

Type 2 diabetes screening needs 'reviewing'

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The process for screening for Type 2 diabetes or those at high risk of the condition needs "careful re-evaluation", according to the first study on the effectiveness of testing methods.

Diabetes screening has been advocated, yet information on the response and diagnostic rates of different screening strategies is not available.

But researchers at the University of Leicester have now found that 'multi-step' programmes lead to more people responding to screening invitations and the number of those needing a final test for a definite diagnosis being reduced.

This was irrespective of the invitation method, developmental status of the countries and/or whether the location of the programme is in an urban or rural setting.

The rate of people diagnosed with Type 2 [diabetes](#) in a one-step programme was 6.6 per cent, 13.1 per cent when two steps were involved, but 27.9 per cent in screening programmes involving three or four steps.

The number needed to be invited to an oral glucose tolerance test (OGTT) to detect one case of Type 2 diabetes was 15 people for one-step programmes, 7.6 for two steps and 3.6 for strategies with three or four steps.

The research, 'Systematic review and meta-analysis of response rates and

diagnostic yield of screening for type 2 diabetes and those at high risk of diabetes', has been published in the PLOS ONE journal.

Lead researcher Professor Kamlesh Khunti, who is Professor of Primary Care Diabetes and Vascular Medicine at the University of Leicester and Co-Director of the Leicester Diabetes Centre, said: "We have been able to provide evidence for the overall response rate and yield of diabetes screening in the background of a variety of factors such as geographical area, invitation methods and locality of the population, which influences decision making when undertaking this task.

"We can conclude that performing a multi-step approach in a population screening increases the yield and decreases the number needed to screen by OGTT and in the two- step approach it even increases the initial response rate to the invitation. In terms of absolute numbers, the highest yield of diabetes, however, is obtained in the one-step studies where an OGTT is offered as a screening test to the population.

"The process of [screening](#) for Type 2 diabetes or those at [high risk](#) of diabetes needs careful re-evaluation by local policy makers in each country especially in view of our findings."

The study was funded by the NIHR Collaboration for Leadership in Applied Health Research and Care (CLAHRC) East Midlands. CLAHRC East Midlands is a partnership of regional health services, universities and industry which turns research into cost-saving and high-quality care through cutting-edge innovation.

Funding also came from the NIHR Biomedical Research Unit in Nutrition, Diet and Lifestyle at the University Hospitals of Leicester NHS Trust and Loughborough University.

More information: Kamlesh Khunti et al. Systematic Review and

Meta-Analysis of Response Rates and Diagnostic Yield of Screening for Type 2 Diabetes and Those at High Risk of Diabetes, *PLOS ONE* (2015).
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