



Centre
Virchow-Villermé



Progress report of the Centre Virchow-Villermé
for the academic year 2014-2015

The Centre Virchow-Villermé for Public Health Paris-Berlin (CVV) was initiated by the French and German governments with the aim of gathering competences in the field of public health from France and Germany, and thereby helping solve global health problems. The projects of the CVV are designed to deliver concrete results with mutual benefits for France and Germany and to promote the exchange and teamwork of students and scientists from both sides of the Rhine.

The Centre Virchow-Villermé has been created and launched to assume a major responsibility in public health and global health by doing relevant research, educating the health work force at all levels and making recommendations on relevant public health issues for France, Germany and beyond.

During the academic year 2014/2015, the CVV pursued its mission to jointly develop and promote innovative education and to offer a bi-national platform for linking research with policy in Global Public Health. The objectives of the Centre are:

- To foster faculty and students' mobility between France and Germany
- To organize French-German dialogue in Global Public Health
- To contribute to research activities in different areas of Global Public Health
- To play a leading role in innovative education in Global Public Health
- To promote open access to education and research

In addition to the regular funding from Charité-Universitätsmedizin Berlin and Université Sorbonne Paris Cité (USPC), the activities described in this report have been realized thanks to additional types of funding such as *Investissements d'avenir* (support of the French government), Chair Sanofi (donation), and French-German University (grant), Assistance Publique-Hôpitaux de Paris (Paris offices).

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Principal Developments on the German side of the CVV

The Charité has created some new structures in order to build and establish Public Health and Epidemiology, both at the Charité and in Berlin in a more efficient and visible way. There is new cooperation between the Charité, the Technical University (TU) and the Alice Salomon Hochschule (ASH), all of which constitute the new Berlin School of Public Health (BSPH). The BSPH will ensure high quality education for students interested in the Public Health domain. This will also be the main teaching platform of the CVV in Berlin. This restructuring of the Public Health Domain in Berlin has almost been completed and the Sanofi-Chair will be taken up from January 1st, 2016.

Tobias Kurth will be appointed as the “Sanofi-Chair” and join the directorship of the CVV in Berlin on January 1st, 2016.

Tobias Kurth is currently a Director of Research at the French National Institute of Health and Medical Research (Inserm) in the Research Center for Epidemiology and Biostatistics (U897) and the University of Bordeaux. He is also an Adjunct Professor of Epidemiology at the Harvard T.H. School of Public Health.

He received his M.D. from the University of Tübingen, Germany and a doctorate in epidemiology from Harvard. He served as a resident in the Department of Neurology at the University Hospital of Essen, Germany. His principal areas of research consist of the following focuses: (i) neuroepidemiology with specific focus on the interrelationships between vascular risk factors, migraine, and cardiovascular disease as well as the prevention of stroke; (ii) pharmacoepidemiology, specifically risk and benefits of analgesic use; and (iii) the application of tools to control for confounding, particularly the propensity score. In Bordeaux, he was involved in the creation of the cluster of excellence program, “Health Determinants in Societies” (HEADS), and in the creation of a new School of Public Health.

Tobias Kurth has published >200 original and review articles in indexed journals and is listed among the <1% most cited researchers in clinical medicine and social sciences. He is the Associate Editor of Cephalalgia and Consulting Clinical Epidemiology Editor at the British Medical Journal. He is involved in teaching and training, both in the US and internationally, specifically in population health science methods and neuroepidemiology.

As he has lived in France for many years, he has excellent knowledge of the French research environment and structure.

Principal Developments on the French Side of the CVV

In June 2015, the Centre Virchow-Villermé at Paris won a call from Agence Nationale de la Recherche, named “Initiative d’Excellence dans les Formations Innovantes Numériques (Idefi-n)” and ranked 2nd out of 69 applications. Although the precise amount of this grant has not been yet fixed when these lines were written, it is expected to be around 1 million euro for the three coming years. This grant rewards and acknowledges the experience in MOOCs acquired in the last two years by CVV-Paris. In addition to becoming one of the worldwide leaders in the production of MOOCs in public and global health, CVV-Paris has developed an expertise and research activities related to MOOCs.

By attracting invited faculties during their sabbatical, CVV-Paris has quickly set up an international network of excellence in various fields of global public health: in biostatistics and epidemiology, in health care management, in demography, and history of public health, and in 2015 in climate change and health related issues thanks to Prof. Rainer Sauerborn from the University of Heidelberg.

CVV-Paris has applied for and won the opportunity to organize a side event during the COP21 (conference of climate change held in Paris) in December 2015. This major event has attracted brilliant scientists from the University of Sorbonne Paris Cité, University of Geneva, University of Heidelberg, the London School of Hygiene and Tropical Medicine. It is sponsored by the Lancet and the Rockefeller Foundation. This will be the occasion to launch three new MOOCs on climate change and health related issues.

With more than 12 permanent staff members, CVV-Paris has established a “MOOC Factory” which allows for the production of the entire MOOC delivery process, without any subcontractors. Welcoming internships from Germany, CVV is dedicated to help the mobility of students and faculties. The new faculty position hired at CVV Berlin will help foster collaborations and partnerships between France and Germany in the coming years.

1. Education

The Centre Virchow-Villermé focuses on the joint development of research and teaching skills in the field of public health. The objective of the Centre Virchow-Villermé is to contribute to the dissemination of knowledge in the field of public/global health and open science by proposing educational opportunities and training through the development of Massive Open Online Courses (MOOC).

In less than two years, the Centre Virchow-Villermé has become one of the most important producers of Massive Open Online Courses (MOOCs) in the field of public and global health. It is worth mentioning that **17 MOOCs will have been produced by the end of 2015**, in various topics of our field, from biostatistics and epidemiology to environmental sciences or demography, gathering more than 40,000 participants. To our knowledge there is no other academic institution in Europe exhibiting such a catalogue today. Our unique (and preferred) competitor, who is (still) ahead of us, remains the Johns Hopkins Bloomberg School of Public Health. Its Dean, Michael Klag, our friend and member of CVV International Advisory Board, has been open and kind enough to continuously advise us wisely in this direction from the early beginning of the CVV. We are rapidly acquiring an extraordinary experience in conceiving these MOOCs, and also in the full process of selecting top-class international Faculty members, creating scenarios, producing videos and other educational materials, providing translations (subtitles), post-producing courses and delivering on various platforms (FUN, Coursera, Iversity), with appropriate moderation, evaluation and certifications. After a phase of IT transfer, through the fruitful and generous collaboration with Inria (the leading research institution for informatics and mathematics in France), Université Paris Descartes and with various subcontracted partners, the CVV is now able to completely produce and deliver MOOCs on the major existing platforms, by making them internally, from A to Z, with all needed competencies on board. All these developments have been made possible thanks to the continuous support and trust received from our mother institutions, Charité Universitätsmedizin Berlin and Université Sorbonne Paris Cité (with the special role of Université Paris Descartes), and from the generous Sanofi five-year donations to the CVV.

A. Released MOOCs (1st session)

In 2015, five new MOOCs were launched in collaboration with different partners:

- **MOOC “Applied Regression Analysis” (1) and MOOC “Applied Logistic Regression” (2) by Prof. Stanley Lemeshow (1st semester 2015, 8040 (1) and 8792 (2) participants)** was launched on Coursera in collaboration with Ohio State University and Université Paris Descartes.

Stanley Lemeshow, Professor of Biostatistics and Founding Dean of the School of Public Health at Ohio State University prepared, with the help of the educational staff of the Centre Virchow-Villermé, two MOOCs which provide theoretical and practical training in statistical modeling, with particular emphasis on linear and multiple regression (MOOC 1) and logistic regression (MOOC 2), for epidemiologists, biostatisticians, and professionals of related disciplines.

- **MOOC “Fighting against Ebola Outbreak!”** was launched in collaboration with the University of Geneva on France Université Numérique (**1st semester 2015, 1900 participants**) and then on Coursera (on-demand).

Antoine Flahault, as the Director of the Global Health Institute in Geneva, coordinated this MOOC developed with 30 academic professors, researchers, policy makers, NGOs members, and others stakeholders in Europe and in Africa. This MOOC aims to explain the Ebola outbreak in 2014 and is now available on demand on Coursera.

- **MOOC “Digital Technologies and Research in Health and Life Sciences: New Practices and Challenges”** by Célya Gruson-Daniel (**2nd semester 2015, 1500 participants**)

Célyla Gruson-Daniel is the research engineer responsible for information technology and communication at the Centre Virchow-Villermé Paris-Berlin. Her MOOC, starting in October 2015, brings together experts in the fields of public health, cognitive science, law and social sciences. It presents the major steps of a research study and the new practices and issues related to digital processes and open science. It is aimed primarily at an audience of PhD students, young researchers and professionals in the field of health and life sciences. This MOOC received the financial support of

IDEX with the call for MOOC projects that was launched by Université Sorbonne Paris Cité in March 2014 as part of the IDEX initiative (*Investissements d'avenir*).

- **MOOC “Why Health is Key for Climate Negotiations” IPCC Experts (2nd semester 2015, 1300 participants)**

This MOOC was developed by four eminent scientists who together authored the health chapter in the recent 5th Assessment report of the IPCC (Intergovernmental Panel on Climate Change). The MOOC is offering a set of arguments highlighting the core role played by health in the debate on climate change to policy makers and opinion leaders participating in the COP 21 negotiations. The MOOC is available on the German MOOC platform, Iversity.

B. Second session of MOOCs

The four MOOCs launched on the platform FUN (National French platform for digital education) in 2014 were relaunched in 2015. These 4 MOOC were produced in collaboration with Inria. All four MOOCs were in French, while two of them were translated into English and one additionally into German. 10600 participants followed the second session of these MOOCs. More than 30 nationalities were represented with an important participation of Francophone countries.

- **MOOC “Introduction to Statistics” Prof. Avner Bar Hen (1st semester 2015, 6607 participants).**

A new version of the MOOC called “**Teaching the Basics**” was created with additional content. This MOOC aims to provide the basis for the statistical analysis of data. The free software R is used to apply the concept studied in this course. The MOOC was relaunched in the 1st semester 2015 with the financial support (20 k€) from the French state with the MOOC call for projects launched by Université Sorbonne Paris Cité as part of the IDEX initiative (*Investissements d'avenir*).

Avner Bar-Hen is a Professor of Statistics at Université Paris Descartes. His MOOC started in January 2014. This introductory course to statistics imparts the essential skills necessary to understand and make decisions based on the analysis of digital data.

- **MOOC “Fighting against Outbreaks of Emerging Infectious Diseases” Prof. Antoine Flahault (1st semester 2015, 1620 participants)**

Antoine Flahault is a Professor at the Medical Faculty of Université Paris Descartes, Sorbonne Paris Cité and Co-director of the Centre Virchow-Villermé. His MOOC based on a case study was launched in February 2014 and in March 2015. It was designed to provide the participants with knowledge on how to monitor emerging infectious diseases, but also how to control and prevent epidemics.

- **MOOC “SARS: “Revolutionizing” Global Governance of Epidemics?” Prof. Patrick Zylberman (1st semester 2015, 370 participants)**

Patrick Zylberman, University Professor, is the Chair of Health History at EHESP School of Public Health. His MOOC started in April 2014 then in February 2015. The course analyzes the SARS crisis of 2003 from a social science perspective, while integrating elements from anthropology, sociology, history of epidemics, international relations, health economics and crisis communication.

- **MOOC “Is the Demographic Bomb Defused?” Prof. Yves Charbit (1st semester 2015, 2090 participants)**

Yves Charbit is a Professor of Demography at Université Paris Descartes and the Director of CEPED. His MOOC launched in May 2014 and in May 2015 discusses the worldwide decrease in fertility from a socio-demographic perspective based on theoretical elements and actual case studies performed in Africa, Asia, and Latin America.

Two MOOCs produced in German with English subtitles were added as a bonus on the second session of the **MOOC “SARS: “Revolutionizing” Global Governance of Epidemics?”** and **MOOC “Is the demographic bomb defused?”**

- **MOOC “Evolutionary Medicine”** Prof. Detlev Ganten
In this “One-Session”-MOOC, Detlev Ganten builds a bridge from genetics to personalized medicine and demonstrates the implications for global health and the healthcare systems. A short introduction to the concept of the World Health Summit is also part of this MOOC.
- **MOOC “Public Health Challenges of Urbanisation with Focus on Megacities”** Prof. Alexander Krämer
In this “One-Session”-MOOC, Prof. Alexander Krämer from Bielefeld University explains how urbanization, especially in megacities, influences health and what the public health challenges in these areas will be.

C. MOOCs in process (with financial support of the Chair Sanofi Paris)

The Centre Virchow-Villermé has invited four guest professors in 2015 to produce the following five MOOCs, with the financial support from the Chair Sanofi Paris.

- **MOOC « Implementation Science »** Prof. Suzanne Havala Hobbs-Babich and Prof. Rohit Ramaswamy / produced in collaboration with Université Paris Descartes

Suzanne Havala Hobbs-Babich is a Clinical Assistant Professor and Director of the Executive Doctoral Program in Health Leadership at the University of North Carolina in Chapel Hill (now at the Indiana University). She prepared in 2014, with the help of the educational team of the Centre Virchow-Villermé, a MOOC to introduce students to the field of implementation science by including immediately applicable problem solving and analytical skills. Taking into account the trans-disciplinary nature of global health, the course integrates qualitative and quantitative tools from a broad array of fields. In 2015, Prof. Rohit Ramaswamy, Clinical Associate Professor and Director of the Center for Global Learning at the University of North Carolina in Chapel Hill produced supplementary videos and designed resources for the MOOC during a two-week-stay at the Centre Virchow-Villermé. The MOOC will be launched during the 1st semester 2016.

- **MOOC “Population and Health Development: Is the Health System a Victim of its Own Successes?”** Prof. Ian Pool

Ian Pool, Professor Emeritus of Demography at the University of Waikato in New Zealand, prepared, with the help of the educational staff of the Centre Virchow-Villermé, a MOOC focusing on the demographic transition in the world. How have size, age, life expectancy, morbidity and mortality of the population evolved in the past 200 years? How have these changes influenced the health systems, both in the North and in the South? Many questions are raised in this MOOC. This MOOC will be available in the second semester 2016.

- **MOOC “The Anthropological Demography of Health”** Dr. Philip Kreager

Philip Kreager, Director of the Fertility and Reproductive Studies Group, School of Anthropology, and Senior Research Fellow in Human Sciences, Somerville College in the University of Oxford, prepared with the help of the educational staff of the Centre Virchow-Villermé, a MOOC on the Anthropological Demography of Health. The MOOC introduces basic concepts and methods of anthropological demography in the context of four major health problems in the developing world: infertility, population ageing, Malaria, and HIV/AIDS. This MOOC will be available in the second semester of 2016.

- **MOOC “Climate Change and Health – Impacts and Responses”** Prof. Rainer Sauerborn

Rainer Sauerborn, Chair of Public Health at the Heidelberg University, is currently preparing two MOOCs dedicated to climate change and health. A 5-week MOOC will present a general introduction to climate change and health. It will review the basis of the issue by giving inputs on several topics: the scientific basis of anthropogenic climate change, the impacts of climate change on a range of infectious, non-communicable diseases, injuries and malnutrition. This MOOC will review practical strategies to protect population health, dubbed “adaptation” in climate-speak, while stressing the limits of adaptations. It will conclude pointing out the many synergies between policies to improve health and climate policies. These so-called “health co-benefits of climate policy” include strategies to increase walking and biking, to reduce indoor and outdoor air-pollution and more. This MOOC will be available in English between in the 1st semester 2016.

- **MOOC “Health and Climate in Africa” (French language)** Prof. Rainer Sauerborn

This 5-week MOOC delivered in French will follow the layout of the preceding MOOC. However all examples and cases will be drawn from Sub-Saharan Africa and about ½ of the course will be taught by African scientists. Interviews will be made with key policy makers, representatives of NGOs and the civil society. This MOOC, to be recorded in Burkina Faso, will be the first on the topic to bring to bear the voice of those who will suffer most from climate change.

D. Project #MOOCLive

In order to safeguard and even to strengthen the CVV place, regarding MOOCs production in public and global health, a European consortium of public and private partners has been built, responding to IDEFI-N call for projects. This project, leading to the creation of the "Virchow-Villermé #MOOCLive Factory", will secure a status of world leader in this area and empower the production of a noticeable core of courses in French.

The Virchow-Villermé #MOOCLive Factory is built on four workpackages (WP). WP1 will be dedicated to data science and MOOCs analyses. WP2, WP3 et WP4 will focused on three major theme avenues of development of our next MOOCs, respectively: International Health Regulations (IHR) and Global Health Security, led by Prof Antoine Flahault, CVV, Université Paris Descartes and Institut de Santé Globale, Université de Genève; Health Economics, Globalization and Health Inequalities, led by Prof Lise Rochaix, Chaire Hospinomics, Paris School of Economics, Paris 1 – APHP; Fighting against Addictions in a Global Context, led by Anne-Laurence Le Faou, Hôpital Européen Georges Pompidou, AP-HP and Prof. Michel Kazatchkine, ONU, Geneva.

A total of 6 MOOCs will be produced during the project.

Some innovations, particularly suitable for public health but also adaptable to other extents, will be provided. For instance the “Cable-car MOOCs”, a set of short and silent animations about public health, derived from the MOOCs, which could be broadcasted in waiting rooms, tramways or other public places. Another example is the creation of mixed training models, using television, to reach the broadest audience possible, by producing 52 minutes long documentaries, available online, free of charge as an additional resource.

To begin with, in the three years of the project, #MOOCLive intends to prove that the concept is viable, creating an effective MOOC factory in global and public health. On a short-term basis, the project is aiming at rewarding attendance of the MOOCs with ECTS credits from a partner university, enhancing teaching programs for master or PhD students in public health.

In the long run, an entire graduated education (master or/and PhD) could be set up with partner universities, especially in the South.

Thanks to efficient business partners, such as ANEO, a French expert of Big Data, data mining and of the analytical representations of the data, the objective of #MOOCLive to analyze data generated from the MOOCs for innovative purposes, respecting ethics and legislations will be fulfilled. With What Health, a digital health association, #MOOCLive will aim at broadcasting MOOCs to the widest population possible, pursuing the democratization of these courses, especially among non-expert populations.

2. Research

Regarding research in public and global health, the approach of the Centre Virchow-Villermé is multidisciplinary, prospective and without borders. Joint and invited professors support this multidisciplinary approach and contribute with their expertise in various fields to research activities of the Centre. In addition to the French-German projects, these individual research activities are included in this report. This interdisciplinary approach enables the comprehension of complex issues in public and global health with its different dimensions including epidemiology, social and environmental sciences, demography, statistics and history.

A. Fields of research and publications

Big Data in Health

In and around public health there is a lot of talk about "big data" — very large sets of complex data that become difficult to process using database management tools. Big data is emerging in public health because the health sector is collecting large amounts of data every single day. The data comes from a variety of settings — clinical, billing, scheduling, drug usage, syndromes and so on. Unfortunately, in the past, a lot of data was not leveraged to make population health more efficient. Now, though, many researchers are working on promoting this aspect.

Big Data in Global Health: Collaboration with CentraleSupélec and ANEO

The Centre Virchow-Villermé could not intend or even pretend to explore big data in health without a strong partnership bringing in competencies from the fields of mathematics, informatics and data science. This has been done in 2014 in Paris, by looking for collaboration with a school of engineering, CentraleSupélec, which is very well known and was in turn looking for a partnership in the health sector. We have decided to look together for funding for a joint project, the formation of a Chair of Big Data and Health. The aim is to hire a professor skilled in big data, with PhD students and postdocs able to initiate the momentum quickly. In addition, the call for tender of ANR (Idfi-n) will associate ANEO, a private company skilled in Big Data analytics and visualizing, to develop Big Data projects associated with MOOCs.

Thesis preparation

Mathilde Pivette's thesis is funded by Celtipharm, a French data broker specialized in pharmaceutical sales data under a CIFRE program. She is a Paris Descartes student and member of EHESP network. The general scientific question of the thesis is: How can one improve the methods of indirect monitoring of diseases through the analysis of drug sales? The project focuses on two methodological issues: (i) The description of the spatial-temporal epidemiology of syndromes, (ii) The real-time monitoring of syndromes. These two axes are based on selected syndromes.

Presentations

Gruson-Daniel C. Round Table « Penser la gestion et la gouvernance des données de santé en termes de communs », Institut Pasteur, October 5, 2015.

Flahault A. Enjeux des big data dans le domaine de la santé, Conference organized with Supélec on « Big Data et Santé – Enjeux de santé publique, opportunités et défis », Hôtel-Dieu October 8, 2015

Publications

Anderson SE, Lemeshow S, Whitaker RC. Maternal-infant relationship quality and risk of obesity at age 5. 5 years in a national US cohort. *BMC Pediatrics* 2014, 14:54. doi:10.1186/1471-2431-14-54

Bar Hen, A. (2014) : Mooc qui peut, Mooc qui veut. *Statistique et Enseignement*, 5:1, 91-99

Bar-Hen A., Emily M., Picard, N. (2015) Spatial Cluster Detection Using Nearest Neighbour Distance. Accepted in *Spatial Statistics*.

Bar-Hen A., Villa-Vialaneix, N. Javaux, H. (2015). Analyse statistique des profils et de l'activité des participants d'un MOOC. Accepted in *Revue Internationale Des Technologies En Pédagogie Universitaire*.

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Public and Global Health

Global Public Health

Global public health has two main dimensions. One is geographical, meaning that fields of interest of global health often cross borders. The second is related to integrated interdisciplinary research. Interdisciplinarity is based on the willingness to bring and implement solutions in complex situations. Regarding health issues, most often solutions involve various sectors, such as agriculture, environment, finance, law, policy, education and not only health. Our publications try more and more to include scientific reports or viewpoints of authors coming from several disciplines: virologists, epidemiologists, veterinarians, sociologists, economists, clinicians, entomologists, environmental scientists when appropriate. They are also mainly addressing topics dedicated to global public health. There are multiple papers on methodology in public health as well.

Research project

Health ranking

Understanding health determinants remains crucial in public health research. Rankings of health determinants help to give an overview for stakeholders in order to improve a population's health. While various rankings of health determinants of US states exist, comparisons of European countries are still scarce. Prof. Antoine Flahault initiated this project with the assistance of postdoctoral researcher Stefanie Schütte.

Objectives

- 1) To review and evaluate the methodology of existing rankings
- 2) To establish a comparison of 30 European countries considering different determinants of health

Collaborations Two Public Health students, Juliane Knop (University of Bremen/EHESP) and Paula Marin (Paris Descartes University) and invited Professor Stanley Lemeshow (Ohio State University)

Perspectives A wider research consortium will be developed including the Paris School of Economics (Chair Hospinomics), Organisation for Economic Co-operation and Development (OECD), World Health Organisation (WHO) in order to improve the achieved outputs.

Publications (Antoine Flahault)

Andayi F, Charrel RN, Kieffer A, Richet H, Pastorino B, Leparç-Goffart I, Ahmed AA, Carrat F, Flahault A, de Lamballerie X. A sero-epidemiological study of arboviral fevers in Djibouti, horn of Africa. *PLoS Negl Trop Dis*. 2014 Dec;8(12):e3299. doi: 10.1371/journal.pntd.0003299. eCollection 2014 Dec. PubMed PMID: 25502692; PubMed Central PMCID: PMC4263616.

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Mansiaux Y, Salez N, Lapidus N, Setbon M, Andreoletti L, Leruez-Ville M, Cauchemez S, Gougeon ML, Vély F, Schwarzinger M, Abel L, Delabre RM, Flahault A, de Lamballerie X, Carrat F. Causal analysis of H1N1pdm09 influenza infection risk in a household cohort. *J Epidemiol Community Health*. 2015 Mar;69(3):272-7. doi: 10.1136/jech-2014-204678. Epub 2014 Nov 21. PubMed PMID: 25416792; PubMed Central PMCID: PMC4345517.

Societal and Medical Challenges of Aging

Aging is a complex process, involving biological and physical processes as well as emotional, psychological and cognitive changes on an individual and societal level. As people age, the incidence and prevalence of many non-communicable chronic diseases increases. Germany and France are the two main players in this field within Europe and therefore can provide direction neighbors facing similar problems and transitions in terms of health and demographic aging. Despite these similarities very few bilateral public health projects are currently underway. The design of cohort studies as one of the key elements in epidemiology allows to address specific public health research questions and to combine effects of lifestyle, environment, genetic predisposition, and other risk factors on a large variety of disease endpoints, and this represents a key opportunity for collaboration between France and Germany.

Research projects

The Berlin Initiative Study (BIS), coordinated by PD Dr. Elke Schäffner

Chronic kidney disease is a key example of an age-related condition often associated with a substantial burden of disease. This is an area of expertise of the Berlin branch of the CVV.

The BIS is a population-based cohort study of older adults exploring the epidemiology of chronic kidney disease (CKD) in old age. It is a longitudinal study, involving bi-annual follow-up visits to catch incident cases of CKD. The study follows the natural course of disease and assesses associated risk factors as well as cardiovascular outcomes and death.

Publications

In April 2014, Elke Schäffner from CVV and Tobias Kurth from University of Bordeaux jointly applied for funding from DFG/ANR with the project "GENERIC". Unfortunately this application was not successful, but the team is actively exploring other financing options.

Publications in Peer-Reviewed Journals (2013/2014)

Douros, A., Ebert, N., Jakob, O., Martus, P., Kreutz, R., Schaeffner, E. (2014). Estimating kidney function and use of oral antidiabetic drugs in elderly. *Fundamentals in Clinical Pharmacology*. 29 (3): 321-8.

Rose, C., Schaeffner, E.S., Frei, U., Gill, J., Gill, J.S. A lifetime of allograft function with kidneys from older donors. *J Am Soc Nephrol*. 2015 Mar 26. pii: ASN.2014080771. [Epub ahead of print]

Ebert N, Loesment A, Martus P, Jakob O, Gaedeke J, Kuhlmann M, Bartel J, Schuchardt M, Tölle M, Huang T, van der Giet M, Schaeffner E. Iohexol plasma clearance measurement in older adults with chronic kidney disease: sampling time matters. *Nephrol Dial Transplant*. 2015 Jun 4. pii: gfv116. [Epub ahead of print]

Jing J, Kielstein JT, Schultheiss UT, Sitter T, Titze SI, Schaeffner ES, McAdams-DeMarco M, Kronenberg F, Eckardt KU, Köttgen A; GCKD Study Investigators. Prevalence and correlates of gout in a large cohort of patients with chronic kidney disease: the German Chronic Kidney Disease (GCKD) study. *Nephrol Dial Transplant*. 2015 Apr;30(4):613-21. doi: 10.1093/ndt/gfu352. Epub 2014

Other Publications

Banas, M., Amann, K., Schaeffner, E. (2014). Nierenveränderungen im Alter. *Nephrologe*, 9, 11-19.

Book Chapters

Schäffner/Kickbusch: Globale Gesundheitspolitik. Handwörterbuch für Internationale Politik, Verlag Barbara Budrich

Climate Change and Health

Climate change is perhaps the greatest threat to global health in the modern world. The health impacts of climate change are wide-ranging, likely to include everything from heat stress to cancer, increased risk of vector-borne, waterborne and food-borne diseases, as well as impacting nutrition, mental health, migration, and conflicts. These impacts are diverse and not always easy to predict, but will certainly have significant impacts on many aspects of health and health systems around the world in response to both gradual changes and increasingly frequent disasters. Thus, this topic plays a major role in environmental sciences as well as in global health and is at the heart of current debates. Because of this political context, communication about the effects of climate change from scientists to policy makers and the public is essential. Messages must be clear, honest, and emphasize the positive health co-benefits of addressing climate change to encourage action. With the leadership of Prof. Dr. Rainer Sauerborn and collaboration with researchers from the University of Heidelberg, the CVV is involved in numerous research projects spanning from scientific literature reviews to analyses of communication and policymaker understanding of the issues. The CVV is taking an active role in organizing and participating in workshops and side events in light of the upcoming COP21 in Paris this December.

Research projects

ClimCom

The CVV has assembled an interdisciplinary research team to investigate the treatment of climate change and health among scientists, policymakers, and the public. The project consists of three separate reviews aimed at analyzing current knowledge, gaps in understanding, and communication between the three groups of critical involved parties in the climate change debate. This umbrella project includes systematic reviews of scientific literature on climate change and health as well as the co-benefits of climate change adaptation, an analysis of EU legislation, and a view of the treatment of climate change and health in the media and social media. This work promotes the CVV's active role in translating scientific knowledge to real-world change - a central goal of public health. Results from the first stages of this study were recently presented at the World Health Summit in Berlin.

SAHDI (Sustainable and health diets)

There is currently no information available on the greenhouse gas (GHG) emissions associated with dietary patterns in India, or possible options for producing low emission, climate-change resilient diets, and their health consequences. Stefanie Schütte has been visiting research fellows at the London School of Hygiene and Tropical Medicine since February 2015 and is involved in this project.

Objectives:

- 1) To explore the determinants of processed food consumption in India
- 2) To identify healthy, low-carbon, climate-change resilient diets that are culturally appropriate and policy-relevant in India.
- 3) To provide a suite of policy and climate-change relevant dietary recommendations for the Indian setting
- 4) Make a linked dataset on diet, environment and health available to the research community

Collaborations: London School of Hygiene and Tropical Medicine (LSHTM), Leverhulme Centre for Integrative Research on Agriculture and Health (LCIRAH), Public Health Foundation India.

Working Groups

Avner Bar-Hen, Anneliese Depoux, Antoine Flahault and Stefanie Schütte participate in an interdisciplinary working group entitled "Politiques de la terre" initiated by Université Sorbonne Paris Cité and supported by IDEX¹. The scientific scope is to create a bridge between policy and research in the area of environmental sciences by covering various disciplines, from geophysics to social sciences.

Publications

Flahault A, Schütte S, Guegan J-F, Pascal M, Barouki R (2015). Health can help saving negotiation on climate change. *The Lancet*; 385(9985):e49-50.

Dalaba M, Akweongo P, Duysburgh E, Tonchev P, Savadogo G, Sarongo H, Williams J, Sauerborn R, Dong H, Loukanova S (2015) Cost effectiveness of clinical decision support system in improving maternal health care in Ghana. *PLoS One* 10(5): e0125920.

Dalaba MA, Akweongo P, Aborigo RA, Saronga HP, Williams J, Aninanya GA, Rainer Sauerborn R and Svetla Loukanova S (2015) Cost to households in treating maternal complications in northern Ghana: a cross sectional study. *BMC Health Services Research* 15:34; doi: 10.1186/s12913-014-0659-1.

Dambach P, Traoré I, Becker N, Kaiser A, Sauerborn R (2014) EMIRA: Ecologic Malaria Reduction for Africa Innovative tools for integrated malaria control. *Global Health Action* 7:25908-<http://dx.doi.org/10.3402/gha.v7.25908>.

Ding Y, Fei Y, Xu B, Yang J, Yan W, Diwan VK, Sauerborn R, Dong H (2015) Measuring costs of data collection at village clinics by village doctors for a syndromic surveillance system-a cross sectional survey from China. *BMC Health Services Research* 15:287; doi: 10.1186/s12913-015-0965-2.

Haque MA, Louis VR, Phalkey R, Sauerborn R. (2014) Use of traditional medicines to cope with climate-sensitive diseases in a resource poor setting in Bangladesh. *BMC Public Health* 14:202.

¹ <http://politiquesdelaterre.fr/>

- Lietz H, Lingani M, Sié A, Sauerborn R, Souares A*, Tozan Y*. Measuring population health: costs of alternative survey approaches in the Nouna Health and Demographic Surveillance System in rural Burkina Faso. *Glob Health Action* 8: 28330 -<http://dx.doi.org/10.3402/gha.v8.28330>.
- Mahendradhata Y, Souares A, Phalkey R, Sauerborn R (2014) Transitions of health care systems in low and middle-income countries toward patient-centeredness. *PLoS Medicine*. Sep 12;14(1):386; doi: 10.1186/1472-6963-14-386.
- Marx S, Phalkey R, Aranda C, Profe J, Sauerborn R, Höfle B (2014) Geographic information analysis and web-based geoportals to explore malnutrition in Sub-Saharan Africa: A systematic review of approaches. *BMC Public Health* 14:1189.
- Mohammed S, Aji B, Bermejo JL, Souares A, Dong H, Sauerborn R (2015) User experience with a health insurance coverage and benefit-package access: implications for policy implementation towards expansion in Nigeria. *Health Policy and Planning*; doi: 10.1093/heapol/cvz068.
- Phalkey R, Aranda-Jan C, Marx S, Höfle B, Sauerborn R (2015) A systematic review of current efforts to quantify the impacts of climate change on under nutrition. *PNAS*112(33):E4522-9; doi: 10.1073/pnas.1409769112.
- Saronga HP, Dalaba MA, Dong H, Leshabari M, Sauerborn R, Sukums F, Blank A, Kaltschmidt J, Loukanova S. (2015) Cost of installing and operating an electronic clinical decision support system for maternal health care: case of Tanzania rural primary health centres. *BMC Health Serv Res* 15:132; doi: 10.1186/s12913-015-0780-9.
- Savadogo G, Souarès A, Sié A, Parmar D, Bibeau G, Sauerborn R (2015) Using a community-based definition of poverty for targeting poor households for premium subsidies in the context of a community health insurance in Burkina Faso. *BMC Public Health* 15:84; doi: 10.1186/s12889-014-1335-4.
- Schoeps A, Lietz H, Sié A, Savadogo G, De Allegri M, Müller O, Sauerborn R, Becher H, Souares A (2015) Health insurance and child mortality in rural Burkina Faso. *Glob Health Action* 8:27327; doi: 10.3402/gha.v8.27327. eCollection 2015

Books and Book Chapters

- Sauerborn R, Augustin J (lead authors) (2015) Auswirkungen des Klimawandels auf die Gesundheit. in: Schellnhuber J, Brasseur G (eds) *Klimawandel und Anpassung: multidisziplinärer Bericht zu Deutschlands Zukunft*. Springer Verlag, Heidelberg. (forthcoming)
- Sauerborn R (2014) Intelligent energy: How can Europe cooperate with South-Asia? In: Wolf SO, Casaca P, Flanagan AJ, Rodriguez C (eds). *The merits of regional cooperation – the case of South Asia*. Springer Verlag, Heidelberg & New York, pg. 87-94.

Presentations

- Depoux, A, Verner G, Puig S, Kowalski C, Sauerborn R, Schütte S. ClimCom: an interdisciplinary working group for communicating on climate change and health. CVV Sanofi Chair Scientific seminar on Climate Change and Health: "Climate Change, Health and Risks Communications. Hôtel-Dieu, AP-HP, Paris, June 18, 2015.
- Depoux, A, Verner G, Puig S, Kowalski C, Sauerborn R, Schütte S. Increasing interest in health within the climate change debate: Science, policy, and the media. Workshop session on Climate Change and Health. World Health Summit 2015, Foreign Office, Berlin, October 10-13, 2015.
- Sauerborn R. Public health as a driver and actor of mitigating climate change. Conference "Climate change and health risks: what are the risks and how to reduce them? Société Française Santé et Environnement, Hôtel de Ville, November 24-25, 2015.
- Sauerborn R. Les co-bénéfices de santé pour les ménages, qui réduisent leurs empreinte de carbone. Atelier "Extension du domaine de la santé: intégrer le changement climatique en ville" Paris, Région Île de France, Hemicycle, Paris IDF, October 16, 2015.
- Sauerborn R. The scientific nexus of climate & health: a theme for the Institut Pasteur? Annual Symposium, Paris, October 15-16, 2015.
- Sauerborn R, Sherlaw K-W, Knop J, Dupont H, Sié A. MOOCs on climate change and health: Disseminating knowledge about cc& health, while bridging the digital divide. Parallel session "Innovations in

Research and Teaching in Planetary Health”, hosted by Leopoldina German Academy of Sciences, World Health Summit 2015, Foreign Office, Berlin, October 10-13, 2015.

Sauerborn R. Leveraging the health arguments for climate negotiations at COP21. Plenary session hosted by Leopoldina German Academy of Sciences. World Health Summit 2015, Foreign Office, Berlin, October 10-13, 2015.

Sauerborn R. Communication climate change and health to populations and policy-makers. Symposium of the Université Franco-Allemande , Université Paris Sorbonne-Cité, September 10, 2015.

Depoux, A. Changement climatique et santé : vers une communication performative ? Atelier scientifique du DAAD, Changement climatique, santé et communication, « Comment sensibiliser la population ? », Hôtel-Dieu, AP-HP, Paris, September 10, 2015.

Sauerborn R. Public health benefits of climate change policies. Annual conference of the Swiss Public Health Society, Institute of Global Health, University of Geneva, September 17-18, 2015.

Sauerborn R. Household Preferences for reducing greenhouse gas emissions in four European high income countries. Conference “Tackling global societal changes through innovative climate research. JPI (Joint Program of Implementation), Brussels. June 16-17, 2015

Sauerborn R. The role of climate change in global health. Workshop “Global Health Education”, Institut Pasteur, Paris, June 25, 2015.

Sauerborn R. Intelligent energy systems – a health challenge for India. Workshop of the Indian Institute for Tropical Meteorology, Pune, India, January 25, 2015.

Sorgho R, Sié A, Simboro S, Franke J, Sauerborn R. Nutrition and climate change - effect of climate change on childhood stunting in Burkina Faso: NutriClim: Proof of concept pilot study. Conference on French-German cooperation in the field of climate change, food security and water resources. French Embassy in Berlin, July 1-2, 2015.

Presentations at the UNESCO scientific conference “Our common future under climate change” as preparation for COP21

Kawan R, Sié A, Yamamoto S, Sauerborn R. Health co-benefits and co-harms of reducing indoor air-pollution in Sub Saharan Africa. UNESCO International Scientific Conference “Our common future under climate change”, Paris, France, July 7-9, 2015.

Traore I, Sié A, Machault V, Vignolles C, Sauerborn R, Dambach P, Becker N. Adaptation to potential shifts in malaria breeding sites: biolarvicide application in Sub-Saharan Africa, guided by risk maps based on remote sensing. UNESCO International Scientific Conference on “Our common future under climate change”, Paris, France, July 7-9, 2015.

Vignolles C, Viel C, Machault V, Sauerborn R, Dambach P, Sié A, Roger C, Tourre YM. The PALUCLIM project. Impacts of climatic factors on the production of malaria vectors in the rural Sahel: application to the Nouna region (Burkina Faso). UNESCO International Scientific Conference on “Our common future under climate change”, Paris, France, July 7-9, 2015.

Posters at the UNESCO scientific conference “Our common future under climate change”

Bunker A, Diboulo E, Marquins S, Egodji T, Sié A, Rocklov J, Sauerborn R. Temperature impact on Non-Communicable Diseases in Africa – a Blind Spot in Research. UNESCO International Scientific Conference on “Our common future under climate change”, Paris, France, July 7-9, 2015.

Diboulo E, Sié A, Traoré I, Dambach P, Louis V, Sauerborn R. Time course of weather variables in malaria-related mortality in a Sub-Saharan African population. UNESCO International Scientific Conference on “Our common future under climate change”, Paris, France, July 7-9, 2015.

Sauerborn R, Flahault A, Ganten D. How can knowledge about health consequences promote acceptance of climate action? UNESCO International Scientific Conference on “Our common future under climate change”, Paris, France, July 7-9, 2015.

Sauerborn R. Doing something for the climate may be beneficial for your health: the NCD-related co-benefits of climate policy. German-Indonesian symposium on non communicable diseases in global health. Heidelberg Institute of Public Health, Germany, November 30- December 1, 2014.

Sauerborn R. Indoor air pollution leads to 8 million deaths globally and contributes to climate change: the case for co-benefits. German-Indonesian symposium on non communicable diseases in global health. Heidelberg Institute of Public Health, Germany, November 30- December 1, 2014.

- Vandenbergh, Alina, Sauerborn R. Heat stress and the elderly: what do German General Practitioners know, what should they? Intl Conference on climate change and health, Heidelberg University, December 4, 2014.
- Sorgho R, Franke J, Sauerborn R. Malnutrition, food yields and weather variability in subsistence farming households – a pilot study from Burkina Faso. Intl. Conference on climate change and health, Heidelberg University, December 4, 2014.
- Neuendorf F, Sauerborn R. Greenhouse gas footprint of teaching hospitals in the border region of France and Germany – a research concept. Intl. Conference on climate change and health, Heidelberg University, December 4, 2014.
- Chebbi-Bunker A, Diboulo E, Sauerborn R. Quantifying health effects of climate change in demographic surveillance systems. Intl. Conference on climate change and health, Heidelberg University, December 4, 2014.

Occupational health

We have initiated collaboration with SNCF, the French national railway company who asked CVV to co-supervise the PhD thesis of a former MPH student of EHESP, Dr Emminarie Lucas, within the doctoral network run by EHESP (Rennes). The topic is implementation science: trying to implement in a large company (180,000 employees) a prevention program aimed to control overweight and obesity, and prevent its consequences, mainly diabetes and hypertension. The program is holistic, with components dedicated to diet and physical activities, and high commitment at all levels within the company.

Presentations

- « Changing the corporate culture to prevent obesity and chronic diseases at workplace » at the 8th European Public Health Conference – Health in Europe – from global to local policies, methods and practices. Milan, Italy, 14 - 17 October 2015.
- « TRANSFORMER LA CULTURE D'ENTREPRISE POUR PROMOUVOIR LA SANTÉ: L'EXPÉRIENCE DE LA SNCF 2011-2014 » SFSP Congrès on « Les Déterminants sociaux de la santé », in Tours, France, 4-6 November 2015.

Research projects

Health shocks and life-style factors (since May 2015)

Although international research on the determinants of lifestyle factors have been produced at a rapid pace, few researchers have investigated the incentives that motivate individuals to change their behavior and pursue a healthier lifestyle by also taking into account the occupational category. This study aims to assess the effect of health shocks on lifestyle choices according to occupational category. It explores the cohort GAZEL based on French workers at EDF-GDF (15 010 men and 5614 women), aged from 35 to 50 years.

Stefanie Schütte is involved in this project in collaboration with Paris School of Economics (Chair Hospinomics).

Publications

- Schütte S, Chastang JF, Parent-Thirion A, Vermeylen G, Niedhammer I (2015). Psychosocial work exposures among European employees: Explanations for occupational inequalities in mental health. *J Public Health*, 5;37(3):373-88.
- Schütte S, Chastang JF, Parent-Thirion A, Vermeylen G, Niedhammer I (2014). Social inequalities in psychological well-being: a European comparison. *Community Ment Health* doi: 10.1093.

Interdisciplinary Health Research

Interdisciplinary health research is becoming more important by combining various disciplines and approaches in order to understand complex public health issues.

Demography and health in sub-Saharan Africa

The rationale of the project is to undertake a double-sided research, on the demand side of fertility (factors contributing to high rates), and on the supply side (strengths or weaknesses and dysfunctions of national health systems)

Early fertility in sub-Saharan Africa

In sub-Saharan Africa, early child bearing (children born to young women, often not married, aged 15-19 and sometimes below those ages) contributes to the observed high rates of fertility. In the context of underdevelopment, it has negative consequences on health and it increases maternal and infant mortalities. It is also a factor favorable to high-risk abortions and domestic violence, while it hampers the education of women.

The proposed research project will focus on two diffusion processes: intergenerational changes; rising « malthusianism » among some social groups (women who are urban and educated wage earners). It will also focus on young mothers (those whose age at first birth is below median age at first birth in the country). For instance what are their sociodemographic characteristics, when compared to women who have had their first child after the median age? Demographic and Health Surveys allow international comparisons.

Partnerships

Project will be conducted in collaboration with Oxford University. Yves Charbit has also been approached by Ministries and/or Research centers of Francophone countries: Ivory Coast, Niger, Senegal, Benin, Guinea Conakry, Burkina Faso. Some MOU's have been signed.

Potential funding UNFPA, DHS, Wellcome Trust, European Union.

Strengths and weaknesses of the national health system in Niger

Research on fertility has been mostly focused on the demand side of reproductive health, while the demand side has been rarely explored by sociodemographers, partly under the pressure of programmatic needs and partly because they usually rely on national surveys of the populations or on client files.

In Niger, donors have stated the improvement of health indicators as conditionality to their funding programs. The Centre was asked by the Ministry of health to help identify the strengths and weaknesses underlying the problem of reliability of reproductive health indicators.

Methodology Phase 1. In the region of Maradi, the data of the health system are reputed to be good. An external validation is possible thanks to the DHS sample, once data are broken down by region. A situational analysis will also contribute to understand the functioning of the health system in that region. Phase 2. In Tillabéry and Dosso on the contrary, indicators are reputed unreliable. Factors explaining the dysfunctioning of the health system in these two regions will be investigated.

Training component One PhD in demography

Partnerships Ministry of Public Health, University Paris Descartes (Center Virchow-Villermé), University of Dijon.

History of Health

History of health is told in many, diverse chapters. Infectious risk is the main focus here. Two present-day topics have been approached with various historical implications. First, the MOOC "SARS: "Revolutionizing" Global Governance of Epidemics?" (1st semester 2014) was intended to point out the crucial importance of globalization in present-day massive health developments such as a respiratory disease pandemic; it aimed also at questioning the new footing upon which international public health institutions such as the WHO stand nowadays in the governance of epidemics. Second, Patrick Zylberman's *Tempêtes microbiennes* explores health security and bioterror and anti-pandemic response scenarios that imposed new images of microbial threats which might affect the management of epidemic crises. History of epidemics has also been scrutinized (*Alternatives internationales*, 2014). Besides these contributions to the history of infectious risk, history of trauma is now a new subject of interest. Some preliminary exploration has been delivered in Patrick

Zylberman's keynote conference: "War, trauma and public health in an era of mass violence, 1931-2014", After Shocks: War, Populations in Motion and Medicine in the Troubled Twentieth Century, a symposium organized by the Munk School of Global Affairs, University of Toronto, September 12-13, 2014. Patrick Zylberman also gave a series of talks in Montreal 4-5 November 2014 (ENAP, Coeur des sciences, Sciences-Po UQAM).

Publications

- Kreager P, Bochow A (eds) (in press) *Fertility, Conjuncture, Difference: anthropological approaches to the heterogeneity of fertility declines*. Oxford: Berghahn.
- Kreager P, 'Population Theory – A Long View' (2015) *Population Studies* 69: 29-37.
- Kreager P, Winney B, Ulijaszek S, Capelli C, *Population in the Human Sciences: Concepts, Models, Evidence*. Oxford: Oxford University Press pp. 55-85.
- Kreager P, Winney B, Ulijaszek S, Capelli C, *Population in the Human Sciences: Concepts, Models, Evidence*. Oxford: Oxford University Press.
- Kreager P, Schröder-Butterfill (2015) 'Differential Impacts of Migration on the Family Networks of Older People in Indonesia: A Comparative Analysis', In: Lan Anh Hoang and Brenda Yeoh, eds. *Transnational Labour Migration, Remittances and the Changing Family in Asia*. London: Palgrave MacMillan.
- Kreager P, 'On the History of Malthusian Thought: A Review Essay' (2014) *Population and Development Review* 40 (4):731-742
- Kreager P, Schröder-Butterfill (2015) 'Cultural Variations in Daughter Preference in Rural Indonesia', *Gender and Ageing: Southeast Asian Perspectives*, T. Devasahayam, ed., Singapore: Institute of Southeast Asian Studies, pp. 150-173.
- Zylberman P, in Le Bouler S, Jouglu E, Pomarède R et Tallec A au rapport *Santé en France. Problèmes et politiques*, sous la direction de, Haut Conseil de la santé publique, La Documentation française, pp. 35-37
- Zylberman P, Bar-Hen, A. La presse parisienne et la grippe « espagnole » (1918-1920), *Les Tribunes de la santé*, pp. 35-49
- Zylberman P, Le délit d'imprudience sanitaire en France au XX^e siècle, *Les Tribunes de la santé* 43 (2014), pp. 93-100
- Zylberman P, Une réaction épidémique, *Alternatives internationales*, hors-série n° 14 (2014), pp. 54-56

Research on openness in science and education

Research on MOOCs

Producing MOOCs with a reflexive approach is the direction taken by the educational team of the Centre Virchow-Villermé.

The "MOOC factory" of the Centre Virchow-Villermé is a rich source of information for the researchers Anneliese Depoux (Université Paris Sorbonne-CELSA), Célya Gruson-Daniel (Université de technologie de Compiègne, Université) and Karl-William Sherlaw (Université Rennes 2). Being both, MOOC producer and researcher from the field of Information and Communication Sciences, they observe parameters such as the teacher's position, body language and choice of words, to determine their influence on the production, the delivery and the reception of a MOOC.

The Centre Virchow-Villermé presented a session at the Conference HumaNum2015 in Montréal (Quebec). Anneliese Depoux presented a session about MOOCs in an information and communication studies perspective. Karl William Sherlaw presented the MOOC as a discourse object, Anneliese Depoux focused on the MOOC as a reinvention of mediatic format and Célya Gruson-Daniel presented the MOOC as a research object in Digital Humanities. Three publications based on this presentation will be available in 2016

Presentations

- Depoux, A. Le MOOC comme réécriture des formes médiatiques, Humanités Numériques 2015, Montreal August 11-13, 2015 <http://hn2015.org/programme/>
- Sherlaw, K.-W. Le MOOC comme objet de discours, Humanités Numériques 2015, Montreal August 11-13, 2015 <http://hn2015.org/programme/>

Gruson-Daniel, C. Le MOOC comme terrain d'étude et d'expérimentation de nouvelles pratiques de recherche. Humanités Numériques 2015, Montreal August 11-13, 2015 <http://hn2015.org/programme/>

Publication

Depoux A, Aïm O, D'une magistralité l'autre. Remédiation de l'ethos professoral par le dispositif du MOOC, Distance et médiations des savoirs, Le cours magistral a-t-il un avenir ?, 9, 2015.

Study

Massive Open Online Courses (MOOCs) became more and more popular as a tool to give access to education free of financial and geographical limitations. The study conducted by Leona Kirchner, intern at the CVV, provides an overview of MOOCs which could contribute to a formation in the field of clinical epidemiology. After having defined the field of clinical epidemiology we searched for eligible courses for an education in clinical epidemiology on the MOOC provider websites Coursera and EdX. The 31 MOOCs we found were analyzed in a benchmark as well as the descriptions of their content in order to group them into categories to be able to provide a better overview of the already existing offer of MOOCs.

Research on Open Science

Célya Gruson-Daniel, as a doctoral student in the field of Information and communication studies and Science and Technologies Studies, has conducted research about the concept of openness in Science.

Book chapters

Gruson-Daniel, C. (2014a). Open Science : cartographie et entretiens. In *Open Models : Les business models de l'économie ouverte* (Without Model), sous la direction de Louis-David Benyayer. Consulté à l'adresse <http://www.openmodels.fr>

Gruson-Daniel, C. (2014b). Open Science ou la Science Ouverte. In *Big, fast & open data. Décrire, décrypter et prédire le monde : l'avènement des données* (FYP EDITIONS, p. 192), sous la direction de Yannick Lejeune. Consulté à l'adresse <http://www.fypeditions.com/big-fast-open-data-decrire-decrypter-predire-monde-lavenement-donnees/>

Presentations

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B. Bilateral scientific activities

Call for projects 2015

In February 2014, the Centre Virchow-Villermé launched its first call for projects to develop common research activities in public health between France and Germany. Open to students of any discipline who were affiliated with Université Sorbonne Paris Cité, this call aimed to support research projects directed towards the comparison of public health systems in France and Germany focusing on specific issues such as environmental health, urban health, urban policy, migration and impact on health, aging, prevention, technology and health, health care systems, as well as public health policy and management.

The Centre received 4 project proposals of which one was selected by the IAB, from the field of public health.

For this second call for projects, 100 000 Euros were put at the Centre's disposal as part of the IDEX initiative and transferred to CVV for the fiscal year 2014. The project selected by the IAB add up to 5 000 Euros, thus, the remaining 95 000 will be reserved for the financing of student's mobility.

Name of applicant	Institution	Partner institution	Title of project	Budget (euros)
Aymery Constant	EHESP	Charité	Paris World Health Assembly Simulation (ParisWHO2015)	5 000,00

Scientific conferences of the Centre Virchow-Villermé Paris

Two scientific seminars open to the public were organized in Paris in May and June 2014. Meant to be places of open scientific exchange, they promoted the presentation of research in progress and further discussions.

January 7, 2015: Scientific Seminar with the Hospinnomics Chair (Paris School of Economics), Paris

February 4, 2015: Scientific Seminar with Dr.Philip Kreager, Sanofi Chair Visiting Professor (Anthropology, Oxford University), Paris

February 20, 2015: Scientific Seminar with Prof. Rainer Sauerborn, Sanofi Chair Visiting Professor (Public Health, Heidelberg University), Paris

May 12, 2015: 3rd CVV Workshop, « The Comparison of the French and German Global Health strategies in the area of communicable and non-communicable diseases », Deutsches Historisches Institute, Paris

May 6, 2015: « Colloque de la sirène », online meeting, with the participants of the MOOC « How to monitor emerging infectious disease » from Prof. Antoine Flahault

June 8, 2015: Scientific Seminar with Susanne Weber Mosdorf (WHO), Paris

June 18, 2015: Sanofi Chair Yearly Scientific Seminar (Climate Change, Health and Risks Communications; Education: on-going Research on MOOCs; French-German cooperation in public Health), Paris

July 3, 2015: 4th CVV Workshop: Comparison of Education and Research in Global Health in France and in Germany, French Embassy, Berlin

September 14, 2015: CVV-DAAD Workshop: Changement climatique, santé et communication, « Comment sensibiliser la population ? »

September 14, 2015: Women, Reproductive Health and Climate. Scientific Seminar given by Yves Charbit (CVV) (see below Expertise in Global Health)

Other bilateral projects

Comparative analysis of tobacco control policies in France and in Germany Tobacco is still one of the most significant issues in public health and the leading cause for preventable death all over the world, especially in Europe. Explicit political efforts and decisions have both helped and failed to reduce the smoking prevalence. Overall, the thesis attempts to compare the tobacco control policy, regarding strategies and relevant actors, in France and in Germany and to derive transnational lesson drawing. A qualitative documentary analysis focusing on legal documents and explanatory memorandums forms is the core of the project, led by a master student, Katharina Klenk, from the University of Bielefeld during a research internship at the CVV.

Mapping research in Public Health in France and in Germany Started in March 2015, the project is aiming at identifying the relevant institutions and the favored researched areas of Public Health in France and in Germany. The first step was to collect information about research teams and institutions, focusing in the beginning on USPC and Charité. To sort them out thematically, a list of key-words was established: disciplines, public health issues, etc. A database should be available online on the site of the CVV in January 2016.

3. Expertise in Global Health

World Health Summit (WHS)

Since its inauguration in 2009, the World Health Summit (WHS) has brought together opinion leaders from academia, politics, civil society, and the private sector to take responsibility for all health related challenges. It was based on the solid friendship between France and Germany and has been enjoying the high patronage of the President of the French Republic and the German Chancellor ever since. The WHS quickly became the pre-eminent forum for addressing global health issues and is effectively setting the global health agenda.

October 19 -22, 2014

The WHS 2014 convened more than 1000 participants from over 80 countries. Another 1200 visitors from almost 90 countries followed the sessions digitally via live-stream on the Summit's website and social networks. The program was structured by four main tracks: Education and Leadership, Research and Innovation, Evidence to Policy and Global Health for Development.

Series of Workshops of Centre Virchow-Villermé Berlin: Comparison of the French and German Global Health Strategies"

The World Health Summit in 2014 was the starting point for a series of four workshops organized by the Centre Virchow-Villermé for Public Health. Two sessions on global health with emphasis on French and German strategies were part of the conferences' program: in the first workshop the bilateral positions regarding the POST-2015 development debate, especially in the health sector were compared, and in the second one the national agendas of global health were the focus of various presentations. Both workshops were very well attended by experts from ministries of France and Germany, from NGO's, international universities and students. The third workshop organized by the Centre Virchow-Villermé for Public Health Paris-Berlin (CVV) on May 12th 2015 focused on the challenges of communicable and non-communicable diseases (CDs and NCDs), including : addressing the commitment to fight HIV/AIDS and exploring what positions the countries have and how they contribute to GFATM, UNAIDS, UNITAID; exploring the positions the two countries have in relation to global action on NCDs and discussing how each country is responding to the policy challenges emerging from the epidemiological shift between communicable and non-communicable diseases at a global level.

The event was hosted at the German Historical Institute Paris (Deutsches Historisches Institut, DHI) and attended by about 50 invited experts and students from France and Germany.

The French Embassy in Berlin was the perfect venue for the fourth workshop on July 3rd, covering issues such as education and research in both countries. Organization, ways of financial support, research programs, networks and cooperation were compared and analyzed in order to understand both systems better and to foster future joint education and research programs. 75 participants from both countries actively participated in working groups and panel discussions and contributed to the formulation of recommendations, which will be summarized in a comprehensive report of this series of workshops.

In all four workshops the emerging picture was reinforced that Germany and France share common perspectives, values and approaches to a number of key issues in global health. However, they also share many gaps and weaknesses, with neither country having centers of knowledge, education, training and research in global health; and they also lack global health networks and think tanks that can help to develop policy, offer advice and recommend action on critical issues.

The workshops have continued to prove valuable as networking opportunities involving a mix of experts including the government, academia, practitioners, public and private sectors and NGOs – which reflects the diversity of actors in global health who are ready to come together and collaborate. The workshops have also helped to make the CVV more visible and a most welcome platform for exchange between institutions, organizations, and individuals.

World Health Summit – Regional meeting Asia - Kyoto, April 13-14, 2015

This years' regional meeting in Japan put the focus on the topics **Challenges in a Rapidly Aging Society, Preparedness for & Resilience after Disasters and Fostering New Leadership. *Conférence Paris Climat 2015***

Paris will host a major conference of parties to the UN Framework Convention on Climate Change (COP 21) in December 2015. Hopefully this conference will be the occasion for parties to commit themselves to significantly reduce greenhouse gas emissions. Health should be on the agenda of the conference. Prior to the political conference, Paris will hold a scientific conference, at Unesco, in July 2015. Antoine Flahault has taken the lead in submitting a proposal regarding the organization of the health session for this conference, with a panel of international experts, including Prof Sir Andy Haines (LSHTM, the UK), and WHO HQ assuring the secretariat that preparations are being made. The application was made at the end of September 2014, with the support of the *Direction Générale de la Santé*.

Reproductive Health and climate change (Paris October 2015)

Yves Charbit played an active role in the drafting of an important report on *Women, as actors in addressing climate change*, which was handed on October 16th by the French Higher Council for Gender Equality to M Laurent Fabius, Minister of Foreign Affairs and President of COP21, The report convincingly argues first, that climate change has even more serious consequences for women than for men in developing countries. Second, that despite the discriminations they suffer, women are striving to adapt to climate change impacts. They are innovating on all continents and yet their actions, often undertaken locally, are undervalued and too rarely funded. Third, that women will be all the more efficient as they become empowered and fully exercise their rights.

M. Fabius promised that France will strongly support the recommendations of the report, especially regarding commitments promoting gender equality and women's empowerment in the Paris Agreement and more broadly in future strategies and funding.

Recommendations

Recommendation 1 Incorporate the dimension of human rights and gender equality in the Paris Agreement, promote women's contribution and strengthen their participation in addressing climate change, at all levels.

Recommendation 2 Promote and support genuine mainstreaming of gender and of women's empowerment in all policies and all programs on adaptation, mitigation and technology access and transfer.

Recommendation 3 Commit in favor of an allocation of climate funding for the promotion of gender equality and women's empowerment in funded projects.

4. Other activities of the Centre

Editing

On April 2015 the Centre celebrated its second anniversary. On this occasion a visual infographics has been released. This document can be downloaded online: http://virchowvillerme.eu/wp-content/uploads/2014/10/2ans_CVV_9.png

Published every semester, the Newsletter is an important tool of communication to inform our stakeholders about the activities of the Centre. Aimed at following our initial goals of developing international and bi-national collaborations and of pooling knowledge in the field of public health, it takes a look at our on-going and future projects and researches. The Newsletter is available in print and web format. On May 2015 the Centre published the third edition of its Newsletter. This issue is available online: <http://virchowvillerme.eu/newsletter/8117/>

In September 2015 the Centre published its first presentation flyer aimed at presenting the Centre to institutions, students and founders. This flyer can be downloaded online: http://virchowvillerme.eu/wp-content/uploads/2014/10/CVV-Flyer2015_PRINT.pdf

All issues of the newsletter are available via the following link: <http://virchowvillerme.eu/newsletter/>

Blog

The members of the CVV team add regularly new blogs to the website. It takes a look at new and interesting events in public and global health, as well as news regarding the production of MOOCs. It is meant to inspire ideas and to encourage further reading about ongoing events and changes in progress.

29 blog articles were published during the academic year 2014-2015.

November

- Centre Virchow-Villermé for Public Health Paris-Berlin – Franco-German initiatives to better understand why climate change is a health issue

October

- Interview with Juliane Knop, production assistant on the MOOC Climate Change and Health in Burkina Faso

September

- “Why Health is Key for Climate Negotiations”: a MOOC for policy makers on climate change as a public health issues
- Conférence-table ronde « Big Data et santé. Enjeux de santé publique, défis et opportunités », le 8 octobre 2015, Hôtel-Dieu, Paris

August

- Lancement du MOOC SciNum « Numérique et recherche en santé et sciences du vivant: nouvelles pratiques et enjeux » le 19 octobre sur la plateforme France Université Numérique

July

- Atelier franco-allemand “Changement climatique, santé et communication: comment sensibiliser la population?”: les inscriptions sont ouvertes !

June

- Summary of the 3rd French-German Workshop: “Global Health Strategies of France and Germany in the area of communicable and non-communicable diseases”

May

- Perspective COP21: Three MOOCs dedicated to “Climate Change and Health” Being Developed at the Centre Virchow-Villermé
- A Mapping of Existing MOOCs for Clinical Epidemiologists to be conducted at the Centre Virchow-Villermé, Leona Kirchner, Newsletter
- Save the date: World Health Summit 2015, October 11-13, Federal Foreign Office Berlin, May 2015, Newsletter
- Climate Change and Diet – Why Should our Dietary Habits Matter?, Stefanie Schütte, May 2015, Newsletter
- MOOCs in the Higher Education Landscape, Célya Gruson-Daniel, Newsletter
- Franco-German Workshops on Global Health, Newsletter
- Student Mobility: Cooperation with the University of Boston, Newsletter
- MOOC on the Anthropological Demography of Health, Newsletter
- Research Evaluation: an Expertise Mission at HCERES, Bordeaux, Newsletter
- Centre Virchow-Villermé Young Researchers: Projects Overview, Newsletter
- Comparison on Tobacco Control to be Conducted at the Centre Virchow-Villermé, Newsletter
- Editorial, Newsletter

April

- 2ème édition du MOOC « La bombe démographique est-elle désamorcée? »
- The Centre Virchow-Villermé for public health Paris-Berlin celebrates its second anniversary

March

- 2nd edition of the MOOC of Antoine Flahault « Fighting against Outbreaks of Emerging Infectious Diseases »
- Biostatistics: Two MOOCs focused on the analysis of health data

January

- Centre Virchow-Villermé: upcoming MOOCs in Public Health
- “Inspire, Learn, Act and build the future of health” – The largest European Health Hackaton will take place in Strasbourg (France) from the 19th to 22nd of March 2015
- 2ème édition du MOOC « SRAS: une “révolution” de la gouvernance mondiale des épidémies ? » du Professeur Patrick Zylberman
- Assessment of the MOOC “Contrôler une épidémie de maladies émergentes infectieuses” – two key moments

December

- First Centre Virchow-Villermé workshops were held during the World Health Summit 2014. Feedback.
- Feedback from Professor Yves Charbit: “The MOOC is a personalized service”

5. The organization of the Centre and its steering committees

The team of the Centre Virchow-Villermé

- Avner Bar Hen – Professor of Statistics, Université Paris Descartes
- Yves Charbit – Professor emeritus of Demography, Université Paris Descartes
- Estelle Duluc – International Project Coordinator, Université Paris Descartes
- Anneliese Depoux – Research Engineer, Executive Director – CVV Paris, Université Paris Sorbonne Cité
- Hélène Dupont – Audiovisual Engineer, Université Paris Descartes
- Antoine Flahault – Professor of Public Health, Université Paris Descartes, Director of the Centre Virchow-Villermé Paris
- Célya Gruson-Daniel – Research Engineer, Université Paris Descartes
- Gueorgui Kigouradze – Audiovisual Engineer, Université Paris Descartes
- Corinne Kowalski – Coordination of international and scientific affairs, Université Paris Descartes
- Sophie Puig-Malet – Communications and Scientific coordination, Université Paris Descartes
- Elke Schäffner – Prof in Public Health, Charité-Universitätsmedizin Berlin, Director of the Centre Virchow-Villermé Berlin
- Stefanie Schütte – Post-Doctoral Researcher, Université Paris Descartes, Sanofi Chair
- Karl-William Sherlaw – MOOC Production and Administration, Université Paris Descartes, Sanofi Chair
- Susanne Stöckemann – Project Coordination and Communications, Charité-Universitätsmedizin Berlin
- Patrick Zylberman – Professor of the History of Health, EHESP School of Public Health

The executive (steering) committees

The Centre benefits from a team composed of members with different personalities. Combining different experiences and coming from diverse backgrounds, such as academic, administrative and professional, the team works together to support the Centre and its projects.

CVV Paris

The executive (steering) committee meets every two months.

Composition: Régine Ducos (EHESP), Arnaud Ducruix (Université Paris Descartes), Corinne Alberti (Université Paris Diderot), Pierre Lombrail (Université Paris 13), Henri Bergeron et Aurélien Krejbich (Sciences Po), Gabrielle Costa de Beauregard (USPC).

CVV Berlin

The committee meets twice a year.

Composition: Annette Grüters-Kieslich: Axel Pries, Jan-Steffen Jürgensen, Peter Tinnemann, Fabian Hempel (all Charité).

The International Advisory Board (IAB) of the Centre Virchow-Villermé

From the start, the Centre has been supported by a board composed of accomplished international members coming from different fields such as public and global health, research, education and technological innovation. Through the combined experience of its members, the IAB contributes to the definition of the Centre's areas of research and governance.

The members of the IAB meet two times per year; in the spring in Paris and in the fall in Berlin.

Composition: Detlev Ganten (President, World Health Summit, Charité – Universitätsmedizin Berlin), Jean-Yves Mérimodol (President, Université Sorbonne Paris Cité), John Kimberly (University of Pennsylvania), Claude Kirchner (INRIA), Philippe Meyer (Académie des Sciences, Paris), Fred Paccaud (Faculté de médecine de l'Université de Lausanne), Paul Chew (Sanofi SA), Patricia Oster-Stierle (DFH-UFA), Peter Piot (LSHTM), Michael Klag (Johns Hopkins Bloomberg School of Public Health), Pierre Corvol (Collège de France), Jean-Francois Bach (Académie des sciences), Jörg Hacker (Leopoldina).