ExPoSE

Explaining **Po**pulation trends in cardiovascular risk: A comparative analysis of health transitions in **S**outh Africa and **E**ngland

Collaborating institutions:

UNIVERSITY OF GREENWICH

Institute for Lifecourse Development

Stellenbosch
UNIVERSITY
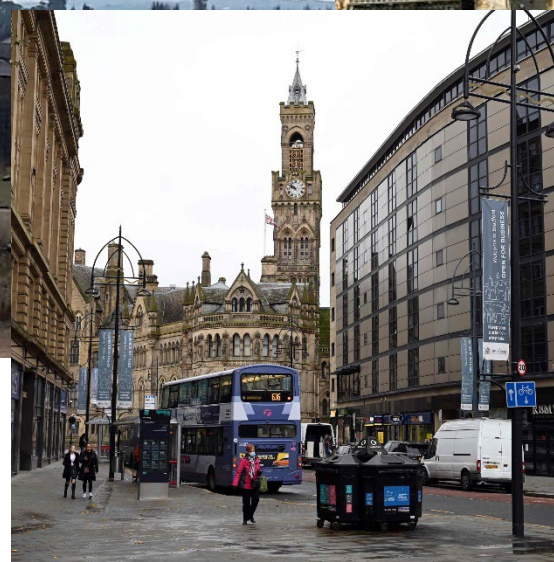IYUNIVESITHI
UNIVERSITEIT

UCL

Funded by:

Introduction to ExPoSE Project and Event Programme

ExPoSE Research Dissemination and Knowledge Exchange Event, 1 September 2023, London, UK

Kafui Adjaye-Gbewonyo, University of Greenwich

Annibale Cois, Stellenbosch University

Project overview

Research Team

- Dr Kafui Adjaye-Gbewonyo, University of Greenwich

  - Research interests: Social epidemiology, non-communicable diseases (NCDs) in African and other low- and middle-income countries (LMICs)

  - Methods: Quantitative and econometric methods using large population surveys

- Dr Annibale Cois, Stellenbosch University

  - Research interests: Epidemiology of NCDs risk factors in LMICs, statistical models for heterogenous data sources, measurement and other sources of error in population surveys

  - Methods: Structural equation modelling, Bayesian multilevel modelling

Funders & Collaborators

The project is funded by the UK's **Economic and Social Research Council (ESRC)** under the *Secondary Data Analysis Initiative*
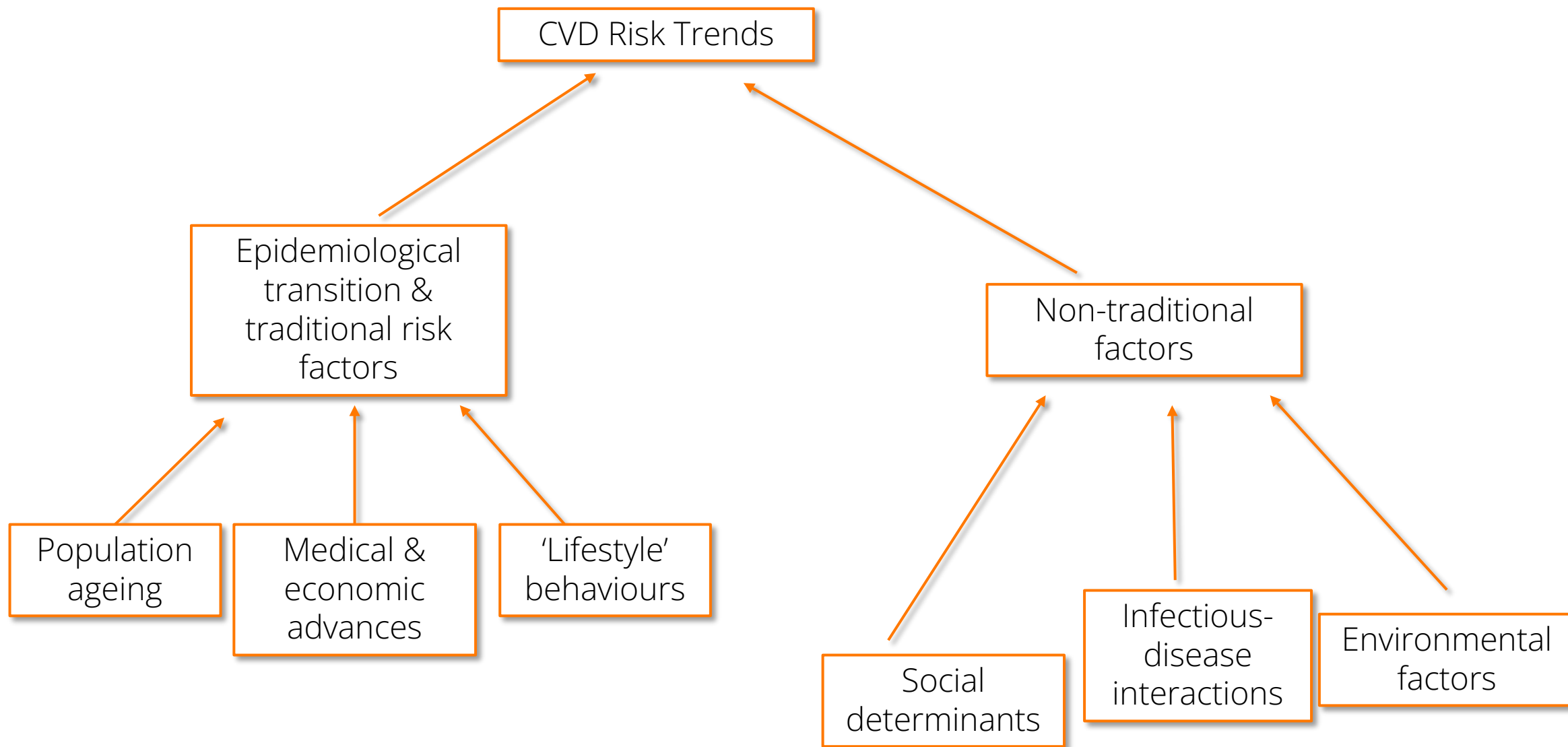
Health and Social Surveys Research Group (HSE team), **UCL:** consulting on use of the Health Survey for England (HSE)

Research questions

1. What are the population trends in CVD risk in South Africa since its first national health survey in 1998?

2. To what extent are these trends explained by demographic, behavioural, social, environmental, health-related and/or other factors?

3. How do these results compare to those in a high-income country with a different infectious disease profile such as England over the same time period?

Conceptual framework

CVD Risk Trends

Epidemiological transition & traditional risk factors

Non-traditional factors

Population ageing

Medical & economic advances

'Lifestyle' behaviours

Social determinants

Infectious-disease interactions

Environmental factors

Data sources

England:

- 17 nationally-representative cross-sectional surveys from the Health Surveys for England (HSE), 1998-2017

South Africa:

- 11 Nationally-representative cross-sectional surveys from South Africa 1998 through 2017
  - DHS 1998, DHS 2003, SAGE 2007-8, NIDS 2008, NIDS 2010-11, SANHANES 2012, NIDS 2012, NIDS 2014-15, SAGE 2014-15, DHS 2016, NIDS 2017

Analysis

Examine population trends in CVD risk

Identify potential explanatory variables

Explain trends over time

Stakeholder & User Advisory Group

Role is to:

- Provide input on the analysis

- Collaborate & co-produce outputs

- Assist with dissemination & impact

17 members from South Africa & the UK participated in the first two meetings

Stakeholder & Users Advisory Group Meeting: 16th November 2021

Stakeholder & User Advisory Group

- **Departments of Health**: SA National Department of Health

- **Academic**: Greenwich, Stellenbosch, UCL, Wits University, KCL

- **Research**: National Centre for Social Research (UK), South African Medical Research Council, Human Sciences Research Council, Africa Health Research Institute,

- **Civil society**: Health Systems Trust, Heart & Stroke Foundation of South Africa

- **Healthcare**: Charlotte Maxeke Hospital, Khayelitsha District Hospital, Council for Medical Schemes

- **Data hosting**: UK Data Service, DataFirst

Stakeholder & User Advisory Group Members

- Prof. Jenny Mindell
- Ms. Anne Connolly
- Prof. Rosana Pacella
- Prof. Edward Fottrell
- Prof. Megan Vaughan
- Prof. André Pascal Kengne
- Ms. Lynn Woolfrey
- Dr Mark Siedner
- Dr Ayanda Trevor Mnguni
- Ms. Candy Day
- Ms. Carrie-Anne Cairncross
- Ms. Cristina Magder

- A/Prof. F. Xavier Gomez-Olivé
- Prof. Pamela Naidoo
- Ms. Qinisile Dlamini
- A/Prof. René English
- Ms. Sandhya Singh
- Prof. Mauricio Avendano Pabon

Protocol

Open access Protocol

BMJ Open Explaining population trends in cardiovascular risk: protocol for a comparative analysis of health transitions in South Africa and England using nationally representative survey data

Kafui Adjaye-Gbewonyo [1], Annibale Cois [2,3]

ABSTRACT
Introduction Cardiovascular diseases (CVD) are the leading cause of death globally and share determinants with other major non-communicable diseases. Risk factors for CVD are routinely measured in population surveys and thus provide an opportunity to study health transitions. Understanding the drivers of health transitions in countries that have not followed expected paths compared with those that exemplified models of 'epidemiologic transition', such as England, can generate knowledge on where resources may best be directed to reduce the burden of disease. This study aims to examine the notions of epidemiological transition by identifying and quantifying

Strengths and limitations of this study

► The study assesses a composite score of cardiovascular disease risk in addition to individual risk factors.
► Trends will be examined over a nearly 20-year period and the contributions of a range of factors to these trends will be quantified at multiple levels.
► Comparative analysis will explore health transitions in different contexts.
► Source data are representative but heterogeneous.
► Innovative structural equation modelling techniques will help to account for variation across surveys.
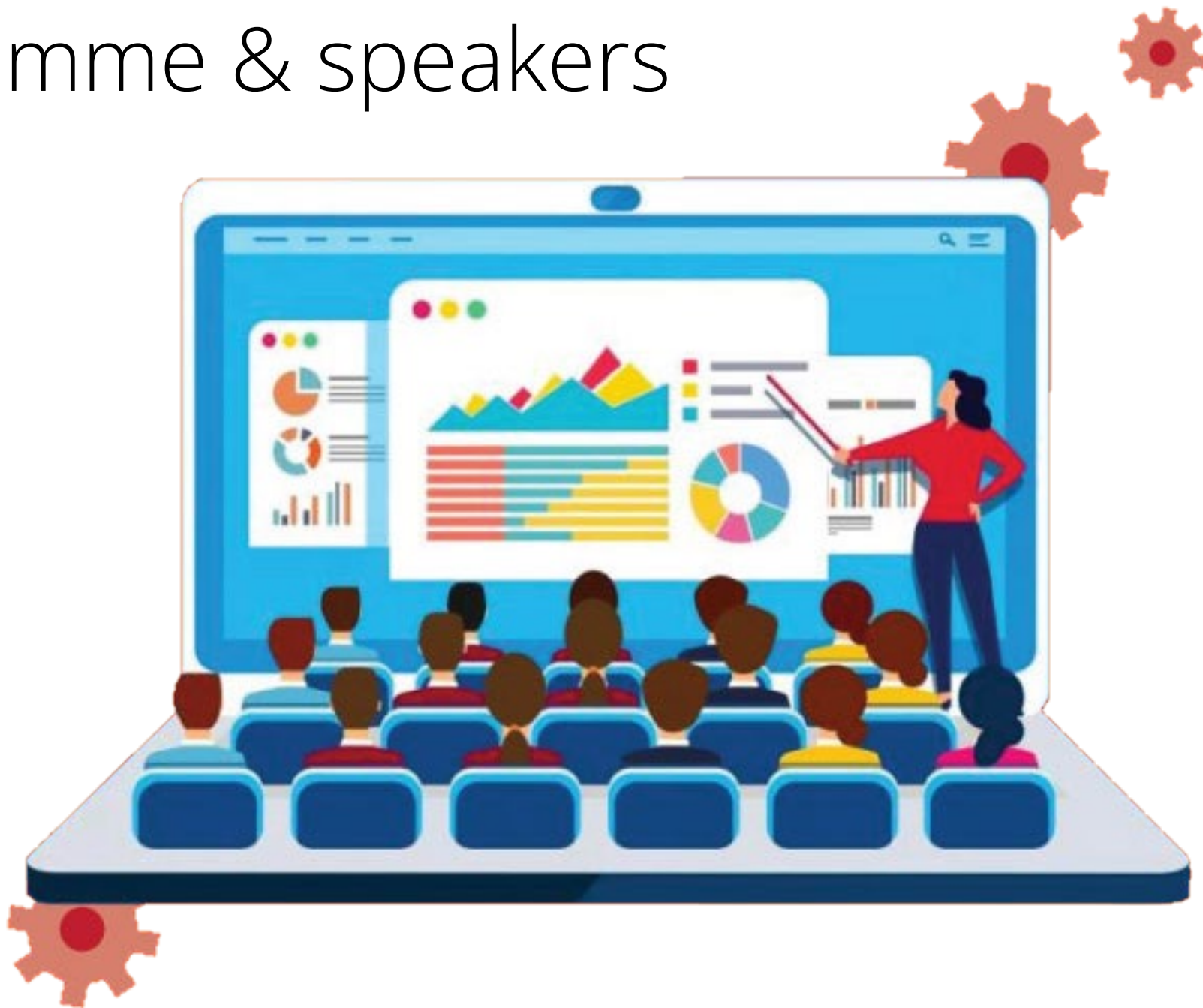
- https://bmjopen.bmj.com/content/bmjopen/12/3/e061034.full.pdf

Project website

www.exposeproject.net

Programme & speakers

Time	Session	Speakers	Location
9:30 – 10:00	Arrival of guests & tea		QA 265
10:00 - 10:20	Welcome	• Prof Claire Monks (Institute for Lifecourse Development, UoG) • Dr Charlotte Jeavons (School of Human Sciences, UoG)	QA 280
10:20 – 10:40	Introduction to ExPoSE project & event programme	• Dr Kafui Adjaye-Gbewonyo (Centre for Chronic Illness and Ageing, UoG)	QA 280
10:40 – 11:10	Overview of the Health Survey for England (HSE)	• Prof Jennifer Mindell (Health & Social Surveys Research Group, University College London (UCL))	QA 280
11:10 – 11:30	HSE data harmonisation for cardiovascular disease (CVD) risk trend analyses	• Dr Shaun Scholes (Health & Social Surveys Research Group, UCL)	QA 280
11:30 – 11:45	Q & A session		Q A 280
11:45 – 12:00	UCL Partners' CVD Resources	• Ms Rachana Bhatt (UCL Partners)	UQA 280
12:00 – 1:00	Lunch		LQA 265
1:00 – 1:45	Findings of the ExPoSE project: Results of analyses of CVD risk trends	• Dr Kafui Adjaye-Gbewonyo • Dr Annibale Cois (Division of Health Systems and Public Health, Stellenbosch University)	FiQA 280
1:45 – 2:15	Using the ExPoSE data dashboard & datasets	• Dr Annibale Cois & Dr Kafui Adjaye-Gbewonyo	QA 280
2:15 – 3:15	Panel discussion: implications of the project findings and translation into action	• Moderator: Prof Ed Fottrell (Centre for Global NCDs, UCL) • Dr Stuart Rison (Wolfson Institute of Population Health, Queen Mary University of London) • Ms Mari Toomse-Smith (Health and Biomedical Surveys, National Centre for Social Research) • Dr Perviz Asaria (Faculty of Medicine, Imperial College London)	QA 280
3:15 – 3:30	Closing remarks	• Dr Damian Poulter (School of Human Sciences, UoG)	QA 280
3:30 – 4:00	Afternoon tea & networking		QA 265