Cardiovascular disease prevention: risk assessment (general population)

NICE indicator

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Indicator

The percentage of people aged 45 to 84 years who have a recorded cardiovascular disease (CVD) risk assessment score in the preceding 5 years.

Indicator type

Network / system level indicator. The indicator would be appropriate to understand and report on the performance of networks or systems of providers.

This document does not represent formal NICE guidance. For a full list of NICE indicators, see our menu of indicators.

To find out how to use indicators and how we develop them, see our NICE indicator process guide.

Rationale

For primary prevention of CVD, NICE recommends using a systematic strategy in primary care to identify people who are likely at high risk of CVD. Once an increased risk has been found, many CVD risk factors are modifiable through lifestyle changes or medical interventions. See NICE's indicators on primary prevention with lifestyle changes and primary prevention with lipid-lowering therapies.

NICE's guideline on cardiovascular disease recommends reviewing estimates of CVD risk on an ongoing basis for people over 40, but this indicator starts at 45 years to provide a 5-year window for the recording of an initial risk score. A frequency of 5 years for repeat CVD risk assessment was chosen to align with the NHS Health Check programme.

The indicator excludes people with type 1 diabetes, CVD, familial hypercholesterolaemia, chronic kidney disease stage 3 to 5 (in line with NICE guidance) as they are at high risk and should proceed directly to lifestyle modification and lipid-lowering therapies. People on current lipid-lowering therapies or with a previous CVD risk score of 20% or more are excluded as repeat assessment is unnecessary.

CVD risk can be estimated based on existing factors already recorded in primary care electronic medical records. However, the accuracy of estimated risk scores will be affected if relevant data is not accurately recorded in GP records, especially in vulnerable and underserved populations. To mitigate perpetuating or exacerbating existing health inequalities, 'batch coding' without clinical judgement should be avoided. Additionally, resultant data should be disaggregated by deprivation, ethnicity, age and gender to help reduce the risk of widening health inequalities.

Source guidance

Cardiovascular disease: risk assessment and reduction, including lipid modification. NICE

guideline NG238 (2023), recommendations 1.1.1 to 1.1.3

Specification

Numerator: The number of people in the denominator with a recorded CVD risk assessment score in the preceding 5 years.

Denominator: The number of people aged 45 to 84 years.

Calculation: Numerator divided by the denominator, multiplied by 100.

Definitions: CVD risk assessment should preferably be undertaken using QRISK3; however, proposed indicator construction would include clinical codes for QRISK, QRISK2 and QRISK3 risk scores. For this indicator, estimated risk scores would be acceptable using factors already recorded in primary care electronic medical records, but 'batch coding' without clinical judgement should be avoided.

Exclusions: People with any of the following:

- type 1 diabetes

- CVD

- familial hypercholesterolaemia

- chronic kidney disease stage 3a to 5

- current treatment with lipid-lowering therapies

- a risk score of 20% or more ever recorded.

Current lipid-lowering therapies is defined as a prescription of statins or other lipid-lowering therapies in the last 6 months of the reporting period.

CVD is defined as angina, previous myocardial infarction, revascularisation, ischaemic stroke or transient ischaemic attack, or symptomatic peripheral arterial disease. Existing NHS Quality and Outcomes Framework registers could be used: CHD001, STIA001 excluding people with a history of haemorrhagic stroke, and PAD001.

Data source: Data should be available from general practice IT systems.

Expected population size: Analysis of data from the Clinical Practice Research Datalink (CPRD) Aurum March 2024 dataset shows that 23.8% of people in England were aged 45 to 84 years with no type 1 diabetes, CVD, familial hypercholesterolaemia, chronic kidney disease stage 3a to 5, current treatment with lipid-lowering therapies or a risk score of 20% or more ever recorded: 2,376 per 10,000 patients.

Update information

Minor changes since publication

December 2024: We added a link to NICE's guideline on cardiovascular disease for recommendations on reviewing estimates of CVD risk.

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