

Christopher Mainey

Intelligence Analyst

I am an NHS Data Scientist/Statistician/Analyst in Health Informatics. I am a member of the Healthcare Evaluation Data (HED) team at University Hospitals Birmingham NHS Foundation Trust (UHB). My work focuses on modelling National Health Service (NHS) data, primarily using the national Hospital Episode Statistics (HES). I work primarily in R and SQL Server, and have experience with various statistical modelling and machine learning techniques. I have recently submitted my PhD thesis, focused on modelling methods for NHS incident reporting data, at UCL.

I advise and train hospitals, commissioners, regulators and the private sector on using data to manage hospitals, monitor mortality, performance and quality. I have a passion for using information effectively to influence policy and impact people's health and improve their hospital care. I am an experienced trainer, presenter and post-grad teacher. I have build and release several R package, and been contributor to the NHS-R Community. I leads a local R usergroup at UHB, and run a programme of R trainig courses for HED.

Key skills

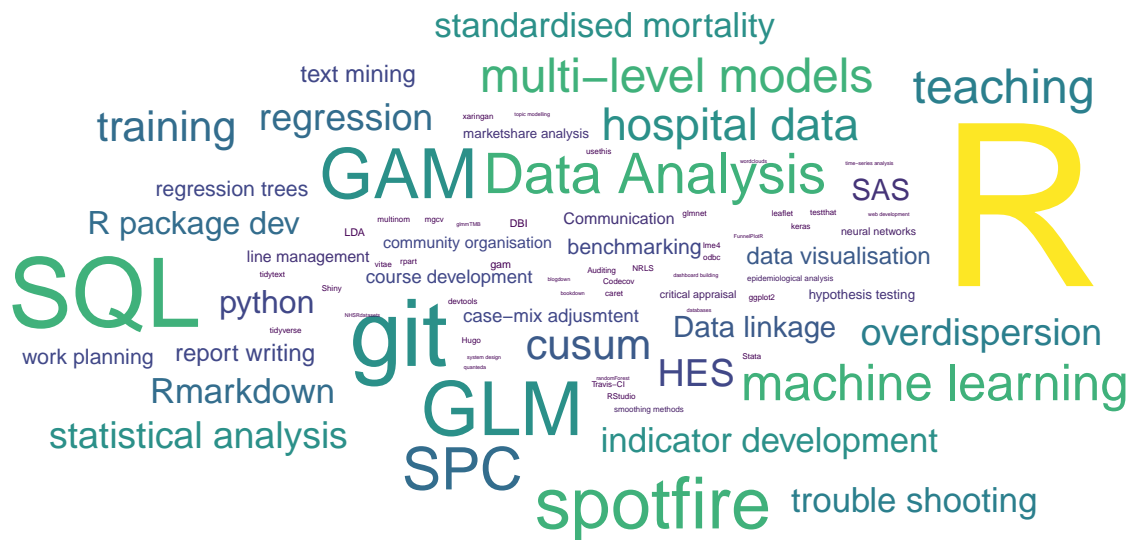
Healthcare Evaluation Data (HED), Health Informatics, Univesity Hospitals Birmingham NHS Foun

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Education

- 2014-19 **PhD Applied Statistics and Machine Learning**, *UCL*, London, UK.
- 2014-14 **PgCert. Public Health**, *University of Birmingham*, Birmingham, UK.
- 2009 **CIPD Certificate in Training Practise**, *CIPD/City College Coventry*, Coventry, UK.
- 2002-06 **BSc Microbiology with Industrial Experience**, *University of Manchester*, Manchester, UK.

Selected Talks, presentations, and teaching experience

- EARL **Talk**, 2019, Implementing R use in an NHS Informatics service.
- RSS **Talk**, 2019, CUSUMs and Funnel Plots for reporting standardised mortality.
Conference

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NHS Gloucestershire **Course**, 2019, Introduction to R: data manipulation, visualisation, and statistical analysis.

Health Foundation **Talk**, 2019, Statistical and Machine Learning methods for NHS Incident data.

UCL PCPH Methodology Meeting **Talk**, 2018, Dealing with noisy count data: strategies for tackling over-dispersion, using R.

UHB Internal **Workshop**, 2018, Introduction to Statistical Process Control.

UHB Internal **Workshop**, 2018, Introduction to Statistics.

Various NHS Trusts **Lecture**, 1995, Standardised Mortality Ratios.

Publications

Education History

2014 - 2020 **PhD Applied Statistics and Machine Learning**, *University College London*, London.

2012 - 2016 **PGCert Public Health**, *University of Birmingham*, Birmingham.

2002 - 2006 **BSc Microbiology with Industrial Experience**, *University of Manchester*, Manchester.

2012 - NA **Intelligence Analyst**, University Hospitals Birmingham NHS Foundation Trust.

2011 - 2012 **Informatics Analyst**, University Hospitals Birmingham NHS Foundation Trust.

2010 - 2011 **Cancer Informatics Analyst**, Arden Cancer Network.

2009 - 2010 **Information Officer**, West Midlands Cancer Intelligence Unit.