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The role of cost-effectiveness analysis in the development of indicators to support incentive-based behaviour in primary care in the UK

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Abbreviations used

UK	United Kingdom
QOF	Quality and Outcomes Framework
NHS	National Health Service
NICE	National Institute for Health and Care Excellence
ABPM	Ambulatory blood pressure monitoring
QALY	Quality adjusted life year
GP	General Practitioner

Abstract

In the United Kingdom, General Practitioners are incentivised through a national Pay-for-Performance scheme to adopt evidence-based quality improvement initiatives through a portfolio of Quality and Outcomes Framework (QOF) indicators. We describe the development of the methodologies used to assess the cost-effectiveness of these Pay-for-Performance indicators and explore the value the process has added to the development of new indicators. Prior to analysis of new indicators, an economic subgroup of the NICE Indicator Advisory Committee is formed to assess evidence developed by health economists on the cost-effectiveness of potential indicators in terms of the health benefits gained, compared to the cost of the intervention combined with the cost of the incentive. The expert subgroup is convened to reach consensus on the amounts that could potentially be paid to general practices for new indicators. Indicators are also piloted in selected general practices and evidence gathered about their practical implementation. The current methods used to assess economic viability of new pilot indicators represent a pragmatic and effective way of providing information to inform decision-making and recommendations. Current policy to reduce QOF funding could shift activity from national to local schemes, with economic appraisal remaining central to inform the rationalization of limited resources.

Introduction

The Quality and Outcomes Framework (QOF) is a financial incentive scheme for UK general practices to improve quality of care. These practices' performance is measured against a set of quality indicators. The scheme was introduced in 2004/05 and is a component of the revised General Medical Services contract between the UK Government and general practice. The funding is intended to reward quality of care, leading to benefits for patients and the National Health Service (NHS). Research has shown that financial incentive schemes have the potential to improve the quality of primary care, though longer-term effects are still unknown.[1-3] In addition, there is some evidence to suggest that these incentives have the potential to improve delivery of clinical care in underserved populations.[4, 5]

There are two main components to the QOF, known as domains, and each includes a set of indicators designed to measure performance. The two domains cover clinical and public health indicators. Points are awarded to practices on the basis of their levels of achievement against individual indicators. In 2015/16 there were 77 indicators for the two domains, through which practices could score up to 559 points. On average, a QOF point is worth £160.15 to a practice in England during 2015/16.[6] ***Table 1*** shows the two domains, their associated indicators and the maximum number of points available for the indicators.

[TABLE 1]

For each clinical area, the structure of indicator point allocation is generally similar. Initially, the production and maintenance of a register of patients are categorized as 'Records'. Other indicators are classified as 'Initial diagnosis' and 'Ongoing management'. Certain clinical areas have a large number of points attached to specific indicators. These are usually clinical areas where there is a clear link between clinical activity and improved outcomes, such as blood pressure reduction[7] and smoking cessation.[8, 9] A few indicators have higher valuation, in some

cases these activities run across several indicator sets (***Table 2***). For instance, smoking cessation is linked to ten unique disease areas.

[TABLE 2]

The National Institute for Health and Care Excellence (NICE) convenes the Indicator Advisory Committee, quarterly to:

- Prioritize suggestions for new clinical or public health topics and make recommendations for indicator development;
- Consider the outcome of piloting, consultation and economic appraisal of potential indicators, and make final recommendations on new indicators;
- Review information on the uptake of current indicators in the QOF and recommend whether any should be retired, considered for changes to points and/or thresholds, or be subject to further assessment.

Once the Committee has agreed new topic areas for indicator development, work is carried out to develop the indicators and to pilot them with up to 40 practices across the UK using a combination of qualitative and quantitative methodology. For example, this may include gathering data on levels of achievement for piloted indicators and interviewing practice staff about issues around implementation of indicators.[10] As part of this process evaluation, work is also undertaken to assess the cost-effectiveness of incentivising the adoption of appropriate pilot indicators. This is done to provide the Committee with evidence on the potential costs and cost benefits of pilot indicators alongside the evidence from piloting. This is particularly important in the current economic climate, where the efficient use of general practice resources reinforces the need to adopt cost-effective decision-making.

Methods for assessing the cost-effectiveness of QOF indicators

The methods applied to determine the cost-effectiveness of QOF indicators adopt a net (monetised) benefit approach. In summary, the method applies the following calculation to an indicator:

Net benefit = (monetised health benefit – delivery cost) – QOF payment

In order to undertake cost-effectiveness analysis for QOF indicators, estimates for a number of variables are required, including details listed in ***Table 3***.

[TABLE 3]

To estimate the net benefit of an indicator, it is necessary to have information on the benefits and costs associated with the indicator. To gather these costs and benefits, a rapid review of the available economic evidence is carried out. The opinions of those involved in delivering the indicators at pilot GP sites are also sought. The costs associated with an indicator include care delivery costs; for example, the costs of additional GP or nurse consultations to monitor a patient's health status over a period of time, the initial cost of implementing the intervention, and if relevant, secondary care service usage. The unit costs for these activities can be obtained from sources [11, 12] such as the Personal Social Services Research Unit (PSSRU) and the Payment by Results tariff (PbR). Indicator costs also include unexpected consequences such as an increase in referrals resulting from more intensive monitoring. This may lead to increased health service usage costs in the short-term, as in the case of chronic kidney disease (CKD), where the introduction of estimated glomerular filtration rate (eGFR) as a prognostic indicator led to a 61 per cent increase in new patient referrals in a NHS Trust.[13]

The benefits refer to health benefits which might be gained by a patient as a result of introducing the indicator. The monetised health benefit of the indicator refers to the value of the health improvements associated with achieving the predicted benefits of the indicator.

For example, in the case of using ambulatory blood pressure monitoring (ABPM) to confirm a diagnosis of hypertension, these can include the avoidance of cardiovascular events in people correctly diagnosed as hypertensive. These benefits are presented in terms of the change in quality adjusted life years (QALYs) as a result of introducing a new indicator compared to standard practice without the new indicator. QALYs are a measurement of health status, using utility measures such as the EQ-5D survey. These measures categorise a person's health status as usually ranging from a value of one for someone in perfect health to a value of zero representing death. [14] NICE recommends the use of QALYs as a measure of health benefit to enable a standardised approach for economic evaluations across health areas.[15] In making recommendations on cost-effectiveness, NICE values QALYs between £20,000 and £30,000. For evaluating cost-effectiveness of new indicators, the lower QALY value of £20,000 is considered. In addition to the health benefits for patients, the cost-effectiveness analysis also takes into account any cost savings that might be achieved, such as avoided adverse events or avoided hospital admissions.

The QOF payments that are made on reaching particular levels of achievement for the indicator are also considered in the net benefit analysis. The QOF payment is assumed to be an incentive payment that is additional to the delivery cost. Payments are triggered once performance for an indicator exceeds the minimum threshold, i.e. the minimum proportion of the eligible population within a GP practice who receive the intervention associated with the indicator. Payments increase linearly until performance reaches the maximum threshold, which is usually around 85% to 90% of the eligible population. For instance, blood pressure management in secondary prevention of coronary heart disease (CHD) is incentivized. The payments for this indicator are triggered once 53 per cent of CHD patients in a general practice have a blood pressure reading of 150/90 mmHg or less in the preceding 12 months. The level of payment increases linearly up to a maximum of 93 per cent of CHD patients with a measured blood pressure reading of 150/90 mmHg or less. [16]

Having taken account of the costs and benefits, described above, the output of this process is an estimate of net benefit. This analysis is conducted based on the entire population of England which is assumed to comprise 7,962 practices with a mean practice size of 7,034 patients.[17] The findings are presented in the form of a net benefit table. The table shows different combinations of QOF points and levels of achievement (percentages of the eligible population to whom the indicator has been applied) at which the indicator can be considered to be cost-effective. This allows the Committee to consider the number of QOF points (and thus the associated incentive payments) that could be offered before the indicator would stop being cost-effective. Where the net benefit is positive, then the indicator is considered to be cost-effective (the benefits to the National Health Services (NHS) outweigh the costs). For instance, cost-effectiveness analysis for nine indicators for cardiovascular disease and diabetes (BP5, CHD9, CHD10, CHD11, CS1, DM15, DM21, LVD3, Stroke12) implemented in 2004/2005 with direct therapeutic impact were found to have positive net benefits, with mean payments per treated patient, made to general practice, ranging from £0.63 to £40.61.[18] In some cases there may be a lack of evidence to support the use of the indicator on economic grounds, but it may be warranted according to other criteria, for example if it is considered by patients, the public and general practices to be valuable. In order to test the robustness of the results, sensitivity analysis is conducted to indicate the extent to which costs would have to rise, or benefits and eligible population would have to fall before the indicator ceased to be cost-effective for specific numbers of points.

Procedure for cost-effectiveness analysis of new indicators: *role of the economic subgroup*

The Indicator Advisory Committee establishes an economic subgroup to appraise the work of the health economists involved in carrying out the economic evaluation of the pilot indicators. The subgroup is made up of committee members with relevant expertise, including practice

managers, general practitioners, and patient representatives. This ensures the analysis reflects clinical practice and consumer preferences. Prior to analysis of any new pilot indicators, the indicators to take forward for economic evaluation are agreed with the economic subgroup. The subgroup scrutinises the rationale for evidence and costs to be used in net-benefit analysis. Evidence of benefits of new indicators is derived from NICE evidence-based guidelines or other robust sources of evidence if NICE guidelines are not available. [19] Once the indicators to evaluate are agreed the health economists performs the economic analysis and presents their findings back to the subgroup for consideration and approval.

Considering the process in more detail, each clinical indicator attracts incentive payments through achievement of specified QOF points. The subgroup advises the health economists about the range of QOF points that should be considered for the economic analysis of each new indicator, for example, between five and 15 points. To determine the appropriate range of points, the QOF point allocation is appraised by the health economists for similar indicators which are already implemented. This helps to promote a reasonably consistent approach within the existing QOF menu. For example, indicators which include confirmation of diagnosis consistently have relatively low levels of QOF points allocated; e.g. 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*) has a maximum of five QOF points.

New indicators that are amenable to cost-effectiveness analysis are those that:

- Lead to a specific treatment or therapy, e.g. cardiac rehabilitation after myocardial infarction;
- Have clinically significant outcomes or are a surrogate measure of a clinically significant outcomes, e.g. lower cholesterol levels in diabetes

- Are likely to have relevant and robust data available on costs and benefits, e.g. reducing blood pressure in older people with hypertension.

Those indicators which are less likely to be considered for cost-effectiveness analysis are those that:

- Are solely process measures, e.g. the creation of a register but with no other action implied;
- Are unclear or inconsistent around the impact of the intervention, e.g. indicators that refer to 'support and advice';
- Are likely to have a lack of availability of high level evidence (e.g. no randomized controlled trials).

These are not specific rules but provide a guide to the usual rationale adopted in deciding whether an indicator can be assessed for its cost-effectiveness. In some cases, the effectiveness of a clinical indicator may not be clear and in these circumstances economic evaluation can still be performed using an approach called "threshold analysis". This helps to determine the point at which an indicator becomes cost-effective (i.e. the net benefit is positive). For example, if there is a lack of evidence around the benefits of a specific treatment that could be incentivised through clinical indicators, threshold analysis can be used to estimate how much clinical improvement has to be achieved before financial incentivisation is cost-effective at different levels of QOF points. In 2011, an indicator was piloted on the percentage of patients with asthma who in the previous 15 months had a record of structured asthma educational discussion. There was insufficient evidence on the health benefits of the intervention, measured by QALYs, to allow net benefit analysis. Instead, the delivery costs, eligible population and levels of reported achieved were modelled against estimated cost savings generated through assumptions about reductions in hospital admissions and A&E visits

avoided with the intervention. Scenarios were developed to indicate how many points might be justified before the indicator would cease to be cost-effective.

Once economic evidence is collated for the relevant pilot indicators, the information is reported back to the economic sub-group for discussion and agreement. More recently, the economic sub-group has recommended further analysis to assess the extent to which the cost-effectiveness of an indicator exceeds the upper range of agreed QOF points. This allows an assessment of those indicators that are analysed as being very cost-effective, as opposed to simply reporting that the indicator is cost-effective to the upper limit of points originally agreed by the economic subgroup. As there are only a fixed number of QOF points to financially incentivise general practices, it is not feasible for these extra points to be recommended for adoption. However, the upper limit of points does provide an indication of the extent to which the indicator is cost-effective.

In 2012/13, there were 31 different new indicators proposed for piloting, of which 14 were considered viable for cost-effectiveness analysis. These latter indicators are outlined in ***Table 4*** and twelve were assessed as being cost-effective. Some of the proposed new indicators, particularly those relating to reducing blood pressure, were considered to be cost-effective well above the maximum QOF points agreed by the economic sub-group.

[TABLE 4]

Table 5 summarises reasons why other indicators were not viable to perform economic analysis. This is primarily related to a lack of evidence or the inability to link an indicator to measurable clinical outcomes.

[TABLE 5]

Limitations to the cost-effectiveness assessment method

The net benefit approach lends itself to evaluating the cost-effectiveness of indicators that have a clearly established direct therapeutic effect, ideally from robust trial evidence. That is, those indicators where achievement can be shown to clearly impact on health status or life expectancy, allowing the benefits to be expressed in terms of QALYs. Many of the 'Ongoing management' indicators have these characteristics. This approach is less applicable to evaluating 'Initial diagnosis' indicators, although this does not mean that such indicators are not actually cost-effective. In the absence of robust trial evidence, these indicators are normally evaluated for their cost-effectiveness by using clearly defined but very conservative modelling assumptions, i.e. using lower range estimates of benefits and higher range estimates for costs. Due to these conservative assumptions, 'Initial diagnosis' indicators may not appear as cost-effective as 'Ongoing management' indicators.

An example of such an indicator is the (now retired) chronic kidney disease indicator, CKD2 (*The percentage of patients on the CKD register whose notes have a record of blood pressure in the preceding 15 months*), which was based on the assumption that monitoring can lead to differing levels of therapy resulting in improvement in renal function. However, it could equally be argued that monitoring per se, provides little if any health benefit and the benefits associated with improved control only occur as a result of subsequent treatment. Critically, a clear link needs to be made between process measures and their clinically-relevant outcomes.

It is important to note that NICE does not consider the broader societal perspective in considering costs. Hence, analyses are limited to a health services perspective which, for practical purposes, simplifies the economic evaluation. External costs such as the productivity loss or lost household production are not included in the analyses.

Additionally, the current NICE recommendation for conducting cost-effectiveness analysis only assesses the incremental changes in quality of life for patients. Conditions which require long-

term care, such as dementia, will impact the quality of life of both patients and their care-givers and family members. The 2014/15 NICE indicators included two indicators to improve dementia care (NM64, NM65).[20] However, cost-effectiveness analysis assessing these indicators did not involve outcomes associated with family members and care-givers. If these outcomes were to be included in the analysis, these dementia indicators may be extremely cost-effective as seen in studies which have assessed outcomes associated with care givers.[20]

Discussion

This approach to assess the economic viability of new pay-for-performance indicators represents a pragmatic and effective way of providing the NICE Indicator Advisory Committee with information to inform its decision making and recommendations for new national QOF indicators. The clear presentation of the economic net benefit taking account of both delivery and reimbursement costs, supported by close scrutiny of the clinical evidence and regular expert input, allows the Committee to understand whether the new indicator is likely to be cost-effective in general practice and, more importantly, the extent to which it is cost-effective through application of sensitivity analysis.

Currently, the economic subgroup of the Committee is presented with cost-effectiveness data based on published trial evidence to determine the effectiveness of interventions to inform the development of new pay-for-performance indicators. Based on evaluation of the impact of QOF over the past decade, there is a risk that this may be over-optimistic about the population health benefits [21, 22]: at inception the general practitioners' pay-for-performance scheme was estimated to reduce mortality by 11 lives per 100,000 people over the first year of implementation, this was still below the 56 lives per 100,000 people that could have been saved if all eligible patients were treated.[21] This may be partly related to general practice already exceeding target performance for full payments (e.g. percentage of patients already treated) at introduction of the scheme.[21] The issue of realistic payment thresholds is partially

ameliorated by pilot testing of new indicators prior to implementation. Further, whilst there has been modest observed improvement in quality of care in the short to medium-term in indicator areas, such as reduction in hospital admissions [23], decrease in short-term mortality [24], and modestly improved quality of care for chronic diseases [25], the long-term impacts on costs, practitioner behaviour, and population health outcomes still need evaluating. Going forward, direct extraction of data on health benefits and baseline target performance from general practices, rather than basing these on trial evidence, would allow the economic subgroup to make more robust and realistic decisions about the effectiveness and cost-effectiveness of specific indicators within the pay-for-performance scheme.

Finally, the recommendations for new QOF pay-for-performance indicators are being developed in a climate of financial restraints. Across England in 2011 to 2013, practices achieved the upper payment thresholds for 87 per cent of all clinical indicators. [26] This level of achievement is greater than policy makers had anticipated. To reduce resource implications, the English Department of Health has increased payment thresholds and is reducing point allocation. [27] As a consequence, although economic analysis may show that an indicator may be cost-effective up to a very high number of QOF points, it is not feasible to recommend those points. However, there may be other opportunities to adopt these indicators: commissioners at local and regional level are already incentivising certain clinical activities, in some cases using QOF-like pay-for-performance schemes.[28] Commissioners may also consider clinical areas, identified as highly cost-effective, appropriate to incentivise locally over and above the national QOF scheme. This may be particularly relevant for indicators that have been shown to be cost-effective up to much higher levels of QOF points than would be feasible to be awarded within the finite and reducing budget in the national QOF scheme.

In conclusion, the reduced level of funding available through the national pay-for-performance quality improvement scheme means economic appraisal is more important than ever, to

ensure that the most cost-effective indicators are incentivised among those which are still retained in the scheme.

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The final version of the document is available at http://hsr.sagepub.com/

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Table 1: QOF domains, indicators and points for 2015/16

	Number of	Points
Clinical domain		
Atrial fibrillation	3	29
Secondary prevention of coronary heart disease	4	35
Heart failure	4	29
Hypertension	2	26
Peripheral arterial disease	3	6
Stroke and Transient Ischemic Attack	5	15
Diabetes mellitus	11	86
Asthma	4	45
Chronic obstructive pulmonary disease	6	35
Dementia	3	50
Depression	1	10
Mental health	7	26
Cancer	2	11
Chronic kidney disease	1	6
Epilepsy	1	1
Learning disability	1	4
Osteoporosis: secondary prevention of fragility fractures	3	9
Rheumatoid arthritis	2	6
Palliative care	2	6
Total	**65**	**435**
Public health domain		
Cardiovascular disease – primary prevention	1	10
Blood pressure	1	15
Obesity	1	8
Smoking	4	64
Cervical screening	3	20
Contraception	2	7
Total	**12**	**124**

Table 2: Clinical and Public Health QOF indicators with high points allocations (2015/16)

Indicator	**Points**
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	20
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	20
DEM004. The percentage of patients diagnosed with dementia whose care plan has been reviewed in a face-to-face review in the preceding 12 months	39
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	25
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	25

Table 3: Variables required in cost-effectiveness analysis of QOF indicators

Variables
- The eligible population; - The achievement rate if the indicator is not incentivised; - The incremental cost of delivering the indicator; - The incremental benefits, in terms of health gains, resulting from introduction of the indicator; - The proposed QOF payment for incremental levels of achievement.

Table 4: Cost-effectiveness of new proposed 2012-2013 pilot indicators

Clinical area	Indicator description	Indicator to be assessed for cost-effectiveness?	Was the indicator cost-effective?
COPD	The percentage of patients with COPD and Medical Research Council (MRC) Dyspnea Scale ≥ 3 at any time in the preceding 15 months, with a record of a referral to a pulmonary rehabilitation program (excluding patients on the palliative care register).	Yes – the indicator refers to a specific course of action taken to address the disease.	Not at a QALY value of £20,000, with a baseline value of 5 points.
MI/Heart Failure	The percentage of patients with heart failure (diagnosed after 1/4/2011) with a record of referral for an exercise based rehabilitation program.	Yes – the indicator refers to a specific course of action taken to address the disease.	Yes, to upper bound of 10 points.
MI/Heart Failure	The percentage of patients with an MI within the last 15 months with a record of a referral to a cardiac rehabilitation program.	Yes – the indicator refers to a specific course of action taken to address the disease.	Yes, to upper bound of 10 points.
Diabetes: Erectile Dysfunction	The percentage of male patients with diabetes who have a record of erectile dysfunction with a record of advice and assessment of contributory factors and treatment options in the preceding 15 months.	Yes – the indicator refers to a course of action that may have been taken to address the condition.	Yes, to upper bound of 10 points.

Tightly linked measures	The percentage of patients with Type 2 diabetes aged 40 years and over with successful lipid management defined as either: a) last recorded cholesterol in the preceding 12 months ≤ 4.0mmol/l b) last recorded cholesterol in the preceding 12 months > 4.0mmol/l and commenced on a moderate dose generic statin within 90 days of cholesterol recording c) last recorded cholesterol in the preceding 12 months > 4.0mmol/l and generic statin dose increased within 90 days of cholesterol recording d) or, last recorded cholesterol in the preceding 12 months > 4.0mmol/l and cholesterol lowering therapy changed to a different drug within 90 days of cholesterol recording.	Yes – parts b), c) and d) of the indicator refers to therapy so cost effectiveness data is likely to be available.	Yes, to upper bound of 30 points.
Hypertension	The percentage of patients under 80 years old with hypertension in whom the last recorded blood pressure (measured in the preceding 9 months) is 140/90 or less.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant interventions.	Yes, to upper bound of 80 points.

Hypertension	The percentage of patients aged 80 years and over with hypertension in whom the last recorded blood pressure (measured in the preceding 9 months) is 150/90 or less.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant interventions.	Yes, to upper bound of 15 points.
Rheumatoid arthritis	The percentage of patients with rheumatoid arthritis aged 30-84 years who have had a cardiovascular risk assessment using a tool adjusted for RA in the preceding 15 months (with appropriate exclusions). NOTE: currently the only CVD risk assessment tool which adjusts for RA is QRISK2.	Yes – the indicator refers to a risk assessment, upon which treatment and therefore improvement could potentially be based.	Yes, to upper bound of 10 points.
Hypertension	The percentage of patients with a new diagnosis of hypertension after 1 April 2012 whose diagnosis was confirmed following ambulatory blood pressure monitoring (ABPM).	Yes – the indicator indicates confirmation of a diagnosis that should lead to treatment or therapy.	Yes but only 23 points were justified at £20,000 per QALY.
Dementia care	The percentage of care givers (of a person with dementia) who have had an assessment of their health and support needs in the preceding 12 months.	Yes – the indicator refers to an assessment which may lead to support or treatment being provided.	Yes, to upper bound of 15 points.

CHD	The percentage of patients under 80 with coronary heart disease in whom the last blood pressure reading (measured in the preceding 15 months) is 140/90 or less.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant interventions.	Yes, to upper bound of 20 points.
Peripheral Arterial Disease	The percentage of patients 80 and over with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 15 months) is 150/90 or less.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant interventions.	Not at a QALY value of £20,000, with a baseline of 5 points.
Peripheral Arterial Disease	The percentage of patients under 80 with a history of PAD whose last recorded blood pressure reading (measured in the preceding 15 months) was 140/90.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant interventions.	Yes, to upper bound of 10 points.
Stroke	The percentage of patients under 80 with a history of stroke or TIA in whom the last blood pressure reading (measured in the preceding 15 months) is 140/90 or less.	Yes – the indicator refers to an intermediate outcome for which there is likely to be economic evidence around relevant	Yes, to upper bound of 15 points.

		interventions.	

Table 5: Reasons cost effectiveness of new proposed 2012-2013 pilot indicators not viable

Reason cost-effectiveness analysis not appropriate	**Example of Indicator**
Indicator relates to an assessment to inform treatment options rather than to intervention so unlikely to yield robust evidence around cost effectiveness.	The percentage of patients with depression who have had a bio-psychological assessment by the point of diagnosis.
Indicator relates to follow-up care and monitoring so unlikely to yield robust evidence around cost effectiveness.	The percentage of patients with recurrent or distant metastatic cancer diagnosed within the preceding 18 months who have a review recorded as occurring within 3 months of the practice receiving confirmation of the diagnosis.
Indicator only relates to diagnosis so unlikely to yield robust evidence around cost effectiveness.	The percentage of patients, 5 years and over, newly diagnosed as having asthma from 1 April 2011 in whom there is a record that the diagnosis of asthma has been made supported by the current BTS-SIGN guidelines.
Indicator refers to support and advice. There is uncertainty about whether the advice would lead to improved clinical outcomes.	The percentage of women with diabetes under the age of 55 years who have a record of information and counselling about contraception, conception and pregnancy in the preceding 15 months.