UNIVERSITY OF BIRMINGHAM AND YORK HEALTH ECONOMICS CONSORTIUM

(National Collaborating Centre for Indicator Development)

Health economic report on piloted indicators

Pilot QOF indicator: Diabetes prevention

The percentage of patients with non-diabetic hyperglycaemia who have had an HbA1c test in the preceding 12 months.

The percentage of women who have had gestational diabetes, diagnosed more than 12 months ago, who have had an HbA1c test in the preceding 12 months.

Potential output: Recommendations for NICE Menu

Introduction and economic rationale for the indicator

This briefing paper describes our thoughts on the potential for an economic analysis of the following potential indicators from pilot 11 of the NICE Quality and Outcomes Framework (QOF) indicator development programme:

The percentage of patients with non-diabetic hyperglycaemia who have had an HbA1c test in the preceding 12 months.

The percentage of women who have had gestational diabetes, diagnosed more than 12 months ago, who have had an HbA1c test in the preceding 12 months.

HbA1c annual screening in patients with non-diabetic hyperglycaemia (nDH) or a history of gestational diabetes

The NICE Public Health Guideline Type 2 Diabetes: prevention in people at high risk (PH38) [1] recommends that patients at high risk of diabetes should have their HbA1c levels tested every year. The definitions in the Guideline given for high risk patients focus on those with 'elevated HbA1c' rather than with nDH or those with a history of gestational diabetes, although both these groups can be considered to be at a higher risk of Type 2 diabetes compared to the general population. No economic modelling of repeat screening of high risk patients was produced for the guideline with the authors of the model noting that producing an economic model for repeat screening would be complex.

Analysis of economic studies of repeat screening for PH38 showed that the studies were not limited to repeat screening in high risk individuals. The conclusion drawn from these studies was that whilst repeat screening of HbA1c is probably cost effective, it is at a range of 3 to 5 years rather than annually. The review team for PH38 concluded that more needed to be known about the use of HbA1c as the preferred method of diagnosing diabetes.

If economic benefits from annual screening could be identified, it could be assumed that these would arise from earlier treatment of people identified with diabetes than would be the case without annual screening. The extent of these benefits would depend on:

- The timescale over which benefits were captured;
- The length of time that a person with a prior diagnosis or nDH or prior gestational diabetes developed diabetes would go undiagnosed;
- The rate of patients wrongly diagnosed with diabetes at the annual review and treated unnecessarily.

Previous studies have shown that effective treatment for diabetes results in benefits that can take well over ten years to accrue so short term gains from earlier identification will be minimal [2].

The length of time that a patient would go undiagnosed without annual screening is not known. Also, the false positive rate for HbA1c in high risk patients could not be identified in the literature. However, it will not be negative and so therefore would offset in part any overall population gains from more frequent screening.

Given these concerns, cost-effectiveness analysis of the two indicators was not deemed possible and could potentially be misleading if not taking into account the full complexity required to model regular HbA1c screening in high risk groups.

References

[1]   National Institute for Health and Clinical Excellence. Type 2 diabetes: prevention in people at high risk 2012. Available from: https://www.nice.org.uk/guidance/ph38

[2]   Baxter M, Hudson R, Mahon J, Bartlett C, Samyshkin Y, Alexiou D, Hex N. Estimating the impact of better management of glycaemic control in adults with Type 1 and Type 2 diabetes on the number of clinical complications and the associated financial benefit.