



Further information

Cambridge Advanced Short Course on Chronic Non-Communicable Disease Epidemiology

Tuesday 3rd July – Wednesday 1st August, 2018

Aim

This comprehensive short course aims to provide: 1) an up-to-date overview of epidemiology, biostatistics and public health concepts used in non-communicable disease (NCD) research 2) lessons on behavioural, social and environmental drivers of NCDs and related interventions, and 3) opportunities to be selected as longer-term CAPABLE Research Fellows in NCDs (please see www.capable-bangladesh.org for details of the long-term Fellowships).

The course should appeal to researchers trained in medicine, epidemiology, public health, biological sciences, social sciences, environmental sciences, physical sciences including water systems, and chemistry.

Course Fee

There is no fee to attend the course. TA/DA will be provided as per HNPSP rule.

Course duration

A 4-week course starting on Tuesday 3rd July and ending Wednesday 1st August, 2018. The course will be conducted from 9.30am to 4.30pm and classes will be held on Saturdays from week 2 onwards.

Course recruitment

Recruitment will be based on relevant educational background, research/work experience in a specific theme, proficiency in English and computing.

Course content

Non-communicable disease risk factors can be studied under 5 research themes, namely:-

- (i) Epidemiology of NCDs
- (ii) Lifestyle and behavioural determinants of health
- (iii) Environment (air quality, water resources and pollution) and health
- (iv) Health policy and gender
- (v) Designing low-cost scalable interventions

The course will cover these five risk themes as well as providing in-depth training in epidemiology, data handling and biostatistics.

Course teaching staff

Details of the lecturing staff are provided on pages 4-8.

Course timetable**Dhaka venue to be confirmed**

Morning session 9.30-12.00, Afternoon session 14.00-16.30

July 2018	Module	Lecture theme	Faculty	Teaching days
Tue 3 - Thu 5, Sat 7 – Thu 12 & Sat 14 – Sun 15	1 Epidemiology and Biostatistics	1.1 Epidemiology (mornings)	Rajiv Chowdhury Emanuele Di Angelantonio Sabrina Flora	11
		1.2 Biostatistics (afternoons)	Nick Mascie-Taylor	
Mon16 – Tue 17	2 Non-communicable Disease (NCD) overview	2.1 NCD epidemiology and public health	Rajiv Chowdhury Emanuele Di Angelantonio	2
Wed 18 – Thu 19		2.2 Pragmatic/behaviour interventions	Simon Griffin Stephen Sutton	2
Sat 21 – Sun 22	3 Lifestyle risk factors	3.1 Tobacco and alcohol use	Sohel Choudhury Khalequzzaman	2
Mon 23 – Tue 24		3.2 Nutrition and physical activity	Nita Forouhi Soren Brage	2
Wed 25	4 Social determinants	Health Policy and Gender	Sarah Hawkes	1
Thu 26			Ruchira Naved	1
Sat 28- Sun 29	5 Environmental exposures	5.1 Air pollution	Rod Jones Md Khalequazzaman	2
Mon 30 - Tue 31		5.2 Water pollution	Al Fazal Khan Joerg Feldmann Rubhana Raqib Jim Ajioka	2
Wed 1 Aug	Course evaluation		Nick Mascie-Taylor Sabrina Flora	1
Total				28

Guest lecturers: Professor Zhengming Chen, Professor Kumudu Wijewardene

Course directors, Associate Professor Rajiv Chowdhury, Professor Sabrina Flora and Professor Nick Mascie-Taylor

Application process

Application Form

- Only online applications will be accepted.
- Please visit: <http://www.capable-bangladesh.org/capacity-development/advanced-short-courses/>;
- Download the application form which must be completed in font size 10;
- Insert a passport size photograph in the application form;
- Save the application form as Fullname (e.g., Rajiv_Chowdhury);
- Save as Fullname a copy of: i) highest degree certificate (e.g., Rajiv_Chowdhury_degree); ii) letter of reference of your latest employer or line manager (e.g., Rajiv_Chowdhury_reference); (if the applicant is currently a student/never employed, a letter from the head of department/course director);
- Return the documents as attachments to capacity@capable-bangladesh.org.

Closing date for applications

The closing date for applications is **20th May 2018**. No applications will be processed after that date.

Other relevant information

A certificate will be given on successful completion of the short course.

A number of bursaries may be available to outstanding participants.

Further Queries

For further information on the CAPABLE programme visit www.capable-bangladesh.org or email info@capable-bangladesh.org

Course Mentors

International staff

Name	Institute	cv
<p>Rajiv Chowdhury Principal Researcher/ Associate Professor in Global Health</p>	<p>Cambridge University</p>	<p>Rajiv is a qualified physician who did his MPhil and PhD in Epidemiology at the University of Cambridge. He was a <i>Commonwealth</i> and <i>Gates Cambridge</i> scholar. Rajiv has also received advanced training in Nutritional Epidemiology at the Imperial College London, in Genetic Epidemiology at the Netherlands Institute of Health Sciences (as an <i>Erasmus Fellow</i>) and in Pragmatic Trials at the London School of Hygiene and Tropical Medicine. He was elected a <i>Fellow of the UK Royal Society for Public Health</i> and a <i>Fellow of the European Society of Cardiology</i>.</p> <p>Rajiv leads the Global Health Research theme within this unit. He is the lead Principal Investigator of several international research projects:</p> <ol style="list-style-type: none"> 1) The BangladEsh Longitudinal Investigation of Emerging Vascular Events (BELIEVE, a 100,000-person prospective cohort study in Bangladesh), 2) <i>The Strengthening Health research by Improving Noncommunicable disease Epidemiology in Sri Lanka</i> (SHINES, 20,000-person prospective cohort study in Sri Lanka). 3) <i>The Malaysian Acute Vascular Events RiSk</i> (MAVERIK, a 5,000-person <i>case-control study of cardiovascular disease in Malaysia</i>) 4) <i>The Bangladesh Risk of Acute Vascular Events</i> (BRAVE, a 16,000-person <i>case-control study of cardiovascular disease</i>). <p>Rajiv also serves as the Scientific Director and joint Principal Investigator of the RCUK-funded (£8M) CAPABLE global health programme in Bangladesh.</p>
<p>Emanuele Di Angelantonio Associate Professor in Translational epidemiology</p>	<p>Cambridge University</p>	<p>Emanuele trained in cardiovascular medicine, in Italy and France, and is registered with the UK General Medical Council as a specialist in general internal medicine. After completing his specialist training, he gained an MSc in Medical Statistics at the London School of Hygiene and Tropical Medicine in 2005 and a PhD in Epidemiology at the University of Cambridge in 2009. He was appointed as University Lecturer in Medical Screening in the Department of Public Health and Primary Care in 2010, where he is leading the Clinical Epidemiology Team in the Cardiovascular</p>

		Epidemiology Unit. In 2012, he has established and lead a new research group in blood donor health, capitalising on his appointment as Principal Investigator in Donor Health Research and Honorary Consultant for NHS Blood and Transplant (NHSBT). Since 2015 he is a Programme Leader and Deputy Director of the National Institute of Health Research (NIHR) Blood and Transplant Research Unit in Donor Health and Genomics in Cambridge.
Professor Sabrina Flora Director	IEDCR	Professor Flora is a trained physician (MBBS) and has a Master degree in Public Health as well as a PhD from the University of Cambridge. She is currently the Director of the Institute of Epidemiology, Disease Control and Research (IEDCR) and was previously Professor of Epidemiology at the National Institute of Preventive and Social Medicine (NIPSOM). She has published widely and her main interests include abdominal obesity, cardiovascular epidemiology, metabolic diseases, nutrition and Diabetes mellitus.
Professor Nick Mascie-Taylor Professor of Human Population Biology and Health	Cambridge University	<p>Nick Mascie-Taylor is a quantitative human biologist and has spent his career at the University of Cambridge where he is Professor of Human Population Biology and Health and Honorary Senior Visiting Fellow at the Department of Public Health and Primary Care. He has a PhD in Natural Sciences and ScD in Human Population Studies.</p> <p>Nick works on the interactions between nutrition, growth, disease and poverty in developing countries. Initially a post-famine nutrition survey in Sudan which measured 80,000 under five-year old children, followed by studies on the epidemiology of Schistosomiasis in East Africa. His research in Bangladesh commenced in 1988 and studies include the impact of deworming and iron and folate supplementation on child cognition and on their nutritional status, impact of anaemia on tea plucking and more recently an 8-year programme to move over 1 million Bangladeshis out of extreme poverty with concomitant improvements in health, nutrition and well-being. Nick has supervised 20 PhD projects in Bangladesh with funding mainly from JICA, WHO, The World Bank and DFID. He also helped set up a Global database on Adult Body Mass Index for the World Health Organization.</p> <p>Nick is passionate about analysing data and he has run many biostatistics training courses in the UK but also in Bangladesh, Denmark, Hungary, India, Iran, Italy, Japan, Kenya, Poland, Sudan, Tanzania, Uganda and Zimbabwe.</p>
Professor Zhengming Chen	Oxford University	Professor Zhengming Chen qualified in medicine at Shanghai Medical University in 1983 (now Fudan University), and gained his DPhil in Epidemiology at the University of Oxford in 1993. He was appointed as Professor of Epidemiology by the University of Oxford in 2006. He is now the Director

		<p>of the China Programs at the Oxford University's Clinical Trial Service Unit and Epidemiological Studies Unit (CTSU) and co-executive director of the China Oxford Centre for International Health Research. His main researches focus on the environmental and genetic causes of chronic disease, evidence-based medicine and evaluation of widely practicable treatments for chronic diseases (such as IHD, stroke and cancer) as well as efficient strategies for chronic disease control in developing countries. Over the past 20 years, he has led several large randomised trials in heart disease (eg, COMMIT/CCS-2), stroke (eg, CAST) and cancer and 3 cohort studies involving >750,000 individuals. Since 2003 he has been the lead principal investigator in the UK for the China Kadoorie Biobank (CKB) prospective study of 0.5 million adults. He leads a research team in Oxford which is responsible for study design and development of procedures and IT systems for the CKB, and for central data management, curation and detailed analyses. He is an honorary professor of Peking Union Medical College and Fudan University in China.</p>
Professor Simon Griffin	Cambridge University	<p>Simon leads the Prevention of Diabetes and Related Metabolic Disorders Programme which contributes to efforts aimed at preventing the growing burden of diabetes, obesity and related metabolic disorders by translating epidemiological knowledge into preventive action, and evaluating the effectiveness of different preventive approaches.</p> <p>Simon qualified from the London Hospital Medical College in 1986 and trained in Clinical Epidemiology and Public Health at the University of Southampton and the London School of Hygiene and Tropical Medicine before moving to the University of Cambridge in 1998. He joined the MRC Epidemiology Unit in 2005. In addition to his role in the MRC Epidemiology Unit, Simon is also Professor of General Practice, Honorary Professor of General Medical Practice at Aarhus University Denmark, an Honorary Consultant at Addenbrooke's Hospital, an Assistant General Practitioner at Lensfield Medical Practice, and a fellow of Wolfson College.</p>
Professor Sohel Choudhury	National Heart Foundation	<p>Dr. Sohel Reza Choudhury is currently Professor and Head of the Department of Epidemiology and Research at the National Heart Foundation Hospital and Research Institute, Bangladesh. Dr. Choudhury graduated from Dhaka Medical College, Bangladesh in 1988 and obtained doctoral degree in cardiovascular disease epidemiology from Shiga University of Medical Science, Japan in 1996. He also obtained a master's degree in Clinical Epidemiology from the University of Newcastle, Australia in 2005. His research interests lie in cardiovascular disease epidemiology and prevention especially tobacco control and high blood pressure prevention. He had been involved in research studies on nutritional and other risk factors in relation to cardiovascular diseases. He worked as a co-PI for a Japanese Center INTERMAP study which investigated the relationship</p>

		<p>between dietary factors and blood pressure. He also worked for World Health Organization, Country Office, Bangladesh as a Temporary National Professional Officer and coordinated the implementation of a Global Adult Tobacco Survey. Dr. Sohel Choudhury is focal point and Co-PI of the BELIEVE Study, a collaborative epidemiological prospective study on NCD in Bangladesh with Cambridge University. Dr. Choudhury also has established research collaboration with other universities in Japan and Australia. He is a member of various national committees on tobacco and NCD control. For the last seven years he has been leading a programme of engaging physicians in tobacco control with a grant from the Bloomberg Foundation. He has been leading programs for establishing tobacco cessation in Bangladesh and involved in NCD data generation particularly population salt intake through national and sub national surveys.</p>
Dr Md Khalequzzaman	BSMMU	<p>Dr Md. Khalequzzaman has 12 years research experience in environmental health, Non-communicable disease and Health Service Management.</p> <p>While working in National Nutrition Services of Ministry of Health, Bangladesh he explored the urban health services provided by the health wing of the City Corporations in collaboration with development partners. There he also got the opportunity to see the development partners' arrangements providing free and subsidized services for the urban poor in Bangladesh.</p> <p>He started working on indoor air pollution and its possible health impacts from 2007 while he was doing his Masters as well his Doctoral in Nagoya University, Japan and is still continuing that work.</p> <p>From 2013, in collaboration with Nagoya University, Japan he started research on Non-Communicable Diseases risk factors in urban poor in Bangladesh as PI in Bangladesh side for 5 years. Baseline information of 34,000 people living in a slum in Dhaka City has been already collected. This study gave the scope to map the existing health services providers and their mode of service delivery in slums. Risk of poverty has also been explored in the slum area.</p> <p>Recently Dr. Khalequzzaman finished a study on Health facilities and health seeking behavior of Char people in Bangladesh. It explored the common health problems which the Char people are suffering from and what kind of health facility they prefer. Also their health care expenditure (i.e. how much money they are spending for health care, about the source of that money, how much money they are spending out of pocket etc.).</p>
Dr Al Fazal Khan	icddr,b	<p>Dr. Md Alfazal Khan is an epidemiologist with particular interest in health impacts of environmental toxicants. He obtained a PhD in environmental epidemiology from Massey University, New Zealand and a Bachelor degree in Medicine from The University of Dhaka. He is</p>

		<p>currently heading Matlab Health Research Centre, icddr,b. For the last 10 years, he has been following a unique cohort to assess the effects of early life arsenic exposure on respiratory, cardiovascular and renal system. Presently he is conducting five research protocols including a collaborative project titled “Cambridge Programme to Assist Bangladesh in Lifestyle and Environmental risk reduction (CAPABLE)”.</p> <p>Throughout his research career, he has conducted several research projects as Principal/Co-Investigator. He has received several research grants including NIH, Gates foundation and RCUK and has collaboration with a number of institutes including University of Cambridge, University of California, Berkeley, Queensland University of Technology and Tokyo University. He has authored several publications in high impact journals.</p>
Professor Nita Forouhi	Cambridge University	<p>Nita Gandhi Forouhi is the Programme Leader of the MRC Epidemiology Unit’s Nutritional Epidemiology Programme and Professor of Population Health and Nutrition at the University of Cambridge. She is also an Honorary Public Health physician with Public Health England.</p> <p>Nita’s research focuses on dietary and nutritional determinants of diabetes, obesity and cardiometabolic disease, and in developing and using improved methods to assess diet and in promoting methodological knowledge exchange through online toolkits. She has also led projects on understanding between-population differences in health, including variation by ethnicity and region.</p> <p>Nita is a clinical academic, trained in medicine, epidemiology and public health in Newcastle, Edinburgh, London and Cambridge. She is well recognised nationally and internationally through her research, with over 200 publications in scientific journals and membership of advisory bodies including the International Diabetes Federation Atlas Committee. Nita enjoys teaching and training and as well as supervising PhD students and post-doctoral fellows, she leads two teaching modules on the MPhil in Epidemiology and MPhil in Public Health courses at the University of Cambridge. She also organises the global WHO/IDF Cambridge Seminar on the Epidemiological and Public Health aspects of Diabetes Mellitus.</p>
Dr Soren Brage	Cambridge University	<p>Dr Søren Brage is the Group Leader of the Physical Activity Epidemiology group. His research interests include developing and evaluating assessment methods for physical activity and fitness at population level, the descriptive epidemiology of physical activity, characterisation of the relationship between physical activity and metabolic disease, and how this relationship may be modified by genetic factors. Søren has an MSc in Exercise Science and an honours degree in health research from the University of Southern Denmark (Odense). He also has MPhil and PhD degrees</p>

		in Epidemiology from the University of Cambridge. During his PhD, he developed and evaluated techniques for objective assessment of physical activity and fitness in populations, using combined accelerometry and heart rate monitoring. These and similar objective methods have now been implemented in several population studies nationally and worldwide which form the basis of the Physical Activity Epidemiology group's work. Søren holds a secondary position as Associate Professor at the University of Southern Denmark (Odense) .
Professor Sarah Hawkes Professor of Global Public Health	University College London	<p>Sarah Hawkes is a medical doctor with a degree in sociology and a PhD in epidemiology. She is Professor of Global Public Health at University College London where she leads a research theme analysing the use of evidence in policy processes, particularly in relation to gender and health. She is Director of the UCL Centre for Gender and Global Health.</p> <p>Sarah has lived and worked for much of the past 20 years in Asia, where she has gathered evidence, built capacity and helped develop policy for programmes focusing on gender, sexual health, non-communicable diseases and human rights. From 2012-2014, Sarah was Wellcome Trust Senior Fellow in International Public Engagement, and focused on the use of public engagement in policy processes. Sarah works closely with national governments, research organisations, WHO and UNFPA in Asia and the Middle East.</p> <p>Recently Sarah has co-led the independent Global Health 50/50 initiative to advance action and accountability for gender equality in global health and contribute to the 2030 Agenda for Sustainable Development.</p>
Dr Ruchira Naved	icddr,b	<p>Dr. Ruchira Naved is a senior scientist at icddr,b, a unique international research organization based in Bangladesh. She has been working on gender issues in Bangladesh for the last 25 years. Dr. Naved's research interest evolves around identifying multi-level correlates of intimate partner violence (IPV), exploring consequences of IPV, and generating evidence on effective ways to prevent IPV. She was the PI of the Bangladesh components of the WHO Multi-country Study on Women's Health and Domestic Violence against Women and the UN multi-country study on men and violence in Asia and the Pacific. She is a member of the Sexual Violence Research Initiative's coordinating group and an Adjunct Faculty at the Hubert Department of Global Health, Rollins School of Public Health at Emory University.</p>

Professor Rod Jones	Cambridge University	Professor Rod Jones' research focuses on observational and modelling studies of atmospheric structure and photochemistry. He is the group leader in the Atmospheric Measurements sector of Centre for Atmospheric Studies at the University of Cambridge. Ozone (O ₃) in the stratosphere protects the biosphere from potentially damaging short wavelength solar radiation. Tropospheric ozone initiates many of the chemical processes, which are necessary for the removal of many pollutant gases, while direct exposure can damage animals and plants. Many other gases play important roles: bromine and chlorine oxides are known to play important roles in stratospheric ozone loss, while gases such as NO ₃ are important in the night-time chemistry in both the stratosphere and troposphere. Other gases, such as the ubiquitous water vapour play important roles in both chemistry and climate. However, not only are the basic distributions of many of these gases poorly known, but also their detailed roles in the atmospheric system have yet to be tested adequately - studies of these are the focus of Professor Jones' group.
Professor Joerg Feldmann	Aberdeen University	Professor for Environmental Analytical Chemistry and Director TESLA (Trace Element Speciation Laboratory), Prof Jörg Feldmann's research interests concern understanding environmental and metabolic processes at the molecular level, particularly when the molecules involved contain a heteroelement (e.g. F, P, S, As, Se, Sb, Hg, Bi, Pb, Sn). The focus of his work is on arsenic speciation in soil/plant as well as in the marine environment. While some studies are very applied such as the arsenic in rice studies. They led to the introduction of the maximum permissible level of inorganic arsenic in rice from the WHO and at the EU level http://www.abdn.ac.uk/research/research-impact/arsenic-in-rice-204.php . While his studies on arsenic in rice are very applied, his work also encompasses highly fundamental studies, such as the elucidation of arsenolipids in marine mammals.
Dr Rubhana Raqib	Icddr,b	Dr Rubhana Raqib has over 23 years of experience in carrying out clinical trials for diarrhoeal diseases and tuberculosis and has specialisation in immunology, infectious diseases and toxicology. In a longitudinal mother-child cohort established in rural Bangladesh (from pregnancy, birth and children at 4-5, 9-10 and 15 years), she has conducted several studies focusing on fetal origin of diseases by assessing pre-and postnatal factors including environmental toxicant exposures, particularly arsenic, that affect the immune function, growth and early biomarkers of non-communicable diseases. One of her current projects includes assessing biomarkers of immune function and inflammation in women and children exposed to house hold air pollution and impact of use of improved cooking fuel on these markers.

Dr Jim Ajioka	Cambridge University	<p>Dr Jim Ajioka is a Senior Lecturer in the Department of Pathology and a Fellow of Jesus College, Cambridge. He received his PhD in drosophila population genetics from SUNY Stony Brook's Department of Ecology and Evolution and helped establish the Drosophila Genome Project as an NIH postdoctoral fellow in Professor Dan Hartl's lab at Washington University. Jim's current research combines science and engineering, employing population genetic tools and large scale molecular biology to: i) Investigate host-intracellular pathogen interactions using <i>Toxoplasma gondii</i> as a model; ii) Implement Synthetic Biology methods for construction of genetic systems in microbes. Both areas of research are underpinned by genomic, transcriptomic, metabolomic, proteomic techniques, with associated computational analyses.</p>
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