

Calum Davey

CONTACT	Tavistock Place, room 215 Social and Environmental Health Research London School of Hygiene and Tropical Medicine London, WC1H 9SH	<i>Tel:</i> +44 (0)20 7927 2292 <i>E-mail:</i> calum.davey@lshtm.ac.uk
INTERESTS	I am interested in innovative methods for the evaluation of health interventions, measuring subjective wellbeing, and tackling social development. My work has focused on social inequalities of health, with an emphasis on HIV.	
EDUCATION	London School of Hygiene & Tropical Medicine , London, UK Oct 2011 - Present Ph.D. Candidate, title: <i>Mobility of female sex workers in India and Zimbabwe & HIV-related healthcare access</i> , supervised by James Hargreaves & Frances Cowan, expected July 2018 M.Sc., Epidemiology	
	University of Pennsylvania , Philadelphia, PA, USA Oct 2008 - Oct 2009 M.U.S.A., Urban Spatial Analytics	
	University of Cambridge , Cambridge, UK Oct 2005 - Jul 2008 B.A., Natural Sciences (Neuroscience)	
SCHOLARSHIPS	<i>Medical Research Council Scholarship</i> Sep 2010 - Sep 2011 Fees and maintenance award for full-time study for a M.Sc. in Epidemiology at the London School of Hygiene and Tropical Medicine.	
	<i>Thouron Award Fellowship</i> Sep 2008 - Sep 2009 Fees and maintenance award from the prestigious Thouron Fellowship Programme for full-time study for a M.U.S.A. University of Pennsylvania.	
GRANTS	<i>Medical Research Council</i> Sep 2015 - Sep 2018 Strategic Skills Award, Pre-doctoral Fellowship. Awarded total of £211,000 for 100% FEC salary for three years, project costs, travel, and administration. Role: PI.	
	<i>3ie</i> Jan 2011 - Dec 2012 Replication Study. Awarded £7,162 to replicate and re-analyse an influential paper on the effects of deworming. Role: co-PI.	
ACADEMIC EXPERIENCE	London School of Hygiene and Tropical Medicine , London, UK Aug 2016 - Present <i>Assistant Professor</i> Evaluation and public-health research, with a focus on HIV and female sex work in low-income settings.	
	<ul style="list-style-type: none">• Leading MRC-funded research on the role of mobility in sex-worker access to care• Leading analysis of cluster-randomised trial in Zimbabwe• Leading Masters-level course in evaluation• Supporting evaluation projects, including in DFID-funded consortia	

Research Assistant / Fellow

Nov, 2011 - Aug 2012 - Aug 2016

Focus on the design and analysis of evaluations of complex public health interventions. Includes current Ph.D. research (started September 2015). Research projects include:

- Design and analysis-planning of cluster randomized trials in Zimbabwe and India
- Led re-analysis of influential stepped-wedge trial of school-level de-worming
- Designed impact evaluation for c.\$400m HIV prevention intervention in Nigeria in collaboration with the World Bank, USAID, and the Nigerian Government
- Funded by DFID, Bill and Melinda Gates Foundation, The World Bank, UNFPA

TEACHING

Module Organiser

Jun 2014 - Present

Co-founded and co-organise graduate-level module for Master of Science students titled *Evaluation of Public Health Interventions*. Responsible for organising and delivering lectures, developing materials, managing seminars, and setting and marking the assessment.

Lecturer

Jun 2015 - Present

Delivered lecture on conceptual hierarchies and introduction to causal analysis on the *Social Epidemiology* module.

Tutor

Sep 2013 - Present

Tutored two MSc students each year, including co-supervising summer projects.

Teaching Assistant

Nov 2012 - Present

Co-taught seminars in *Statistical Methods in Epidemiology*, and *Social Epidemiology*. Marked summer projects, module assignments, and end of year exam scripts.

PhD Advisory Board

Sep 2016 - Present

Member of the Advisory Board for Georgina Miguel-Esponda, PhD student at LSHTM.

PUBLICATIONS

Analyses

R Prakash, T Beattie, P Javalkar, P Bhattacharjee, S Ramanaik, R Thalinja, S Murthy, **C Davey**, J Blanchard, C Watts, M Collumbien, S Moses, L Hesie, S Isac 2017. Correlates of school dropout and absenteeism among adolescent girls from marginalized community in north Karnataka, south India. *Journal of adolescence* doi: 10.1016/j.adolescence.2017.09.007

FM Cowan , **C Davey**, E Fearon, P Mushati *et al.*. 2017. The HIV Care Cascade Among Female Sex Workers in Zimbabwe: Results of a Population-Based Survey From the Sisters Antiretroviral Therapy Programme for Prevention of HIV, an Integrated Response (SAPPH-IRe) Trial. *J Acquir Immune Defic Syndr* doi: 10.1097/QAI.0000000000001255

A Bourne , **C Davey**, F Hickson, D Reid, P Weatherburn. 2016. Physical health inequalities among gay and bisexual men in England: a large community-based cross-sectional survey. *Journal of Public Health* doi:10.1093/pubmed/fdw029

F Hickson, **C Davey**, D Reid, P Weatherburn, A Bourne. 2016. Mental health inequalities among gay and bisexual men in England, Scotland and Wales: a large community-based cross-sectional survey. *Journal of Public Health* doi:10.1093/pubmed/fdw021

JR Hargreaves, S Mtetwa, **C Davey**, J Dirawo, S Chidiya, C Benedik, MS Naperiela, R Wong-Gruenwald, D Hanisch, T Magure, O Mugurungi, FM Cowan. 2015. Cohort analysis of programme data to estimate HIV incidence and uptake of HIV-related services among female sex workers in Zimbabwe, 2009-14. *J Acquir Immune Defic Syndr*. doi:10.1097/QAI.0000000000000920

S Mtetwa, J Busza, **C Davey**, R Wong-Gruenwald, and F Cowan. 2015. Competition is not necessarily a barrier to community mobilisation among sex workers: an intervention planning assessment from Zimbabwe. *BMC Public Health* 15:787 doi:10.1186/s12889-015-2118-2

S Naperiela Mavedzenge, **C Davey**, T Chirenje, P Mushati, S Mtetwa, J Dirawo, B Mudenge, A Phillips, and F M Cowan. 2015. Finger Prick Dried Blood Spots for HIV Viral Load Measurement in Field Conditions in Zimbabwe. *PLoS One*. 10(5):e0126878. doi:10.1371/journal.pone.0126878

J R Hargreaves, **C Davey**, E Fearon, B Hensen, and S Krishnaratne. 2015. Trends in Socioeconomic Inequalities in HIV Prevalence among Young People in Seven Countries in Eastern and Southern Africa. *PLoS One*. 10(3):e0121775. doi:10.1371/journal.pone.0121775

FM Cowan, S Mtetwa, **C Davey**, E Fearon, J Dirawo, R Wong-Gruenwald, T Ndikudze, S Chidiya, C Benedikt, J Busza, and JR Hargreaves. 2013. Engagement with HIV Prevention Treatment and Care among Female Sex Workers in Zimbabwe: a Respondent Driven Sampling Survey. *PLoS ONE* 8(10): e77080. doi:10.1371/journal.pone.0077080

JR Hargreaves, **C Davey**, E Fearon, and S Krishnaratne. 2013. Changes in HIV prevalence among socioeconomic groups in eight African countries: analysis of sequential cross-sectional surveys (abstract). *The Lancet* Volume 381, Special Issue, S57, 17 doi: [http://dx.doi.org/10.1016/S0140-6736\(13\)61311-2](http://dx.doi.org/10.1016/S0140-6736(13)61311-2)

JR Hargreaves, **C Davey**, and RG White. 2012. Does the 'inverse equity hypothesis' explain how both poverty and wealth can be associated with HIV prevalence in sub-Saharan Africa? *J Epidemiol Community Health* doi:10.1136/jech-2012-201876

Protocols

TS Beattie, S Isac, P Bhattacharjee, P Javalkar, **C Davey**, T Raghavendra, S Nair, S Satyanarayana, DL Kavitha, J F Blanchard, C Watts, M Collumbien, S Moses, L Heise. 2016. Reducing violence and increasing condom use in the intimate partnerships of female sex workers: Study protocol for *Samvedana Plus*, a cluster randomised control trial in Karnataka state, south India *BMC Public Health* doi:10.1186/s12889-016-3356-7

JR Hargreaves, E Fearon, **C Davey**, A Phillips, V Cambiano, FM Cowan. 2016. Statistical design and analysis plan for an impact evaluation of an HIV treatment and prevention intervention for female sex workers in Zimbabwe: a study protocol for a cluster randomised controlled trial. 2016. *Trials* 17:6 doi:10.1186/s13063-015-1095-1.

TS Beattie, P Bhattacharjee, S Isac, **C Davey**, P Javalkar, S Nair, R Thalinja, G Sudhakar, M Collumbien, JF Blanchard, C Watts, S Moses, L Heise. 2015. Supporting adolescent girls to stay in school, reduce child marriage and reduce entry into sex work as HIV risk prevention in north Karnataka, India: protocol for a cluster randomised controlled trial. *BMC Public Health* 15:292 doi:10.1186/s12889-015-1623-7

Stepped-wedge trial design, re-analysis, and analysis methods

C Davey & J Thompson, KL Fielding, JR Hargreaves, RJ Hayes. Robust analysis of stepped wedge trials using cluster-level summaries within periods. *Statistics in Medicine*. Accepted.

JA Thompson, KL Fielding, **C Davey**, AM Aiken, JR Hargreaves, RJ Hayes. Bias and inference from misspecified mixed-effect models in stepped wedge trial analysis. *Statistics in medicine*. 2017 May 28.

C Davey, AM Aiken, RJ Hayes, and JR Hargreaves. 2015. Re-analysis of health and educational impacts of a school-based deworming programme in western Kenya: a statistical replication of a cluster quasi-randomized stepped-wedge trial. *Int J Epidemiol.* 2015 Oct;44(5):1581-92. doi: 10.1093/ije/dyv128.

AM Aiken, **C Davey**, JR Hargreaves, and RJ Hayes. 2015. Re-analysis of health and educational impacts of a school-based deworming programme in western Kenya: a pure replication. *Int J Epidemiol.* 2015 Oct;44(5):1572-80. doi: 10.1093/ije/dyv127.

C Davey, JR Hargreaves, JA Thompson, AJ Copas, E Beard, JJ Lewis, and KL Fielding. 2015. Analysis and reporting of stepped wedge randomised controlled trials: synthesis and critical appraisal of published studies, 2010 to 2014. *Trials* 16:358 doi:10.1186/s13063-015-0838-3

J R Hargreaves, A J Copas, E Beard, D Osrin, J J Lewis, **C Davey**, J A Thompson, G Baio, K L Fielding, and A Prost 2015 Five questions to consider before conducting a stepped wedge trial. *Trials* 16:350 doi:10.1186/s13063-015-0841-8

A J Copas, J. J Lewis, J A Thompson, **C Davey**, G Baio, and J R Hargreaves. 2015 Designing a stepped wedge trial: three main designs, carry-over effects and randomisation approaches. *Trials* 16:352 doi:10.1186/s13063-015-0842-7

E Beard, J J Lewis, A J Copas, **C Davey**, D Osrin, G Baio, J A Thompson, K L Fielding, R Z Omar, S Ononge, J R Hargreaves, and A Prost. 2015. Stepped wedge randomised controlled trials: systematic review of studies published between 2010 and 2014. *Trials* 16:353 doi:10.1186/s13063-015-0839-2

Evaluation methods

C Davey, S Hassan, C Bonell, N Cartwright, M Humphreys, A Prost, JR Hargreaves. 2017. Gaps in Evaluation Methods for Addressing Challenging Contexts in Development. CEDIL. URL: <https://cedilprogramme.org/gaps-evaluation-methods-addressing-challenging-contexts-development/> [Peer-reviewed report for DFID]

C Davey, M Boulay, and JR Hargreaves. 2014. Strengthening Nonrandomized Studies of Health Communication Strategies for HIV Prevention. *JAIDS* 66:S271-S277.

Comment

JR Hargreaves, C Goodman, **C Davey**, B A Willey, B I Avan, and J R A Schellenberg. 2016. Measuring implementation strength: lessons from the evaluation of public health strategies in low- and middle-income settings. *Health policy and planning*

J R Hargreaves, A M Aiken, **C Davey**, and R J Hayes. 2015. Authors' Response to: Deworming externalities and school impacts in Kenya. *Int J Epidemiol.* Oct;44(5):1596-9. doi: 10.1093/ije/dyv130

PAPERS IN
PREPARATION

FM Cowan, **C Davey**, E Fearon, P Mushati, J Dirawo, Sungai Chabata, V Cambiano, S Napierala, D Hanisch, R Wong-Gruenwald, N Masuka, T Mabugo, K Hatzold, O Mugurungi, J Busza, A Phillips, JR Hargreaves. Results of the SAPPH-IRe Trial: a cluster randomised trial of a combination intervention to empower female sex workers in Zimbabwe to link and adhere to antiretrovirals for treatment and prevention. Responding to reviewer comments, *Lancet HIV*

C Davey, FM Cowan, JR Hargreaves. How does mobility affect HIV-related healthcare access and use among female sex workers? A systematic review Under review, *Social Science and Medicine*

T Powell-Jackson, **C Davey**, E Masset, S Krishnaratne, RJ Hayes, K Hanson, JR Hargreaves. Trials and tribulations – cross-learning from the practices of epidemiologists and economists. Responding to reviewer comments, *Health Policy and Planning*

C Davey, FM Cowan, JR Hargreaves, TBC. Patterns of mobility of female sex workers in Karnataka, India, and Zimbabwe. In preparation.

C Davey, FM Cowan, JR Hargreaves, TBC. Depression and associated factors in a large female sex worker sample in Zimbabwe: A respondent driven sample study'. In preparation.

C Davey, JR Hargreaves, S Hassan, N Cartwright, M Humphreys, Edoardo Masset, A Prost, David Gough, Sandy Oliver, C Bonell. 2017. Designing evaluations to provide evidence to inform action in new settings. CEDIL. URL: <https://cedilprogramme.org/designing-evaluations-provide-evidence-inform-action-new-settings/>. Under review

T Ndori-Mharadze, E Fearon, J Busza, S Mtetwa, FM Cowan, JR Hargreaves, **Calum Davey**, X Acharya. How did intensifying targeted services for female sex workers change their engagement in the HIV prevention and care cascade? An example from three sites in Zimbabwe. Under review, *JIAS special supplement - Optimizing the Impact of Key Population Programming across the HIV Cascade*

PRESENTATIONS

Centre of Excellence for Development Impact and Learning Launch Event 25 Jan 2018: presented inception report on 'learning more' from evaluations for decision in new contexts.

Centre of Excellence for Development Impact and Learning Pre-inception workshop 25 Apr 2017: presented on Gaps in Evaluation Methods for Addressing Challenging Contexts in Development.

Stepped Wedge Trials Symposium 22 Sep 2015: presented on the Analysis and reporting of Stepped Wedge Trials.

Evaluators Conference 16 Jun 2015: organised and hosted one-day conference of evaluators from over 20 organisations.

Towards comprehensive evaluation for health and development: promoting the integration of evaluation methods Apr 2015: presentation titled: *Epidemiology and Econometric approaches to RCTs*.

BLOGS

The Conversation: How re-analysing the data of scientific research can change the findings 2015. <http://theconversation.com/how-re-analysing-the-data-of-scientific-research-can-change-the-findings-44926>

PROFESSIONAL EXPERIENCE

Retroscreen Virology, London, UK

Research Assistant

May 2010 - Sep, 2010

Initiated data management system. Analysed data for publication. Sourced influenza samples from hospital archives to investigate 1918 pandemic.

CartONG, Chambéry, France

GIS Consultant

Sep 2009 - May, 2010

Health and Nutrition Tracking Survey: led an international team to build online mapping and data-sharing portal. Haiti Radio Stations: created live-updating map of media stations in Haiti in emergency timeframe. Supported community forest management for UN's Reducing Emissions from Deforestation and Forest Degradation program in Vietnam.

INTERNAL
CITIZENSHIP

Centre for Evaluation Design and Analysis Theme Leader

Sep 2014 - Present

Contributed to the organisation of Centre activities, including the well-attended retreat in September 2014. Regularly attend steering committee meetings, and engage with the student's evaluation group. For the first quarter this year I have organised three external speakers, and one internal seminar.

EXTERNAL
CITIZENSHIP

Education Endowment Foundation, London, UK

Evaluation Manager (Secondment)

Sep 2014 - Sep 2015

Successfully negotiated a secondment to improve links between the School, the Centre for Evaluation, and funders and academics working with the Education Endowment Foundation: the *What Works Centre* for education in the UK.

I promoted the work of the School through contacts with 25 top UK and international Universities and research organisations. In my role I organised an evaluators' conference with over 100 delegates from around the world to discuss evaluation methods. I managed 75 evaluations of interventions to improve the academic attainment of children from deprived backgrounds in the UK. Working with the evaluation officer and grants managers I set-up 25 projects - 20 of which were randomised controlled trials - and oversaw the publication of 34 reports.

Advisory Board member

Sep 2015 - Present

The Education Endowment Foundation Advisory Board advises executive staff on evaluation methods and best practices. I represent the perspectives of the public health field. The Education Endowment Foundation continues to improve the rigour and up-take of evaluation in the education sector, which is widely regarded as having been imported from the field of public health.

COMPUTER SKILLS

- Statistical Packages: extensive experience of STATA & R.
- Applications: Geographical Information Systems such as ArcMap and QGIS, L^AT_EX, Markdown, common Windows databases, Excel, and presentation software
- Operating Systems: MacOS, Unix/Linux, Windows.