

Experienced NHS data scientist with interests in predictive modelling, machine learning, text mining, and teaching

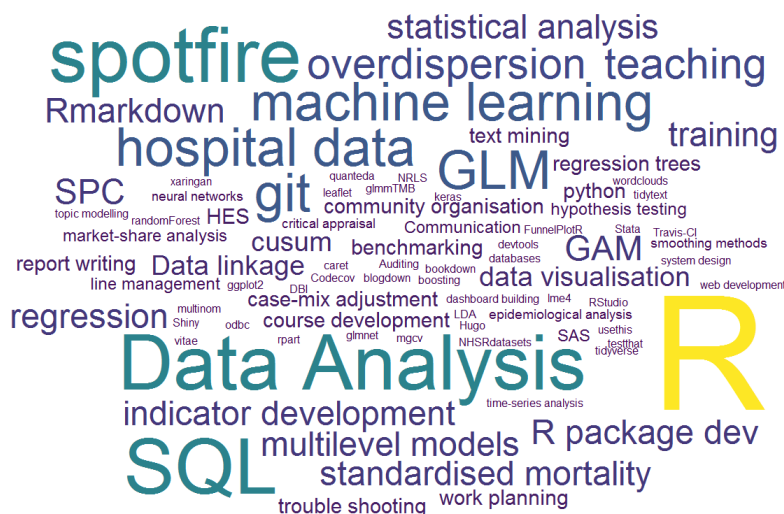
I advise and train hospitals, commissioners, regulators and the private sector on using data to manage hospitals, monitor quality, performance, and mortality. I am an experienced trainer, presenter and post-grad teacher. I have built and released several R packages and am a keen contributor to the NHS-R Community. I lead a local R usergroup, and run a programme of R training courses for HED.



CONTACT INFO

+44 7708791765

For more information, please
contact me via email.



SUMMARY

Experienced NHS data scientist,
working on benchmarking hospital
data, indicator development, and
training.

Significant experience with modelling HES data and standardised mortality methods.

Skilled in R, SQL, Regression
Modelling, and Machine Learning

This CV was made with the R package **pagedown**. View online at [here](#)

Last updated on 2019-10-09.

EDUCATION

2019
(submitted)

University College London (UCL)

PhD applied Statistics and Machine Learning

📍 London, UK

Thesis: Statistical Methods for NHS incident reporting data

2014

University of Birmingham

PGCert. Public Health

📍 Birmingham, UK

MPH programme, left partially unfinished due to commencing PhD,
finished as PGCert instead.

2009 ● **CIPD / City College Coventry**
CIPD Certificate in Training Practice ● Coventry, UK

2014 ● **University of Manchester**
BSc Microbiology with Industrial Experience ● Birmingham, UK

Thesis: A model of *Pseudomonas aeruginosa* in the Cystic Fibrosis lung.
Placement: One-year with Arch Biocides

EXPERIENCE

2012 |
2019 ● **Intelligence Analyst**
Healthcare Evaluation Data (HED), Health Informatics, University
Hospitals Birmingham NHS FT ● Birmingham, UK

- Statistical lead and senior analyst, focussed on building predictive models in R and SAS, indicator design, SQL database infrastructure and processes, as well as quality assurance.
- Building online national benchmarking analysis tools: www.hed.nhs.uk.
- Highly involved in customer support, training and translating between analysts, business teams and users.
- Line management and team work planning, using Agile methods.
- Run local R usergroup, contributing to national NHS-Community, and established a commercial R training programme.

2012 |
2016 ● **Data Manager (AIR Study)**
Clinical Immunology (sub-contracted from UHB), University of
Birmingham ● Birmingham, UK

- Data extraction and outcome linkage for trial participants, from UHB attendance and clinical data systems.

2011 |
2012 ● **Informatics Analyst**
Health Informatics, University Hospitals Birmingham NHS FT ● Birmingham, UK

- Producing monthly reporting outputs for UHB clinical and performance management functions
- Specialist analysis, dashboard building, and information development for HIV service.

2010 |
2011 ● **Cancer Informatics Analyst**
Arden Cancer Network ● Coventry, UK

- Informatics support for network service improvement projects.
- Constructed cancer waiting times reporting system and various automated templates.

2009 |
2010 ● **Information Office**
West Midlands Cancer Intelligence Unit (WMCIU) ● Birmingham, UK

- Producing statistics for information requests.
- Investigative analysis, e.g. difference from nationally published figures and research data.
- Supervising/validating work of junior analysts.



TEACHING AND ASSESSMENT EXPERIENCE

- 2016
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2018 • **Use of Evidence**
First year UCL medical school course on study design and statistics.
Led a tutorial group over the course and delivered lectures to full
course group.
London, UK
- 2016
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2017 • **Statistical Methods in Epidemiology**
Teaching assistant on MSc Data Science for Health, UCL Farr
Institute/LSHTM
London, UK
- 2016
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2017 • **Understanding the NHS**
Assessing first year medical student assignments on NHS structure,
history, and current/future challenges.
London, UK
- 2016
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2017 • **Research dissertations**
Second assessor on MSc Mental Health dissertations for students
with quantitative studies.
London, UK



SELECTED PUBLICATIONS, POSTERS & TALKS

- 2019 • **Driving R adoption in an NHS information service: barriers and solutions**
Talk at Enterprise Applications of the R Language (EARL) conference
London, UK
Mainey C
- 2019 • **Using funnel plots and CUSUM techniques to monitor hospital-standardised mortality**
Talk at Royal Statistical Society Conference
Belfast, UK
Mainey C
- 2018 • **Modelling Incident Reporting in the NHS**
Poster for Royal Statistical Society Conference
Cardiff, UK
Mainey C, Freemantle N
- 2017 • **Can we build statistical models of incident reporting in the NHS?**
Poster for Patient Safety Congress Conference
Manchester, UK
Mainey C
- 2016 • **Brief Report: Immunization of HIV-Infected Adults in the UK With Haemophilus influenzae b/Meningococcal C Glycoconjugate and Pneumococcal Polysaccharide Vaccines**
J Acquir Immune Defic Syndr. 2016 Nov 1;73(3):287-293.
MacLennan C, Richter A, Hodson J, Faustini S, Birtwistle J, Whitelegg A, Chigiga J, Singo M, Walker-Haywood J, Mulugeta B, Masuka S, **Mainey C**, Plant T, Drayson M; Manavi K