UNIVERSITY OF BIRMINGHAM AND UNIVERSITY OF YORK HEALTH ECONOMICS CONSORTIUM

(NICE EXTERNAL CONTRACTOR)

Development feedback report on piloted indicator

QOF indicator area:	Hypertension
Pilot period:	1st April 2012 – 30th September 2012
Potential Output:	Recommendations for NICE menu

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Background

As part of the NICE-managed Quality and Outcomes Framework (QOF) process, all clinical and health improvement indicators are piloted, using agreed methodology, in a representative sample of GP practices across England, Scotland, Wales and Northern Ireland.

The aim of piloting is to test whether indicators work in practice, have any unintended consequences and are fit for purpose.

Piloted indicator

1. The percentage of patients with a new diagnosis of hypertension after 1 April 2012 whose diagnosis was confirmed following ambulatory blood pressure monitoring (ABPM).

Number of practices participating in cohort 6: 39

Number of practices withdrawing from the pilot: 3

Number of practices where staff were interviewed: 36

(39 GPs, 8 Practice Nurses, 1 Nurse Practitioner, 1 Community matron, 22 Practice Managers and 3 Administrative staff = 74 primary care staff most involved in the QOF pilot)

Assessment of clarity, reliability, feasibility, acceptability and implementation

Clarity

- Indicator wording as stated, rated as clear and unambiguous by the experts and frontline GPs.
- The HSCIC has confirmed that they have been able to write Business Rules (and/or an Extraction Specification).

Reliability[1] and feasibility

Indicator	**Feasibility**	**Reliability**	**Implementation**
1	**2**	**2**	**2**
GPES conversion			**3**

Acceptability

Acceptability indicator 1

Twenty three of the pilot practices (63.9%) felt that this indicator should be considered for inclusion in QOF, with a further nine practices (25%) being ambivalent. Four practices (11.1%) did not support it being considered for inclusion.

Those practices who supported this indicator being considered for QOF noted that it was easy to do and was consistent with NICE guidelines. Many practices had been using ABPM to diagnose hypertension for some time although not necessarily consistently. Participating in the pilot prompted them to make this routine practice.

'... it is in keeping with NICE Guidelines ...' (ID36)

'... we've been doing ambulatory blood pressure monitoring for a long time ... And obviously we've not been doing it consistently in terms of absolutely newly diagnosed patients, but we do do it quite regularly ... we've obviously discussed the new guidelines for hypertension anyway and we came to the conclusion here that we were already doing it for the majority of patients who'd tolerate it.' (ID3)

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[1] HSCIC provide guidance on whether the piloted indicators are, from a business rule perspective, suitable to become 'live' indicators. A notional 'scoring' system is used:

1. No problems to implement in live with other indicators
2. Minor re-work before it can go live with other indicators
3. Major re-work but do-able without recourse to anyone outside of the process
4. Major considerations to be made before the indicator can go live - possibly need to speak to CFH / suppliers
5. Not feasible

'... we have a ABPM machine anyway and were trying to, not quite as energetically, but trying to do that sort of thing anyway with new diagnoses or confirmation of strange blood pressures or whatever. So what it did was in effect give us the chance to crystallize that we should be doing it that way and making it a policy. So actually we introduced it with no problems to us, by actually making it that hypertension would not be diagnosed without one.' (ID33)

Two practices commented that they had been able to discount hypertension as a diagnosis in some patients during the pilot who would previously have been commenced on treatment, which they viewed as positive. One practice noted the usefulness of ABPM in convincing patients of their diagnosis.

'...it's actually quite successful really, the two I've seen actually weren't hypertensive so yeah, so I've seen, I've reviewed two of them after the ambulatory and no treatment needed ... so yes it has been helpful and obviously we will carry on.' (ID25)

*'[*ABPM is] *a powerful piece of evidence and often clinches the diagnosis for them* [patients].*'* (ID29)

Four practices did not support this being included in QOF. Two of these did not have ABPM machines within the practice and had no intention of purchasing one. One thought that this indicator was too difficult to implement and one thought this should be a Directed Enhanced Service (DES).
Six practices were ambivalent about the inclusion of this indicator. Of these, three had no ABPM machine in the practice (2 referred to locally commissioned services and the other did not use ABPM to make a diagnosis), two expressed a preference for home blood pressure monitoring (HBPM) and one practice would have no problems if it was introduced but wasn't convinced it was a priority.

'Not ambulatory specifically, no. I think there should be the option of home [monitoring].*'* (ID8)

Twenty-eight practices (77.8%) had their own ABPM machines, sometimes more than one. A further two practices access local consortia commissioned services and three referred to secondary care. Three practices without their own ABPM machines reported that they made the diagnosis of hypertension based upon HBPM (2 practices) or 4 separate clinic readings with referral to secondary care ABPM services an option if necessary.

<u>Acceptability recommendation</u>

- There are barriers/ risks/ issues/ uncertainties identified from the pilot *in terms of acceptability* that in themselves may not be sufficient to prevent an indicator being recommended by the AC, but require the particular attention of the AC.

Implementation

Assessment of piloting achievement

HYPERTENSION INDICATOR 1	Baseline	Final
Number of Practices Uploading	**19**	**19**
Practice Population	**144,866**	**145,701**
New diagnosis after 1st April XXXX	**1,709**	**812**
Excluded if they do not meet Numerator criteria		
ABPMEXC date before Hypertension date	0	0
Registered in the last 3 months	40	25
Hypertension Exclusion in last 15 months	5	1
Hypertension diagnosed in last 3 months	543	391
Total Exclusions	588	417
	equals	*equals*
Hypertension Denominator	**1,121**	**395**
Hypertension Numerator	**34**	**108**
Numerator as % of Denominator	**3.03%**	**27.34%**

Baseline data was extracted over a 12 month period whereas final data was extracted for the 6 months of the pilot only. Practice achievement increased by 24% across all practices during the pilot period. Twelve practices actively participated in the indicator with individual practice achievement at the final data extraction point ranging from 7 – 70% suggesting that this is a feasible and acceptable activity for practices to be undertaking.

Changes in practice organisation

Specific comments indicator 1

The majority of practices were doing this prior to the pilot although not necessarily routinely. Participating in the pilot gave them the opportunity to make this standard practice and to amend templates.

Two practices reported that their consortia had set up a local referral service rather than investing in machines for each practice.

Resource utilisation and costs

Specific comments indicator 1

One practice commented that this could be time consuming, but the majority of practices reported that this was straightforward to do.

Some practices may also need to purchase ABPM machines. The NICE costing template estimates a unit price of £1016[2].

Barriers to implementation

Specific comments indicator 1

The main potential barrier to implementation was lack of access to ABPM machines. As reported above 77.8% of practices had their own ABPM machines, with a further two practices accessing local consortia commissioned services.

Patient acceptability was also identified as a potential barrier to implementation. This was explored during piloting. Reported patient acceptability varied between practices with most practices reporting no or few refusals through to one practice[3] reporting that 50% of their patients preferred HBPM. Some practical issues were noted, such as patients being reluctant to wear them to work. One practice worked around this by fitting the ABPM machine on a Friday evening and instructing the patient as to its removal 24 hours later. As reported, one practice reported that the ABPM results were useful in demonstrating their diagnosis to patients and convincing them to start treatment.

Practices who expressed a preference for HBPM and had invested in HBPM machines reported greater numbers of patients refusing ABPM.

Assessment of exception reporting

Specific comments indicator 1

Pilot practices did not express concerns about exception reporting, except where patients refused ABPM. Most practices reported that they would initiate treatment in patients with severe hypertension[4] without performing an ABPM. The number of affected patients was small and this was not identified as an exception reporting issue.

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[2] NICE (2011) *CG127: Hypertension Costing report* NICE: London.
http://www.nice.org.uk/nicemedia/live/13561/56016/56016.pdf

[3] A 6 partner practice of 11,000 patients in a market town.

[4] NICE Guidance CG127 defines severe hypertension as a clinic systolic blood pressure of 180 mmHg or higher or a clinic diastolic blood pressure of 110 mmHg or higher.

Likewise, a diagnosis of hypertension being made by secondary care was not identified as an exception reporting issue. This tended to occur in one of two ways. Firstly, the patient was admitted with a cardiovascular event and discharged on antihypertensive medication. Or secondly, an elevated outpatient clinic reading was recorded. This usually occurred as part of pre-operative assessment and the patient was referred back to their GP for further evaluation.

Assessment of potential unintended consequences

Specific comments indicator 1

No specific comments.

Implementation recommendation

- There is a high degree of confidence that there are no major barriers/risks/issues/uncertainties identified from the pilot *in terms of implementation* that would preclude this indicator from being implemented.

Assessment of overlap with existing QOF indicators and potential changes to existing QOF indicators

None

Overall Recommendation

There are barriers/risks/issues/uncertainties identified from the pilot that in themselves may not be sufficient to prevent an indicator being recommended by the AC, but require the particular attention of the AC.

Appendix A: Indicator details

Provisional approval for the development of indicators on ambulatory blood pressure monitoring (ABPM) for the diagnosis of hypertension was given by members of the Advisory Committee in November 2011 to reflect recommendation 1.2.3 in CG127.

NICE clinical guideline 127 recommendation 1.2.3

1.2.3: If the clinic blood pressure is 140/90 mmHg or higher offer ambulatory blood pressure monitoring to confirm the diagnosis of hypertension

Three indicators were developed to reflect NICE recommendation 1.2.3 from CG127 and two to reflect recommendation 1.2.4 for discussion with three topic experts (Professor Richard McManus, Professor Bryan Williams and Dr Terry McCormack) on 28th November 2011. The issues discussed in relation to these indicators and the outcomes of these discussions are detailed in Table 1.
The final indicator taken forward for discussion with frontline GPs was:

1. The percentage of patients with a new diagnosis of hypertension after 1 April 2012 whose diagnosis was confirmed with ABPM.

Table 1: Hypertension diagnosis indicators

NICE recommendation	Potential indicator	Questions/ issues for expert group discussion	Outcome of expert discussion
1.2.3: If the clinic blood pressure is 140/90 mmHg or higher offer ambulatory blood pressure monitoring to confirm the diagnosis of hypertension	The percentage of patients with a new diagnosis of hypertension after 1 April 20XX whose diagnosis has been confirmed with ABPM. The percentage of patients with hypertension whose diagnosis has been confirmed using ABPM. The percentage of patients aged 45 years	Any indicator related to method of diagnosis is potentially redundant as achievement should be in the 90-100% range. The diagnostic test should be a pre-requisite to the diagnosis not an optional extra which attracts additional funding. Where these indicators exist they have tended to be earmarked for retirement on the basis of poor discriminatory value, high achievement and coding problems (see CHD13). Extends target population to new and existing diagnoses. How feasible is this? Presumably patients would need to stop any existing treatment for ABPM to be performed? Do we need to exclude patients with AF and other pulse irregularities? Should we include detail of the standard for ABPM performance in terms of minimum numbers of	This indicator was agreed and taken forward with the specification of year as 2012. There remains the issue of excluding patients with AF, to be discussed with front line GPs. We will also need to explore the availability of ABPM machines. The other two indicators were deemed infeasible for the following reasons: It was agreed that a diagnosis indicator had to be prospective and not retrospective, which would unnecessarily add to workload as well as cause angst in patients being called back into surgery. There was some discussion around revising the indicator to include

	and over, whose last recorded BP was 140/90mmHg or greater in the preceding 5 years who have been offered ABPM to confirm/ exclude hypertension.	recordings etc? Builds upon existing BP monitoring indicators RECORDS 11 and 17. Requires diagnostic test to be used to confirm/ refute a diagnosis. Views on age range? Should there be an upper age limit? Should a single BP reading of 140/90 trigger ABPM? Would need to exclude those with a pre-existing diagnosis of hypertension. Would need to exception report those unable to tolerate ABPM.	'suspected' hypertension, but this type of indicator cannot be supported in QOF. There was some discussion about the definition of a (sustained) raised blood pressure and the criteria for opportunistic measurement. It was agreed that this was difficult to define according to NICE guidance and difficult to measure in terms of QOF.
1.2.4: If a person is unable to tolerate ABPM, home blood pressure monitoring is a suitable alternative to confirm the diagnosis of hypertension.	The percentage of patients with a new diagnosis of hypertension after 1 April 20xx unsuitable for ABPM whose diagnosis has been confirmed with HBPM. The percentage of	Need to be able to specify a target population. Presumably patients exception reported from ABPM on the grounds of 'unsuitability' but without AF or other pulse irregularities. Assumes ABPM and HBPM are equivalent in terms of diagnostic value – how accurate is this assumption? Do we need to add the detail of how many measurements	These two indicators were not taken forward because: ABPM is the preferred diagnostic test. Giving equal weight in an indicator to ABPM and HBPM may be interpreted by practices as them being of equal diagnostic value. An indicator which focused upon the use of home monitoring in those patients unsuitable for

	patients with a new diagnosis of hypertension after 1 April 20xx whose diagnosis has been confirmed using ABPM or HBPM.	should be used to confirm a diagnosis? How does this tend to be recorded in general practice? If a referral is made to secondary care are all the measurements given in the results or just confirmation or otherwise of the diagnosis?	ABPM would suffer from a poorly defined target group, which again would be subject to practice variation in the interpretation of 'unsuitable'. Finally, as ABPM is performed using a programmable monitor the quality standard described in recommendation 1.2.9 should be achievable, given a concordant patient. Concordance with the quality standard for HBPM given in recommendation 1.2.10 would be more difficult, if not impossible, to confirm.

Focus group discussion with frontline GPs

A focus group was held on 8th December 2011 with 12 front line GPs recruited via the West Midlands Faculty of the Royal College of General Practitioners. They participated on a voluntary basis. The majority were male (female = 3), aged between 30-55 years and included three QOF Assessors. There were also two representatives from PRIMIS+ at the meeting and a representative from NICE. Prior to the meeting the GPs were provided with written detail of the proposed indicators and the underpinning NICE recommendation/ quality standard. This included details of specific issues which we wanted them to discuss in relation to each indicator. The purpose of this meeting was to consider the clarity, feasibility and validity of the indicators, to suggest improvements where

possible and to highlight specific issues that would need to be explored during piloting. Each indicator was discussed in turn.

Hypertension diagnosis

1. *The percentage of patients with a new diagnosis of hypertension after 1 April 2012 whose diagnosis was confirmed with ABPM.*

There was agreement that this should progress to piloting but with a slight wording change to ensure that the ABPM was performed prior to the hypertension diagnosis being entered in the patient record.

Critical areas that need to be considered during piloting are how to manage patients with severe hypertension who should be started on treatment prior to ABPM, how to manage patients diagnosed in secondary care and whether to exclude patients with AF. All these issues are addressed in CG127. Other issues which will need to be considered included access to ABPM monitors and the number of patients who require a repeat ABPM.

There was some discussion as to the use of HBPM and whether it was an equivalent diagnostic approach to ABPM. NEC reiterated that this was not the case and that the problems associated with monitoring HBPM had been discussed with the topic experts.

Indicators to be progressed to piloting

Text in red indicates wording changes made as a result of the focus group discussion.

Hypertension diagnosis

The percentage of patients with a new diagnosis of hypertension after 1 April 2014 whose diagnosis was confirmed following ABPM.