

Health Data Research UK

Applicant information

Job description and person specification

- Post:** BHF Data Science Centre – Associate Director: Diabetes Data Science Catalyst
- Location:** Primary base could be anywhere in the UK, but must be willing and able to travel to London and elsewhere (mainly UK) in connection with the role
- Salary:** This post would be suitable as a secondment
- Duration:** Approx. 1 day/week for 3 years. A lesser or greater time commitment may be considered for the right candidate
- Reporting to:** Director, BHF Data Science Centre (Professor Cathie Sudlow)

About Health Data Research UK

Health Data Research UK (HDR UK) is the UK's national institute for health data science. Our mission is to unite the UK's health data to enable discoveries that improve people's lives. It is funded by UK Research and Innovation, the Department of Health and Social Care in England and equivalents in Northern Ireland, Wales and Scotland, and leading medical research charities.

HDR UK was set up in 2018 to support research on health data at scale to advance our understanding of disease and enable new discoveries that will ultimately improve health and care. We have established national research programmes that use data at scale, and we are building an infrastructure to enable the responsible access and analysis of this data. Our work is structured around three key themes:

- Uniting health data – including our work with data custodians through the [UK Health Data Research Alliance](#) and on making health data discoverable and accessible through the [Health Data Research Innovation Gateway](#).
- Improving health data – incorporating contributions from HDR UK's [Human Phenome](#) and [Applied Analytics](#) priority areas, the [Health Data Research Hubs](#) and the [BHF Data Science Centre](#), including our work on improving data quality and standards, on data curation, and on developing tools and methods for sharing, linking and analysing data.
- Using health data –including our work on research discoveries and skills development across four national priority areas: [Understanding the Causes of Disease](#), [Clinical Trials](#), [Public Health](#) and [Better Care](#).

We are delivering this strategy through our inclusive, team-oriented One Institute ethos - bringing together NHS, universities, research institutes and charities.

About the BHF Data Science Centre

The [British Heart Foundation \(BHF\) Data Science Centre](#), is building on a £10m initial investment from the [BHF](#) to deliver the data and data science needed to address some of the most pressing challenges in heart and circulatory health research.

The centre works in partnership with patients, the public, NHS, researchers and clinicians to promote the safe, ethical and scientifically robust use of data for research into the causes, prevention and treatment of all diseases of the heart and circulation (including, for example, heart attacks, heart failure, heart rhythm disorders, stroke, peripheral vascular disease and vascular dementia).

The BHF Data Science Centre does not hold data itself. Instead, it works with relevant data custodians, including through the UK Health Data Research Alliance and Health Data Research Innovation Gateway, to provide knowledge and expertise to help researchers from the NHS, academia and industry find, access, understand, connect and analyse the UK's unique cardiovascular 'big data' from national registries, NHS electronic medical records, cohorts and other relevant datasets.

The aim of the centre is to enable responsible, ethical research that combines the power of advanced analytic methods with the UK's large-scale and diverse cardiovascular data. High impact outputs will help to shape better cardiovascular health services, provide patients and health professionals with the tools to make better decisions, and bring the latest medical discoveries to patients across the UK faster than ever before.

Extensive and ongoing engagement with key stakeholders has shaped the development of the centre's six thematic areas:

- Better access to and use of structured health data UK population-wide for cardiovascular research
 - Better access to and use of unstructured health data (including imaging data) at scale for cardiovascular research
 - Enabling large-scale use of personal monitoring data in a wide range of cardiovascular research
 - Developing and refining computable cardiovascular phenotypes for different applications
 - Supporting discoveries of cardiovascular disease causes, prediction, early detection, prognostic tools and treatments using population and disease-based cohorts ("Enhancing Cohorts")
 - Developing methods and infrastructure for large, efficient, data-enabled cardiovascular trials
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- The *Diabetes Data Science Catalyst* is a new initiative which forms part of the BHF Data Science Centre through a partnership between the BHF, [Diabetes UK](#) and the BHF Data Science Centre (led by HDR UK). Diabetes UK is providing £300,000 of funding to support the Diabetes Data Science Catalyst over three years in addition to the BHF's existing investment for the BHF Data Science Centre. The Diabetes Data Science Catalyst forms a central pillar of Diabetes UK's Research Strategy 2020-25 to support diabetes research enabled through data science and AI. The Diabetes Data Science Catalyst will benefit from being embedded in the Centre, facilitating collaborative working across all six of the Centre's thematic areas, enabling data-driven research using linked multi-modal patient data at national (UK-wide) scale. The research enabled by the *Diabetes Data Science Catalyst* will enhance our knowledge of the links between diabetes and cardiovascular disease; facilitate a deeper understanding of the causes and progression of diabetes as a major cardiovascular risk factor; and drive improvements in treatment and prevention of diabetes, with

associated reductions in cardiovascular disease. All three partners in the Diabetes Data Science Catalyst recognise the transformative potential of a precision medicine approach using data, data science and AI.

Purpose of the post

The Associate Director for the *Diabetes Data Science Catalyst* will be a key member of the BHF Data Science Centre leadership team, working closely with the Director, Associate Directors leading the Centre's six thematic areas, and centre staff to identify and prioritise key areas of work in diabetes research as it relates to cardiovascular health and disease, demonstrating impact at national and international level. They will have an excellent understanding of, and expertise in, the use of large scale, multimodal data types in diabetes research, and a strong commitment to developing linked healthcare data-enabled approaches to enhance understanding of the causes and progression of diabetes and its cardiovascular sequelae, and to improve strategies for treatment.

Supported by the BHF Data Science Centre team, the postholder will work with stakeholders across the UK to:

- identify research priorities for large-scale, data-enabled diabetes research with a focus on relevant cardiovascular associations and outcomes;
- forge relevant collaborations to progress diabetes research priorities;
- in alignment with BHF Data Science Centre and HDR UK-led activities, identify and address the infrastructure and analytics challenges that need to be overcome to enable linkage across health data and their analyses at UK-wide scale, to improve the cardiovascular health and care of people with diabetes.

There will be significant overlap with the centre's six thematic areas, and collaborative working with the Associate Directors leading these themes is expected. Collaboration with HDR UK's initiatives and national priorities, such as [UK Health Data Research Alliance](#), [Applied Analytics](#), [Understanding the Causes of Disease](#) and the [Human Phenome](#) will also be key.

This part-time role will provide leadership and strategic planning for diabetes research, to meet the wider objectives of the BHF Data Science Centre in improving cardiovascular health through the use of large-scale data and innovative analytical methods, working strategically with the BHF and Diabetes UK.

This post would suit a clinical or non-clinical research leader, with a strong track record of diabetes research and an interest in the cardiovascular risks and consequences of diabetes, as well as an understanding of relevant aspects in health data science (such as the use of population-wide health data in research), who is already in an established leadership role or well advanced on a career pathway towards a leadership position in this field.

Main responsibilities

- **Provide leadership** to bring together research, clinical, epidemiological, data science and multi-omics, networks, professional societies, NHS organisations, patients, public, industry and wider stakeholders within the health data science community to shape, influence and build consensus on the use of multi-modal health data and their integration with other health data for diabetes research. An ability to see the bigger picture and focus on key priorities is crucial in order to ensure benefit to the wider community

- Create and maintain new **partnerships**, building on existing networks across the data science, diabetes and cardiovascular communities, NHS organisations, industry, patients and public, regulatory and information governance partners to identify and prioritise the key challenges of using, linking and analysing multi-modal health data at national scale. The postholder will also build on existing partnerships and collaboration opportunities established by the Centre's thematic area Associate Directors and with relevant HDR UK initiatives and national priorities
- Work with the diabetes, cardiovascular and health data science communities, patients and public, NHS organisations, industry, the BHF and Diabetes UK and the BHF Data Science Centre Director to identify suitable and build on existing identified **exemplar driver projects** that will highlight and address key requirements via the Diabetes Data Science catalyst. In collaboration with the wider health data science and diabetes communities, provide strategic leadership in the development of novel and/or reproducible methodological and analytical approaches
- Provide strategic direction and champion a **team science** approach to deliver projects, providing negotiation and brokering skills where necessary to drive improvement in the use, linkage and analysis of multi-modal health data for diabetes research
- Work with the BHF Data Science Centre Director and team, the BHF and Diabetes UK to lead the development of:
 - **strategic plans** for the *Diabetes Data Science Catalyst*;
 - **project and delivery plans and subsequent reporting** for this thematic area
- Contribute to and lead on relevant funding applications and other initiatives to **leverage additional resources** to enhance the research-enabling activities of the *Diabetes Data Science Catalyst*
- Working with the BHF Data Science Centre team, wider HDR UK colleagues, the BHF and Diabetes UK to identify opportunities and provide content to **communicate to diverse audiences** on the impact of the activities of the *Diabetes Data Science Catalyst*

Day-to-day project management and administrative support will be provided by the Centre team.

Planning and organising

The postholder will lead on the development of a strategy and delivery plan to meet the objectives of the BHF Data Science Centre in the use, linkage and analysis of health data in diabetes research. This will require working with the small BHF Data Science Centre team in planning and organising project plans for this area as well as providing oversight across a number of complex projects to ensure delivery of objectives within deadlines.

Problem solving

This role involves significant application of prior knowledge accumulated from professional and research experience. An enhanced level of initiative and problem-solving ability is needed to develop new ideas and novel approaches in response to issues and research problems, as well as tenacity to resolve infrastructure, organisational or governance bottlenecks. This approach will involve sharing knowledge and development with leading experts in the field, requiring collaboration, excellent negotiating skills and creative thinking. Considerable strategic awareness will need to be used.

The postholder will operate with significant independence and will make effective judgements on when to escalate issues to the Director or other senior HDR UK colleagues.

Decision making

Responsibility for developing and delivering on the strategy for the *Diabetes Data Science Catalyst*, in collaboration with the Director, the BHF and Diabetes UK.

Initiate, develop and build on opportunities for collaborative working with the broader members of the diabetes, cardiovascular and health data science communities, NHS organisations, patients and public, industry, wider HDR UK community, relevant national and international partners and organisations.

Continuous improvement

HDR UK is dedicated to continuous improvement through our quality management system and has achieved ISO 9001 accreditation. The post-holder will review, analyse, identify and implement opportunities for quality improvement within their role and as part of the wider team through our strategy development and internal audit processes.

Key contacts/relationships

The post holder will be a key member of the BHF Data Science Centre leadership team working closely with the BHF Data Science Centre Director, Associate Directors for the Centre's six thematic areas and the Centre team. They will build and maintain effective working relationships with colleagues within and across HDR UK, partners in the British Heart Foundation, Diabetes UK, NHS organisations, the wider cardiovascular, diabetes and health data science communities, partners in substantive HDR UK Hubs and sites, and other key stakeholders.

A key relationship will be with patients and the public to build trust and acceptability the use of health data at scale for diabetes research.

Eligibility

Candidates must:

- hold a substantive post at a UK organisation
- have a contract of employment at their organisation that extends up to 2024 or beyond,
- have the written support of their organisation (an institutional supporting letter will be required at the application stage)

Knowledge, skills and experience

Experience

- Extensive experience in diabetes research with an interest in the cardiovascular risks and consequences of diabetes, as well as an interest and understanding of relevant aspects in health data science, e.g. use and analysis of population-wide health data in research, linkage of routinely collected to other types of health relevant data (e.g. from wearable devices or imaging), use of health data linkages to enhance large cohorts and/or clinical trials
- Proven leadership skills to provide direction and deliver change across the UK
- Ability to lead and inspire trust in a wide range of stakeholders and to build consensus across multiple stakeholders

- Advanced understanding of the complexities, challenges and limitations of using routinely collected structured data from different health settings (e.g., secondary care, primary care, dispensed medications, specialist registry data etc.) as well as from different devolved nations of the UK in health research
- Experience of linking routinely collected with other health relevant data (e.g. omics, wearables, imaging) with appreciation and knowledge of the uses, challenges and potential limitations of such linkages in large-scale research studies
- Knowledge of innovative methodological and analytic approaches (e.g., AI and/or machine learning) and their application to analysis across routinely collected and other health data sources in health research
- Well connected with the diabetes, cardiovascular and health data science research networks, NHS organisations, professional societies, industry and wider stakeholders of relevance to the ambitions of the *Diabetes Data Science Catalyst*
- Experience of working with patients and the public in planning and delivering research
- Commitment and ability to bring together people and infrastructure to drive forward improvements and change systems through collaborative team working and exemplar projects

Skills

- Excellent influencing and negotiating skills
- Creative and innovative thinker
- Personal drive and ambition to provide leadership in the area of health data science in diabetes research
- A commitment and enthusiasm to engaging with patients, the public, and patient and public involvement networks/organisations in the diabetes data science catalyst is essential.
- Excellent communication skills with the ability to listen to and bring on board a wide range of stakeholders with competing priorities and views
- Excellent networking skills with a desire to work collaboratively to achieve goals
- Excellent organisational and time management skills, with the ability to manage competing priorities and issues under time pressures
- Ability to work flexibly with a small core support team

Dimensions

- This role is a secondment for approx. one day/week to provide leadership and strategic direction for the Diabetes Data Science Catalyst
- The post holder will work with the BHF Data Science Centre Director, thematic area leads and the team to meet the objective of improving the cardiovascular health and care of people with diabetes through research using large-scale data and advanced analytics
- There will be project management and administrative support from the BHF Data Science Centre to the post-holder in their role, provided through funding support from Diabetes UK
- The post-holder will be expected to work flexibly to fit the requirements of the role
- HDR UK is a national institute, and our activities take place across the UK. Therefore, the post-holder should be willing to undertake travel within the UK and occasionally internationally when required

Application Process

Interested applicants are encouraged to contact the BHF Data Science Centre Director to discuss further:
bhfdsc@hdruk.ac.uk

Prior to application, candidates are encouraged to discuss with their line manager / other relevant senior colleagues how this part-time secondment position would fit with their existing post.

*Please apply via the online portal and attach a CV (listing no more than **20** of your most relevant publications or other research outputs and no more than **10** of your most relevant funding awards), a covering letter of no more than 500 words explaining what you can bring to this role, and a letter from your institution supporting your secondment to perform this role if appointed.*

The closing date for this vacancy is 5pm Monday 21 February 2022.

Interviews will take place on Monday 28 February 2022. Interviews will take place via zoom.

Equal Opportunities Policy Statement

Health Data Research UK is an equal opportunities employer, and as such aims to treat all employees, consultants and applicants fairly. It is our policy to provide employment equality to all, irrespective of:

- Gender, including gender reassignment
- Marital or civil partnership status
- Having or not having dependants
- Religion or belief
- Race (including colour, nationality, ethnic or national origins)
- Disability
- Sexual orientation
- Age

We are opposed to all forms of unlawful and unfair discrimination. All job applicants and employees who work for us will be treated fairly and will not be unfairly discriminated against on any of the above grounds. Decisions about recruitment and selection, promotion, training or any other benefit will be made objectively and without unlawful discrimination.