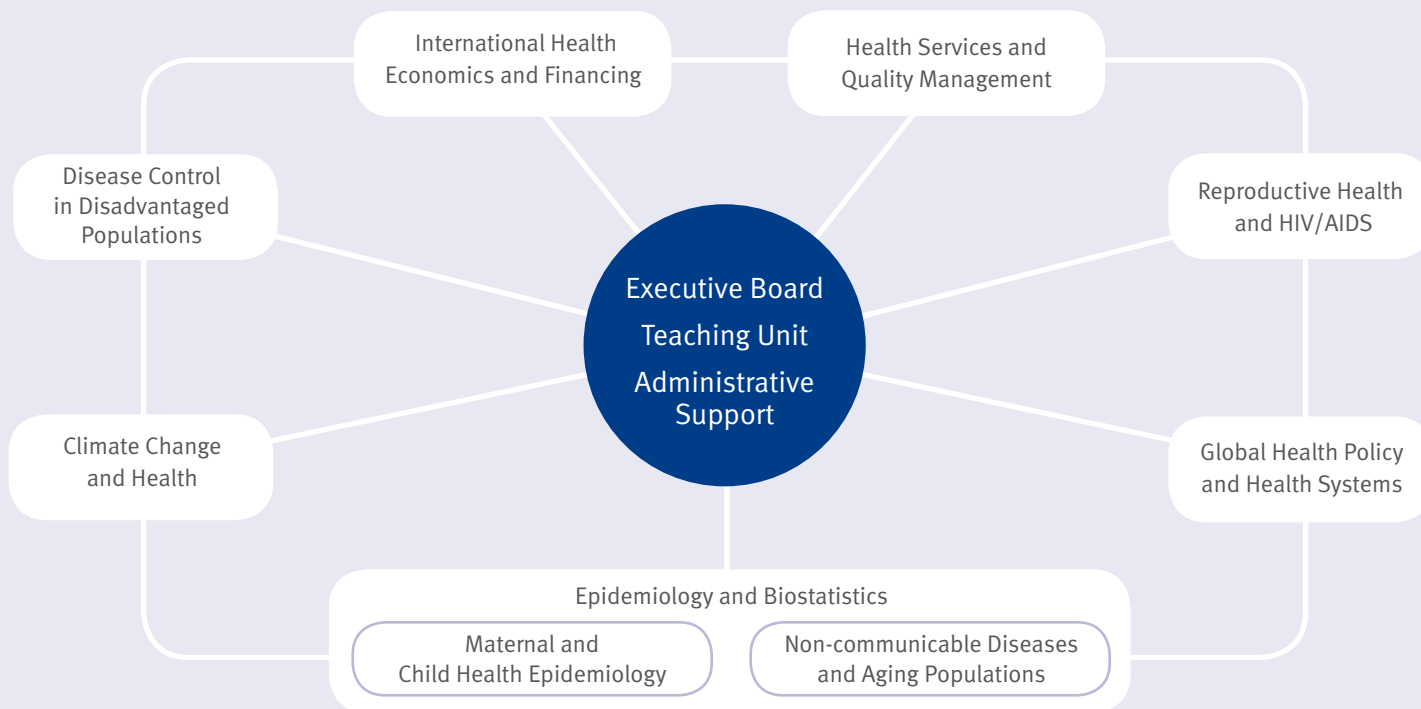
Our staff is working within seven thematic units:

1. Epidemiology and biostatistics, including maternal and child health epidemiology and non-communicable diseases and aging populations
2. Disease control in disadvantaged populations
3. Climate change and health
4. Reproductive health and HIV/AIDS
5. International health economics and financing
6. Global health policy and health systems
7. Health service and quality management

Each unit develops their core area integrating research, teaching and service. In addition, we have a teaching unit to coordinate and support the institute's teaching activities. The management support staff coordinate administrative and financial tasks.

An executive board comprised of the unit heads and the head of the administrative support is chaired by the director and is responsible for strategy and decision-making.

 www.ukl-hd.de/PH



The Institute as a Hub

The Heidelberg Initiative for Global Health (HIGH)

In recent years, many countries have upgraded their research and management capacity in global health. In Germany, this process is still in an early stage. The University of Heidelberg has established itself as a centre of excellence in a wide range of relevant disciplines (e.g. life sciences, political sciences, geo sciences, international law, development studies), and can draw on expertise from eminent collaborating institutions such as the German Cancer Research Centre and Max Planck Institutes. Thus, it has a unique potential and a responsibility to take a lead in research and evidence generation for action to promote "Health for All". The institute as well as the medical faculty and the university have a long track record of tackling global health issues and challenges. This includes joint research programmes such as the Research Focus Control of Tropical Infectious Diseases (SFB 544), joint doctoral programmes as well as the many international collaborative projects, portrayed in this report.

Building on these assets and taking into account the trans-disciplinary nature of global health, we initiated the Heidelberg Initiative for Global Health (HIGH) as a hub

and future think tank for all global public health related activities at the University of Heidelberg and its associated institutions and partners locally, nationally and internationally. This new initiative was planned and developed in 2011 and launched in 2012 and covers life sciences, clinical medicine, public health, anthropology, environmental sciences, law and economics. It pursues the following objectives:

1. To map, link interests, activities and foster synergies related to global health.
2. To join forces for research and teaching in global health through coordination, concept development, joint applications and joint projects.
3. To promote equitable and enabling international academic partnerships for global health issues.
4. To strengthen the capacity of University of Heidelberg, its networks and its partners, to address global health challenges ranging from disease control, to universal access to health care, health equity, environment, governance and health-related human rights.

Our operational priorities include:

- › Research: Building ongoing projects and collaborations, and developing new projects around the proposed thematic priorities.
- › Teaching for medical students: Public health and health economics
- › Global health teaching: Heidelberg can build on the postgraduate teaching in the MSc International Health, the Master in Medical Anthropology in South Asia, various short courses, and diploma courses for those planning to work in low- and middle-income countries. In 2010 an elective course in global health was established for medical students and short courses have been opened to medical students. A student society for global health has also been established.
- › Consulting and participation in international expert groups: Synthesising evidence and providing advice to policy makers and development agencies nationally and internationally working in the field of global health.
- › Fostering equitable partnerships: Developing models of best practice for fair partnerships and capacity building in low-income countries (e.g. cooperation with the Nouna Research Centre, as well as networking internationally (European Academic Global Health Alliance) on best practice and guidelines, such as the 11 principles for trans-boundary research partnerships, as developed by the Swiss Commission for Research Partnerships (update 2012).

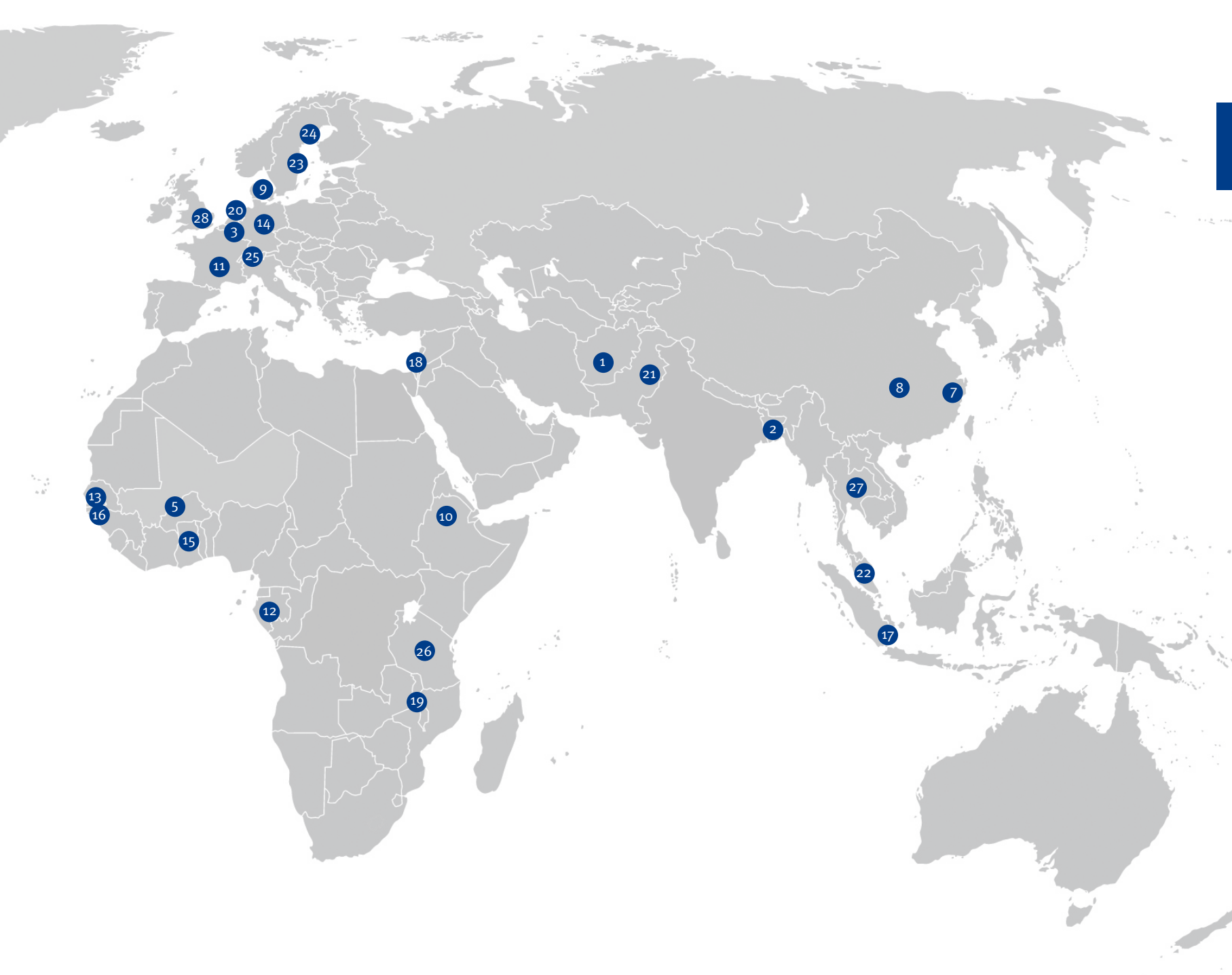
Our thematic priorities include:

- › Developing models, tools and strategies for the prevention and control of diseases, which disproportionately affect disadvantaged populations (product development – clinical interventions – modelling techniques - implementation research).
- › Health and the natural and social environment (climate change, migration). In this area, we closely collaborate with another new interdisciplinary platform, the Heidelberg Center for the Environment (HCE).
- › Increasing equity, including gender, coverage and cost-effectiveness of health systems.
- › Health policy, governance and health diplomacy (analysis of current policies on global health, such as the Millennium Development Goals (MDGs), human rights and health, funding for global health).

Collaborations Worldwide

1. **Afghanistan, Mazar-e-Sharif:** Civil Balkh Hospital
2. **Bangladesh, Dhaka:** BRAC University
3. **Belgium:** Institute of Tropical Medicine, Antwerp; Gent University
4. **Brasil, Fortaleza:** University Fortaleza
5. **Burkina Faso:** Centre de Recherche en Santé de Nouna (CSRN); Faculté de Médecine, Ouagadougou
6. **Canada, Montreal:** McGill University
7. **China, Shanghai:** Fundan University, Zhejiang University School of Medicine, Hangzhou
8. **China, Wuhan:** Tongji Medical College Huazhong University of Science and Technology
9. **Denmark, Copenhagen:** Statens Serum Institute
10. **Ethiopia, Gondar:** University of Gondar
11. **France:** International Agency for Research on Cancer (IARC), Lyon; University of Toulouse
12. **Gabon:** Medical Research Unit (MRU) from the Albert Schweitzer Hospital, Lambaréné
13. **Gambia, Fajara:** MRC laboratories
14. **Germany:** (see chapter National Collaborations)
15. **Ghana:** INDEPTH Network (18 countries in Africa and Asia), Accra; Health Research Centre, Navrongo; Kumasi Centre for Collaborative Research; Kintampo Health Research Centre
16. **Guinea Bissau:** Bandim Health Project
17. **Indonesia, Yogyakarta:** Gadjah Mada University
18. **Israel, Jerusalem:** Statistical Bureau
19. **Malawi:** Central Hospital and Lighthouse Trust, Kamuzu; College of Medicine and REACH Trust, Lilongwe
20. **Netherlands, Amsterdam** Center for Global Health and Inequality
21. **Pakistan, Punjab:** Ministry of Health
22. **Singapore:** National University Hospital
23. **Sweden, Stockholm:** Karolinska Institute
24. **Sweden, Umeå:** Umeå University
25. **Switzerland:** WHO, Geneva; Swiss Tropical and Public Health Institute, Basel
26. **Tanzania:** Muhimbili University of Health and Allied Sciences (MUHAS), Dar es Saalam; Mbeya Medical Research Programme
27. **Thailand, Bangkok:** Thai Red Cross Society
28. **United Kingdom, London:** London School of Hygiene & Tropical Medicine; University College London (UCL)
29. **USA, Cambridge:** Harvard University
30. **USA, Utah:** University of Utah









Thematic Groups

Epidemiology and Biostatistics

Epidemiology has a relatively short tradition in Germany. Thirty years ago few research departments with a focus on epidemiology existed at German universities. Although the University of Heidelberg was not one of them at the time, some epidemiological activities nonetheless took place within the clinical departments or within other institutes. In 1998, a new position for a full professor in epidemiology and biostatistics was created at the medical faculty of the University of Heidelberg, assigned to the Institute of Public Health, at that time under its former name "Department of Tropical Hygiene and Public Health".

 www.ukl-hd.de/epistat

The unit "Epidemiology and biostatistics" headed by Prof. Heiko Becher, is the only formal "section" within the institute. Major milestones in its development were two projects within the collaborative research grant SFB 544 "Control of tropical infectious diseases" from 1999 to 2011, and a PhD programme (Graduiertenkolleg 793) on "Epidemiology of communicable and chronic, non-communicable diseases and their inter-relationships", funded from 2002 to 2011.

The unit started with just four members, and has now grown to a considerable size. A majority of its staff is funded through research grants which has increased substantially over the last years, with a total funding amount of 6,13 million Euro from 2006 to 2012.

Head:

Prof. Dr. Heiko Becher

Administrator:

Elke Braun-van der Hoeven

Data manager:

Gabriele Stieglbauer

Postdocs:

PD Dr. Heribert Ramroth (deputy head)
Dr. Sabine Gabrysch
Dr. Volker Winkler
Dr. Gisela Kynast-Wolf
Dr. Anton Safer

Doctoral students:

Andreas Deckert
Ema Kuhrs
Eva Lorenz
Robin Nesbitt
Irene Santi
Heiko Zimmermann

IT support:

Oumar Mamadou Dia

Associate members:

Prof. Olaf Müller
Dr. Valérie Louis
Dr. Florian Neuhann
Nobila Ouedraogo

In addition, some doctoral students and undergraduate students are involved ad hoc on small-scale assistant contracts.

The unit covers a range of different research areas which include studies in infectious disease epidemiology, with a focus on malaria and tuberculosis, studies of chronic diseases (e.g. cancer, stroke), studies in social epidemiology in migrants, maternal and child health epidemiology, descriptive studies with a focus on Africa, biostatistical research projects and others.

The unit is also actively involved in teaching.

The epidemiology module of the "Querschnittsbereich" epidemiology, medical biometry and medical informatics for medical students is organized by the Prof. Becher, and various members of the unit together with colleagues from the DKFZ (German Cancer Research Centre) are involved in teaching in them. The epidemiology module in the Master of Science in International Health course as well as other courses within the institute are also taught by unit staff.

Furthermore, training courses for doctoral students in epidemiology have been developed and taught within the PhD programme "Graduiertenkolleg 793". This is outlined in the teaching chapter on page 74 of the report. Unit members are also involved in various other teaching activities.

The unit offers epidemiological support to all members of the medical faculty. This has led to various collaborations in a range of different areas, such as oral health and cardiology.

Members of the unit are involved in numerous other academic activities within and outside the faculty. Prof. Becher has been recently nominated by the epidemiological societies in Germany as a representative for epidemiology in the German Research Foundation (DFG) and was elected for his second period which runs from 2012 to 2016. Previously, he has also been President of the German Society of Epidemiology.

The unit has been successful in terms of publications and several grant applications.

A sample of major research projects are briefly outlined in the following.

Infectious disease epidemiology and health reporting in low- and middle-income countries

Project team:

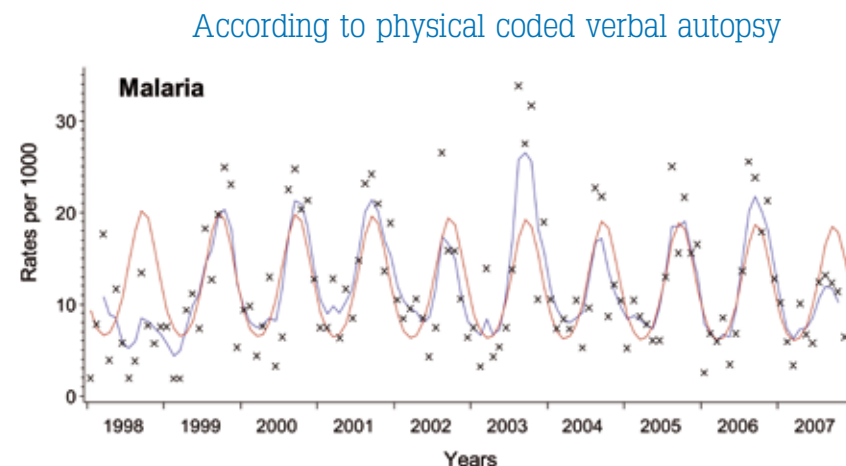
Heiko Becher, Heribert Ramroth, Gisela Kynast-Wolf, Anja Schoeps, Eveline Otte im Kampe, Eva Lorenz, Gabriele Stieglbauer, Olaf Müller, Nobila Ouedraogo, Volker Winkler

External Collaborators:

Dr. Ali Sié and CRSN staff, Nouna, Burkina Faso; Dr. Osman Sankoh and INDEPTH, Accra, Ghana; Prof. Peter Byass and colleagues, Umeå, Sweden

Our research projects in this area focus on three main aspects. The first is a better understanding of the temporal and spatial distribution of overall mortality in general and malaria mortality in particular in countries with high malaria transmission. The second is to contribute to the planning and analysis of large intervention trials, for example to investigate the effects of insecticide-treated bednets, or to compare different vaccination schemes and their effect on overall mortality. Our long standing collaborations with the Centre de Recherche en Santé de Nouna (CRSN), Burkina Faso, and with the international network for the demographic evaluation of populations and their health in developing countries (INDEPTH) in Accra, Ghana, enable us to use large and high-quality databases for this

Mortality rates by malaria for children less than five years of age by year, Nouna HDSS (crosses: original rates, blue: average, red: model)



research. Since ascertainment of cause of death is a particularly difficult problem in low- and middle-income countries, we use and compare different approaches to assign the most likely cause of death.

The first series of projects are:

- › Pattern of cause-specific childhood mortality in a malaria endemic area of Burkina Faso
- › Seasonal patterns in overall and malaria mortality
- › Ascertainment of cause of death via verbal autopsy: Physician coding versus computer assisted interpreting of verbal autopsies (INTER-VA)

In these projects, data from the Nouna HDSS are the basis.

The second series of projects are collaborative projects with the group of Olaf Müller, the CRSN, and several partners in Africa and Europe.

- › Effects of insecticide-treated bednets during early infancy
- › OPTIMUNIZE - Optimising the impact and cost-effectiveness of child health intervention programmes of vaccines and micronutrients in low-income countries.

Other projects:

INTREC is an EU-funded project entitled "Building sustainable capacity for research for health in low- and its determinants in low- and middle-income countries". Running from 2012 to 2017, it aims at developing sustainable capacity by providing state-of-the-art region-specific training for

young researchers, and educating decision makers on social determinants of health.

The project "**Estimating lung cancer death in countries with incomplete or less reliable death statistics**" is funded by the German Research Foundation and led by Volker Winkler. We have developed models which allow estimation of lung cancer deaths indirectly, using smoking prevalence data, effect estimates from other studies and population figures.

Migrant studies / social epidemiology

Project team:

Heiko Becher, Volker Winkler, Ema Kuhrs, Heiko Zimmermann, Andreas Deckert, Tabeth Mashayamombe, Anna Keib

External Collaboration:

Ari Paltiel, Jerusalem, Israel; The National Cohort, Germany

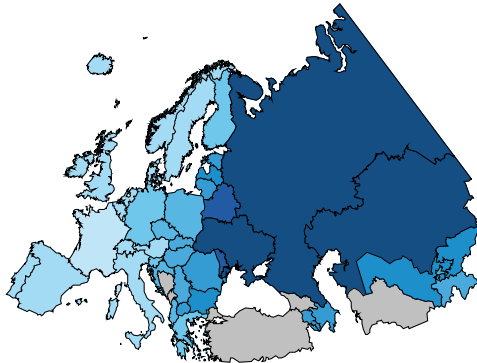
For about ten years, our unit has been investigating the mortality patterns of migrants from the former Soviet Union. We have set up two large register based cohort studies of about 50,000 individuals in total and have investigated the mortality pattern, which showed several remarkable characteristics. The low mortality from cardiovascular disease in particular gave rise to several further studies, such as a nested case-control study within this cohort where individual information was collected by personal interview, and a prospective cohort study in the area of Augsburg for which cohort recruitment is currently ongoing. Our unit is also involved since the initial planning phases for one of the largest

Members of the unit epidemiology and biostatistics



Projects in migration/ social epidemiology

- › Changing risk factor patterns for cardiovascular and cerebrovascular diseases (CVD) in a large cohort of migrants in Augsburg
- › Mortality of ethnic German immigrants from the former Soviet Union in Germany – The AMOR study
- › Cancer incidence and mortality of German immigrants in the Saarland (AMOR-Saar)
- › Nested Case-control study on cardiovascular risk factors among Aussiedler
- › Mortality of migrants from the former Soviet Union to Germany and Israel – a comparative study
- › The National Cohort – migrant research, feasibility studies and cohort recruitment



Mortality from cardiovascular diseases in Europe: a striking example of the differences in health and risk factors between countries of migrant origin and destination (dark blue: high risk, light blue: low risk).

cohort studies worldwide, the "National Cohort" which plans to recruit 200,000 individuals, starting 2013 (see also page 107). In the BMBF funded feasibility studies, our unit investigated strategies to recruit migrants. In addition, the unit is involved in several other sub-projects.

Stroke epidemiology

Project team:

Heiko Becher, Anton Safer, Gabriele Stieglbauer

External Collaborations:

Prof. Armin Grau and Dr. Frederik Palm, Ludwigshafen; PD Dr. Caspar Grond-Ginsbach, Heidelberg

For several years, the unit has been collaborating with the group of Prof. Armin Grau, Ludwigshafen, in the field of stroke epidemiology. Most recently, we have finished data ascertainment for a case-control study with 475 cases and 810 controls. The primary aim of the study is to investigate inflammation, genetic factors and social determinants as risk factors for ischemic stroke and their interaction. In addition, we analyse, together with the colleagues in Ludwigshafen, data from the ongoing stroke registry.

Biostatistical methods in epidemiology

Project team:

Heiko Becher, Eva Lorenz, Volker Winkler

External collaborations:

Prof. Sauerbrei, Freiburg; Prof Royston, London, Prof. Siemiaticky and Prof. Abrahamowicz, Montreal; Prof. Kauermann, München

Developing appropriate statistical methods for complex epidemiological data is important. We focus on two areas. Dose-response modelling is of particular importance if the relationship between the dose of an agent and the disease risk is to be estimated. Often the distributions of these exposures are complex, and involve a part of the population which is unexposed, and another part which has a specific, continuously distributed exposure. Estimating a dose-response function is more complex in such a situation and we have developed a method which can be applied. In this project, funded by the German Research Foundation, we investigate further statistical properties and develop multivariable extension:

- › Analysis of dose-response relationships in epidemiology with spike at zero
- › Person-year estimation with incomplete follow-up
- › Using penalized spline to model age- and season-of-birth-dependent effects of childhood mortality risk factors in rural Burkina Faso

Research group: Non-communicable diseases & aging populations

Project team:

Heribert Ramroth (head), Heiko Becher, Irene Santi, Elisabeth Rudolph, Sami Chenouda

External Collaboration:

International Agency for Research on Cancer (IARC), Lyon France; International Head And Neck Cancer Consortium (INHANCE), Utah USA

The research group focuses on behavioural and occupational risk factors for laryngeal cancer, as well as survival rates. Starting point for this project was a case-control study, while analyses focusing on survival resulted from a subsequent enlarged cohort study. Two university hospitals and three medical hospitals of three different German federal states participated in this study, resulting in a final sample of 257 cases and 769 controls, 1:3 frequency-matched for sex and age. The subsequent cohort study included all patients from the case-control study but was increased to include all cases in the same study region as in the case-control study up to the end of the year 2004. To date, patients from four clinics could be recruited, resulting in a final cohort of 594 laryngeal cancer patients.

Perspectives of the group:

The study team is currently applying a recently developed occupational index

to differentiate between educational and occupational effects for this cancer. This seems to be especially important for better distinguishing between various confounding variables. Recent survival analyses considering the effect of lifestyle factors are planned to be applied to a cohort of head and neck cancer patients collected by the INHANCE working group in cooperation with the International Agency for Research on Cancer (IARC), France.

Research group: Maternal and child health epidemiology

Project team:

Sabine Gabrysch (head), Robin Nesbitt, Heiko Becher, Terhi Lohela, Nicholas Kyei, Anja Schoeps

External collaborators:

Oona Campbell, Betty Kirkwood, Alex Manu, Lisa Hurt and others at the London School of Hygiene and Tropical Medicine; Kintampo Health Research Centre in Ghana; Centre de Recherche en Santé Nouna in Burkina Faso; Philipp Zanger at the Institute of Tropical Medicine Tübingen, amongst others.

Funding:

Rahel Goitein-Straus fellowship from the Medical Faculty of Heidelberg University, Postdoctoral fellowship of the Baden-Württemberg Foundation.

We investigate how geographic accessibility of health facilities and quality of care at faci-

lities influence use of delivery care, antenatal care, maternal and newborn mortality in Sub-Saharan African countries.


In Zambia and Malawi, we could take advantage of existing geo-referenced national health facility census data and household data from demographic and health surveys, linking these in a Geographic Information System (GIS). In Burkina Faso and in Ghana, we use data from our partner institutions' demographic surveillance systems. In Ghana, together with our collaborators, we surveyed 86 health facilities in 2010 and are currently studying the influence of distance and quality of maternal and newborn care at delivery facilities on maternal mortality as well as on delivery care-seeking in emergency situations and for planned facility deliveries.

We have furthermore reviewed current health-system output indicators and benchmarks proposed by the WHO and other UN agencies and made suggestions on how to make them consistent and more practically useful.

From 2013 on for six years, the BMBF will fund a junior scientist group in epidemiology at the institute, which will be led by Dr. Sabine Gabrysch. The group will conduct a cluster-randomised trial of an integrated agricultural project with women's groups aimed at reducing undernutrition in young children.

Project	HIPH Staff * Doctoral students ** Bachelor/Master students	Partners in HIPH	External Partners	Funding	Duration
Infectious disease epidemiology					
Pattern of cause-specific childhood mortality in a malaria endemic area of Burkina Faso	Heiko Becher, Gisela Kynast, Heribert Ramroth, Gabriele Stieglbauer	Olaf Müller	Ali Sié, CRSN, Nouna, Burkina Faso	DFG (SFB 544), Project Z2	2008-2012
Seasonal patterns in overall and malaria mortality	Heiko Becher, Eveline Otte in Kampe**, Heribert Ramroth, Gabriele Stieglbauer	Olaf Müller	Ali Sié, CRSN, Nouna, Burkina Faso	DFG (SFB 544), Project Z2, Core funding	2008-ongoing
Modeling of malaria	Heiko Becher Thomas Jänisch Kerstin Rosenberger *		Martin Eichner, Institute of Medical Biometry, Tübingen, Germany	GRK 793	2005-2011
Effects of insecticide-treated bednets during early infancy	Heiko Becher	Olaf Müller (PI)	Ali Sié, CRSN, Nouna, Burkina Faso	DFG (SFB 544), core funding	2002-2012
The role of antimicrobial peptides in human skin infections	Sabine Gabrysch		Philipp Zanger, Institute of Tropical Medicine, Tübingen, Germany		2009-2010
Optimizing the impact and cost-effectiveness of child health intervention (OPTIMUNIZE)	Heiko Becher Anja Schoeps**	Olaf Müller Nobila Ouedraogo*	Peter Aaby, Guinea Bissau and the OPTIMUNIZE consortium	EU	2011-2015
Cancer epidemiology					
Smoking and lung cancer in Africa	Heiko Becher Volker Winkler		Nawi Ng, Centre for Global Health Research, Umeå, Sweden	DFG	2008-2012
Occupational and other risk factors for laryngeal cancer	Heiko Becher Heribert Ramroth		Andreas Dietz, University Hospital, Leipzig, Germany; INHANCE consortium; IARC France; Wolfgang Ahrens, BIPS, Bismarck, Germany	BMBF and core funding	2000 - ongoing
Survival of laryngeal cancer	Heribert Ramroth Heiko Becher Irene Santi * Elisabeth Rudolph * Sami Chenoudi *		Andreas Dietz, University Hospital, Leipzig, Germany; INHANCE consortium; IARC France; Wolfgang Ahrens, BIPS, Bismarck, Germany	GRK 793 Hopp-Stiftung	2006 - ongoing

Project	HIPH Staff * Doctoral students ** Bachelor/Master students	Partners in HIPH	External Partners	Funding	Duration
Migrant studies / Social epidemiology					
Changing risk factor patterns for cardiovascular and cerebrovascular diseases (CVD) in a large cohort of migrants in Augsburg	Heiko Becher Andreas Deckert *		Christa Meisinger, Institute of Epidemiology, Helmholtz Zentrum München, Germany	DFG / GRK 793	2009 - 2013
Mortality of ethnic German immigrants from the former Soviet Union in Germany – The AMOR study	Volker Winkler Ema Kuhrs * Heiko Becher		Oliver Razum, University of Bielefeld, Germany	GRK 793	2002 - ongoing
Cancer incidence and mortality of German immigrants in the Saarland (AMOR-Saar)	Volker Winkler Heiko Becher		Christa Stegmeier, Cancer Register Saarland, Germany	Core funding	ongoing
Nested case-control study on cardiovascular risk factors among Aussiedler	Heiko Becher Ema Kuhrs *			GRK 793	2009 - 2012
Mortality of migrants from the former Soviet Union to Germany and Israel – a comparative study	Heiko Becher		Ari Paltiel, Bureau of the Statistics Jerusalem, Israel		ongoing
Biostatistics					
Analysis of dose-response relationships in epidemiology with spike at zero (SPATZ)	Heiko Becher Eva Lorenz *		Willi Sauerbrei, University of Freiburg, Germany; Patrick Royston, UCL, London, UK	DFG	2011-2014
Person-year estimation with incomplete follow-up	Heiko Becher Volker Winkler			Core funding	ongoing
Cardiovascular disease epidemiology					
Case-control study on inflammatory, genetic and social determinants of ischemic stroke (GENESIS)	Heiko Becher Anton Safer	Olaf Müller	Armin Grau, Frederik Palm and others, Ludwigshafen, Germany	DFG	2007-2012
Maternal and child health epidemiology					
Risk factors of infant and child mortality in Burkina Faso	Heiko Becher Gisela Kynast Gabriele Stieglbauer		Ali Sié, CRSN, Nouna, Burkina Faso	Core funding and University Hospital	2006 - ongoing

Project	HIPH Staff * Doctoral students ** Bachelor/Master students	Partners in HIPH	External Partners	Funding	Duration
Spatial clustering of childhood mortality	Heiko Becher Gisela Kynast Gabriele Stieglbauer	Olaf Müller	Osman Sankoh, IND-EPTH, Accra, Ghana; Ali Sié, CRSN, Nouna, Burkina Faso	Core funding and University Hospital	2006 - ongoing
Indicators and benchmarks for tracking progress towards safe motherhood	Sabine Gabrysch		Oona Campbell, LSHTM, London, UK; Philipp Zanger, Institute of Tropical Medicine, Tübingen, Germany		2009-2011
Distance to delivery care, service use and neonatal mortality in Zambia and Malawi	Sabine Gabrysch, Terhi Lohela**		Oona Campbell, LSHTM, London, UK	Rahel Goitein-Straus Fellowship	2009-2012
Quality of antenatal care in Zambia, and influence of quality of care and distance on antenatal care use	Sabine Gabrysch, Nicholas Kyei**		Oona Campbell, LSHTM, London, UK	Rahel Goitein-Straus Fellowship	2011-2012
Geographic access, quality of care and delivery care-seeking in Ghana, impact on maternal and perinatal mortality	Sabine Gabrysch, Robin Nesbitt *		Betty Kirkwood, Alex Manu, Lisa Hurt, and others, LSHTM, London, UK	Baden-Württemberg Foundation	2010 - ongoing
Childhood mortality and distance to health centers in Burkina Faso	Heiko Becher Anja Schoeps** Sabine Gabrysch	Olaf Müller	Ali Sié, CRSN, Nouna, Burkina Faso	Core funding	2010 - 2011
Other projects					
Ascertaining the cause of death using verbal autopsy data: the probabilistic InterVA.	Heribert Ramroth Eva Lorenz* Mark Ssenono* Heiko Becher Johanna Rankin**		Peter Byass, Ed Fottrell, Umeå University, Sweden		2008-2012
National Cohort feasibility-studies	Heiko Becher Heiko Zimmermann Ema Kuhrs * Heribert Ramroth Gabriele Stieglbauer		See  www.nationalekohorte.de	BMBF	2011-2013
Comparative study on head lice treatment in Fortaleza, Brazil	Heiko Becher Susanne Sonnberg *		Jörg Heukelbach, Federal University of Fortaleza, Brasil	GRK 793 Core funding	2008-2011

Disease Control in Disadvantaged Populations

This multidisciplinary working group consists of specialists working in different areas relevant to disease control in low- and middle-income countries (e.g. parasitology, epidemiology, paediatrics, reproductive health, anthropology, health economics, disease surveillance).

All group members work on projects in partnership with colleagues from a number of countries mainly situated in the south (e.g. Burkina Faso, Uganda, Tanzania, Malawi, China, Bangladesh).

The aim of the group is to collaborate on relevant projects to improve health through applied disease control measures in disadvantaged populations of respective partner countries. Currently, the main topics of the working group are HIV/AIDS, malaria, dengue and maternal and child health.

Group leader:

Prof. Dr. Olaf Müller

Members:

Claudia Beiersmann

Dr. Manuela De Allegri*

Dr. Sabine Gabrysch*

Prof. Dr. Albrecht Jahn*

Dr. Valérie Louis*

Robin Nesbitt*

Dr. Florian Neuhann*

Martin Nyaaba Adokiya

Nobila Ouedraogo

Prof. Dr. Andreas Ruppel

Prof. Dr. Malabika Sarker

Dr. Aurélia Souares*

Dr. Yesim Tozan

Prof. Dr. Annelies Wilder-Smith*

*Associated members

HIV research

Our HIV research group addresses quality of care related to antiretroviral treatment (ART) provision for adult and pregnant women and ART adherence and retention in care. Since 2002 and until 2011 DFG has funded

a research project on different operational facets of a routine PMTCT (preventing mother-to-child transmission) program in Nouna, Burkina Faso (principal investigator (PI) Hans-Georg Kräusslich; co-investigators Malabika Sarker and Olaf Müller). The multi-country European Union (EU) project "Effect of antiretrovirals for HIV on African health systems, maternal and child health" ARVMAC focussed on the quality of ART and PMTCT service provision in Uganda, Tanzania and Burkina Faso (HIPH principal Investigator Malabika Sarker, co-investigators Florian Neuhann and Olaf Müller). Since 2006, ARVMAC engaged in conducting research on cross-country comparison using three demographic surveillance systems (DSS). The project ended in 2011. Additional research is ongoing in the areas of retention in care, treatment interruption, and emerging resistance to ART in Malawi, funded by the Hector Foundation (PI Florian Neuhann).

 www.arvmac.eu

Malaria research

Most of the malaria research projects were carried out in the research zone of the Centre de Recherche en Santé de Nouna (CRSN) in Burkina Faso. Malaria is holoendemic but highly seasonal in this area.

Research activities started in 1999 with a WHO-supported randomised controlled trial (RCT) on the effects of zinc supplementation in malaria control (PI Olaf Müller), followed



Doctoral student Germain Mandi examining a child with malaria enrolled in a RCT on the efficacy of methylene blue-based combination therapy in Nouna, Burkina Faso

by a DFG-supported RCT on the long-term effects of insecticide-treated mosquito nets (ITN) on malaria morbidity and all-cause mortality (PI Olaf Müller), a DFG-supported study on operational aspects of ITN programmes in Africa (PI Olaf Müller), a DFG-supported study on the efficacy and effectiveness of alternative first-line treatment regimens compared to artemisinin-based combination therapy (ACT) in Burkina Faso (PI Olaf Müller). Most of these projects were part of the DFG-funded SFB 544 which also concluded in 2011. A partly industry-funded clinical research project on the development of methylene blue-based combination therapy as an alternative treatment regimen for falciparum malaria in Africa is ongoing.

The goal of this project is the establishment of a product development partnership for the development of an alternative malaria

drug regimen until registration (PI Olaf Müller). Moreover, studies have started or are planned which aim to assess the effects of methylene blue-based combination therapy on the gametocytes in falciparum malaria and on the hypnozoites in vivax malaria. A new solid methylene blue formulation for children has just been developed in collaboration with the University of Düsseldorf (PI Olaf Müller).

Dengue

Dengue fever is a mosquito-borne viral disease estimated to cause about 50-100 million infections worldwide every year, of which 25,000 are fatal. Global incidence has risen rapidly in recent decades: some 2.5 billion people, two fifths of the world's population, are now at risk, mainly in the

tropics and sub-tropics, but climate change and travel patterns have also contributed to the introduction of dengue fever even in Europe.

Our dengue working group consists of physicians, epidemiologists and environmental scientists. The group is part of the EU DengueTools project. DengueTools endeavours to achieve better diagnosis, surveillance, prevention, prediction and/or prevention of the spread of dengue fever to previously non-endemic regions (including Europe) in the context of climate change. The project is funded under the health theme of the 7th framework programme of the European Commission, grant agreement number: 282589 DengueTools.

www.denguetools.net

Maternal & child health (MCH)

The MCH projects consist of:

- › Research on public health aspects of routine childhood vaccinations in Sub-Saharan Africa (SSA)
- › Research on the epidemiology and prevention of childhood malnutrition in Burkina Faso
- › Research on infectious disease elimination and eradication strategies in SSA
- › Research on the effectiveness of care in pregnancy and child birth with an emphasis on antenatal screening, referral systems, community-based safe motherhood, and related health systems issues,



Doctoral student Maike Tipke investigating the quality of malaria drugs sold on a market in Nouna, Burkina Faso

such as quality of care and access in Tanzania, Burkina Faso, Ghana and Germany

- › Research on the population-based assessment and monitoring of reproductive morbidity, mortality and use of health services in Europe

Childhood vaccinations are an important tool for reducing morbidity and mortality in developing countries. In recent years, a number of new and costly vaccinations have been included or are proposed to be included into the Extended Programme of Immunization (EPI) schemes, but it is currently not clear how this can be effectively implemented and sustained. Moreover, routine vaccinations can be associated with some rare, unspecific and unintentional effects. A large EU-funded multi-country research project is currently under way to look at these issues in a number of African countries (HIPH PIs Olaf Müller & Heiko Becher, doctoral student Nobila Ouedraogo).

Disease elimination and eradication remain globally debated topics. The working group is addressing aspects of malaria elimination in Asia, dracunculosis elimination in Ghana and polio elimination in Nigeria (PI Olaf Müller).

Childhood malnutrition remains a major public health problem in SSA, causing up to half of the under-five mortality. A longitudinal study on the development of childhood malnutrition and its determinants took place in the research zone of the Centre de Recherche en Santé de Nouna (CRSN) in Nouna health district in north-western Burkina Faso (PI Olaf Müller, doctoral student Claudia Beiersmann).

Care in pregnancy and child birth is closely linked to the Millennium Development Goals (MDG 4 and 5). Effective care cannot be achieved with a silver bullet approach based on one specific intervention. Rather,

it requires a functional health system ranging from the community to local first level facilities and up to the referral hospital.

These levels need to be linked through a referral system, supportive supervision and a bi-directional flow of information. Thus, our research projects in Tanzania and Burkina Faso pursue a systems approach, based on a defined and tested health service model (PI Albrecht Jahn).

Health information on reproductive health issues is often incomplete and not standardized, hampering planning for appropriate services as well as limiting the possibilities to learn from the cross-country comparative analysis. We are the German partners in the EU-funded REPROSTAT project, which aims at standardizing reproductive health reporting in Europe and address specific neglected areas such as adolescent reproductive health, abortion, and teenage pregnancies (PI Albrecht Jahn).

Perspectives of the group:

The members of the working groups plan to continue working closely together in the field of applied disease control research aiming at improving the health of neglected populations, but will concentrate fully on infectious diseases in the future.

Projects 2010/2011:

Acronym	Full title	Partners	HIPH Staff *doctoral students	Funding agency and timeline	Main results and outlook
D4	Efficacy, safety and public health aspects of ITNs in Africa	HIPH; CRSN; Ministry of Health Burkina Faso	Olaf Müller Albrecht Jahn Manuela De Allegri Valérie Louis Joelle Bals* Maike Tipke* Tabea Schroer*	DFG SFB 544 (1999-2011)	ITNs are safe in all age groups and in all endemic areas; compliance remains a challenge during the hot and dry season in West Africa; universal coverage is the best public health strategy; replacement systems for old ITNs remain a challenge
A8	Development of methylene blue (MB) -based malaria treatment combination therapy	HIPH; Institute for Biometrics and Informatics, Heidelberg; University of Düsseldorf; University of Ulm; CRSN; Centre National de Recherche et de Formation sur le Paludisme (CNRFP)	Olaf Müller Bernd Marks Maike Tipke*	DFG (SFB 544) (2005-2011)	MB is safe and effective in African malaria patients; it acts slow against the parasites and thus needs to be combined with appropriate partner drugs; it is currently the most effective drug against the gametocytes of <i>P. falciparum</i> ; adding MB to existing ACTs could be a good strategy
GK 793	Malnutrition in young children of Burkina Faso	CRSN	Olaf Müller Claudia Beiersmann*	DFG (2008-2011)	Malnutrition has only marginally declined in rural Burkina Faso over the past decades and remains a major neglected area in international public health
Optimise	Unspecific effects of childhood immunisations in SSA	HIPH; States Serum Institute, Denmark LSHTM, UK; CRSN Burkina Faso, Navrongo	Heiko Becher Olaf Müller Nobila Ouedraogo*	EU (2011-2015)	The project aims to analyse routine data from three DSS sites in SSA; in addition it aims at conducting a RCT on an alternative measles vaccine regimen.
AIDS in Malawi	AIDS in Malawi	HIPH; Light house, Malawi	Florian Neuhann, Heribert Ramroth, Florian Scheibe*, Julia Lübbert*	Hector Foundation (2008-2014)	Treatment interruption of ART is associated with resistance development in 25 % of cases.
Dengue-Tools	Strategies and tools for the surveillance and control of dengue	University of Umeå, Sweden; LSHTM; University of Singapore; University of Malaysia; Ministry of Health, Sri Lanka; University of Sao Paolo; Mahidol University, Thailand; TwistDx, Cambridge; Oxitec, Oxford; Institute Pasteur, Paris; Swiss Tropical Institute, Basel	Valérie Louis Yesim Tozan Annelies Wilder-Smith	EU FP7 (2011-2015)	To develop novel tools and strategies to control dengue

Climate Change and Health

There will be no diseases exclusively specific of climate change, rather climate change modifies and amplifies existing health risks in a great array of climate-sensitive diseases. This will particularly affect low- and middle-income countries, raising serious issues of inequity. There is good evidence that the health impacts will be in the areas of malnutrition, infectious diseases, diarrhea, and cardiovascular diseases. Particularly vulnerable groups are likely to be infants, young children and the elderly. There is a large need for detailed, population-based studies of health impact by linking disease datasets with meteorological information. Climate theses need to be longitudinal covering at least 10 years. Our close collaboration with the INDEPTH network gives us access to such datasets, both retrospectively and prospectively. Impacts can be avoided through what the climate community calls "adaptation" interventions and policies. These may be within the health sector or outside. Adaptation within the sector include surveillance systems for climate-sensitive diseases, early warning systems, e.g. for vector-borne diseases, enhanced control efforts on geographic or socioeconomic target groups.

Group leader:

Prof. Rainer Sauerborn

Members:

Dr. Valérie Louis

Dr. Sabine Gabrysch*

Dr. Yazoumé Yé

Dr. Shelby Yamamoto

*Associated members

Doctoral students:

Aditi Chebbi

Aminul Haq

Alina Vandenbergh

Peter Dambach

Revati Phalkey

Humboldt scholar:

Maduni Madanayake

Research projects run in the group

CLIMIMO (Climate change, migration and mortality)

This is a cooperation with 11 INDEPTH sites and Umeå University, Sweden. Research

includes time series analysis on data from 11 INDEPTH research centres from Sub-Saharan Africa and Asia. Age- and cause- and spatially-specific deaths were analyzed against temperature, humidity and rainfall data of the day of death and lagged by days to three months. The results have been submitted as a special volume of "Global Health Action".

PALUCLIM (Impacts of climate factors on the production of malaria vectors)

The aim is to guide larvicidal antimalarial intervention to ecosystems of high transmission risk using satellite proxies, which have previously been validated on the ground through entomological data (both larva and adult mosquitoes). The project is in collaboration with the University of Toulouse, the French Space Research Centre, Météo France and the CRSN Nouna.

Aging and Climate change:

This is a joint Umeå-HIPH group, where the post doc, Dr. Barbara Schumann, from Umeå at the Center for Aging and Living Conditions (ALC) and two doctoral students are affiliated with the Heidelberg NAR (Network of Aging Research), of which our institute is a member. The two doctoral theses, supervised by Rainer Sauerborn, will focus on the impact of climate change on morbidity and mortality of the elderly in Sub-Saharan Africa and changes in prescribing practices for multi-morbid elderly patients during heat waves in Germany.



CLIMIMO first project workshop in Nouna, 11/2011

Peter Dambach struggling to find the ground truth of satellite data of malaria breeding sites

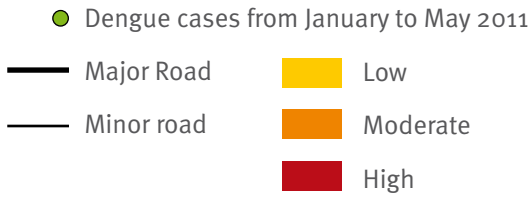
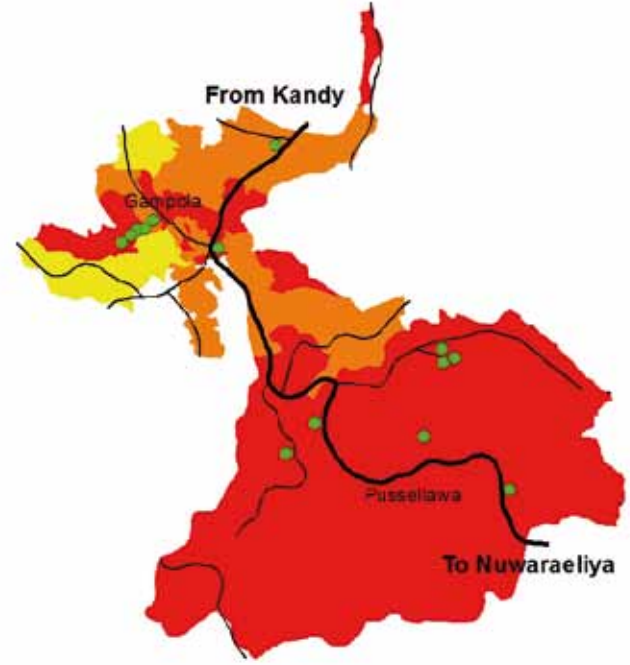


Perspectives of the group:

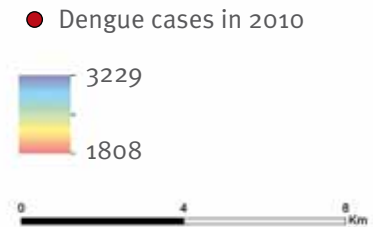
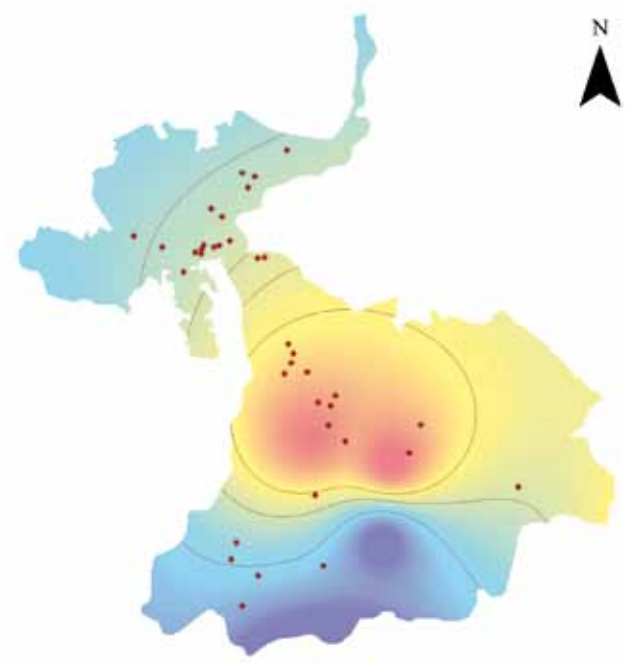
A strategic workshop in May 2012 founded a consortium of our group with Umeå university, the French Space Research Center, Toulouse University, the French Meterological Service and Nouna IND-EPTH center. Apart from pursuing our current agenda, we want to develop jointly the following areas:

1. Malnutrition triggered by climate change
2. The impact of climate driven hydrometeorological diasters
3. Early-warning systems for malaria and dengue

Dengue risk by identified socio-economic factors in Gampola region, Sri Lanka



Annual rainfall of Gampola region, Sri Lanka, in millimetre 2010 with isolines



Update: new junior research group "Climate change and aging in a global perspective"

Background

Climate change is one of the largest potential threats to global health. While it is widely accepted that vulnerabilities to the health impact of climate change will vary according to gender, socio-economic status, education, social networks and immobility, the specific vulnerability of the elderly has received very little scientific attention so far. Some studies from UK and Sweden indicate that the elderly might not only be more vulnerable, particularly to heat, air pollution and climate-sensitive infectious diseases, but they may also have a larger climate footprint, thus at the same time disproportionately contributing to and suffering from climate change. Studies have also shown that the elderly male population are more reluctant to consider climate-induced hazards a threat to their own health.

Set-up

In addition to the topic, the set up of this junior group is quite innovative: it spans two universities with their research capacity on aging and climate:

- › University of Heidelberg (Institute of Public Health, Network of Aging Research NAR)
- › Umeå Universitet, Sweden (Centre for Global Health Research and Centre for Aging and Living Conditions)

Two doctoral scholarships were awarded by the NAR on:

Climate change and aging in Germany

Topic: Climate-related perceptions and behavior of the elderly and their doctors and nurses in the Rhine-Neckar Region

Climate change and aging in low- and middle-income countries

Topic: The impact of climate on the health of the ageing population in Nouna, Burkina Faso.

Reproductive Health and HIV/AIDS

Recent years have seen progress in maternal and child health with decreasing maternal and under 5 mortality, however this progress does not apply everywhere in the world and improvement around maternal health and child health will remain a priority for global health even in the post MDG era. Within our institute we address this topic in close relation to HIV not least because some countries in particular in Sub-Saharan Africa with high maternal mortality face generalized HIV epidemics simultaneously. Further the sexual transmission of HIV and mother to child transmission also link these health topics. The reproductive health and HIV/AIDS thematic group works in close cooperation with other groups in particular the disease control in disadvantaged populations group and the health service & quality management.

Sub-Section HIV: The focus of projects in HIV lies on treatment of HIV and opportunistic infections and complications, quality of health services structures and processes, retention in HIV care, competence of patients and adherence to treatment. All projects include elements of capacity building in partner countries and for young researchers in North and South.

Group leader:

Dr. Florian Neuhann

Group members:

Dr. Sabine Gabrysch*
Prof. Albrecht Jahn*
Prof. Olaf Müller*
Prof. Malabika Sarker*
PD Dr. Heribert Ramroth*
Sandra Barteit
Phillip Hoepfner

*Associated members

Doctoral students:

Florian Scheibe
Julia Lübbert
Nicola Glaser
Saskia Nahrgang
Antje Theurer

Effects of antiretrovirals for HIV on African health systems, maternal and child health (ARVMAC)

Project team:

Prof. Malabika Sarker (head), Hilde Gold-Feuchtmüller, Saskia Nahrgang, Dr. Florian Neuhann, Prof. Olaf Müller, Florian Scheibe, Paul Conrad

ARVMAC was a large EU FP6 funded project conducted by a large consortium in which the HIPH took a work package on quality of care in antenatal care, including prevention of mother to child transmission of HIV (HIPH, Malabika Sarker) and for antiretroviral therapy (HIPH Florian Neuhann). Several other researchers of the Institute have been involved in and contributed to the project (Manuela De Allegri, Albrecht Jahn, Olaf Müller) and results have been analyzed for doctoral theses, master theses and publications.

 www.arvmac.eu

Malawi German networking for capacity building in treatment, training and research at Kamuzu central hospital (MAGNET)

Project team:

Dr. Florian Neuhann (head), Antje Theurer, Philip Hoepffner, Sandra Barteit, PD Dr. Heribert Ramroth, Hilde Gold-Feuchtmüller

Partners:

Kamuzu Central Hospital, Medical Department, University Clinic Infectiology Cologne and Bonn,

Funding :

GIZ/ESTHER, Centre for international Migration and development (CIM), extension possible

In the framework of the European ESTHER Initiative (Ensemble pour une Solidarité Thérapeutique Hospitalière en Réseau) since 2008 the institute is engaged – together with infectious disease departments in Cologne and Bonn – in a partnership with medical department of the Kamuzu Central Hospital in Lilongwe Malawi called MAGNET (Malawi German Networking for capacity building in treatment, training and research at Kamuzu Central Hospital).

The overall objective of this partnership is to improve the quality of patient care and the teaching and training for the final year medical students. A German medical doctor is placed at the department, teaching ward rounds are conducted by visiting faculty,



Florian Neuhann teaching EpiInfo in Lilongwe, Malawi.

Waiting list number handed out at Lighthouse Clinic reception



an e-learning platform has been developed and operational research conducted e.g. to perform a situational analysis of the quality of care and to investigate the causes of fever among patients admitted to the department. Results of both studies have been presented at international conferences and are in the process of publication. Since 2012 a second ESTHER partnership was funded by ESTHER between the Lighthouse, the Infectious Disease Clinic of Cologne and the HIPH.

 www.esther-magnet.org

Addressing the challenges of service quality: innovations in patient care and service efficiency in a large public ART clinic in a resource limited setting

Project team:

Dr. Florian Neuhann (head), Julia Lübbert, Nicola Glaser, PD Dr. Heribert Ramroth, Hilde Gold-Feuchtmüller

The Hector Foundation in Germany funds projects for a study period of five years, there are some sub-projects still ongoing. Project partner is the Lighthouse Trust in Lilongwe, Malawi, which runs two large centres for comprehensive HIV prevention, treatment and care services. The program aims to analyse and consequently inform public treatment programs with regards to quality and efficiency.




Florian Neuhann with Director Dr. Sam Phiri and members of the management team of Lighthouse



The back to care viral load study (B2CVL) looked at and evaluated the current practice of the Malawian HIV treatment programme to restart patients who interrupted of their antiretroviral treatment on their previous first line regimen (PI Florian Neuhann, HIPH, Sam Phiri, Lighthouse, investigators Julia Luebbert, doctoral student Heidelberg, Hannock Tweya, Lighthouse, Paul Schnitzler, Virology Heidelberg, Heribert Ramroth HIPH). The aim of this study was to determine the prevalence of virological failure and patterns of drug resistance among patients with treatment interruption and to evaluate the current practice of resuming firstline ART. The project was successfully completed, presented and published. (Clin Inf Diss 2012)

Other projects look in a qualitative approach into the reasons of patients to interrupt antiretroviral treatment and the perception and expectations of patients on quality and efficiency of the services at the Lighthouse.

Between January and March 2012 a cross-sectional study on the prevalence of renal impairments among HIV positive and HIV negative clients of the lighthouse has been conducted and is now being analyzed (RESULT - renal survey Lighthouse; cross-sectional survey of renal function in HIV-positive and HIV-negative clients of the Lighthouse counselling and testing center in Lilongwe, Malawi).

 www.lighthouse.org

Acronym	Title	Key words	Partners	HIPH investigator	Funding	Timeline	Perspective
MAGNET	Malawi German networking for capacity building in treatment, training and research at Kamuzu Central Hospital	Capacity building, quality improvement, training, high HIV prevalence	University of Cologne, Kamuzu Central Hospital	Florian Neuhann	GIZ/ESTHER	2008-2012	Extension possible
RESULT	Cross-sectional survey of renal function in HIV-positive and HIV-negative clients of the Lighthouse counseling and testing center in Lilongwe, Malawi	HIV, renal function		Florian Neuhann	Hector Stiftung		
ARVMAC	Effects of antiretrovirals for HIV on African health systems, maternal and child health	Quality ART, ART delivery in urban and rural health systems in Africa		Florian Neuhann	EU	2007-2010	Analysis still ongoing

International Health Economics and Financing

The research group in international health economics and health financing aims at being at the fore-front of health economics and health financing research and teaching on a global level. The group came into existence about fifteen years ago, as one of the first academic groups in Germany with a focus on the application of health economics to health systems research in low- and middle-income countries. Over the years, the group has experienced natural changes in leadership, but has maintained its role of contributing to global health systems research through the understanding of how scarce resources can be used efficiently to produce valuable and equitable health outcomes world-wide.

 www.ukl-hd.de/ph/HealthEconomics

Group leader:

Dr. Manuela De Allegri

Formal members

Gerald Leppert
Stephan Brenner
Olivier Kalmus
Qun Wang
Gilbert Abihiro
Hoa Nguyen

Associated partners

Prof. Dr. Hengjin Dong
Dr. Yesim Tozan

Associated PhD students

Hans-Christian Stahl
Shafiu Mohammed
Yan Ding
Yan Fei
Budi Aji
Happiness P. Saronga
Germain Savadogo
Jake Robyn

Over the years, the group has come to focus primarily on research themes pertinent to health financing and more specifically to the achievement of universal health

coverage on a global level. In line with the global health financing agenda, the group's current work focuses primarily on impact evaluations related to:

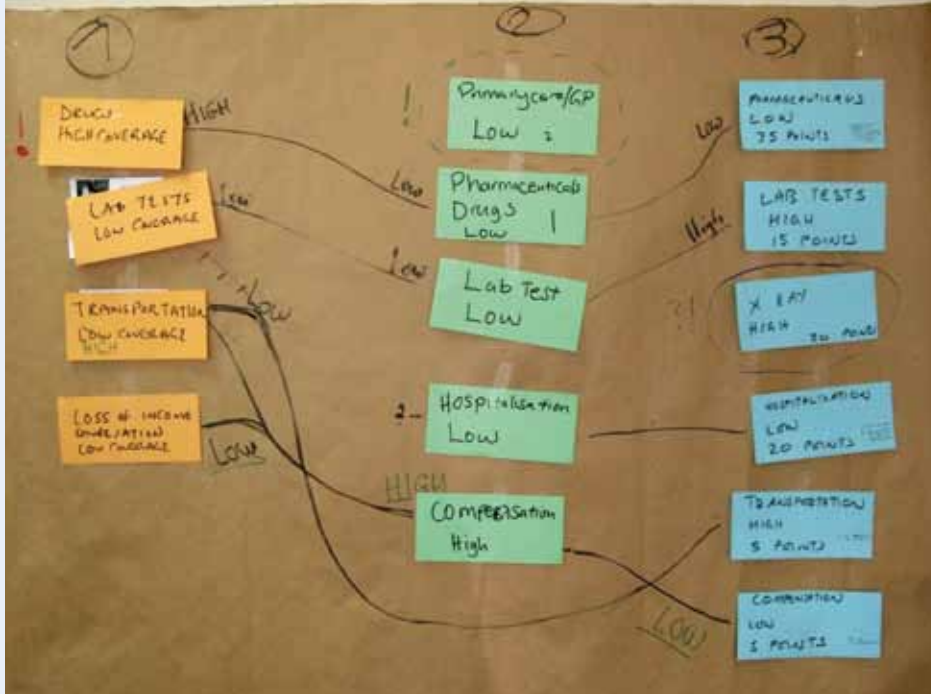
- › alternative systems to raise funds for health care
- › health care financing interventions which target traditionally disadvantaged groups and vulnerable populations with the aim of increasing access to health services
- › innovative strategies to ensure an equitable and efficient mix of quality health services to those in need.

Specific areas of expertise and research include:

Social health insurance, private insurance, and micro health insurance: The group works with experimental and semi-experimental research designs to accompany the development and to produce evidence on the impact of insurance mechanisms in low- and middle-income countries.

Provider payment and health services purchasing: The group has competencies in performance-based financing and relevant assessments of quality of care, primarily in low- and middle-income countries.

User fee abolition: The group works on issues relevant to the abolition of user fees in West African countries, conducting both applied research on the impact of single interventions (in collaboration with the disease control group at the HIPH) and



Using the meta-plan method to facilitate workshops on micro health insurance in low-income settings

Manuela holding a workshop on health financing in Malawi



broader policy analysis to unravel factors shaping the relevant policy shifts.

Economic evaluation and health technology assessment: The group is proficient in the theory and practice of analytical approaches to cost analysis, economic evaluation, and health technology assessment both of specific treatments and of complex public health interventions. Specific competencies include economic evaluation of malaria, dengue, and cutaneous leishmaniasis interventions.

Equity analysis: The group has extensive expertise in the assessment of the equity impact of diverse public health policies, primarily in relation to access to care and financial protection from the cost of illness.

Mixed methods research: The group combines expertise in econometric analysis with expertise in qualitative research methods to promote the application of mixed research methods in health economics and financing. The group has held relevant courses and workshops in several countries around the world.

Partnership with evaplan

The group has established a strategic partnership on social protection and health financing with colleagues from evaplan (see page 86 ff), a consultancy agency affiliated with the HIPH.

Joining academia and consultancy aims at contributing to the development of effective social protection policies by combining academic excellence with state-of-the-art global practice. Within the framework of such partnership, group members actively contribute to project development, offering training and consulting services across their range of core competencies. At the same time, colleagues from evaplan have the opportunity to contribute their practical knowledge to the teaching and research activities of the group.

Current projects

The potential of microfinance institutions to advance progress towards universal health coverage through micro health insurance: A mixed methods study in Malawi

Funded by the DFG (German Research Society) 2011 to 2013

Principal investigator (PI): Manuela De Allegri

Agenda - setting criteria for the abolition of user fees health policies in West Africa

Funded by the Canadian Health Research Institute 2011 to 2012

Co-investigator: Manuela De Allegri

Assessing the impact of using performance-based financing to improve the quality of obstetric and neonatal care in Malawi

Funded by TRAction (United States Agency for International Development, USAID) and the Norwegian Government 2012 to 2014

PI: Manuela De Allegri

An integrated surveillance system for infectious disease in rural China: generating evidence for early detection of disease outbreaks in resource-poor settings (ISSC)

Funded by the European Union FP7 Program 2010-2013

Co-investigator: Hengjin Dong

Innovative tools and strategies for surveillance and control of dengue

Funded by the European Union FP7 Program 2011-2015

Co-investigator: Yesim Tozan

Perspectives of the group

The group is currently working to expand its work in Asia, mostly in collaboration with two institutions bound to HIPH by a memorandum of understanding: James P Grant BRAC School of Public Health in Bangladesh and Zhejiang University in Hangzhou, China. In addition, the group is currently part of a recently established network, co-funded among others by DFG and ESRC, which gathers researchers from the University of Heidelberg, from the University of Edinburgh, and from Jawaharlal Nehru University and from Sree Chitra Tirunal Institute for Medical Sciences and Technology in India to foster discussion and research development on the topics of transcultural health, Asian medicine, innovations in medicine, and non-communicable diseases.

At the same time, the group is looking into strengthening its presence in Africa. In particular, the group has set up collaboration with colleagues from the University of Montreal to join forces in the evaluation of health financing reforms in West Africa. In addition, building on the recognition that health is central to economic development, the group has engaged in cooperation with development economists both at the University of Passau and at the University of Mannheim to explore the link between health interventions and economic development. The group currently further intensifies its recent cooperation with research partners in Malawi, particularly the College of Medicine of the University of Malawi and the Research for Equity and Community Health Trust (REACH Trust).

Last but not least, the near future will see the group progressively more engaged in "exporting" its mixed-methods approach to the study of the economics of global health. Training in mixed-methods will take place both through formal teaching abroad and through direct mentoring of junior researchers with the aim of establishing capacity to replicate the unique course currently on offer at HIPH in a number of other settings.



Gerald and Olivier with research partners in Malawi

Dengue project team members at a meeting in Sri Lanka (fourth from the left: project leader Annelies Wilder-Smith)



Global Health Policy and Health Systems

"Global health is collaborative transnational research and action for promoting health for all". Beaglehole's and Bonita's (2010) short answer emphasises the key elements as health equity, healthy environment, universal access to health care, and action-orientation. The challenges to health for all are many. While the global dimension of pandemics is self-evident, the solutions to many other health issues, such as mitigation of health effects of climate change, migrant health, malnutrition, violence and injuries, as well as unequal and poor access to health care and medicines, are equally dependent on a coordinated global effort and global solidarity as enshrined in the human right to health.

Global health is still a concept under development. Academic institutions across the world are working on it and reorient their agendas towards a global health perspective and move to a transdisciplinary approach within and beyond the health sector, including other disciplines such as geography, political sciences, anthropology, law and trade. We started this working group in 2011 along with the initiation of the Heidelberg Initiative for Global Health (HIGH), as a university-wide transdisciplinary platform for global health, which was launched in 2012. It comprises partners from the University Hospital, the University and its Center for the Environment, as well as associated institutions, such as the German Cancer Research Center.

Within this transdisciplinary context and partnership, the working group monitors and analyses major global health policy issues and processes, with a focus on

1. the implementation of WHO's global strategy and plan of action on public health, innovation and intellectual property (GSPOA),
2. the analysis of the strengths and limitations of the millennium development

goal (MDG) concept and related consequences for post-MDG development goals beyond 2015,

3. models for global partnerships in research and development, and
4. governance, leadership and priority setting in global health based on a human rights approach.

Group leader:

Prof. Albrecht Jahn

Members:

Prof. Olaf Müller*

Dr. Manuela De Allegri*

Dr. Rafael Bauschke**

Caroline Zöllner, MSc

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Projects:

Go4Health: Formulating new goals for global health, and proposing new governance for global health that will allow the achievement of these goals

This is a EU-FP7-project starting in September 2012 and addressing the following objectives:

General objective:

To propose New health development goals (NHDG), embedded in a global social contract.

Specific objectives:

1. To critically analyse the MDG approach, its achievements and shortcomings, including the present incentive systems for MDG-related health innovation.
2. To formulate a set of goods and services that corresponds with essential health needs (EHNS), which should be guaranteed to every human being as entitlements under the human right to health.
3. To affirm and further elucidate the national responsibility for providing these goods and services, and to clarify the international responsibility in relation to the national responsibility.
4. To critically analyse and propose changes to the present global. Governance of Health (GGoH), such that it holds governments and others more accountable for their responsibilities, enhancing the likelihood that the goals will be achieved.

Another important activity is the follow up of WHO's consultative expert working group (CEWG) on research and development: financing and coordination. This report was presented to the World Health Assembly 2012 and made a range of recommendations on how to best support research and innovations for diseases that primarily affect low- and middle-income countries. Having been involved in the CEWG, we support the current consultations and work on the proposal for a WHO convention.

We also provide consultancy service for development agencies and Ministries of Health. Current collaborations include the European

Academic Global Health Alliance, the German Agency for International Cooperation (GIZ), Global Health Europe, and international academic partner institutions in Tanzania, Burkina Faso, Bangladesh, and Peru.

The Go4Health consortium comprises 14 international partners from academia (public health and law), and civil society:

- › Institute of Tropical Medicine, Belgium
- › Heidelberg Institute of Public Health
- › SECTION27, South Africa
- › O'Neill Institute for National and Global Health Law, Georgetown University Law Center
- › University of Oxford
- › Medico International
- › Center for Health, Human Rights and Development, Uganda
- › University of Nairobi
- › BRAC University, James P. Grant School of Public Health, Bangladesh
- › Centro de Estudios para la Equidad y Gobernanza en los Sistemas de Salud, Guatemala
- › Norwegian Centre for Human Rights
- › London School of Hygiene and Tropical Medicine
- › University of Queensland; Australia
- › University of Toronto, Dalla Lana School of Public Health

Health Service and Quality Management

The Heidelberg health service and quality management group is a collaboration between evaplan GmbH and the Institute of Public Health at the University of Heidelberg. As such it brings together consultants, trainers and researchers working to improve the quality of health care in developing countries and Germany.

Coordinating team:

PD Dr. med. Michael Marx
Helen Prytherch
Dr. Aurélia Souares

Participants

Prof. Albrecht Jahn*
Dr. med. Svetla Loukanova
Dr. med. Rainer Külker
Sylvia Sax
Christine Thayer
Angelika Pochanke, evaplan GmbH
Prof. Annelies Wilder-Smith*
Norma Lange-Tagaza
Sylvia Runge-Ranziger
Irmgard Marx
Prof. Dr. Joachim Szecsenyi

*Associated members

Ongoing projects – examples

QUALMAT project

Project Coordinator: Rainer Sauerborn
Project Manager: Svetla Loukanova

The QUALMAT research project (Quality of maternal and prenatal care: bridging

the know-do gap) funded as part of the 7th framework programme of the European Union (grant agreement 22982) is a collaboration between the Centre de Recherche en Santé de Nouna (Burkina Faso), Ghent University (Belgium), University of Heidelberg (Germany), Karolinska Institute (Sweden), Muhimbili University of Health and Allied Sciences (Tanzania), and Navrongo Health Research Centre (Ghana). The overall objective of this research is to improve the motivation and performance of health workers and ultimately the quality of prenatal and maternal care services. The intervention packages include the development and implementation of a system of performance based incentives and a computer-assisted clinical decision support system (CDSS) based on WHO guidelines. The interventions will be implemented from the beginning of 2012 and will be evaluated in a pre-post controlled study design in rural Burkina Faso, Ghana and Tanzania between 2009-2014. The project includes over 30 scientists and nine PhD students.

The hypothesis of the overall QUALMAT project is that there are deficits in the performance of maternal and neonatal health care providers that result in insufficient outputs (eg. insufficient quality of patient care) that go beyond the limitations that can be readily explained by a lack of resources and combine with other malfunctions in the health system to hinder progress towards health outcomes including the targets of MDG 5. Motivation is believed to hold the key to provider performance and improved



Supporting quality improvement in health systems in Bangladesh (Photo S. Sax)

Training on the computer-assisted clinical decision support system of QUALMAT



quality of care. Firstly, qualitative work was conducted to explore the determinants and influences upon maternal and neonatal health (MNH) provider motivation at primary care level in rural Burkina Faso, Ghana and Tanzania. Secondly, a scale has been developed to assess MNH provider motivation, willingness to perform and work behaviour. Baseline data has been collected in all three countries. As the main QUALMAT interventions are introduced the scale will be used at intervals to monitor for possible change.

www.qualmat.net

Development and implementation of a comprehensive integrated quality management system for reproductive health services, Kenya (2011-2013), evaplan GmbH

evaplan GmbH and the Institut für Angewandte Qualitätsförderung und Forschung im Gesundheitswesen (AQUA Institute) are implementing this project as an established consortium in collaboration with a local partner, the Institute of Health Policy Management & Research (IHPMR) in Nairobi. evaplan has the lead and carries overall responsibility. The aim is to improve the quality of services in the area of reproductive health, including gender-based violence (GBV) by means of an integrated quality management system.

The AQUA Institute has already developed a scientifically proven quality management (QM) instrument called the European Practice Assessment which rests on the visutool® software. It allows for benchmarking, can



QUALMAT meeting in Burkina Faso in 2011

be used in out-patients and in-patients settings and adapted to different clinical areas, for example to focus on family planning and reproductive health services. Taking advantage of evaplan and IHPMRs local knowledge of the Kenyan health system and the Kenyan quality assurance model, a well established methodology will be used to engage stakeholders in a participatory process to select the standards and indicators that the QM instrument needs to be based upon in order to be integrated in the Kenyan health system.

Prior experience in adapting this QM instrument to other settings has shown that it allows for utmost flexibility. Care is being

taken to incorporate ongoing QM processes in Kenya. Facility needs assessment will also be undertaken to inform the adaptation process and ensure the QM instrument meets local needs and is truly tailor-made. The consensus building approach will also involve relevant provincial, district and hospital management as their buy-in is essential to the success of QM change processes, particularly those that involve the introduction of information and communication technologies (ICTs).

Capacity building at the health facility level is provided by the IHPMR and a team of international consultants. The international experts' foci are the adaptation of the QM

Instrument, to accompany the implementation, providing coaching of staff and to establish a pool of trainer of trainers at IHPMR. The private sector will also be involved as future potential clients for the adapted QM instrument. It is intended that marketing will be undertaken throughout Kenya and the East-African region in due course. These measures will all help to secure the sustainability of the intervention beyond the initial time-span of support from GIZ. Internal GIZ knowledge management, operational research and broader project dissemination services are also provided. The AQUA Institute is interested to support IHPMR staff and facility level partners to prepare scientific publications.

Impact of community-based health insurance and other financing mechanisms on quality of care in Sub-Saharan Africa

Project team: Aurélia Souares, Jake Robyn, Rainer Sauerborn

External Collaboration: Ali Sié, Germain Savadogo, Centre de Recherche en Santé de Nouna, Burkina Faso

Community-based health insurance (CBI), one form of community financing, has been seen as an attractive solution to the challenge of generating financial resources for the formal health sector in low- and middle-income countries. In particular, they are seen as a potential instrument to improve access to health care by reducing financial barriers to health services, empowering enrollees, and improving the quality of care provided. In recent years, the development of CBI programs in Sub-Saharan Africa has garnered substantial interest by both researchers and policymakers alike. In early 2004, a CBI scheme (Assurance Maladie à Base Communautaire - AMBC) was introduced in Nouna district, Burkina Faso. As the perception of quality is a major factor for the predicted retention of patients in modern health care systems and also seems to be an important factor of enrolment and retention of those enrolled in health insurance, the different factors related to patients' perception of quality of care are an important problem to be tackled. We used observation, in-depth interview and exit questionnaire to assess potential differences, between CBI enrollees and the general population not enrolled in the scheme, in the objective and perceived

quality of care of primary health care facilities contracted with the Nouna CBI scheme.


Health care financing reforms should enhance a more equitable access to care (free health care, health insurance) and improve performances in health service delivery (performance-based funding). But their integration into national health systems might be a challenge for the system's stability, health care quality and the sustainability of targeted health programs.

Research project developed are aiming at analyzing this impact on quality of health care.

Salzburg global seminar

Michael Marx and Sylvia Sax joined Dr. Rashad Massoud and other quality experts in the planning committee for a global seminar held at the Schloss Leopoldskron in Salzburg, Austria from April 22 - 27, 2012. The seminar focused on health care improvement in low- and middle-income countries and the target group was high level policy makers and practitioners from these countries. The aim of the seminar was to examine global accomplishments and failures in quality improvement, their reasons and challenges of taking successful efforts forward in our increasingly complex health systems over the next five to ten years. A framework paper has been submitted to the British Medical Journal.

Other quality management activities at evaplan:

- › 2010-2011 capacity building for effective health project: evaplan and AOK Consult jointly implement a one year blended learning course on QM for senior health professionals from Kenya, Tanzania, Cambodia, Vietnam on behalf for GIZ (formerly InWEnt).
- › 2010 evaplan implemented a regional symposium entitled "Measuring and improving quality in maternal health care: chances and challenges for central Asia" (Uzbekistan, Tajikistan and Kyrgyzstan) on behalf of GIZ.
- › Expanded quality management using information power (EQUIP) research project funded by the EU 7th framework programme to improve maternal and new-born health in Tanzania and Uganda: evaplan is responsible for the work package on Quality Management  www.equip-project.eu
- › 2009 evaplan and the AQUA Institute in Göttingen undertook a consultancy to strengthen the process of accreditation in the health sector in Kenya.
- › QM-consultancies (including conceptual work, implementation and training courses) conducted on behalf of GIZ in India, Bangladesh, Pakistan and Yemen.

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The Collaborative Research Centre (SFB 544)

SFB 544 (1999-2011)

The Collaborative Research Centre 544 (Control of Tropical Infectious Diseases)

This large and successful research program has been running since the year 1999 and ended in mid-2011. The HIPH has been among the founding members of this program and has regularly contributed to the high quality of this collaborative research.

The "Sonderforschungsbereich" (collaborative special research grant) entitled "Control of tropical infectious diseases" of the German Science Foundation (DFG) comprised between 15 and 20 research groups and was acquired in 1999 with Rainer Sauerborn as the founding speaker and re-evaluated every three years. The research project lasted 12 years. It was led by Hans-Georg Kräusslich (Dept. of Virology) in the last nine years of its existence. The SFB comprised at its start six groups of the Institute of Public Health, two from biochemistry, one from parasitology and virology respectively, two from the Central Institute for Molecular biology research groups of the EMBL (Kafatos), the Biochemistry Department (Schirmer and Krauth-Siegel), the Department of Economics (Schmidt), and the Departments of Parasitology (Lanzer). The underlying concept of the research project was to look at new interventions and potential barriers for the control of infectious tropical diseases from the bench to the bed and to the community, from "gene to society". The collaborative grant became a condensation kernel for interdisciplinary research within the University of Heidelberg and produced a large number of scientific papers, doctoral

dissertations and contributed to the training of many young scientists.

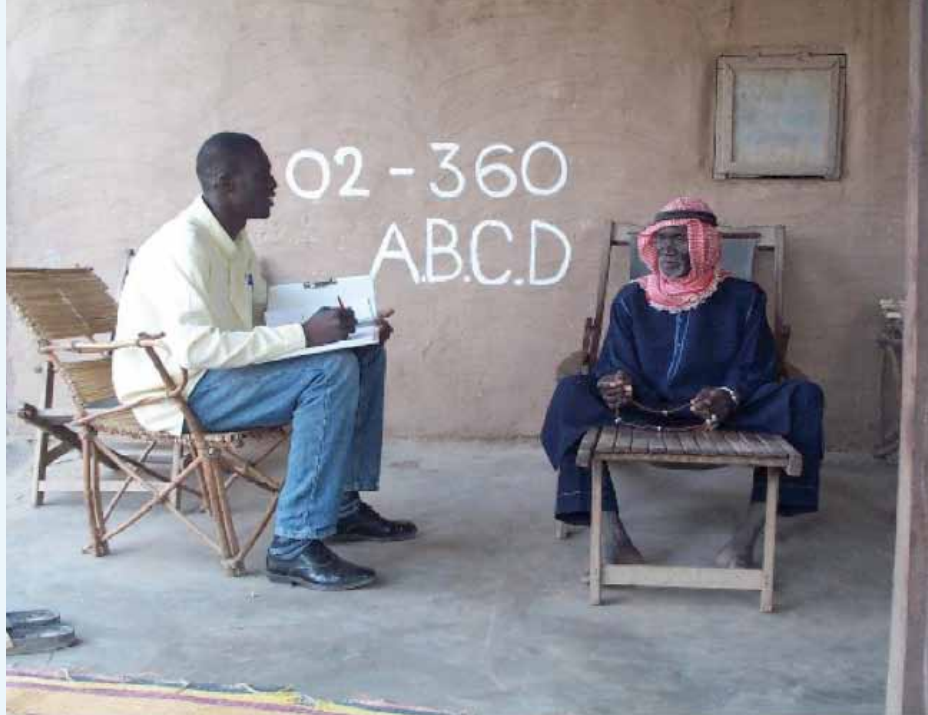
As an illustrative example for the development of new drugs and vaccines against tropical infectious diseases, a recombinant malaria vaccine was developed against a parasitic target structure, the merozoite surface protein (MSP-1) protein by the group of Hermann Bujard. Heiner Schirmer re-discovered methylene blue as a potent antimalarial and characterized it structurally and functionally. In combination with other antimalarials, the latter drug has been tested in clinical trials, led by Olaf Müller. Since children's urine will turn green during the treatment and accompanying study of collaborating anthropologists explored whether this would be a barrier for drug use and reported that it was actually not. Drugs and vaccines are only useful tools when and if they reach the women, children and men for which they have been designed. In Africa, only between 10% and 40% of those suffering from malaria seek modern health care and have access to drugs. The main barrier is the high costs for obtaining care and buying drugs. Within the SFB and in collaboration with the Ministry of health, a group of the HIPH achieved an evidence-based design of a community-based health insurance scheme.

The SFB received core funding from the Ministry of Science of the State of Baden-Württemberg for our main research partner, the "Centre de Recherche en Santé de Nouna", in Burkina Faso. This allowed the construction of on site state-of-the-art labs,

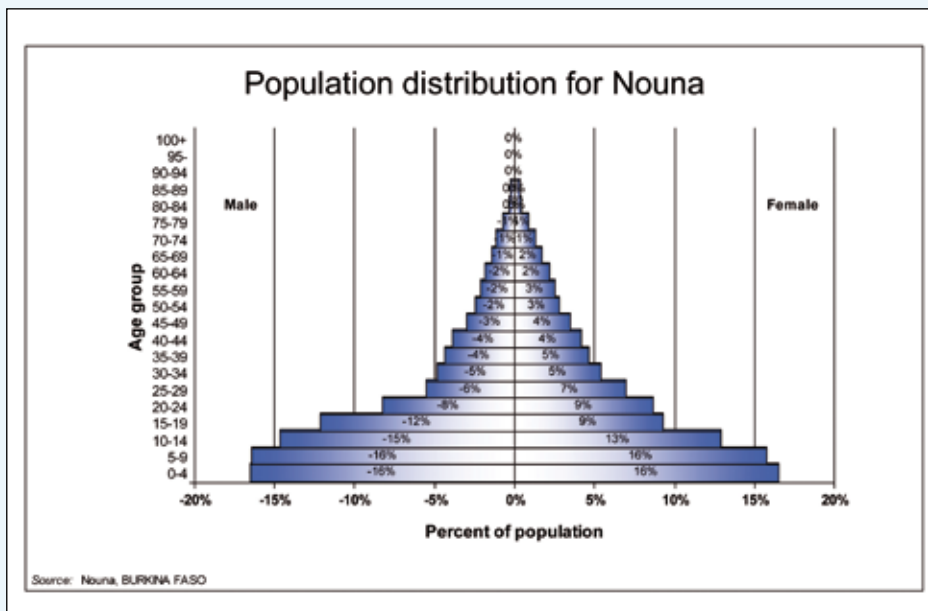
a computer center and the establishment of a population-based demographic surveillance system in the Nouna district, which today includes over 150,000 individuals (see chapter on CRSN on page 92).

During the last phase of the SFB 544 program, four research projects and one central project were implemented by HIPH. These were:

1. A8 Project (PIs Olaf Müller, Peter Meisner): Evaluation of alternative malaria first-line combination therapies in young children of Nouna/Burkina Faso
2. D1 Project (PI Heiko Becher): An extended evaluation of malaria morbidity and mortality estimates in selected countries in Sub-Saharan Africa
3. D2 Project (PI Rainer Sauerborn): Community-based insurance – the effect of targeted subsidies and other policies on different scenarios for long-term sustainability
4. D4 Project (PI Olaf Müller, Albrecht Jahn): Community-effectiveness of the distribution of insecticide-treated bed nets through antenatal care services in malaria control in rural Burkina Faso
5. Z2 Project (PI Heiko Becher): Data management and data analysis of the database from the CRSN in Nouna, Burkina Faso, and statistical collaboration with research groups within the SFB



Making people count: Population-based research as part of the special research center SFB 544 “Control of tropical infectious diseases” SFB project Z1 (Heiko Becher).





The whiteboard contains the following sticky notes:

- Green sticky notes (top row):** Four rectangular notes with handwritten text, likely serving as section headers.
- White oval sticky notes (left column):** A vertical column of five oval notes containing text.
- Pink rectangular sticky notes:** Several notes scattered across the board, some with bolded text.
- Orange rectangular sticky notes:** A larger group of notes, some with bolded text, arranged in rows.
- White rectangular sticky notes (bottom row):** A horizontal row of five rectangular notes at the bottom of the board.

Teaching

Teaching is a core value in our institute. The teaching unit oversees all the undergraduate and postgraduate teaching at our institute. For many years, Professor Andreas Ruppel as Director of Teaching, and Dr. Rainer Kuelker, Master's course coordinator, led the teaching unit with great dedication and vision.

In June 2011, Mercator Professor Annelies Wilder-Smith took over the leadership of the teaching unit, supported by Dr. Olaf Horstick as teaching coordinator, Mrs. Pauline Grys as short course coordinator, Mrs. Katharina Sommer as course manager, and Anke Nitschke-Edert as DAAD coordinator.

 www.ukl-hd.de/ph/teaching



Annelies Wilder-Smith, director of teaching

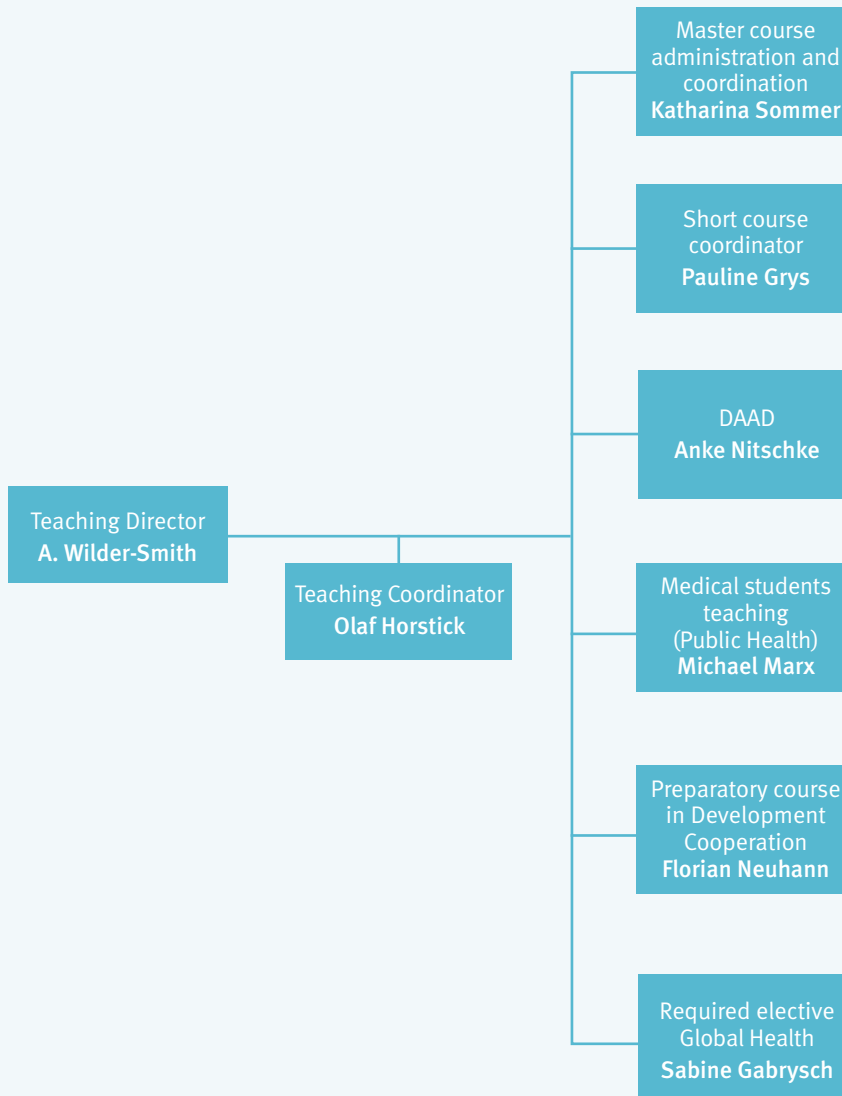
Some tropEd students



Introduction to new teaching faculty

Annelies Wilder-Smith moved to Heidelberg in early 2011 after almost 20 years in Asia. She is a public health physician and tropical medicine specialist with many years of working experience in low- and middle-income countries. She was the coordinator of global health teaching at the National University of Singapore, the director of Asia's largest travel medicine clinic in Singapore, and specialises in clinical and epidemiological research related to emerging infectious diseases.

Olaf Horstick is a specialist in public health medicine with main interests in public health in low- and middle-income countries. Over his 20 years of experience in global health in many different countries and different fields of public health, his work has been predominantly in neglected tropical diseases. In this context Olaf has been at WHO for 6 years, working chiefly on dengue. As of last year, Olaf works part-time for GIZ, coordinating several health-related cooperation projects between Brazil and other Latin American countries. His special interests include primary care development, health sector reform, programme management and control of neglected communicable diseases.



Undergraduate Teaching for medical students

Undergraduate teaching is a core activity of our institute. We offer teaching in various formats to medical students in the fields of public health and health economics. Global health teaching to medical students is a new activity since 2010.

Global health is the health of populations in a global context and transcends the perspectives and concerns of individual nations. The shortest and possibly best definition is "collaborative trans-national research and action for promoting health for all." The reasons for giving more attention to global health education at German medical universities go well beyond the needs of the low- and middle-income countries. Several studies have found that student exposure to global health problems can affect career choices in favour of disciplines and job settings that serve disadvantaged populations, both overseas and in their home countries.

There is a rapid rise in student interest in overseas experiences. We did a survey amongst medical students at the University of Heidelberg: About 20-25% of the German medical students intend to do a medical elective in a low- and middle-income coun-

try; more than 60% expressed an interest in more teaching on global health.

Dr. Sabine Gabrysch has successfully introduced the elective course "global health". In addition to this course we have now opened some of our short courses (see chapter postgraduate) for a limited number of medical students. If more than 4 courses are successfully completed, the student can obtain a certificate in global health. Furthermore, we are engaging with the students to develop a global health society, under the leadership of Prof. Albrecht Jahn and Dr. Olaf Horstick.

Global health required elective

Following an initiative from Heidelberg medical students and members of the Institute of Public Health, a new elective course ("Wahlfach") for medical students on global health was launched in the winter term 2010/11, coordinated by Dr. Sabine Gabrysch. Various members of the Institute teach on the course which runs every term over two weekends and provides an overview of global health issues, including sessions on health systems in low-income countries, the MDGs and on social, ecological and political determinants of health such as climate change and gender issues. Medical students enthusiastically took up this chance to learn about global issues and some got engaged in organising the course.

In May 2011 teachers and students organising global health courses in German universities gathered in Marburg and founded the Global Health Alliance to exchange experiences and teaching material and to enable more German universities to offer such courses. Furthermore, there are links to teaching coordinators of global health courses in other European countries, in particular the UK and Italy.

Coordinator:

Dr. Sabine Gabrysch

Epidemiology in HeiCuMed

The new "Approbationsordnung" includes epidemiology as part of the so-called Querschnittsfach "Epidemiology, medical biometry and medical informatics" as a compulsory subject within the "HeiCuMed" curriculum for medical students. Professor Heiko Becher has been appointed by the medical faculty as the responsible scientist for organisation and teaching of the epidemiology module. Teaching takes part in small groups of about 35 students. The students learn basic concepts in epidemiology, including relevant measures, study designs, and principles to analyse observational studies. Practical exercises are incorporated in the course for a better comprehension of the theoretical principles. Teaching materials are regularly updated and the lectures are supplemented by examples from recently published studies.

Together with colleagues from the German Cancer Research Centre, the following members of the unit contribute to the teaching in this course which is conducted in German: Prof. Dr. Heiko Becher, Prof. Dr. Olaf Müller, PD Dr. Heribert Ramroth, Dr. Sabine Gabrysch, Dr. Volker Winkler

Public health in HeiCuMed

Prevention, health promotion / health economics

Language: German

Number of Students in 2010/2011:
320 (95% German, 5% international)

Teaching staff (Institute of Public Health):

Manuela De Allegri, Dr. Olaf Horstlick, Gerald Leppert, PD Dr. Michael Marx, Roland Panea (evaplan GmbH), Prof. Dr. Rainer Sauerborn, Prof. Dr. Annelies Wilder-Smith, Hans-Christian Stahl

Partner Institutes/Co-organizer:

Department of General Medicine and Health Care Research, Department of Sports Medicine

Course content (covered by the HIPH):

- › **Public Health:** Introduction to health systems; principles and structure of the German health system; global perspective in health and prevention
- › **Health Economics:** Definition and assessment of condition, requirements and needs, methods of economic evaluation, guidelines and principles for health financing, health insurance

Module in-charge/Coordinator

PD Dr. med. Michael Marx

Society for global health

This academic society offers medical students and students from other faculties the opportunity to deepen their understanding and engage in debate on global health issues beyond the scope of their core curricula and disciplines. It involves a high level of interactive teaching and self-organization, and links students to global challenges such as how to achieve universal access to health

care, health and environment, models for research and innovation for neglected diseases, human rights based approaches to health and effectiveness and sustainability of disease specific control programs.

At the same time the society aims to inform and link students to ongoing research projects and to involve and mainstream Heidelberg's international students and researchers, along with their personal experiences, into our global health related teaching in research. Finally, the society wants to raise awareness on ethical issues and the University's societal responsibility related to Global Health.

DAAD Ärzteprogramm

Medical students from low- and middle-income countries are not sufficiently prepared by the German medical curriculum to confront health problems in their home countries. The DAAD supports us since many years to teach thematic blocks during weekends to foreign students from Africa, Asia and Latin America. We organized 6 to 8 weekends per year, each with about 25 participants coming from various German Universities. We have been pleased throughout by the commitment of the students and their strong interest in rearing themselves to work in their home countries on return. The weekends are dedicated to subjects from fields such as HIV/AIDS, sexual and reproductive health, neglected tropical diseases, health systems and health policy, tropical

paediatrics, non-communicable diseases, drug management, control programs. Financial support by DAAD is essential for this program and we are grateful that – after restructuring its program lines – these weekends continue as a special offer to prepare medical students to some challenges which they may face after they return to their home countries.

 www.ukl-hd.de/ph/aerzteprogramm

Pädagogische Hochschule teaching

Since 2008, the Institute of Public Health covers the topic epidemiology in the "Pädagogische Hochschule" Heidelberg for students who would like to achieve a bachelor in "Gesundheitswissenschaften". The students learn basic concepts in epidemiology, including relevant measures, study designs, and principles to analyse observational studies. The following members of the unit contribute to the teaching within the reporting period: Prof. Dr. Olaf Müller, PD Dr. Heribert Ramroth, Dr. Volker Winkler, Prof. Dr. Heiko Becher.

The teaching language is German.



Postgraduate

Postgraduate teaching in international health has a long-standing tradition at our institute. About 20 years ago the English Master's course was started, initially with a focus of training future leaders from low- and middle-income countries. More than 35 years ago, Professor Diesfeld founded the "Entwicklungshilfekurs", a course to prepare mainly German doctors and non-doctors for their service in resource limited settings. Our institute is also one of the hosting institutions for the tropEd network (see page 79).

The 13th 'Humanitärer Kongress-Theorie und Praxis der Humanitären Hilfe' with the theme: 'Ideals, reality and compromises: do we meet humanitarian needs?' was held in October 2011 in Berlin, Germany, where we presented our teaching. Furthermore, our ideas on global health teaching were presented at the World Health Summit in Berlin, October 2011, and at the 7th European conference on tropical medicine and international health in Barcelona, October 2011. Currently we offer the following postgraduate courses: Master's programme in International Health, Advanced short courses, and preparatory courses for working in developing countries.

Master's programme in International Health (M.Sc. IH)

Course focus

Focuses on health problems in low- and middle-income countries. It includes the promotion of health, prevention and treatment of disease, palliative care and rehabilitation. Studies of health systems, health economics, health policy, and management of health services are central. A cursory view of diverse aspects of health in many low- and middle-income countries shows a need for improved health policy, more efficient organisation and management at all levels of health systems, and sustainable financing. In order to make health services accessible to the people who need them most, reforms are urgently needed both at the policy-making level and on the delivery side. The M.Sc. IH was developed with these factors in mind.

Teaching Approach

Participatory teaching and learning methods are the underlying didactic concepts of the course. Participants are expected to take an active part throughout the course, e.g. small group work, individual study time and

assignments, presentations based on their own working experience, case studies and group discussion.

Structure

The course has three distinct parts, each accounting for 20 ECTS (European Credit Transfer System). In this system, credit points are given on the basis of student investment time, i.e., how much time a student "invests" in a given topic (including lecture time, group work and individual learning time). The three parts of the M.Sc. IH are:

- › A three-month core module, providing a basic overview on essential topics in international health.
- › Advanced modules, offering more in-depth learning on selected topics.
- › A thesis module, allowing for guided individual research work with a personally flexible choice.

The course covers the diverse aspects of international health and may be taken either as part time study within the tropEd network or as a compact one-year residential programme at Heidelberg.

DAAD scholarships are available for the residential programme.

Quality Assurance

The programme is accredited at the national level. All taught parts (core course, advanced modules) are additionally accredited in the tropEd network. An international stan-

Standard is further ensured by faculty members of other Institutes of public health acting as lecturers and external examiners.

A maximum of 25 students are accepted into the programme, which guarantees an intensive personal contact with lecturers and academic supervisors throughout the programme.

Target group

The M.Sc. IH is intended for physicians and other health-related academic professionals with at least two years' work experience. Its focus is to provide students with a solid foundation in international public health principles and competency with the tools and methods necessary to initiate programmes that would improve health services in an efficient, sustainable and equitable way.

Career Perspective

Graduates are expected to take up policy, planning, management or teaching positions in, for example, international organisations, ministries of health, national health programmes, non-government organisations and universities.

Course language

English

Entry requirements

Degree in medicine or any other equivalent academic degree (minimum of 4 years bachelor or master's degree, conform to the standard of University of Heidelberg



Successful graduates in 2010

Successful graduates in 2011



regulations) plus at least two years' professional experience in a public health related position.

English language proficiency: if an applicant's first language is not English, he/she is requested to provide evidence of his/her English language proficiency with a TOEFL or IELTS test.

(TOEFL required minimum score: 237 computer based, 92-93 internet based, 580 paper based, IELTS required minimum: band 6,5)

Age limit for DAAD scholarship: 36 at time of application and the respective academic degrees should normally not be older than 6 years.

Degree awarded

Master of Science in International Health (M.Sc. IH)

Course begins

1 October each year

Course duration

12 months

Duration of German language course prior to beginning of programme (only for holders of a DAAD scholarship)

2 months

Content of the Master's programme in International Health

- › Introduction: creating a learning community (excursion on weekend)
- › Health systems and international health concerns
- › Determinants of health
- › Research foundations (epidemiology, biostatistics, qualitative methods)
- › Health policy, health economics, evaluation
- › Health planning, health management, quality management
- › Thesis preparation I
- › Reproductive health services and HIV/AIDS: new evidence and strategy
- › Disease control: strategies and policies
- › Financing health care – principles of insurance
- › Leadership and change management
- › Improving the quality of health care services
- › Consultancy skills in international Cooperation in health: evaluation of health facilities, projects and programmes
- › Thesis preparation II
- › Excursion
- › Elective: public health and disasters
- › Elective: proposal writing as a consultancy skill
- › Elective: climate change and health
- › Thesis writing / field work
- › Introduction: creating a learning community
- › Introduction to international health and health systems
- › Determinants of health
- › Research foundations
- › Health policy, health economics, evaluation

Application deadline

University deadline: 30 April for the same year's course

DAAD scholarships are available for the residential programme with the following deadlines for each year's course:
31 July at the German Embassy;
31 August at DAAD in Bonn;
15 October at the M.Sc. IH course administration at Heidelberg.

Different deadlines may apply for other scholarship funding agencies.

Remarks

Candidates are required to submit the M.Sc.IH course application form which is available from the course secretariat or as

a download on our website (see below). Applications for DAAD scholarship must be completed separately using the DAAD application form.

Tuition fee: 14,095 Euro for the residential programme (special arrangements apply to DAAD scholarship holders).

For further information

Heidelberg Institute of Public Health
M.Sc.IH – course administration
Phone: +49-(0)6221-564905
Fax: +49-(0)6221-564918
e-mail: MSc_IH@uni-heidelberg.de

 www.ukl-hd.de/ph/MSCIH

Master theses 2010 - 2011

Name	Country	Profession	Thesis
2010 / 2011			
Dr. Phyu Mar Soe	Myanmar	Assistant Lecturer MB, BS	Mothers' self-treatment practices for under-five children with acute respiratory infections/pneumonia in Dembia district, Amhara region, Ethiopia
Thi Hoa Nguyen	Vietnam	Project Officer for health and HIV/AIDS	Community preferences for a social health insurance benefit package - an exploratory study among the uninsured in Bac Giang, Vietnam
Dr. Juan Alfonso Leonardia	Philippines	Medical Doctor, Pharmacist, Local Reform Implementation Coordinator	An assessment of factors influencing the retention of physicians under the national rural physician deployment program in the Philippines
Nuri Nazmun Nahar	Bangladesh	Dentist	Oral hygiene knowledge and practice among school going adolescents (13-18 years) in Kumasi, Ghana

Name	Country	Profession	Thesis
Dr. Nicholas Nana Adjei Kyei	Ghana	Medical Officer, MB, CHB	The influence of distance and quality of care on antenatal service utilization in rural Zambia
Shushan Kebedom Tedla	Eritrea	Hospital Pharmacist	Insecticide-treated mosquito net utilization among pregnant women in Dembia District, Amhara Region, Ethiopia
Dr. Fekri Ali Salem Dureab	Yemen	Community Medicine, CBRHP Technical Officer	The effects of community-based reproductive health workers on the utilization of family planning services in Yeme
Dr. Mayu Okano	Japan	Medical Doctor	tropEd-track, thesis pending
Margret Fockenber	Germany	Medical Doctor and Advisor	The know-do-gap in performance: dimension and causes of professional misconduct in a rural district hospital in Tanzania
Dr. Terhi Lohela	Finland	Medical Doctor	Influence of distance to delivery facility on neonatal mortality in rural Malawi
Mario André Maximilian Couto Ferrari	Brazil	Dentist, Teaching Forensic Medicine	The implementation of the "Sistema Único de Saúde" and its impact on the quality of life and oral health status in Brazil
Thomas Moore	USA	Planner for US-European Command, Avian/Pandemic Influenza	tropEd-track, thesis pending
Miriam Wilms	Germany	Medicine Degree	tropEd-track, thesis pending
Dr. Günther Slesak	Germany	Medical Doctor, Project Manager	tropEd-track, thesis pending
Marie-Carmel Gedeon	Canada	Physiotherapist	tropEd-track, thesis pending
Felicia Chang	Trinidad & Canada	Biologist	Travel restrictions for HIV positive travellers
2011 / 2012			
Afua Aduako Asante-Poku	Ghana	MSc International Health Management, Economics and Policy, Researcher	Household expenditure for diabetes in Sub-Saharan Africa - a systematic literature review
Iris de Miranda	Brazil	BSc Psychology	tropEd-track, thesis pending
Ana Ligia Gutiérrez Solís	Mexico	Surgeon Dentist	Interventions against fluorosis and the effect on prevalence in Mexico
Naqibullah Hamdard	Afghanistan	Medical Doctor, Programme Manager for Provincial Health Systems	Health organizations culture, set of beliefs and attitudes associated with use of health data in decision making

Name	Country	Profession	Thesis
Angella Basemera Karamagi	Uganda	Medical Doctor, Medical Officer with Children's AIDS Fund	E-learning as a tool for partial compensation of lack of clinical teachers in Kamuzu Central Hospital Malawi
Stephen Kow Baako Amoah	Ghana	BSc In Community Nutrition, Program Officer	Tracking progress towards the underlying policy objectives of the Millennium Declaration in Ghana
Neo Mogogi Mohutsiwa-Dibe	Botsuana	BSc Dental Science, Dentist	Mobile health (m-health) in Africa - what works, what doesn't and why?
Natasha Evelyn Anne Murray	New Zealand	MBChB, House Officer	Knowledge, acceptability and behavior towards impregnated school uniforms for dengue control in chachoengsao province of Thailand: a mixed methods approach
Nsorma Gertrude Nyaaba	Ghana	BA Integrated Development Studies, Assistant Research Officer in Health Research	Factors that affect Health Extension Workers satisfaction with training and supervision in Dera Woreda, Ethiopia
Zhomart Orman	Kazakhstan	Medical Doctor	Healthcare facility perception on the influence of the new upgraded accreditation processes on the quality of health services within the facility
Daniel Ssentamu	Uganda	MBBS, Regional Health Service Manager/ Consultant	Value of membership in Community Health Insurance in Nakaseke District, Uganda: Reasons to enroll or not to enroll
John Langidare Tanaki Laiser	Tanzania	BSc Public Administration, Hospital Administrator	Can incentive payments increase the uptake of maternal care services in Dodoma Region, Tanzania?
Meilayasina Tarigan	Indonesia	BSc in Chemistry, Monitoring and Evaluation coordinator	Impact of model household training by health extension workers to immunization coverage, nutritional status, and insecticide treated nets utilization in Dera district - Ethiopia
Shaveta Walia	India	MBBS, Medical Officer	Social media: a new promising tool for disaster management
Manting Wang	China	MSc Social Medicine and Health Management, Administrator	Analysis of health education for schistosomiasis control in China: a literature review
Nay Yee Wyine	Myanmar	MBBS, Demonstrator	Comparison of integrated management of childhood illness (imci) guidelines adapted with dengue fever and various dengue fever guidelines and in South East Asian countries
Julia Franziska Yassin	Germany	MBBS, Senior House Officer Obstetrics and Gynecology	tropEd-track, thesis pending

Short courses in International Health

The Institute of Public Health has been offering a growing number of short courses since 1999.

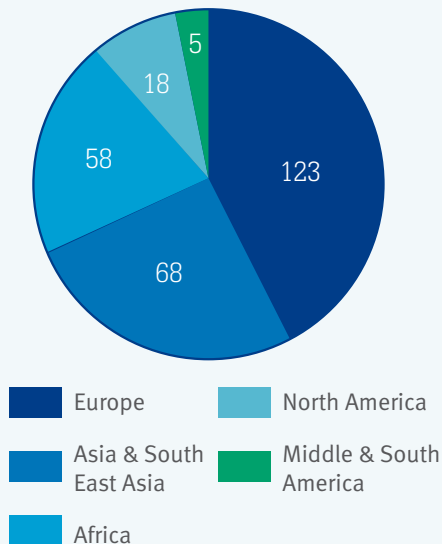
In 2006 a number of courses have been included into our Master of Science in International Health as either mandatory or elective advanced modules.

Lecturers in the courses generally have both field experience and an academic background in the course topic. Besides our own international staff, we invite external lecturers from various sectors: e.g. non-governmental organizations (NGO), international organisations, governmental sector, research and training programmes, etc.

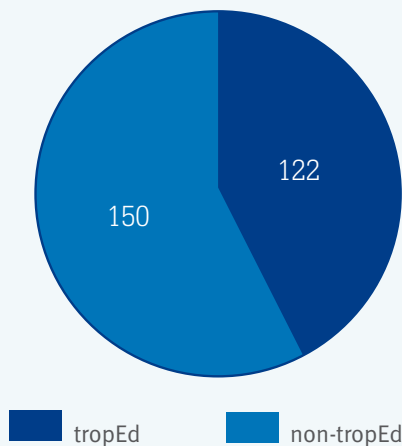
Participants are usually from a variety of countries, as well as professional and educational backgrounds. As all courses are accredited within the educational network tropEd, and those students are an important target group. Yet, we also have about 50 % of external participants who do the courses as individual further training.

www.ukl-hd.de/ph/shortcourses

Short course participants' origin 2010/11



Distribution tropEd / non-tropEd participants 2010/11



Short courses 2010/11

- › Consultancy skills in international cooperation in health: evaluation of health facilities, projects & programmes
- › Disease control: strategies and policies
- › Economic principles of social security
- › Health and climate change: impact and adaptation strategies
- › Health and human rights
- › Facility management
- › Financing health care and insurance
- › Financial management and controlling in health insurance
- › Improving the quality of healthcare
- › Leadership and change management
- › Macro-political aspects of social security systems
- › Mixed methods in international health research
- › Public health and disasters
- › Proposal writing as a consultancy skill
- › Quality management in international health
- › Reproductive health services and HIV/AIDS: new evidence and strategy
- › Schistosomiasis control: an interdisciplinary approach

New in 2011

- › Decision making in public health: evidence, politics or diplomacy
- › Participatory learning and action: tools for community development
- › Public health and Anthropology

www.ukl-hd.de/ph/shortcourses

Graduiertenkolleg 793 (GRK 793)

The PhD programme "Graduiertenkolleg 793: Epidemiology of communicable and chronic, non-communicable diseases and their interrelationships" has been the only PhD programme for epidemiology in Germany until now. It ran from April 1st, 2002 to March 31, 2011 with a stipend extension period until March 31, 2012. Heiko Becher has been the chairman of the program. Other supervisors and lecturers from the Institute of Public Health were Olaf Müller, Rainer Sauerborn, Heribert Ramroth and, as former members, Thomas Jänisch and Oliver Razum. The administration of the program has been organized by Ms Elke Braun-van der Hoeven. The main aim of the program was postgraduate education of young graduates in the field of epidemiology through largely independent research in an epidemiological study, general advanced education in main fields of epidemiologic research, and reinforcement of existing research groups and genuine contributions to epidemiologic research.

Until April 2012, 92 doctoral theses were completed or almost completed. Of these, 17 were or are affiliated with the Institute of Public Health. The table on the right shows some data. Many of the theses were marked with "summa cum laude", and a large number of scientific prizes were awarded to members of the program (see list on page 76). With few exceptions, all theses were written in English. The teaching program including all seminars and lecturers were also given in



Members of the Graduiertenkolleg at a two-day retreat 2010

Number of doctoral students and marks of the GRK 793

	Note	PhD theses		
		male	female	total
Fellows	Cum laude	1	2	3
	Magna cum laude	5	20	20
	Summa cum laude	2	8	10
	Final mark pending	1	9	10
	total	9	39	43
associated PhD students	Cum laude	2	1	3
	Magna cum laude	9	14	23
	Summa cum laude	0	3	3
	Final mark pending	2	8	10
	total	13	26	39

English. Members in the GRK were recruited from all over the world, with students coming from the following countries: Europe (Germany, Spain, Poland, Georgia, Italy, Romania, Russia, Hungary), Africa (Burkina Faso, Cameroon, Uganda), Asia (China, Mongolia, The Philippines, Nepal, Palestine, Israel), America (USA, Canada) and Australia.

The scientific output was impressive. Until April 2012, the students published 320 peer reviewed papers in total, many of these in the very best journals. Several papers are not yet submitted, therefore this number will increase further. All students presented their work on international conferences.

We are also proud that all alumni of the program who got attractive positions, many of them to continue with a scientific career, and others in the industry or in international organisations such as the WHO.

 <http://grk.dermis.net>

GRK 793 members

Prof. Dr. rer. nat. Heiko Becher (Chairman),
Heidelberg Institute of Public Health

Prof. Dr. med. Hermann Brenner, (Deputy
Chairman; DKFZ), Division of Clinical Epidemiology and Aging Research

Prof. Dr. sc. hum. Jenny Chang-Claude
(Council member; DKFZ), Division of
Cancer Epidemiology

Prof. Dr. sc. math. Jürgen Wahrendorf,
(Council member; DKFZ), Research Group
Environmental Epidemiology

PD Dr. med. Volker Arndt (DKFZ),
Division of Clinical Epidemiology and
Aging Research

Prof. Dr. med. Walter Haefeli, Clinical
Pharmacology and Pharmacoepi-
demiology, Heidelberg

Dr. Thomas Jänisch, University Hospital –
Section Tropical Medicine, Heidelberg

Prof. Dr. Rudolf Kaaks (DKFZ), Division of
Cancer Epidemiology

Prof. Dr. med. Olaf Müller, Heidelberg
Institute of Public Health

PD Dr. Alexandra Nieters (DKFZ), Division
of Cancer Epidemiology

Dr. Michael Pawlita (DKFZ), Division of
Genome Modification and Carcinogenesis

Prof. Dr. Marcella Rietschel, Central
Institute of Mental Health, Mannheim

Prof. Dr. med. Dietrich Rothenbacher,
(DKFZ), Division of Clinical Epidemiology
and Aging Research

Prof. Dr. rer. nat. Karen Steindorf (DKFZ),
Research Group Environmental
Epidemiology

Prof. Dr. med. Til Stürmer, University of
North Carolina at Chapel Hill

Prof. Dr. med. Thomas Diepgen, University
Hospital – Department of Social Medicine,
Heidelberg

Dr. rer. medic. Christiane Gasse, Aarhus
Universitet, Clinical Epidemiology, NBG

PD Dr. Jakob Linseisen, Institute of Epi-
demiology, Helmholtz Centre München
(HMGU)

Prof. Dr. Oliver Razum, University of Biele-
feld, School of Public Health

Prof. Dr. Rainer Sauerborn, Heidelberg
Institute of Public Health

Dr. Brigitte Schlehofer (DKFZ), Research
Group Environmental Epidemiology



Heiko Becher thanks Elke Braun-van der Hoeven for her excellent administrative support in the GRK 793 (final symposium June 2011)

GRK 793 members at the final symposium in June 2011



Awards for students from the PhD programme GRK 793 (members of the institute)

- › September 2007 - **Jördis Jennifer Ott** and **Volker Winkler** (3rd price, 250 €) won young scientist prizes at the meeting of the German Society for Epidemiology, Augsburg.
- › September 2009 - **Volker Winkler** (3rd price) won a Stephan-Weiland-Price for young scientists at the annual meeting of the German Society of Epidemiology (DGEpi) in Münster.
- › February 2011 - **Andreas Deckert** won the 1st price of the best paper award for his presentation at the 15th conference of SAS users in research and development (KSFE) in Heidelberg.
- › September 2011 – **Heiko Zimmermann** won the poster price at the joint annual meeting of the German Society of Epidemiology (DGEpi) and the meeting of the GMDS in Mainz.

Contribution to the Master's programme in Medical Biometry and Biostatistics

The Institute of Medical Biometry and Informatics in Heidelberg (IMBI) offers a postgraduate Master's programme in Medical Biometry and Statistics. The curriculum covers the wide field of biostatistics and its application in medical research as well as lectures to deepen knowledge in specific statistical methods and in medical topics. Within the core curriculum, epidemiology as a single module is taught. This block course is coordinated and lectured by Prof. Heiko Becher. Andreas Deckert is the coordinator of the basic module biometry and is also an active lecturer within this module.

Preparatory course for professionals in health sector development cooperation

Since 1974, the institute conducted certificate training courses to prepare professionals to work in health sector projects in international development cooperation founded by Prof Diesfeld. This course actually formed the basis to later start the Master's programme in International Health in Heidelberg. Over the last 7 years the course was coordinated by Florian Neuhann and administratively managed by Hilde Gold Feuchtmüller since 1994. The courses were highly acclaimed for the early introduction of multi-professional training and innovative teaching methodologies.



Participants of the preparatory course for professionals in 2011

Several generations of German professionals in international health have started their careers after participating in the course. The curricula of course were adapted over time to reflect changes in needs and demands as e.g to address the HIV epidemic with a specific course module. The funding through the German Ministry of Economic Development and Cooperation in collaboration with the faith based development agency ended in 2011. The institute however has decided to continue its involvement in this area and signed a memorandum of understanding with the Medical Mission Institutes in Tübingen and Würzburg to offer courses under the umbrella of an Academy of Global Health and Development from 2013.

Teaching Collaborations

International collaborations are the hallmark of our institute. Strengthening international collaborations and fostering new collaborations is our vision and a core value. We are pleased to report on our longstanding collaborations, in particular with Nouna, Burkina Faso, as well as newer collaborations in Africa, Asia and beyond. International collaborations are important as they open more opportunities for collaborative research and projects. With such collaborations we can tap into the expertise and experience of academic staff at universities and research centers worldwide. Everyone benefits. Countries from the South will benefit from further capacity building and scientific exchange programs. We in Heidelberg have the opportunity to learn more about the reality of public health in low- and middle-income countries, thus opening possibilities to improve and adapt existing training and research activities with a practical view of work in resource poor settings. International collaborations also enhance research funding, enrich training and teaching in global health, and open opportunities for German and overseas PhD students for exciting research projects.

European Course in Tropical Epidemiology (ECTE)

The European Course in Tropical Epidemiology ECTE is 3-week intensive basic course on epidemiology and biostatistics. The course is intended for physicians, nurses, biologists, anthropologists, health program managers, health administrators and other professionals working in the health sector in tropical countries or with an interest in public health in tropical countries.

Emphasis is on methodology and the practical application of epidemiological tools in low- and middle-income countries. ECTE is a collaborative venture of various European centres of tropical medicine and public health and is held annually at a different venue.

Lecturers and facilitators for ECTE come from:

- › Institute of Public Health, Heidelberg University, Germany
- › Barcelona Institute for Global Health (ISGlobal), Spain
- › Barcelona Centre for International Health Research (CRESIB), Spain
- › Institute of Tropical Medicine and International Health, Berlin, Germany
- › Department of Public Health, Prince Leopold Institute for Tropical Medicine, Antwerp, Belgium.
- › Nordic School of Public Health, Goteborg, Sweden.
- › Swiss Tropical and Public Health Institute, Basel, Switzerland
- › Liverpool School of Tropical Medicine, Liverpool, UK
- › Centre for Tropical Diseases Sacro Cuore Don G. Calabria Hospital, Negrar, Verona, Italy
- › Mario Negri Research Institute, Milano - S. Maria Imbaro, Italy
- › London School of Hygiene and Tropical Medicine, UK

Heidelberg was the host for this course in 2009 with Professor Becher as course director followed by Gothenborg (Sweden) and Berlin, Germany. In 2012, the course takes place in Barcelona, Spain.

 www.ecte.org

Short courses tropEd – network for education in international health

tropEd is a network of institutions for higher education in international health, consisting of more than 30 European and 8 non-European institutions. The network provides postgraduate opportunities for education and training. It focuses on improving the management of health services for disadvantaged populations, thus contributing to sustainable development. The innovative approach is based on mobility of people, the exchange of experiences in different disciplines and the establishment of a common standard in education and training. It prepares people to work more effectively in a multicultural environment by exposing them to multiple perspectives as the tropEd students have to take a number of advanced modules outside of their so-called home institutions at partner institutions of the network.

Heidelberg has been a member of tropEd from the start. Currently, not only the short courses (advanced modules) are accredited within the network, but also the Master's programme which has been restructured several years ago. It now consists of three parts: a three month core course, advanced modules, and a thesis.

The Institute of Public Health thus was able to introduce a part time track while keeping the full time residential students in Heidelberg.

The tropEd member institutions meet three times a year at various locations within the network to accredit courses, discuss membership statuses, quality assurance, student issues, etc. In January 2010, as the meeting was hosted in Heidelberg which was attended by 18 member institutions. Apart from working long hours, the network always tries to include also a social activity and despite the cold and icy paths, most people joined and enjoyed the castle tour.

 www.tropEd.org

Short courses: Ethiopia

We enjoy a long-standing, DAAD-supported partnership with the Department of Public health at Gondar University in Ethiopia. Our cooperation involves teaching and research, and we have continuous exchange of scientists amongst both institutions. As part of the exchange program, each year we receive two participants from Gondar University in short courses of their choice within our Master's programme in International Health in Heidelberg. These visits aim to strengthen postgraduate teaching in Gondar, which we support by staff from Heidelberg. We jointly developed and implemented in Gondar short courses on "Consultancy skills" and "Qualitative research methods" (2010), which are now part of their Master's programme. In 2011, we offered a course on "Publication and research skills". Our partners in Gondar regularly receive our MSc students (two or three per year) and act as local supervisors

for their field studies, which always resulted in a successful master thesis. Within the "Ärzte-Programm" we also organize yearly "expert seminars" in selected countries for DAAD-Alumni. These aim at refreshing local medical professionals in areas of their choice. The topics of the workshops were in 2010 "cancer", "health sector reform" and "Poverty reduction" (Addis Ababa, Ethiopia) and in 2011 "cancer" and "health sector reform" (Hanoi, Vietnam).

Short courses: Bangladesh

Quality Management (2010)

BRAC University, Bangladesh

Organizer: Sylvia Sax

A short course based on the one offered in Heidelberg by the same coordinator.

Short courses: Tunisia

Climate change and health (2010)

The short course on climate change and health was sponsored by the Tunisian Ministry of Health and GTZ (now GIZ), the German Society for International Cooperation. The request for this introductory course to be held in French was initiated from the Ministry of Health. Prof. Rainer Sauerborn and Dr. Valérie Louis, the coordinators of the Heidelberg short course on climate change and health, adapted the course content and format to a five-day course in French. They covered 80 % of the lectures. A francophone guest lecturer from Belgium was also invited.

The topics covered included the following: physical basis of climate change; climate scenarios and mitigation; health impact of climate change; climate-sensitive diseases; health system response, adaptation, mitigation in the health sector. Examples were drawn as often as possible from the geographical context. At the end of the course, the participants made an oral group presentation on a topic of their choice linking their professional expertise with the themes covered during the week. The course was evaluated and feedback from the participants was sought out.

The course was conducted by Prof Rainer Sauerborn and Dr. Valérie Louis



Group discussion led by Malabika Sarker

Heribert Ramroth discusses analysis results with CRSN staff members during an intensive short course in Nouna

Teaching in Malawi

Teaching constitutes one important element of the collaboration with the Hospital in Lilongwe Malawi and comprises of

- › Clinical teaching through bedside teaching ward rounds, lectures by visiting faculty, a structured training course in ultrasound diagnostic and the provision of an e-learning platform
🌐 www.esther-magnet.org
- › A training course "Introduction to epidemiology and use of the EpiInfo Software" (PD Dr. Heribert Ramroth)
- › A combination of bedside teaching and lectured course in "Advanced HIV management" in cooperation with the Infectious Disease Clinic University Cologne



Teaching in Nouna, Burkina Faso

One major aim within the SFB 544 was to build sustainable capacity in the Nouna Research Centre (CRSN). Regular training was provided in the field of statistical methods and epidemiology for researchers and collaborators. Topics in the reported time frame were concepts in epidemiology, including relevant measures, study designs and principles to analyse observational studies. Survival techniques were taught, including Cox Regression models and Kaplan Maier estimates, using EpiInfo and Stata® software.

Courses were conducted by Prof. Dr. Heiko Becher, PD Dr. Heribert Ramroth and Gabriele Stieglbauer.

The institutional capacity building through an East African region postgraduate teaching programme "Public Health" (EAR-HEALTH)

Within the EDULINK program we aimed to contribute to public health training in East Africa. The Project EAR-HEALTH (2008-2011) was led by our institute (principal investigator Andreas Ruppel; project manager Pauline Grys) with partners in Kenya (Moi University School of Public Health, Duncan Ngare, deceased, Edwin Were), Tanzania (MUHAS School of Public Health and Social Sciences, Melkizedeck Leshabari) and Uganda (Makerere University School of


Public Health, Juliet Kiguli).

At each partner university we developed and implemented – together with the local organizers – each of the following courses:

- › "Quality improvement and leadership in health systems and services" (QI), Rainer Kuelker
- › "Sexual and reproductive health & HIV/AIDS" (RH), Malabika Sarker
- › "Health and displaced populations" (DP), Michael Marx
- › "Train the teachers" workshops, Andreas Ruppel and Rainer Kuelker.

In total, the courses and workshops were attended by over 300 participants from various institutions.

The project ended in August 2011 and received financial support from the ACP-EU Cooperation Programme in Higher Education (EDULINK: A programme of the ACP group of states, with the financial assistance of the European Union). It is intended that the courses continue from 2012 without EU-support and under the leadership of the East-African partners.

 www.ear-health.org

The EAR-HEALTH courses facilitated in 2010 and 2011 in detail were:

2010

DP: 21.06.-03.07.2010, Dar es Salaam, Tanzania, course coordinator Simon Mamuya

RH: 10.05.-22.05.2010, Eldoret, Kenya, course coordinator Edwin Were

QI: 22.02.-05.03.2010, Kampala, Uganda, course coordinator Roy Mayega

Train the Teachers:

22.02.-26.02.2010, organizers Duncan Ngare, David Ayuku, Charles Walekhwa, Andreas Ruppel, Rainer Kuelker.
08.03.-12.03.2010, Dar es Salaam, Tanzania, organizers M.T. Leshabari, D.C. Kakoko, Andreas Ruppel, Rainer Kuelker.

2011

DP: 21.03.-01.04.2011, Kampala, Uganda, course coordinator Abdullah Ali Halage

RH: 23.05.-03.06.2011, Dar es Salaam, Tanzania, course coordinator Rose Mpembeni

QI: 04.07.-15.07.2011, Eldoret Kenya, course coordinator Edwin Were

Lecture Series

Widely regarded as a platform for distinguished speakers and engaging discussions on any topic related to global public health, we have organized various lecture series. These lecture series are open to the public, and some are co-organized with other institutes. In 2011, we organized two lecture series in collaboration with the South Asia Institute: The first series was on public health in South Asia and the second series was on current controversies in global health in the context of transcultural issues, organized by Professor William Sax from the South Asia Institute and Prof. Annelies Wilder-Smith from the Institute of Public Health. Other lecture series are the regularly running lecture series in epidemiology, the HIPH seminar series and the EcoHealth series.

Lecture series epidemiology

Organizer:

Prof. Dr. Heiko Becher

A regular lecture series "Ringvorlesung Epidemiologie" is organised every term by Heiko Becher (24th in the summer term 2012). In this lecture, invited scientists give a lecture on different topics, often from areas which are not represented in Heidelberg. The program is therefore always a mixture of very different areas, from infectious diseases to genetics or new biostatistical methods.

Heidelberg Institute of Public Health (HIPH) seminar series

Organizer:

Prof. Dr. med. Olaf Müller

Dr. Valérie Louis

The HIPH seminar series is the successor of the Abteilung für Tropenhygiene und Öffentliches Gesundheitswesen (ATHOEG) seminar series, which was initiated by Olaf Müller and Oliver Razum.

The aim of the HIPH Seminar Series is:

- › To provide details of new or ongoing projects to the academic members of HIPH
- › To offer a platform for scientific exchange between the different groups of HIPH

EcoHealth seminar series

Organizers:

Dr. Sabine Gabrysch

Dr. Thomas Jänisch

Life-support systems are deteriorating on a global scale, we experience climate change, biodiversity loss, soil erosion, ocean pollution and other serious problems. The complex interdependence of humans, animals and their natural environments means that human health affects and is affected by these changes. Such complex challenges cannot be solved by reductionist and unidisciplinary approaches, they require ecological and social systems thinking. EcoHealth, short for ecosystems approach to health, considers these inextricable linkages between ecosystems, society and health of animals and human.

Starting in the summer term 2011, Sabine Gabrysch from the Institute of Public Health and Thomas Jänisch from the Department of Infectiology, organised an EcoHealth seminar series with national and international speakers and subsequently an EcoHealth journal club to bring together people from different backgrounds to learn more about the EcoHealth approach and to discuss

each other's work and ideas with the aim to encourage joint EcoHealth projects.

 www.eco-health.de

Transcultural controversies

Lecture Series 2011

With accelerating globalization, scientific and therapeutic paradigms are transferred ever more quickly between cultures and nations. This means not only that they

are adapted and transformed with increasing rapidity, but also that there are more frequent situations where paradigms and techniques from one milieu do not fit elsewhere. Controversies ensue for a number of reasons; for example when "imported" paradigms and techniques are thought to be culturally inappropriate, scientifically unacceptable, or economically unfeasible. In this lecture series, prominent scientists from Heidelberg and abroad examine the role of globalization in creating – and solving – such controversies.

Public health in South Asia

Program of a joint seminar series of the South Asia Institute (SAI) and the Heidelberg Institute of Public Health (HIPH) 2011

01/2011	Local and global health	Bo Sax and Rainer Sauerborn, Hans Rosling: TED seminar - film projection
02/2011	Addressing corruption in the health sector: Securing equitable access to health care for everyone	Dr. Cornelius Oepen, German International Cooperation (GIZ), Eschborn
03/2011	Health impact of and policy response to natural disasters in India - research results from a collaborative EU FP6 project	Revati Phalkey, candidate Dr. sc. hum.
05/2011	Health impact scenarios for South Asia	Rainer Sauerborn, HIPH
05/2011	Adaption strategies at the household, community and government level in South Asia	Urvashi Chandra, PhD, United Nations Office for Project Services (UNOPS), Dehli; Aminul Haq
06/2011	The James Grand School of Public Health, BRAC University, Dhaka, Bangladesh: achievements and perspectives	Tim Evans, Dean, James Grant School of Public Health, BRAC University, Dhaka, Bangladesh
07/2011	Lifestyle Diseases in South Asia	Constanze Weigl, SAI; Florian Neuhann, HIPH

Lecturers in transcultural controversies

Prof. Kalinga Tudor Silva (Colombo): Health and the development industry

Prof. Annelies Wilder-Smith (Heidelberg): Emerging infectious diseases: culture, environment and hysteria

Prof. William S. Sax (Heidelberg): Traditional mental health therapies

Prof. Dr. Andreas Kruse (Heidelberg): Transcultural controversies in gerontology

Nazli Balkir (Heidelberg): Healing the Soul: spirituality and religion in psychotherapy

Dr. Stefan Ecks (Edinburgh): Mind food: medicating moods in Calcutta

Prof. Einar Wilder-Smith (Heidelberg): Transcultural aspects of epilepsy





Service and Consulting

evaplan – Your Partner in International Health

evaplan is the consulting arm of the Heidelberg Institute of Public Health and collaborates closely with other institutes and departments of the university. It incorporates more than 20 years of professional experience from around the world. evaplan's portfolio is largely based upon bi- and multilateral development cooperations, but also includes assignments within the EU member states in the area of public health.

evaplan has a broad range of partners such as universities, non-governmental organisations and other consulting firms, spanning both the Northern and Southern Hemispheres. Furthermore, it is able to draw upon the large international network of academics, policy makers and alumni that associate with the Heidelberg Institute of Public Health.

Since 2004, evaplan has worked for a variety of bi- and multi-lateral agencies in the following countries: Bangladesh, Burkina Faso, Burundi, Cambodia, Cameroon, China, Egypt, Ethiopia, Ghana, India, Indonesia, Kenya, Kirgizstan, Kosovo, Malawi, Morocco, Nepal, Northern Sudan, Oman, Pakistan, the Philippines, Rwanda, Russia, South Africa, Tanzania, Turkey, Uganda, Ukraine, Vietnam, Yemen, as well as in EU-Member states.

 www.evaplan.org

Profile – areas of expertise

evaplan undertakes advisory missions, engages in operational research, and implements projects and innovative training programmes, including study tours, in the field of international health.

evaplan's professional staff has a broad range of backgrounds covering public health, epidemiology, sexual and reproductive health, HIV and AIDS, health economics, social sciences and medical anthropology. All collaborators have first-hand experience of working in low-resource contexts and travel frequently on assignments overseas. The evaplan team is multicultural and multilingual. Senior staff is also involved in teaching in various training programmes at the Heidelberg Institute of Public Health, as well as in the tutoring of masters and doctoral students.

We are engaged in short- and long-term projects with a focus on Sub-Saharan & Northern Africa, the Middle East, Asia and Europe.

evaplan has five main areas of expertise

- › Health systems strengthening
- › Sexual and reproductive health and rights
- › Response to hiv and aids
- › Comprehensive quality management
- › Social protection and health financing

Our principles and our approach

In line with the international strive for harmonising development efforts and ultimately achieving greater efficiency in the delivery of aid our work is strictly aligned with the policy framework of partner countries and development partners.

The guiding principles of evaplan's work include: gender equality, realising human rights and respect for cultural diversity. Our approach is flexible and participatory. We collaborate closely with local partners.

Our core methodological competencies include the following

- › Technical support, result based monitoring and impact evaluation
- › Capacity building, teaching and curriculum development
- › Operational research
- › Strategy and concept papers
- › Documentation of "good practice" and knowledge management
- › Conceptualisation and implementation of technical study tours

Social protection and health financing

Social protection for the vulnerable

We conceptualise and strengthen mechanisms alleviating and mitigating the risks of falling into poverty due to ill health, disability, old age and exclusion. Our expertise

includes conditional cash transfers and provisions for ageing populations.

Social protection in health

We promote universal health coverage by designing, scaling-up and linking social, private and micro insurance mechanisms. Our experience comprises the definition of benefit packages and the design of models for risk equalization.

Reimbursement and provider payments

We aim at setting the right incentives within an efficient and coherent purchasing framework and combine expert knowledge and skills in issues as diverse as pay for performance, hospital financing – including diagnosis-related group (DRGs) – and pharmaceutical pricing.

Public financial management and good governance

Our portfolio encompasses the improvement of public financial management at national, district and local level. We have a track record in the promotion of good governance and in linking health sector strategic plans to national accounting mechanisms.

Economic analyses and costing studies:

We conduct economic evaluations and analyse the benefit incidence of health care programmes. We also address the question of how health systems can best incorporate innovations — from e-health to telemedicine

Health systems strengthening

Given the various determinants of health we are committed to cross-sectoral efforts to place health into a broader policy context. Our work addresses the major weaknesses of health systems, such as stewardship and management issues, human resources, information, quality of service provision as well as demand side issues such as people's participation, knowledge and behaviour.

Main areas of support

Sectoral coordination mechanisms

We provide advice for governments and international organizations who strive to improve health systems at national and sub-national levels. evaplan has conducted feasibility studies and evaluations of health sector coordination mechanisms (e.g. SWAps) and of pooled sector financing. Other recent relevant mandates include studies on the impact of Global Health Initiatives on health systems.

Public private partnerships (PPPs)

Our expertise includes designing, implementing and evaluating PPPs in areas as diverse as quality management and e-health. Besides providing negotiation support for setting up mutually beneficial PPPs we ensure sustainability by anchoring these initiatives in the health sector context.

Health planning, monitoring & evaluation

evaplan has guided participatory processes to elaborate national planning guidelines and formats for district, hospital develop-

ment and HIV/AIDS plans. Our services range from the design of methods, techniques and tools for programme evaluations (including impact evaluation) to the implementation of programme progress reviews and results-based monitoring.

Human resources for health

The global health workforce crisis calls for approaches that address political, economical, psychological and sociological dimensions. evaplan supports strategic planning for human resources and undertakes operational research to explore country-specific reasons for poor motivation, performance and retention of health workers. We have experience of mapping tools to monitor health workers migration and of technically advising the design and implementation of incentive schemes. Support is given to innovative capacity building programmes for health workers and at organisational level.

Heidelberg quality management group

In 2008, the quality management group was established as joint effort of evaplan and the Heidelberg Institute of Public Health. It brings together a network of public health professionals with multidisciplinary backgrounds engaged in implementation, research and teaching in the field of quality management. The group seeks to bring state of the art developments in the area of quality management to low- and middle-income countries. To this end it not only engages constantly in a

professional exchange with bi- and multilateral donors but also fosters the transfer of knowledge among Southern countries. The group sees itself as a think tank translating evidence into policy making and practice. Members of the group have extensive experience of supporting quality management policy development and implementation at all levels of the health system. Clients include the European Union (EU), German International Cooperation (GIZ), Global Fund (GFATM), World Bank, WHO, United Nations Population Fund (UNFPA) and USAID.

Examples of the work done by the group include:

- › Support to the process of establishing a national accreditation body in Kenya in collaboration with the AQUA Institute Göttingen
- › Courses in quality of care at the University of Heidelberg
- › Blended learning courses in QM on behalf of GIZ
- › Research on implementation of quality management methods and tools in Pakistan, Kenya, Tanzania and Uganda

Outcomes

The Heidelberg quality management group has a strong track record on producing strategy and concept papers for a variety of audiences and target groups. Additionally members of the group have significant experience in drafting curricula, providing training for participants from low- and middle-income countries as well as conducting operational research.

Outlook

With its wide variety of services and extensive experience from different continents, the Heidelberg quality management working group seeks to build quality management capacity at all levels and to bridge the gap between practical experience and academic training and research. Besides facilitating dialogue and exchange across countries, the group also provides services in the German health sector.

Sexual and reproductive health & rights (SRHR) and HIV & AIDS

The importance of SRHR

SRHR is of crucial importance to broader efforts towards poverty reduction and sustainable development, hence the addition of a new target for "universal access to reproductive health by 2015" to the Millennium Development Goal of "Improving maternal health".

We are committed to a rights-based approach that contributes to achieving equal access to information and services without discrimination related to sex, social class, ethnicity or age. Our expertise includes conceptual and strategic work on comprehensive SRHR and respective technical support to programmes at country level.

HIV and AIDS

evaplan has wide experience in the multi-sectoral response to HIV and AIDS, both at



Mothers with their children at the CREN (health and nutrition center for undernourished children) in Nouna, Burkina Faso (March 2010)

April 2011, best time for mangos in Burkina Faso



national level as well as in building local government capacity. This includes technical support, training, knowledge management, monitoring and evaluation in HIV and AIDS interventions. Furthermore, we have been involved in strengthening the role of businesses and the private sector through facilitating the development of workplace programmes.

Linkage and integration of SRHR and HIV and AIDS

The need for linkage and integration of sexual and reproductive health and rights (SRHR) and HIV & AIDS in the framework of strengthened health systems is increasingly recognized. We support efforts of promoting the linkage of SRHR with HIV & AIDS for example through operational research, conceptual work, training and capacity development.

Young people as a target group most in need

Among the focal target groups in our work are young people who are very important both in vulnerability and numbers but lack access to information and services. We have a sound experience in numerous countries in the development of information and communication approaches and interventions that are gender-sensitive and tailored to young people's needs. evaplan has also conducted operational research on young people's sexual and reproductive health needs in various countries and cultural contexts.



International Collaborations



CRSN Nouna

Centre de Recherche en Santé de Nouna

We have the privilege to work with a large number of partners and countries on a project basis. However, some partners stand out through mutual long-term partnership arrangements, based on complementarity in research and training. The partners presented in this chapter in more detail are the Nouna Health Research Centre CRSN, the BRAC University with the collaboration ICDDRB in Bangladesh, the Zhejiang University in Hangzhou in China, the INDEPTH network, partners in Malawi and the Tongji Medical College.

Among the European partners we have long-term collaborations with the University of Umeå and the Karolinska Institute in Sweden, the London School of Hygiene and Tropical Medicine (LSHTM) in UK and the University Paul Sabatier and French Space Research Center (CNES) in Toulouse, France.

Over the past 20 years, the institute has a particularly close cooperation with the Centre de Recherche en Santé de Nouna in Burkina Faso. This research center developed from a large public health research project which started in 1989. In 1999 it was fully integrated in the organogram of the Ministry of Health directly affiliated with the Cabinet of the Minister of Health. This underlined the policy relevance that the center had gained in pioneering and scientifically evaluating new policies, e.g. in the area of health insurance or the improvement of quality of care. With the large and long-term collaborative grant on "Control of tropical infectious diseases" other research areas were built up: a parasitological and biological lab, clinical trial capabilities, and most recently an environmental/meteorological information system. The core data base linking all these research areas was a dynamic population-register of deaths, births and migration, called "demographic surveillance system" (DSS). The CRSN Nouna was a founding member and has been a leading partner in the Africa-Asia research network "INDEPTH" since its inception in 1999. Since 1986, preceding the partner-

ship with Nouna, a cooperation treaty was signed between the two medical faculties of University of Heidelberg and Ouagadougou University. In the future, the CRSN will assume the role of a teaching and research collaborating centre of the medical faculty Ouagadougou.

 www.crsn-nouna.bf

 www.hd-nouna.org

Residents of Nouna in Burkina Faso



BRAC University

The James P Grant School of Public Health (JPGSPH) at BRAC University in Bangladesh is a leading school of public health. The Bulletin of the World Health Organization has recognized the school as one of the six schools in the world promoting and practicing innovative higher public health education. In addition, JPGSPH has earned a standing amongst all schools of public health for its emphasis on community-based experiential learning.

The JPGSPH, BRAC University and the Institute of Public Health, University of Heidelberg, Germany, share the same mission of enhancing public health through capacity building; fostering graduate and post graduate education; contributing to the generation, dissemination, and promotion of the utilization of knowledge through research; and improving service delivery. Given the similarity of their missions, these two institutions have initiated a fruitful collaboration marked by the signing of a memorandum of understanding. The areas of collaboration include: a) Academic cooperation; b) Joint research activities; c) Joint appointment of senior faculty and faculty exchange; d) Joint seminars, conferences and acade-



Group of women with children in Bangladesh

mic meetings; and e) Student exchange. Manuela De Allegri from Heidelberg Institute of Public Health and Malabika Sarker from JPGSPH act as coordinating partners on behalf of their respective institutions.

 www.bracu.ac.bd

Zhejiang University, China

This is a new partnership with a long-term perspective. It was founded on a memorandum of understanding signed in 2011 in which the two institutes of public health sketch a research agenda on non-communicable diseases (NCDs), particularly on diabetes and cardiovascular diseases. The center for NCD diseases of Zhejiang University will serve as a crystallization kernel for joint research and teaching in this field. In a North-South collaboration effort, the HIPH will validate the current excellent disease and vital event reporting system the Zhejiang university built up both in an urban, a rural and an island population. This validation will be done together with the INDEPTH research network (on the right-hand side of the page), of which Zhejiang will become a member.

INDEPTH

The INDEPTH network was created in 1999 as a federation of independent research sites whose characteristic has been the tool of demographic surveillance system (DSS). This consists of a continuous monitoring of populations and their health with regular house-to-house visits of a contiguous population of about a 100.000 people. The INDEPTH network now has about 30 collaborating research centres from 19 countries in Africa and Asia. It is funded by the Gates Foundation, the Swedish CIDAR and other foundations. Its main objective is the standardization of methods and definitions,

quality control as well as the fostering of collaborative research funds. The network has been extremely successful in fulfilling these roles and is major contributor now to the live of the participating centres. It is a strong force in capacity building, providing training, and workshops for proposal development all across the sites. The Heidelberg Institute of Public Health has been instrumental in the setup and has been a partner of the INDEPTH network ever since.

 www.indepth-network.org



Partners in Malawi

Our collaboration with Malawian institutions unfolds along two parallel, yet highly complementary arms: one with a clinical focus and one with a focus on impact evaluation of complex health system interventions.

Kamuzu Central Hospital (KCH) and the Lighthouse (LH) are central to our collaboration on clinical studies. The College of Medicine (COM) and REACH Trust (RT) are central to our collaboration on health systems analysis.

KCH is located in Lilongwe. It serves as a referral centre for all the districts of the central region and is also a major referral hospital for the northern parts of Malawi. KCH, already a teaching hospital for nurses, clinical officers, medical assistants, and medical doctors, has recently been designated to become the second campus for the College of Medicine in Malawi.

LH is also located in Lilongwe. Established in 1997, the LH's mission is to care for people living with HIV/AIDS by providing a continuum of quality services and support, and by engaging to build capacity in the health sector, in direct close collaboration



Experienced nurse at a Lighthouse review station in Malawi

with the Ministry of Health. LH is now one of the largest providers of ART in Malawi, reaching out to over 22,000 patients.

Our cooperation with KCH and LH dates back to 2005. After initial informal exchange, cooperation with the two institutions (see page 28) is now funded through GIZ as part of the European hospital partnership network ESTHER (Ensemble pour une solidarité thérapeutique hospitalière en réseau) and further through a grant from the Hector foundation. Both partnerships aim at health system strengthening and quality improvement.

The College of Medicine (COM) is located in Blantyre. Established in 1991, COM has distinguished itself as an initiator of high class health research. The collaboration is particularly vibrant with the Department of Community Health, given the common interests and expertise (reproductive health, health

systems and financing, communicable and non-communicable diseases). Beyond the single collaborative research projects, HIPH has made a long term commitment to foster capacity building at COM through doctoral training and faculty exchange, thanks to support from the Norwegian Government and USAID.

The REACH Trust (RT) is an independent Malawian health research charity based in Lilongwe. RT is a leader in research operating at the intercept between clinical work and social sciences. RT and HIPH are currently implementing the first longitudinal comprehensive household survey to monitor access to care and relative spending in Malawi. HIPH has made a long term commitment to foster capacity building at RT, mostly through direct training of local junior researchers. The collaboration between HIPH and RT is funded by a DFG grant.

University of Umeå

This young Northern-most Swedish university won a structural Swedish grant to create the "Umeå Centre in Global Health Research" (UCGHR) in 2008. The collaboration between HIPH and the UCGHR has been particularly strong in four areas:

- a) "Climate change and health", with several joint research projects and two courses on the topic in Heidelberg and Umeå, taught together
- b) Dengue control research, a large consortium of 10 international scientific institutions.
- c) Partnership with INDEPTH network undergirded by a EU project to strengthen capacity-building across the INDEPTH sites (HeikoBecher)
- d) Journal in Global Health Action

Particularly fruitful are the double appointments of professors in these areas: Rainer Sauerborn has been "guest professor of climate change and global health" (see item a) at Umeå university since 2009. Annelies

Wilder-Smith has been guest professor leading the dengue project (b) since 2010. Stig Wall and Peter Byass have been external examiners in our Master of Science course since 2007. Additionally, HeikoBecher and Rainer Sauerborn are in the editorial board of the Global Health Action journal (chief editors Stig Wall and Peter Byass).

 www.umu.se/english

Staff members of the Umeå International School of Public Health with guest professor Heiko Becher after a charity running event



Karolinska Institute, Stockholm

Division of Global Health

Since 1998 we have run five large EU-funded research projects with Karolinska Institute (KI) as key partner. The focus has been on health system research and evidence-based policy development (with Göran Tomson as lead partner). The illustrative areas to study this were malaria care and antenatal and

maternity care. Another focus was on early warning systems for infectious diseases using lay people and their cell-phones as communication channels (with Prof. Vinod Diwan as lead partner). A large number of mutual exchanges in external examiners for doctoral theses complement this cooperation, as does the joint involvement in the INDEPTH network. KI and the HIPH have

worked together in founding the European Academic Global Health Alliance (EAGHA).

Both Swedish partners, Umeå University and Karolinska Institute are running the "Swedish Research School in Global Health", a joint PhD programme. The HIPH is currently partnering with this research school proposing a DFG funded "International Research Training Group" (IRTG) on global health with both Swedish partners, which we hope will lead to a joint Swedish-German PhD programme on global health.

 <http://ki.se>



LSHTM

London School of Hygiene and Tropical Medicine

Since 1989, we have been working with various departments of the LSHTM, particularly in two domains: health economics, particularly with regard to exploring innovative and locally adapted ways of health care financing. Recently we have collaborated on health consequences of climate change and on maternal and child health. In Sir Prof. Andy Haines, we have a strong partner for

developing and strengthening capacity at European universities in research on global aspects of health.

Heidelberg and the LSHTM collaborated on the network Tropical Medicine Europe. We were both founding members of the successor Institution, the European Academic Global Health Alliance, chaired by Andy Haines.



UPS and CNES

Paul Sabatier University and French Space Research Center, Toulouse

The Institute built a consortium which includes this multi-disciplinary science cluster to improve our abilities to carry out environmental health research, particularly in the area of regional weather/climate on malaria and malnutrition in West Africa. Through our

cooperation, we have access to satellite imaging ("remote sensing") and regional climate models.

This enables us to study linkages e.g. with infectious disease models and real-time

data (see projects CLIMIMO and PALUCLIM, page 32). Prof. Jean-Pierre Lacaux has had close links to the Nouna Health Research Center and serves on its international scientific advisory board (page 92)



Tongji Medical College

Huazhong University of Science and Technology, Wuhan, PR China

The University of Heidelberg has a long-standing partnership with the Tongji Medical College. Prof. Ruppel is member of the university team which leads the exchange of doctoral and other students with Wuhan. Being a visiting professor of the Tongji

Medical College, he developed the Course "scientific presentation skills" for young Chinese scientists, which he taught several times, last in 2010 at the Tongji Hospital. The scientific cooperation with the Department of Parasitology (partner: Prof.

Li Yonglong) covers the parasitic infection schistosomiasis and included exchange in both directions of doctoral students (Pauline Grys, Wang Ting, Lei Jiahui) and faculty (Prof. Ruppel and Prof. Li).

Participants in a lecture of Prof. Andreas Ruppel at the Tongji Medical College



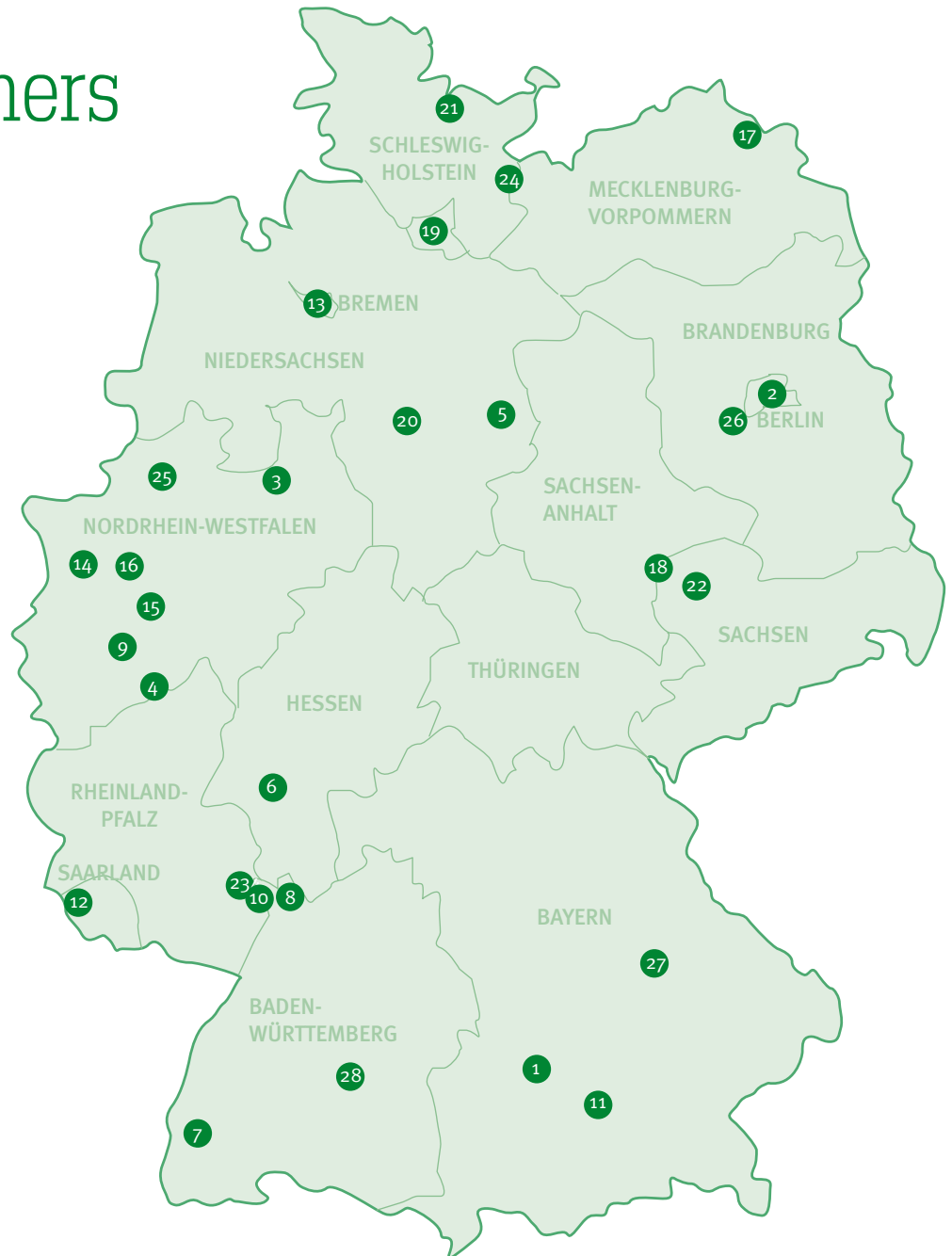




National Collaborations

Selected Partners in Germany

Our mission is to contribute to the improvement of health through research, teaching and direct services (patient care, consulting) in low- and middle-income countries and at home. A number of our research projects are therefore based in Germany, and these are performed in collaboration with many national partners. Among these are the German Cancer Research Centre in Heidelberg, the Institute for Mental Health in Mannheim, Helmholtz Centers in Munich and Centers for infectious diseases, and a large number of University institutes.



Selected collaborations in Germany

1. KORA-Studienzentrum Augsburg
2. Charité - University Medical Center Berlin
3. University of Bielefeld
4. Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ), Bonn
5. Helmholtz Centre for Infectious Diseases, Braunschweig
6. KfW Bankengruppe, Frankfurt
7. University of Freiburg
8. Heidelberg: DKFZ; University Hospital
9. Infectious Disease Department Cologne
10. Central Institute of Mental Health (ZI), Mannheim
11. Helmholtz Centre Munich
12. Saarland Cancer Registry, Saarbrücken

Collaborations within the framework of the National Cohort (see page 107)

2. Berlin: Max Delbrück Center for Molecular Medicine (MDC) Berlin-Buch; Charité - University Medical Center; Robert Koch Institut (RKI)
5. Helmholtz Centre for Infectious Diseases, Braunschweig
7. University Hospital Freiburg
8. Heidelberg: DKFZ; University Hospital
11. Helmholtz Centre Munich
10. Central Institute of Mental Health (ZI), Mannheim
12. Saarland Cancer Registry, Saarbrücken
13. Bremen Institute of Epidemiology and Prevention Research (BIPS)
14. University of Duisburg-Essen
15. Düsseldorf: German Diabetes Center; Leibniz Research Institute for Environmental Medicine (IUF)
16. University Hospital Essen
17. Ernst Moritz Arndt University, Greifswald
18. Martin-Luther-University of Halle
19. University Medical Center Hamburg-Eppendorf (UKE)
20. University of Veterinary Medicine Hannover, Foundation (TiHo)
21. Christian-Albrechts-University Kiel
22. University of Leipzig
23. Klinikum Ludwigshafen
24. University of Lübeck
25. University of Münster
26. Institute of Human Nutrition Potsdam-Rehbrücke (DIfE)
27. Regensburg University (RU)

Highlighted network collaborations within the framework of the multi-centre DZIF (German Centre for Infection Research) (see page 107)

19. Bernhard Nocht Institute for Tropical Medicine, Hamburg
11. Department of Tropical Medicine at the Ludwig-Maximilians-University (LMU), Munich
28. Institute of Tropical Medicine, Eberhard Karls University, Tübingen

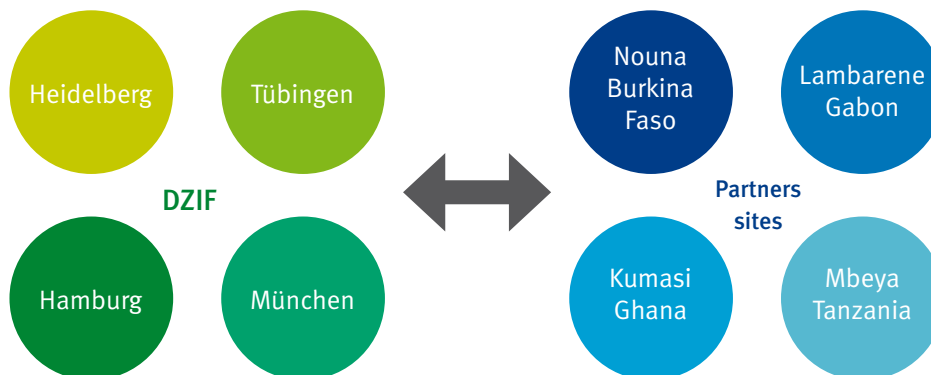
DZIF

German Centre for Infection Research

The DZIF is a multi-centre structure with 27 contributing institutions located on seven sites (Bonn-Köln, Giessen-Marburg-Langen, Hannover-Braunschweig, Hamburg-Lübeck-Borstel, Heidelberg, München, Tübingen). The Federal Ministry of Education and Research (BMBF) has founded it with the overarching aim to make translation of basic research findings into new approaches and applications for the diagnosis, prevention and treatment of infectious diseases faster and more effective. The translational efforts focusing on distinct infectious disease-related health problems will be coordinated

by "Thematic Translational Units" (TTUs). To support the TTU and foster the strategic coordination of concerted translational efforts translational infrastructures will be developed.

The DZIF has been founded in 2011 and started officially in January 2013. The Institute of Public Health will be involved in the TTU Malaria in the project "Impact of co-infections" and in the translational infrastructure "DZIF African partners sites" (see figure below).



In October 2011 a few infrastructural measures and projects have started and among them the "harmonization of research sites in infectious endemic countries". Our Institute is involved in a network of four German universities (Hamburg, Heidelberg, München and Tübingen) and four African research centres (Kumasi Centre for Collaborative Research in Ghana, Mbeya Medical Research Programme in Tanzania, Albert Schweitzer Hospital in Lambaréné, Gabon, Centre de Recherche en Santé de Nouna in Burkina Faso).

This project has for objectives to prepare the translational infrastructure "DZIF African Partners sites" and specifically to:

- › establish the principles and to identify the remit of an international research framework and define the roles of all partner institutions in the spirit of a long-term collaborative effort.
- › strengthen high quality infectious disease-related research both laboratory, clinical, epidemiological and public health in low-income countries.
- › provide training and scientific exchange for both, DZIF clinical scientists in these regions, as well as scientists from low-income countries in DZIF institutions.

www.bmbf.de/de/16544.php

National Cohort

A network of German research institutes from the Helmholtz Association, the Leibniz Association, various universities and research departments has taken the initiative for the creation of a large-scale, nation-wide, long-term prospective population study with the aim of explaining the causes of widespread diseases such as cardiovascular disease, cancers, diabetes, dementia, and infectious diseases, identifying risk factors, highlighting effective forms of prevention, and identifying options for the early detection of diseases.

In this cohort study, 200,000 people aged between 20 and 69 from across Germany will be medically examined and questioned on their living habits (e.g. physical activity, smoking, diet, occupation etc.). In addition, all participants in the study will supply blood samples which will be stored in a central biobank for later research projects. In the course of their observation over a period of 10–20 years, some of the participants are bound to develop diseases, which we will then be able to correlate with the data collected. The study thus offers unique potential for a wide range of scientific investigations. Researchers will therefore be able

to derive valuable findings on how

- › genetic factors,
- › environmental conditions,
- › social milieu, and
- › lifestyle

interact in the development of disease. These findings, it is hoped, will greatly facilitate the development of more effective prevention and treatment strategies for the most widespread diseases. It will also lead to new approaches to the prevention of chronic diseases.

In the last year, feasibility studies have been performed to test various aspects of the planned study. Our institute under the leadership of Professor Becher was responsible for evaluating methods to recruit migrants for this cohort.

 www.nationale-kohorte.de

DKFZ

German Cancer Research Center

The collaboration with the German Cancer Research Center (DKFZ) is through a number of large projects: The PhD program epidemiology (Graduiertenkolleg, see page 74) would not have existed without the contribution of several departments of the DKFZ, represented by the deputy speaker and members of the council (Profs. Hermann Brenner, Jenny Chang-Claude and Jürgen Wahrendorf) and other thesis supervisors. The case-control study on laryngeal cancer (see page 24) was launched when the principal investigator, Professor Becher, was still at the DKFZ. The national cohort is a new project, in which the DKFZ and the our Institute have joint responsibility for local recruitment (on the left side of this page).

 www.dkfz.de





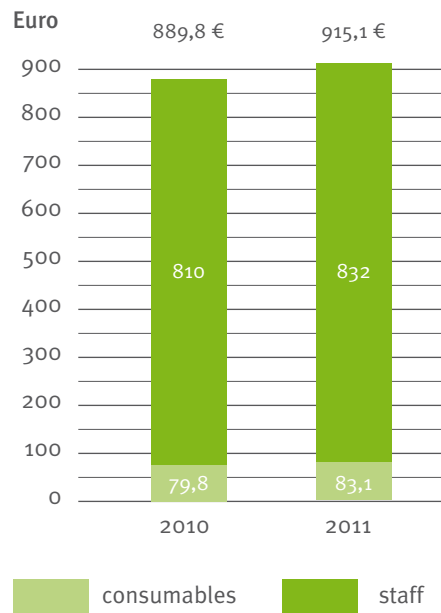
Funding

Core Funding

The core budget in 2010 was 889.800€ and increased by 2.8% to 915.100€ in 2011. 42% of the employees are paid out of core budget, 58% are paid by soft money.

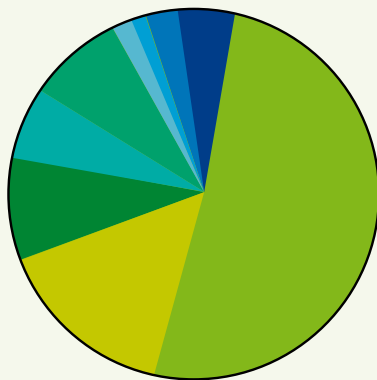
Main funding organisations are: DFG, EU, BMBF, GIZ, DAAD

Core funding 2010 / 2011



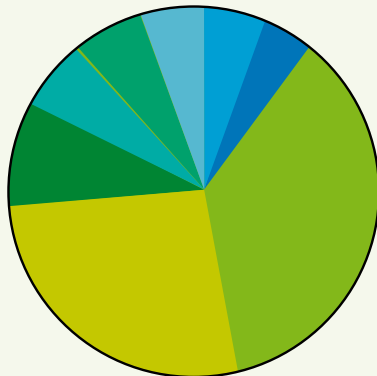
Third Party Funding

Soft money 2010 1.927.170 €



DFG 1.012.788 €	52 %	Foundation 30.000 €	2 %
EU 320.769 €	16 %	WHO 13.158 €	1 %
GTZ/GIZ 176.083 €	9 %	BMBF 48.954 €	3 %
Others 108.152 €	5 %	DAAD 122.424 €	6 %
Participants 141.859 €	7 %		

Soft money 2011 2.317.685 €



DFG 712.417 €	34 %	Participants 127.445 €	6 %
EU 596.471 €	28 %	Foundation 157.071 €	7 %
GIZ 128.557 €	6 %	BMBF 149.858 €	7 %
Others 139.254 €	7 %	DAAD 113.467 €	5 %





Institute's Life

Jubilee Conference

We strive to celebrate diversity of cultures and thoughts among our staff and students, commensurate with our global orientation in research and teaching. Examples for social events include ethnic cooking sessions, yoga groups, hiking/ biking events, film clubs, parties, whether it be for celebrating birthdays, vital events, doctoral defences or christmas/season parties to name just a few.

In 2012, the Institute will celebrate its 50th anniversary with a symposium "Global Health in the 21st Century" (September 13-15). With its roots in the South Asia Institute, its change to the Institute of Hygiene, the focus on global health with the integration of clinical tropical medicine in the newly founded "Department of Infectious Diseases" the institute will attempt an outlook to the challenges lying ahead, from universal

coverage, climate change the continuing threat of infectious diseases and the rising pandemic of non-communicable diseases in an aging world. At the same time the institute will celebrate (with) its partners in the North and the South.

www.klinikum.uni-heidelberg.de/Global-Health-Symposium.124596.o.html

Humboldt Fellow Maduni Madanayake (left side) meeting Federal President Gauck in Berlin.



Global Health Conference Heidelberg 2011

**Second international conference on
"Global health and preventive medicine",
14. – 16./17. June 2011, Heidelberg**

Under the patronage of the Federal and State Ministries of Research, an international conference on global health & preventive medicine was held in Heidelberg, Germany from 14. – 16. June 2011.

Prevention plays a key role in addressing global health challenges such as the control of pandemics, the rising tide of non-communicable diseases, and the spread of violence and injuries. In order to be effective, preventive strategies need to include underlying causes of avoidable morbidity and mortality by promoting policies that foster a healthy environment, healthy life styles and equitable access to health care and information. So far, the global health debate has not paid the due attention to the potential of prevention and health promotion. Thus, this conference aimed addressing this gap by 3 days of presentations and intensive deliberations with more than 100 speakers and 500 participants from many disciplines and policy makers from 31 countries around the world.

The discussion was organized along the following broad issues

- › Self-empowerment, lifestyle / life care and education for good health and life long well-being
- › How to best promote health by addressing the leading global risk factors
- › Partnerships for health across disciplines, institutions and traditional policy areas
- › Alternative intercultural preventative medical approaches, to focus on the use

- › of different cultural backgrounds
- › Good governance, policy relevance, and corporate social responsibility

Thematic topics included the control of non-communicable diseases and communicable diseases, harmful use of alcohol, violence, smoking, environmental health and climate change, sanitation, health promotion and health systems. At the crossroads of non-communicable diseases and communicable diseases the new horizon of the debate on health for all is moving towards the post-MDG 2015 agenda. Thus the main conclusions of the conference was summarized in the Heidelberg Declaration.

Chamber music hall in the conference location, the Kongresshalle Heidelberg



KSFE Heidelberg 2011

Conference of SAS-users in research and development

Conference organizer:

PD Dr. Heribert Ramroth
Dr. Carina Ortseifen (Heidelberg University)
SAS Institute Germany, Heidelberg

The German community of users of the statistical programming package SAS meets once a year to interchange knowledge and to discuss new developments of the SAS software. In 2011, this conference was held in Heidelberg from 24th to 25th of February: KSFE 2011 – Konferenz der SAS-Anwender in Forschung und Entwicklung. The number of participants exceeded any number seen

before, reaching 530 registered conference participants. The main topic of the conference was "Learning from each other". The conference covered tutorials on the usage of SAS®/Base, SAS® Graph, SAS® SQL, JMP and many other specific talks on the SAS software.

www.urz.uni-heidelberg.de/KSFE2011

Heidelberg contributed with this conference to the celebration of the 625th anniversary of the Ruperto Carola University of Heidelberg.

The lecture hall at the opening event of the KSFE 2011 in Heidelberg



The not-for-profit association "Friends of Nouna" e.V.

The idea to initiate a non-profit association giving humanitarian aid beyond causal research was developed following research activities at the "Centre de Recherche en Santé de Nouna (CRSN)" in Nouna/Burkina Faso in the context of the SFB 544 "Control of tropical infectious diseases" (see chapter 1). The association "Friends of Nouna" was founded in 2001 by members of the institute. Prof. Becher was chairman until 2004 followed by Dr. Ronellenfitsch until 2008; since then the position is held by Dr. Louis.


The aims of the organisation are the promotion of projects in the fields of training, agri-cultural development and health in the province Kossi, situated in the North West of Burkina Faso as well as the promotion and development of cultural exchange between Burkina Faso and Germany within the idea of international understanding.

The first major project was building a well in the small village of Cissé. In this village, an extremely high child mortality was observed, and the drinking water supply was particularly poor. Thanks to the generous help of sponsors the well was finished by the end of 2004. Reparations made in 2010

after a falling tree had damaged the well external structure ensured further access to safe water and use of the well.

Follow up of projects and maintenance of current installations represents a priority for the association. Activities in Germany focus on fundraising and actions to promote cultural exchange between Burkina Faso and Germany. In recent years, this has included representation at the African market and at the christmas market in Heidelberg, an event to introduce African musical instruments at a Kindergarten, and the production and promotion of a CD recorded by local traditional musicians in Nouna. The association aims to continue its current work and promote new projects and activities in the future.

To contact us:
info@freunde-von-nouna.de

 www.freunde-von-nouna.de

The current projects in Burkina Faso include:

- › Installation of solar panels on rural health centers and maternities (CSPS) in particular to provide light for deliveries taking place at night. Within the last 5 years, 6 CSPS have been equipped with solar installations.
- › Set up and care of a food garden in the health and nutrition center for undernourished children (CREN) in Nouna.
- › Support for developing dormitory centers for school students away from home.

President: Dr. Valérie Louis

Vice-president: Dr. Paul Conrad

Treasurer: Dr. Aurélia Souares

Liaison officer: Nobila Ouédraogo

Webmaster: Olivier Kalmus

Green Institute

The idea for the project "Green Institute" has an unusual history, considering that it is an university or hospital "energy-saving-project": the strong engagement of environmentally-conscious staff at the University of Heidelberg's Institute of Public Health and the active support of the Institute's director, Prof. Rainer Sauerborn, made it possible for the "green seedling" to strike roots. By now, it has already started to flourish and is bearing first fruits.

First, the Institute introduced some small measures, which led to the reduction of paper usage and also to the switch from white to recycled paper. Ways to reduce the amount of overseas travel were also initiated. Where possible, multimedia conferences and other alternative methods are used to save time, money and of course reduce the carbon footprint of the institute. Next the "Green Institute" team looked into the possibilities of saving energy at the Institute itself. It became clear rather quickly that this project had wide-reaching implications and that certain technical knowledge was needed in order to be able to measure as well as to evaluate the energy consumption

before seeking to reduce it. To obtain exact numbers and develop convertible measures, the "Green Institute" team sought new and supportive business partners: the technical department of the University Hospital, the Energy Commissioner of the University and the consulting and coordination team Hoinka and Dr. Banedji-Schafii.

Material and methods

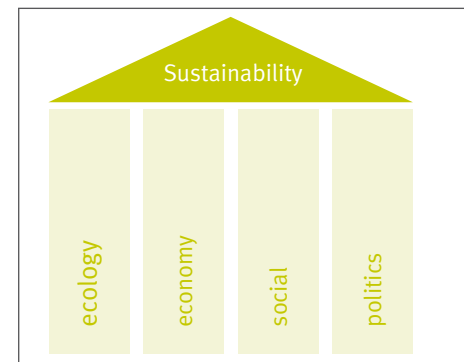
The project group had knowledge about the independent survey of the BUND (Bund für Umwelt und Naturschutz Deutschland – "Friends of the Earth Germany") which revealed that in clinics and hospitals nationwide energy costs of about 600 million Euros per year could potentially be saved. Everyone was aware that, for example, through building measures on the facade, or renegotiating the contract with the current or a new energy supplier, the University Hospital could save much energy, money and CO₂-Emissions.

As these decisions are not in the hands of the Institute of Public Health, only those

measures for saving energy have been taken into consideration which can be influenced by staff members.

The idea was to calculate the Institute's real rate of electricity consumption per employee. Until then there existed neither numbers nor a feeling of how much energy was consumed and at which costs - especially as the Institute does not have to pay for electricity itself. Subsequently, measures for saving energy would be carried out and the use of electricity would be measured to determinate the concrete potential for saving.

At this point, it was very important for the team to keep in mind every single of the pillars of sustainability, that is next to ecological and economical features also the pillars of social sustainability and political sustainability (see figure below).



Five working groups emerged:

- I: Object-/building analyses
- II: Equipment analyses
- III: Users behavior
- IV: Organisation/management
- V: PR/politics

While working group I recorded the data of the entire institute's buildings and determined model buildings and rooms for later measurements (see figure 2), working group II determined the exact number of power-hungry devices in order to be able to estimate the actual energy consumption during a two-week-trial.

Working group III thought of means to spread awareness and motivation to take an active role in the power saving project. The fourth working group attended to "organization and management" (including the issues of allocating the employees to their working spaces, the purchase, maintenance and repair of electronic devices, as well as the basic energy-saving setting on the computers). The task of the public relations working group was communication and information, mainly to spread awareness and motivate people to participate in the project.

Institute staff and guests were invited to take part in a seminar including a work-shop, which introduced the project. Team members as well as external speakers presented different aspects of the project. Working group III seized the opportunity to collect data of usa-

Scenario I: What measures were included?

Computers:

Unplugging computers after work (evening) and at the weekends. Easily realizable by using power strips with power buttons.



Printers:

Unplugging printers over night and at the weekends. Easily realizable by using power strips with power buttons. Enabling automatically switching into power saving mode during daytime.



Lighting:

The installed lamps were already optimized (4x38W T5 lamps with electronic ballasts instead of 4x58-80W T8 lamps). Additional energy can be saved by switching off the light when leaving the room or when no light is required at all.



With these measures up to 40% of energy can be saved.

ge behaviour before the topic was introduced with the help of a pre and post test questionnaire. During the workshop more measures and tools for saving energy were developed, which were presented and discussed during a concluding session.

From this pretest data it could be concluded that most of the energy was used for laptops, computers, and printers. Based on these findings, different scenarios were developed which were supposed to evaluate small and bigger investments (in for example power strips or the purchase of new electronic equipment). As a result savings of up to 44% for scenario 1 and 55% for scenario 2 were

estimated. With a small investment of about 280 Euros (scenario 1) the institute could save 3800 Euros and 14,520 kg CO₂ within three years.

Scenario 1 was chosen (mainly due to cost reasons). The investments were made and measurements were done yet again. As can be seen in figure 4, 30% of energy could be saved with this scenario. This meant savings of up to 1780 Euros and 9,960 kg CO₂, at a amortization rate of three years.

The results of the user questionnaire were interesting: 90% of the participants stated that they would use means to save energy (as for

example turning off the lights when leaving a room), but 76% would still like to know more about energy-saving options.

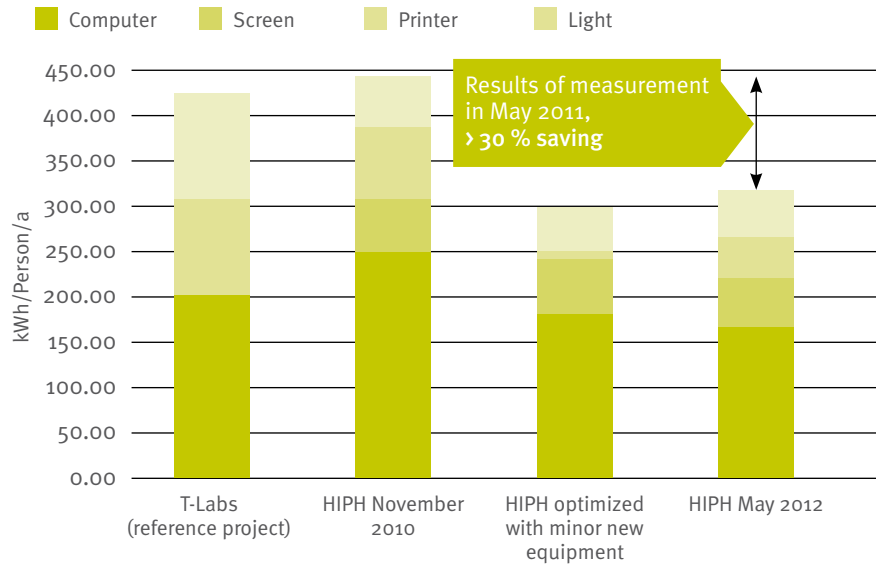
As mentioned above in the introduction, this pilot project came to life on a very unusual way and will, in short-term, not achieve bigger savings for the entire university hospital. This is mostly due to financial and organizational reasons, nonetheless is the first step in this direction.

Further, this project can be taken as an example for other institutions such as schools and hospitals, as in institutions of this kind the saving potential is usually rather high. Therefore, the exchange and discussion of knowledge and ideas is the only way to spread awareness of the topic among consumers in order to create incentives of savings and thus create power efficiency on a larger scale.



Some members of the "Green Institute" team

Workplace room 13 (kWh/Person/a)



With minor investment and "green" behaviour HIPH could save more than 30 % energy.

The IT System at the Institute

The information technology (IT) group of the institute consists of one doctoral student with a degree in medical informatics and a part time student assistant (HIWI). They are responsible for maintenance of both the server and corresponding infrastructure(s). The main tasks are broadly divided into three areas: Software-, hardware-, operating system and network infrastructure. These include: Server, local computer and printer

maintenance, (re-)installations of operating systems, different applications and drivers, orders for new software and/or technical components, trouble shooting in cases of viruses and malware intrusion.

The institute maintains its own Linux server which is currently a rack mount server with 3 gigabytes RAID 5 storage. The server is located centrally in the university commu-

nications center. The server is based on a Fedora Linux operating system, using Samba shares to enable staff access and interconnections. Due to frequent absence of staff members the need of flexible and secure exchange (in addition to e-mail communication) of scientific materials and key documents is required. A full data backup of shares is done every 3-4 months on external USB hard disks. Incremental backups are independently carried out during a week.

Overall, the institute has approximately 50 desktop computers and around 30 laptops/netbooks. Most run with the operating system Windows XP, and some on Mac OS X. There are about 20 printers. Software is installed locally by the IT staff. It includes Microsoft Office, Skype, Sophos, Endnote, PDF Programs, and additional statistical software like SAS or Stata, and specialized software in some cases.

Prominent musicians at a HIPH advent concert in 12/2011



Staff

Members of the institute with a contract in 2010/2011

Professors			Country of origin
Sauerborn	Rainer	Climate change and health	Germany
Becher	Heiko	Epidemiology and biostatistics	Germany
Müller	Olaf	Disease control in disadvantaged populations	Germany
Jahn	Albrecht	Global health policy and health systems	Germany
Marx	Michael	Health service and quality management	Germany
Ruppel	Andreas	Teaching unit	Germany
Wilder-Smith	Annelies	Mercator Professor, Teaching unit	Netherlands

Adjunct Professors			Country of origin
Dong	Hengjin	International health economics and financing	China
Sarker	Malabika	Reproductive health and HIV / AIDS	Bangladesh

Postdocs / Scientists			Country of origin
De Allegri	Manuela	International health economics and financing	Italy
Gabrysch	Sabine	Epidemiology and biostatistics	Germany
Horstick	Olaf	Teaching unit	Germany
Külker	Rainer	Teaching unit	Germany
Kynast-Wolf	Gisela	Epidemiology and biostatistics	Germany
Leppert	Gerald	International health economics and financing	Germany
Louis	Valérie	Climate change and health	France

Loukanova	Svetla	Climate change and health	Bulgaria
Neuhann	Florian	Reproductive health and HIV / AIDS	Germany
Ramroth	Heribert	Epidemiology and biostatistics	Germany
Safer	Anton	Epidemiology and biostatistics	Austria
Souares	Aurélia	Health service and quality management	France
Tozan	Yesim	Climate change and health	Turkey
Winkler	Volker	Epidemiology and biostatistics	Germany
Yamamoto	Shelby	Climate change and health	Canada

Administration/Support			Country of origin
Bertram	Claudia	Teaching unit	Germany
Braun - van der Hoeven	Elke	Epidemiology and biostatistics	Germany
Dey	Pinaki	International health economics and financing	India
Gold-Feuchtmüller	Hilde	Disease control in disadvantaged populations / Reproductive health and HIV / AIDS	Germany
Häfner	Angela	Climate change and health	Germany
Niebel	Sandra	Climate change and health	Germany
Nitschke-Edert	Anke	Teaching unit	Germany
Schwarzmann	Sabine	Climate change and health	Germany
Sommer	Katharina	Climate change and health / Teaching unit	Germany
Stieglbauer	Gabriele	Epidemiology and biostatistics	Germany
Petersen	Natascha	Teaching unit	Germany
Wolf	Annette	Epidemiology and biostatistics	Germany

Guest Scientists			Country of origin
Banedj-Schafii	Mandana	Green institute	Iran
Civitelli	Giulia	Epidemiology and biostatistics	Italy
Jakubicka	Thomas	Health service and quality management	Austria
Madanayake	Maduni	Climate change and health	Sri Lanka
Meißner	Peter	Disease control in disadvantaged populations	Germany
Rankin	Johanna	Epidemiology and biostatistics	Germany / USA

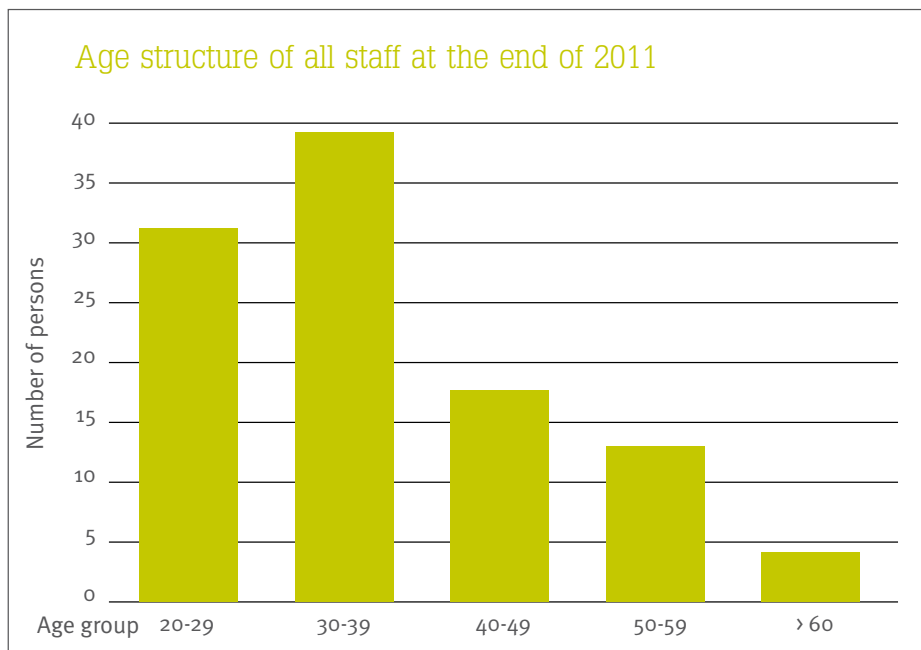
Sankoh	Osman	Epidemiology and biostatistics	Sierra Leone
Siling	Katja	Epidemiology and biostatistics	Slovenia
Yé	Yazoumé	Climate change and health	Burkina Faso
Zhen	Yu	International health economics and financing	China

Doctoral Students			Country of origin
Adokiya Nyaaba	Martin	Disease control in disadvantaged populations	Ghana
Aji	Budi	Climate change and health	Indonesia
Beiersmann	Claudia	Disease control in disadvantaged populations	Germany
Codyre	Patricia	Climate change and health	Ireland
Dalaba	Maxwell	Climate change and health	Ghana
Dambach	Peter	Climate change and health	Germany
Deckert	Andreas	Epidemiology and biostatistics	Germany
Degougé	Vivian	Disease control in disadvantaged populations	Camerun
Ding	Yan	International health economics and financing	China
Farzana	Yasmin	Climate change and health	Bangladesh
Fei	Yang	International health economics and financing	China
Glaser	Nicola	Reproductive health and HIV / AIDS	Germany
Grys	Pauline	Disease control in disadvantaged populations	Germany
Haque	Aminul	Climate change and health	Bangladesh
Kalmus	Olivier	International health economics and financing	Luxemburg
Kuhrs	Ema	Epidemiology and biostatistics	Georgia
Lorenz	Eva	Epidemiology and biostatistics	Germany
Lübbert	Julia	Reproductive health and HIV / AIDS	Germany
Malik	Ahmad	Climate change and health	Pakistan
Mohammed	Shafiu	International health economics and financing	Nigeria
Nesbitt	Robin	Epidemiology and biostatistics	Canada
Ouédraogo	Nobila	Disease control in disadvantaged populations	Burkina
Parmar	Divya	Climate change and health	India
Phalkey	Revati	Health service and quality management	India

Popilian	Ramona	Health service and quality management	Romania
Prytherch	Helen	Health service and quality management	Great Britain
Robyn	Jake	Climate change and health	USA
Rosenberger	Kerstin	Epidemiology and biostatistics	Germany
Santi	Irene	Epidemiology and biostatistics	Italy
Savadogo	Germain	Climate change and health	Burkina Faso
Shafik	Amal	Climate change and health	Egypt
Scheibe	Florian	Reproductive health and HIV / AIDS	Germany
Ssenono	Mark	Epidemiology and biostatistics	Uganda
Stahl	Hans-Christian	Climate change and health	Germany
Theurer	Antje	Reproductive health and HIV / AIDS	Germany
Yé	Maurice	Climate change and health	Burkina Faso
Yrjoe-Koskinen	Jaakko	Climate change and health	Finnland
Zimmermann	Heiko	Epidemiology and biostatistics	Germany

Student Assistants			Country of origin
Asante Poku	Afua	International health economics and financing	Ghana
Ballhorn	Annette	Climate change and health	Germany
Barteit	Sandra	Reproductive health and HIV / AIDS	Germany
Dia	Oumar	Epidemiology and biostatistics	Senegal
Duffert	Christin	Teaching unit	Germany
Glaser	Nicola	Reproductive health and HIV / AIDS	Germany
Haase	Maxi	Teaching unit	Germany
Haßler	Katja	Climate change and health	Germany
Heimisch	Melissa	Climate change and health	Germany
Henkes	Katrin	Teaching Unit	Germany
Kama	Cigdem	Epidemiology and biostatistics	Turkey
Kroha	Verena	Teaching unit	Germany
Kyei	Nicholas	Epidemiology and biostatistics	Ghana
Lohela	Terhi	Epidemiology and biostatistics	Finnland

Maurer	Caterina	Teaching Unit	Germany
Mazzurana	Eva	Teaching Unit	Italy
Mosenpour	Amir Mohsen	Teaching unit	Iran
Otte im Kampe	Eveline	Epidemiology and biostatistics	Germany
Petersen	Margot	Health service and quality management	Germany
Rankin	Johanna	Epidemiology and biostatistics	USA
Rothermund	Nandita	Teaching Unit	Germany
Schmid	Simona	Teaching unit	Germany
Schoeps	Anja	Epidemiology and biostatistics	Germany
Schröber	Jakob	Global health policy and health systems	Germany
Taubi	Rasha	Teaching unit	Libanon
Wolf	Robert	Epidemiology and biostatistics	Germany
Zöllner	Caroline	Disease control in disadvantaged populations	Germany



Doctoral Theses

Name	Nationality	Supervisor	Started in	Title of thesis
Aji Budi	Indonesian	Rainer Sauerborn	2009	The effects of health insurance for poor people on fairness and equity in health care financing: An empirical illustration using out of pocket payments in Indonesia
Patricia Codyre	Irish	Rainer Sauerborn	2008	Public health knowledge-based interventions for improving the quality of care in Subsahara Africa (computer-mediated communication systems a HCI solution)
Dalaba Maxwell	Burkinabé	Rainer Sauerborn	2011	Cost effectiveness of clinical decision support system (CDSS) in improving prenatal and maternal care in Ghana
Peter Dambach	German	Rainer Sauerborn	2009	Modelling of persontime at risk of malaria in Nouna, Burkina Faso by remote sensing of distribution and quality of surface water
Aminul Haque	Bangladeshi	Rainer Sauerborn	2010	Household's perception and coping strategies about the effect of climate change on health
Ramona Popilian	Romanian	Rainer Sauerborn	2009	Analysis of financial and operational sustainability in a community based health insurance in rural Burkina Faso
Yasmin Farzana	Bangladeshi	Rainer Sauerborn	2010	Mapping out the present scenario of prevention, early detection and treatment of diabetes at the first line health care centers and factors for the emerging epidemics of diabetes in Bangladesh
Divya Parmar	Indian	Rainer Sauerborn	2009	Relationship between community-based health insurance and household economic indicators in Nouna, Burkina Faso
Helen Prytherch	British	Rainer Sauerborn	2009	Definitions, determinants and measurements of health workers motivation in low income settings
Jake Robyn	US	Rainer Sauerborn	2009	Integrating innovative health care provider payments systems into extension of community-based health insurance in Burkina Faso

Name	Nationality	Supervisor	Started in	Title of thesis
Germain Savadogo	Burkinabé	Rainer Sauerborn	2010	Utilization of an alternative method for measuring poverty: the community wealth ranking as an efficient method to identify the poorest in a community setting, Nouna health district, Burkina Faso
Amal Shafik	Egyptian	Rainer Sauerborn	2003	The impact of community health insurance on household health expenditures in Burkina Faso
Maurice Ye	Burkinabé	Rainer Sauerborn	2009	Implementing a performance based incentive scheme taking into account health workers perspectives in Nouna health district (acceptability, feasibility and potential impact on maternal and child health care improvement)
Jaakko Yrjoe-Koskinen	Finnish	Rainer Sauerborn	2006	Der Einfluss der Organisationskultur auf die Nutzung der Gesundheitsberichterstattung durch die staatlichen Gesundheitsdienste im ländlichen Burkina Faso
Hans-Christian Stahl	German	Rainer Sauerborn	2008	Economic evaluation of a novel therapeutic approach to the treatment of cutaneous leishmaniasis in Kabul, Afghanistan
Yang Fei	Chinese	Hengjin Dong	2010	Feasibility evaluation of an integrated surveillance system for infectious diseases in rural China
Yan Ding	Chinese	Hengjin Dong	2010	Economic evaluation of integrated surveillance system in rural China
Mohammed Shafiu	Nigerian	Hengjin Dong	2008	Perceived-performance on the formal sector program of the health insurance scheme in Nigeria: An assessment of the insured, health care providers, and health maintenance organizations in Kaduna State, Nigeria
Robin Nesbitt	Canadian	Heiko Becher / Sabine Gabrysch	2011	The influence of distance and quality of care on preventive versus emergency use of health facilities for delivery in the Brong Ahafo region of Ghana
Elisabeth Rudolph	German	Heiko Becher / Heribert Ramroth	2008	Überlebenszeitanalyse bei Larynxkarzinompatienten in Abhängigkeit von Faktoren des Lebensstils und klinischen Merkmalen
Irene Santi	Italy	Heiko Becher / Heribert Ramroth	2011	Determining survival rates of laryngeal cancer patients taking lifestyle factors into account
Sami Chenouda	German	Heiko Becher / Heribert Ramroth	2008	Einfluss von Komorbidität, Zweitkarzinomen und Rezidiven auf die Überlebenszeit beim Larynxkarzinom
Andreas Deckert	German	Heiko Becher	2008	Kohortenstudie zur Mortalität bei Spätaussiedlern im Raum Augsburg: Genetische und lebensstilbedingte Faktoren

Name	Nationality	Supervisor	Started in	Title of thesis
Kerstin Rosenberger	German	Heiko Becher	2007	Implementation and parameter estimation of an intra-host model describing human immune response in falciparum malaria
Susanne Sonnberg	German	Heiko Becher	2008	Ovicide Wirksamkeit von Produkten zur Behandlung der Infestation mit der Kopflaus (Pediculus capitis)
Ema Kuhrs	Georgian	Heiko Becher	2008	Risikofaktoren für kardiovaskuläre und zerebrovaskuläre Krankheiten von Migranten aus Ländern der ehemaligen Sowjetunion in Deutschland
Ari Paltiel	Israeli	Heiko Becher	2007	Mortality in Jewish migrants from Russia to Israel
Heiko Zimmermann	German	Heiko Becher	2010	Oral health in migrants from the former Sowjet Union
Eva Lorenz	German	Heiko Becher	2011	Generalisation of the fractional polynomial procedure for semi-continuous variables in epidemiology and clinical research
Ingfu Wirjawan	Indonesian/ German	Annelies Wilder-Smith	2011	Research on emerging infectious diseases in South East Asia
Antje Theuer	German	Gerd Fätkenheuer (Cologne)/ Florian Neuhann	2010	Causes of fever among in patient of Kamuzu Central Hospital
Julia Lübbert	German	Paul Schnitzler / Florian Neuhann	2008	HIV resistance in treatment interruption
Nicola Glaser	German	Olaf Müller / Florian Neuhann	2011	Chronic kidney disease in HIV and Non HIV patients Malawi
Saskia Nahrgang	German	Olaf Müller / Florian Neuhann	2007	HIV/AIDS treatment quality in Burkina Faso
Florian Scheibe	German	Olaf Müller / Florian Neuhann	2007	HIV/AIDS treatment quality in Uganda
Paul Konrad	German	Olaf Müller	2007	Quality of maternal health in Burkina Faso
Tabea Schroer	German	Olaf Müller	2008	Entomological efficacy of ITN in Burkina Faso
Claudia Beiersmann	German	Olaf Müller	2008	Malnutrition in young children of Burkina Faso
Bernd Marks	German	Olaf Müller	2008	Safety of methylene blue in African children with and without G6PD deficiency
Joelle Bals	German	Olaf Müller	2009	Long-term effects of ITN in Africa
Nobila Ouédraogo	Burkinabé	Olaf Müller	2009	Public health aspects of childhood vaccinations in Africa
Martin Adokiya	Ghana	Olaf Müller	2011	Surveillance of infectious diseases in West Africa

Name	Nationality	Supervisor	Started in	Title of thesis
Katharina Sušac	German	Michael Marx	2011	Water supply projects and their influence on diarrhoea prevalence in 0-5 year-olds in Burundi, East-Africa
Sylvia Sax	Canadian	Michael Marx	2007	Adapting international healthcare accreditation in a developing country: when complex methods meet complex systems
Silvia Runge-Ranzinger	German	Michael Marx	2008	Is dengue disease surveillance able to predict or detect outbreaks and initiate timely response? Assessment of national dengue control programmes in Thailand and Cambodia
Katharina Weigl	German	Michael Marx	2012	Quality approaches going beyond toolkits in Tanzania's health-care system
Revati Phalkey	Indian	Michael Marx	2008	Structure and performance of the integrated disease surveillance system in Maharashtra, India
Patrik Tabatabai	German	Michael Marx	2010	The internal brain drain of health care professionals in the southern zone of Tanzania
Florian Vogt	German	Michael Marx	2010	Health risk patterns among refugees and residential populations in South Sudan
Tatjana Ohlig	German	Albrecht Jahn	2011	Long term consequences of antenatally detected and undetected intrauterine growth retardation
Abubakari Abdulai	Ghana	Albrecht Jahn	2011	Malnutrition in school children in Ghana

Awards

Name	Prizes awarded 2010/2011
Manuela De Allegri	2011: Best thesis supervisor
Andreas Deckert	Best paper award, KSFE 2011, 15th Conference of SAS users in research and development; University of Heidelberg
Sabine Gabrysch	Rahel Goitein-Straus award of the Medical Faculty of the University of Heidelberg 2010-11
	Postdoctoral fellowship of the Baden-Württemberg Foundation 2011-13
	Young investigator award at the 19th IAE World Congress of Epidemiology
Nicholas Nana Adjei Kyei	Class 2010/2011: Best master student
Andreas Ruppel	2011: Best teacher
Sylvia Sax	2011: Best short course coordinator
Hans-Christian Stahl	Letter of appreciation from the Afghan Ministry of Public Health
Annelies Wilder-Smith	Mercator prize
Heiko Zimmermann	Poster prize of the annual conference of the GMDS and DGEpi, September 2011
	Poster prize of the annual conference of the NAgP in Bonn, October 2011

Committee Memberships

Name	Member
Heiko Becher	Elected member of the "Fachkollegium" of the German Research Foundation (DFG) for the subject "Epidemiologie, medizinische Biometrie, medizinische Informatik, Public Health"
	Speaker of the PhD programme "Epidemiology (Graduiertenkolleg 793)", University of Heidelberg
	Member of the council of the Berlin School of Public Health
	Elected executive board member of the German Society of Epidemiology, 2012-2014
Sabine Gabrysch	Steering committee member of the John Snow Society
Albrecht Jahn	Commission Dr. sc. hum. of the Medical Faculty in Heidelberg (since 2011)
Gerald Leppert	German Society for Health Economics - International cooperation (Prof. Flessa) microinsurance network working group on health insurance
Olaf Müller	Commission Dr. med. of the Medical Faculty in Heidelberg
Florian Neuhann	Chairman of the section Universal Access of the German AIDS Society
Andreas Ruppel	Commission Dr. sc. hum. of the Medical Faculty in Heidelberg (until 2011)
Hans-Christian Stahl	German Society for Health Economics - international cooperation (Prof. Flessa) Waisenmedizin e.V. - PACEM (executive board)
Annelies Wilder-Smith	President, Asia Pacific Society of Travel Medicine
	Chair, conference of the Asia Pacific Society of Travel Medicine Singapore 2012
	Executive board member, International Society of Travel Medicine

Editorial Boards

	Journal
Heiko Becher	Biometrical Journal
	Global Health Action
Sabine Gabrysch	Emerging Themes in Epidemiology
Olaf Müller	Malaria Reports
	Scientific World Journal
Rainer Sauerborn	Global Health Action
Annelies Wilder-Smith	Journal of Travel Medicine
	Expert Review of Vaccines

Certificates in 2010 / 2011

Name	Certificate
Manuela De Allegri	"Baden-Württemberg Certificate" for University Teachers
Andreas Deckert	"Baden-Württemberg Certificate" for University Teachers
Sabine Gabrysch	"Baden-Württemberg Certificate" for University Teachers
Heribert Ramroth	"Baden-Württemberg Certificate" for University Teachers
Malabika Sarker	"Baden-Württemberg Certificate" for University Teachers
Aurélia Souares	"Baden-Württemberg Certificate" for University Teachers
Hans-Christian Stahl	Lecturer training Heidelberg (DOS I & DOS II)
Volker Winkler	"Baden-Württemberg Certificate" for University Teachers

List of Abbreviations

Some frequently used abbreviations

ART	Antiretroviral treatment
BMBF	Bundesministerium für Bildung und Forschung (Federal Ministry of Education and Research)
CRSN	Centre de Recherche en Santé de Nouna
DAAD	Deutscher Akademischer Austauschdienst (German Academic Exchange Service)
DFG	Deutsche Forschungsgemeinschaft (German Research Foundation)
DKFZ	Deutsches Krebsforschungszentrum (German Cancer Research Center)
DSS	Demographic surveillance system
EU	European Union
FP	Framework programme
GIZ	German Agency for International Cooperation

HDSS	Health and demographic surveillance system
HIPH	Heidelberg Institute of Public Health
INDEPTH	International network for the demographic evaluation of populations and their health in developing countries
ITN	Insecticide-treated mosquito nets
JPGSPH	James P Grant School of Public Health
LSHTM	London School of Hygiene and Tropical Medicine
MDG	Millennium development goal
PI	Principal investigator
REACH	Research for equity and community health
SFB	Sonderforschungsbereich (Special research center)
SRHR	Sexual and reproductive health and rights

SSA	Sub-Saharan Africa
tropEd	International network of institutions for higher education in international health
WHO	World Health Organization

