Quality and Outcomes Framework Achievement, prevalence and exceptions data, 2011/12

Technical Annex

We are England's national source of health and social care information

www.ic.nhs.uk
enquiries@ic.nhs.uk

Author:	**Prescribing and Primary Care team, Health and Social Care Information Centre**
Responsible statistician:	**Oliver Smith, Service Manager**
Version:	**V1.0**
Date of publication	**30 October 2012**

Contents

1. QOF Information

1.1 The Quality Management Analysis System (QMAS)

All QOF data for England are derived from the Quality Management Analysis System (QMAS), a national system developed by NHS Connecting for Health. QMAS uses data from general practices to calculate their QOF achievement.

QMAS is a national IT system developed by NHS Connecting for Health to support the QOF. The system calculates practice achievement against national targets, and gives general practices, primary care trusts (PCTs) and strategic health authorities (SHAs) objective evidence and feedback on the quality of care delivered to patients.

Through the QOF, general practices are rewarded financially for aspects of the quality of care they provide. QMAS ensures consistency in the calculation of quality achievement and disease prevalence, and is linked to payment systems. This means that payment rules underpinning the GMS contract are implemented consistently across all systems and all practices in England.

Users of data derived from QMAS should recognise that QMAS was established as a mechanism to support the calculation of practice QOF payments. It is not a comprehensive source of data on quality of care in general practice, but it is potentially a rich and valuable source of such information, providing the limitations of the data are acknowledged.

The Prescribing and Primary Care Services team, part of the Health and Social Care Information Centre (HSCIC), has worked on behalf of the Department of Health and in collaboration with NHS Connecting for Health to obtain extracts from QMAS to support the publication of QOF information.

The HSCIC QOF publication is based on data for the period April to March. Data are extracted from the national QMAS system at the end of June or July (depending on sign-off rates). The time lag between the end of the reporting year and the extraction of data is to allow for adjustments agreed between practices and PCTs prior to sign off.

The QOF bulletin covers three types of data for England:

- **Data relating to QOF achievement.**
- **Prevalence information based on QOF clinical registers.**
- **Data relating to QOF clinical indicator exceptions.**

1.2 Data Coverage – QOF Achievement Data

QOF achievement data are presented for general practices in England which made an end-of-year submission to QMAS. QOF achievement figures include data automatically extracted from general practice systems by the QMAS system at the end of March (or otherwise entered into QMAS), and data adjustments for the reporting year submitted between April and June/July.

Note that the number of practices covered by the QOF publication changes each year.

1.3 QOF Achievement Data for PMS Practices

Personal Medical Services (PMS) practices are able to negotiate local contracts with their PCTs 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 1,000 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 comparability in levels of achievement – so that where GMS and PMS practices have maximum QOF achievement, both are regarded as having achieved the maximum 1,000 points.

1.4 QOF Prevalence Data

Prevalence information is provided for all practices that were in the QOF achievement dataset. QMAS uses clinical registers to make prevalence adjustments in calculating practices' QOF payments, but the national publication of QOF information shows only raw prevalence.

For 19 of the 20 areas of the clinical domain, QMAS captures the number of patients on the clinical register for each practice (for Smoking indicators the 'register' is based on other clinical registers.) 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:

Raw prevalence = (number on clinical register / number on practice list) * 100

Six clinical areas of the QOF are based on registers that relate to specific age groups. Diabetes registers are based on patients aged 17+; chronic kidney disease, depression, epilepsy and learning disabilities registers are based on patients aged 18+; and obesity registers are based on patients aged 16+. Because 'prevalence rates' based on registers as a percentage of total list size would underestimate prevalence for these six clinical areas, alternative calculations, based on estimates of appropriate age-banded list size information, were used to derive more precise prevalence rates for these six clinical areas.

The clinical registers used to calculate prevalence were those submitted to QMAS at the same time as achievement submissions (i.e. end of year submissions). From 2009 onwards, 'National Prevalence Day' was moved to 31 March – so for the purpose of prevalence adjustments to QOF payments, prevalence is calculated on the same basis as disease registers for indicator

denominators. (In years prior to 2008/09 'National Prevalence Day' for prevalence adjustments was 14 February.)

1.5 Practice List Sizes

The QOF information published by the Health and Social Care Information Centre includes practice list sizes supplied to QMAS from National Health Applications and Infrastructure Services (NHAIS), the national general practice payments system, as at 1st January of the reporting year. These figures are used in QMAS 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 estimated to represent over 99.0 per cent of registered patients in England (based on registration data from the Prescription Services Division of the NHS Business Services Authority).

1.6 Level of Detail

There is no patient-specific data in QMAS because this is not required to support the QOF. For example, QMAS 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 not possible, for example, to identify the number of patients with both of these diseases.

1.7 QOF Exception Reporting

Patient exception reporting applies to those indicators in the clinical domain of the QOF where level of achievement is determined by the percentage of patients receiving the specified level of care. Exception reporting also applies to one cervical screening indicator and two contraceptive services indicators in the additional services domain; six 'records and information' indicators within the organisational domain also have exception reporting. The information presented in this bulletin refers to clinical domain indicators only.

The GMS contract Statement of Financial Entitlements (SFE) 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

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.

2. Definitions

2.1 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.

2.1.1 Registers

Registers relate to each of the indicator groups within the clinical domain of the QOF. Clinical indicator groups with related registers are shown in section 6. 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 CHD at each practice.

2.1.2 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 SFE exception criteria.

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

Register = Denominator + Exclusions + Exceptions

2.1.3 Indicators by Type within the Clinical Domain

The QOF programme team at the National Institute for Health and Clinical Excellence (NICE) has produced a classification of the types of indicator in the clinical domain of the QOF. The five categories of QOF clinical indicator, defined by NICE, are:

- **Health outcome** (O) – the indicator directly measures a health outcome (such as mortality, morbidity, health-related quality of life). There is one outcome indicator – Epilepsy 8: epilepsy seizure-free in the past 12 months.
- **Intermediate outcome** (IO) – the indicator measures an intermediate health outcome. Refers to indicators relating to BP target; cholesterol target; HbA1c target; lithium levels.
- **Process measure directly linked to health outcomes** (PD) – the indicator measures an action (process) that is directly linked to a therapeutic intervention that is known to improve health outcomes. This is defined as delivery of a drug therapy or non-drug interventions and may include referral to specialist service where intervention will be delivered (for example, smoking cessation).

- **Process measure indirectly linked to outcomes** (PI) – this includes both pure process measures (e.g., BP measurement) and process measures that may indirectly lead to an improvement in health outcomes (e.g. use of a diagnostic test, clinical review).
- **Register** (R) – the indicator is a clinical register.

The classification of each clinical indicator is shown in the section 6.

2.1.4 QOF Measures

2.1.4.1 QOF Achievement

Reference to 'QOF achievement' often refers to the percentage of available QOF points achieved. So if a practice achieves the full 1,000 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.

2.1.4.2 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;

$$\text{Underlying achievement (net of exceptions)} = \frac{\text{IndicatorNumerator}}{\left(\text{IndicatorDenominator}\right)}$$

2.1.4.3 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;

$$\text{Percent of patients receiving intervention} = \frac{\text{IndicatorNumerator}}{\left(\text{IndicatorExceptions} + \text{IndicatorDenominator}\right)}$$

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, SHA, PCT and practice level, where they are presented alongside achievement and exceptions data.

2.1.4.4 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 2011/12 there were 1,000 points available in the QOF. 79 of these points were allocated to Hypertension indicators. If a practice does not have any patients on their Hypertension register (i.e. no patients meeting the QOF definition for established hypertension), then they would be unable to achieve any of the points allocated to the Hypertension indicators. Therefore, even if the practice achieved all the other points available they would only be able to reach 92.1 per cent points achievement (921 points achieved / 1,000 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 previously, for a practice with no patients on their hypertension register the practices maximum **points available** would be 921 (1,000 points minus the 'unachievable' 79 Hypertension points). In this case, the difference between the practices **'points achievement'** and **'points achieved as a per cent of QOF points available'** would be as follows;

Points achievement
= (Points achievement / All QOF points) x 100

= (921 / 1,000) x 100 = 92.1 per cent

Points achieved as per cent of points available
= (Point achievement / QOF points available) x 100

= (921 / 921) x 100 = 100 per cent

Points Achieved as a per cent of QOF points available are not covered in the main report bulletin, they are presented at practice level in the practice domain summary spreadsheet, alongside the *Points achievement* data.

2.2 Effective Exception Rates

Exception reporting rates presented in this bulletin are referred to as 'effective exception rates'. For each indicator in the clinical domain, the effective exception rate is calculated as follows:

*[Number of Exceptions / (Number of Exceptions + 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.

2.3 Source Data

QMAS is primarily a system to support QOF payments, and exception reporting is recorded as part of that process. QMAS 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.

2.4 Number of practices included in Exceptions Data

A small number of practices which participate in the QOF make manual submissions to QMAS or are otherwise unable to make an electronic submission of exceptions data (for example, where the installed version of QMAS does not support this submission). For this small number of practices, no exceptions data are available, and they are not included in exceptions figures.

2.5 Derivation of Exception Numbers

For each practice-indicator combination, numbers of exceptions are derived as follows:

- Where QMAS recorded a number of exceptions for a practice and indicator (including zero exceptions) this figure was used.
- Where QMAS did not record a number of exceptions for a practice-indicator combination, but did record a number of exclusions, the number of exceptions was taken to be zero.
- Where QMAS did not record a number of exceptions, nor a number of exclusions, for a practice-indicator combination, but where the practice was known to be capable of submitting exception information to QMAS (by virtue of such information being submitted for other indicators), the number of exceptions was taken to be zero.

2.6 Notes on the Data

Practices using QMAS 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 primary care trusts (PCTs) for payment. However, information captured by QMAS relating to exceptions and exclusions can not be amended on the QMAS 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 QMAS 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.

QMAS does not allow a presentation of exceptions broken down by each of the nine SFE exception criteria outlined above. There are four reasons for this:

- QMAS 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.

- QMAS 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 QMAS users.

- Any individual patient can be associated with more than one of the exception criteria, but only one such reason needs to be identified by the QMAS system 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 to QMAS in line QOF business rules around patient exceptions is primarily focused on ensuring that data values used for achievement calculations are accurate for payment purposes; ie that patients are not included in indicator denominators where appropriate in terms of the business rules. Therefore any testing of the order of sequencing (ie 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.

3. QOF Prevalence

3.1 Notes on 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 due partly to increased case finding.** Other factors in interpreting information on specific registers include:

- The diabetes register (indicator DM19) was redefined for 2006/07 to state that GPs should be able to identify patients as having either Type I or Type II diabetes. However, the QOF diabetes register does not distinguish between Type I and Type II diabetes.

- Some clinical areas have 'resolution codes' to reflect the nature of diseases. Others, such as the cancer register, do not.

- To be on the asthma register, patients need a diagnosis of asthma and a prescription for an asthma drug within the year.

- Six clinical areas of the QOF are based on registers that relate to specific age groups. Diabetes registers are based on patients aged 17+; chronic kidney disease, depression, epilepsy and learning disabilities registers are based on patients aged 18+; and obesity registers are based on patients aged 16+. Because 'prevalence rates' based on registers as a percentage of total list size would underestimate prevalence for these six clinical areas, alternative calculations, based on estimates of appropriate age-banded list size information, were used to derive more accurate prevalence rates for these six clinical areas (see section 3.2).

- 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 QMAS. For example, QMAS 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 qualification to this statement is that the Depression 1 indicator is based on patients who are on the CHD and/or Diabetes registers, and Smoking indicators are based on patients who have one of several conditions; however no prevalence rates for these indicators are included in this bulletin.)

- 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 15 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.

- 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.

3.2 Age specific list sizes and prevalence rates

Age-banded practice list sizes, relating to the final quarter of the reporting year (January to March), are obtained from the Prescription Services Division of the NHS Business Services Authority (BSA) for the practices included in the QOF prevalence dataset. List size figures for this period are usually available for the majority of practices (over 99 per cent) in the QOF prevalence dataset. The list size figures for this period are the most appropriate for using a basis for prevalence measures, as disease registers are taken as at 31 March each year ('prevalence day)

The BSA data does not give ages by single year, so it is necessary to use a proportion of the 15-24 age band to estimate the numbers aged 17-24 (for diabetes), 18-24 (for depression, epilepsy, chronic kidney disease and learning disabilities) and 16-24 (for obesity). These estimates (which assume the number of people in the 15-24 age band is evenly spread across individual ages) were added to the numbers in age bands for 25 years and over to give estimates of:

- Number on each BSA practice list aged 16+ (for obesity).
- Number on each BSA practice list aged 17+ (for diabetes).
- Number on each BSA practice list aged 18+ (for depression, epilepsy, chronic kidney disease and learning disabilities).

These numbers were then used to calculate estimates of:

- The percentage of each BSA practice list who were aged 16+ (for obesity).
- The percentage of each BSA practice list who were aged 17+ (for diabetes).
- The percentage of each BSA practice list who were aged 18+ (for depression, epilepsy, chronic kidney disease and learning disabilities).

These percentages were then applied (if the BSA data was missing or zero then data for these practices was omitted) to the total list sizes in the QOF dataset to give estimates of:

- The number on each QOF practice list aged 16+ (for obesity).
- The number on each QOF practice list aged 17+ (for diabetes).
- The number on each QOF practice list aged 18+ (for depression, epilepsy, chronic kidney disease and learning disabilities).

These numbers then became the denominators for calculation of prevalence rates for the six clinical areas whose registers are age-specific.

3.3 Depression prevalence rates

Note that Depression prevalence rates for 2008/09, as shown in the Quality and Outcomes Framework Achievement and prevalence report 2008/09, were calculated using the whole practice list size (rather than the age specific 18+ list size). These data have not subsequently been recalculated and therefore rates for 2008/09 are inconsistent and in effect are artificially suppressed compared with subsequent years.

4. Caveats concerning QOF Achievement and Prevalence data

The QMAS 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.

QMAS is a live database, and practices can submit clinical and non-clinical data at any time. This publication is derived from a snapshot of QMAS data relating to the position of practices at a specific point in time – usually June or July following the end of the reporting year.

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 PCT-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 practice 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 QMAS. For example, QMAS 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 QMAS, 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.

5. Caveats concerning 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 to interpret 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. Primary care trusts will have access to more detailed local information, and knowledge of local circumstances, to enable unusual levels of exception reporting to be investigated further.

6. QOF Indicators 2011/12

(Note: R, P, IO, P-T-O and O after the clinical indicator definitions refer to NICE categories of types of clinical indicator, as outlined in section 2.1.3 above)

Clinical Domain		
Coronary Heart Disease		
CHD01	The practice can produce a register of patients with coronary heart disease	R
CHD06	The percentage of patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 15 months) is 150/90 or less	IO
CHD08	The percentage of patients with coronary heart disease whose last measured total cholesterol (measured in the preceding 15 months) is 5 mmol/l or less	IO
CHD09	The percentage of patients with coronary heart disease with a record in the preceding 15 months that aspirin, an alternative anti-platelet therapy, or an anti-coagulant is being taken (unless a contraindication or side effects are recorded)	PD
CHD10	The percentage of patients with coronary heart disease who are currently treated with a beta-blocker (unless a contraindication or side effects are recorded)	PD
CHD12	The percentage of patients with coronary heart disease who have had influenza immunisation in the preceding 1 September to 31 March	PD
CHD13	For patients with newly diagnosed angina (diagnosed after 1 April 2011), the percentage who are referred for specialist assessment.	PI
CHD14	The percentage of patients with a history of myocardial infarction (from 1 April 2011) currently treated with an ACE inhibitor (or ARB if ACE intolerant), aspirin or an alternative anti-platelet therapy, beta-blocker and statin (unless a contraindication or side effects are recorded)	PD
Cardiovascular disease – primary prevention		
PP01	In those patients with a new diagnosis of hypertension (excluding those with pre-existing CHD, diabetes, stroke and/or TIA) recorded between the preceding 1 April to 31 March: the percentage of patients aged 30 to 74 years who have had a face to face cardiovascular risk assessment at the outset of diagnosis (within 3 months of the initial diagnosis) using an agreed risk assessment tool	PI
PP02	The percentage of patients diagnosed with hypertension (diagnosed after 1 April 2009) who are given lifestyle advice in the preceding 15 months for: increasing physical activity, smoking cessation, safe alcohol consumption and healthy diet	PI
Heart Failure		
HF01	The practice can produce a register of patients with heart failure	R
HF02	The percentage of patients with a diagnosis of heart failure (diagnosed after the 1 April 2006) which has been confirmed by an echocardiogram or by specialist assessment	PI
HF03	The percentage of patients with a current diagnosis of heart failure due to Left Ventricular Dysfunction (LVD) who are currently treated with an ACE inhibitor or Angiotensin Receptor Blocker (ARB), who can tolerate therapy and for whom there is no contraindication.	PD
HF04	The percentage of patients with a current diagnosis of heart failure due to LVD who are currently treated with an ACE inhibitor or Angiotensin Receptor Blocker (ARB), who are additionally treated with a beta-blocker licensed for heart failure, or recorded as intolerant to or having a contraindication to beta-blockers	PD
Stroke and Transient Ischemic Attack (TIA)		
STROKE01	The practice can produce a register of patients with Stroke or TIA	R
STROKE06	The percentage of patients with a history of TIA or stroke in whom the last blood pressure reading (measured in the preceding 15 months) is 150/90 or less	IO
STROKE07	The percentage of patients with TIA or stroke who have a record of total cholesterol in the preceding 15 months	PI
STROKE08	The percentage of patients with TIA or stroke whose last measured total cholesterol (measured in the preceding 15 months) is 5 mmol/l or less	IO
STROKE10	The percentage of patients with TIA or stroke who have had influenza immunisation in the preceding 1 September to 31 March	PD
STROKE12	The percentage of patients with a stroke shown to be non-haemorrhagic, or a history of TIA, who have a record that an anti-platelet agent (aspirin, clopidogrel, dipyridamole or a combination), or an anti-coagulant is being taken (unless a contraindication or side effects are recorded)	PD
STROKE13	The percentage of new patients with a stroke or TIA who have been referred for further investigation	PI
Hypertension		
BP01	The practice can produce a register of patients with established hypertension	R
BP04	The percentage of patients with hypertension in whom there is a record of the blood pressure in the preceding 9 months	PI
BP05	The percentage of patients with hypertension in whom the last blood pressure (measured in the preceding 9 months) is 150/90 or less	IO
Diabetes		
DM02	The percentage of patients with diabetes whose notes record BMI in the preceding 15 months	PI
DM10	The percentage of patients with diabetes with a record of neuropathy testing in the preceding 15 months	PI

DM13	The percentage of patients with diabetes who have a record of micro-albuminuria testing in the preceding 15 months (exception reporting for patients with proteinuria)	PI
DM15	The percentage of patients with diabetes with a diagnosis of proteinuria or micro-albuminuria who are treated with ACE inhibitors (or A2 antagonists)	PD
DM17	The percentage of patients with diabetes whose last measured total cholesterol within the preceding 15 months is 5mmol/l or less	IO
DM18	The percentage of patients with diabetes who have had influenza immunisation in the preceding 1 September to 31 March	PD
DM19	The practice can produce a register of all patients aged 17 years and over with diabetes mellitus, which specifies whether the patient has Type 1 or Type 2 diabetes	R
DM21	The percentage of patients with diabetes who have a record of retinal screening in the preceding 15 months	PD
DM22	The percentage of patients with diabetes who have a record of estimated glomerular filtration rate (eGFR) or serum creatinine testing in the preceding 15 months	PI
DM26	The percentage of patients with diabetes in whom the last IFCC-HbA1c is 59 mmol/mol (equivalent to HbA1c of 7.5% in DCCT values) or less (or equivalent test/reference range depending on local laboratory) in the preceding 15 months.	IO
DM27	The percentage of patients with diabetes in whom the last IFCC-HbA1c is 64 mmol/mol (equivalent to HbA1c of 8% in DCCT values) or less (or equivalent test/reference range depending on local laboratory) in the preceding 15 months	IO
DM28	The percentage of patients with diabetes in whom the last IFCC-HbA1c is 75 mmol/mol (equivalent to HbA1c of 9% in DCCT values) or less (or equivalent test/reference range depending on local laboratory) in the preceding 15 months	IO
DM29	The percentage of patients with diabetes 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 15 months.	PI
DM30	The percentage of patients with diabetes in whom the last blood pressure is 150/90 or less.	IO
DM31	The percentage of patients with diabetes in whom the last blood pressure is 140/80 or less.	IO

Chronic Obstructive Pulmonary Disease

COPD08	The percentage of patients with COPD who have had influenza immunisation in the preceding 1 September to 31 March	PD
COPD10	The percentage of patients with COPD with a record of FEV1 in the preceding 15 months.	PI
COPD13	The percentage of patients with COPD who have had a review, undertaken by a healthcare professional, including an assessment of breathlessness using the MRC dyspnoea score in the preceding 15 months	PI
COPD14	The practice can produce a register of patients with COPD	R
COPD15	The percentage of all patients with COPD diagnosed after 1 April 2011 in whom the diagnosis has been confirmed by post bronchodilator spirometry	PI

Epilepsy

EPILEPSY05	The practice can produce a register of patients aged 18 years and over receiving drug treatment for epilepsy	R
EPILEPSY06	The percentage of patients aged 18 years and over on drug treatment for epilepsy who have a record of seizure frequency in the preceding 15 months	PI
EPILEPSY08	The percentage of patients aged 18 years and over on drug treatment for epilepsy who have been seizure free for the last 12 months recorded in the preceding 15 months	O
EPILEPSY09	The percentage of women under the age of 55 years who are taking antiepileptic drugs who have a record of information and counselling about contraception, conception and pregnancy in the preceding 15 months	PI

Hypothyroidism

THYROID01	The practice can produce a register of patients with hypothyroidism	R
THYROID02	The percentage of patients with hypothyroidism with thyroid function tests recorded in the preceding 15 months	PI

Cancer

CANCER01	The practice can produce a register of all cancer patients defined as a 'register of patients with a diagnosis of cancer excluding non-melanotic skin cancers from 1 April 2003'	R
CANCER03	The percentage of patients with cancer, diagnosed within the preceding 18 months, who have a patient review recorded as occurring within 6 months of the practice receiving confirmation of the diagnosis	PI

Palliative Care

PC02	The practice has regular (at least 3 monthly) multidisciplinary case review meetings where all patients on the palliative care register are discussed	PI
PC03	The practice has a complete register available of all patients in need of palliative care/support irrespective of age.	R

Mental Health

MH08	The practice can produce a register of patients with schizophrenia, bipolar affective disorder and other psychoses	R
MH10	The percentage of patients on the register who have a comprehensive care plan documented in the records agreed between individuals, their family and/or carers as appropriate	PI
MH11	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of alcohol consumption in the preceding 15 months.	PI
MH12	The percentage of patients with schizophrenia, bipolar affective disorder and other pychoses who have a record of BMI in the preceding 15 months.	PI
MH13	The percentage of patients with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood pressure in the preceding 15 months.	PI
MH14	The percentage of patients aged 40 years and over with schizophrenia, bipolar affective disorder and other psychoses who have a record of total cholesterol:hdl ratio in the preceding 15 months.	PI
MH15	The percentage of patients aged 40 years and over with schizophrenia, bipolar affective disorder and other psychoses who have a record of blood glucose in the preceding 15 months.	PI
MH16	The percentage of women (aged from 25 to 64 in England and Northern Ireland, from 20 to 60 in Scotland and from 20 to 64 in Wales) with schizophrenia, bipolar affective disorder and other psychoses whose notes record that a cervical screening test has been performed in the preceding 5 years.	PD
MH17	The percentage of patients on lithium therapy with a record of serum creatinine and TSH in the preceding 9 months.	PI
MH18	The percentage of patients on lithium therapy with a record of lithium levels in the therapeutic range in the preceding 4 months.	IO

Asthma

ASTHMA01	The practice can produce a register of patients with asthma, excluding patients with asthma who have been prescribed no asthma-related drugs in the preceding 12 months	R
ASTHMA03	The percentage of patients with asthma between the ages of 14 and 19 years in whom there is a record of smoking status in the preceding 15 months	PI
ASTHMA06	The percentage of patients with asthma who have had an asthma review in the preceding 15 months	PI
ASTHMA08	The percentage of patients aged 8 years and over diagnosed as having asthma from 1 April 2006 with measures of variability or reversibility	PI

Dementia

DEM01	The practice can produce a register of patients diagnosed with dementia	R
DEM02	The percentage of patients diagnosed with dementia whose care has been reviewed in the preceding 15 months	PI
DEM03	The percentage of patient with a new diagnosis of dementia (from 1 April 2011) with a record of FBC, calcium, glucose, renal and liver function, thyroid function tests, serum vitamin B12 and folate levels recorded 6 months before or after entering on to the register	PI

Depression

DEP01	The percentage of patients on the diabetes register and/or the CHD register for whom case finding for depression has been undertaken on one occasion during the preceding 15 months using two standard screening questions	PI
DEP04	In those patients with a new diagnosis of depression, recorded between the preceding 1 April to 31 March, the percentage of patients who have had an assessment of severity at the time of diagnosis using an assessment tool validated for use in primary care.	PI
DEP05	In those patients with a new diagnosis of depression and assessment of severity recorded between the preceding 1 April to 31 March, the percentage of patients who have had a further assessment of severity 4-12 weeks (inclusive) after the initial recording of the assessment of severity. Both assessments should be completed using an assessment tool validated for use in primary care.	PI

Chronic Kidney Disease

CKD01	The practice can produce a register of patients aged 18 years and over with CKD. (US National Kidney Foundation: Stage 3 to 5 CKD)	R
CKD02	The percentage of patients on the CKD register whose notes have a record of blood pressure in the preceding 15 months	PI
CKD03	The percentage of patients on the CKD register in whom the last blood pressure reading, measured in the preceding 15 months, is 140/85 or less	IO
CKD05	The percentage of patients on the CKD register with hypertension and proteinuria who are treated with an angiotensin converting enzyme inhibitor (ACE-I) or angiotensin receptor blocker (ARB) (unless a contraindication or side effects are recorded)	PD
CKD06	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 15 months	PI

Atrial Fibrillation

AF01	The practice can produce a register of patients with atrial fibrillation	R
AF03	The percentage of patients with atrial fibrillation who are currently treated with anti-coagulation drug therapy or an anti-platelet therapy	PD
AF04	The percentage of patients with atrial fibrillation diagnosed after 1 April 2008 with ECG or specialist confirmed diagnosis	PI

Obesity

OB01	The practice can produce a register of patients aged 16 years and over with a BMI greater than or equal to 30 in the preceding 15 months	R

Learning Disabilities

LD01	The practice can produce a register of patients aged 18 years and over with learning disabilities	R
LD02	The percentage of patients on the learning disability register with Down's Syndrome aged 18 years and over who have a record of blood TSH in the preceding 15 months (excluding those who are on the thyroid disease register)	PI

Smoking

SMOKING03	The percentage of patients with any or any combination of the following conditions: CHD, stroke or TIA, hypertension, diabetes, COPD, asthma, CKD, schizophrenia, bipolar affective disorder or other psychoses whose notes record smoking status in the preceding 15 months.	PI
SMOKING04	The percentage of patients with any or any combination of the following conditions: CHD, stroke or TIA, hypertension, diabetes, COPD, asthma, CKD, schizophrenia, bipolar affective disorder or other psychoses who smoke whose notes contain a record that smoking cessation advice or referral to a specialist service, where available, has been offered within the preceding 15 months.	PD

Organisational Domain

Records and Information

RECORDS03	The practice has a system for transferring and acting on information about patients seen by other doctors out of hours
RECORDS08	There is a designated place for the recording of drug allergies and adverse reactions in the notes and these are clearly recorded
RECORDS09	For repeat medicines, an indication for the drug can be identified in the records (for drugs added to repeat prescription with effect from 1 April 2004). Minimum standard 80%
RECORDS11	The blood pressure of patients aged 45 years and over is recorded in the preceding 5 years for at least 65% of patients
RECORDS13	There is a system to alert the out of hours service or duty doctor to patients dying at home
RECORDS15	The practice has up to date clinical summaries in at least 60% of patient records
RECORDS17	The blood pressure of patients aged 45 years and over is recorded in the preceding 5 years for at least 80% of patients
RECORDS18	The practice has up to date clinical summaries in at least 80% of patient records
RECORDS19	80% of newly registered patients have had their notes summarised within 8 weeks of receipt by the practice
RECORDS20	The practice has up to date clinical summaries in at least 70% of patient records
RECORDS23	The percentage of patients aged 15 years and over whose notes record smoking status in the preceding 27 months

Information for Patients

INFORMATION05	The practice supports smokers in stopping smoking by a strategy, which includes providing literature and offering appropriate therapy

Education and Training

EDUCATION01	There is a record of all practice-employed clinical staff having attended training/updating in basic life support skills in the preceding 18 months
EDUCATION05	There is a record of all practice-employed staff having attended training/updating in basic life support skills in the preceding 36 months
EDUCATION06	The practice conducts an annual review of patient complaints and suggestions to ascertain general learning points which are shared with the team
EDUCATION07	The practice has undertaken a minimum of 12 significant event reviews in the preceding 3 years which could include: Any death occurring in the practice premises New cancer diagnoses Deaths where terminal care has taken place at home Any suicides Admissions under the Mental Health Act Child protection cases Medication errors A significant event occuring when a patient may have been subjected to harm, had the circumstance/outcome been different (near miss)
EDUCATION08	All practice-employed nurses have personal learning plans which have been reviewed at annual appraisal
EDUCATION09	All practice-employed non-clinical team members have an annual appraisal
EDUCATION10	The practice has undertaken a minimum of 3 significant event reviews within the preceding year

Practice Management

MANAGEMENT01	Individual healthcare professionals have access to information on local procedures relating to Child Protection
MANAGEMENT02	There are clearly defined arrangements for backing up computer data, back-up verification, safe storage of back-up tapes and authorisation for loading programmes where a computer is used
MANAGEMENT03	The hepatitis B status of all doctors and relevant practice employed staff is recorded and immunisation recommended if required in accordance with national guidance
MANAGEMENT05	The practice offers a range of appointment times to patients which as a minimum should include morning and afternoon appointments 5 mornings and 4 afternoons per week except where agreed with the PCO
MANAGEMENT07	The practice has systems in place to ensure regular and appropriate inspection, calibration, maintenance and replacement of equipment including: a defined responsible person clear recording systematic pre-planned schedules reporting of faults
MANAGEMENT09	The practice has a protocol for the identification of carers and a mechanism for the referral of carers for social services assessment
MANAGEMENT10	There is a written procedure manual that includes staff employment policies including equal opportunities, bullying and harassment and sickness absence (including illegal drugs, alcohol and stress) to which staff have access

Medicines Management

MEDICINES02	The practice possesses the equipment and in-date emergency drugs to treat anaphylaxis
MEDICINES03	There is a system for checking expiry dates of emergency drugs on at least an annual basis
MEDICINES04	The number of hours from requesting a prescription to availability for collection by the patient is 72 hours or less (excluding weekends and bank/local holidays)
MEDICINES06	The practice meets with the PCO prescribing adviser at least annually and agrees up to three actions related to prescribing
MEDICINES08	The number of hours from requesting a prescription to availability for collection by the patient is 48 hours or less (excluding weekends and bank/local holidays)
MEDICINES10	The practice meets with the PCO prescribing adviser at least annually, has agreed up to three actions related to prescribing and subsequently provided evidence of change
MEDICINES11	A medication review is recorded in the notes in the preceding 15 months for all patients being prescribed 4 or more repeat medicines Standard 80%
MEDICINES12	A medication review is recorded in the notes in the preceding 15 months for all patients being prescribed repeat medicines Standard 80%

Quality and Productivity

QP01	The practice conducts an internal review of their prescribing to assess whether it is clinically appropriate and cost effective, agrees with the PCO three areas for improvement and produces a draft plan for each area no later than 30 June 2011
QP02	The practice participates in an external peer review of prescribing with a group of practices and agrees plans for three prescribing areas for improvement firstly with the group and then with the PCO no later than 30 September 2011
QP03	The percentage of prescriptions complying with the agreed plan for the first improvement area as a percentage of all prescriptions in that improvement area during the period 1 January 2012 to 31 March 2012 .
QP04	The percentage of prescriptions complying with the agreed plan for the second improvement area as a percentage of all prescriptions in that improvement area during the period 1 January 2012 to 31 March 2012 .
QP05	The percentage of prescriptions complying with the agreed plan for the third improvement area as a percentage of all prescriptions in that improvement area during the period 1 January 2012 to 31 March 2012 .
QP06	The practice meets internally to review the data on secondary care outpatient referrals provided by the PCO
QP07	The practice participates in an external peer review with a group of practices to compare its secondary care outpatient referral data either with practices in the group of practices or with practices in the PCO area and proposes areas for commissioning or service design improvements to the PCO
QP08	The practice engages with the development of and follows 3 agreed care pathways for improving the management of patients in the primary care setting (unless in individual cases they justify clinical reasons for not doing this) to avoid inappropriate outpatient referrals and produces a report of the action taken to the PCO no later than 31 March 2012
QP09	The practice meets internally to review the data on emergency admissions provided by the PCO
QP10	The practice participates in an external peer review with a group of practices to compare its data on emergency admissions either with practices in the group of practices or practices in the PCO area and proposes areas for commissioning or service design improvements to the PCO
QP11	The practice engages with the development of and follows 3 agreed care pathways (unless in individual cases they justify clinical reasons for not doing this) in the management and treatment of patients in aiming to avoid emergency admissions and produces a report of the action taken to the PCO no later than 31 March 2012

Patient Experience Domain

Patient Experience

PE01	The length of routine booked appointments with the doctors in the practice is not less than 10 minutes. [If the practice routinely sees extras during booked surgeries, then the average booked consultation length should allow for the average number of extras seen in a surgery session. If the extras are seen at the end, then it is not necessary to make this adjustment.]. For practices with only an open surgery system, the average face to face time spent by the GP with the patient is at least 8 minutes. Practices that routinely operate a mixed economy of booked and open surgeries should report on both criteria.

Additional Services Domain

Cervical Screening

CS01	The percentage of patients (aged from 25 to 64 in England and Northern Ireland, from 20 to 60 in Scotland and from 20 to 64 in Wales) whose notes record that a cervical screening test has been performed in the preceding 5 years
CS05	The practice has a system for informing all women of the results of cervical smears
CS06	The practice has a policy for auditing its cervical screening service, and performs an audit of inadequate cervical smears in relation to individual smear-takers at least every 2 years
CS07	The practice has a protocol that is in line with national guidance and practice for the management of cervical screening, which includes staff training, management of patient call/recall, exception reporting and the regular monitoring of inadequate smear rates

Child Health Surveillance

CHS01	Child development checks are offered at intervals that are consistent with national guidelines and policy

Maternity Services

MAT01	Antenatal care and screening are offered according to current local guidelines

Contraceptive Services

SH01	The practice can produce a register of women who have been prescribed any method of contraception at least once in the last year, or other appropriate interval e.g. last 5 years for an IUS
SH02	The percentage of women prescribed an oral or patch contraceptive method who have also received information from the practice about long acting reversible methods of contraception in the preceding 15 months
SH03	The percentage of women prescribed emergency hormonal contraception at least once in the year by the practice who have received information from the practice about long acting reversible methods of contraception at the time of, or within 1 month of, the prescription

7. QOF Links

NHS Employers (for QOF guidance):
http://www.nhsemployers.org/PayAndContracts/GeneralMedicalServicesContract/QOF/Pages/QualityOutcomesFramework.aspx

GMS contract Statement of Financial Entitlements:
http://webarchive.nationalarchives.gov.uk/+/www.dh.gov.uk/en/Healthcare/Primarycare/PMC/contractingroutes/DH_4133079

QMAS (Connecting for Health):
http://www.connectingforhealth.nhs.uk/systemsandservices/gpsupport/qmas

Primary Care Commissioning:
http://www.pcc-cic.org.uk/article/qof-business-rules-v230

QOF Publications in other UK countries

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

Wales:
http://wales.gov.uk/topics/statistics/theme/health/primary-care/gms-contract/?lang=en

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

Published by the Health and Social Care Information Centre
Part of the Government Statistical Service

This publication may be requested in large print or other formats.

For further information:

www.ic.nhs.uk
0845 300 6016
enquiries@ic.nhs.uk