Making sense of genetic testing for heart disease

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(Medical Xpress)—A new study by academics at The University of Nottingham looks at how patients respond to genetic testing for risk of coronary heart disease (CHD).

CHD is the top cause of death globally and is predicted to remain the single leading cause of death. General practitioners currently identify patients with an increased risk of the illness using conventional cardiovascular risk assessment tools that take account of risk factors, such as, blood pressure, cholesterol level, smoking and family history.

A new study – 'Introducing genetic testing for cardiovascular disease in primary care' - published in the *British Journal of General Practice* and led by Professor Nadeem Qureshi, from the Division of Primary Care at The University of Nottingham, explores how patients perceive the results of genetic testing, when offered the test after a conventional

cardiovascular risk assessment.

Professor Qureshi says: "The main reason for genetic testing for the risk of CHD is a family history of this disease, and people undergoing testing are often motivated by a desire to convey results to their children. Predictive genetic tests are currently available over the counter, but both the public and clinicians do not really understand the test results."

Participants in the study had to deal with the complexity of conflicting findings from the genetic test, family history and conventional cardiovascular risk assessment. Ways of dealing with this included either focussing on the genetic risk or the environmental lifestyle risk factors, whilst other participants were sceptical about the value of the genetic test results.

In some participants the genetic test results helped them maintain a healthy lifestyle while others were falsely reassured by the average genetic risk result, despite having an above-average conventional cardiovascular risk assessment score.

Professor Qureshi adds: "With this type of test being offered commercially direct to the public, general practitioners are increasingly exposed to genetic test results. They need to have an understanding of the complexity and relevance of these test results. This will be particularly challenging when the genetic test result is not consistent with CHD risk identified through conventional cardiovascular risk assessment and the family history. The results need to be presented in a clearer way, to enable the patients to take account of all of the assessments and test results. This is important to ensure that the patient maintains a healthy lifestyle."

More information: "Introducing genetic testing for cardiovascular disease in primary care: a qualitative study. Jo B Middlemass, research

fellow," Momina F Yazdani, Joe Kai, Penelope J Standen, and Nadeem Qureshi. *Br J Gen Pract* May 2014 64:e282-e289; DOI: 10.3399/bjgp14X679714