Ian R Hambleton

PhD level data scientist | Data Engineering | Public health intelligence

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FULL CAREER DETAILS

Website: https://ianhambleton.com

Publications: https://bit.ly/hambleton-publications

EXPERIENCE

End-to-end data solutions for resource limited settings. Data analytics for public health evidence. Design and analysis lead on a large number of health research projects. Development of data handling frameworks to ensure sustainable data quality. Development of low-maintenance database environments. Selected project examples below:

2024
Leading causes of death and disease burden in the Americas: Noncommunicable diseases and external causes
Analysed and wrote a flagship report for the Pan-American Health Organization exploring the burden of chronic non-communicable diseases since 2000. The report is available at: https://iris.paho.org/handle/10665.2/59568.

2023—Current
CaribData
Leading a regional initiative to build Caribbean data infrastructure, provide training, and promote data sharing through storytelling. Focused on data sovereignty for Caribbean Small Island Developing States. Collaborates with country partners to enhance data handling, communication skills, and sustainable data practices. Funded by the Inter-American Development Bank, aiming for long-term sustainability through university, government, and industry collaborations.

2020—2022
COVID-19 surveillance
Led COVID-19 regional surveillance for 20 Caribbean countries, providing evidence-based support and advice on emergency public health planning. Produced 23 reports each morning—over 650 reports monthly—circulated via regional agencies. Presented updates at regional government meetings, and published peer-reviewed articles on the outbreak. An example of daily surveillance outputs are available at (https://ianhambleton.com/covid19).

2015—Current
Caribbean health inequalities
Performed NIH-funded analyses identifying health outcome inequalities across the Caribbean and comparing them with regional neighbors. Explored life expectancy disparities, mortality rates among African descent populations, and the impact of aging on noncommunicable disease burden. Presented findings to Caribbean health officials, gaining regional attention and fostering collaborations with several Ministries of Health to target vulnerable populations for public health interventions.

SUMMARY

A biostatistician and data handling expert with 30 years experience in Europe, Africa, and the Caribbean. Published 200+ articles, secured US$18M in health funding. Leads data handling, analytics, and secure online data collection. Collaborates with international universities and donor agencies. Holds degrees in Mathematics, Medical Statistics, and Statistical Epidemiology.

EDUCATION

1999—2003
PhD Statistical Epidemiology
Southampton University, UK.

1994—1995
MSc Biometry (Distinction)
Reading University, UK.

1988—1992
BA Mathematics (1st Class)
Brunel University, UK.

SKILLS

Statistics ● Data visualisation ● Statistical modelling ● Design and analysis of surveys ● Health surveillance ● Systematic review methods ● Systematic analyses of available data.

Epidemiology ● Health in Small Island Developing States ● Chronic Non-Communicable Diseases ● Multimorbidity & Ageing ● Sickle-cell disease & Haemoglobinopathies ● Diabetes ● Health Inequality.

Data Handling ● Data quality in health ● Data security ● Data Wrangling ● Data Curation & Sharing ● Data communication ● Data reviews & audits.

Infrastructure Development ● Database design & construction ● Best practice data handling ● Secure data sharing and communication frameworks.

Process Development ● Health project management ● Survey, cohort, surveillance design & operation ● Project and data archiving.

Advocacy ● Data-in-all-policies ● Government data quality audits ● Evidence communication.

Coding (level of expertise)
● Stata (●●●●●)
● R (●●●)
● Python (●●●)
● SQL (●●●)

EXPERIENCE (continued)

2014—2016

Inequality analytics and workshops

Working with UNICEF Regional Office for South Asia (ROSA), produced analytics for countries across South and South East Asia on inequalities in key child development indices. Developed and led workshops on summarizing and mapping health inequalities.

2008—Current

Data handling infrastructure development & maintenance

Built and managed data-handling infrastructures at the University of the West Indies since 2008. Led GDPR-compliance upgrades from September 2020, resulting in enhanced data protection standards. Secured Inter-American Development Bank funding in 2022 for CaribData, a regional project promoting best practices in data handling, sharing, and communication. This project aims to improve data management across the Caribbean, fostering collaboration and innovation in data practices.

2007—Current

Data-lifecycle process development & operation

Developed then operated *'end-to-end'* data handling processes for a range of health studies, typically involving data collection, cleaning, analysis, secure storage, long-term curation, and secure sharing as needed. Also known as data-lifecycle process management. Example projects—mostly implemented in the Caribbean—include national non-communicable disease risk factor and disease surveillance systems, household nutrition surveys, lupus disease registry, and research cohort and case-control studies in diabetes, cardiovascular disease and HIV.

1995—2004

The Jamaican sickle cell cohort study

Led databasing and analytics for the UK Medical Research Council funded Jamaican Sickle Cell Cohort Study. Published over 60 reports, presenting influential findings, for example: ● Traced 99% of over 1,000 defaulted patients, providing first survival estimates for homozygous sickle disease in the Caribbean ● Neonatal screening insights used to advocate for programs in several African countries ● B19 infection study revealed that one-third of infections do not show typical symptoms ● Outpatient care model for uncomplicated painful crises gained wide acceptance ● Elderly survivor report highlighted extreme clinical variation.

RESEARCH OUTPUTS

I have published **213** articles in international peer reviewed journals, with 12 published systematic review updates in the Cochrane Collaboration Library (**27** articles published since 2022, **52** since 2020, **66** since 2018). Recent articles published in journals such as Nature, Lancet, Lancet Global Health, Lancet Americas, Int. Journal of Epidemiology, and the Cochrane Database.

I have published **90** technical reports and book chapters (**2** since 2022, **7** since 2020, **17** since 2018), and given **109** oral presentations and posters at international conferences (**10** since 2022, **23** since 2020, and **34** since 2018).

WORK HISTORY

2010—present

Professor of Biostatistics

George Alleyne Chronic Disease Research Centre
The University of the West Indies,
Barbados, West Indies.

2006—2010

Senior Lecturer in Biostatistics

George Alleyne Chronic Disease Research Centre
The University of the West Indies
Barbados, West Indies.

2004—2006

Clinical Trial Statistician

London School of Hygiene & Tropical Medicine
Mwanza, Tanzania.

2002—2004

Senior Lecturer in Biostatistics

Sickle Cell Unit
The University of the West Indies
Jamaica, West Indies.

1996—2002

Senior Scientist (statistics)

UK Medical Research Council (MRC)
Jamaica, West Indies.

1995—1996

Lecturer in Medical Statistics

Charing Cross Medical School
Chelsea & Westminster Hospital,
London, UK.

FUNDING HISTORY

2010—present

I have secured health research grants totaling more than 18 million US dollars, mostly for work involving health in Small Island Developing States. Funding agencies have included ● UK Medical Research Council ● UK National Institute for Health Research ● US National Institutes for Health ● Inter-American Development Bank ● Wellcome Trust ● UK Department for International Development ● World Bank ● European Union ● UK Stroke Association ● Alliance for Lupus Research ● The Cochrane Collaboration.
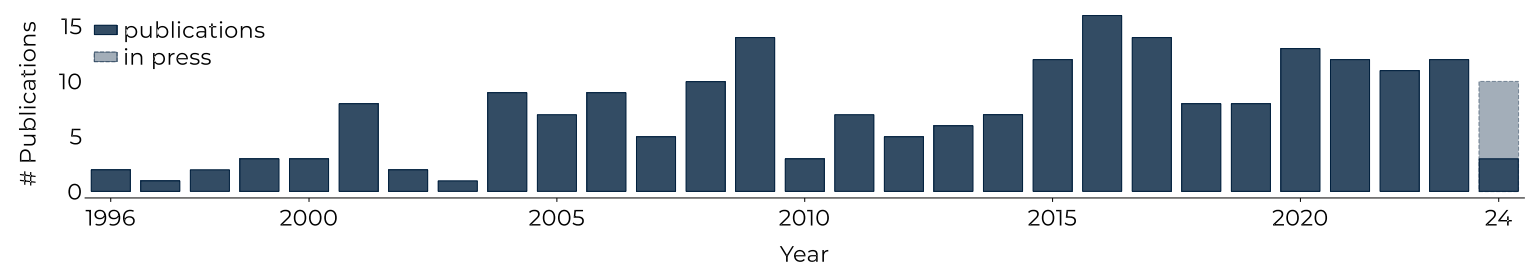
RECENT COMMITTEE WORK

2022-2023

Pan-American Health Organization

Advisor for the development of Caribbean country-level health profiles, Health in the Americas.

RESEARCH OUTPUTS (continued)

RESEARCH OUTPUTS, Selected Articles

Hambleton IR, Jeyaseelan S. The silent barrier: exploring data availability in Small Island Developing States. Rev Panam Salud Publica. 2024;48:exxx. https://doi.org/10.26633/RPSP.2024.xxx (In Press)

NCD Risk Factor Collaboration (NCD-RisC) (**Hambleton IR**, member of NCD-RisC group). Worldwide trends in underweight and obesity from 1990 to 2022: a pooled analysis of 3663 population-representative studies with 222 million children, adolescents, and adults. Lancet. 2024 Mar 16;403(10431):1027-1050. doi: 10.1016/S0140-6736(23)02750-2.

Hambleton IR, Caixeta R, Jeyaseelan SM, Luciani S, Hennis AJM. The rising burden of non-communicable diseases in the Americas and the impact of population aging: a secondary analysis of available data. Lancet Reg Health Am. 2023 Mar 31;21:100483. doi: 10.1016/j.lana.2023.100483.

NCD Risk Factor Collaboration (NCD-RisC) (**Hambleton IR**, member of NCD-RisC group). Diminishing benefits of urban living for children and adolescents' growth and development. Nature. 2023 Mar;615(7954):874-883. doi: 10.1038/s41586-023-05772-8.

Brown CR, Rocke K, Murphy MM, **Hambleton IR**. Interventions and policies aimed at improving nutrition in Small Island Developing States: a rapid review. Revista Panamericana de Salud Pública. doi: 10.26633/RPSP.2022.33

Mossadeghi B, Caixeta R, Ondarsuhu D, Luciani S, **Hambleton IR**, Hennis AJM. Multimorbidity and social determinants of health in the US prior to the COVID-19 pandemic and implications for health outcomes: a cross-sectional analysis based on NHANES 2017-2018. BMC Public Health. 2023 May 15;23(1):887. doi: 10.1186/s12889-023-15768-8.

Hambleton IR, Jeyaseelan SM, Murphy MM. COVID-19 in the Caribbean small island developing states: lessons learnt from extreme weather events. Lancet Glob Health. 2020 Sep;8(9):e1114-e1115. doi: 10.1016/S2214-109X(20)30291-6.

RESEARCH OUTPUTS, Selected Technical Reports

Pan-American Health Organization (PAHO), (Authors: **Hambleton IR**, Hennis A, Luciani S, Caixeta R). Leading causes of death and disease burden in the Americas: Noncommunicable diseases and external causes. 2024; 112p. (https://iris.paho.org/handle/10665.2/59568).

Pan-American Health Organization. CE168/11 - Policy on the Application of Data Science in Public Health Using Artificial Intelligence and Other Emerging Technologies. May 2021. (**Hambleton IR**. Member of writing committee)

RECENT COMMITTEE WORK (continued)

2021—2022
National Institutes for Health
Statistician on Data Safety Monitoring Board for HIV implementation trials.

2020-Current
Pan-American Health Organization
Member of Expert Committee. Digital Transformation and Data Science in the Americas

2020—2022
CARICOM, Council for Human and Social Development (COHSOD).
Member of Technical Advisory group for COVID-19 outbreak surveillance and modelling

2017—Current
Yale University, ECHORN
Chair, Data Sharing Working Group

2012—2019
International Diabetes Foundation (IDF)
Statistical advisor, Diabetes Atlas (6th—8th eds)

2010—2023
Barbados Ministry of Health
Ethics Board member, statistical oversight

2009—Current
Cochrane Collaboration
Statistical editor