

DataLoch: developing new opportunities for projects to improve health and social care

The DataLoch Team: <https://dataloch.org/about-us/meet-the-team>

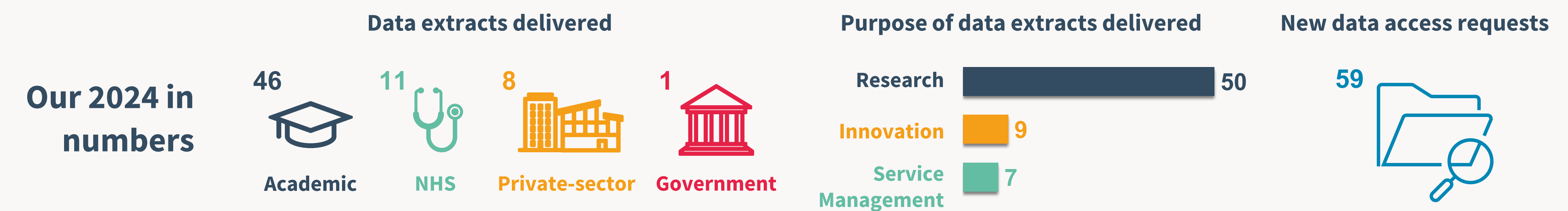
University of Edinburgh / NHS Lothian; contact: dataloch@ed.ac.uk

What is DataLoch?

Part of the Scottish Safe Haven Network, DataLoch is a data service developed in partnership by the University of Edinburgh and NHS Lothian, underpinned by public involvement and engagement. We:

- bring together health and social care data for the South-East Scotland region;
- work with experts in health and social care to understand and improve these data; and
- provide safe access to data for health data research through our Secure Data Environment and for clinical studies.

Working collaboratively, these efforts allow a holistic data-driven approach to the prevention and treatment of different conditions, as well as the provision of health and social care services more broadly. Ultimately, we support projects that improve the health and wellbeing of the nation.

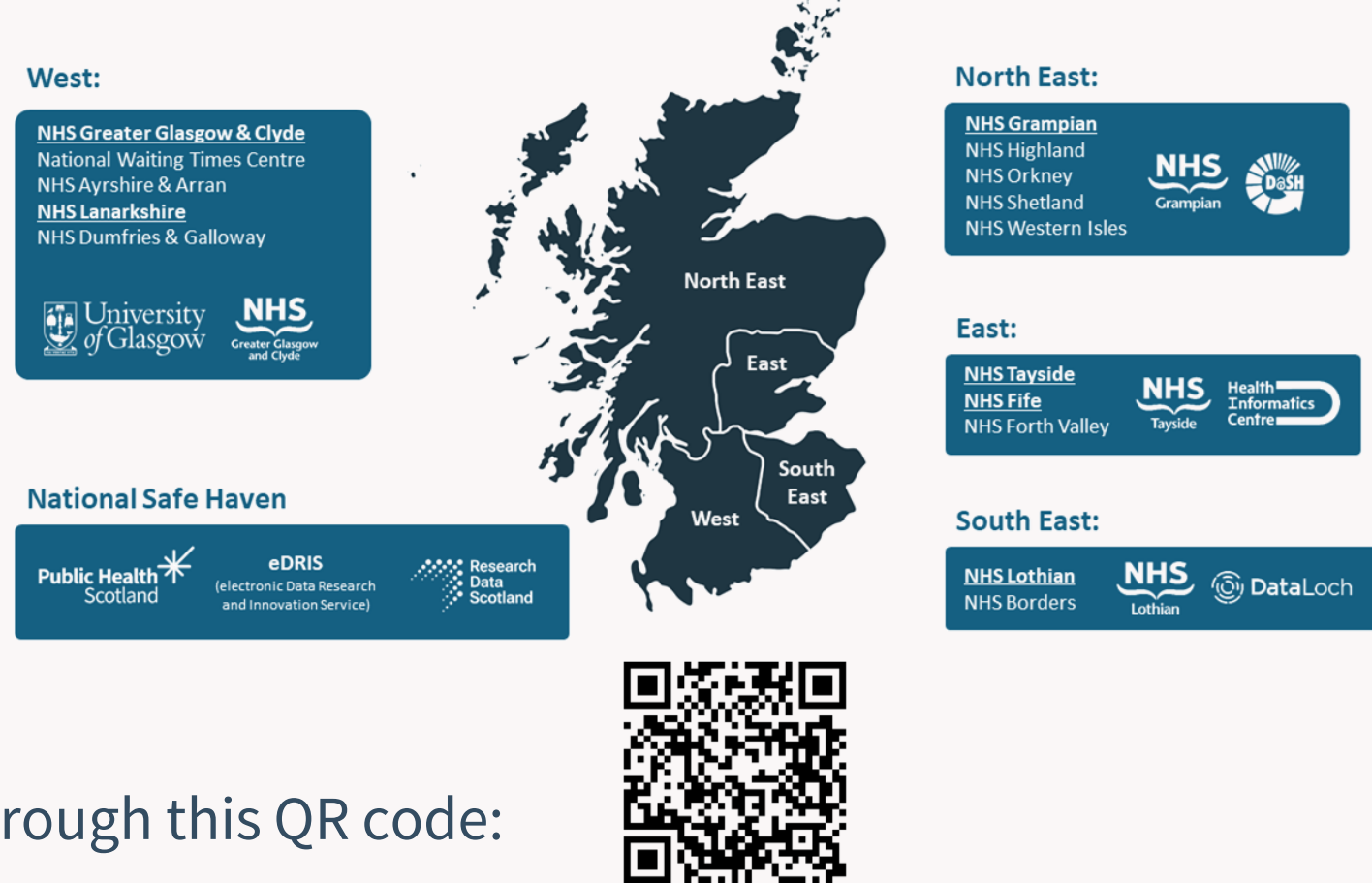


Aligning across Scotland

With our Scottish partners, we are developing a single pathway for researchers to access the data they need for their projects.

This pathway will provide routes to the data held across Regional and National Safe Havens. A single front door will lead to expert advice about the data available for research and the best way to access them.

Together, we are working hard to expand the data offering, safely simplify governance processes and enable connection of data across all Safe Havens.



Discover the latest through this QR code:



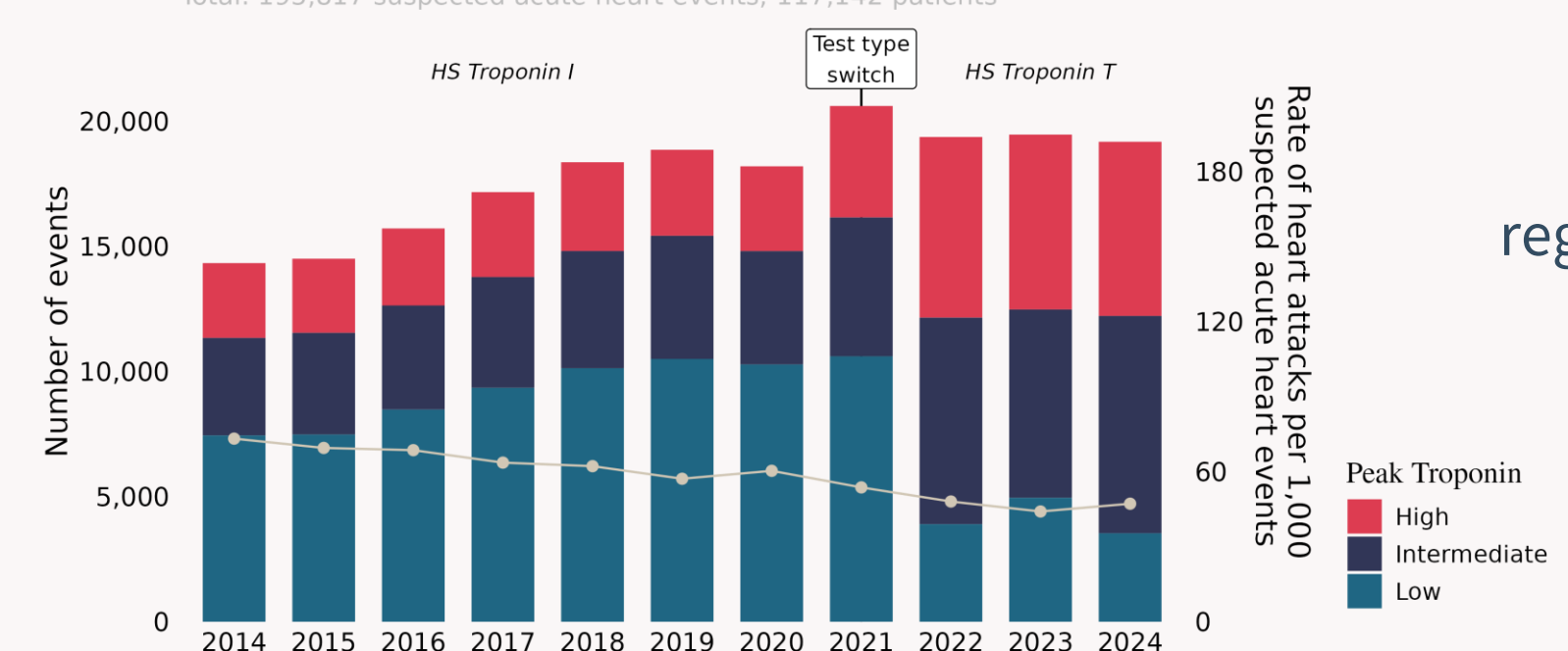
DataLoch Registries

Our registries are theme-specific databases (defined by related conditions or diseases) validated by clinical and academic experts. These pre-defined cohorts simplify access while maintaining robust data security.

Through close collaborations with clinicians and researchers, we have recently developed registries focused on **Heart Disease** and **Respiratory** conditions, which accelerate the opportunities for innovative studies in these specialist areas. Plans are in place for registries on **Ageing** as well as

Mental Health.

Cardiac troponin testing in NHS Lothian Emergency Departments

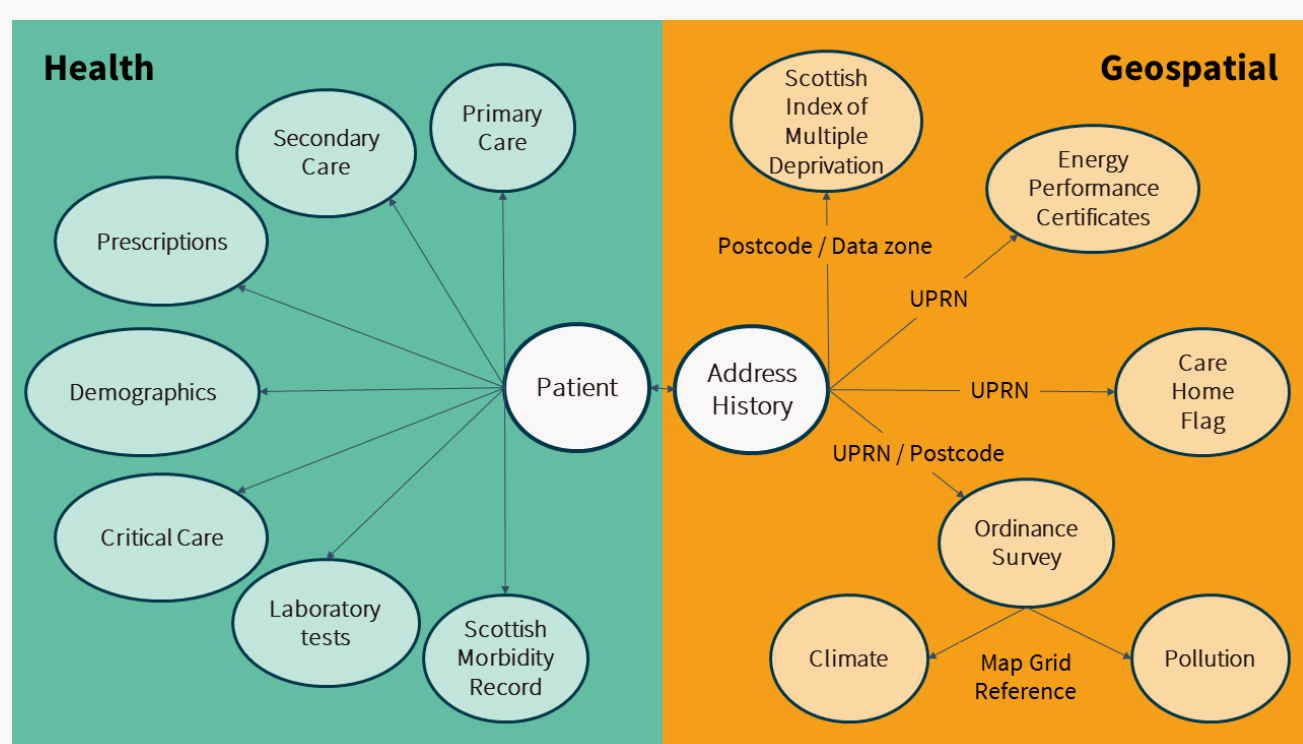


Discover more about our registries through the QR code:



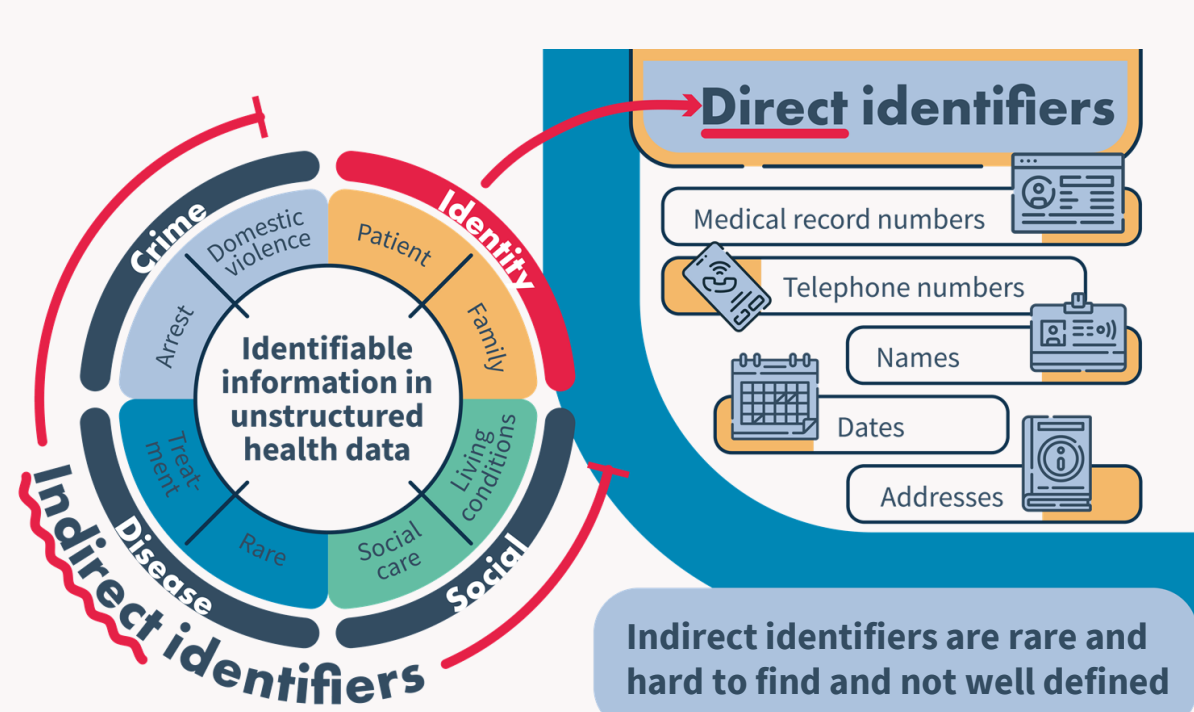
Geospatial data

At DataLoch, we are exploring the linkage of health data with various geospatial datasets to provide opportunities to investigate health impacts of:



- 1) different types of **home heating, insulation**, etc. from the household Energy Performance Certificate dataset;
- 2) various **pollutants and climate conditions** from publicly available pollution and climate datasets; and
- 3) living in a **care home**.

This work is based on accurate identification of addresses, which are then linked to Unique Property Reference Numbers (UPRN) and Grid Map References. Data are de-identified before researcher access.



Natural Language Processing (NLP)

In comparison with coded data, clinical free-text holds a broader spectrum of patient experiences. However, it also includes a multitude of potential

direct and indirect identifiers (see graphic), which currently prevents the use of free-text extracts within health research and innovation.

By applying NLP techniques on free-text, we are developing the processes to remove direct and indirect identifiers so that the de-identified data can be made available for research without compromising confidentiality.



We are also developing methods to convert free-text into coded, structured data that are research ready. Find out more through the QR code.

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