News Release

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Big data initiative set to make impact on health of society

A £20 million project is seeking to harness the power of healthcare and government data to improve the lives of patients and the wider population.

Two major research institutes, involving universities and the NHS, are using healthcare and public authority records to develop health treatments and improve public policy.

They are benefiting from UK funding to support cutting edge medical, healthcare and social research aimed at improving the health and wellbeing of individuals and populations in Scotland, the wider UK and overseas. The funding is led by the Medical Research Council and Economic and Social Research Council.

The Farr Institute Scotland and the Administrative Data Research Centre Scotland (ADRC-S) – which formally open on Monday 29 February – are based at Edinburgh BioQuarter, a partnership between the University of Edinburgh, Scottish Enterprise and NHS Lothian.

Working shoulder-to-shoulder, they are at the forefront of big data – analysing extremely large and complex sets of data to reveal patterns and trends that can provide meaningful information to inform research and decision making.

The Farr Institute Scotland – a collaboration between six Scottish universities and NHS National Services Scotland – is developing procedures to securely curate electronic health records.

These are designed to protect patient confidentiality while providing researchers with datasets to enable new medical discoveries, validation of treatments, and improved NHS healthcare delivery. Researchers will work with the information to develop commercial drugs, diagnostic tests and life-saving medical technology, at a speed and scale not previously possible.

The ADRC-S works with government records, helping researchers to use anonymised data – such as on road accidents or benefit payments – to create a broad picture of society. This helps to track changes in people's behaviour, such as in response to new policies.

Researchers will be able to combine ADRC data with the Farr Institute's medical datasets to discover new ways to help individuals, populations and policymakers. Information from multiple sources could overturn established views on how to tackle social and healthcare problems – enabling better health and wellbeing, at reduced economic cost.

Huge, privacy-protected, data sets can be created by curating patient and other population-based data as well as from genetic information from populations.

Professor Sir Pete Downes, Vice Chancellor at the University of Dundee, which leads the Farr Institute Scotland, said: "Scotland and the UK are uniquely poised to use our outstanding data assets in a trustworthy and secure way to make a big difference through research that transforms lives locally and globally. Scotland and the UK is ideally positioned to lead in this new world of data science."

Professor Andrew Morris, Vice Principal Data Science at the University of Edinburgh and Director of the Farr Institute Scotland, said: "Health systems internationally are challenged to deliver better quality healthcare at reduced cost so we must find new innovative ways, underpinned by cutting edge research and new knowledge, to provide services and treatments that are better and cheaper. To do this requires complete and high quality data at the local, regional and national level, and collaboration between the public, researchers, the NHS, Government and industry. That is what the Farr Institute is all about."

Professor Chris Dibben, Director of ADRC Scotland, said: "Linking together collections of administrative data can help us to use data intelligently – creating better knowledge for a better society. This is extremely valuable for social and economic research. Our studies have the potential to influence future government policy and to measure how policy decisions change society."

Shona Robison, Scottish Government Cabinet Secretary for Health and Social Care, said: "Scotland is one of the best places in the world to conduct data-driven research. The Farr Institute and the ADRC, working together, can provide new exciting research opportunities to securely exploit data to improve health."

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Notes for editors:

The Farr Institute Scotland is part of the Farr Institute for Health Informatics Research, which has partner hubs in London, Manchester and Swansea. Its academic partners are Australian National University and the Universities of Aberdeen, Dundee, Edinburgh, Glasgow, St Andrews and Strathclyde. It is supported by the Medical Research Council (MRC), Arthritis Research UK, the British Heart Foundation, Cancer Research UK, the Chief Scientist Office of the Scottish Government, the Engineering and Physical Sciences Research Council and the Economic and Social Research Council. It also receives funding from the NHS National Institute for Health Research, NHS National Services Scotland, the National Institute for Social Care and Health Research, the Scottish and Welsh Governments and the Wellcome Trust.

The Administrative Data Research Centre, funded by the Economic and Social Research Council (ESRC), collaborates with centres in Belfast, Southampton and Swansea. Its academic partners are Australian National University, Edinburgh Napier University, Heriot-Watt University and the Universities of Aberdeen, Edinburgh, Glasgow, St Andrews and Stirling.

The Economic and Social Research Council (ESRC) is the UK's largest funder of research on the social and economic questions facing us today. It supports the development and training of the UK's future social scientists and also funds major studies that provide the infrastructure for research. ESRC-funded research informs policymakers and practitioners and helps make businesses, voluntary bodies and other organisations more effective. The ESRC also works collaboratively with six other UK research councils and Innovate UK to fund cross-disciplinary research and innovation addressing major societal challenges. The ESRC is an independent organisation, established by Royal Charter in 1965, and funded mainly by the Government.



























