

Impact of using a non-diabetes-specific risk calculator on eligibility for statin therapy in type 2 diabetes

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Aims/hypothesis The aim of this study was to investigate the impact of using a non-diabetes-specific cardiovascular disease (CVD) risk calculator to determine eligibility for statin therapy according to current UK National Institute for Health and Clinical Excellence (NICE) guidelines for those patients with type 2 diabetes who are at an increased risk of CVD (10 year risk $\geq 20\%$).

Methods The 10 year CVD risks were estimated using the UK Prospective Diabetes Study (UKPDS) Risk Engine and the Framingham equation for 4,025 patients enrolled in the Lipids in Diabetes Study who had established type 2 diabetes and LDL-cholesterol < 4.1 mmol/l.

Results The mean (SD) age of the patients was 60.7 (8.6) years, blood pressure 141/83 (17/10) mmHg and the total cholesterol:HDL-cholesterol ratio was 3.9 (1.0). The median (interquartile range) diabetes duration was 6 (3–11) years and the HbA_{1c} level was 8.0% (7.2–9.0%). The cohort comprised 65% men, 91% whites, 4% Afro-Caribbeans, 5% Asian Indians and 15% current smokers. More patients were classified as being at high risk by the UKPDS Risk Engine (65%) than by the Framingham CVD equation (63%) ($p < 0.0001$). The Framingham CVD equation classified fewer men and people aged < 50 years old as high risk ($p < 0.0001$). There was no difference between the UKPDS Risk Engine and Framingham classification of women at high risk ($p = 0.834$).

Conclusions/interpretation These results suggest that the use of Framingham-derived rather than UKPDS Risk Engine-derived CVD risk estimates would deny about one in 25 patients statin therapy when applying current NICE guidelines. Thus, under these guidelines the choice of CVD risk calculator is important when assessing CVD risk in patients with type 2 diabetes, particularly for the identification of the relatively small proportion of younger people who require statin therapy.