Resource impact statement

Resource impact
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Indicators

NM63: The percentage of patients with COPD and Medical Research Council (MRC) Dyspnoea Scale 3 or more at any time in the preceding 15 months, with a record of oxygen saturation value within the last 15 months.

IND101: The percentage of patients with COPD and Medical Research Council (MRC) Dyspnoea Scale 3 or more at any time in the preceding 15 months, with a subsequent record of an offer of referral to a pulmonary rehabilitation programme.

Introduction

This report covers 2 new indicators relating to chronic obstructive pulmonary disease (COPD). These indicators are part of the NICE menu of potential Quality and Outcomes Framework (QOF) indicators for 2013/14, following the recommendations of the independent QOF advisory committee in June 2012. The indicators have been piloted as part of the NICE QOF indicator development process.

This report considers the likely cost impact of incentivising the clinical interventions associated with the proposed indicators 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.

COPD accounts for approximately 30,000 deaths each year in the UK, with more than 90% of these occurring in people older than 65. COPD coexists with other diseases that share tobacco smoking as a risk factor, of which the most common are coronary heart disease and lung cancer. It is difficult to be certain of the true mortality rate from COPD. Some people die with the disease rather than because of it. Others die from causes related to COPD, but their deaths may be certified as being a result of these complications.

COPD limits a person's ability to breathe and carry out routine activities, and people can become fearful of undertaking day to day activities because of increasing shortness of breath associated with physical exertion. For people who are severely affected, COPD can result in inability to carry out routine domestic tasks and go out without help (Healthcare Commission, 2006). Infective exacerbations of the condition are common; they can result in increased GP attendance and hospital admission, and can be distressing and disruptive for patients.

There is evidence that the use of long term oxygen therapy (LTOT) improves survival in people with COPD who have severe hypoxaemia (PaO_2 below 8 kPa), and that pulmonary rehabilitation can improve outcomes for people with COPD.

Long term oxygen therapy

The NICE's guideline on COPD and quality standard recommend that people with COPD who may need LTOT are assessed in accordance with NICE guidance by a specialist oxygen service.

The need for oxygen therapy can be assessed using a number of factors, including an assessment of oxygen saturation being 92% or less when breathing air (NICE's guideline on COPD) or using pulse oximetry. Pulse oximetry provides a non-invasive estimate of arterial oxygen saturation (SaO2). Pulse oximetry allows a GP to assess a person's level of oxygen saturation and determine whether they should be referred for clinical assessment for long term oxygen therapy. Pulse oximetry is most valuable clinically as a screening tool to identify people who need referral for assessment for LTOT because it can reliably exclude people who are not hypoxaemic (SaO2 more than 92%). Pulse oximetry cannot reliably predict which people with an abnormal reading have hypoxaemia sufficiently severe to need LTOT, which is why those people need further assessment including arterial blood gas measurement to establish whether they have severe hypoxaemia. The NICE quality standard recommends referral to a specialist oxygen service for this assessment.

Pulmonary rehabilitation

The NICE guideline and quality standard on COPD recommend that people with COPD meeting appropriate criteria are offered an effective, timely and accessible multidisciplinary pulmonary rehabilitation programme.

Pulmonary rehabilitation is defined as a multidisciplinary programme of care for people with chronic respiratory impairment that is individually tailored and designed to optimise each person's physical and social performance and autonomy.

There is evidence that pulmonary rehabilitation can improve outcomes in people with COPD. NICE recommends that pulmonary rehabilitation should be offered to all those who consider themselves functionally disabled by COPD (usually MRC dyspnoea grade 3 and above).

Cost implication

Number of people affected

The NICE guideline uses data from the QOF in 2008/09, which gives the prevalence of diagnosed COPD as 1.6% in England.

Current care

COPD is the most common reason for emergency admission to hospital as a result of respiratory disease; it accounts for the most episodes of hospital care (80% of episodes in people aged over 60) and is second only to pneumonia in total bed-days per year.

COPD is mainly managed by GPs and members of the primary healthcare team, with onward referral to secondary care when needed. Mild and moderate symptoms in the absence of frequent exacerbations will be managed predominately in primary care. The treatment and management of COPD is aimed at alleviating symptoms and slowing progression.

Information from the QOF indicator pilot shows that:

- for the oxygen saturation indicator the baseline achievement at the start of the pilot was 28.5%
- for the pulmonary rehabilitation indicator the baseline achievement at the start of the pilot was 10%.

Proposed care

We have assumed indicator NM46 can be achieved with little additional cost because pilot data suggested that there little additional work was needed. Where care in line with the indicator was not routine, the COPD review template was amended to capture the data needed. We have assumed that the test will add some time to an appointment with a practice nurse, which currently averages 15 minutes. For costing purposes it was assumed that this test added 25% time to a consultation with a practice nurse.

The indicator pilot found that only 1 of 22 participating practices (5%) did not have access to a pulse oximeter at the start of the pilot.

For indicator IND101 there will be an initial cost impact from referral of the prevalent population (1.6%) to a pulmonary rehabilitation programme. The on-going cost for the incident population (0.1%) will be significantly less.

The pilot data estimated that 50% of people with COPD would not be eligible for pulmonary rehabilitation and that 80% of people offered a referral to a pulmonary rehabilitation would accept.

Resource impact

The resource impact of indicator NM46 is estimated at £1.6 million for England as set out in table 1.

Table 1 Estimated resource impact of indicator NM46

-	**Units**
England population	51,220,237
COPD prevalence	1.6%
Population with COPD	819,524
Baseline achievement	30%
Number of people whose records meet indicator	245,857
Additional number of people whose records need to meet indicator for 90% achievement by GP practices	491,714
Cost per attendance with practice nurse	£12.75
Estimated additional time per practice nurse attendance	25%
Cost per additional attendance with practice nurse	£3.19

In addition to the above costs there may some one-off costs for practices that do not have pulse oximeters. These are estimated at £60 each from the pilot for 5% of practices. Projected nationally there would be an estimated one-off cost of £25,000, based on 5% of 8,228 practices buying 1 additional pulse oximeter at a cost of £60.

The resource impact of indicator IND101 includes an estimated initial cost impact for England of £57.7 million and an ongoing cost of £4.1million, as set out in table 2.

Table 2 Estimated resource impact of indicator IND101#

-	**Units**	**Units**
England population	51,220,237	51,220,237
COPD prevalence	1.6%	
COPD incidence		0.1%
Population with COPD	819,524	51,220
Baseline achievement	10%	0%
Number of people whose records meet indicator	81,952	0
Additional number of people whose records need to meet indicator for 90% achievement by GP practices	655,619	46,098
Estimated percentage of people eligible for pulmonary rehabilitation	50%	50%
Estimated number of people eligible for pulmonary rehabilitation	327,810	23,049
Estimated percentage of people accepting pulmonary rehabilitation	80%	80%
Estimated number of people accepting pulmonary rehabilitation	262,248	18,439
Estimated cost of pulmonary rehabilitation	£220	£220
Estimated cost of the indicator	57,694,475	4,056,643

Sensitivity analysis

For indicator NM46 varying the additional time of the practice nurse per attendance from 10% to 40% varies the cost impact from £0.6 million to £2.5 million.

For indicator NM46 varying the baseline achievement of the indicator between 20% and 50% varies the cost from £1.0 million to £1.8 million.

For indicator IND101 varying number of people eligible for pulmonary rehabilitation between 40% and 60% varies the cost for the initial impact from £46.2 million to £69.2 million, and the ongoing cost impact from £3.2 million to £4.9 million.

For indicator IND101 varying number of people accepting pulmonary rehabilitation between 70% and 90% varies the cost for the initial impact from £40.3 million to £51.9 million, and the ongoing cost impact from £2.8 million to £3.6 million.

Potential savings

Health economic analysis undertaken as part of indicator piloting assumes a saving of £500 per patient from reduced hospitalisation.

Conclusions

The cost impact of indicator NM46 is estimated to be £1.6 million per year. Dependant on local circumstances there may be on off costs associated with the purchase of additional pulse oximeters.

The cost impact of indicator IND101 is estimated to be £57.7 million initially, with an ongoing cost impact of £4.1 million per year.

Related QOF indicators

Current QOF indicator	Numerator	Denominator	Underlying achievement

COPD10: The percentage of patients with COPD with a record of FEV_1 in the preceding 15 months. (QOF guidance states it is important to monitor respiratory function in order to identify patients who might benefit from pulmonary rehabilitation or continuous oxygen therapy.)	703,630	791,868	88.9%

References

Health and Social Care Information Centre (2011) QOF 2010/11 data [online].

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