



Swiss Re
Centre for Global Dialogue

SEARCH

Systematic Explanatory Analyses of Risk factors affecting
Cardiovascular Health in Brazil, China, India and Mexico

Overview and stakeholders

In collaboration with



Editorial

In January 2013, Swiss Re and the Harvard School of Public Health (HSPH) created SEARCH – Systematic Explanatory Analyses of Risk factors affecting Cardiovascular Health – to better understand the relationship between risk factors and health outcomes. As the world's second largest reinsurer, Swiss Re seeks more accurate projections of global morbidity and mortality. HSPH seeks to better understand the most important determinants of health and to improve health status globally.

Swiss Re and the Swiss Re Foundation are funding this joint research initiative, which coincides with the 100-year anniversary of the Harvard School of Public Health and the 150-year anniversary of Swiss Re. The initial focus of SEARCH is on the risk factors for cardiovascular disease and stroke. The collaboration focuses on four countries: Brazil and Mexico in Latin America, and China and India in Asia. These four countries are flagships for rapid development and rapid evolution of a variety of risk factors that will determine morbidity, mortality and longevity. Eleven postdoctoral fellows have been awarded grants to conduct research based on existing data sets/cohorts. Each fellow has a mentor at HSPH and Swiss Re.

HSPH and Swiss Re have a history of collaboration that goes back more than a decade. The past two years have led to a conviction that our goals and strategy overlap and are synergistic. Our interactions have been productive and enjoyable and we expect to gain more clarity into health and disease risk factors which will provide a significant contribution to the understanding of future mortality and longevity trends.

Daniel Ryan
Head Life & Health
Research & Development
Swiss Re

Joseph Brain
Drinker Professor of
Environmental Physiology
Harvard School of Public Health

Annabelle Hett
Head Centre for Global Dialogue
Swiss Re

Introduction

Nature of collaboration

How did the collaboration come about?

In May 2012, Swiss Re and the Harvard School of Public Health organised a joint conference in Boston, addressing key drivers of longevity. In autumn 2013, HSPH celebrated its 100-year anniversary, coinciding with Swiss Re's 150-year anniversary. The parties agreed to mark the celebrations with a joint research initiative entitled SEARCH: Systematic Explanatory Analyses of Risk factors affecting Cardiovascular Health.

Why is the collaboration being undertaken?

Both institutions need to connect risk factors to health outcomes. Both institutions require better quality data and a deeper understanding of how measurable parameters influence health care costs, longevity, and the quality of life as we age.

SEARCH aims to develop data sources upon which new scientific findings can be based. The main focus for Swiss Re will be to better quantify health and disease risk factors. This data can provide a significant contribution to the understanding of future health and mortality trends, particularly in high growth markets, and so improve underwriting. The same data will be used by HSPH to develop and test preventive health measures and health policies.

Are there any other partners in the collaboration?

The collaboration is supported by the World Health Organization (WHO) which acts as advisor and facilitates access to data sources.

What goals does the collaboration have?

The objective is to gather reliable data on cardiovascular disease risk factors and management in Brazil, China, India, and Mexico. We analyse this data in the context of requirements for healthy longevity. The study addresses medical risk factors, prevention and treatment practices, lifestyle choices and public health policy. SEARCH complements the WHO Global Burden of Disease study with a focus on non-communicable diseases. Specific subject areas addressed include:

- Risk factors such as smoking, air pollution, diet, diabetes, obesity and hypertension, and physical inactivity
- Disease treatment and prevention practices for cardiovascular disease, diabetes, and metabolic syndrome

The project seeks to understand and predict the future impact of cardiovascular disease on the well-being and longevity of humans in high growth economies. How do government policies affect risk factors? How do risk factors such as smoking, pollution, diet, obesity, and hypertension affect outcomes? Finally, as we better understand risk factors and health outcomes, how does that shape health policy?

SEARCH is forward looking. It seeks to take data over the last 20 years and extrapolates it into likely trends for coming decades. What future impact will current policy measures have on future disease outcomes and mortality? How can we influence future health trends?

Swiss Re seeks to better understand future longevity drivers and model them into Swiss Re's current and future business strategies. Changes in mortality will have a significant influence on in-force and future life insurance business. HSPH would like to better understand public health challenges in different countries, and to make recommendations aimed at improving mortality outcomes.

How is the project being funded?

The funding comes in equal parts from Swiss Re Group Underwriting and the Swiss Re Foundation. Both CGD and L&H R&D committed resources to the management of the research project and the development of stakeholder conferences. CGD hosts Swiss Re events at its premises. HSPH provides infrastructure such as highly qualified mentors and administrators.

What is the timescale of the project?

Swiss Re and HSPH signed the Memorandum of Understanding in January 2013. HSPH completed the recruitment of postdoctoral research fellows in May 2013. Two conferences where preliminary findings were presented took place in Boston and Rüschtikon in autumn 2013. The first phase of the project will last for two years, culminating with a conference in September 2014 in Boston, MA, where fellows will present their research findings. Discussions are underway with regards to a continuation and possible expansion of the project extending into 2015 and beyond.

Who are the key individuals involved in the project and what resources do they have?

Swiss Re:

The SEARCH sponsors are Daniel Ryan (Head Life & Health R&D) and Annabelle Hett (Head Centre for Global Dialogue). Christoph Nabholz (Head Business Development, Centre for Global Dialogue) and Andreas Obrist (Business Development Manager, Centre for Global Dialogue) are responsible for the project management. In addition, the project is supported by 12 Swiss Re mentors from Switzerland, the United Kingdom, the United States, Canada, Mexico, China, and India.

HSPH:

The executive director of this program is Joe Brain (Professor of Environmental Physiology). Joe Brain, together with Michelle Williams (Chair of the Department of Epidemiology), and Doug Dockery (Chair of the Department of Environmental Health) form the executive committee. Eight additional senior faculty support SEARCH as mentors for the Swiss Re Fellows.

Content of collaboration

What sources is the research project using?

We build on existing pioneering studies, such as the multiple versions of the CHD Impact Model and Global Burden of Disease (GBoD) projects. The CHD risk factor analysis and future projections published by Simon Capewell work as a template for structuring the expected research results. All Swiss Re Fellows have access to a variety of cohorts and data sets for their respective risk factor and country analyses. Fellows have identified over 30 diverse data sources such as government population health surveillance data, cohort studies, and other accessible databases.

Why are Swiss Re and HSPH so interested in emerging economies?

1. Emerging/ high growth markets are fast expanding and rapidly growing their middle class. There is a concurrent growth in many markets in demand for life and health insurance policies.
2. As economies become more prosperous, there are rapid shifts in their human behavior and health profiles, most notably a shift from infectious to non-communicable diseases.
3. Emerging/ high growth markets frequently lack the depth and sophistication of data currently found in many industrial economies.

Why is the focus on cardiovascular disease?

1. It is the biggest cause of death in major emerging/ high growth economies.
2. It is closely associated with an established range of causal factors, including inactivity, smoking and diet.
3. Altering causal factors for cardiovascular disease will have a significant effect on mortality. Factors include smoking bans, urban and housing designs that encourage physical activity, and emergency responses to coronary events.

What will the sponsoring bodies do with the results?

Swiss Re: The results will be used to build forward looking morbidity and mortality models to assess current and future life and health business.

HSPH: Their objective is to develop and test preventive health measures, and to shape global health policies.

Where will the research be published?

The Swiss Re Fellows are encouraged to publish their results in peer-reviewed academic journals. Swiss Re will make a synthesis of the findings available to its clients and the public.

Working groups

Brazil

1. Fellow: Gregore Mielke (p.20)
HSPH mentor: I-Min Lee (p.17)
2. Fellow: Marcia Otto (p.23)
HSPH mentor: Dariush Mozaffarian (p.21)
3. Fellow: Claudia Suemoto (p.27)
HSPH mentor: Goodarz Danaei (p.12)
4. Swiss Re collaborators: Aspasia Angelakopoulou (p.8),
Ken Krause (p.16), Alison McLean (p.20), Urs Widmer (p.28)

China

1. Fellow: Yanping Li (p.18)
HSPH mentor: Lu Qi (p.23)
2. Fellow: Hongyu Wu (p.30)
HSPH mentors: Frank Hu (p.14), Qi Sun (p.27)
3. Swiss Re collaborators: Hueyfang Chen (p.10), David Lu (p.19),
Xiaojie Wang (p.28)

India

1. Fellow: Shilpa Bhupathiraju (p.10)
HSPH mentor: Frank Hu (p.10)
2. Fellow: Daniel Corsi (p.11)
HSPH mentor: Subu Subramanian (p.26)
3. Swiss Re collaborators: Himanshu Bhatia (p.9), Brian Ivanovic (p.15),
Daniel Ryan (p.20)

Mexico

1. Fellow: Hiram Beltran-Sanchez (p.9)
HSPH mentor: Subu Subramanian (p.26)
2. Fellow: Martin Lajous (p.16)
HSPH mentor: Joseph Brain (p.10)
3. Swiss Re collaborators: Eduardo Lara (p.17), Monica Wilson (p.30)

Risk factor-based fellows

1. Fellow: Hillel Alpert (p.8) [Smoking]
HSPH mentor: Gregory Connolly (p.11)
2. Fellow: Jennifer Nguyen (p.22) [Indoor and outdoor air pollution]
HSPH mentor: Douglas Dockery (p.12)
3. Swiss Re collaborators: Aspasia Angelakopoulou (p.8) [Smoking],
Séverine Rion (p.24) [Physical activity], Kevin Somerville (p.26)
[Health systems]

HSPH and other collaborators

1. Pedro Hallal (p.12), Co-leader, Physical activity group
2. Ted Henson (p.13), Project Manager
3. David Hunter (p.14)
4. William Hsiao (p.15)
5. Nancy Long Sieber (p.18), Project Manager
6. Bernard Lown (p.18)
7. Srinath Reddy (p.24), Co-leader, India group
8. Vikas Saini (p.25), Leader, Health systems group
9. Walt Willett (p.29), Diet & metabolism group mentor
10. Michelle Williams (p.29), Co-leader, India group
11. Thomas Zeltner (p.31), WHO Collaborator

Swiss Re project team

1. Annabelle Hett (p.13), Project Sponsor
2. Christoph Nabholz (p.21), Project Director
3. Andreas Obrist (p.22), Project Manager
4. Daniel Ryan (p.25), Project Sponsor

Working groups



Hillel Alpert, Fellow

Research Scientist

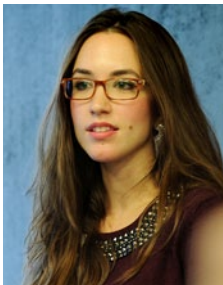
Department of Environmental Health, HSPH

Fellowship mentor: Greg Connolly

Risk factor: Smoking

Country: Brazil, China, India and Mexico

Mr Alpert is a Research Scientist with the Center for Global Tobacco Control at the Harvard School of Public Health, his primary role for the past eight years. He has conducted research related to tobacco use as a risk factor for cardiovascular and other tobacco-induced disease, and published articles pertaining to smoking- attributable morbidity and mortality in populations. He has served as International Research Coordinator with HSPH programs in Greece, Cyprus, and other countries; consultant to Scientific Advisory Committee on Tobacco Product Regulation of the World Health Organization; and a primary developer of the monographs, "Strategic Plan for Tobacco Control in Cyprus" and "The Greek Tobacco Epidemic", which were developed in collaboration with academic institutions, nongovernmental organizations, and ministries of health and education; and he is primary or contributing author of over 50 peer-reviewed scientific publications, books, and monographs. Mr Alpert's academic concentrations have been environmental epidemiology (ScD, Harvard School of Public Health), health policy and management (ScM, Harvard School of Public Health), and Human Genetics (BSc, McGill University). He has been guest lecturer in the HSPH course, Approaches to International Tobacco Control. In addition to the Swiss Re SEARCH Fellowship, Mr Alpert receives funding from the National Institutes of Health (NIH) grant number 2 R01 CA087477 (Connolly).



Aspasia Angelakopoulou, Collaborator

Research Statistician, Life & Health R&D

Swiss Re, London, United Kingdom

Country: Brazil

Risk factor: smoking

Aspasia Angelakopoulou joined Swiss Re as a Research Statistician in Life & Health R&D in May 2011. She is responsible for all data related issues varying from data management to statistical analysis methods and data interpretation.

Ms Angelakopoulou is involved in a number of projects with the R&D team as well as in other teams. Her main research area includes morbidity and mortality trend investigations across a number of diseases as well as the analysis of insurance data in order to gain a better understanding of consumer behaviour. She is also interested in statistical methods for analysing longitudinal data. Ms Angelakopoulou is a graduate of University College London where she completed her first degree in Economics and Statistics. She then received her postgraduate qualifications in Epidemiology and Statistics from Imperial College London and London School of Economics and Political Science. Following the end of her studies she worked as a data analyst in Neurology in GlaxoSmithKline London before joining London School of Hygiene and Tropical Medicine where she worked as an analyst in cardiovascular disease. During her time there she was involved in a number of projects aiming at understanding the biological basis and consequence for disease risk of common genetic variants on coronary heart disease and type II diabetes. She was also responsible for coordinating data collection and statistical analysis in a project looking at the relationship between inflammation and cardiovascular disease. Teaching practical sessions in various courses was another strong component of her role there.



Hiram Beltran-Sanchez, Fellow

Research Fellow
Harvard Center for Population and Development Studies
Fellowship Mentor: Subu Subramanian
Risk factor: Diet & metabolism
Country: Mexico

Mr Beltran-Sanchez received his MS in Mathematics from Northern Arizona University. He received his MA and PhD in Demography from the University of Pennsylvania. His doctoral thesis consisted of three essays on mortality and survivorship by causes of death in the United States. He is currently a research fellow at the Harvard Center for Population and Development Studies. His research focuses on studying national patterns in mortality, morbidity and biomarker indicators of health in both the U.S. and Mexico. Mr Beltran-Sanchez is currently studying compression of morbidity in the elderly population of the U.S. as well as the physiological status of the adult Mexican population. In this fellowship, he studies risk factors related to metabolic dysregulation (high plasma glucose, high cholesterol levels and overweight) and cardiovascular dysregulation (high blood pressure, pulse, and use of anti-hypertensive medication) in the adult Mexican population. In addition to the Swiss Re SEARCH Fellowship, Mr Beltran-Sanchez receives funding from the Center for Demography and Ecology, University of Wisconsin-Madison, and he is the recipient of a David E. Bell Postdoctoral fellowship through the Harvard Center for Population and Development Studies.



Himanshu Bhatia, Collaborator

Chief Medical Officer Asia
Swiss Re, Mumbai, India
Country: India

In 2009, Himanshu Bhatia was appointed as Chief Medical Officer for Swiss Re in Asia. He is mainly involved in product development, insurance medicine-related projects such as evidence-based ratings and cost benefit analysis, case-related services in underwriting/claims, and training/seminars on medical underwriting. He has been with Swiss Re for over eleven years. Mr Bhatia holds a degree in medicine from the University of Mumbai, India, and a master's degree in health services administration from the University of Michigan, Ann Arbor. He is the Asia Editor of the Academy of Life Underwriting journal "On The Risk" and a member of the American Academy of Insurance Medicine. His research interest includes understanding the emergence of cardiovascular disease in Asia and its impact over the next few decades on mortality, longevity, and healthcare utilisation.

Working groups



Shilpa Bhupathiraju, Fellow

Research Fellow
Department of Nutrition, HSPH
Fellowship mentor: Frank Hu
Risk factor: Diet & metabolism
Country: India

Ms Bhupathiraju received her Master of Science degree in Food Service Management and Dietetics from Avinashilingam Deemed University in India and her Master of Science in Human Nutrition from Iowa State University. She was awarded her PhD in Nutritional Epidemiology from the Friedman School of Nutrition Science and Policy at Tufts University. Ms Bhupathiraju's research interests include understanding the dietary and lifestyle predictors in the prevention and development of cardiovascular disease and Type 2 Diabetes. As part of an American Heart Association postdoctoral fellowship grant, she is currently exploring the role of quantity and variety in fruit and vegetable intake in the prevention of cardiovascular disease. She is particularly interested in exploring the role of diet in the burgeoning diabetes and heart disease epidemic in India, where a rapid nutrition transition is currently underway. In addition to the Swiss Re SEARCH Fellowship, she receives funding through an American Heart Association Postdoctoral Fellowship Grant (13POST14370012).



Joseph Brain, Project Director

Cecil K. and Philip Drinker Professor of Environmental Physiology
Department of Environmental Health, HSPH
Country: Mexico, Group Co-leader

Joseph Brain received his Master of Science and Doctor of Science degrees from Harvard University. He is the Cecil K. and Philip Drinker Professor of Environmental Physiology at HSPH. His research emphasises responses to inhaled gases, particulates, and microbes. His studies extend from the deposition of inhaled particles in the respiratory tract to their clearance by respiratory defense mechanisms. Of particular interest is the role of lung macrophages; this resident cell keeps lung surfaces clean and sterile. The context of these studies on macrophages is the prevention and pathogenesis of environmental lung disease as well as respiratory infection. Mr Brain's research has utilised magnetic particles in macrophages throughout the body as a non-invasive tool for measuring cell motility and the response of macrophages to various mediators and toxins. Another area of study is drug delivery to and through the lungs.



Hueyfang Chen, Collaborator

Actuary, Life & Health R&D
Swiss Re, Armonk, New York, USA
Country: China

Hueyfang Chen graduated with a Bachelor of Science in Actuarial Science and Finance from the University of Illinois at Urbana-Champaign. She became a fellow of the Society of Actuaries (FSA) and Chartered Enterprise Risk Analyst (CERA) in 2007. She worked at Towers Watson (Towers Perrin previously), in Life Actuarial Consulting for about 3 years before joining Swiss Re in 2008. Ms Chen's research interests include diseases that could cause dementia like Alzheimer's and Parkinson's; as well as how the mortality of these patients changes compared to the normal population, and what factors are influencing it.



Greg Connolly, Mentor

Professor

Department of Social and Behavioral Sciences, HSPH

Fellowship mentor to: Hillel Alpert

Risk factor: Smoking, Group leader

Gregory N. Connolly is the Director for the Center for Global Tobacco Control and Professor of the Practice of Public Health in the Department of Social and Behavioral Sciences and Health at Harvard School of Public Health. He is also a Dr. William Cahan Distinguished Professor awarded to Harvard School of Public Health by the Flight Attendants Medical Research Institute (FAMRI). He received his D.M.D from the School of Dental Medicine at Tufts University and his MPH from the Harvard School of Public Health. His research focuses is on the prevention and control of tobacco and tobacco related disease. He conducts research on tobacco product design, reduced risk tobacco products, global tobacco issues, efficacy of tobacco control interventions and the structure and marketing practices of the tobacco industry. Mr Connolly is the principle investigator on three research projects: 1) "Design and Characterization of Tobacco Products," National Cancer Institute 2) "New Tobacco Products and PREPS: Design, Marketing and Consumer Response," American Legacy Foundation, and 3) "Impact of State and National Clean Indoor Air Laws on the Economy and Health of Hospitality Workers," Flight Attendants Medical Research Institute.



Daniel Corsi, Fellow

Research Fellow

Harvard Center for Population and Development Studies

Fellowship mentor: Subu Subramanian

Risk factor: Diet & metabolism

Country: India

Daniel Corsi has gained wide international education experience at leading institutes in three countries. He received his MSc in Public Health from the London School of Hygiene & Tropical Medicine. He was awarded a PhD in Health Research Methodology from McMaster University in Hamilton, Canada, in July 2012. Mr Corsi's primary area of research is in social and environmental determinants of health with a specific focus on cardiovascular disease and risk factors in India. He has examined the social and geographic distributions of smoking, diabetes, body mass index, and other risk factors for cardiovascular disease in populations worldwide. Prior to joining the Harvard Center for Population and Development Studies, Mr Corsi was a research fellow at McMaster's Population Health Research Institute. In addition to the Swiss Re SEARCH Fellowship, he is the recipient of a David E. Bell Postdoctoral fellowship through the Harvard Center for Population and Development Studies.

Working groups



Goodarz Danaei, Mentor

Assistant Professor of Global Health
Departments of Epidemiology, Global Health, HSPH
Fellowship mentor to: Claudia Suemoto
Risk factor: Diet & metabolism
Country: Brazil, Group Co-leader

Goodarz Danaei received his medical degree from the Tehran School of Medical Sciences and his Master of Science and Doctor of Science degrees in Global Health and Population and Epidemiology from the Harvard School of Public Health. His global health research focuses on estimating the effect of risk factors and preventive interventions on non-communicable disease incidence and mortality at the population level. This research uses empirical evidence on risk factor distributions from population health surveys and evidence on effect sizes from epidemiological studies. These methods have been and continue to be used for example in the Global Burden of Diseases, Injuries and Risk Factors 2010 study where Mr Danaei currently serves as the co-leader of the Expert Group on Metabolic Risks of Chronic Diseases and a member of the Expert Group on Nutritional Risk Factors.



Douglas Dockery, Mentor

Professor of Environmental Epidemiology, HSPH
Chair, Department of Environmental Health, HSPH
Fellowship mentor to: Jennifer Nguyen
Risk factor: Indoor and outdoor air pollution, Group leader

Douglas Dockery is the Director of the Harvard-NIEHS Center for Environmental Health and Associate Professor of Medicine (Epidemiology), in Channing Laboratory at Harvard Medical School. Mr Dockery and his colleagues have studied the health effects of air pollution exposures in populations who have been followed for up to twenty-five years. That research has increasingly pointed to combustion-related particles as being causally linked to increased morbidity and mortality even at the relatively low concentrations observed in developed countries today. Mr Dockery and his colleagues have reported that episodes of particulate air pollution are consistently associated with increased daily mortality, increased hospital admissions and emergency room visits, exacerbation of asthma, increased respiratory symptoms and lower lung function. Long-term follow-up studies have shown particulate air pollution is associated with shortened life expectancy in adults and increased chronic respiratory illness and lower lung function in children. This research has led to the current debate on the role of particulate air pollution in producing adverse effect effects and to the re-evaluation of air quality standards both nationally and internationally.



Pedro Hallal, Co-leader, Physical activity group

Associate Professor, Universidade Federal de Pelotas, Brazil
Fellowship mentor to: Grégore Mielke
Risk factor: Physical activity
Country: Brazil

Pedro Hallal received his BA in Physical Education, and MSc and PhD in Epidemiology, from the Universidade Federal de Pelotas, Brazil. He is currently an Associate Professor at the Universidade Federal de Pelotas, Brazil. His research focuses on physical activity and health, with five interrelated themes: (a) physical activity levels, trends and measurement; (b) determinants and correlates of physical activity; (c) health consequences of physical activity; (d) physical activity interventions; (e) global action for physical activity promotion. Mr Hallal's work and research is based in Brazil.



Ted Henson, Project Manager

Department of Environmental Health, HSPH

Ted Henson received his Master of Science in Health Policy and Management from the Harvard School of Public Health in 2012. While at HSPH, he was an Albert Schweitzer Fellow and focused his project on increasing access to medical and non-medical care and services for patients at community health centers in Boston. Prior to HSPH, Mr Henson started a nonprofit newspaper for the homeless in Washington, DC, called Street Sense. His research interests are around how financing mechanisms employed by various health systems create incentives or disincentives for the provision of high-quality, equitable care.



Annabelle R. Hett, Managing Director

Head Swiss Re Centre for Global Dialogue
Swiss Re, Zurich, Switzerland

Annabelle Hett is Head of the Swiss Re Centre for Global Dialogue within division Group Strategy. The Centre provides a platform dedicated to the exploration of key global issues and trends from a risk transfer and financial services perspective. Annabelle Hett is responsible for the Business Development team, which facilitates major industry events at the Centre; enhances Swiss Re's leadership position in managing risk and capital; leverages marketing and business opportunities for Swiss Re; and provides insights into the risk landscape of the insurance industry. She is also in charge of the Risk Research Relations team, which generates and steers business-relevant applied risk research with global external partners for Swiss Re.

In addition, Annabelle Hett manages Swiss Re's Advisory Panel, the leading external consulting body to Swiss Re's Board of Directors and Executive Management that addresses issues of strategic relevance. Its membership includes senior figures from diverse fields such as politics, finance, science and academia.

Before joining the Centre, Annabelle Hett was Head of Emerging Risk Management at Swiss Re. She was in charge of the systematic identification, assessment and evaluation of emerging risks on the Group level and also had responsibility for screening existing exposures arising from novel, unprecedented scenarios and accumulations. She joined Swiss Re in 2002 as a risk expert. She assumed responsibility for developing Swiss Re's risk perception system "SONAR", which was patented. Annabelle Hett obtained a degree in veterinary medicine with a doctorate in radiology and nuclear medicine from the University of Berne, Switzerland.

Working groups



Frank Hu, Mentor

Professor of Nutrition and Epidemiology

Department of Epidemiology, HSPH

Fellowship mentor to: Shilpa Bhupathiraju, Yanping Li, Hongyu Wu

Risk factor: Diet & metabolism, Group co-leader

Country: China, Group leader

Frank Hu is Professor of Nutrition and Epidemiology at Harvard School of Public Health and Professor of Medicine, Harvard Medical School and Channing Division of Network Medicine, Brigham and Women's Hospital. He also serves as Director of the Harvard Transdisciplinary Research in Energetics and Cancer (TREC) Center and Epidemiology and Genetics Core of Boston Nutrition and Obesity Research Center (BNORC). His research is mainly focused on nutritional and lifestyle epidemiology and prevention of obesity and type 2 diabetes as well as gene-environment interactions. Mr Hu's research group has conducted detailed examinations of the relationships between dietary and lifestyle factors (especially sugar-sweetened beverages, dietary patterns, and diet quality) and risk of obesity, diabetes, and cardiovascular disease. These findings have contributed to current public health recommendations for chronic disease prevention. Mr Hu is also collaborating with researchers from China and India in obesity and diabetes epidemiologic and randomized intervention studies.



David Hunter

Dean for Academic Affairs

Vincent L. Gregory Professor in Cancer Prevention

Department of Epidemiology, HSPH

Department of Nutrition, HSPH

As Dean for Academic Affairs at the Harvard School of Public Health, David Hunter oversees the major academic operations of the school including faculty affairs, student affairs, diversity, and research strategy and development. His principal research interests are the etiology of cancer, particularly breast, colorectal and skin cancers, and prostate cancer. Mr Hunter is an investigator on the Nurses' Health Study, a long-running cohort of 121,000 US women, and was project director for the Nurses' Health Study II, a cohort of 116,000 women followed since 1989. His work is on genetic susceptibility to these cancers and gene-environment interactions. Most recently Mr Hunter has been a lead instructor for several epidemiology classes at HSPH.



William Hsiao

K.T. Li Professor of Economics
Department of Global Health and Population, HSPH
Department of Health Policy and Management, HSPH

William Hsiao’s health policy research program spans across developed and developing nations. Comparing health systems across industrialised nations, Mr Hsiao applies political and economic theories to develop a structural framework of essential elements of health systems. His team uses econometric models to test various hypotheses and to estimate the extent to which each structural element influences health expenditures and health status. Employing his systemic framework, he is assisting Taiwan, Cyprus, Mexico, Colombia, China, and Sweden in their health systems reforms. In developing nations, Mr Hsiao’s research focuses on the development of sustainable financing mechanisms to provide health care for the poor, rural population, and urban workers. With UNICEF’s support, he collaborates with seven universities in China to conduct a nationwide study on health care financing and provision for 100 million poor Chinese. Meanwhile, with the support of The World Bank, he is launching a large-scale social experiment on community financing for the rural Chinese population, involving 100 communities and two million people.



Brian Ivanovic, Collaborator

Manager & Senior Researcher Applied R&D, Life & Health
Swiss Re, Fort Wayne, Indiana, USA
Country: India

Brian Ivanovic provides leadership and support to Swiss Re’s North American Longevity Research & Development area and to Swiss Re’s Global Life Applied Research team. He is a board certified family physician and epidemiologist, with 14 years of reinsurance industry experience. His team conducts insured lives research that assists Swiss Re in the establishment of pricing assumptions and in understanding emerging risk trends affecting health. His research has been published in the Journal of Insurance Medicine and North American Actuarial Journal and a number of Swiss Re’s client publications.

Prior to his insurance industry experiences, Mr Ivanovic completed a Fellowship in Academic Medicine at the Medical College of Wisconsin in Milwaukee and spent six years teaching medical students in Des Moines and Milwaukee. He began his medical career as a Flight Surgeon in the US Air Force. His research interest includes understanding the underlying drivers of mortality risk and mortality trends in population and insured groups.

Working groups



Kenneth Krause, Collaborator

Medical Director, Underwriting Medical R&D
Swiss Re, Armonk, NY, USA
Country: Brazil

Kenneth Krause is currently Vice President and Medical Director at Swiss Re. He has been with Swiss Re Life & Health for 16 years and in insurance medicine for over 20 years. Mr Krause received his MD degree at Penn State University's Hershey Medical Center, and his medical training at North Shore University and Memorial Sloan Kettering Hospitals in New York. His board certification and clinical practice experience are in Internal Medicine. He holds a Master's degree in research design and statistical analysis from the University of Michigan's School of Public Health. Mr Krause is board-certified in Insurance Medicine, and is active in industry activities, having served as Editor of the Journal of Insurance Medicine, a number of AAIM committees, of which he currently is the President-Elect for 2014. He is a primary contributor to Swiss Re's Life Guide, and his interests are the assessment of new medical tests on risk assessment and mortality, emerging risks in life and health insurance, and analysis of insurance and public health databases. His research interests include the assessment of new medical tests on life risk assessment and mortality outcomes, emerging risks in life and health insurance, and analysis of insurance and public health databases with a focus on cardiovascular risk factors, and older age mortality.



Martin Lajous, Fellow

Research Fellow
Department of Epidemiology, HSPH
Additional affiliation: National Institute of Public Health, Mexico
Fellowship mentor: Joseph Brain
Country: Mexico

Martin Lajous graduated from the medical school at the National Autonomous University of Mexico and obtained a Masters Degree in epidemiology in 2004 and a doctoral degree in 2011 from the Department of Epidemiology at HSPH. He currently is a research fellow in the Program on Causal Inference at the Harvard School of Public Health, has been a researcher at the National Institute of Public Health of Mexico since 2004 and an associate researcher at the Center for Research and Population Health in France since 2011. His work has focused on nutrition and chronic disease, including cardiovascular disease, diabetes and breast cancer. In 2006, Mr Lajous led an effort to establish a large cohort study to investigate the relation between lifestyle factors and major diseases among 115 000 female teachers in Mexico, where he serves as the Scientific Coordinator. He receives funding from The Lown Scholars Program, CONACyT and NIH. The work presented also received funding from Health Canada and the Ministry of Health (Mexico).



Eduardo Lara, Collaborator

Senior Health Insurance Actuary Latin America
Swiss Re, Mexico City, Mexico
Country: Mexico

For the past 20 years, Eduardo Lara has focused and specialised in health insurance. He has been working as specialist for health insurers and healthcare consulting practices in the Latin America region. He is a certified actuary and currently acts as President of the Mexican Association of Actuaries. Mr Lara joined Swiss Re in late 2012 and has the commitment of developing and implementing the company's primary medical insurance initiative in Latin America. His research interests include understanding how medical underwriting and risk factors affect individuals' future healthcare costs based on current and past conditions and how this could change over; as well as learning about medical advances that could impact the cost of care, especially in the Latin America region where specific and proper data is not always available.



I-Min Lee, Mentor

Professor, Department of Epidemiology, HSPH
Professor, Department of Medicine, HMS
Fellowship mentor to: Grégore Mielke
Risk factor: Physical activity, Group leader

I-Min Lee received her Bachelor of Medicine, Bachelor of Surgery from the National University of Singapore, her Master of Public Health from the Harvard School of Public Health and her Doctor of Science degree from the Harvard School of Public Health. Ms Lee's main research interest is in the role of physical activity in promoting health and preventing chronic disease. This extends to characteristics associated with a physically active way of life, such as the maintenance of ideal body weight. She also is concerned with issues relating to women's health. At present, she primarily is involved in two research projects: 1) the College Alumni Health Study, a prospective cohort study of the predictors (particularly, physical inactivity) of chronic diseases, and 2) the Women's Health Study, a completed randomised trial (1992–2004) of aspirin and vitamin E, with women currently being followed on an observational basis, and including accelerometer measures of physical activity.



Yanping Li, Fellow

Research Scientist

Department of Nutrition, HSPH

Fellowship mentor: Lu Qi

Risk factor: Smoking, diet & metabolism, health systems

Country: China

Yanping Li received her medical degree from Tianjin Medical School in China, a Master of Science from the Chinese Academy of Preventive Medicine in 2000, and PhD in 2008 from Wageningen University, the Netherlands. Her research interests include: (1) Trends of lifestyle factors and their association with obesity and other chronic diseases among the Chinese population; (2) Fetal programming of chronic diseases and its interaction with lifestyle factors in adulthood; (3) Genes and environmental interactions in relation to the risk of obesity and diabetes; and (4) Restless legs syndrome and other sleep disorders among Americans. In addition to the Swiss Re SEARCH Fellowship, Ms Li receives funding through the National Heart, Lung, and Blood Institute (HLO71981), The National Institute of Diabetes and Digestive and Kidney Diseases (DK091718) and from the United States – Israel Binational Science Foundation Grant 2011036.



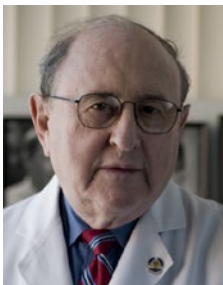
Nancy Long-Sieber, Project Manager

Adjunct Lecturer on physiology

Department of Environmental Health, HSPH

Country: India

Nancy Long-Sieber received her PhD from the University of Michigan. After a spending a year in Japan as a post-doctoral fellow, she came to the Harvard School of Public Health in 1991 to continue her training. She is currently an Adjunct Lecturer on physiology at HSPH and the project manager on the HSPH side for the this collaboration. In the past two decades, she has been a teacher and researcher, and has administered several fellowship programs including the Parker B. Francis Fellowship and the Lown Scholars Program. Her interests include health effects of metal mining, and the emergence of non-communicable diseases in low and middle income countries.



Bernard Lown

Chairman Emeritus, Lown Institute

Professor Emeritus, Harvard School of Public Health

Bernard Lown is a world-renowned cardiologist and humanitarian. Mr Lown pioneered the development of the direct current defibrillator, now the standard of care for cardiac resuscitation. He developed the cardioverter for correcting disordered heart rhythms, and introduced the use of the drug lidocaine to control heartbeat disturbances. In the early 1960s he was a founder of Physicians for Social Responsibility, and in the eighties he co-founded, with Yevgeny Chazov from the Soviet Union, International Physicians for the Prevention of Nuclear War (IPPNW). In 1985, Bernard Lown accepted the Nobel Peace Prize on behalf of IPPNW. He is Professor Emeritus at the Harvard School of Public Health and senior physician (ret.) at the Brigham and Women's Hospital in Boston, Massachusetts. He is the founder of the Lown Cardiovascular Group and is the Chairman Emeritus of the Lown Institute.



David Lu, Collaborator

Deputy Regional Chief Medical Officer, Life & Health
Swiss Re, Hong Kong, China
Country: China

David Lu joined Swiss Re in January 2013 as Deputy Regional Chief Medical Officer of Asia. He is mainly responsible for the Great China area including China, Hong Kong and Taiwan. Before joining Swiss Re, he gained 10 years of working experience at a UK-based international medical insurance company as Assistant General Manager of Medical and Underwriting of Hong Kong. Besides his underwriting role, he was also responsible for leading clinical governance and total health management to ensure access to quality and appropriate care as well as to help people live longer, healthier, happier lives.

Mr Lu received his Bachelor degree of Medicine at The School of Medicine, Beijing University in 1986 and was employed by the First Hospital of Beijing University as an orthopedic surgeon. In 1992, he was sponsored by the Shionogi Cell Science Research Foundation to research on minimal invasive spinal surgery in Japan, under the supervision of Professor Kiyoshi Kaneda, the world-renowned spine surgeon and scientist. He obtained his Doctoral degree in Medical Science in 1997 from Hokkaido University, Sapporo, Japan and a certificate of advanced clinical training for spinal surgery from the Japanese Ministry of Health. In 1997, he was invited by the Department of Orthopedic Surgery at the University of Hong Kong to continue his research on minimal invasive spinal surgery and lead the Applied Spinal Research Laboratory.

Mr Lu has written extensively about his research and published 26 peer reviewed original scientific papers in international journals, 73 international and regional scientific conference papers, and 3 book chapters. His research on applying chemo-nucleolysis for the treatment of scoliosis has been internationally recognised, and won the SICOT (Societie Internationale Chiruchie Orthopaedie ET Traumatologique) 2001 Best Poster Award in Paris; HKOA (Hong Kong Orthopaedic Association) 2001 The Best Paper Award for Associate Member in Hong Kong, and was selected as the Winner of the 5th Annual SPINE Journal Young Investigator Research Award. Mr Lu's research interest includes proactive risk control through cardiometabolic diseases management, and patient reported outcome measurements.

Working groups



Alison McLean, Collaborator

Head of Behavioural Research, Life & Health R&D
Swiss Re, London, United Kingdom
Country: Brazil and China

Alison McLean's research focusses on the underlying drivers of consumer behaviour – including the evaluation of behavioural economic-informed interventions. She previously worked as a Claims Medical Manager, managing a team of clinical specialists. In this role, her team was responsible for providing clinical input to claims management solutions, product design, training and the implementation of research strategies to better understand and improve claim outcomes. Prior to joining Swiss Re, Ms McLean worked in clinical roles as an Occupational Therapist in both the public and private sectors. This involved providing therapeutic intervention to optimise people's functional ability after sustaining injury or illness. She completed a Master of Science in Health Economics, Policy and Management (London School of Economics), holds a Master of Health Science in Health and Environment (Queensland University of Technology), and a Bachelor of Health Science Occupational Therapy (University of Newcastle, Australia). Ms McLean's research interest is in understanding the impact of individual and population level health and social interventions on health outcomes, productivity and well-being.



Grégore Mielke, Fellow

Doctoral Student
Universidade Federal de Pelotas, Brasil
Fellowship mentor: Pedro Hallal, I-Min Lee
Risk factor: Physical activity
Country: Brazil

Grégore Milke is a PhD student in Epidemiology at the Universidade Federal de Pelotas, Brazil. The focus of his work is on public health, with an emphasis on physical activity and sedentary behaviours in Brazil. His specific research topic is the study of social inequities in sedentary behaviour, as well as the health consequences of physical activity and sedentary behaviour. In addition to the Swiss Re SEARCH Fellowship, Mr Milke receives funding from the Wellcome Trust through the New Investigator Award scheme in addition to scholarship funding from the Brazilian Research Council.



Dariush Mozaffarian, Mentor

Associate Professor
Department of Epidemiology, HSPH
Fellowship mentor to: Marcia Otto
Risk factor: Diet & metabolism, Group Co-leader
Country: Brazil, Group Co-leader

Dariush Mozaffarian received his medical degree from Columbia College of Physicians & Surgeons, his Master of Public Health from the University of Washington School of Public Health and his Doctor in Public Health (Dr.P.H.) in Epidemiology from the Harvard School of Public Health. His research interests are the effects of behaviour and lifestyle, particularly dietary habits, on primary risk and secondary prevention of cardiovascular and metabolic diseases. Areas of specific interest include: 1) Effects of omega-3 and trans fatty acids on cardiovascular outcomes, intermediary phenotypes, and metabolic and physiologic pathways; 2) Policy issues related to fat consumption in developed and developing nations; 3) Quantitative analyses of risks and benefits of fish consumption; 4) Global cardiovascular health, and; 5) The combined impact of multiple dietary and other lifestyle behaviors on cardiovascular and metabolic risk.



Christoph Nabholz, Project Director

Head Business Development, Centre for Global Dialogue
Swiss Re, Zurich, Switzerland

Christoph Nabholz is Head of Business Development at the Swiss Re Centre for Global Dialogue and additionally serves as Research & Development Manager to Swiss Re's Life & Health Division. As Head of Business Development he is responsible for the content of high-profile industry events held at the Centre for Global Dialogue, Swiss Re's premiere conference facility. With his background in genetics he actively supports Swiss Re's research on and development activities in medical trends and longevity.

Before joining the Centre, Mr Nabholz was Strategic Research Manager in Global Life & Health Underwriting and served as Swiss Re's Global Genetics Consultant. Prior to joining Swiss Re, he was a postdoctoral fellow in genomics and functional genetics with Prof. Tom Maniatis at Harvard University. He received a diploma in biochemistry from the University of Basel, Switzerland, and a Ph.D. with honours in molecular genetics from the University of Freiburg, Switzerland. His research interests include better understanding of personalised- and translational-medicine approaches. This includes medical trend research on molecular diagnostics, cancer therapy, regenerative medicine, nano-medicine, and next generation antibodies. A key part of his research is to better understand how genetic variations in our genome are associated with health and disease risk predisposition and how this information is used in novel drug development and treatment of disease.

Working groups



Jennifer Nguyen, Fellow

Research Fellow

Department of Environmental Health, HSPH

Fellowship mentor: Douglas Dockery

Risk factor: Indoor and outdoor air pollution

Country: Brazil, China, Mexico and India

Jennifer Nguyen received her Master of Public Health from Boston University and her Doctor of Science in Environmental Health and Epidemiology from the Harvard School of Public Health. Her broad research interests are around how environmental factors affect cardiovascular health. She is particularly interested in air pollution and weather, and how they relate to acute and chronic cardiovascular outcomes. She is also interested in epidemiologic methods, specifically sources of bias in studies and how measurement error may affect the observed associations. For the Swiss Re Fellowship, Ms Nguyen focuses on how indoor and outdoor air pollution relate to cardiovascular disease and stroke in Brazil and Mexico. In addition to the Swiss Re SEARCH fellowship, she receives funding from a National Institute of Environmental Health Sciences (NIEHS) grant R21ES020194 and through the Dean's Fund at the Harvard School of Public Health.



Andreas Obrist, Project Manager

Business Development Manager, Centre for Global Dialogue

Swiss Re, Zurich, Switzerland

In his role as Business Development Manager, Andreas Obrist strives for an effective and business-relevant use of the Centre as a platform for dialogue between internal and external stakeholders on key global issues and trends from a risk transfer perspective. He is involved in the organisation of conferences and workshops focused on exploring and developing industry-issues as well as fostering marketing and business opportunities for Swiss Re.

Previous to his current position, Mr Obrist worked in international economic development as Program Manager for Global Business Brigades (GBB). He provided business consulting and strategic investment to support under-resourced microenterprises in Honduras. Before that he was a Project Manager at the Consulate of Switzerland – swissnex Boston where he promoted knowledge exchange between the US and Switzerland and showcased Switzerland's strengths in innovation, research and education.

Previous to his assignments in Honduras and the United States, Mr Obrist worked as Business English Teacher for EF Education in Ecuador and as Sales Trader for Lehman Brothers in Zurich. He holds a Master's degree in Business Administration from Hult International Business School in Cambridge, Massachusetts.



Marcia Otto, Fellow

Postdoctoral Fellow
Department of Epidemiology, HSPH
Fellowship mentor: Dariush Mozaffarian
Risk factor: Diet & metabolism
Country: Brazil

Marcia Otto received her MS in Environmental Science from the University of Sao Paulo, Brazil. She completed her PhD at the University of Texas School of Public Health with focus on micronutrient intakes and their relationships with inflammation and cardiovascular disease, metabolic syndrome and type II diabetes in U.S. adults. Ms Otto's research interests are on the effects of different aspects of diet and diet quality on cardiovascular and metabolic health. Her current research projects include evaluating the effects of circulating fatty acids on cardiovascular disease incidence and progression, the development of novel metrics to characterize dietary diversity and quality and their relation to cardiovascular and metabolic disease risk in a multi-ethnic population, and the impact of dietary and metabolic risk factors on the burden of chronic diseases in Brazil. In addition to the Swiss Re SEARCH Fellowship, she receives funding from an unrestricted educational grant from Bunge LLC.



Lu Qi, Mentor

Assistant Professor
Department of Nutrition, HSPH
Fellowship mentor to: Yanping Li
Risk factor: Diet & metabolism
Country: China

Lu Qi's research has focused on the genetic, nutrition, biochemical risk factors and gene-environment interactions in relation to obesity, type 2 diabetes and the cardiovascular complications in diabetic patients. Mr Qi is the Principal Investigator of two NIH R01 grants, the Principal Investigator of a American Heart Association Scientist Development Grant, and Co-Principal Investigator of European Foundation for the Study of Diabetes (EFSD) funded lifestyle intervention trial in Chinese women. As Principal Investigator, he is also leading a metabolomic study in two diet intervention trials funded by U.S. – Israel Binational Science Foundation.



Srinath Reddy, Co-leader, India group

Bernard Lown Visiting Professor of Cardiovascular Health,
Department of Epidemiology, HSPH
President, Public Health Foundation of India
Country: India, Group co-leader

Srinath Reddy is a founding member of the Public Health Foundation of India and has been providing leadership to the foundation since its inception in March 2006. Prior to this, Mr Reddy headed the Department of Cardiology at the All India Institute of Medical Sciences (AIIMS) in New Delhi. He graduated from the Osmania Medical College, Hyderabad and later trained at AIIMS, where he received his MD (Medicine) and DM (Cardiology) degrees with high academic honors. He is a clinical cardiologist also trained in epidemiology from McMaster University, Canada. Mr Reddy has been involved in several major international and national research studies, including: 1) INTERSALT, a global study of blood pressure and electrolytes, and 2) INTERHEART, a global study on risk factors of myocardial infarction. He was appointed as the First Bernard Lown Professor of Cardiovascular Health at the Harvard School of Public Health and is also an Adjunct Professor at the Rollins School of Public Health, Emory University.



Séverine Rion, Collaborator

Senior Pharmacist, Life & Health R&D
Swiss Re, Zurich, Switzerland
Risk factor: Physical activity

Séverine Rion is a trained pharmacist, working for Swiss Re's Life & Health R&D department in the Zurich headquarter of the company. Her actual research is focused on advances in the pharma and biotech industries, innovative health and information-communications technologies and consumer behaviour.

Before joining the L&H Research Office, Ms Rion worked as a Senior Casualty Risk Engineer for Swiss Re in the field of life sciences and hospital risk management. In this position, she developed methods and tools to conduct risk assessments and bench marking for the life sciences industries. She further modeled risk scenarios and landscapes for different industry sectors including hospitals.

Prior to joining Swiss Re, Ms Rion was a chemist in public and hospital pharmacies. She studied pharmacy at the Swiss Federal institute of Technology (ETH) in Zurich and the Ecole de Pharmacie in Lausanne to obtain her Federal Degree in Pharmacy. Her research at the ETH and at the Scripps Research Institute in San Diego was on Virtual Screening of 3-Dimensional Databases for Ligand Design and molecular biology.



Daniel Ryan, Project Sponsor

Head Life & Health R&D

Swiss Re, London, United Kingdom

Country: India

Daniel Ryan is Head Life & Health R&D at Swiss Re, having joined in August 2010. He was previously Head of Mortality Consulting and Research at Towers Watson, and was the principal investigator for 8 years and founder of an innovative research group that addressed a wide range of key issues on mortality and morbidity.

Swiss Re has invested significantly in understanding future drivers to mortality and longevity, and Mr Ryan leads a multi-disciplinary group that is focused on the development and evaluation of forward-looking scenarios based on prior history of disease or good health.

Mr Ryan is a keen advocate of closer links between the actuarial and medical profession, and is a member of World Economic Forum's Global Agenda Council for Ageing. He is also the Chair of the Technical Committee for the Life and Longevity Market Association, a non-profit venture to promote a liquid traded market in longevity and mortality risk that would assist pension funds that are interested in transferring risk to the wider capital markets.



Vikas Saini, Leader, health systems group

President, Lown Foundation

Lecturer, Department of Medicine, HMS

Risk factor: Health systems

Vikas Saini is President of the Lown Foundation. He completed his MD with distinction from Dalhousie University in Halifax (1980), residency at Baltimore City Hospitals/ Johns Hopkins Bayview, and a Lown Fellowship at Brigham and Women's Hospital. Mr Saini joined the Lown Group in 1987 before leaving to co-found Aspect Medical Systems, the pioneer in consciousness monitoring technologies in the operating room and critical care setting. Mr Saini left private practice on Cape Cod in 2007 to return to the Lown Cardiovascular Group and Lown Foundation. He is board certified in cardiovascular disease, internal medicine, and nuclear cardiology and is a Lecturer in the Department of Medicine at Harvard Medical School and a Visiting Scientist in the Department of Nutrition at the Harvard School of Public Health. His interests include nutritional and preventive cardiology, technology applications for medicine, the biology of aging, and global health. Mr Saini writes a monthly column for Prevention India magazine.



Kevin Somerville, Collaborator

Medical Consultant
Swiss Re, London, United Kingdom
Risk factor: Health systems

A New Zealander, Kevin Somerville studied medicine at Auckland University. He moved to the UK to gain postgraduate medical experience and subsequently remained in the country. He has worked and trained in Medical Academic centres in Edinburgh, Nottingham (where he was a lecturer in Therapeutics and wrote his DM thesis) and Oxford. In Oxford he was Senior Registrar in Geratology to Professor Sir John Grimley Evans. In 1989 he was appointed Consultant Physician and Geriatrician to St Bartholomew's Hospital in central London.

Since 1997, Mr Somerville has been Medical Consultant to Swiss Re, most recently as a member of the Global Life and Health Underwriting team based in London. Initially he provided advice to Swiss Re about the medical risk assessment of older people and long term care insurance; but over the last 15 years his role has expanded to include most aspects of life and health medical risks. His current role has particular reference to the medical aspects of underwriting and claims and includes developing an evidence based approach to risk assessment. He is Past President of the Assurance Medical Society and was first chair of the LUCID conference planning committee, a multidisciplinary biennial meeting of life underwriters, claims assessors and insurance doctors in the UK. His research interest includes collaborative research on how the factors that influence mortality and morbidity alter with increasing age and how the distribution of and changing secular trends in CVS risk factor exposure in different populations affect cardiovascular disease event rates.



SV "Subu" Subramanian, Mentor

Professor, Population Health and Geography
Department of Social and Behavioral Sciences, HSPH
Fellowship mentor to: Hiram Beltran-Sanchez, Daniel Corsi
Risk factor: Diet & metabolism, physical activity
Country: India, Mexico

Subu Subramanian is Professor of Population Health and Geography in the Department of Social and Behavioral Sciences at HSPH. He is also a faculty associate at the Institute of Quantitative Social Sciences at Harvard University and is a member of the Steering Committee for the Harvard Center for Population and Development Studies, and Harvard Center for Geographic Analysis. He has a PhD in Geography from the University of Portsmouth, UK with specialisation in multilevel statistical methods. Mr Subramanian's research focus specifically includes: 1) Understanding the role of geographic, social and institutional contexts; 2) Developing and applying multilevel methods to investigating the reciprocal and dynamic relationship between macro socioeconomic environments; 3) Investigating the social determinants of health inequalities in India; 4) Developing global comparative perspectives on socioeconomic and geographic axes of health stratification in different societies; and 5) Integrating intergenerational and socioeconomic perspectives to understanding variations in health and well-being.



Claudia Suemoto, Fellow

Postdoctoral student
Department of Global Health and Population, HSPH
Fellowship mentor: Goodarz Danaei
Risk factor: Diet & metabolism
Country: Brazil

Claudia Suemoto is an Assistant Professor of Geriatrics at the University of Sao Paulo Medical School. Her previous research interest focused on the association between cardiovascular risk factors and neurodegenerative diseases. At her postdoctoral fellowship at the Harvard School of Public Health, Ms Suemoto investigates the association between obesity and diabetes with all-cause and cardiovascular disease (CVD) mortality in the SABE (Saúde, Bem Estar and Envelhecimento) cohort study from Sao Paulo, Brazil. She also evaluates trends in CVD mortality as well as trends in obesity and diabetes prevalence in 27 Brazilian capital cities during the last 10 years. In addition to the Swiss Re SEARCH Fellowship, she receives funding through a Brazilian fellowship, Science without Borders, CAPES.



Qi Sun, Mentor

Assistant Professor
Department of Nutrition, HSPH
Fellowship mentor to: Hongyu Wu
Risk factor: Diet & metabolism, physical activity, smoking
Country: China

Qi Sun is Assistant Professor of Medicine at Brigham and Women's Hospital and Harvard Medical School, and an Assistant Professor in the Department of Nutrition at HSPH. Mr Sun's primary research interests are to identify and examine biomedical risk factors, including dietary biomarkers, in relation to type 2 diabetes, obesity, and cardiovascular disease. His research is primarily based on a few large-scale cohort studies including the Nurses' Health Study I and II and the Health Professionals Follow-up Study. Mr Sun is also interested in the role of environmental pollutants, especially those from dietary sources, in the etiology of obesity and type 2 diabetes.

Working groups



Xiaojie Wang, Collaborator

Actuarial Analyst, Life & Health R&D

Swiss Re, Armonk, New York, USA

Risk factor: Smoking, indoor and outdoor air pollution

Country: China

Xiaojie Wang received her Bachelor's degree in chemistry from Nanjing University in 2007. She studied at the University of Texas at Austin for four years and obtained her Master's degree in mathematics with a focus on actuarial science in 2011. She worked at New Era Life Insurance Company as Actuarial Analyst for more than two years, mainly in life valuation. Ms Wang joined Swiss Re in March 2013 as Actuarial Analyst. She became an Associate of Society of Actuaries (ASA) in 2012. Her research interest is focused on the mortality impact by air pollution in Asia. Air pollution is one of the main environmental causes which contribute to premature death worldwide.



Urs Widmer, Collaborator

Senior Medical Officer

Swiss Re, Zurich, Switzerland

Country: Brazil

Urs Widmer graduated from Zurich University Medical School in 1979. After postgraduate research work in a metabolic unit and a specialty degree in internal medicine (1988) he did research at the Rockefeller University, New York on the cloning of novel chemokines. After 13 years as an attending physician in internal medicine and consultant for clinical immunology at Zurich University Hospital he joined Swiss Re in 2005 as Senior Medical Officer. His research interests include the insurability of HIV positive people, influenza pandemics, insurability of rare diseases and reimbursement for orphan drugs, intervention studies using disease and health monitoring devices, and analysis of insurance and public health databases with a focus on cardiovascular risk factors.



Walter Willett, Diet & metabolism group mentor

Fredrick John Stare Professor of Epidemiology and Nutrition
Chair, Department of Nutrition (HSPH)
Risk factor: Diet & metabolism

Walter Willett is the Chair of the Department of Nutrition at the Harvard School of Public Health and the Fredrick John Stare Professor of Epidemiology and Nutrition. He received his Medical Degree (M.D.) from the University of Michigan Medical School in 1970, his Master in Public Health from HSPH in 1973 and his Doctor in Public Health (Dr.P.H.) in 1980 from HSPH. His research primarily involves the investigation of dietary factors, using epidemiologic approaches, in the cause and prevention of cardiovascular disease, cancer, and other important conditions. The primary studies conducted by his group involve several large ongoing prospective cohorts, including: 1) the 121 700-member Nurses' Health Study, initiated by Frank Speizer at the Channing Laboratory; 2) the Health Professionals Follow-up Study, a cohort of 52 000 men; and, and 3) the Nurses' Health Study II, a cohort of younger women numbering 116 000.



Michelle Williams, Co-leader, India Group

Stephen B. Kay Family Professor of Public Health, HSPH
Chair, Department of Epidemiology, HSPH
Country: India, Group Co-leader

Michelle Williams received her Master of Science in Civil Engineering and Public Health from Tufts University, a Master of Science from the Harvard School of Public Health and her doctoral degree in epidemiology from the Harvard School of Public Health. She is the Chair of the Department of Epidemiology at HSPH. Her research interests lie principally, but not exclusively, in the field of reproductive and perinatal epidemiology. She has spent the last two decades focused on integrating epidemiological, biological and molecular approaches into rigorously designed clinical epidemiology research projects that have led to greater understandings of the etiology and pathophysiology of placental abruption, gestational diabetes, and preeclampsia. Ms Williams is Principal Investigator of three large National Institutes of Health-funded projects: 1) A Prospective Cohort Study of Migraine, Platelet Activation, and Preeclampsia; 2) A Cohort Study of Preterm Delivery in Relation to Partner Abuse, Mood and Anxiety Disorders; and 3) Triggers of Placental Abruption: A Case Crossover Study of an Ischemic Placental Disease.

Working groups



Monica Wilson, Collaborator

Medical Director
Swiss Re, Toronto, Canada
Country: Mexico

Monica Wilson is the Vice President and Medical Director for Swiss Re Life & Health Canada and current President of the Canadian Life Insurance Medical Officer Association. She received her Doctor of Medicine in Puebla, Mexico and then specialized in Critical Care Medicine at Hospital Español de Mexico, located in Mexico City. Once completing her residency, she continued to work as an Attending Physician in the Intensive Care Unit in this same hospital for approximately 12 years.

Ms Wilson joined Swiss Brokers of Mexico in 2002 as a part time medical consultant. In 2004, she retired from clinical medicine to join Swiss Re in the Zurich hub where she worked as a Medical Officer providing underwriting consultation and education for Swiss Re Underwriters and clients spanning across Continental Europe, the Middle East and Asia.

In July 2006, Ms Wilson returned to her home country to join Swiss Re Life & Health Canada where she provides underwriting consultation, support and education for Swiss Re Underwriters as well as Canadian, American and Caribbean clients. Her research interest includes cardiovascular disease and liver disease, mainly hepatitis B.



Hongyu Wu, Fellow

Postdoctoral Fellow
Department of Nutrition, HSPH
Fellowship mentors: Frank Hu, Qi Sun
Risk factor: Diet & metabolism, physical activity, smoking
Country: China

Hongyu Wu received her PhD from the Institute for Nutritional Sciences, Shanghai Institutes for Biological Sciences, Chinese Academy of Sciences (Shanghai, China) in 2011. She is currently a Postdoctoral Fellow in the Department of Nutrition, Harvard School of Public Health. Ms Wu's research focuses on investigating the diet and lifestyle factors, environmental pollutants, and biomarkers in relation to the development of obesity, type 2 diabetes and cardiovascular disease, as well as risk of mortality. Ms Wu conducts research on several diet and lifestyle risk factors, such as change of diet, smoking and physical activity, in relation to chronic diseases in middle aged and elderly population from two big cities of China. In addition to the Swiss Re SEARCH Fellowship, Hongyu receives funding through Grant DK58845 from National Institutes of Health (Frank B. Hu), Grant 11SDG7380016 from American Heart Association and 1-12-JF-13 from American Diabetes Association (Eric L. Ding).



Thomas Zeltner, WHO Collaborator

Special Envoy for Financing
World Health Organization

Thomas Zeltner, former Secretary of Health of Switzerland and Director-General of the Swiss National Health Authority (1991–2009), has a long history as an innovative and progressive leader in public health. He currently serves as Special Envoy for Financing of the World Health Organization (WHO). In this capacity he advises the Director General of WHO Margaret Chan on the identification of an improved financing framework for the organization, a cornerstone of the current reform of this UN agency. He is Co-Founder of the Global Patient Safety Forum, a convening organisation of the world leading patient safety organizations and a Managing Editor of the Journal of Patient Safety. He is also member of the Global Agenda Council on Digital Health of the World Economic Forum (WEF) and Chairman of the Advisory Board of the Global Health Programme at the Graduate Institute (Geneva).

Mr Zeltner is board member of the Swiss Academies of Arts and Sciences. Since 1992, he has been Professor of Public Health at the University of Berne and is a Visiting Scientist at the Harvard School of Public Health.

As Secretary of State for Health, Mr Zeltner regularly represented Switzerland at the World Health Assemblies (1991–2009). He was a member and Vice-President of the Executive Board of the World Health Organization (1999-2002) and chaired many committees, such as the open ended intergovernmental group to review the working methods of the Executive Board (2001–03) and the committee on multinational tobacco companies and their attempt to undermine tobacco control activities of the World Health Organization (2000). He was instrumental in establishing and implementing a common Health Foreign Policy between the Swiss Ministries of Foreign Affairs and Health (2006).

As Director-General of the Federal Office of Public Health of Switzerland he was a key actor in Swiss health policy. He has presided over changes to transform the regulated market model of the Swiss health care sector into a more value and consumer driven health care system. The Swiss model of health care, which guarantees access to a comprehensive benefit package to all residents, is gaining increased international interest and attention.

Mr Zeltner graduated with an MD and a Master's degree in Law from the University of Bern. He is a 2010 Fellow of the Harvard Advanced Leadership Initiative.

Sponsors



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The Harvard School of Public Health brings together dedicated experts from a wide range of disciplines to educate new generations of global health leaders and produce powerful ideas through rigorous research that can transform the lives and health of people everywhere. Each year more than 400 faculty members at HSPH teach 1200-plus full-time students from around the world, as well as train thousands more through online and executive education activities. Our educational programs and research efforts range from the molecular biology of AIDS to the epidemiology of cancer; from violence prevention to healthy lifestyles and nutrition; from maternal and children's health to environmental health; from US health policy to international health and human rights.



The Swiss Re Centre for Global Dialogue is a platform for the exploration of key global issues and trends from a risk transfer and financial services perspective. Founded by Swiss Re, one of the world's largest and most diversified reinsurers, in 2000, this state-of-the-art conference facility positions Swiss Re as a global leader at the forefront of industry thinking, innovation and worldwide risk research. The Centre facilitates dialogue between Swiss Re, its clients and others from the areas of business, science, academia, and politics.



Swiss Re Foundation is a non-profit organisation committed to care and concern for society and the environment. Launched in 2012 by global re/insurer Swiss Re, the Foundation aims to make people more resilient towards natural hazards, climate change, population growth, water scarcity and pandemics, along with other challenges to society's security, health and prosperity. It also supports community projects and employee volunteering in locations where Swiss Re has offices.

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