

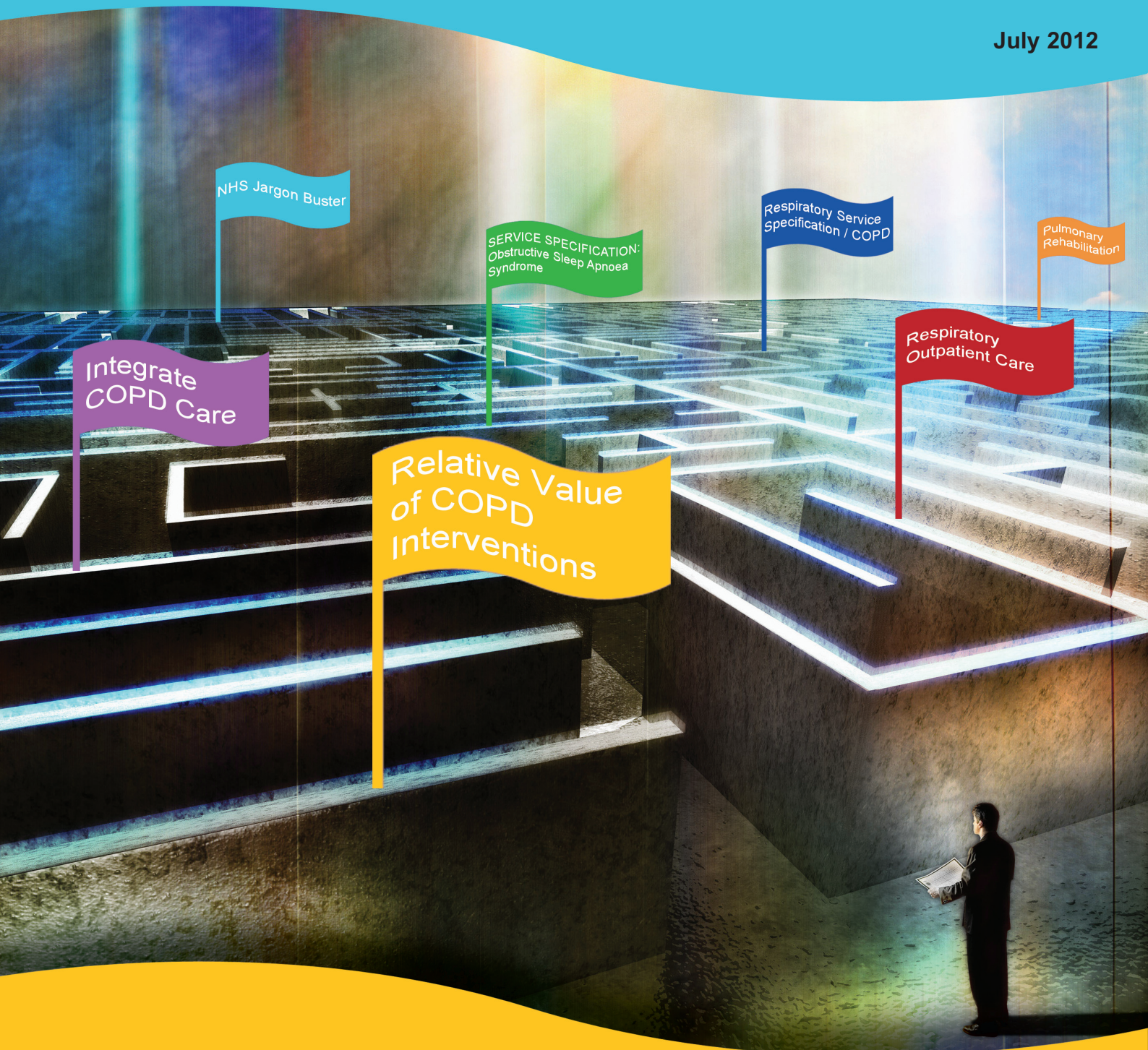


IMPRESS



Improving and Integrating Respiratory Services

July 2012



IMPRESS Guide to the relative value of COPD interventions - Executive summary

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IMPRESS was set up in 2007 as a joint initiative between the British Thoracic Society (BTS) and the Primary Care Respiratory Society-UK (PCRS-UK) to provide clinical leadership to the NHS to stimulate improvement and integration in respiratory services. The IMPRESS team now has representation from primary and secondary care, nursing and medicine, public health, social care, providing and commissioning and lay views. We have worked through many of the issues that local teams need to address to improve care across the system and provide practical and highly-regarded guidance through our website www.impressresp.com

The British Thoracic Society (BTS) has over 2,800 members who are actively working in a variety of healthcare professions to improve the standards of care for people with lung diseases. Sixty-five percent of members are secondary care physicians and doctors in training. The remainder are respiratory nurse specialists, respiratory physiotherapists, respiratory technical and physiological measurement professionals, smoking cessation practitioners and staff working in primary care settings. The society undertakes an ambitious programme of quality improvement activities, education and public awareness programmes, and publishes the journal Thorax. It also organises the largest single-society respiratory scientific meeting in Europe. BTS Guidelines are accredited by NHS Evidence. BTS national clinical audits are recommended by NAGCAE for inclusion in NHS trust quality accounts. BTS Care Bundles for both COPD and CAP are in development and the new series of BTS Quality Standards will be launched in 2012. Funding has been secured from HQIP to establish the BTS Lung Diseases Registry. The Society places great value on its work with strategic partners such as PCRS-UK and patient organisations, as it is these collaborations that help the over-arching strategic objectives of raising the profile of the specialty and working to improve standards of respiratory care.

<http://www.brit-thoracic.org.uk/>

The Primary Care Respiratory Society UK (PCRS-UK) is an independent charity representing primary care health professionals interested in delivering the best standards of respiratory care. It is dedicated to achieving optimal respiratory care for all through:

- Representing primary care respiratory health needs at policy level
- Promoting best practice in primary care respiratory health through education, training and other services
- Supporting the development of primary care health professionals in respiratory medicine
- Facilitating and leading primary care respiratory research

For further information and details of how to join the PCRS-UK <http://www.pcrs-uk.org/>



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IMPRESS Guide to the relative value of COPD interventions



IMPRESS Guide to the relative value of interventions for people with COPD

A population-based approach to improving outcomes for people with chronic obstructive pulmonary disease based on the cost of delivering those outcomes

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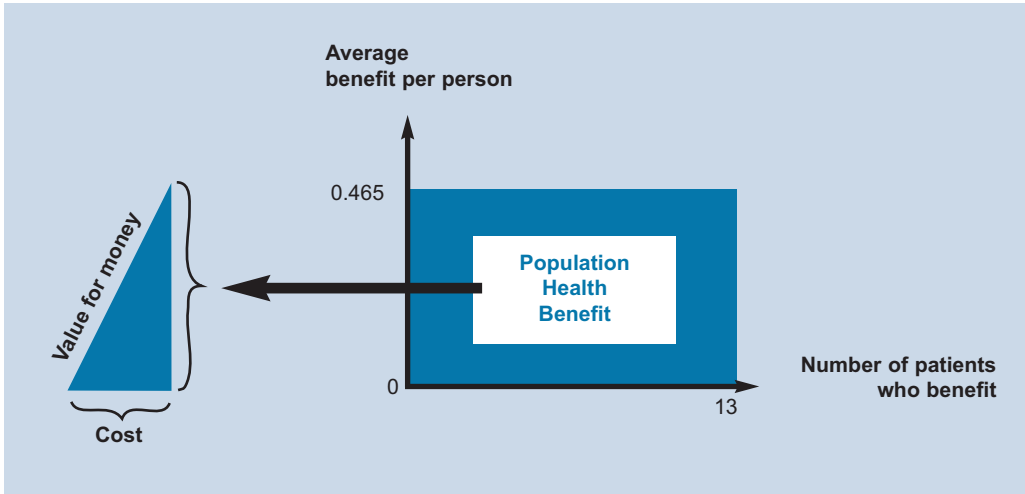
We thank Vince Mak, NHS London Respiratory Team for his additional analysis of the drug data. We thank Prof Aziz Sheikh, University of Edinburgh and Rupert Jones, GP and DH adviser for their review.

Executive summary

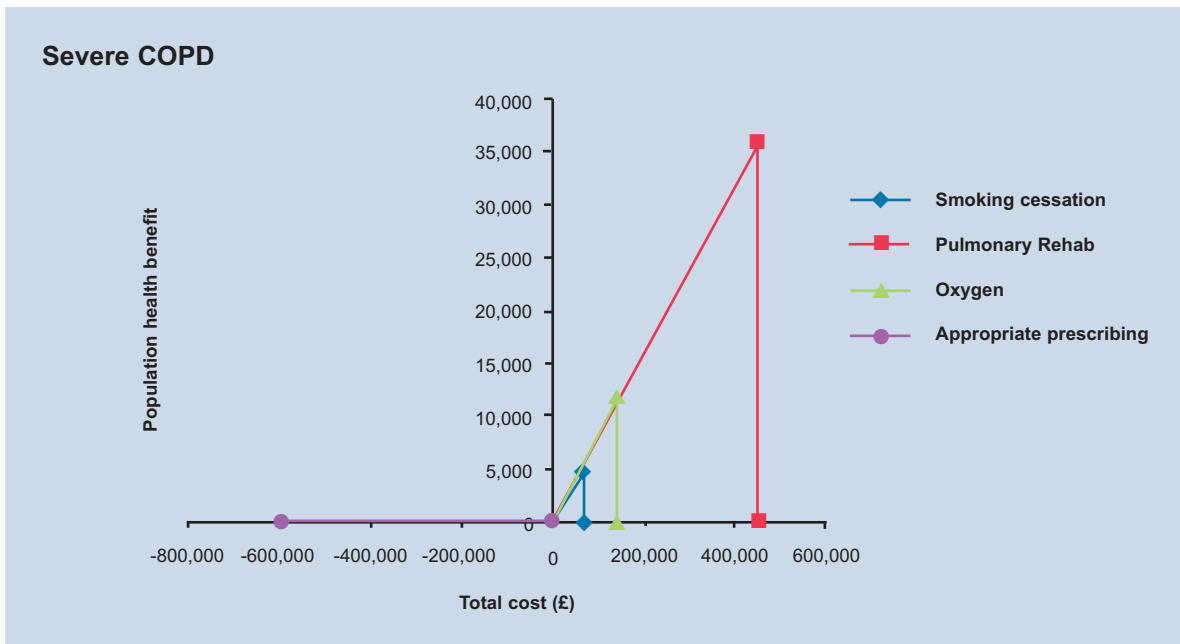
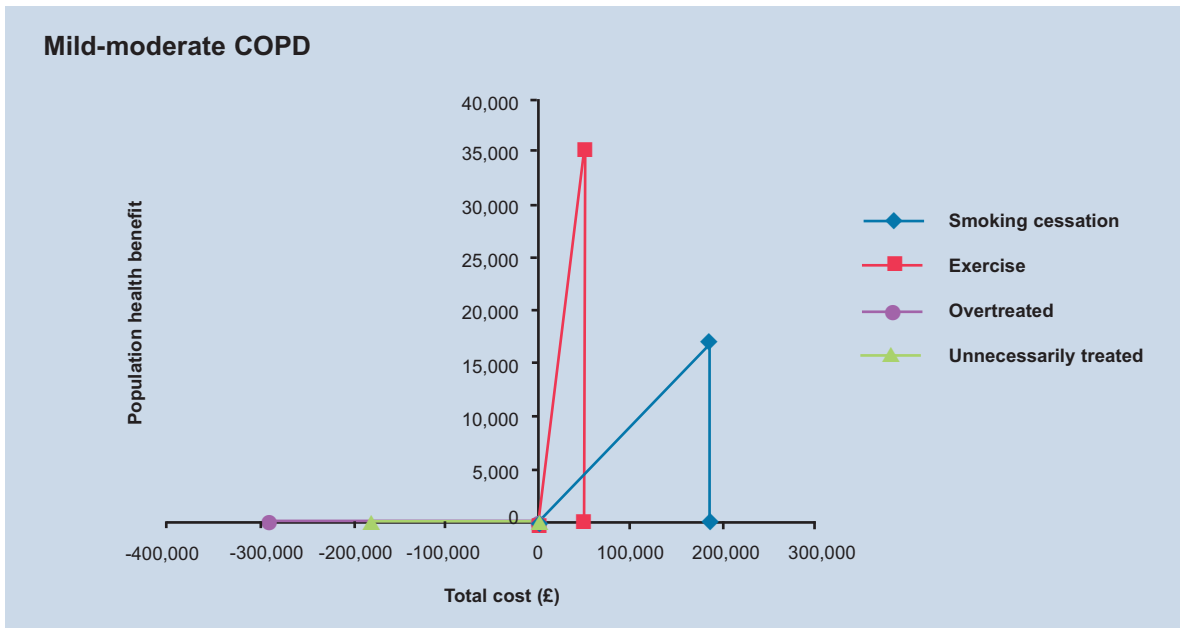
This IMPRESS paper aims to guide commissioners working within the limits of respiratory programme budgets to allocate resources to the interventions for a population with COPD that offer the most value, defined as outcomes divided by cost. It builds on our previous work More for Less. Our focus is on where there is scope to change. This means taking steps to ensure that funds are spent on what improves a patient's health, and to reduce expenditure on what does not, and to stop interventions that may cause harm.¹

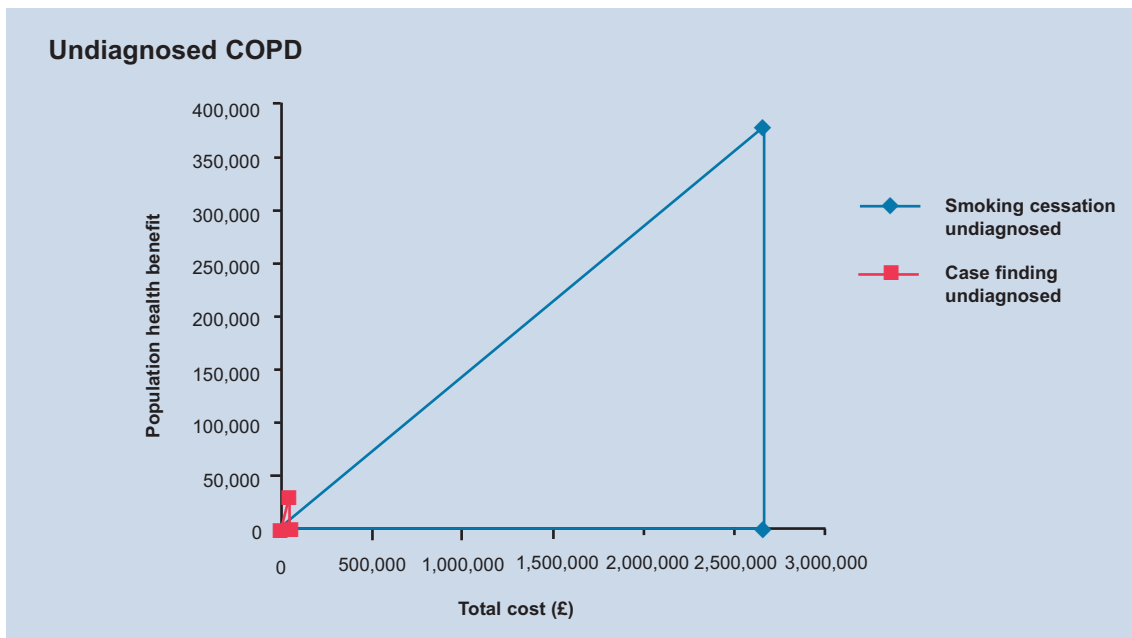
Using a resource allocation method called decision conferencing developed by the London School of Economics, supported by the Health Foundation, we have created "value triangles", one for each of three population segments: undiagnosed, diagnosed with mild-moderate disease and diagnosed with severe-very severe disease. We worked with published cost-effectiveness evidence, public health data about population morbidity, and real data about what is currently provided. We used an archetypal population of 300,000 and assumed about 3000 would have mild-moderate disease, about 1900 would have severe/very severe disease and 6000 would be undiagnosed. We produced rectangles that described the segmented population health benefit of selected interventions and from that, added in the cost dimension to create value triangles. These were overlaid to show the relative value of different interventions for each category: the larger the volume, the greater the population to benefit; the steeper the hypotenuse, the greater the value.

1. Brody M. From an Ethics of Rationing to an Ethics of Waste Avoidance. *NEJM* 2012; 2 May. DOI: 10.1056/NEJMp1203365



Value for money triangles





So what do these triangles and our analysis tell us?

1. Relative to our comparator interventions, even with low (6%) one year quit rates in the undiagnosed population, stop smoking interventions provide great value in the diagnosed and undiagnosed population and should be commissioned as a TREATMENT for COPD and be a priority for prevention in those not yet diagnosed.
2. Stop smoking interventions will, of course, benefit people at risk of developing or enduring a number of long term conditions including cardiovascular disease. Investment in existing stop smoking services should be reviewed and where necessary shifted to ensure that it meets the needs of local smokers. Where it is absent, for example, in settings such as hospitals or mental health units where ill smokers can be found, additional resource from the respiratory programme budget may be needed.
3. In the undiagnosed population the value of stop smoking support for smokers is greater than in comparison to case-finding in symptomatic smokers, but they can both be cost-effective and they are not mutually exclusive; a number of stop smoking services now use screening spirometry for smokers with symptoms, and practitioners using spirometers should also be trained in stop smoking counselling.
4. Particularly in severe disease, the steepness of the hypotenuse of the triangles is relatively similar for a number of interventions, but the size of the population to benefit means that programmed pulmonary rehabilitation stands out as the one offering most value. The analysis of the cost-effectiveness data suggests the current sequence of management may need reordering so that interventions such as stop smoking and consideration for referral to pulmonary rehabilitation should happen before any trial of triple therapy. The message is patients should be optimised on treatment prior to pulmonary rehabilitation, not necessarily maximised.
5. We agreed from the evidence that the hierarchy of medical treatments in the current NICE guideline was appropriate.²⁻⁴ We also noted that the actual costs would shift over time as a number of COPD medicines came off patent in the next 2-3 years. Our messages aren't about switching, but about appropriate prescribing, and setting prescribing in the context of additional options. This aligns with the recommendations in the full NICE COPD guideline. Clinicians and commissioners should take much more note of the cost-effectiveness data of drug therapies, for which we used the NICE, Canadian and Belgian systematic reviews up to mid-2011, and that triple therapy should be reserved for patients for whom it is appropriate: for people with severe disease who have persistent exacerbations despite using either ICS/LABA or LAMA.

2. National Clinical Guideline Centre. (2010) Chronic obstructive pulmonary disease: management of chronic obstructive pulmonary disease in adults in primary and secondary care. London: National Clinical Guideline Centre. Including Appendix M. <http://guidance.nice.org.uk/CG101/Guidance/pdf/English>
3. Gaebel K, Blackhouse G, Robertson D, Xie F, Assasi N, Mclvor A, Hernandez P, Goeree R. Triple Therapy for Moderate-to-Severe Chronic Obstructive Pulmonary Disease [Internet]. Ottawa: Canadian Agency for Drugs and Technologies in Health; 2010 (CADTH technology report; no. 127). [cited 2010 May 5]. <http://www.cadth.ca/index.php/en/hta/reports-publications/search/publication/1690>
4. Neyt M, Van den Bruel A, Gailly J, Thiry N, Devriese S. Tiotropium in the Treatment of Chronic Obstructive Pulmonary Disease: Health Technology Assessment. Health Technology Assessment (HTA). Brussels: Belgian Health Care Knowledge Centre (KCE). 2009. KCE reports 108C. D/2009/10.273/20 <http://www.crd.york.ac.uk/cms2web/ShowRecord.asp?AccessionNumber=32010001227>

6. In the mild-moderate category there is substantial overtreatment⁵ and there is a negative value in some prescribing: the risk of harm can outweigh the benefits and therefore the prescriber should be aware of the financial and clinical costs and benefits. There are a number of clinical reasons why multiple treatments should be carefully considered before initiation, but there is also an economic argument that the incremental cost per QALY tends to be very high for multiple treatments – up to £130,000.
7. There are gaps in the cost-effectiveness data on most service models, including traditional service provision, aspects of current integrated care policy such as risk stratification and integrated teams, and therefore local data and judgements will be required. IMPRESS would continue to advocate integrated care and shared records, to reduce under-coordination.⁶ It still argues for the guiding principle to be right services to be provided at the right time by the right person. The model of integrated care consultants and practitioners with a special interest should continue to be tested.⁷
8. Primary and secondary care specialists have a role with patients with complex respiratory problems including those who are acutely ill and they need the timely application of evidence-based interventions.

So what does this mean for you?

1. Before the application of any value model, ensure it is applied to the right population. Ensure the basics are right every time: first think prevention. Then ensure accurate diagnosis, using quality assured spirometry of existing patients; and careful removal of medicines which are being misused including inhaled corticosteroids and oxygen. This is likely to need investment in capability and capacity. The costs of training, education and support are not included in this document, but are fundamental to it and we would strongly support investment, as argued in the Kings Fund document on integrated care.⁸
2. Refer to our **More for Less** document that gives examples of ways to save money doing things more efficiently
3. We advise commissioners to specify that people admitted with a respiratory problem are seen by a specialist team within 24 hours as this will pick up any misdiagnosis or misuse of treatment.⁹ Patients should also be reviewed prior to discharge. We advise the use of an evidence-based care bundle.¹⁰
4. Check if you commission stop smoking services in all settings including social care, and where you know significant numbers of people smoke locally. Ensure practitioners are trained in stop smoking counselling and using evidence-based formulary in all the services supporting sick smokers. Offer stop smoking professionals guidance on COPD and encourage case-finding by linking them into COPD pathways. Consider engaging teams in mental health services and acute services such as ambulance services.¹¹ Link up stop smoking and oxygen services.
5. Do you commission pulmonary rehabilitation and in sufficient quantity to meet the need, where need is defined as ability to benefit from an intervention?¹² Do you have a robust strategy for increasing appropriate referrals to it, as it is a skilled job to encourage breathless people to take exercise rather than to take more medicine? This should include early post-admission rehabilitation.¹³
6. How are you ensuring that prescribing of inhaled medicine and oxygen is responsible? Do all prescribers know about the costs and the cost-effectiveness of the drugs they prescribe? The full NICE guideline and appendices would be useful to medicines management advisers,² as are **NICE Medicines and Prescribing Centre bulletins**. Are they making sufficient effort to ensure patients also understand their value and how best to use them?

5. Jones R *et al*. Accuracy of diagnostic registers and management of chronic obstructive pulmonary disease: the Devon primary care audit. *Respiratory Research* 2008 Volume 9, Number 1, 62, DOI: 10.1186/1465-9921-9-62

6. Dr John Ovretveit. Does improving quality save money? A review of the evidence of which improvements to quality reduce costs to health service providers. Sept 2009 For Health Foundation

7. Integrated Care Consultant. BTS. http://www.impressresp.com/index.php?option=com_content&view=article&id=41&Itemid=35

8. Goodwin N *et al*. Integrated care for patients and populations: Improving outcomes by working together A report to the Department of Health and the NHS Future Forum. Kings Fund. February 2012

9. Price LC, Lowe D, Hosker HSR *et al* on behalf of the British Thoracic Society and the Royal College of Physicians Clinical Effectiveness Evaluation Unit (CEEU). UK National COPD Audit 2003: impact of hospital resources and organisation of care on patient outcome following admission for acute COPD exacerbation. *Thorax* 2006; **61**: 837–842.

10. <http://www.copdcarebundle.com/>

11. National Institute for Health and Clinical Excellence, 01 June 2010 Smoking cessation services in primary care, pharmacies, local authorities and workplaces, particularly for manual working groups, pregnant women and hard to reach communities. <http://www.nice.org.uk/nicemedia/live/11925/39596/39596.pdf>

12. IMPRESS Guide to Pulmonary Rehabilitation

Available at http://www.impressresp.com/index.php?option=com_content&view=article&id=38&Itemid=32

13. Seymour JM *et al*. Outpatient pulmonary rehabilitation following acute exacerbations of COPD. *Thorax* 2010;**65**:423-428 doi:10.1136/thx.2009.124164

7. Waste is apparent in overprescribing and/or inappropriate prescribing that could be saved and reinvested in commissioning high value services such as pulmonary rehabilitation. NICE recommendations need to be read in full, as there are contradictions between the full document and the Executive Summary, which is often used in isolation.² The full document agrees with other national appraisals.^{3,4} Taken with actual primary care prescribing figures there is likely to be a clear cost saving by reviewing pharmacotherapy in those patients with an FEV1 >50% predicted.
8. Be even-handed with the evidence. Apply what is known about cost per QALY; do not use lack of evidence as an excuse for not considering their value and finding ways to know it. We have provided our analysis. Consider plugging the evidence gap with your own studies if you are in a position to invest in improvement projects or research.

Further resources:

See resources on value at www.impress.com/

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