Job title: Health Data Analyst / Scientist
Accountable to: Senior Data Scientist (HDI)
Hours: Full-time (37.5 hours per week)
Job type: Permanent
Base/location: Cambridge, UK
Salary: £28,000 - £35,000 depending upon experience

Job summary

We are looking for a talented and driven individual to join our team to help support the use of cancer data by scientists involved in cancer research. You should be passionate about the use of data in scientific research and a good communicator, able to build strong relationships and work collaboratively with colleagues and key stakeholders.

You will be part of a team based in Health Data Insight C.I.C (HDI) working closely with colleagues in Public Health England's (PHE) National Cancer Registration and Analysis Service (NCRAS). A background in cancer is not required, although experience with understanding and manipulating large amounts of data is a key skill and experience of health data would be an advantage. The post will give you the opportunity to understand the data held by NCRAS and the legal and information governance controls that govern the release.

Main duties and responsibilities

You will support the analysis of data for a range of HDI projects that aim to improve patient care and outcomes (see the HDI website for further information). These include cancer treatment patterns and outcomes, new molecular treatments and genetic mutations, and a series of standing cohort studies (anonymous real-world epidemiological cohorts of patients followed up over time).

Key skills:

- analyse, interpret and present public health and cancer data
- gather, manage and evaluate large amounts of data from a range of sources
- review the prevalence and incidence of advanced disease in a range of cancers
- explore treatment effects on survival, adverse events and cost
- examine the relationship between these variables and overall outcomes

Information Governance

- Ensure that all data transfer arrangements meet with the information governance requirements of HDI, PHE and the NHS.
- Ensure, with others at the NCRAS, that the data is appropriately stored and used.
- Comply with all the information governance requirements required of those handling personal sensitive health data.

Data analysis, interpretation and reporting

- Applying specialist analytical, statistical and epidemiological methods to highly complex data from a variety of sources to routine and ad hoc analytical projects and tasks as well as providing specialist advice on the appropriate use of this information.
- Acquiring and maintaining a thorough understanding of relevant core datasets, including potential uses and limitations, and participating in dataset user groups where appropriate.
- Working with the project teams to optimise use of new data sources and identifying new and innovative ways to analyse and present intelligence. Engaging with stakeholders to ensure analyses are valid and interpretation is clinically accurate.
- Using a variety of methods including written briefings and oral presentations to interpret and communicate outcomes of highly complex data analyses to both non-statistical and statistical professionals and stakeholders, determining the appropriate level of complexity according to the needs of the audience.
- Contribute to HDI's analytical capability, planning, managing and delivering on a range of projects requiring complex analytical input from other HDI and external colleagues, including data output, workloads and delivery timescales.
- Supporting and promoting the use of HDI's quality assurance procedures and standard operating procedures, including compliance with corporate policies in relation to security, confidentiality and release of information.
- Attending meetings with key stakeholders.
- Supporting the local, national and international translation of outputs through awareness raising, oral presentations and written briefings or reports as well as managing and contributing to the production, publication and dissemination of journal articles and reports, epidemiological studies and any other outputs as identified by the project teams.
- Working with the team to ensure the effective use by the end user of nationally developed tools and resources.
- Contribute to other innovative data projects in HDI working with analysts in other organisations

General

- Identify own learning needs; locate appropriate training resources (e.g. books, web tutorials) to address these needs.
- Work with and support colleagues across the institution.
- Provide education and training to others where appropriate.
- Manage own workload, estimating time to completion of tasks, identifying any factors that may cause delays or problems in implementation.
- Take an interest in the Cancer Registration process maintaining knowledge of relevant issues.
- Undertake any other duties as required by the Director, either on a temporary basis or following mutually agreed changes to the job description.

Person Specification:

- Educated to degree level in relevant subject
- Experience working with cancer and/or public health data
- Basic understanding of molecular medicine and how this relates to cancer registration
- Good knowledge of data analysis, statistical analysis and programming techniques (in for example R/STATA/Python)
- Ability to process data to a high standard
- Good understanding of information governance and the importance of this within data transfer
- Understanding of Caldicott principles
- Understanding of data security
- Ability to work on own as well as part of a team
- Self-motivated and able to work and manage own time lines and meet deadlines

Health Data Insight C.I.C

HDI is a social enterprise overseen by the *Office of the Regulator of Community Interest Companies* which ensures we meet our social purpose and that the value we create is protected and used for social good.

Our aim is to:

- create value for public sector organisations by finding new knowledge from both existing and new sources of information
- provide a data management and linkage service that allows partners to access information in safe-havens that guarantee the privacy of each individual patient.
- create visual, internet-based information services and applications that can be easily accessed, used and understood

- supply organisations with information and services that they can use to understand and help improve their services
- inform patients to enhance their selection, access and use of healthcare services and improve their understanding of their clinical condition and care.

Our strategic objectives are aligned to NHS and wider government policy to improve transparency and access to data, encourage self-management, enable choice and foster the use of social enterprises to deliver public services.

The National Cancer Registration and Analysis Service (NCRAS)

The National Cancer Registration and Analysis Service (NCRAS), which is within Public Health England (PHE), provides intelligence to drive improvement in standards of cancer care and clinical outcomes. This is facilitated through a series of work programmes, utilising the healthcare data and information collected about cancer patients by multiple specialist organisations and collated within PHE. The NCRAS builds on the work of partner organisations and teams to develop world class cancer intelligence for PHE, partners – nationally and internationally - and the local public health system.

The NCRAS leads on sharing high quality intelligence, knowledge, evidence and expertise to support the needs of stakeholders. It produces analyses, toolkits and reports which span both the Public Health and NHS agenda. New analyses include the number of people living with cancer, how outcomes vary between different patient groups and by stage at diagnosis, and an insight into cancer equality metrics.

The NCRAS consists of cancer registration and intelligence teams in nine offices across PHE. Each team will have national and local responsibilities and functions and will work closely with PHE colleagues in other divisions, directorates, centres and regions.

HDI – PHE Partnership

HDI has a Partnership Agreement with PHE. The focus of the partnerships between Public Health England's (PHE) National Disease Registration Service (NDRS) and external organisations is to improve health outcomes using the real-world data collected by the National Disease Registration Service. These collaborative arrangements exist to support the development and application of innovative approaches and statistical techniques to the collection, quality assurance, data linkages and analyses of registry data. They are formed when an area that is deemed of significant benefit to patients is identified by both parties and when neither organisation would otherwise be able to progress individually.