Family history -- a significant way to improve cardiovascular disease risk assessment

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A new study by researchers at The University of Nottingham has proved that assessing family medical history is a significant tool in helping GPs spot patients at high risk of heart disease and its widespread use could save lives.

Previous research has suggested that family history can be an indicator of a patient's risk of heart disease but at present family medical details are not systematically collected and used by GPs in cardiovascular risk assessment.

This first-ever clinical investigation into systematically collecting family history as part of cardiovascular disease risk assessment has identified a further five per cent of patients who would benefit from prevention measures. The researchers from the University's Division of Primary Care also found that the gathering of family medical data is simple, low-cost and acceptable to patients.

Leading the study, Professor Nadeem Qureshi said: "Recently there has been great interest in performing genetic tests to identify individuals at high risk of heart disease, but our study has found that simply taking a detailed family history may be as effective, if not more, to identify these individuals. We are thrilled our research has been published in the prestigious international journal, Annals of Internal Medicine which has highlighted the study in its Editorial, agreeing that it is time to take systematic family history collection more seriously."

The large randomised controlled trial was carried out in 24 doctors' practices in the East Midlands and South West England over a six month period. The practices were organised into 12 pairs of one control and one intervention practice each. 748 patients aged 30 to 65 with no previously diagnosed cardiovascular risk were studied.

In all patients the medical staff calculated a standard cardiovascular risk score by inputting core risk factors like age, sex, smoking status, blood pressure and cholesterol into a risk calculator. GPs usually use this score to predict a patient's 10 year risk for cardiovascular disease. In the intervention groups, clinicians also had patients fill in a questionnaire on family history of coronary heart disease. The patient's standard risk was multiplied by 1.5 if a family history of premature heart disease was identified. This is because a patient is more likely to develop Coronary Heart Disease (CHD) if they have a father or brother younger than 55 years who had CHD or a mother or sister younger than 65 with the disease.

Doctors invited patients identified as having a high risk (20 per cent or more) for developing heart disease in the next 10 years for a consultation. The risk was explained and advice offered on lifestyle changes such as diet, exercise and giving up smoking.

The study found that the additional use of systematic family history in cardiovascular risk assessment almost doubles the proportion of individuals identified at high cardiovascular risk.

The research also concludes that the systematic identification of familial risk for CHD offers a potentially low-cost approach to targeting limited resources for screening and prevention interventions in those at high cardiovascular risk. The use of a self-completed tool to do this appears acceptable to patients without causing anxiety, and could lead to more CHD being prevented.