Job Description

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Summary

Job title	Health Data Scientist
Division	Medical Sciences
Department	Nuffield Department of Primary Care Health Sciences
Location	Radcliffe Primary Care Building, Radcliffe Observatory Quarter, Woodstock Road, Oxford, OX2 6GG
Grade and salary	Researcher Grade 7: Salary in the range £38,674 - £43,171 per annum
Hours	Full time (part time working of at least 0.8FTE will be considered)
Contract type	Fixed-term until 31 July 2027
Reporting to	Professor Sir Aziz Sheikh, Head of Department and Simon de Lusignan, Professor of Primary Care and Clinical Informatics
Vacancy reference	BZ24126 - 175590

Research topic	Health Data Science
Principal Investigator / supervisor	Professor Sir Aziz Sheikh
Project team	The HDR UK Inflammation and Immunity Driver Programme is led by Professors Aziz Sheikh, Jenni Quint (imperial College London), Liam Heaney (Queen's University Belfast), Ian Sinha University of (Liverpool) and Gwynn Davies (University of Swansea).
Funding partner	The funds supporting this research project are provided by HDRUK https://www.hdruk.ac.uk/research/research-driver-programmes/inflammation-and-immunity/ https://www.ed.ac.uk/usher/inflammation-and-immunity

The role

We are seeking an enthusiastic individual with experience in data management, health data science, medical statistics, epidemiology or a related discipline. The applicant should have a keen interest to work with large healthcare datasets.

The researcher will work with the HDR UK Inflammation and Immunity Driver Programme (DP2), which seeks to transform the UK's capabilities to improve understanding of health mechanisms and outcomes, using respiratory and allergic disorders as exemplar domains. The programme will provide a data foundation to contribute to novel respiratory health and clinical strategies that better predict, prevent and manage respiratory conditions. It is developing open-source tools and methods for the scientific community to provide a framework and approach for studying the surveillance and trajectory of other inflammatory and immune disorders. The programme is also developing future research leaders and contributing to the wider HDR UK strategy to accelerate trustworthy data use, empower researchers and promote partnerships.

You will be expected to develop and carry out your own aspect of work within the driver program, to ultimately plan and lead a high-quality programme of research using large cohort electronic health data with a focus on evaluating the impact of health policy interventions (e.g., introduction of RSV programme, clean air zones, abolition of winter fuel subsidies to pensioners) across the UK using natural experiment designs.

In addition, you will be expected to submit publications to refereed journals and to contribute to attracting external research funding.

The post provides an outstanding opportunity to work across institutions and four nations, having national and international relevance, and undertake and publish high impact quantitative work. The successful applicant will also have suitable experience of or willingness to learn new methodologies, advanced statistics and working with large health data sets.

Responsibilities

- Manage own academic research and administrative activities. This involves project management, to co-ordinate multiple aspects of work to meet deadlines

- Lead analysis of multiple linked datasets to understand and provide expert advice and guidance on the impact of health policy interventions on respiratory health. These include:

    o Writing complex queries to produce anonymised, harmonised electronic health datasets to use in cohort studies containing health data from multiple sources.

    o Perform metanalysis to produce a range of quantitative and descriptive analyses (such as adjusted odds ratios and hazard ratios) of these complex data, and the relationships between them, for epidemiologists, clinicians and statisticians, contributing to the academic activities of team.

    o Developing to address specific clinical and epidemiological questions.

    o Checking and processing data, documenting and maintaining well-structured records of all changes to datasets and data queries.

    o Reviewing relevant literature around various disease outcomes in conjunction with different health-related coding systems.

- Lead work with data custodians to obtain permissions for these linkages using existing governance or by working across a range of organisations to develop new governance structures.
- Work with our information governance lead to ensure that process and procedures are in place to ensure compliance with Data Protection Legislation and information governance policy
- Act as a source of information and advice to other members of the group on methodologies and governance issues.
- Collaborate in the preparation of research publications, and book chapters and lead on preparing, presenting and disseminating results in oral and written reports and publications to contribute to a community of practice for data science and connect this work with wider global research efforts.
- Develop ideas for generating research income, and coordinate grant proposals with senior researchers

Selection criteria

Essential selection criteria

- PhD (or near completion) in epidemiology or statistics involving the use of electronic healthcare record data or a closely related discipline, or equivalent research, industrial or commercial experience.
- Demonstratable experience in writing queries to transfer, transform and interrogate data from large databases and accompanying statistical analysis packages (e.g. R, SQL).
- Demonstratable experience of statistical analysis such as logistic regressions and meta-analysis on large cohort data.
- Track record of undertaking and publishing independent, quality research in a data-focused field and in the delivery of analytical or data-focused projects.
- Solid understanding of the principles of security and confidentiality of personal data in a research context.
- Success in navigating governance challenges and other logistics of carrying out research using health data owned and managed by others, with experience of identifying and mitigating the risk of security breaches.
- Excellent archiving, data management and organisational skills.
- Excellent written and oral English language communication skills, with strong analytical and presentation skills and the ability to generate good quality written reports and research papers in a timely manner.
- A flexible and collaborative approach to work, with the ability to work independently, as well as to judge appropriately when to seek advice and support from senior colleagues.

Desirable selection criteria

- Understanding and experience of health records, health informatics and the use of administrative data in respiratory health research.
- Evidence of having made a significant contribution to writing proposals.

Pre-employment screening

Standard checks

If you are offered the post, the offer will be subject to standard pre-employment checks. You will be asked to provide: proof of your right-to-work in the UK; proof of your identity; and (if we haven't done so already) we will contact the referees you have nominated. If you have previously worked for the University we will also verify key information such as your dates of employment and reason for leaving your previous role with the department/unit where you worked. You will also be asked to complete a health declaration so that you can tell us about any health conditions or disabilities for which you may need us to make appropriate adjustments.

Please read the candidate notes on the University's pre-employment screening procedures at: https://www.jobs.ox.ac.uk/pre-employment-checks

About the University of Oxford

Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cutting-edge. Oxford is one of Europe's most entrepreneurial universities and we rank first in the UK for university spin-outs, and in recent years we have spun out 15-20 new companies every year. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information, please visit www.ox.ac.uk/about/organisation.

Nuffield Department of Primary Care Health Sciences

A top ranked centre for academic primary care in the UK, we lead world-class research and training to rethink the way healthcare is delivered in general practice and other primary care settings, both across the UK and globally. Integrating evidence and innovation, our main research focus is on enhancing prevention, early diagnosis and management of common illness.

Our research is led by internationally renowned scientists, many of whom are practising GPs and primary care clinicians, but many others are psychologists, epidemiologists, sociologists, and public health academics. We cover the broad range of issues that you might expect to address in the community, including cardiovascular and metabolic disease, infectious diseases and childhood illness, diet, smoking and cancer. We also focus on understanding and improving the experiences of patients, rigorously

evaluating the effectiveness of treatments and diagnostics, utilising big data, developing digital health interventions and working internationally. We have methodological expertise in novel clinical trial design and implementation, clinical decision making and diagnostics, clinical epidemiology, medical statistics, behavioural science, modelling, qualitative research and the wider application of social science theory and methods to address practical and theoretical challenges in health and care settings.

The department was established in October 1998 (as the Department of Primary Health Care) with the appointment of a foundation chair in general practice, and was made a free-standing department in 2011 with the first Oxford statutory chair in primary care. We provide a strong multi-disciplinary training environment, a full programme of academic support and good IT facilities. Our ability to collaborate with other epidemiological and community based research groups across the University and with GP surgeries locally and nationally enables us to utilise a broad range of relevant expertise into our teaching and research.

Our main research themes coalesce around cardiovascular disease and diabetes, infection, cancer, health behaviours, and digital health, with several cross-cutting themes, including disease prevention, early diagnosis, and patient self-management, big data and new clinical themes. We place inclusivity and diversity at the forefront of our approach to research from design and conduct through to the dissemination of our findings.

The department has exceptional infrastructure, including the long-established Primary Care Clinical Trials Unit, one of the most expert CTU's for trials conducted in community settings. We also host the Oxford Institute for Digital Health, the Bennett Institute for Applied Data Science, the Oxford Centre for Evidence-Based Medicine; the Interdisciplinary Research in Health Sciences research group (which uses both quantitative and qualitative methods to examine the human, organisational and societal issues relating to the delivery of healthcare and the improvement of health services) and the Medical Sociology and Health Experiences Research Group (MS HERG), which undertakes qualitative research into the patient experience including the Healthtalk research programme published on www.healthtalkonline.org. The department is a founding member of the National Institute for Health Care Research (NIHR) School of Primary Care Research, houses both the NIHR Applied Research Collaboration (ARC), Oxford Thames Valley and the NIHR MedTech and In Vitro Diagnostics Co-operative (MIC), and leads several themes of the Oxford University Hospital and Oxford Health BRCs. In terms of methodologies, as well as our critical mass of social scientists and computer/information scientists, the department supports one of the largest groups of medical statisticians in medical sciences and a growing team of health economists.

Clinicians in our department teach a number of threads in the undergraduate course in Medicine and we place students in GP practices as part of their training. We run a very successful, well established MSc programme in Evidence Based Health Care, and a new MSc in Translational Health Science with the Department of Continuing Education. In 2023 we will accept students to a new MSc in Applied Digital Health and to an MSc in Global Health Care Leadership run in partnership with the Said Business School.

The University of Oxford is a member of the Athena SWAN Charter to promote women in Science, Engineering, Technology and Medicine and holds an Athena SWAN Silver award at institutional level. The Nuffield Department of Primary Care Health Sciences holds a departmental Gold Athena SWAN award (awarded in March 2023 and the first Gold in the University of Oxford) to recognise advancement of gender equality: representation, progression and success for all.

The Nuffield Department of Primary Care Health Sciences currently holds a Gold National Union of Students (NUS) Green Impact award. Green Impact is an environmental accreditation scheme

championed by the National Union of Students and is designed to support environmentally and socially sustainable practice. The department supports sustainability initiatives in the following areas: supporting and leading change; energy; water; materials and waste; sustainable travel; biodiversity and nature; and food.

In order to create a positive culture, the department has created a set of values that we all aspire to demonstrate in the way we work and behave. These can be viewed [here](#)

Our staff are mostly located in the superbly renovated Grade II listed Radcliffe Primary Care Building on the Radcliffe Observatory Quarter (ROQ), the University's most prestigious development site for a generation, and close to the city centre (see http://www.ox.ac.uk/roq/ for more information). Some staff are located nearby in the Gibson Building at the ROQ and some, including clinical teachers are based in Eagle House nearby off Walton Street.

Car parking is very restricted at both sites with only a small percentage of staff being granted an annual parking permit and priority being given to those with access needs. Bus Pass, Train Pass, bicycle loans and Season Ticket Loan Schemes are all in operation for staff.

For more information please visit: http://www.phc.ox.ac.uk

Medical Sciences Division

The Medical Sciences Division is an internationally recognised centre of excellence for biomedical and clinical research and teaching. We are the largest academic division in the University of Oxford.

World-leading programmes, housed in state-of-the-art facilities cover the full range of scientific endeavour from the molecule to the population. With our NHS partners we also foster the highest possible standards in patient care.

For more information please visit: http://www.medsci.ox.ac.uk/

How to apply

Applications are made through our online recruitment portal. Information about how to apply is available on our Jobs website https://www.jobs.ox.ac.uk/how-to-apply.

Your application will be judged solely on the basis of how you demonstrate that you meet the selection criteria stated in the job description.

As part of your application you will be asked to provide details of two referees and indicate whether we can contact them now.

You will be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants)

If you are applying for a research post and you have had periods of working part-time, please indicate this on your CV or in your supporting statement. This will ensure that any outputs such as publications are fairly judged when considered alongside the expected outputs of full-time workers.

Where posts are advertised full-time, we **may** be able to consider part-time working or job share arrangements depending on the requirements of the role. If you want to work part-time and this option is not expressly stated in the advert or job information, please email recruitment@phc.ox.ac.uk to enquire whether the role you are applying for might be available on a part-time basis.

Please upload all documents **as PDF files** with your name and the document type in the filename.

Please do not upload full published papers or certificates as part of your supporting documents.

All applications must be received by **midday** UK time on the closing date stated in the online advertisement.

If you currently work for the University please note that:

- as part of the referencing process, we will contact your current department to confirm basic employment details including reason for leaving
- although employees may hold multiple part-time posts, they may not hold more than the equivalent of a full time post. If you are offered this post, and accepting it would take you over the equivalent of full-time hours, you will be expected to resign from, or reduce hours in, your other posts(s) before starting work in the new post.

Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing department(s).

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments).

If you need help

Application FAQs, including technical troubleshooting advice is available at: https://staff.web.ox.ac.uk/recruitment-support-faqs

Non-technical questions about this job should be addressed to the recruiting department directly recruitment@phc.ox.ac.uk

To return to the online application at any stage, please go to: www.recruit.ox.ac.uk.

Please note that you will receive an automated email from our online recruitment portal to confirm receipt of your application. **Please check your spam/junk mail** if you do not receive this email.

Important information for candidates

Data Privacy

Please note that any personal data submitted to the University as part of the job application process will be processed in accordance with the GDPR and related UK data protection legislation. For further information, please see the University's Privacy Notice for Job Applicants at: https://compliance.admin.ox.ac.uk/job-applicant-privacy-policy. The University's Policy on Data Protection is available at: https://compliance.admin.ox.ac.uk/data-protection-policy.

The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for very senior research posts at **grade RSIV/D35 and clinical equivalents E62 and E82** of 30 September before the 70th birthday. The justification for this is explained at: https://hr.admin.ox.ac.uk/the-ejra.

For **existing** employees on these grades, any employment beyond the retirement age is subject to approval through the procedures: https://hr.admin.ox.ac.uk/the-ejra.

There is no normal or fixed age at which staff in posts at other grades have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

Equality of opportunity

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

Benefits of working at the University

Employee benefits

University employees enjoy 38 days' paid holiday, generous pension schemes, flexible working options, travel discounts including salary sacrifice schemes for bicycles and electric cars and other discounts. Staff can access a huge range of personal and professional development opportunities. See https://hr.admin.ox.ac.uk/staff-benefits

Employee Assistance Programme

As part of our wellbeing offering staff get free access to Health Assured, a confidential employee assistance programme, available 24/7 for 365 days a year. Find out more https://staff.admin.ox.ac.uk/health-assured-eap

University Club and sports facilities

Membership of the University Club is free for University staff. It offers social, sporting, and hospitality facilities. Staff can also use the University Sports Centre on Iffley Road at discounted rates, including a fitness centre, powerlifting room, and swimming pool. See www.club.ox.ac.uk and https://www.sport.ox.ac.uk/.

Information for staff new to Oxford

If you are relocating to Oxfordshire from overseas or elsewhere in the UK, the University's Welcome Service includes practical information about settling in the area, including advice on relocation, accommodation, and local schools. See https://welcome.ox.ac.uk/

There is also a visa loan scheme to cover the costs of UK visa applications for staff and their dependants. See https://staffimmigration.admin.ox.ac.uk/visa-loan-scheme

Family-friendly benefits

We are a family-friendly employer with one of the most generous family leave schemes in the Higher Education sector (see https://hr.web.ox.ac.uk/family-leave). Our Childcare Services team provides guidance and support on childcare provision, and offers a range of high-quality childcare options at affordable prices for staff. In addition to 5 University nurseries, we partner with a number of local providers to offer in excess of 450 full time nursery places to our staff. Eligible parents are able to pay for childcare through salary sacrifice, further reducing costs. See https://childcare.admin.ox.ac.uk/.

Supporting disability and health-related issues (inc menopause)

We are committed to supporting members of staff with disabilities or long-term health conditions, including those experiencing negative effects of menopause. Information about the University's Staff Disability Advisor, is at https://edu.admin.ox.ac.uk/disability-support. For information about how we support those going through menopause see https://hr.admin.ox.ac.uk/menopause-guidance

Staff networks

The University has a number of staff networks including for research staff, BME staff, LGBT+ staff, disabled staff network and those going through menopause. Find out more at https://edu.admin.ox.ac.uk/networks

The University of Oxford Newcomers' Club

The University of Oxford Newcomers' Club is run by volunteers that aims to assist the partners of new staff settle into Oxford, and provides them with an opportunity to meet people and make connections in the local area. See www.newcomers.ox.ac.uk.

Research staff

The Researcher Hub supports all researchers on fixed-term contracts. They aim to help you settle in comfortably, make connections, grow as a person, extend your research expertise and approach your next career step with confidence. Find out more https://www.ox.ac.uk/research/support-researchers/researcher-hub

Oxford's Research Staff Society is a collective voice for our researchers. They also organise social and professional networking activities for researchers. Find out more https://www.ox.ac.uk/research/support-researchers/connecting-other-researchers/oxford-research-staff-society