Showcase 2014: Life Course Challenges and Global Threats to Public Health

TUESDAY MAY 27, 2014
# PublicHealth@Cambridge

## Steering Committee members

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<td><strong>Prof Carol Brayne</strong></td>
<td>Chair, Director of Cambridge Institute of</td>
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<td>Public Health</td>
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<td><strong>Prof John Clarkson</strong></td>
<td>Deputy Chair, Engineering</td>
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<td>Centre for Science and Policy</td>
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<td><strong>Prof Nick Mascie-Taylor</strong></td>
<td>Biological Anthropology</td>
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<td><strong>Prof Patrick Maxwell</strong></td>
<td>Regius Professor of Physic</td>
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<td><strong>Dr Ann Prentice</strong></td>
<td>MRC Human Nutrition Research Unit</td>
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<td><strong>Prof Sylvia Richardson</strong></td>
<td>MRC Biostatistics Unit</td>
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<td><strong>Prof Stefan Scholtes</strong></td>
<td>Judge Business School</td>
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<td><strong>Prof Derek Smith</strong></td>
<td>Zoology</td>
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<td>History</td>
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<td><strong>Prof Simon Tavaré</strong></td>
<td>Cancer Research UK Cambridge Institute</td>
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<td><strong>Prof Nick Wareham</strong></td>
<td>MRC Epidemiology Unit</td>
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<td><strong>Prof James Wood</strong></td>
<td>Veterinary Medicine</td>
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<td><strong>Dr Ron Zimmerm</strong></td>
<td>PHG Foundation</td>
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<td><strong>Dr Paula Frampton</strong></td>
<td>Strategic Network Coordinator</td>
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<td><strong>Dr Gill Rands</strong></td>
<td>Research Strategy Office</td>
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For further information and to join the Network, please visit: [www.publichealth.cam.ac.uk](http://www.publichealth.cam.ac.uk)
“The PublicHealth@Cambridge Strategic Network was launched in 2013 to help Cambridge extend our capacity to impact on public health in populations around the world.

The Network already connects over 800 researchers from the arts, humanities, social sciences, technology and biomedicine and continues to go from strength to strength.

This unique trans-disciplinary group allows us to consider how health and well-being can be sustained here and across the globe in the future and apply our combined expertise to specific major public health issues, including ageing, inequalities, sustainability, and health across the animal/human interface.”

Professor Carol Brayne, Chair of the PublicHealth@Cambridge Steering Committee
Early Career Researcher Symposium
TUESDAY MAY 27, 2014

9.15am: Arrival and Registration
9.45am: Introduction and welcome
Paula Frampton, Network coordinator

10.00am: Session 1
Chair – John Clarkson, Engineering
Stephen Burgess, Public Health and Primary Care
Using published data in Mendelian randomization: a blueprint for efficient identification of causal risk factors

Vickie Braithwaite, MRC Human Nutrition Research Unit

Goylette Chami, Land Economy/Department of Pathology
Mass drug administration for schistosomiasis and hookworm in Uganda: quantifying the existing impact and developing new strategies with complex networks

Eleanor Winpenny, RAND Europe/CCHSR
Policy interventions to address major public health challenges: international experiences

11.00am: Coffee
11.30am: Session 2
Chair – Ann Prentice, MRC Human Nutrition Research Unit
David Johns, MRC Human Nutrition Research Unit
Behavioural Weight Management Programmes: A systematic review for the National Institute of Health and Care Excellence

Emilie Aguirre, MRC Epidemiology Unit/CEDAR
Common Agricultural Fallacy?: Analysing the Structural Obesogenic Effects of EU Agricultural Law

Lesley Steinitz, Faculty of History
Advertising healthy eating in 1900, and lessons for today

Annalijn Conklin, MRC Epidemiology Unit/CEDAR
Persistent financial hardship is associated with increased long-term weight gain. Do Health Behaviors Have a Role to Play?

12.30pm: Keynote (Ann Hoskins, PHE)
1.00pm: Lunch

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Public Health@Cambridge Showcase 2014
TUESDAY MAY 27, 2014

1.30pm: Arrival and Registration

2.00pm: Introduction and Welcome
Carol Brayne,
Chair of the PublicHealth@Cambridge Network

2.10pm: Session One – Lifecourse Challenges
Chair – Stefan Scholtes, Judge Business School
Caroline Hart, Education
The School Food Plan and Public Policy for Healthy Children
Brendan Burchell, Sociology
Gender, job quality, well-being and the life course
Louise Lafortune, Cambridge Institute of Public Health
Towards an integrated public health approach to optimise health in older age groups

3.10pm: Keynote 1
Ann Hoskins, Public Health England

3.35pm: Coffee break

4.05pm: Keynote 2
Mike Kelly, NICE

4.30pm: Session Two – Global Threats
Chair – Nick Wareham, MRC Epidemiology Unit
Doug Crawford Brown, Land Economy
The public health implications of harmonised global climate change and economic development policies
James Wood, Veterinary Medicine
Multi-disciplinary approaches to the investigation of emerging infectious diseases
Andy Cliff, Geography
Humanitarian Crises, population displacement and epidemic diseases, 1901-2010

5.30pm: Summing up
Sir Leszek Borysiewicz, University Vice-Chancellor

5.45pm Drinks reception and poster session
Speakers: Early Career Programme

Stephen Burgess, Public Health and Primary Care

*Using published data in Mendelian randomization: a blueprint for efficient identification of causal risk factors*

Mendelian randomization is the use of genetic variants to make inferences on causal effects using observational data and represents a fast and inexpensive technique for prioritizing or de-prioritizing risk factors as targets for clinical intervention. However, finding suitable data for assessing the Mendelian randomization assumptions and estimating causal effects with sufficient power may be problematic.

In this talk, I outline a two-sample Mendelian randomization approach, detail the necessary steps for conducting such an analysis, and present statistical methods for combining data on the associations of multiple genetic variants into a single causal effect estimate, using the example of the causal effect of calcium levels on type 2 diabetes risk.

Vickie Braithwaite, MRC Human Nutrition Research Unit


Rickets, a bone disease of growing children, causes debilitating lower-limb deformities and increases the risk of osteoporosis in later life. Rickets is one of the most common non-communicable diseases of the developing world and is re-emerging in the UK. Fibroblast growth factor-23 (FGF23), a phosphate-regulating hormone, is grossly elevated in children with rickets in The Gambia, West Africa. We have recently shown that poor iron status is the strongest predictor of elevated FGF23 and that supplementation with iron can reduce FGF23; thus providing a novel link between iron and phosphate regulatory pathways.

I am investigating the effect of maternal iron status on infant FGF23 and bone mineral metabolism in a study of mother-infant pairs based at MRC Keneba, The Gambia. This study will help to elucidate potential in utero effects of iron status on infant bone health outcomes and on the antecedents of rickets and will have implications for maternal and infant nutrition.

For further information and to join the Network, please visit: www.publichealth.cam.ac.uk
Neglected tropical diseases (NTDs) are a set of 17 chronic infections of poverty, largely attributable to poor hygiene and a lack of safe water and sanitation. Amongst the most prevalent and debilitating of these infections are schistosomiasis and soil-transmitted helminths (STHs), which afflict over one billion people worldwide.

Mass drug administration (MDA) is the mainstay of control for helminthic NTDs. Working in Uganda with the Ministry of Health, my research focuses on identifying where general MDA efficacy can be improved. In particular, I study who fails to benefit from preventative chemotherapy using a marriage of analytical tools from game theory, complex networks, econometrics, and biology.

The Public Health Responsibility Deal (PHRD) in England is a public-private partnership that brings together government, academics, and commercial and voluntary organisations to meet public health objectives. In this study we examine how other countries have sought to address public health problems targeted by the PHRD using policy instruments, from entirely voluntary agreements to mandatory regulation. We seek to assess the core enablers and barriers of regulatory, self-regulatory or voluntary strategies.

We selected two pledges from the PHRD, alcohol labelling and salt reduction, and four countries, Australia, Denmark, Finland and France. For each we conducted a targeted literature review and key informant interviews. The evidence suggests that voluntary agreements may be effective to achieve public policy aims but success will depend upon a number of prerequisites. However, while voluntary agreements might facilitate the introduction of a given policy, their impacts might be smaller in terms of public health gain.
Speakers: Early Career Programme

David Johns, MRC Human Nutrition Research Unit

**Behavioural Weight Management Programmes: A systematic review for NICE**

This review was commissioned by NICE to inform guidance on the effectiveness of programmes and relative importance of the components included in these complex interventions for weight-loss and weight-regain.

We systematically searched for randomised controlled trials of multicomponent behavioural weight management programmes (BWMPs). BWMPs combining diet and exercise were the most effective. BWMPs involving a calorie target or including a dietitian may also be more effective, but the programme characteristics explaining success are mainly unknown. No programme characteristics were found to be associated with a change in the rate of weight regain which implies it may be most fruitful to maximise weight loss when designing BWMPs.

Emilie Aguirre, MRC Epidemiology Unit/CEDAR

**Common Agricultural Fallacy? Analysing the Structural Obesogenic Effects of EU Agricultural Law**

The sets of laws and policies that govern our agricultural systems have a profound impact on the foods we ultimately eat. Only by understanding the interplay between macro-level policy and the resulting food structure can we adequately understand and address the current population-level increases in obesity. However, despite the critical significance of laws regulating our food systems, this area is often overlooked in the public health setting.

In the UK and EU, the Common Agricultural Policy (CAP) is the macro-level policy governing and funding agricultural production. This talk will focus on how CAP has contributed to the creation of the current food system in the UK and EU, looking ahead to discuss the imminent sugar policy changes of the next three years. It will make the case for incorporating a legal and policy perspective into public health research.

For further information and to join the Network, please visit: www.publichealth.cam.ac.uk
Lesley Steinitz, Faculty of History

Advertising healthy eating in 1900, and lessons for today

What was it to be “healthy” in around 1900? A plethora of branded manufactured health foods, such as Bovril, Sanatogen and Dr. Tibbles Vi-Cocoa, were being advertised to consumers during the decades around the turn of the twentieth century. Their claims built on the new knowledge and kudos of chemistry, medicine and nutrition science, and contemporary ideals of “good health”.

My talk will look at how these grabbed the attention of consumers, and will explore what this can tell us today about the communication of healthy eating advice.

Annalijn Conklin, MRC Epidemiology Unit/CEDAR

Financial hardship is associated with increased weight gain: What is the role of Health Behaviours?

Weight status is strongly patterned by socioeconomic status (SES), but financial hardship may also separately influence weight. We aimed to examine the independent associations between financial hardship and 10-year weight gain, and explore health behaviours as potential mechanisms, in British employees.

Self-reported financial hardship in terms of having difficulty paying bills and insufficient money for food/clothing was assessed together with weight of participants. Persistently insufficient money for food/clothing was significantly independently related to subsequent weight gain in female British employees and was not mediated by classical correlates of economic disadvantage and weight. These results suggest strategies to tackle obesity must address women’s everyday financial troubles which may influence weight through more biological pathways.
Caroline Hart, Education

The School Food Plan and Public Policy for Healthy Children

In July 2013, the ‘School Food Plan’ was published, prompted by an array of economic, health, education and behavioural concerns. The School Food Plan signals 16 actions to improve school food, including increasing the uptake of school meals, introducing breakfast clubs and widening the implementation of new food standards in schools.

Drawing on insights from a study of 20 primary schools in Yorkshire, this talk explores the social context of food practices in schools and implications for policy development. The findings indicate the need for tailored school-level strategies and multi-level interventions to achieve culture change and promote positive behaviour change regarding food practices in schools and beyond.

Brendan Burchell, Sociology

Gender, job quality, well-being and the life course

The five-yearly European Working Conditions Survey is a major source of policy-relevant information on gender and employment in Europe. As a cross-sectional survey, it is poorly suited to understanding how progression through life stages impacts upon quality of employment. Yet understanding the life course is key to understanding how men’s employment chances diverge from women’s over time, and essential for the development of policies to reduce gender inequalities.

This presentation will show attempts to integrate progression through life stages into our understanding of gender differences over the life course, with some predictable and some surprising results.
Evidence suggests that long-term chronic conditions, age-related disability, and to some extent frailty and dementia may be more amenable to preventive interventions than previously thought. The challenge is to develop evidence-based policies and practices that reflect the complexity of improving health in a heterogeneous ageing population.

Underpinned by a translational framework, I will describe the building blocks of an approach that aims to identify and evaluate preventive interventions that are tailored better to ageing societies, focusing on those that have the greatest potential to improve outcomes and reduce inequalities. The working premise is that prevention and risk reduction in later life can be effective and cost-effective at all stages of health and frailty, including at the end of life – if well targeted and delivered equitably.
The public health implications of harmonised global climate change and economic development policies

Economic development for the 4 billion people living at the bottom of the global economic pyramid will raise the quality of their lives but increase greenhouse gas (GHG) emissions and the risks of climate change.

This talk uses advanced macroeconomic, climate and public health models to examine the impacts of GHG emissions reduction policies on the magnitude and equity of global health risks. The underlying research considers both the direct impacts of climate change and the co-benefits of reduction of other pollutants such as particulate matter, and examines how changing economic status of poorer nations may influence the sensitivity of populations to these risk agents.
Wars, environmental disasters and other forms of humanitarian crisis have precipitated the mass displacement of populations since biblical times. Over the 20th century, more than a billion people have endured forced population displacement, resulting in profound disruption of livelihoods, social support mechanisms and health care delivery. The dislocation of food production systems has frequently led to chronic malnutrition and an increased susceptibility to infectious diseases. Sexual violence and exploitation (especially of refugee women) have raised the spectre of HIV/AIDS and other sexually transmitted infections, while environmental changes and/or exposure to new environments have promoted the processes of disease emergence and re-emergence.

Using case studies, this talk illustrates the way in which forced population displacements can produce unexpected global dispersals of epidemic-causing diseases.
Stefanie Bucker, Cambridge Institute of Public Health
NIHR School for Public Health Research: Ageing Well Programme
SPHR Ageing Well Programme: Developing Age-Friendly Towns and Cities
SPHR Ageing Well Programme: Ageing, welfare benefits and wellbeing: The role of welfare benefits in shaping wellbeing in older age

Theodore Cosco, Public Health and Primary Care
Whose ‘successful ageing’?

Lavinia Giurgi, Engineering
(Un)informed decision making: the reliability and credibility of medical travel websites

Lauren Kassell, History and Philosophy of Science
The Casebooks Project: A Digital Edition of Simon Forman’s and Richard Napier’s Medical Records, 1596-1634

Victoria Keevil, Public Health and Primary Care
Television viewing time measured over ten years of follow-up, muscles strength and usual walking speed in community-based British men and women

Ronald Kiguba, MRC Biostatistics Unit
Determinants of suspected adverse drug reaction reporting among healthcare professionals in a resource-limited setting

Yue Leng, Public Health and Primary Care
Daytime napping and increased respiratory morbidity: symptom, marker or risk factor?
James Lester, Geography/Veterinary Medicine

Using Syndromic Surveillance and Participatory Epidemiology to Investigate Patterns of Disease in Rural Western Uganda

Celine Meier zu Koecker, Engineering

A Case study of Medical Travel

Rachel Pechey, Public Health and Primary Care

Social patterning of health-related behaviours: towards an understanding of the impact of environments and their moderators

Olivia Remes, Public Health and Primary Care

Review of reviews on the prevalence of anxiety disorders

Lee Roberts, MRC Human Nutrition Research Unit

The Effect of Dietary Inorganic Nitrate on White Adipose Tissue Metabolism

Sanne Verra, Engineering

Challenges in cross border healthcare

Jennifer Yip, Public Health and Primary Care

Eyeing up Deprivation and Low Vision
The PublicHealth@Cambridge Research Network generates fresh insight into the health and well-being of populations via our multidisciplinary community of researchers. We support development of new research and coordinated activities in areas of importance to public health and facilitate translation of research, to the benefit of current and future populations.

For further information and to join the Network, please visit: www.publichealth.cam.ac.uk

For any questions, comments or discussion, please contact the Network coordinator, Dr Paula Frampton: coordinator@publichealth.cam.ac.uk