NORTH EAST QUALITY OBSERVATORY SERVICE (NATIONAL COLLABORATING CENTRE FOR INDICATOR DEVELOPMENT)

FOR

NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

INDICATOR DEVELOPMENT PROGRAMME

Contextual data in support of piloted indicators

Topic area: Cardiovascular disease (CVD)

Pilot period: January – March 2022

IAC meeting date: 14th June 2022

Output: Supporting contextual information and findings from practice system clinical searches associated with the qualitative pilot to contribute towards recommendations for NICE indicator menu

Contents

Introduction

This paper presents publicly available data from NHS Digital and the CVD Prevent audit. Information from clinical system searches undertaken by pilot practices is presented and described from page 7 onwards.

The relevant key findings are summarised below.

Contextual information from publicly available data sources

Cardiovascular disease (CVD) definitions and registers – as defined in QOF Business Rules comparison

Cardiovascular disease is a general term for conditions affecting the heart and circulatory system and various definitions are available[1,2,3,4,5].

Using the latest NHS Digital QOF Business Rules[6] as the source of the conditions included in a QOF-register based CVD definition, the relevant QOF indicators, condition-level SNOMED code clusters and the most recent 2020/21 national register counts and prevalence data[7] are shown in Table 1.

To note that indicator DM023 (The percentage of patients with diabetes, on the register, and a history of CVD (excluding haemorrhagic stroke) who are currently treated with a statin) covers patients in all of the registers in Table 1 other than Heart Failure, with the addition of familial hypercholesterolemia (^999006811000230109) and stage 3-5 (i.e. not 1-2) chronic kidney disease (CKD) (^999004011000230108)[6].

The Indicators No Longer in QOF (INLIQ) indicator CVD-PP002 (The percentage of patients diagnosed with hypertension (diagnosed on or after 1 April 2009) who are

[1] Cardiovascular Disease (CVD) - types, causes & symptoms | British Heart Foundation (bhf.org.uk)
[2] Cardiovascular disease - NHS (www.nhs.uk)
[3] https://www.england.nhs.uk/aac/wp-content/uploads/sites/50/2020/04/Summary-of-national-guidance-for-lipid-management-for-primary-and-secondary-prevention-of-cardiovascular-disea.pdf
[4] Overview | Cardiovascular disease: risk assessment and reduction, including lipid modification | Guidance | NICE
[5] https://www.england.nhs.uk/ourwork/clinical-policy/cvd/cvdprevent/
[6] https://digital.nhs.uk/data-and-information/data-collections-and-data-sets/data-collections/quality-and-outcomes-framework-qof
[7] https://digital.nhs.uk/data-and-information/publications/statistical/quality-and-outcomes-framework-achievement-prevalence-and-exceptions-data/2020-21

given lifestyle advice in the preceding 12 months for: smoking cessation, safe alcohol consumption and healthy diet)[8] uses the former CVD Primary Prevention register as its population which includes hypertension (^999006611000230105) but excludes any patients with 'a pre-existing diagnosis of any of CHD, stroke, TIA, unresolved diabetes, PAD, familial hypercholesterolemia and/or unresolved CKD 3-5 diagnosis not superseded by a CKD 1-2 diagnosis' from its title and construction[6].

Table 1: QOF indicators relating to CVD prevalence (2020/21)

Indicator	Total numbers recorded on registers (Prevalence, % of total practice populations)	SNOMED code cluster
Coronary Heart Disease (CHD001)	1,850,657 (3.05%)	^999000771000230107
Heart Failure (HF001)	550,613 (0.91%)	^999013691000230108
Peripheral Arterial Disease (PAD001)	356,958 (0.59%)	^999005931000230101
Stroke and Transient Ischaemic Attack (STIA001)	1,093,593 (1.80%)	Stroke: ^999005531000230105 TIA: ^999005291000230109

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[8] Introduced into QOF in 2009/10 and retired from April 2014. Included in INLIQ from 2014/15 onwards

CVD Prevent audit findings

CVDPREVENT is a national primary care audit that automatically extracts routinely held General Practice data covering the diagnosis and management of 6 high risk conditions that cause stroke, heart attack and dementia: atrial fibrillation, high blood pressure, high cholesterol, diabetes, non-diabetic hyperglycaemia and chronic kidney disease[5].

CVDPREVENT data is collected through the General Practice Extraction Service (GPES) by opt-in from practices, therefore will not represent the same data collected in QOF[9].

The first report presents analysis of GP recorded data for relevant patient cohorts up to March 2020[10] with a second report due to be published in summer 2022, containing data up to March 2021. A CVDPREVENT data explorer tool[11] is also available which includes data to September 2021, this includes several indicators relating to CVD including analysis by deprivation score as shown in Table 2.

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[9] https://s3.eu-west-2.amazonaws.com/nhsbn-static/CVDPREVENT/2021/CVDPREVENT%20Methodology%20Annex%20FINAL.pdf
[10] https://s3.eu-west-2.amazonaws.com/nhsbn-static/CVDPREVENT/2021/CVDPREVENT_First%20Annual%20Audit%20ReportFINAL.pdf
[11] https://www.cvdprevent.nhs.uk/data-explorer

Table 2: CVDPREVENT indicators (to September 2021)

Indicator	National Value	Sex	Age Group (years)	Deprivation Quintile (1 is most deprived)
CVDP003FH: Prevalence of genetically confirmed familial hypercholesterolaemia all ages (rate per 100,000 patients)	9.6	M: 7.8 F: 11.4	=<17: 2.8 18-39: 6.1 40-59: 14.5 60-79: 16.7 80+: 5.1	1: 8.2 2: 8.2 3: 10.2 4: 10.7 5: 10.9
CVDP001AF: Prevalence of GP recorded Atrial Fibrillation in patients aged 18 and over (%)[12]	2.3%	M: 2.7% F: 1.9%	18-39: 0.1% 40-59: 0.6% 60-79: 4.8% 80+: 16.9%	1: 1.7% 2: 2.0% 3: 2.4% 4: 2.7% 5: 2.9%
CVDP001HYP: Prevalence of GP recorded Hypertension in patients aged 18 and over (%)	15.6%	M: 15.6% F: 15.6%	18-39: 0.8% 40-59: 11.3% 60-79: 35.6% 80+: 56.2%	1: 14.5% 2: 14.8% 3: 15.8% 4: 16.6% 5: 16.5%
CVDP001CHOL: The percentage of patients aged 18 and over with GP recorded CVD (including CHD, stroke, TIA and AAA[13]), with a previous prescription for lipid lowering therapy[14]	92.8%	M: 94.0% F: 90.7%	18-39: 40.4% 40-59: 87.9% 60-79: 94.8% 80+: 93.1%	1: 93.4% 2: 92.8% 3: 92.6% 4: 92.5% 5: 92.4%
CVDP002CHOL: The percentage of patients aged 18 and over with GP recorded Chronic Kidney Disease with classification of categories G3a to G5 (previously stage 3 to 5), with a previous prescription for lipid lowering therapy[14]	74.6%	M: 79.5% F: 71.1%	18-39: 23.4% 40-59: 46.3% 60-79: 76.7% 80+: 78.1%	1: 79.0% 2: 76.2% 3: 74.2% 4: 73.0% 5: 71.2%

[12] Prevalence across deprivation quintiles was similar after adjustment for age.
[13] AAA refers to abdominal aortic aneurysm
[14] Ethnicity data also available for this indicator

Contextual information from practice clinical searches

Clinical search findings

The indicator pilot described in this report was a partial pilot using qualitative methods only. However, in order to provide additional context to the pilot feedback, practices were asked to run simple clinical system searches (shown in Appendix E) and share the results of these with NCCID for collation and analysis. Fifteen of the 16 participating practices provided their search findings as requested, including one practice which had recently merged their administration and submitted two returns, therefore 16 clinical search findings have been analysed here. Each clinical search return is referred to as a pilot practice in this section.

There was a total of 165,711 registered patients aged 18 and above in the 16 practice returns combined, as of the end of January 2022 (as reported by the practices, with the exception of one practice which did not return a practice list size, therefore this was taken from the 1st February NHS Digital Patients Registered at a GP Practice publication[15]).

The aim of the searches was to provide additional context in terms of the proportion of patients with an existing diagnosis of CVD. The search findings also describe the extent to which CVD risk assessment scores are currently recorded by practices and also the proportion of patients with a latest score of 10% or greater and 20% or greater.

In terms of the number of patients with an existing diagnosis of CVD (based on whether they appear on one or more of the following disease registers: Coronary Heart Disease, Heart Failure, Peripheral Arterial Disease, Stroke and Transient Ischaemic Attack), there were 13,288 patients from 13 pilot practices reported as having an existing diagnosis of CVD. This equates to 10.0% of the population, and varied between 2.83% and 32.81% across the 13 practices. Note that data is was only available from 13 of the 16 pilot practices (data from two practices was excluded

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[15] https://digital.nhs.uk/data-and-information/publications/statistical/patients-registered-at-a-gp-practice

due to data quality concerns and one practice did not submit a response to this question).

Across the full 16 practices 5.6% of patients aged 18 and over had had a CVD risk assessment score recorded in the last 12 months (Table 3). 2.2% of the total practice population had a score of greater than or equal to 20%, with 2.6% having a score of between 10% and 20%.

Approximately 27.4% of patients with a CVD risk score recorded in the last 12 months had a score greater than or equal to 20%, with a further 30.4% having a score between 10% and less than 20%[16].

Table 3: Practice level summary of clinical search results

Practice	Total population	Patients with a recorded CVD Risk Assessment Score (last 12 months)	Patients with a score of ≥20% (% of population)	Patients with a score of 10% - <20% (% of population)
1	16,591	752 (4.5%)	242 (1.5%)	203 (1.2%)
2	8,025	460 (5.7%)	124 (1.5%)	255 (3.2%)
3	5,808	782 (13.5%)	206 (3.5%)	241 (4.1%)
4	8,298	109 (1.3%)	27 (0.3%)	16 (0.2%)
5	7,047	381 (5.4%)	104 (1.5%)	96 (1.4%)
6	9,480	688 (7.3%)	47 (0.5%)	172 (1.8%)
7	12,025	356 (3.0%)	89 (0.7%)	99 (0.8%)
8	11,370	1,079 (9.5%)	510 (4.5%)	302 (2.7%)
9	19,537	430 (2.2%)	1,206 (6.2%)	1,582 (8.1%)
10	13,229	365 (2.8%)	50 (0.4%)	127 (1.0%)
11	6,910	109 (1.6%)	37 (0.5%)	41 (0.6%)
12	11,571	1,126 (9.7%)	223 (1.9%)	316 (2.7%)
13	9,800	417 (4.3%)	97 (1.0%)	156 (1.6%)
14	6,288	267 (4.2%)	28 (0.4%)	79 (1.3%)
15	6,745	491 (7.3%)	214 (3.2%)	161 (2.4%)
16	12,987	1,385 (10.7%)	407 (3.1%)	405 (3.1%)
Total	**165,711**	**9,197 (5.6%)**	**3,611 (2.2%)**	**4,251 (2.6%)**

[16] These calculations exclude practice 9 due to concerns regarding data quality

Summary of key findings

- Various individual patient registers for CVD-related conditions are currently available in QOF, giving prevalence estimates ranging from 0.59% to 3.05% of practice populations.

- CVDPREVENT data gives further information on CVD conditions including breakdowns by age, sex and deprivation. Data from this source shows that for patients with CVD and CKD, the levels of treatment with lipid lowering therapy are currently relatively high.

- Clinical searches from pilot practices found that 13,288 patients from 13 pilot practices had an existing diagnosis of CVD (based on whether they appear on one or more CVD-related disease registers), equating to 10.0% of the population.

- Clinical searches from pilot practices found that an average of 5.6% of the population have a risk score recorded in the last 12 months. Approximately 27.4% of patients with a CVD risk score recorded in the last 12 months had a score greater than or equal to 20%, with a further 30.4% having a score between 10% and less than 20%.