

# **NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE**

## **QUALITY AND OUTCOMES FRAMEWORK (QOF) INDICATOR DEVELOPMENT PROGRAMME**

### **Cost impact statement: Peripheral arterial disease**

**QOF indicator area:** Peripheral arterial disease

**Date:** July 2013

#### **Indicators**

NM67: The percentage of patients aged 79 or under with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 12 months) is 140/90 mmHg or less

#### **Introduction**

This report covers 1 new indicator relating to peripheral arterial disease (PAD). The indicator is part of the NICE menu of potential Quality and Outcomes Framework (QOF) indicators for 2014/15, following the recommendations of the independent QOF advisory committee in June 2013. The indicator has been piloted as part of the NICE QOF indicator development process.

This report considers the likely cost impact of incentivising the interventions associated with the proposed indicator in terms of the number of additional interventions provided and the cost of each intervention. Costs to NHS commissioners are outlined where relevant, along with the cost of additional activity at general practices.

The QOF already has a blood pressure target indicator for people with PAD of all ages:

PAD002: 'The percentage of patients with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less.'

The rationale for the current indicator, PAD002, is to address blood pressure control as a risk factor in the treatment of cardiovascular complications of arteriosclerosis.

The intent of the new indicators is to align the current QOF PAD002 indicator with the updated [NICE clinical guideline on hypertension](#), which recommends a target clinic blood pressure below 140/90 mmHg in patients under 80 with treated hypertension, and a clinic blood pressure below 150/90 mmHg in patients aged 80 and over with treated hypertension.

## **Cost implication**

### ***Number of people affected***

NICE clinical guideline 147: lower limb peripheral arterial disease estimates a prevalence rate of PAD in the over 60s of 20%. This was the only age related prevalence figure that could be found.

However, the British Heart Foundation (2006) estimates that 12.6% of people aged over 55 have coronary heart disease. This is a rate some 63% of that for those with PAD. The report also states that 6.3% of those between 16 and 74 have CHD. It has therefore been assumed that the ratio of CHD to PAD in the over 55s can be applied to the rate for those aged between 16 and 74. This suggests that the rate of PAD in people aged between 16 and 74 is approximately 10%.

Assuming this rate is the same for people under 80 and that 76.5% of the overall population is aged between 16 and 79 suggest that 7.65% are under 80 and have PAD.

Current QOF indicator CHD6 (reworded as CHD002 in 2013/14) has an underlying achievement of 90.1% for patients with coronary heart disease in whom the last blood pressure reading (measured in the preceding 15 months)

is 150/90 mmHg or less. We have assumed that this will be the same achievement rate for PAD002.

The Health Survey for England 2011 indicates the prevalence of high blood pressure (defined as blood pressure above 140/90) in 2011 was 31% among men and 28% among women. The survey identifies the proportion of adults with untreated hypertension as 14% for men and 11% for women. The report states, 'Hypertension was more common among those reporting stroke or IHD, at 60% of men and 45% of women. Those with other forms of CVD were no more likely to have hypertension than those with no CVD.'

### ***Current care***

The current QOF indicator PAD002 incentivises blood pressure management for **all** people with PAD, and has a target blood pressure of 150/90 mmHg or less.

The proposed new indicator would change the target blood pressure level for people aged 79 and under to 140/90 mmHg or less. The target for people aged 80 and over would remain the same.

### ***Proposed care***

Proposed care to achieve lower blood pressure for people aged 79 and under may include lifestyle modifications (based on advice) and antihypertensive medication, with GP (and other healthcare professional) consultations. Proposed care for people aged 80 and over would remain unchanged.

Table 1 estimates cost of implementing the indicator and uses the assumptions discussed in the number of people affected. We also assume that the impact of the indicator is to reduce the population with untreated blood pressure over 140/90 mmHg to 10% and that that an increase in treatment is a GP consultation and medication. The annual cost is calculated at £1.04 million for this element.

There is also a potential additional cost associated with smoking cessation interventions. We have assumed that of the additional people who will be

treated 20% will be smokers and will have active support to stop smoking including behavioral support and nicotine products. The annual cost for this element is £4.95 million.

**Table 1 Estimated cost of implementing indicator NM67**

	<b>Men</b>	<b>Women</b>	<b>Total</b>
Number of people aged between 18 and 79	20,816,128	20,686,932	41,503,060
% who have peripheral arterial disease	10.0%	10.0%	10.0%
Number of people who have peripheral arterial disease	2,081,613	2,068,693	4,150,306
% with blood pressure under 150/90 mmHg	90.1%	90.1%	90.1%
Number of people with blood pressure under 150/90 mmHg	1,875,533	1,863,893	3,739,426
% with blood pressure over 140/90 mmHg and under 150/90 mmHg	31%	28%	29.5%
Number of people with blood pressure over 140/90 mmHg and under 150/90 mmHg	581,415	521,890	1,103,305
% untreated	14%	11%	12.5%
Number of people with blood pressure over 140/90 mmHg and under 150/90 mmHg untreated	81,398	57,408	138,806
Assume 10% remain untreated			10%
Number of people remaining untreated			110,331
Number of additional people to be treated			28,476
Estimated cost of antihypertensive drugs per year after diagnosis			£8.61
Estimated cost of monitoring appointment with GP			£28
<b>Total cost of antihypertensive drugs and monitoring</b>			<b>£1,042,488</b>
% of additional people to be treated who smoke and choose smoking cessation support			20%
Number of additional people to be treated who smoke and choose smoking cessation support			5695
Estimated cost of smoking cessation support per annum (first year)			£870
<b>Total cost of smoking cessation</b>			<b>£4,954,739</b>
<b>Total cost impact</b>			<b>£5,997,227</b>

Pharmaceutical treatment to lower blood pressure in people with PAD is highly cost effective because of the low cost antihypertensive drugs and the high cost of health outcomes that they can avert. Based on the cost of an emergency admission for cardiac arrest (£1,955), if 3,068 cardiac arrests are avoided the cost impact of this indicator is neutral. The figure of 3,068 cardiac arrests is 10.8% of the additional people treated.

**Table 2 Reduction in cardiac arrest for indicator to be cost neutral**

Number of cardiac arrests avoided	3,068
Cost of emergency admission for cardiac arrest	£1,955
<b>Total costs avoided</b>	<b>£5,997,227</b>

The cost impact does not take into account QOF indicator HYP003, the percentage of patients aged 79 or under with hypertension in whom the last blood pressure reading (measured in the preceding 9 months) is 140/90 mmHg or less. The cost impact of HYP003 is likely to include some of the identified population above so this will further reduce the cost impact of the indicator.

### ***Resource impact***

The resource impact of implementing indicator NM67 is estimated to be £6.00 million. However the reduction in future high-cost outcome events for the additional population being treated is likely to reduce the cost impact. The total resource impact doesn't take account of HYP003, which will include some of the identified population above and therefore further reduce the cost impact.

### ***Sensitivity analysis***

If the percentage of people with PAD and have blood pressure over 140/90 mmHg who remain untreated is varied between 5% and 11%, the estimated costs vary from £17.62 million to £3.67 million.

If the percentage of the additional people to be treated who smoke and choose smoking cessation support is varied between 10% and 50%, the estimated costs vary from £3.52 million to £13.43 million.

## Conclusions

The estimated initial cost impact of indicator NM67 is £6.00 million. It is anticipated this cost impact will be reduced by a decrease in high cost outcome events for this population and that some of the eligible population above will already be identified in the cost impact of HYP003.

## Related QOF indicators

Current QOF indicator	Numerator	Denominator	Underlying achievement (2011/12)
PAD3: (reworded as PAD002 in 2012/13). The percentage of patients with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 15 months) is 150/90 mmHg or less.	Not in QOF in 2011/12	Not in QOF in 2011/12	Not in QOF in 2011/12
PAD002: The percentage of patients with peripheral arterial disease in whom the last blood pressure reading (measured in the preceding 12 months) is 150/90 mmHg or less	Not in QOF in 2011/12	Not in QOF in 2011/12	Not in QOF in 2011/12
BP5 (replaced by HYP002 in 2013/14): The percentage of patients with hypertension in whom the last blood pressure (measured in the preceding 9 months) is 150/90 or less	5,803,370	7,285,735	79.7%
HYP002: The percentage of patients with hypertension in whom the last blood pressure reading (measured in the preceding 9 months) is 150/90 mmHg or less	Not in QOF in 2011/12	Not in QOF in 2011/12	Not in QOF in 2011/12
HYP003: The percentage of patients aged 79 or under with hypertension in whom the last blood pressure reading (measured in the preceding 9 months) is 140/90 mmHg or less	Not in QOF in 2011/12	Not in QOF in 2011/12	Not in QOF in 2011/12

## References

Health and Social Care Information Centre (2012) [QOF 2011/12 data](#) [online].

University of Birmingham (NICE External Contractor), Development feedback report on piloted indicator, 2013.

University of Birmingham and University of York Health Economics Consortium (NICE External Contractor), Health economic report on piloted indicator, 2013.

[Coronary heart disease statistics, A compendium of health statistics. \(2012 edition\).](#)

British Heart Foundation Health Promotion Research Group,  
Department of Public Health, University of Oxford

Health Survey for England 2011 – [Chapter 3 Hypertension](#)  
The Health and Social Care Information Centre