



Health & Social Care
Information Centre

Quality and Outcomes Framework – Prevalence, Achievements and Exceptions Report

Technical Annex, 2014-15

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This publication may be of interest to General Practitioners, members of the public and other stakeholders to make local and national comparisons and gain a picture of GP service provision and service quality for participating practices in England.

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QOF Background

The Quality and Outcomes Framework (QOF) was introduced as part of the new General Medical Services (GMS) contract on 1 April 2004. The objective of the QOF is to improve the quality of care patients are given by rewarding practices for the quality of care they provide to their patients. QOF is therefore an incentive payment scheme, not a performance management tool, and a key principle is that QOF indicators should be based on the best available research evidence. Participation by practices in the QOF is voluntary, though participation rates are very high, with most Personal Medical Services (PMS) practices also taking part.

Information in this report was derived from the Calculating Quality Reporting Service¹ (CQRS), together with the General Practice Extraction Service² (GPES), national systems developed by the HSCIC.

QOF information from previous years has been published by the Health and Social Care Information Centre and is available at <http://www.hscic.gov.uk/qof> and via an online search function at <http://qof.hscic.gov.uk/>

The Calculating Quality Reporting Service (CQRS)

In 2014-15, all the QOF data were collected from practices by the GPES. The GPES is a centrally managed primary care data extraction service that extracts information from GP IT systems for a range of purposes at a national level. The GPES flows data to the Calculating CQRS.

CQRS has been used to calculate payments for GP practices across England for the 2014/15 financial year. The service calculates achievement and payments on quality services, including the Quality and Outcomes Framework (QOF), as well as Enhanced Services (ESs) and some other clinical services (e.g. new immunisations).

PMS practices

Personal Medical Services (PMS) practices are able to negotiate local contracts with their commissioning organisations for the provision of all services. PMS practices may also participate in the QOF, and they may either follow the national QOF framework or enter into local QOF arrangements. PMS practices with local contractual arrangements are included in the published QOF information, and in the figures presented in the bulletin.

Where PMS practices use the national QOF, their achievement (in terms of the 559 QOF points available) is subject to a deduction (approximately 100 points) before QOF points are turned into QOF payments. This is because many PMS practices already have a chronic disease management allowance, a sustained quality allowance and a cervical cytology payment included in their baseline payments. GMS practices do not receive such payments, but receive similar payments through the QOF. To ensure comparability between GMS and PMS practices, the QOF deduction for PMS practices ensures that they do not receive the same payments twice. Because the bulletin covers QOF achievement and not payments, all QOF achievement shown is based on QOF points prior to PMS deductions. This is to allow

¹ <http://systems.hscic.gov.uk/cqrs>

² <http://www.hscic.gov.uk/gpes>

comparability in levels of achievement – so that where GMS and PMS practices have maximum QOF achievement, both are regarded as having achieved the maximum 599 points.

Level of detail

There is no patient-specific data in CQRS because this is not required to support the QOF. For example, GPES captures aggregate information for each practice on patients with coronary heart disease and on patients with diabetes, but it is not possible to identify or analyse information about individual patients. It is therefore, not possible, to identify the number of patients with both of these diseases.

Practice list sizes

The QOF information published by the Health and Social Care Information Centre (HSCIC) includes practice list sizes as at 1st January of the reporting year. These figures are used in CQRS for list size adjustments in QOF payment calculations. In the context of this publication, these list sizes are used as the basis for the calculation of raw clinical prevalence.

The sum of the practice list sizes for the practices included in the QOF publication represent 99.8 per cent of registered patients in England. The National Health Applications and Infrastructure services (NHAIS)³ data show a population of registered patients as 56,939,507 in England as at the 1st January 2015, the number of registered patients in QOF is 56,817,654. There are 7,779 practices in QOF and 7,881 active practices on NHAIS as at the 1st January 2015; this is coverage of 98.7 per cent of practices.

Validation

When we received the data from CQRS, we check first for completion. In 2014-15 we received no data for 30 practices that had signed up to take part.

Each year, when the data have been received and processed, we hold a validation exercise with sub-regions. Named contacts from those sub-regions can log in to an online system, check the achievement data for their practice, let us know if the data is correct and comment on any issues.

There were 8 practices that did not partake in this (5 were discussed at the time with the relevant contact).

There were 26 practices who were taken out of the final publication due to comments received (these were discussed with the various contacts).

There were 186 further comments made – these have been published and are available through <http://www.hscic.gov.uk/pubs/qofachprevexcoc15> called qof-1415-practice-validation-comments.

³ <http://systems.hscic.gov.uk/ssd/prodserv/vaproopenexe>

Definitions

Definitional background

There is a distinction between:

- Numbers of patients on disease registers for QOF indicator groups (disease areas).
- Numbers of patients relevant to specific indicators within these indicator groups.
- Numbers of patients relevant to specific indicators who are included in the indicator denominator when measuring QOF achievement.

Registers

Registers relate to each of the indicator groups within the QOF. Not all conditions have a register e.g. Blood pressure is a count of those who have had their blood pressure taken so is not a register. The information systems which underpin the QOF hold the numbers of patients on each of these registers, for each participating practice. For example, there is a register count for all people diagnosed with coronary heart disease at each practice.

Indicator denominators, exclusions and exceptions

Indicator **denominators** are the numbers of patients from the appropriate disease register who are counted for QOF achievement against a specific QOF indicator. (The indicator numerator is the number of those in the denominator who meet the specific indicator success criteria.)

Differences between an indicator denominator and the number on a register can be due to indicator definition. Some indicators refer to subsets of patients on a disease register, for example they may refer only to patients who smoke. Patients who are on the disease register, but not included in the indicator denominator for definitional reasons, are referred to here as **exclusions**.

Where differences between an indicator denominator and the number on a register are not due to indicator definition, this is due to **exceptions**. Exceptions relate to patients who are on the disease register, and who would ordinarily be included in the indicator denominator. However they are excepted from the indicator denominator because they meet at least one of the SFE⁴ exception criteria.

The normal relationship between registers, denominators, exclusions and exceptions is therefore:

Register = Denominator + Exclusions + Exceptions

⁴ Statement of Financial Entitlement - see [page 12](#)

Data Processing

The data is delivered via file transfer and contains a number of .csv files – (known as flat files), which contain all the QOF information for 2014-15.

These data are uploaded into a SAS Enterprise Guide (SAS EG) project, which transforms the data into readable formats and enables spreadsheets to be built.

The SAS EG project calculates all the prevalence, achievement and exceptions rates for each indicator; these are then checked against the raw data to ensure accuracy.

The following files are released as part of the QOF 2014-15 publication:

- 1) Report for England – this is the PDF report containing tables charts, maps and descriptive text about the results.
- 2) Annex 1 Report Tables and Charts – this is an excel version of all tables, charts and maps used within the PDF publication.
- 3) Annex 2 Technical Report – this document.
- 4) Annex 3 Data Quality Statement and Frequently asked questions – this is a PDF document which contains information about the data quality of QOF data, and questions that arise on a regular basis.
- 5) Prevalence, achievements and exceptions at regional and national level for England – this is an excel spreadsheet with different workbooks for each condition/measure within QOF showing the QOF results at England level and for the four regions within England.
- 6) Prevalence, achievements and exceptions at sub-region and Area Team level for England – as (5) above, but at sub-region level – there are 13 of these. For QOF we split London in 3 Area Teams to aid the usefulness of the data, therefore we publish data for 27 Area Teams, rather than the standard 25.
- 7) Prevalence, achievements and exceptions at CCG level for England – as (5) above but at CCG level, there are 209 of these.
- 8) Prevalence, achievements and exceptions at practice level for England, cardiovascular group. This is a zip file (due to the size of the data) and contains separate spreadsheets with the practice level data for the following conditions/measures:
 - Atrial Fibrillation (AF)
 - Blood Pressure (BP) (45+)
 - Secondary prevention of coronary heart disease (CHD)
 - Cardiovascular Disease – primary prevention (CVD-PP) (30-74)
 - Heart Failure (HF)
 - Hypertension (HYP)
 - Peripheral Arterial Disease (PAD)
 - Stroke and Transient Ischaemic Attack (STIA).
- 9) Prevalence, achievements and exceptions at practice level for England, respiratory group, as (9) above and shows the data for:
 - Asthma (AST)
 - Chronic Obstructive Pulmonary Disease (COPD)

10) Prevalence, achievements and exceptions at practice level for England, lifestyle group, as (9) above and shows the data for:

- Obesity (OB) (16+)
- Smoking (SMOK) (15+).

11) Prevalence, achievements and exceptions at practice level for England, high dependency and other long term conditions group, as (9) above and shows the data for:

- Cancer (CAN)
- Chronic Kidney Disease (CKD) (18+)
- Diabetes Mellitus (DM) (17+)
- Palliative Care (PC).

12) Prevalence, achievements and exceptions at practice level for England, mental health and neurology group, as (9) above and shows the data for:

- Dementia (DEM)
- Depression (DEP) (18+)
- Epilepsy (EP) (18+)
- Learning Disabilities (LD)
- Mental Health (MH).

13) Prevalence, achievements and exceptions at practice level for England, musculoskeletal group, as (9) above and shows the data for:

- Osteoporosis (OST) (50+)
- Rheumatoid Arthritis (RA) (16+).

14) Prevalence, achievements and exceptions at practice level for England, fertility, obstetrics and gynaecology group, as (9) above and shows the data for:

- Cervical Screening (CS) (25-64)
- Contraception (CON) (<55).

15) Prevalence for England, all groups at all levels – this is one spreadsheet with 36 workbooks showing prevalence for all relevant conditions at National, Regional, Sub-regional, Area Team, CCG and practice level. This is useful for customers who are only interested in the prevalence aspects of QOF.

16) Achievements at practice level for England, all domains – this is one spreadsheet with a workbook for each measure showing the practice level achievement for the Clinical, public health and public health additional services domains. These are the familiar domains for those looking at long term QOF achievement and useful for customers interested in achievement scores.

17) Exceptions at practice level for England, all domains – as (17) above, but just showing exception information.

18) QOF Indicator definitions – a full list of the indicator codes used in QOF 2014-15 and their definitions.

19) Practice validation comments by for England – in July we held a validation exercise where sub-region contacts could log into a website and check the achievement scores for their practices and let us know if there were any problems. This spreadsheet contains a list of all the practices, any comments that were sent to us, and any action taken as a result.

20) CSV files data for England – this is the full dataset used to create the above spreadsheets and reports. These are 32 flat files, which are suitable for import to any excel workbook and most database systems. These are provided so customers can carry out further investigation on the data if they wish.

The QOF data

QOF achievement data

QOF achievement data are presented for general practices in England which made an end-of-year submission to CQRS. QOF achievement figures were extracted on the 10th July so include all adjustments made on CQRS up to the 9th July.

Note that the number of practices covered by the QOF publication changes each year. In 2014-15 it covers 7,779 practices in England.

Reference to ‘QOF achievement’ often refers to the percentage of available QOF points achieved. So if a practice achieves the full 559 QOF points, it has achieved 100 per cent of the points available and may be said to have 100 per cent achievement across the whole QOF.

The level of achievement for certain elements of the QOF can be expressed in the same way. A practice achieving all clinical QOF points available, can be said to have 100 per cent clinical achievement even though it may not have 100 per cent achievement overall.

Practices achieve the maximum QOF points for most indicators (especially clinical indicators) when they have delivered the maximum threshold to achieve the points available.

For many indicators a practice must provide a certain level of clinical care to 90 per cent of patients on a particular clinical register to achieve the maximum points.

Underlying achievement (net of exceptions)

Underlying achievement (net of exceptions) data are provided in the spreadsheets associated with the report. Since a practice can deliver the required care to fewer than 100 per cent of its patients (often around 90 per cent) to achieve the full (100 per cent) points available, there is an important distinction between percentage achievement in terms of QOF points available and the underlying achievement (net of exceptions) for specific indicators.

Underlying achievement (net of exceptions) presents the indicator numerator as a percentage of the denominator as is calculated thus;

$$\text{Underlying achievement (net of exceptions)} = \frac{\text{Indicator Numerator}}{\text{Indicator Denominator}}$$

Percentage of patients receiving the intervention

Underlying achievement (net of exceptions) does not account for all patients covered by indicator, as it takes no account of “exceptions” (patients to whom the indicator applies, but who are not included in the indicator denominator according to agreed exception criteria). *Percentage of patients receiving the intervention*, gives a more accurate indication of the rate of the provision of interventions as the denominator for this measure covers all patients to whom the indicator applies, regardless of exception status (i.e. indicator exceptions and indicator denominator). This measure is calculated as follows;

Per cent of patients receiving intervention = (Numerator / (Exceptions + Denominator)) x 100

Percentage of patients receiving the intervention figures are not covered in the main report bulletin, they are presented in the indicator specific spreadsheets at national, Region, sub-region, Area Team, CCG and practice level, where they are presented alongside achievement and exceptions data.

Points achieved as a per cent of QOF points available

In recognition of the fact that it is not always possible for practices to achieve all of the points in the QOF, the HSCIC has produced a further measure of practice achievement. This measure takes account of instances where practices cannot achieve points because they have no patients pertinent to an indicator.

For example, in 2014-15 there are 559 points available in the QOF and 45 of these points are allocated to asthma indicators. If a practice does not have any patients on their asthma register, (no patients meeting the established criteria), then they would be unable to achieve any of the points allocated to the asthma indicators. Therefore, even if the practice achieved all the other points available they would only be able to reach 91.9 per cent achievement (514 points achieved/ 559 points available)

In these circumstances, the standard 'points achievement' measure can be misrepresentative and may result in a practice's achievement apparently declining from one year to the next where they have patients on a register in one year but none in the next year.

To represent practice points achievement more fairly, the HSCIC calculates adjusted maximum points achievable for each practice, effectively removing points from the calculation denominator where **both** of the following conditions apply:

- the practice does not have any patients in the indicator denominator
- the practice has reported no exceptions for the indicator denominator

In essence, the indicator denominator plus indicator exceptions must equal zero. This ensures we are not adjusting maximum points achievable where there are patients on the relevant disease register (exceptions are included in the disease register, but not in the relevant denominator), who have not received the interventions.

For the example outlined above, for a practice with no patients on their asthma register the practice's maximum points available would be 514 (559 points minus the 'unachievable' 45 asthma points). In this case, the difference between the practice's '**points achievement**' and '**points achieved as a per cent of QOF points available**' would be as follows.

$$\begin{aligned}\text{Points achievement} &= (\text{Points achievement} / \text{All QOF points}) \times 100 \\ &= (514 / 559) \times 100 = 91.9 \text{ per cent}\end{aligned}$$

$$\begin{aligned}\text{Points achieved as per cent of points available} &= (\text{Point achievement} / \text{QOF points available}) \times 100 \\ &= (514 / 514) \times 100 = 100 \text{ per cent}\end{aligned}$$

Due to the complexities of calculating and presenting the '**points achieved as a per cent of QOF points available**' figures, we only provide these for total points, not for any domain or group totals.

This data can be found in the raw CSV files called REVISED_MAX_POINTS_TOTAL.csv and in the qof-1415-prac-domain-achievement spreadsheet available through <http://www.hscic.gov.uk/pubs/qofachprevexcoct15>

QOF prevalence

It is important to emphasise that QOF registers are constructed to underpin indicators on quality of care, and they do not necessarily equate to prevalence as may be defined by epidemiologists. For example, prevalence figures based on QOF registers may differ from prevalence figures from other sources because of coding or definitional issues. It is difficult to interpret year-on-year changes in the size of QOF registers, for example a gradual rise in QOF prevalence could be due partly to epidemiological factors (such as an ageing population) or to increased case finding. Other factors in interpreting information on specific registers include:

- Some clinical areas have ‘resolution codes’ to reflect the nature of diseases. Others, such as the cancer register, do not
- There are six areas of the clinical QOF and all areas of the public health QOF that are based on registers that relate to specific age groups (see table below). Because ‘prevalence rates’ based on registers as a percentage of total list size would underestimate prevalence for these areas, alternative calculations, based on appropriate age-banded list size information, were used to derive more accurate prevalence rates.

Clinical	Public Health
Chronic kidney disease 18+	Blood pressure 45+
Depression 18+	Cardiovascular Disease- Primary Prevention 30-74
Diabetes mellitus 17+	Obesity 16+
Epilepsy 18+	Smoking 15+
Osteoporosis 50+	Contraception <55
Rheumatoid arthritis 16+	Cervical Screening 25-64

- Many patients are likely to suffer from co-morbidity, i.e. diagnosed with more than one of the clinical conditions included in the QOF clinical domain. Robust analysis of co-morbidity is not possible using QOF data because QOF information is collected at an aggregate level for each practice; there is no patient-specific data within CQRS. For example, CQRS captures aggregated information for each practice on patients with coronary heart disease and on patients with diabetes, but it is not possible to identify or analyse patients with both of those diseases.
- The QOF register for ‘cardiovascular disease – primary prevention’ does not count the number of patients with cardiovascular disease. Rather, this is a register of patients with a new diagnosis of hypertension, excluding those with pre-existing CHD, diabetes and stroke/TIA aged 30-74.
- To be on the asthma register, patients need a diagnosis of asthma and a prescription for an asthma drug within the year.
- To be included in the obesity register a patient must be 16 or over and have a record of a BMI of 30 or higher in the previous 12 months. This requirement results in the prevalence of obesity in QOF being much lower than the prevalence found in the Health Survey for England and other surveys.

- To be on the depression register, the patient must have a new diagnosis of depression in the preceding year that has been reviewed within given timescales.
- The QOF register for ‘Osteoporosis – secondary prevention of fragility fractures’ is a register of patients aged over 50-75 with a record of a fragility fracture since April 2012, confirmed by a DXA scan. Included in the register are those aged 75 with a diagnosis (scan not required)

The number of patients on clinical registers can be used to calculate disease prevalence, expressing the number of patients on each register as a percentage of the number of patients on practices’ lists. Therefore ‘raw prevalence’ for a clinical area is defined as:

$$(\text{number on clinical register} / \text{number on practice list}) * 100$$

Where age specific registers are used the formula is:

$$(\text{number of patients on register} / \text{estimated number of patients at that practice in that age bracket/range}) * 100$$

CQRS uses clinical registers to make prevalence adjustments in calculating practices’ QOF payments.

The national HSCIC publication of QOF information shows only raw recorded prevalence and **does not** include prevalence adjustments

QOF exception reporting

Patient exception reporting applies to those indicators in the QOF where level of achievement is determined by the percentage of patients receiving the specified level of care.

The GMS contract Statement of Financial Entitlements (SFE)⁵ includes the following:

“The QOF includes the concept of exception reporting. This has been introduced to allow practices to pursue the quality improvement agenda and not be penalised, where, for example, patients do not attend for review, or where a medication cannot be prescribed due to a contraindication or side-effect.

The following criteria have been agreed for exception reporting:

A) patients who have been recorded as refusing to attend review who have been invited on at least three occasions during the preceding twelve months

B) patients for whom it is not appropriate to review the chronic disease parameters due to particular circumstances e.g. terminal illness, extreme frailty

C) patients newly diagnosed within the practice or who have recently registered with the practice, who should have measurements made within three months and delivery of clinical standards within nine months e.g. blood pressure or cholesterol measurements within target levels

D) patients who are on maximum tolerated doses of medication whose levels remain sub-optimal

⁵ <https://www.gov.uk/government/publications/the-statement-of-financial-entitlements-amendment-directions-2012>

E) patients for whom prescribing a medication is not clinically appropriate e.g. those who have an allergy, another contraindication or have experienced an adverse reaction

F) where a patient has not tolerated medication

G) where a patient does not agree to investigation or treatment (informed dissent), and this has been recorded in their medical records

H) where the patient has a supervening condition which makes treatment of their condition inappropriate e.g. cholesterol reduction where the patient has liver disease

I) where an investigative service or secondary care service is unavailable.

In the case of exception reporting on criteria A and B this would apply to the disease register and these patients would be subtracted from the denominator for all other indicators. For example, in a practice with 100 patients on the CHD disease register, in which four patients have been recalled for follow-up on three occasions but have not attended and one patient has become terminally ill with metastatic breast carcinoma during the year, the denominator for reporting would be 95. This would apply to all relevant indicators in the CHD set.

In addition, practices may exception-report patients relating to single indicators, for example a patient who has heart failure due to left ventricular dysfunction (LVD) but who is intolerant of ACE inhibitors could be exception-reported. This would again be done by removing the patient from the denominator.

Practices should report the number of exceptions for each indicator set and individual indicator. Exception codes have been added to systems by suppliers. Practices will not be expected to report why individual patients were exception-reported. Practices may be called on to justify why they have excepted patients from the QOF and this should be identifiable in the clinical record.”

For each indicator in the clinical domain, the exception rate is calculated as follows:

$$[\text{Number of Exceptions} / (\text{Number of Exceptions} + \text{Indicator Denominator})] * 100$$

Therefore the recorded number of exceptions is expressed as a percentage of the number of patients on a disease register who were qualified to be part of the indicator denominator – i.e. were not counted as *exclusions* for definitional reasons.

CQRS is primarily a system to support QOF payments, and exception reporting is recorded as part of that process. CQRS was not designed to deliver specific management information about exception reporting, but does allow summary information on the levels of exception reporting to be generated. This information is the basis for this publication.

A small number of practices who participate in the QOF make manual submissions to CQRS or are otherwise unable to make an electronic submission of exceptions data. For this small number of practices, no exceptions data are available. However, in order to maintain consistency with the report annexes, which are based on aggregated data from individual practices, they are included in the overall exception calculations.

This has the impact of slightly reducing the exception rates (because there are no *indicator exceptions* for these practices in the calculation numerator, but their *indicator denominator* data are included in the calculation denominator). The impact of this is minimal with an impact of approximately 0.2 per cent at practice level.

Notes on the data

Practices using CQRS were able to amend disease register figures and measures of QOF achievement (numerators and denominators for indicators) following the financial year end, prior to agreement of QOF achievement with their sub-regions for payment. However, information captured by CQRS relating to exceptions and exclusions cannot be amended on the CQRS system. Where amendments to registers or indicator denominators occurred, the relationship between disease register, indicator denominator, exclusions and exceptions could be affected; and there could be a difference between effective exception rates computed using CQRS data and 'actual rates' that would have been computed if exception and exclusion counts had been amended in line with changes to registers and denominators.

CQRS does not allow a presentation of exceptions broken down by each of the nine Statement of Financial Entitlements (SFE) exception criteria outlined above. There are four reasons for this:

- CQRS uses an internal set of exception ID codes that do not map directly into the nine exception reporting criteria in the SFE; rather, these exception ID codes relate to exception reporting coding 'clusters' within QOF business rules, often specific to individual QOF indicators.
- CQRS reporting functionality does not make a distinction between exception reporting and definitional exclusions – both types of omission from indicator denominators are included on reports available to CQRS users.
- Any individual patient can be associated with more than one of the exception criteria, but only one such reason needs to be identified in order to exception-report a patient from inclusion in the indicator denominator. Only the first reason identified by the system is therefore captured, and no information is captured for other potential reasons.

Testing of data extraction from CQRS in line with QOF business rules around patient exceptions is primarily focused on ensuring that data values used for achievement calculations are accurate for payment purposes; i.e. that patients are not included in indicator denominators where appropriate in terms of the business rules. Therefore any testing of the order of sequencing (i.e. the order whereby systems check for different exception codes or criteria) is secondary. Different GP clinical information systems **may** follow different sequencing without this impacting on payment accuracy.

Within the spreadsheets released as part of this publication the following standards have been put in place:

- 1) Where a register is zero and it is not possible to accrue points (except in the case of palliative care), the rest of the columns in that row have '-' entered
- 2) There are a small number of instances where numerator numbers have exceeded denominator numbers – we believe these to be data quality issues so in the column 'Underlying achievement net of exceptions' and, where relevant, the 'Percentage of patients receiving intervention' column we have set these to '-'. There are less than 20 instances across all indicators where this has occurred.

Caveats

QOF achievement and prevalence data

The CQRS system was established as a mechanism to support the calculation of practice QOF payments. It is not a totally comprehensive source of data on quality of care in general practice, but it is potentially a rich and valuable source of information for healthcare organisations, analysts and researchers, providing the limitations of the data are acknowledged.

Levels of QOF achievement will be related to a variety of local circumstances, and should be interpreted in the context of those circumstances. Users of the published QOF data should be particularly careful in undertaking comparative analysis.

The following points have been raised by local healthcare organisations in consultation with the Health and Social Care Information Centre:

- The ranking of practices on the basis of QOF points achieved, either overall or with respect to areas within the QOF, may be inappropriate. QOF points do not reflect practice workload issues (for example around list sizes and disease prevalence) – that is why practices' QOF payments include adjustments for such factors.
- Comparative analysis of practice-level or CCG-level QOF achievement (or prevalence) may also be inappropriate without taking account of the underlying social and demographic characteristics of the populations concerned. The delivery of services may be related, for example, to population age/sex, ethnicity or deprivation characteristics that are not included in QOF data collection processes.
- Information on QOF achievement, as represented by QOF points, should also be interpreted with respect to local circumstances around general practice infrastructure. In undertaking comparative or explanatory analysis, users of the data should be aware of any effect of the numbers of partners (including single handed practices), local recruitment and staffing issues, issues around practice premises, and local IT issues.
- Users of the data should be aware that different types of practices may serve different communities. Comparative analysis should therefore take account of local circumstances, such as numbers on practice lists of student populations, drug users, homeless populations and asylum seekers.
- Analysis of co-morbidity (patients with more than one disease) is not possible using QOF data. QOF information is collected at an aggregate level for each practice. There is no patient-specific data within QOF data. For example, CQRS captures aggregated information for each practice on patients with coronary heart disease and on patients with asthma, but it is not possible to identify or analyse patients with both of these diseases.
- Underlying all this is the fact that the information held within CQRS, and the source for the published tables, is dependent on diagnosis and recording (case finding) within practices using practices' clinical information systems.
- Measuring the quality of care is not a simple process. Within the clinical domain, the QOF does not cover every clinical condition, and only describes some aspects of the care for the clinical areas that are included. However, the QOF does provide valuable information (for example on prevalence, cholesterol levels and blood pressure) on a

scale unavailable before 2004/05, and provides a measure of improvement in the delivery of care.

QOF exceptions data

An important aim of the Quality and Outcomes Framework is to encourage appropriate and high quality clinical care for key long-term conditions. Potentially, exception reporting could influence the level of financial reward to practices.

The availability of high level information on exception reporting provides an indication of the variations in exception rates that are found between specific indicators, and between NHS organisational areas.

It is important to emphasise some of the limitations of the available data, as described previously in this document. These include practices missing from the analysis; the derivation of exception counts; and the potential for amendments to indicator denominators not mirrored by changes to counts of exceptions.

Additionally, care should be taken when interpreting high level analysis in the context of local primary care service delivery, notably in terms of the numbers of patients associated with relatively high or low exception rates. CCGs will have access to more detailed local information, and knowledge of local circumstances, to enable unusual levels of exception reporting to be investigated further.

QOF formulae

FORMULAE USED IN THE QOF

Please note:	
Data for 2013-14 are included in the spreadsheets for comparability. The sum of the registers, achievement scores or exceptions counts for 2013-14 practice are not equal to the sum of the same measures at higher levels, e.g CCG/AT for the same year. This is because practices which are not participating in QOF this year, but did last year, are no longer in the data set, but the CCG, AT, sub-region, region and nation level totals are shown as published last year.	
Measure (per cent)	Formula
prevalence rate	register / full list size * 100
age specific prevalence rate	register / age related list size * 100
achievement score	achievement points / 559 * 100
adjusted achievement score	achievement points / maximum possible achievement points * 100
individual indicators achievement score	numerator / (denominator + exceptions) * 100
achievement score net of exceptions	numerator / denominator * 100
exception rate	exceptions / (denominator + exceptions) * 100
year on year change	((this year per cent / last year per cent)-1) * 100

QOF indicators 2014-15

Condition / Measure	Indicator Code	Indicator Description
Asthma	AST001	The contractor establishes and maintains a register of patients with asthma, excluding patients with asthma who have been prescribed no asthma-related drugs in the preceding 12 months
	AST002	The percentage of patients aged 8 or over with asthma (diagnosed on or after 1 April 2006), on the register, with measures of variability or reversibility recorded between 3 months before or any time after diagnosis
	AST003	The percentage of patients with asthma, on the register, who have had an asthma review in the preceding 12 months that includes an assessment of asthma control using the 3 RCP questions
	AST004	The percentage of patients with asthma aged 14 or over and who have not attained the age of 20, on the register, in whom there is a record of smoking status in the preceding 12 months
Atrial fibrillation	AF001	The contractor establishes and maintains a register of patients with atrial fibrillation
	AF005	In those patients with atrial fibrillation whose latest record of a CHADS2 score is greater than 1, the percentage of patients who are currently treated with anti-coagulation therapy or anti-platelet therapy
	AF004	In those patients with atrial fibrillation in whom there is a record of a CHADS2 score of 1, the percentage of patients who are currently treated with anti-coagulation drug therapy
Cancer	CAN001	The contractor establishes and maintains a register of all cancer patients defined as a 'register of patients with a diagnosis of cancer excluding non-melanotic skin cancers diagnosed on or after 1 April 2003'
	CAN003	The percentage of patients with cancer, diagnosed within the preceding 15 months, who have a patient review recorded as occurring within 6 months of the date of diagnosis
Chronic kidney disease	CKD001	The contractor establishes and maintains a register of patients aged 18 or over with CKD (US National Kidney Foundation: Stage 3 to 5 CKD)
	CKD002	The percentage of patients on the CKD register in whom the last blood pressure reading (measured in the preceding 12 months) is 140/85 mmHg or less
	CKD003	The percentage of patients on the CKD register with hypertension and proteinuria who are currently treated with an ACE-I or ARB
	CKD004	The percentage of patients on the CKD register whose notes have a record of a urine albumin: creatinine ratio (or protein: creatinine ratio) test in the preceding 12 months
Chronic obstructive pulmonary disease (COPD)	COPD001	The contractor establishes and maintains a register of patients with COPD
	COPD002	The percentage of patients with COPD (diagnosed on or after 1 April 2011) in whom the diagnosis has been confirmed by post bronchodilator spirometry between 3 months before and 12 months after entering on to the register
	COPD003	The percentage of patients with COPD who have had a review, undertaken by a healthcare professional, including an assessment of breathlessness using the Medical Research Council dyspnoea scale in the preceding 12 months

	COPD004	The percentage of patients with COPD with a record of FEV ₁ in the preceding 12 months
	COPD005	The percentage of patients with COPD and Medical Research Council dyspnoea grade ≥ 3 at any time in the preceding 12 months, with a record of oxygen saturation value within the preceding 12 months
	COPD007	The percentage of patients with COPD who have had influenza immunisation in the preceding 1 August to 31 March
Dementia	DEM001	The contractor establishes and maintains a register of patients diagnosed with dementia
	DEM002	The percentage of patients diagnosed with dementia whose care has been reviewed in a face-to-face review in the preceding 12 months
	DEM003	The percentage of patients with a new diagnosis of dementia recorded in the preceding 1 April to 31 March with a record of FBC, calcium, glucose, renal and liver function, thyroid function tests, serum vitamin B12 and folate levels recorded between 6 months before or after entering on to the register
Depression	DEP003	The percentage of patients aged 18 or over with a new diagnosis of depression in the preceding 1 April to 31 March, who have been reviewed not earlier than 10 days after and not later than 56 days after the date of diagnosis
Diabetes mellitus	DM017	The contractor establishes and maintains a register of all patients aged 17 or over with diabetes mellitus, which specifies the type of diabetes where a diagnosis has been confirmed
	DM002	The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less
	DM003	The percentage of patients with diabetes, on the register, in whom the last blood pressure reading (measured in the preceding 12 months) is 140/80 mmHg or less
	DM004	The percentage of patients with diabetes, on the register, whose last measured total cholesterol (measured within the preceding 12 months) is 5 mmol/l or less
	DM006	The percentage of patients with diabetes, on the register, with a diagnosis of nephropathy (clinical proteinuria) or micro-albuminuria who are currently treated with an ACE-I (or ARBs)
	DM007	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA _{1c} is 59 mmol/mol or less in the preceding 12 months
	DM008	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA _{1c} is 64 mmol/mol or less in the preceding 12 months
	DM009	The percentage of patients with diabetes, on the register, in whom the last IFCC-HbA _{1c} is 75 mmol/mol or less in the preceding 12 months
	DM012	The percentage of patients with diabetes, on the register, with a record of a foot examination and risk classification: 1) low risk (normal sensation, palpable pulses), 2) increased risk (neuropathy or absent pulses), 3) high risk (neuropathy or absent pulses plus deformity or skin changes in previous ulcer) or 4) ulcerated foot within the preceding 12 months
	DM014	The percentage of patients newly diagnosed with diabetes, on the register, in the preceding 1 April to 31 March who have a record of being referred to a structured education programme within 9 months after entry on to the diabetes register
	DM018	The percentage of patients with diabetes, on the register, who have had influenza immunisation in the preceding 1 August to 31 March

Epilepsy	EP001	The contractor establishes and maintains a register of patients aged 18 or over receiving drug treatment for epilepsy
Heart failure	HF001	The contractor establishes and maintains a register of patients with heart failure
	HF002	The percentage of patients with a diagnosis of heart failure (diagnosed on or after 1 April 2006) which has been confirmed by an echocardiogram or by specialist assessment 3 months before or 12 months after entering on to the register
	HF003	In those patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction, the percentage of patients who are currently treated with an ACE-I or ARB
	HF004	In those patients with a current diagnosis of heart failure due to left ventricular systolic dysfunction who are currently treated with an ACE-I or ARB, the percentage of patients who are additionally currently treated with a beta-blocker licensed for heart failure
Hypertension	HYP001	The contractor establishes and maintains a register of patients with established hypertension
	HYP006	The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less
Learning disability	LD003	The contractor establishes and maintains a register of patients with learning disabilities
Mental health	MH001	The contractor establishes and maintains a register of patients with schizophrenia, bipolar affective disorder and other psychoses and other patients on lithium therapy
	MH002	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a comprehensive care plan documented in the record, in the preceding 12 months, agreed between individuals, their family and/or carers as appropriate
	MH003	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood pressure in the preceding 12 months
	MH007	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of alcohol consumption in the preceding 12 months
	MH008	The percentage of women aged 25 or over and who have not attained the age of 65 with schizophrenia, bipolar affective disorder and other psychoses whose notes record that a cervical screening test has been performed in the preceding 5 years
	MH009	The percentage of patients on lithium therapy with a record of serum creatinine and TSH in the preceding 9 months
	MH010	The percentage of patients on lithium therapy with a record of lithium levels in the therapeutic range in the preceding 4 months, NICE 2010 menu ID: NM22

Osteoporosis: secondary prevention of fragility fractures	OST004	The contractor establishes and maintains a register of patients: 1. Aged 50 or over and who have not attained the age of 75 with a record of a fragility fracture on or after 1 April 2012 and a diagnosis of osteoporosis confirmed on DXA scan, and 2. Aged 75 or over with a record of a fragility fracture on or after 1 April 2014 and a diagnosis of osteoporosis
	OST002	The percentage of patients aged 50 or over and who have not attained the age of 75, with a fragility fracture on or after 1 April 2012, in whom osteoporosis is confirmed on DXA scan, who are currently treated with an appropriate bone-sparing agent
	OST005	The percentage of patients aged 75 or over with a record of a fragility fracture on or after 1 April 2014 and a diagnosis of osteoporosis, who are currently treated with an appropriate bone-sparing agent
Palliative care	PC001	The contractor establishes and maintains a register of all patients in need of palliative care/support irrespective of age
	PC002	The contractor has regular (at least 3 monthly) multi-disciplinary case review meetings where all patients on the palliative care register are discussed
Peripheral arterial disease	PAD001	The contractor establishes and maintains a register of patients with peripheral arterial disease
	PAD002	The percentage of patients with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less
	PAD004	The percentage of patients with peripheral arterial disease with a record in the preceding 12 months that aspirin or an alternative anti-platelet is being taken
Rheumatoid arthritis	RA001	The contractor establishes and maintains a register of patients aged 16 or over with rheumatoid arthritis
	RA002	The percentage of patients with rheumatoid arthritis, on the register, who have had a face-to-face review in the preceding 12 months
Secondary prevention of coronary heart disease	CHD001	The contractor establishes and maintains a register of patients with coronary heart disease
	CHD002	The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less
	CHD005	The percentage of patients with coronary heart disease with a record in the preceding 12 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken
	CHD006	The percentage of patients with a history of myocardial infarction (on or after 1 April 2011) currently treated with an ACE-I (or ARB if ACE-I intolerant), aspirin or an alternative anti-platelet therapy, beta-blocker and statin
	CHD007	The percentage of patients with coronary heart disease who have had influenza immunisation in the preceding 1 August to 31 March
Stroke and transient ischaemic attack	STIA001	The contractor establishes and maintains a register of patients with stroke or TIA
	STIA008	The percentage of patients with a stroke or TIA (diagnosed on or after 1 April 2014) who have a record of a referral for further investigation between 3 months before or 1 month after the date of the latest recorded stroke or the first TIA

	STIA003	The percentage of patients with a history of stroke or TIA in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less
	STIA007	The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record in the preceding 12 months that an anti-platelet agent, or an anti-coagulant is being taken
	STIA009	The percentage of patients with stroke or TIA who have had influenza immunisation in the preceding 1 August to 31 March
Blood pressure	BP002	The percentage of patients aged 45 or over who have a record of blood pressure in the preceding 5 years.
Cardiovascular disease - primary prevention	CVD-PP001	In those patients with a new diagnosis of hypertension aged 30 or over and who have not attained the age of 75, recorded between the preceding 1 April to 31 March (excluding those with pre-existing CHD, diabetes, stroke and/or TIA), who have a recorded CVD risk assessment score (using an assessment tool agreed with NHS CB of $\geq 20\%$ in the preceding 12 months months: the percentage who are currently treated with statins
Obesity	OB001	The contractor establishes and maintains a register of patients aged 16 or over with a BMI ≥ 30 in the preceding 12 months
	SMOK002	The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 12 months
	SMOK003	The contractor supports patients who smoke in stopping smoking by a strategy which includes providing literature and offering appropriate therapy
	SMOK004	The percentage of patients aged 15 or over who are recorded as current smokers who have a record of an offer of support and treatment within the preceding 24 months
	SMOK005	The percentage of patients with any or any combination of the following conditions: CHD, PAD, stroke or TIA, hypertension, diabetes, COPD, CKD, asthma, schizophrenia, bipolar affective disorder or other psychoses who are recorded as current smokers who have a record of an offer of support and treatment within the preceding 12 months
Cervical screening	CS001	The contractor has a protocol that is in line with national guidance agreed with the NHS CB for the management of cervical screening, which includes staff training, management of patient call/recall, exception reporting and the regular monitoring of inadequate sample rates
	CS002	The percentage of women aged 25 or over and who have not attained the age of 65 whose notes record that a cervical screening test has been performed in the preceding 5 years
	CS004	The contractor has a policy for auditing its cervical screening service and performs an audit of inadequate cervical screening tests in relation to individual sample-takers at least every 2 years
Contraception	CON001	The contractor establishes and maintains a register of women aged 54 or under who have been prescribed any method of contraception at least once in the last year, or other clinically appropriate interval e.g. last 5 years for an IUS
	CON003	The percentage of women, on the register, prescribed emergency hormonal contraception one or more times in the preceding 12 months by the contractor who have received information from the contractor about long acting reversible methods of contraception at the time of or within 1 month of the prescription

QOF links

QOF Publications

<http://www.hscic.gov.uk/qof>

QOF online database:

<http://www.qof.hscic.gov.uk/>

NHS Employers (for QOF guidance):

<http://www.nhsemployers.org/your-workforce/primary-care-contacts/general-medical-services/quality-and-outcomes-framework>

GMS contract Statement of Financial Entitlements:

<https://www.gov.uk/government/publications/the-statement-of-financial-entitlements-amendment-directions-2012>

Primary Care Commissioning:

<http://www.pcc-cic.org.uk/article/qof-business-rules-v25.0>

GPES:

<http://www.hscic.gov.uk/gpes>

CQRS:

<http://systems.hscic.gov.uk/cqrs>

QOF Publications in other UK countries

Scotland:

<http://www.isdscotland.org/Health-Topics/General-Practice/Quality-And-Outcomes-Framework/>

Wales:

<http://wales.gov.uk/statistics-and-research/general-medical-services-contract/?lang=en>

Northern Ireland:

http://www.dhsspsni.gov.uk/index/hss/gp_contracts/gp_contract_qof.htm