



QResearch News Update Autumn 2020

Oxford leads development of risk prediction model for more tailored COVID-19 shielding advice

Clinicians and GPs are now able to better identify patients who are at a higher risk of serious illness from SARS-CoV-2 infection based on a new data-driven risk prediction model, developed by an Oxford University-led team.

The model is also be used to inform mathematical modelling of the potential impact of national public health policies on shielding and preventing infection and potentially help identify those at highest risk to be vaccinated, when available.

The model uses routinely collected anonymized electronic health records of 8 million adults in the UK, accessed through the University of Oxford's QResearch database and linked datasets, to identify factors that can be used to predict those at highest risk of infection and serious illness from COVID-19. These include age, sex, ethnicity, deprivation, smoking status, body mass index, pre-existing medical conditions and current medications.

The researchers plan to regularly update their model as levels of immunity change, more data become available and behaviour in the population changes, so that the model could also be used to support risk stratification for public health purposes as the infection rate changes over time.

The work was funded by the National Institute for Health Research (NIHR) following a commission by the Chief Medical Officer for England.

The study was published by the BMJ on October 20th and can be seen in full here <https://www.bmj.com/content/371/bmj.m3731>. Find out more about QCOVID at www.qcovid.org

In this edition

◆ QResearch study linking together COVID-19 patient data awarded funding.

◆ Oxford leads development of risk prediction model for more tailored COVID-19 shielding advice

◆ Professor Julia Hippisley-Cox packs auditorium for annual Richard Doll Lecture

◆ Advisory Board Member Focus

◆ QResearch joins Oxford-led consortium for liver cancer early detection

Next Issue

We hope you like our new newsletter format.

It is a great opportunity for us to bring together a range of news on the use of the QResearch database.

To feature your research news here, please email Claire Meadows at pa-julia.hippisley-cox@phc.ox.ac.uk

QResearch study linking together COVID-19 patient data awarded funding

The national QResearch-Oxford record linkage study is to be used to understand whether drugs commonly taken for chronic conditions such as hypertension or diabetes may exacerbate or reduce the severity of COVID-19 disease.

The study, led jointly by Professor Julia Hippisley-Cox in the Nuffield Department of Primary Care Health Sciences' Primary Care Epidemiology Group, with Professor Peter Watkinson in the Nuffield Department of Clinical Neurosciences, has been awarded funding by the NIHR Oxford Biomedical Research Centre.

It is hoped this study will be able to identify alternative drugs for patients with chronic conditions, as well as possible drugs to treat COVID-19; and identify high-risk patients in primary care.

About QResearch

QResearch is a large consolidated database derived from the anonymised health records of over 35 million patients.

The data currently come from approximately 1500 general practices using the EMIS clinical computer system.

The practices are spread throughout the UK and include data from patients who are currently registered with the practices as well as historical patients who may have died or left.

Historical records extend back to 1989, making it one of the largest and richest general practice databases in the world.

Founder Julia Hippisley-Cox is based at Nuffield Department of Primary Health Sciences, Medicine Sciences Division, University of Oxford.

www.qresearch.org

Professor Julia Hippisley-Cox packs auditorium for Annual Richard Doll Lecture

On March 3rd, QResearch founder Professor Julia Hippisley-Cox presented to a standing-room only audience at the Old Road Campus, as part of the annual Richard Doll Lecture programme.

Her presentation, entitled 'The Risk of Everything: using linked electronic health records to develop and validate risk prediction tools for use in clinical care' looked at the past, present and future of QResearch as a data source for a growing range of projects.

To see the full presentation visit the QResearch website <http://url.ie/17bp3>

QResearch Advisory Board Member Focus: Rafael Perera

Professor Perera is Director of the Statistics group in the Oxford University Nuffield Department of Primary Care Health Sciences, which he joined in 2002.

He has overseen the development of one of the strongest methodological/statistical groups in the UK (across all clinical areas) with a particular emphasis on monitoring, with his group achieving national and international recognition [NIHR Progress Report 2008/09-Delivering Health Research].

Rafael sits on a range of national and international panels and boards that influence healthcare policy at different levels and is also Director of Research Methodologies in the Centre for Evidence Based Medicine.



QResearch joins Oxford-led consortium for liver cancer early detection

Professor Julia Hippisley-Cox and the QResearch electronic health records database are to contribute to a prestigious Cancer Research UK-funded programme to research the earlier detection of hepatocellular carcinoma. The Early Detection Programme Award, worth £2.5million over five years, brings together a multidisciplinary team from across the University of Oxford to understand more about the changes in the liver as cancer develops. The researchers will use this to inform new, more sensitive diagnostic tests with the ambition of detecting liver cancer earlier.

In this research programme, scientists aim to learn more about the origins of liver cancer and develop more sensitive detection tests. The Oxford-led team will investigate people with and without cancer to identify factors that will enable better risk assessment and earlier cancer detection. Their research will include analysis of molecular profiles in both the liver tissue and the blood, and advanced liver imaging.

Professor Ellie Barnes, Nuffield Department of Medicine and the Chief Investigator for this programme, said "We are delighted to receive funding from CRUK for this research programme. With the support of a world-class team, I believe that this award will allow us to make an important step change in the UK for both HCC detection and the scientific understanding of cancer initiation"

"We are delighted to be part of this innovative award. We will use QResearch to develop a new computerised risk prediction tool which will help identify patients in primary care who are at highest risk of liver cancer so that patients can be identified at the earliest possible opportunity to help speed up the diagnosis and treatment for people with liver cancer. used across the NHS."

Professor Julia Hippisley-Cox, Director of QResearch and Professor of Clinical Epidemiology and General Practice