University of Birmingham and University of York Health Economics Consortium (NCCID)

Development feedback report on piloted indicators

QOF indicator area: Pulse monitoring

Pilot period: 1st October 2016 – 28th February 2017

Potential output: Recommendations for NICE menu

Contents

Summary of recommendations

Indicator

1. The percentage of patients registered at the practice aged 65 years and over who have been diagnosed with one or more of the following conditions: hypertension, diabetes, CKD, PAD, stroke/TIA, COPD or RA who have had a pulse rhythm assessment in the preceding 12 months.

Acceptability recommendation:

Band 1: >70% of practices support inclusion.

Implementation recommendation:

Band 2: minor problems identified during piloting or anticipated to arise in wider implementation.

Cost effectiveness recommendation:

See summary report.

Issues to consider:

Issue	Detail	Mitigating activity
Variable approaches to recording pulse monitoring.	Some practices recorded pulse rhythm as free text in the rather than being read coded. Practice was inconsistent within practices.	Clear guidance surrounding the recording of pulse monitoring on clinical systems and ensure all clinical staff who measure the pulse are aware of this.
Evidence base surrounding the clinical, cost and time effectiveness of this indicator	Three practices stated that this indicator should be viewed as a screening programme for which clinical and cost effectiveness evidence was lacking. It was felt that this indicator should be reviewed by the National Screening Committee.	
Clinical skills in pulse measurement	A small number of practices expressed potential training needs in pulse measurement for some clinical staff such as HCA's.	
High workload	Most practices acknowledged the workload involved. Although this was not generally viewed as a barrier to implementation, some practices felt that this was likely to be significant.	

Background

As part of the NICE-managed Quality and Outcomes Framework (QOF) process, all clinical and health improvement indicators are piloted, using an 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.

Practice recruitment

Number of practices recruited:	29
Number of practices dropping out:	2
Number of practices unable to interview:	0
Number of practices interviewed:	27

[26 GPs, 6 practice nurses, 9 practice managers and 1 health care assistant = 42 primary care staff]

All percentages reported have been calculated using the 29 practices recruited to the pilot as the denominator.

Piloted indicators

1. The percentage of patients registered at the practice aged 65 years and over who have been diagnosed with one or more of the following conditions: hypertension, diabetes, CKD, PAD, stroke/TIA, COPD or RA who have had a pulse rhythm assessment in the preceding 12 months.

Assessment of clarity, reliability, feasibility, and acceptability

Clarity

No concerns were identified during piloting or the GP focus group.

Reliability and feasibility

We were able to develop business rules to support this indicator.

Issues to be resolved prior to implementation:

Issue	Detail	Mitigating activity
Exception reporting	Lack of indicator specific exception codes	Codes would need to be requested to support this indicator.

Acceptability

Twenty-one practices (72.4 %) were supportive of this indicator being considered for QOF. Most reported that pulse rhythm assessments were already being undertaken in patients with these conditions, either regularly or on an opportunistic basis. Two practices stated that their local CCG already had a monitoring scheme in place for this. Pulse assessment was taken during long term condition annual reviews, NHS health checks, flu vaccination clinics, and new patient registrations. Practices who did not already do this generally described it as something they could easily add to their annual review templates. Two practices felt that adding this area to QOF would ensure all practices do this.

"This is also already on our PCQF (Primary Care Quality Framework), so that's something we were already doing." (PM, Practice ID26)

"I think historically practices try to look at opportunistic ways, so new patient registrations, involve the Healthcare Assistants checking the pulse, and whatever patient contacts are made with the Healthcare Assistants and Nurses, again the pulse is checked as a matter of routine as part of the chronic disease reviews." (GP, Practice ID20)

"We've been doing it for a while, so if it came into QOF, I think it would be more pertinent. It would be there. The practice will have to do it...The only way you're going to get it going" (GP, Practice ID10)

Most practices felt these groups were at a high risk of developing atrial fibrillation (AF) and acknowledged the potential of pulse rhythm assessment to identify new cases. Some reported that they regularly picked up new cases of AF in this way. AF was described as under diagnosed and regular pulse monitoring was considered useful for improving this. Early identification was acknowledged as important in order to initiate a discussion regarding anticoagulation prescribing as soon as possible with the overall benefit of stroke prevention.

"It would help to screen for heart rate conditions, such as atrial fibrillation and to pick it up and maybe treat patients and prevent patients having complications, such as strokes." (GP, Practice ID26)

"I think AF is a ticking time bomb for that patient, if we can do something to diagnose early and do something about it, then it would be a good idea, but it does take time though. I know checking the

pulse is only two minutes or one minute, but actually the counselling, then follow, if you find an irregular pulse, follow-up" (GP, Practice ID07)

Almost all practices who chose to include this indicator felt all of the listed conditions should be included. The workload involved was described as high due to the number of conditions included. Although this was not generally viewed as a barrier to inclusion, this perspective was not universal. Two practices stated that their list of CKD patients was very large, with one of them suggesting that this condition should be removed from the indicator. Two practices did not currently carry out pulse monitoring for COPD patients and questioned whether they were at increased risk of AF, however they were happy for it to be included. One practice also stated they did not currently do this for rheumatoid arthritis patients. A small number of practices also suggested the addition of coronary heart disease and ischaemic heart disease patients to this indicator due to their high risk of AF.

"I would add in heart disease...Well, they're going to have an irregular pulse for all sorts of reasons, not necessarily AF" (PN, Practice ID15)

"Clearly it's a large volume of patients...We did do that but took more of an opportunistic view to it as well and we simply used manual pulse as our measurement because it was simple and easy to do in the surgery with them sitting beside you." (GP, Practice ID14)

All practices described taking a manual pulse as an initial measurement then subsequently using an ECG machine if there were irregularities. All had access to an ECG machine in their practice with only one stating that this was currently under review and they may need to refer patients to the hospital for an ECG over the next few years. However, some practices stated that they utilised the hospital ECG service in non urgent situations such as this. The reasons for this was to manage practice workload and to have a cardiologist to interpret the results. The introduction of other electronic methods such as touch screens were also discussed by a small number of practices.

"We do ECGs in practice. At the moment we do. In future depending on the funding we may have to cut down...We'll have to send them to the hospital...Not this year, no, but over the next two or three years because they're tightening the screws from everywhere." (GP, Practice ID04)

"And we have a little machine which can do a rhythm strip without actually wiring them up. You just put your thumbs on it. If I don't want a full ECG, you can just check their rhythm by putting on that." (GP, Practice ID32)

One particular issue identified was recording on clinical systems, with some stating that this was often added as free text in to the patient notes rather than being Read coded. Two practices expressed concerns that they may be penalised for this. This was described as a potential issue due to the various staff who may be taking pulse measurements including GPs, nurses and HCA's where a cultural shift may be required to ensure everyone was recording this in the same way.

"It's often free texted, so I can see it being, because of the numbers of people…it's a good indicator to focus minds and then have a systematic approach to how you are recording the information, I think it will take a bit of cultural change in shift and I'm not convinced across the different clinical systems, that they'll all do it the same" (GP, Practice ID23)

"It's always recorded free text and not necessarily the codes that you were looking for. So I did them, I did a retrospective audit and changed the codes to the ones you were looking for." (PM, Practice ID27)

Only two practices expressed concerns over potential training issues surrounding adequate measurement and it was acknowledged there may be differences in clinicians expertise in this area.

"I think some people are more comfortable with it than others, but most chronic disease management is going to be done by nurses so you'd have to make sure that nurses were confident about picking up atrial fibrillation either manually or you'd have to give them a piece of equipment so they could do it that way." (GP, Practice ID25)

Only one practice (3.4%) was unsure as to whether this was suitable for inclusion in QOF. Pulse monitoring was viewed as an important element of care for these patients but that if it was implemented as a standalone indicator it may become a tick box exercise with limited consideration of the wider clinical context of individual patient care.

"Probably as just part of the annual review, I wouldn't say it needs to be something separate...I just think it's just these boxes that we just get ticks without thinking about it and you know there's reasons for you doing it and if people are going to do it to tick a box then you're not really putting it in clinical context." (GP, Practice ID01)

Five practices (17.2%) were not supportive of this indicator being considered for QOF. Three of these practices viewed the activity described in the indicator as a screening programme. As such, they felt that this activity should be endorsed by the National Screening Committee. There were concerns about the appropriateness of this being part of QOF and it was felt that it should be implemented as a fully funded screening programme if an evaluation of the evidence showed it to be beneficial.

"If you want to screen half the adult population, you should actually fund that as a screening programme, rather than thinking that this is another thing that people can do within the allocated time that we've got". (GP, Practice ID29)

"Just before this interview I had a quick check on the National Screening Council's recommendations and it's not something that's recommended as something you should be screening for. It's not recommended because it's not clear that those identified at risk through screening would benefit from early diagnosis. So if there's no evidence for benefit for a screening system then you shouldn't be setting up a screening system." (GP, Practice ID05)

"You're entering into the realms of screening and that would be my concern about this is this is really a screening thing yeah so is that something we should be doing as part of QOF or not. I would have thought it wouldn't sit within QOF it should be part of bigger national screening programme but that would need to be, because obviously with all screening programmes you have to work out what's the pick up rate, is it cost effective….My understanding is that evaluation hasn't really been done yet." (GP, Practice ID25)

Although the high workload of this indicator was acknowledged by most practices, due to the clinical benefits of this care it was generally not viewed as a barrier to implementation. However, this was not a universal perspective and some practices were concerned about low achievement due to the high workload and inefficient read coding. They felt it would be better for this area to be separated and added in with indicators for each of the individual conditions.

"... I think if it is an indicator you need to have quite low percentage achievement because it's going to be big numbers...people would have had a pulse rate measured but actually coding their rhythm is going to be difficult to achieve getting GPs to record stuff that they automatically do and just don't think to code it." (GP, Practice ID18)

Assessment of implementation

Assessment of piloting achievement

	Baseline	Final
Number of practices uploading	14	14
Practice population (from NHAIS)	118,341	119,968
Register	11,416	11,824
Excluded		
Rule 1: patients with atrial fibrillation	1,409	1,511
Exception reported		
Rule 3: recent registration	96	77
Rule 4: recent diagnosis	28	34
Total exceptions	**1,533**	**1,622**
Exceptions as a % of eligible population	**13.43**	**13.72**
Denominator	9,883	10,202
Numerator	4,757	2,948
Numerator as a percentage of denominator	**48.13**	**28.90**

The fall in achievement during the pilot period is probably due to the different time periods over which achievement was measured. The baseline extraction covered 12 months of practice activity whereas the final extraction only included activity undertaken during the pilot. Given the different timescales involved it is likely that recording of this activity remained constant before and during the pilot.

Changes in practice organisation

Practices noted that there may need to be changes in practice organisation surrounding the recording of pulse monitoring, where current recording practices are inconsistent within and between practices.

Resource utilisation and costs

Workload implications were identified in relation to the high number of patients on the registers for the conditions listed in the indicator. However, taking a pulse measurement and Read coding this was also viewed as a task that could be completed quickly. As written, the target population incorporates approximately 10% of the registered population (range 3.6% - 14.8%).

Practice workload could also increase due to the need to perform additional numbers of ECGs within the practice. There may also be an impact upon secondary care if practices increase the numbers of referrals to ECG departments. Some practices expressed a preference for referral and a cardiology reported ECG in these circumstances.

Barriers to implementation

One main barrier to implementation is the differences in recording of pulse rhythm both between practices and between clinical staff within practices. Most reported that this was not recorded consistently and may be added as free text to patient notes. Practices would need to ensure that all staff taking pulse assessments Read code this correctly.

Some potential training needs in pulse measurement were identified for some clinical staff such as HCA's.

Assessment of exception reporting

The main reason for patients being excluded from the denominator was a pre-existing diagnosis of AF, which accounted for over 90% of exception reporting during the pilot. However, it is likely that exception reporting would increase during implementation as we were unable to account for discretionary exception reporting e.g. patient unsuitable/ informed dissent during the pilot due to a lack of suitable Read codes.

Assessment of potential unintended consequences

No potential unintended consequences were identified in relation to performing an assessment of pulse rate and rhythm. There are however potential unintended consequences to any screening programme.

Assessment of overlap with and/or impact on existing QOF indicators

There are no related existing QOF indicators.

Suggested amendments to indicator wording

Some practices suggested that patients with coronary heart disease and ischaemic heart disease should be included in this indicator due to their increased risk of atrial fibrillation.

Appendix A: Practice recruitment

We planned to recruit 34 practices in England and 2 in each of the Devolved Administrations. English practices were to be representative in terms of practice list size, deprivation and clinical QOF score. Given the limited variability in clinical QOF score we excluded practices with a score of ≤ 10th centile. Practice list size and IMD scores were divided into tertiles and a 3x3 matrix created with target recruitment numbers for each cell. These are detailed in the table below.

	List size		
IMD Score	Low	Medium	High
Low	3	4	5
Medium	3	4	4
High	4	4	3

As previously presented to the Committee, practice recruitment has been extremely challenging. At the beginning of this pilot we had recruited 28 practices in England and 3 in the Devolved Administrations (2 in Northern Ireland, 1 in Scotland). Practice recruitment by strata is shown in the table below with cells in bold where we failed to meet target numbers. We also over recruited in one strata which is shown by the numbers in the table. Two practices in England withdrew from the pilot prior to it starting reducing the total numbers of pilot practices to 26 in England, 2 in Northern Ireland and 1 in Scotland.

	List size		
IMD Score	Low	Medium	High
Low	**2/3**	**3/4**	**1/5**
Medium	3/3	4/4	**1/4**
High	5/4	4/4	3/3

Appendix B: Indicator development

Following the June 2016 Advisory Committee meeting the NCCID was asked to develop new indicators for anticoagulant monitoring in patients with atrial fibrillation.

GP focus group

A focus group to discuss potential indicators was held on 20th July 2016 where all potential indicators were discussed. Focus group attendees were volunteers recruited via our database of GPs who had responded to previous invitations. From the volunteers we purposively selected 15 GPs to attend the focus group to try to ensure a balance of men and women, representation from minority ethnic groups and a range of ages.

Of those invited, 14 attended the meeting. Nine (60%) were male. Approximately one third of the participants described themselves as being of white ethnicity (n=5). Participants were reimbursed £250 for their attendance.

Anneka Patel and Shaun Rowark attended on behalf of NICE. Gemma Ramsey and Ross Ambler attended on behalf of NHS Digital.

One indicator was presented to the group in relation to annual pulse monitoring in patients with specified long term conditions. The consensus was that this seemed like a reasonable idea and was already being funded by some CCGs. However, some participants were more sceptical and queried the purpose of the indicator.

One indicator was progressed to piloting.

Indicator wording as piloted

1. The percentage of patients registered at the practice aged 65 years and over who have been diagnosed with one or more of the following conditions: hypertension, diabetes, CKD, PAD, stroke/TIA, COPD or RA who have had a pulse rhythm assessment in the preceding 12 months.

Appendix C: Acceptability and Implementation recommendations

Acceptability recommendations

One of the following recommendations is made based upon reported acceptability of the indicator to pilot practices.

Band 1: ≥70% of practices support inclusion

Band 2: 60-69% of practices support inclusion

Band 3: 50-59% of practice support inclusion

Band 4: <50% of practices support inclusion.

Implementation recommendations

One of the following recommendations is made based upon an assessment of issues or barriers to implementation reported during piloting.

Band 1: no problems identified during piloting or anticipated to arise. Indicator terms precisely defined.

Band 2: minor problems identified during piloting or anticipated to arise in wider implementation. Problems resolvable prior to implementation through either 1) an amendment to indicator wording, 2) an amendment to the business rules and/or 3) by giving further clarification of indicator terms in associated guidance.

Band 3: major problems identified during piloting or anticipated in wider implementation. Possibly resolvable through the actions described in band 2 but indicator requires further development work and/or piloting.

Band 4: major problems identified during piloting. Not immediately resolvable. Indicator not recommended for wider implementation.