Statins are not always prescribed to the patients who will benefit most

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Credit: University of Birmingham

A study by the University of Birmingham has found that statins are not always prescribed to patients who will benefit the most from them.

This research by the team from the Institute of Applied Health Research examined the clinical records of 1.4 million patients who did not have existing cardiovascular disease and who were not taking, or had not been offered, statins in the past. These patients were suitable for a cardiovascular diseases (CVD) risk assessment to guide clinicians in deciding who should be offered a statin for the primary prevention of CVD.

The risk assessment results in a QRISK2 score - a prediction algorithm for CVD that uses traditional risk factors (age, systolic blood pressure, smoking status and ratio of total serum cholesterol to high-density lipoprotein cholesterol) together with body mass index, ethnicity, measures of deprivation, family history, chronic kidney disease, rheumatoid arthritis, atrial fibrillation, diabetes mellitus, and antihypertensive treatment.

The study found that the majority of patients (over 90 percent) who had a QRISK2 score coded between 2012 and 2015 did not go on to have a statin prescribed.

This was in part due to the fact that around 60 percent of these patients fell into the 'low risk' category and therefore, according to NICE guidelines, should not be prescribed statins.

However, despite the NICE guidelines, there was still a small but significant proportion of this group being prescribed statins. Initiations in this group accounted for one in six of all new statin initiations to patients with a coded risk score.

About a third of patients who fell into the highest risk category were initiated on statins. Those who were not initiated on statins may have been offered treatment but declined; or, potentially, they weren't offered a statin.

Dr Samuel Finnikin said: "The decision to start a statin is a difficult one for many reasons. People should be helped to make this decision by having a discussion with their healthcare professional about the risks and benefits of treatment informed by an estimate of the personal level of risk.

"Only by undertaking a formal risk assessment can the clinician know who to offer a statin to, and the patient understand the degree of benefit they can expect from the medication. Our research suggests that the risk assessment is perhaps not always being routinely undertaken and documented.

"An estimated CVD risk score is an essential part of the shared decision to initiate statins to reduce the risk of heart disease and stroke. Without it, we run the risk of over treating patients who are unlikely to benefit, and potentially initiate treatment without patients being fully aware of the benefits to them".

Since 2012, when the QRISK2 score was introduced, 72.9 percent of statin initiations were to patients who did not have a documented QRISK2 score.

These patients may have had a risk assessment that wasn't documented, or had a risk score calculated with a different tool. However, these data suggest a significant number of patients are being started on statins without having a formal CVD risk assessment done.

Without a risk assessment, clinicians can't be sure that they have identified patients who are most likely to benefit from statins, and patients can't be provided with accurate information about the benefits of taking a statin so the decision can't be made based on the best possible information. Younger patients, who are more likely to have a low risk score, are more likely to be started on a statin without a risk assessment.

More information: Samuel Finnikin et al. Statin initiations and QRISK2 scoring in UK general practice: a THIN database study, *British Journal of General Practice* (2017). DOI: 10.3399/bjgp17X693485