The cost-effectiveness of testing strategies for type 2 diabetes: a modelling study

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Declared competing interests of authors: Professor Kamlesh Khunti has acted as a consultant and speaker for Novartis Pharmaceuticals UK Ltd, Novo Nordisk, Sanofi-aventis, Eli Lilly and Company and Merck Sharp & Dohme Corp. He has received grants in support of investigator and investigator-initiated trials from Novartis Pharmaceuticals UK Ltd, Novo Nordisk, Sanofi-aventis, Eli Lilly and Company, Pfizer, Boehringer Ingelheim and Merck Sharp & Dohme Corp. Professor Kamlesh Khunti has also received funds for research and honoraria for speaking at meetings and has served on advisory boards for Eli Lilly and Company, Sanofi-aventis, Merck Sharp & Dohme Corp. and Novo Nordisk. Professor Melanie Davies has acted as consultant, advisory board member and speaker for Novo Nordisk, Sanofi-aventis, Eli Lilly and Company, Merck Sharp & Dohme Corp., Boehringer Ingelheim, Janssen and AstraZeneca. She has received grants in support of investigator and investigator-initiated trials from Novo Nordisk, Sanofi-aventis, Eli Lilly and Company, Boehringer Ingelheim, Merck Sharp & Dohme Corp. and GlaxoSmithKline.

Published May 2015
DOI: 10.3310/hta19330

Plain English summary

Cost-effectiveness of testing strategies for type 2 diabetes

Health Technology Assessment 2015; Vol. 19: No. 33
DOI: 10.3310/hta19330

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Plain English summary

There is an ongoing NHS programme offering a Health Check to those between 40 and 74 years of age to check their risk of developing cardiovascular disease in the future by measuring risk factors such as cholesterol and body mass index (BMI). Screening for diabetes forms part of this assessment, but alternative blood tests are available, in particular measurement of glycated haemoglobin (HbA_{1c}) or fasting plasma glucose (FPG). There are advantages to each test: a FPG test is slightly cheaper, but HbA_{1c} does not require an 8-hour overnight fast beforehand. In addition, the set of individuals identifiable with, or at risk of, diabetes using a FPG test would not match the set of individuals identified using a HbA_{1c} test; therefore, the individuals who receive treatment may differ according to which test is used. This report uses information on the number of individuals who would be identified with diabetes or at risk of diabetes and the costs of the blood tests, and, using computer modelling, produces estimates of the lifetime costs and health impact of using a HbA_{1c} test compared with a FPG test. The results suggest that, in most cases, a HbA_{1c} test is likely to be more cost-effective than a FPG test. This conclusion may be reversed in some localities where the excess number of individuals detected with raised glucose using a FPG test relative to a HbA_{1c} test would be greater than in the LEADER (Leicester Ethnic Atherosclerosis and Diabetes Risk) cohort, but this would be dependent on the uptake of HbA_{1c} testing compared with uptake of FPG testing.

Health Technology Assessment

HTA/HTA TAR

ISSN 1366-5278 (Print)

ISSN 2046-4924 (Online)

Impact factor: 5.116

Health Technology Assessment is indexed in MEDLINE, CINAHL, EMBASE, The Cochrane Library and the ISI Science Citation Index and is assessed for inclusion in the Database of Abstracts of Reviews of Effects.

This journal is a member of and subscribes to the principles of the Committee on Publication Ethics (COPE) (www.publicationethics.org/).

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This report

The research reported in this issue of the journal was funded by the HTA programme as project number 10/133/01. The contractual start date was in July 2012. The draft report began editorial review in November 2013 and was accepted for publication in September 2014. The authors have been wholly responsible for all data collection, analysis and interpretation, and for writing up their work. The HTA editors and publisher have tried to ensure the accuracy of the authors' report and would like to thank the reviewers for their constructive comments on the draft document. However, they do not accept liability for damages or losses arising from material published in this report.

This report presents independent research funded by the National Institute for Health Research (NIHR). The views and opinions expressed by authors in this publication are those of the authors and do not necessarily reflect those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health. If there are verbatim quotations included in this publication the views and opinions expressed by the interviewees are those of the interviewees and do not necessarily reflect those of the authors, those of the NHS, the NIHR, NETSCC, the HTA programme or the Department of Health.

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