

New QRISK score to predict heart disease in younger people

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Experts at The University of Nottingham have developed a new 'score' to help GPs detect heart disease in younger people - before it damages their health.

Using data from the [electronic health records](#) of over two and half million people researchers have developed, validated and evaluated the new lifetime 'score' which takes account, among many other factors, social deprivation and ethnicity. The results of their research is published today (9 Dec 2010) in the *BMJ*.

Julia Hippisley-Cox, Professor of Clinical Epidemiology and General Practice in the School of Community Health, said: "This new score has the potential to identify younger people who have a high risk over the course of their lifetime, who are currently not picked up by the more conventional '10 year' risk scores. By identifying people at a younger age, GPs will have more chance of intervening before [heart disease](#) sets in, to help reduce their lifetime risk through treatments and lifestyle advice."

Heart disease is the leading cause of [premature death](#) in the UK and a major cause of disability.

The majority of GPs in the UK currently have access to the QRISK2 formula which predicts [cardiovascular disease risk](#) over 10 years. It was developed using data from over 500 GP practices, feeding into the QRESEARCH® database, run by the University in collaboration with EMIS.

Until now there have been no published risk scores that estimate the lifetime risk of heart disease, while incorporating social deprivation or ethnicity. The new lifetime score also takes account of other factors including: smoking status, systolic blood pressure, cholesterol levels, body mass index, family history of heart disease, and age and sex.

The new lifetime 'score' shows that different people could be at high risk compared with the 10 year risk score. The new 'score' will identify people for possible intervention at a much younger age. The risk calculator is available at www.qrisk.org/lifetime

Using the QRESEARCH® database Professor Hippisley-Cox, together with experts from Queen Mary's School of Medicine and Dentistry in London and the Avon Primary Care Research Collaborative in Bristol, have been able to produce a model based on a large, ethnically diverse population. The information could be updated to take account of improvements in data quality and refined over time to reflect trends in population characteristics, changes in clinical requirements and improved methods for communicating cardiovascular risk to patients.

Professor Hippisley-Cox said: "Our study leaves a number of unanswered questions. These include whether early intervention in people with a high lifetime risk but low 10-year risk would have a greater clinical benefit than later intervention; whether people at low absolute risk would value long term treatments with little short term gain; determining the appropriate threshold for [lifetime risk](#) to balance the expected benefits against the potential adverse effects of interventions such as statins. Although more research is needed to closely examine the cost effectiveness and acceptability of such an approach, this does represent an important advance in the field of cardiovascular disease prevention".

Cardiovascular disease includes coronary heart disease (angina and

myocardial infarction), stroke, or transient ischaemic attacks. National policies now support targeting of interventions to reduce the risk of cardiovascular disease among high risk patients.

The University of Nottingham has a broad research portfolio but has also identified and badged 13 research priority groups, in which a concentration of expertise, collaboration and resources create significant critical mass. Key research areas at Nottingham include energy, drug discovery, global food security, biomedical imaging, advanced manufacturing, integrating global society, operations in a digital world, and science, technology & society.

Through these groups, Nottingham researchers will continue to make a major impact on global challenges.

Provided by University of Nottingham

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