






David Henderson


Research Fellow

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About me

I was the first person to successfully negotiate access to, and produce results from, a national linked health and social care dataset for research in Scotland. I have expert knowledge on administrative social care data here. This project showed the first empirical link between multimorbidity and receipt of social care. My current post with the Scottish Centre of Administrative Data Research builds on the dataset created as part of my PhD at the Urban Big Data Centre in Glasgow. In light of the COVID-19 pandemic, I have led a team of experts in acquiring a new research dataset for investigating mortality in care homes. Furthermore, I advise a group on care home data and analytics administered through Public Health Scotland to provide expertise to the Scottish Government. I am a registered Nurse and until recently worked part-time for NHS 24 as a Nurse Practitioner. Previous nursing experience included Medical High Dependency and Acute Medical Admissions at Raigmore Hospital in Inverness. This clinical knowledge and experience has proved invaluable when wrangling complex healthcare datasets e.g. prescribing and unscheduled care

Skills

- Advanced Data Analysis in Safe Haven environments. I have an ONS Safe Researcher Training Certificate and a track record of delivering large projects through Information Governance protocols to make population data linkage with anonymised individual-level data a reality.
- Cleaning, validating, and manipulating large, messy data using R and R Studio. Predominantly with tidyverse tools but also data.table for the largest in-memory datasets. Up-to-date knowledge of fast-moving changes in R software development and where R is and is not appropriate software to use.
- Modelling using standard regression and time-to-event techniques. Knowledge of mixture models - specifically application of Latent Class Analysis.
- In-depth knowledge of measures of multimorbidity (including clustering), how to operationalise these measures using electronic health and social care records, and the strengths and limitations of these measures.
- Data Visualisation. I have advanced skills using the ggplot2 package and extensions.
- RMarkdown for: code sharing, report writing via *LaTeX*, building websites, and writing a CV.
- Version control with Git and GitHub

Education

2015-2019	PhD Urban Studies (Urban Big Data Centre) Viva passed with no corrections 16th Dec 2019	University of Glasgow
2013-2015	Master of Research in Health Research with Merit	University of Stirling
2012-2013	PG Certificate Advanced Practice	University of Dundee
2006-2009	BSc Nursing with Merit	University of Stirling

Employment History

2019-	Research Fellow affiliated with Scottish Centre for Administrative Data Research	Edinburgh Napier University
2018-2019	Research Assistant Urban Big Data Centre	University of Glasgow
2015-2018	Nurse Practitioner part-time	NHS24
2010-2015	Staff Nurse Medical High Dependency Unit, Acute Medical Admissions Unit, Cardiology step-down	NHS Highland
2008-2010	Healthcare Assistant ad-hoc Nurse Bank	NHS Highland
2003-2006	Assistant Director/Locations Scout various drama productions	Self-employed
1995-2002	Lance Corporal Pipes & Drums/Machine Gun platoon, 1st Bn The Highlanders (Seaforth, Gordons and Camerons)	HM Forces

Publications

1. Mercer, S, C Lunan, C MacRae, D Henderson, B Fitzpatrick, and J Reilly (Submitted). Half a century of the inverse care law: a comparison of general practitioner job satisfaction and patient satisfaction in deprived and affluent areas of Scotland at national level. *Annals of Family Medicine*.
2. MacRae, C, S Mercer, B Guthrie, and D Henderson (In Press). Prevalence of comorbidity in chronic kidney disease: a large cross-sectional study. *British Journal of General Practice*.

3. Henderson, D, I Atherton, C McCowan, S Mercer, and N Bailey (2020). Linkage of national health and social care data: a cross-sectional study of multimorbidity and social care use in people aged over 65 years in Scotland. *Age and Ageing* (afaa134).
4. Bell, D, D Henderson, E Lemmon, and M Moro (2020). Deaths in Scottish care homes and COVID-19. *International Long-Term Care Policy Network, CPEC-LSE*.
5. Bell, D, A Comas-Herrera, D Henderson, S Jones, E Lemmon, M Moro, and ... (2020). COVID-19 mortality and long-term care: a UK comparison. *International Long-Term Care Policy Network, CPEC-LSE*.
6. Johnston, L, D Henderson, J Hockley, and S Shenkin (2020). The Development of a Care Home Data Platform in Scotland: Insights from the Care Home Innovation Partnership, Lothian. *medRxiv* (PREPRINT).
7. Henderson, D, J Burton, E Lynch, D Clark, J Rintoul, and N Bailey (2019). Data Resource Profile The Scottish Social Care Survey (SCS) and the Scottish Care Home Census (SCHC). *International Journal of Population Data Science* (4 (1)).
8. Henderson, D (2019). Multimorbidity and social care: exploiting emerging administrative data sources in Scotland. *PhD THESIS, University of Glasgow*.

Talks

2016	Data Linkage Scotland - showcase. Invited talk at event co-hosted by Farr Institute, ADRC-S, and UBDC
2017	ADRN conference Edinburgh. Analysis of Scottish Government Open Social Care Data
2018	Not exactly rocket science. Podcast where health researchers are invited to explain their research to non-health researchers
2018	ADRN conference Belfast. Validation of the Scottish Social Care Survey using data from Renfrewshire Council
2018	IPDLN conference Banff, Canada. Multimorbidity and access to social care: exploiting emerging administrative data sources in Scotland
2019	ADRN conference Cardiff. Association between receipt of social care and multimorbidity: evidence from a population-sized cohort in Scotland

Achievements

2012	Early Clinical Career Fellowship (ECCF). NHS Education for Scotland fellowship offering an opportunity for highly enthusiastic, talented and motivated nurses and midwives to develop personally, professionally and academically, at an early stage in their career
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