# NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

# HEALTH AND SOCIAL CARE DIRECTORATE

# QUALITY STANDARD CONSULTATION

# SUMMARY REPORT

## 1 Quality standard title

Chronic obstructive pulmonary disease

Date of Quality Standards Advisory Committee post-consultation meeting:
21 October 2015

## 2 Introduction

The draft quality standard for chronic obstructive pulmonary disease was made available on the NICE website for a 4-week public consultation period between 23 July and 20 August 2015. Registered stakeholders were notified by email and invited to submit consultation comments on the draft quality standard. General feedback on the quality standard and comments on individual quality statements were accepted.

Comments were received from 31 organisations, which included service providers, national organisations, professional bodies and others.

This report provides the Quality Standards Advisory Committee with a high-level summary of the consultation comments, prepared by the NICE quality standards team. It provides a basis for discussion by the Committee as part of the final meeting where the Committee will consider consultation comments. Where appropriate the quality standard will be refined with input from the Committee.

Consultation comments that may result in changes to the quality standard have been highlighted within this report. Comments suggesting changes that are outside of the process have not been included in this summary. The types of comments typically not included are those relating to source guidance recommendations and suggestions for non-accredited source guidance, requests to broaden statements out of scope, requests to include thresholds, targets, large volumes of supporting information, general comments on the role and purpose of quality standards and requests to change NICE templates. However, the Committee should read this summary alongside the full set of consultation comments, which are provided in appendices 1 and 2.

# 3 Questions for consultation

Stakeholders were invited to respond to the following general questions:

1. Does this draft quality standard accurately reflect the key areas for quality improvement?

2. If the systems and structures were available, do you think it would be possible to collect the data for the proposed quality measures?

3. For each quality statement what do you think could be done to support improvement and help overcome barriers?

Stakeholders were also invited to respond to the following statement specific questions:

1. For draft quality statement 2: Please provide details of any national standards for healthcare professionals for the training and assessment of inhaler technique in people with COPD that you are aware of?

2. For draft quality statement 4: Are pulmonary rehabilitation services widely available for people with stable COPD who have self-reported exercise limitation? If so, please provide details.

3. For draft placeholder statement 8: Do you know of any evidence-based guidance that could be used to develop this placeholder statement? If so, please provide details. If not, would new evidence-based guidance relating to hospital discharge care bundles have the potential to improve practice? If so, please provide details.

4. For draft placeholder statement 9: Do you know of any evidence-based guidance that could be used to develop this placeholder statement? If so, please provide details. If not, would new evidence-based guidance relating to multidimensional assessment tools have the potential to improve practice? If so, please provide details.

# 4 General comments

The following is a summary of general (non-statement-specific) comments on the quality standard.

- Support for the areas identified as quality standard statements.
- Concerns were raised that the management of COPD spans secondary, primary and community care and many of the statements are secondary care focussed. Stakeholders highlighted that care needs to be provided in a multidisciplinary manner.
- There should be an acknowledgement that the impact of COPD on patients and families can be both physically and mentally debilitating.
- Stakeholders acknowledged that there had been some improvement to COPD services since the publication of the first COPD QS in 2011 and welcomed the update.
- Concerns regarding the alignment of some statements to admissions avoidance teams and pathways.

**Consultation comments on data collection**

- Stakeholders commented that there are challenges in collecting data in some areas and the ease of collection is reliant on good record keeping.
- Stakeholders acknowledge that if would be possible to collect the data for the majority of statement measures.

- The continuation of the national audit would greatly support data collection in this area above that of existing hospital data collection systems.

# 5 Summary of consultation feedback by draft statement

## *5.1 Draft statement 1*

People aged over 35 years who present with a risk factor and one or more symptoms of COPD have post-bronchodilator spirometry.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 1:

- Expand the list of risk factors to include family history of COPD and all methods of tobacco smoking.
- Expand the list of symptoms to include weight loss, effort intolerance, waking at night, ankle swelling, fatigue, occupation hazards, chest pain and haemoptysis.
- Formal accreditation should be sought for spirometry training and interpretation, staff should show competence and regular audit of practices should be undertaken. Additional measures on the level of training and competencies should be added.
- Post-bronchodilator therapy should be carried out on appropriate devices that are maintained and calibrated.

## *5.2 Draft statement 2*

People with COPD who are prescribed an inhaler have their inhaler technique assessed when starting treatment and then regularly during treatment.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 2:

- Patients should be given a choice of inhaler type after they have tried the different devices.
- Inhaler technique should be part of an annual review of a self-management plan and technique checked at every interaction with a healthcare professional.
- Stakeholders highlighted the role pharmacist can play in reviewing inhaler technique via medicines use reviews.
- The appropriateness of hospital admissions as an outcome measure was questioned.

**Consultation question 4**

Stakeholders made the following comments in relation to consultation question 4:

- The UK Inhaler Group has developed draft standards on inhaler technique and training.
- Meters are available to ensure the correct flow is being generated from inhaled devices.
- Respiratory Education UK (REUK) and Education for Health offer university accredited diploma, degree and masters level courses that include inhaler technique courses.

## *5.3 Draft statement 3*

People with COPD and a resting stable oxygen saturation level of 92% or less have their arterial blood gases measured to assess whether they need long-term oxygen therapy.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 3:

- The purpose of oxygen therapy within the rationale should be corrected as oxygen therapy does not treat breathlessness.
- Consider including risk assessments for the use of oxygen therapy.
- Clarification around the assessment methods for measuring blood gases, arterial versus capillary, the settings where they are used and alternative approaches.
- Question whether to include ‘persistent resting stable oxygen’ in the statement.
- Stakeholders commented that follow-up and regular review of LTOT is also required.
- Further detail should be included on the definitions of ‘resting’ and ‘stable’
- The use of other types of oxygen therapy such as ambulatory, nocturnal or short burst oxygen therapy.

## *5.4 Draft statement 4*

People with stable COPD and self-reported exercise limitation are referred to a pulmonary rehabilitation programme.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 4:

- Expand the population group to offer pulmonary rehabilitation to all people with COPD. Emphasise that patient education is key to prevent disease progression.
- Stakeholders report high dropout rates especially from those with complex needs and the need for healthcare professionals to be aware of the importance of behavioural change and the inclusion of psychological elements for successful pulmonary rehabilitation programmes.
- Stakeholders suggest that the statement could be strengthened by adding a timeframe from referral to initiation.
- Stakeholders felt that it was important to consider including maintenance courses in addition to initial referral.
- Stakeholders questioned the relevance in using MRC3/self-reported exercise limitation as a population definition for referral.
- The seasonal fluctuations in exacerbation rates were highlighted and the need for services to consider them when providing services.
- Some stakeholders questioned why people with locomotor or neurological difficulties are excluded from pulmonary rehabilitation.

**Consultation question 5**

Stakeholders made the following comments in relation to consultation question 5:

- Variation in service provision exists despite clear guidance on service set up and referral criteria.
- The statement is aspirational, services exist but capacity is limited.
- RCP organisational audit of pulmonary rehabilitation services data analysis is currently underway.

## *5.5 Draft statement 5*

People with COPD admitted to hospital for an acute exacerbation start a pulmonary rehabilitation programme within 4 weeks of discharge.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 5:

- Stakeholders support the statement and suggest it could be incorporated into a discharge bundle statement in the future.
- Stakeholders feel that the inclusion of psychology professionals into the team delivering the rehabilitation is required to overcome COPD related anxiety.
- Stakeholders questioned how likely it is that this is achievable in the current resource model and there should be provision to make more pulmonary rehabilitation services available.
- Some stakeholders raised additional equality and diversity considerations for inclusion.

## *5.6 Draft statement 6*

People with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 6:

- Clarify rationale.
- Inclusion of risk assessments for oxygen provision.
- Reference target saturation range 88-92%.
- Reference to the oxygen delivery device, low flow nasal cannulae.
- Suggested an outcome measure could be the number of times non-invasive ventilation is required due to oxygen toxicity.

## *5.7 Draft statement 7*

People with COPD with persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation.

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 7:

- Further define ‘immediate non-invasive ventilation’ within the statement.
- Include reference to oxygen alert cards carried by some patients.
- Questioned appropriateness of the units where non-invasive ventilation should be delivered.
- Greater links should be made between withdrawal of non-invasive ventilation and end of life care.
- Consistency between wording use in the audience descriptor for patients and the statement.

## *5.8 Draft statement 8*

(placeholder): Hospital discharge care bundle

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 8:

- Support and acknowledgement that there is emerging evidence on the value that the discharge bundle can bring in reducing readmission.
- Any guidance developed on discharge bundles should also consider how and who is responsible for delivery.

**Consultation question 6**

Stakeholders made the following comments in relation to consultation question 6:

- No evidence-based guidance was identified.
- British Thoracic Society COPD discharge care bundle pilot project highlighted.
- Various patient information booklets on self-management and leaving hospital were highlighted.

### *5.9 Draft statement 9*

(placeholder): Multidimensional assessment tool

**Consultation comments**

Stakeholders made the following comments in relation to draft statement 9:

- Placeholder statement welcomed.

**Consultation question 7**

Stakeholders made the following comments in relation to consultation question 7:

- No evidence-based guidance identified.

## 6 Suggestions for additional statements

The following is a summary of stakeholder suggestions for additional statements:

- Risk assessment for oxygen use, particularly in respect to smoking
- Lung volume reduction surgery
- Nutritional management of patients.
- Management of infection such as seasonal influenza
- Treatments offered in line with NICE or GOLD guidelines

Some suggestions map to original statements in QS10 that were not prioritised for the QS update:

- Self-management plans including mood assessment and access to therapy QS10 statement 2 and 7
- Annual clinical and psychological review QS10 statement 4
- Smoking cessation QS10 statement 5
- Annual review of LTOT QS10 statement 9
- Access to specialist care in hospital QS10 statement 10
- Palliative care for advanced COPD QS10 statement 13

# Appendix 1: Quality standard consultation comments table – registered stakeholders

| ID | Stakeholder | Comment on | Comments |
|---|---|---|---|
| 1 | National Aspergillosis Centre – Wythenshawe Hospital | General | Among other factors that may contribute to progression of COPD are infections caused by bacteria and *Aspergillus* spp. |
| 2 | British Lung Foundation | General | Reference to the NICE Quality Standard on smoking cessation on the first page of the new Standard is welcome. However, given smoking cessation is the most cost effective intervention for slowing disease progression in COPD, the accompanying text should be strengthened to: detail the strong correlation between COPD and smoking; advise that people with COPD are more likely to be in need of smoking cessation services; and advise that quitting smoking is the single most effective treatment for COPD. |
| 3 | British Lung Foundation | General | We would like to see overt reference to NICE's Quality Standard on end of life care on the front page of the standard, as this important aspect of advanced COPD care is often neglected. Mutual reference between the two Quality Standards will strengthen the impact of both. |
| 4 | British Lung Foundation | General | We welcome the focus on a person-centred, integrated, approach to the management of COPD. However, we believe this should include specific reference to the fact that the management of COPD spans secondary and primary and community care and recognition of the important role that supported self-management plays in best practice for COPD. |
| 5 | British Lung Foundation | General | We believe the increasing evidence highlighting the value of supported self-management in COPD needs to be recognised in the standard. |
| 6 | British Lung Foundation | General | The introductory text explaining COPD as a condition ought to make reference to the fact that the impact of COPD on patients and families can be both physically and mentally debilitating |
| 7 | British Specialist Nutrition Association | General | An area of care that is not included within the quality statements is the nutritional management of patients with COPD.<br>Of the 7 outcomes that the quality standard is expected to contribute improvements to, appropriate nutritional management can improve the following:<br>• Mortality<br>• Hospital admissions<br>• Quality of life<br>• Exercise Capacity |

| ID | Stakeholder | Comment on | Comments |
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| | | | Nutrition also supports domains 1, 2 and 3 of the NHS outcomes framework, and outcome 4 of the public health outcomes framework for England.<br><br>Malnutrition is common in patients with COPD, with prevalence rates of between 30-60% in inpatients and 10-45% in outpatients (Stratton RJ, Green CJ, Elia M. Disease-related malnutrition: an evidence based approach to treatment. Oxford: CABI Publishing; 2003 (ISBN 0 851996485) Significant unintentional weight loss (>5%) has also been reported in 22% of COPD outpatients (Weekes CE, Bateman NT. Weight change in chronic obstructive pulmonary disease; not just a problem of undernutrition. Thorax. 2002;57 (Suppl III): 60.). Malnutrition is associated with poor prognosis and increased mortality, independent of disease severity (Landbo C, Prescott E, Lange P, Vestbo J, Almdal TP. Prognostic value of nutritional status in chronic obstructive pulmonary disease. Am J Respir Crit Care Med. 1999 Dec; 160(6):1856-61.and outpatients who are identified as at risk of malnutrition are at increased risk of hospitalisation, longer hospital stays and increased mortality (Weekes et al, 2007; Steer J, Gibson GJ, Bourke SC. Stratton RF (2010) Predicting outcomes following hospitalization for acute exacerbations of COPD. QJM 103(11): 817–29 |
| 8 | British Specialist Nutrition Association | General | As per 1.2.12.6 of NICE CG101 (Chronic obstructive pulmonary disease: Management of chronic obstructive pulmonary disease in adults in primary and secondary care), BMI should be calculated in all patients with COPD, and patients should be referred for dietetic advice if the BMI is abnormal/changing over time. For those with a BMI <20kg/$m^2$ oral nutritional supplements should be prescribed to increase caloric intake. Nutritional intervention should also form part of the pulmonary rehabilitation programme (1.2.8.4 of NICE CG101).<br><br>Evidence from systematic reviews show that the use of oral nutritional supplements in patients with COPD can:<br>- Improve Quality of Life<br>- Significantly improve length of stay and readmissions to hospital<br>- Significantly improve hand grip strength<br>- Significantly improve respiratory muscle strength<br>- Significantly improve exercise performance<br>- Significantly improve patients' nutritional intake<br>- Significantly improve weight |

| ID | Stakeholder | Comment on | Comments |
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| | | | (Collins PF et al, 2012; Collins PF et al, 2013; Snider JT et al, 2015; Ferreira IM et al, 2012)<br><br>To improve care in this patient group, we believe that the early detection and appropriate management of malnutrition should be highlighted within the quality statements. In addition to forming a stand-alone quality statement, nutritional assessment/management should also be included within statement 9 (multi-dimensional assessment tool). |
| 9 | Royal Pharmaceutical Society | General | The Royal Pharmaceutical Society (RPS) welcomes NICE Quality Standards on Chronic Obstructive Pulmonary Disease (COPD).<br>Pharmacists are well placed to support patients with COPD; they are experts in medicines, providing advice and information on the usage of medicines to patients and other healthcare professional. They can additionally support in educating patients on management of COPD through the many interactions they have with patients in primary, community and secondary care settings. |
| 10 | British Thoracic Society | General | Palliative care issues are important and this is not only around end of life i.e. terminal aspects of palliative care, but palliative care should be considered much earlier in the disease to palliate the symptoms of breathlessness, this is a major oversight.<br><br>Aspects of anxiety and depression are very common in this patient group. We appreciate that there is a NICE document referring to management of depression and it does include comments about COPD but this is a missed opportunity and we need to put aspects of management of depression / anxiety in the quality standard. This could perhaps be embedded in the pulmonary rehabilitation statement where much of the assessment can take place.<br><br>There is little comment about the use of lung volume reduction surgery. In patients who have advanced breathlessness. The use of lung volume reduction surgery, either through a direct surgical approach or lung volume reduction using coils or valves can make a big difference to individual lives. Moreover we should not exclude the option for transplantation in patients.<br><br>There seems to be little comment about self-management and education. Whilst some of these metrics may be difficult to measure there is an evidence base (Cochrane) that |

| ID | Stakeholder | Comment on | Comments |
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| | | | suggests self-management reduces hospital admission and improves aspects of quality of life. This is something that is easily manageable by determining the number of patients who say, have had one exacerbation then receive self-management advice including antibiotics and steroids. Is this a missed opportunity?<br><br>Management of infections is clearly a key area (see self-management). However the number of patients with COPD who are on the GP's register who have seasonal flu vaccination would be an important and simple outcome. Whilst it is normally recommended, a formal quality standard looking at the actual uptake and perhaps even looking specifically why patients do not receive flu vaccination may be an important step at limiting the number of seasonal exacerbations and the pressures that occur on hospitals and of course the impacts on the patients. |
| 11 | British Thoracic Society | General | It is vital that there is a quality statement about smoking cessation. We note that there is separate generic smoking standards but the fact is that it is the single most effective and best value treatment in COPD. The national COPD audit shows *very clearly* that it is not being provided to patients. There should be a standard for proportion of COPD patients who are smokers offered smoking cessation support including counselling and pharmacotherapy |
| 12 | Great Western Hospital NHS Trust | General | Could add;<br>- Self-management plan provision for COPD patients,<br>Should have mood assessed and access to therapy. |
| 13 | Education for Health | General | As members of the UK Inhaler Group, Education for Health fully endorse the response submitted today by the UK Inhaler Group (UKIG) to the NICE consultation on draft COPD quality standard |
| 14 | Boehringer Ingelheim Ltd | General | Overall we welcome the refresh of the Quality Standards for COPD as some improvements have been made to services, and therefore outcomes for people with COPD, since the standards were originally presented in 2011. |
| 15 | Association of Respiratory Nurse Specialists | General | ARNS strongly support the need for COPD quality standards, however we feel there are a number of key points that need strengthening or including<br>There needs to be a stronger focus of COPD care being provided in a multidisciplinary manner including the role of the respiratory nurse specialist in providing integrated care working across primary and secondary care, much of the quality standard is focussed on acute intervention, where much of the care is now provided in the community by specialist respiratory teams especially in times of exacerbations/crisis |

| ID | Stakeholder | Comment on | Comments |
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| | | | Linked with this is a body of evidence to support the need or discussion around end of life care or palliative care for people living with COPD. ARNS strongly believes that End of Life Care should be an additional quality standard and that healthcare professionals should be engaging in these discussions and planning for the future. A lack of focus or discussion results in high numbers of unplanned admissions with many patients not getting an opportunity to discuss or think about preferred priorities of care for the future. NICE guidelines support the need for End of Life care therefore ARNS feel that this should be discussed further; there are good examples of integrated models of palliative care. Qualitative evidence supports that many patients were are unaware of COPD as a long term conditions.<br>We also believe that there needs to be a focus on the non-pharmacological management of breathlessness in COPD which links with self-management and psychosocial aspects of care including the wider MDT (including our hospice colleagues)<br>ARNS welcomes the reference to the NICE Quality Standard on smoking cessation on the first page of the new Standard. However, given smoking cessation is the most cost effective intervention for slowing disease progression in COPD, the accompanying text should be strengthened to detail the strong correlation between COPD and smoking, that people with COPD are more likely to be in need of smoking cessation services, and that quitting smoking is the most effective treatment for COPD we also feel that there is additional need to discuss the role of e-cigs.<br>ARNS recognises that there are additional overarching guidance on patient experience however, emerging evidence also suggests that tailored specifically to COPD, and that measuring the patient experience of living with COPD potentially is an opportunity of quality alongside other reported outcomes and could be consider with the development of statement 9. |
| 16 | Association of Respiratory Nurse Specialists | General | Some comments have been included from the British Lung Foundation Submission to support |
| 17 | Novartis Pharmaceuticals | General | The Global Initiative for Chronic Obstructive Lung Disease (GOLD) Guidelines provides recommendations for the diagnosis and assessment of COPD. Other COPD assessment tools include the CAT template (COPD Assessment Test). We believe that the use of a multidimensional assessment tool should be linked to management and treatment decisions and should be used at diagnosis, annual review or whenever there |

| ID | Stakeholder | Comment on | Comments |
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| | | | is a significant change in patient's symptoms to determine management decisions. |
| 18 | RCN | General | This is to inform you that the RCN has no comments to submit to inform on the COPD draft quality standards consultation at this time. |
| 19 | British Infection Association | General | The BIA welcomes this QS and supports interventions that reduce the need for courses of antibiotics in this very large group of patients |
| 20 | The Royal College of Pathologists | General | I am just writing to inform you that The Royal College of Pathologists does not have any comments to make at this stage. |
| 21 | Nutricia Advanced Medical Nutrition | General | An area of care that is not included within the quality statements is the nutritional management of patients with COPD.<br>Of the 7 outcomes that the quality standard is expected to contribute improvements to, appropriate nutritional management can improve the following:<br>• Mortality<br>• Hospital admissions<br>• Quality of life<br>• Exercise Capacity<br>It also supports domains 1, 2 and 3 of the NHS outcomes framework, and outcome 4 of the public health outcomes framework for England.<br><br>Malnutrition is common in this patient group, with prevalence rates of between 30-60% in inpatients and 10-45% in outpatients (Stratton et al, 2003). Significant unintentional weight loss (>5%) has also been reported in 22% of COPD outpatients (Weekes and Bateman, 2002). Malnutrition is associated with poor prognosis and increased mortality, independent of disease severity (Landbo et al, 1999), and outpatients who are identified as at risk of malnutrition are at increased risk of hospitalisation, longer hospital stays and increased mortality (Weekes et al, 2007; Steer et al 2010).<br><br>As per 1.2.12.6 of NICE CG101, BMI should be calculated in all patients with COPD, and patients should be referred for dietetic advice if the BMI is abnormal/changing over time. For those with a BMI <20kg/$m^2$ oral nutritional supplements should be prescribed to increase caloric intake. Nutritional intervention should also form part of the pulmonary rehab programme (1.2.8.4).<br>Evidence from systematic reviews show that the use of oral nutritional supplements in patients with COPD can:<br>- Improve Quality of Life |

| ID | Stakeholder | Comment on | Comments |
|---|---|---|---|
| | | | - Significantly improve length of stay and readmissions to hospital<br>- Significantly improve hand grip strength<br>- Significantly improve respiratory muscle strength<br>- Significantly improve exercise performance<br>- Significantly improve patients' nutritional intake<br>- Significantly improve weight<br>(Collins PF et al, 2012; Collins PF et al, 2013; Snider JT et al, 2015; Ferreira IM et al, 2012)<br><br>To improve care in this patient group, we believe that the early detection and appropriate management of malnutrition should be highlighted within the quality statements. In addition to forming a stand-alone quality statement, nutritional assessment/management should also be included within statement 9 (multi-dimensional assessment tool). |
| 22 | British Geriatrics Society | General | We have looked through the QS and are very happy with the statements made, which if enacted will improve the care of older adults as well as those of younger age. There are no ageist elements and the standards apply equally well without adjustment to older people. We are happy for BGS to endorse them |
| 23 | DH | General | I wish to confirm that the Department of Health has no substantive comments to make, regarding this consultation. |
| 24 | London Respiratory Network | General | Please note that we have also made contributions to the British Lung Foundation response |
| 25 | British Society for Antimicrobial Chemotherapy | General | Members of the British Society for Antimicrobial Chemotherapy (BSAC) have no further comment to make on the draft COPD (update) quality standard. |
| 26 | British Lung Foundation | General | We welcome the focus in the new Quality Standard on those areas which need specific attention. However, this is very different in look and focus to the previous Quality Standard which was more comprehensive in its approach and mapped to the patient journey. The new approach to quality statements should be explained on the front page of the new Standard. This should include the rationale for a focus on fewer statements and make reference to NICE's online pathway for COPD which now provides detail on the patient journey for COPD and recommendations for best practice, which were included in the 2011 Quality Standard. Where possible this should be presented as an evolutionary process, especially as there has been no major shift in evidence base or policy change. |

| ID | Stakeholder | Comment on | Comments |
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| 27 | National Aspergillosis Centre – Wythenshawe Hospital | General Training and competencies | Among the training and competencies for healthcare professionals in managing COPD is awareness and understanding of the role of pulmonary aspergillosis in COPD. Guinea and colleagues from Hospital General Universitario Gregorio Marañón, Universidad Complutense, Madrid, Spain found 3.6 cases of invasive pulmonary aspergillosis (IPA) per 1000 COPD admissions (*Clin Microbiol Infect* 2010;16:870). The study identified key predictors of IPA among patients with COPD by logistic regression analysis. The multivariate analysis gave an area under the curve of 0.925 (95% CI 0.888–0.962; p <0.001) as a predictive model for IPA and COPD. Elevated serum galactomannan was found in 42% of cases of IPA and COPD. Patients with IPA and COPD had significantly higher mortality rates than those patients with COPD and no IPA. If one assumes that the frequency of IPA of 1.3% is similar in Spain and UK, then there would be an estimated 39,000 patients with COPD complicated by IPA. Similar data were found in China but with a higher frequency of 3.9% IPA in COPD patients (*Clin Microbiol Infect* 2012;18:403).<br>We recommend that awareness of IPA as a potential infection in patients with COPD may be introduced into the training curriculum of those health care professionals caring for patients with COPD. |
| 28 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance 1.1.1.2 | Haemoptysis occurred in 9.4% and chest pain in 16.9% of patients with COPD and IPA (CMI 2010; 16:870). Their presence should prompt consideration of IPA complicating COPD. |
| 29 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance 1.1.3.1 and 1.1.3.2 | For “Further Investigations,” one should consider submitting serum for galactomannan EIA in patients with compatible clinical and radiographic manifestations. |
| 30 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance 1.1.8.1 and Table 5 | Among “Reasons for Referral” in Table 5, please include “Suspected Pulmonary Aspergillosis.” The “Purpose” would consist of “confirm diagnosis and initiate promptly antifungal therapy”. |
| 31 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance 1.2.3.2 | Patients treated with long-term corticosteroid therapy should be monitored for development of possible pulmonary aspergillosis (*Clin Microbiol Infect* 2010;16:870; corticosteroids were an important factor in the multivariate logistic regression model from Spain. However, only 13% of patients with IPA and COPD in a study from China were receiving corticosteroids (*Clin Microbiol Infect.* 2012; 18:403), underscoring that most patients with COPD and IPA are not receiving corticosteroids. |

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| 32 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance 1.3.3.2 | • For p**atients referred to hospital,** "if sputum is purulent, a sample should be sent for microscopy and culture" should be changed to: "if sputum is purulent, a sample should be sent for microscopy and culture for bacteria and fungi with a careful examination for *Aspergillus* spp."<br>• "Serum galactomannan should be submitted for patients with compatible clinical and radiographic manifestations."<br>• "If *Aspergillus* is recovered subsequent consultation with experts in management of IPA is highly recommended.'' |
| 33 | National Aspergillosis Centre – Wythenshawe Hospital | Guidance References | Please, include the following reference:<br>Schelenz S, Barnes RA, Barton RC, Cleverley JR, Lucas SB, Kibbler CC, Denning DW; British Society for Medical Mycology. British Society for Medical Mycology best practice recommendations for the diagnosis of serious fungal diseases. Lancet Infect Dis. 2015 Apr; 15(4):461-74. |
| 34 | Orion Pharma | Introduction | "Pharmacological and other therapies can help to manage symptoms and disability caused by COPD, and improve the person's quality of life, despite having only limited or no impact on the airflow obstruction".<br><br>Are the types of therapy available for COPD going to be expanded upon at all in terms of cost and devices for patients? The combination inhalers are likely to add cost to the NHS and, although they may be needed at some point in the disease progression of COPD, earlier treatments (individual LABA, for example) are not always maximised at an earlier opportunity. |
| 35 | London Respiratory Network | Introduction | We understand that Smoking Cessation (QS43) will continue to be highlighted as a Related QS but feel that Stop Smoking Support for Tobacco Dependence in patients with COPD is such an important marker of quality in this patient population that it would warrant inclusion as a specific QS |
| 36 | GSK | Introduction | Five of the draft quality statements are related to secondary care management (QS 3, 5, 6, 7, 8). The majority of patients with COPD patients are managed within primary care, however considering the continuing high rates of admissions this would appear not to be optimal. Basic primary care management of COPD is not highlighted by the new quality statements. The new document doesn't support the need for individualised COPD care, part of the move to personalised medicines as outlined in the NHS Five |

| ID | Stakeholder | Comment on | Comments |
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| | | | Year Forward View vision of the future and in the NHS' Personalised care and support planning handbook (2015). |
| 37 | British Thoracic Society | Page 6 – safety issues | Oxygen use while smoking or vaping is a risk. |
| 38 | GSK | Previous QS 10 (2011) | We are concerned about the removal of the previous QS10 (2011) which outlined the importance of access to specialist care in hospital. Specialist care in hospital is important to reduce length of stay, to facilitate early discharge planning and to reduce readmissions. Including this will enable QS8 (2015), to be achieved more consistently. |
| 39 | GSK | Previous QS 2/3 (2011) | The previous QS included 2 statements fundamental to primary care management of COPD which are lacking in QS 2015 and we believe should be included in the proposals. Currently there is little focus on the need for high standards in the management of patients in primary care which is where most patients are currently managed.<br><br>QS2 (2011) looked at **individualised** management plans including patient involvement in choice of therapy. The previous Quality Standards had QS2 (2011) including the development of a comprehensive management plan as the second QS. This is important and, sequentially, would make sense to leave as QS2, after diagnosis. Currently this is not measured within QOF and, therefore, the removal of this requirement as a QS may have a particularly detrimental impact to patient care.<br><br>QS3 (2011) recommends patients being offered treatment in line with NICE guidance. It is fundamental that patient care is in line with NICE or GOLD or local guidelines. QS should be inclusive with respect to guidelines to acknowledge the possibility of best practice changing more rapidly than individual guidelines. This would help to ensure that patients receive the highest level of care currently available.<br><br>Maintaining and developing both 2011 QS2& QS3 would support delivery of NHS Outcomes Framework 2015–16 and Public Health Outcomes Framework 2013–16. |
| 40 | GSK | Previous QS13 (2011) | Provision of support and palliative care is essential in patients with advanced COPD this also contributes to achieving The NHS Outcomes Framework 2015–16 domain 4 |
| 41 | GSK | Previous QS4 &QS7 (2011) | A statement around annual clinical and psychological review and patient education, as in the previous Quality Standards (2011), should still be included. Health status (CAT or SGRQ) should also be captured here in the new QS. |

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| 42 | GSK | Previous QS5 (2011) | The omission of a statement on smoking means that the opportunity to emphasise the importance of smoking cessation in primary and secondary prevention of COPD to clinicians and commissioners is lost. |
| 43 | Nutricia Advanced Medical Nutrition | Question 1 | As above, nutrition plays a key role in some of the areas identified for quality improvement but is not addressed within the quality statements. |
| 44 | Primary Care Respiratory Society UK | Question 1 | • Undertaking **spirometry** is a key area for improvement. This is referred to in statement 1, but nowhere is it explicit that it is quality-assured diagnostic spirometry that should be the focus of improvement. This is distinct from spirometry for screening or opportunistic case finding. There is considerable variation in the quality of performing and interpreting quality assured diagnostic spirometry across the UK in both general practices and secondary care. Many people are involved in spirometry who don't have the competency or training to do it. The QS should pick up on this important area of variation. 'A guide to performing quality assured diagnostic spirometry' was published in 2013 https://www.pcc-cic.org.uk/sites/default/files/articles/attachments/spirometry_e-guide_1-5-13_0.pdf . This work was followed up by work on competency and accreditation led by DH/NHSE, but has not been seen through to publication which is disappointing.<br>• There has been chronic **underinvestment in training** the primary care workforce in respiratory disease management. It would be excellent if the QS could act to drive CCGs and practices to ensure that their staff are adequately trained in managing these common conditions.<br>• Another area of weakness is that the most cost effective interventions are not put in place before less cost effective ones. The **COPD value pyramid** shows which are the highest value interventions, yet many patients are on expensive triple therapy without having those highest value interventions first. https://www.networks.nhs.uk/nhs-networks/london-respiratory-network/documents/Value%20Pyramid.pdf It would be useful if the QS included something on applying the most cost effective interventions.<br>• Has NICE reviewed the outputs of the national COPD audit? This highlighted systemic issues in communication across healthcare sectors/organisations which needs addressing if patient centred care is to be achieved. |

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| 45 | British Specialist Nutrition Association | Question 1 | As detailed in the general comments above, nutrition plays a key role in some of the areas identified for quality improvement but is not addressed within the quality statements. |
| 46 | British Thoracic Society | Question 1 | I do not think draft accurately reflects all of the areas which are open for quality improvement. These have been raised above in the “general section”. |
| 47 | Boehringer Ingelheim Ltd | Question 1 | We question however if enough progress has been made across all measures to justify such a reduction in the quality measures that are now being proposed. In 2014, the APPG Respiratory inquiry into respiratory deaths found that services for people with COPD are still varied and praised the fact that NICE had developed a quality standard for COPD. This highlighted many of the areas raised in the inquiry – quality diagnosis, smoking cessation, pulmonary rehabilitation, oxygen treatment and management planning. The report went on to say that “it is therefore perplexing that there are no levers in the system to drive implementation of the quality standard and to ensure that the investment in such a comprehensive piece of work by NICE actually delivers improved care. There appears to be no specific monitoring of the uptake of such core guidance and no incentives for CCGs, practices, and community and acute trusts to deliver care in line with it.”<br>We are concerned therefore that the new standard no longer calls for people with COPD to have an individualised management plan; that there is no longer a standard around clinical and psychosocial assessment; nor is there a standard around providing people who have had a COPD exacerbation with written advice on how to recognise and prevent future exacerbations.<br>We understand that the current NICE clinical guideline for COPD, CG101, will come up for review in 2016. If these areas are covered in any revised guideline then we understand there is no need to duplicate quality advice. We suggest that this review is brought forward to run concurrently with this Quality Standard refresh. |
| 48 | Chartered Society of physiotherapy | Question 1 | The Chartered Society of Physiotherapy welcomes this quality standard. We agree that this draft accurately reflects the key areas for improvement. One area that is linked to towards the end of the document but we wonder if the link could be made more prominent is the End of Life Quality Standard. Perhaps linking to other relevant guidance at the beginning of the document would give them more visibility. |
| 49 | Boehringer Ingelheim Ltd | Question 2 | We believe there would still be challenges in collecting the data from the proposed |

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| | | | quality measures, even if suitable systems and structures were in place. For example, the denominator for Quality Statement 1 would be very dependent on good record-keeping. Areas with poor record-keeping might well have poor spirometry rates as well, but would end up with similar data to very good areas, because both the numerator and denominator are reduced in the poorer areas.<br>For Quality Statement 4, should the measure relate to referrals or attendances? Just measuring referrals doesn't reveal whether patients are being seen promptly or having to wait a long time for rehabilitation. |
| 50 | Chartered Society of physiotherapy | Question 2 | Broadly speaking, yes we do believe that it would be possible to collect the data. |
| 51 | Primary Care Respiratory Society UK | Question 2 | • The challenge is to develop systems that actually measure quality. How do you measure whether the clinician themselves knows how to use the inhaler in order to evaluate the patient's skill? Checking inhaler technique by asking the patient whether they can use their inhaler is not good enough. The clinician should ask the patient to demonstrate inhaler use ideally with their own inhaler.<br>• While it is excellent that there are 2 Q statements here on pulmonary rehabilitation, there are still parts of the country where a service is not available. It is hard to see how an absence of service continues to be acceptable and that there are no sanctions for areas without such a service. (see Q 5) |
| 52 | British Thoracic Society | Question 2 | Data collection for many of these aspects would be very difficult from hospital based statistics. National audit data or the development of a formal dataset to determine outcomes across primary, secondary and community care is the ideal way forward as without measuring changes beyond QoF we have little idea about the changes which are making a difference to patient care. Continual audit is one option but this would need to mandated. |
| 53 | Primary Care Respiratory Society UK | Question 3 | • There has been chronic **underinvestment in training** the primary care workforce in respiratory disease management. It would be excellent if the QS could act to drive CCGs and practices to ensure that their staff are adequately trained in managing these common conditions. Spirometry and inhaler technique are prime examples of this.<br>• Access to online resources for training and skill renewal, such as inhaler technique videos, would also be helpful. |

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| 54 | British Thoracic Society | Question 3 | This is clearly an important area but involves very specific and targeted aspects of work. Clearly underpinning all of this is education and training of patients, their carers, primary care physicians and hospital doctors. Regrettably many patients with COPD continue to be managed by general physicians when they are hospitalised and there is a general view across the health economies that COPD can be managed by any healthcare provider though conditions like diabetes need "specific care". This failure to recognise the importance of COPD and its need for specific care is a major barrier. |
| 55 | Primary Care Respiratory Society UK | Question 4 | PCRS-UK is a member of the UK Inhaler Group. This group has developed draft standards for training and assessing inhaler technique. We support these draft standards and will be actively working with them to refine and finalise them in the coming months. |
| 56 | British Thoracic Society | Question 4 | (Statement 2) There are a few standards for inhaler technique although an "inhaler project" is being developed. There are recognised "meters" that can be used to ensure that the correct flow is generated during such devices to optimise intrapulmonary deposition of drugs. Such meters are not particularly expensive and should be made more widely available, as should education to try and improve the standards. Regrettably there does remain some variation in how patients are taught to use inhalers. Some of this relates to the general plethora of different devices, dry powder and metered dose inhalers and which particular metered dose inhalers require a large volume spacer to improve drug deposition. |
| 57 | UK Inhaler Group | Question 4 | We are not aware of any current recognised UK Standards for the training and assessment of inhaler techniques either in people with COPD or Asthma. However, there are recommendations that patients should be given a device that they can use and that the ability of patients to use their device correctly should be checked regularly.[1-3] There is a wide body of evidence suggesting that many healthcare professionals and patients are unable to use devices correctly.[3-9] Evidence on inhaler technique was reviewed most recently for the NICE Asthma diagnosis and monitoring guideline (draft) (chapter 29 of full draft guideline).[1] |

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| | | | The importance of checking inhaler technique in order that patients derive maximum benefit from their inhaler is widely recognised and has been included in various other guidance from NICE and SIGN (details in appendix 1)[1,2]. Across COPD and asthma it has been estimated that:<br>• There are around 18 different inhaler devices<br>• Over 90 unique device-drug-dose combinations<br>• 42 device and drug class variations<br>• 9 different types of spacer device available on the NHS<br>• It is not possible to treat patients from mild to severe disease, stepping up treatments following the current BTS/SIGN asthma guideline or GOLD guideline using a single type of inhaler device.<br><br>The UK Inhaler Group was created in order to improve the value that patients and the NHS get from inhaled treatments. (See appendix 2 for more information) We have been working on developing standards for professionals checking and teaching inhaler technique, and can therefore suggest the following standards. These are draft standards in development on which we aim to obtain consensus across the respiratory community and finalise in the next few months.<br><br>**Standards**<br><br>1. All professionals prescribing an inhaler should know how to use the device themselves and have had their own competency assessed. They should be able to demonstrate the technique correctly and clearly to the patient.<br>2. No inhaler should be prescribed without ensuring that the person receiving it can use it. This may involve instructing, watching, reinforcing and repeating. This should be done by the prescriber, or the person reviewing a patient, and again by the person dispensing the inhaler.<br>3. Device technique should be checked either on the prescribed device or with a relevant placebo device (note these are for single patient use)<br>4. Inhaler technique should be checked at every consultation and review and prior to prescribing an additional or alternative inhaler. Sub-optimal technique should be |

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| | | | recognized and corrected<br>5. No patient should be switched to an alternative device without their technique being taught and assessed<br>6. All professionals should understand the fundamental difference between pressurised metered dose inhalers (pMDI) and dry powder inhalers (DPI) and their inspiratory requirements;<br><br>pMDI - slow and steady<br>DPI - quick and deep<br><br>Different devices require different inspiratory flow. This can be checked by devices such as:<br><br>• Flo-tone or Two-tone<br>• Aims machine (MDI and pMDI)<br>• In check device<br>• Whistles – to fit various devices, and provided by the pharmaceutical companies<br><br>7. Advice should be given on care of the device (including spacers) - washing it according to the manufacturer's instructions (if appropriate); not regularly testing the device and wasting doses; storage according to the manufacturer's instructions.<br>Devices should be replaced according to the manufacturers' instructions and good practice guidelines.<br>8. There should be a regular audit of the quantity of inhalers prescribed and collected (not just the number of prescriptions)<br><br>Please note that there is an initiative in the Netherlands – Inhaled Medication Instruction School – which may have developed standards. The following article also takes a comprehensive view on the use of inhalers from an EU perspective.<br>Crompton, G.K. et al The need to improve inhalation technique in Europe: A report from the Aerosol Drug Management Improvement Team .Respiratory Medicine , |

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| | | | Volume 100 , Issue 9 , 1479 – 1494 2006<br><br>We have attached at appendix 3 an extract from the Australian Asthma handbook which relates to inhaler technique.<br><br>**References**<br><br>1. BTS/SIGN British Guideline on the management of Asthma. British Thoracic Society (BTS) and Scottish Intercollegiate Guidelines Network (SIGN) 2012 http://www.brit-thoracic.org.uk/guidelines/asthma-guidelines.aspx<br>2. Drugs and Therapeutics Bulletin Improving Inhaler technique who needs teaching DTB doi:10.1136/dtb.2012.10.0131 2012<br>3. NICE (2010) Clinical Guideline 101. Chronic obstructive pulmonary disease. Management of chronic obstructive pulmonary disease in adults in primary and secondary care (partial update issued June 2010).*National Institute for Health and Clinical Excellence*. Available from http://www.nice.org.uk/nicemedia/live/13029/49397/49397.pdf. Last accessed August, 2015.<br>4. Brocklebank et al Health Technology Assessment 2001; Vol. 5: No. 26 Inhaler technique and training in people with chronic obstructive pulmonary disease and asthma Expert Rev. Respir. Med. 6(1), 91–103 (2012)<br>5. Capstick and Clifton Inhaler technique and training in people with chronic obstructive pulmonary disease and asthma *Expert Rev. Respir. Med.* 6(1), 91–103 (2012)<br>6. Melani AS, Bonavia M, Cilenti V, Cinti C, Lodi M, Martucci P, et al. Inhaler mishandling remains common in real life and is associated with reduced disease control. Respiratory medicine. 2011;105(6):930-8<br>7. Vincken W, Dekhuijzen PR, Barnes P and Group A The ADMIT series - Issues in inhalation therapy. 4) How to choose inhaler devices for the treatment of COPD. *Prim Care Respir J.* 2010 19**,** 1**,** 10-20.<br>8. Rau JL (2006) Practical problems with aerosol therapy in COPD. *Respir Care.* 2006 51**,** 2**,** 158-72. |

| ID | Stakeholder | Comment on | Comments |
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| 58 | Boehringer Ingelheim Ltd | Question 4 | We are unaware of any standards in this area. |
| 59 | Novartis Pharmaceuticals | Question 4 | Respiratory Education UK (REUK) and Education for Health offer university accredited diploma, degree and masters level courses that include inhaler technique courses and are nationally recognised and referred to in several training documents. |
| 60 | Primary Care Respiratory Society UK | Question 5 | There are still parts of the country where a service is not available. It is hard to see how an absence of service continues to be acceptable and that there are no sanctions for areas without such a service. Guidance is available on how to set up a service and how to promote it so that appropriate referrals to it are made, but there appears to be insufficient incentive for such a service to be provided as standard. So patients lose out on a highly effective intervention.<br>The National COPD audit is gathering data from pulmonary rehab groups around the country so will have mapped the majority of services available across the country.<br><br>We suggest a rewording of this to: 'with stable COPD and reported exercise limitation'. The exercise limitation could be observed by a family member or elicited after prompting by a clinician, so 'self-reported' is too limiting. |
| 61 | British Thoracic Society | Question 5 | (Statement 4) Pulmonary rehabilitation services are generally available but more information of this will be available in the near future with the forthcoming publication of the Royal College of Physicians organisational audit of pulmonary rehabilitation services. Generally most areas will provide pulmonary rehabilitation, however they are limited by the number of places that patients can access. Developing this point further it is important to realise that if there is an expectation of patients to move into pulmonary rehabilitation 4 weeks after an exacerbation there will need to be a wide variation over the months in the provision of services. Whilst exacerbations of COPD do occur throughout the year there are clearly peaks which occur during the periods of infection. |
| 62 | Boehringer Ingelheim Ltd | Question 5 | The way this statement is written is potentially vague - for example, anyone with ANY |

| ID | Stakeholder | Comment on | Comments |
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| | | | self-reported exercise limitation AND stable COPD could claim to need to be referred under this language. It could be reworded to be more specific, for example "self-reported exercise limitation due to stable COPD". It will also be a challenge to measure this, has no time line attached, and does not specify that they actually need to be seen, only referred, so in theory any time frame is acceptable and no outcome is required. While we support the intention of this quality statement, we question how likely it is that this is achievable in the current resource model. This should not mean that the statement is removed. There should be some provision to make more pulmonary rehabilitation services available |
| 63 | Primary Care Respiratory Society UK | Question 6 | It is our view that a hospital discharge bundle promotes a more systematic approach to discharging the patient, and can help to ensure that primary care is better informed about when a patient leaves hospital and what needs to be done to follow up and prevent readmissions. However excellent communication systems are needed between primary, secondary and community care to embed such bundles. There are discharge bundles that fail to achieve their full potential because of a failure to set up the communication systems across sectors.<br><br>In London, at Imperial College Healthcare Trust the COPD team designed a discharge care bundle:<br>– aimed at improving care and reducing readmissions<br>– Included personal management plans “COPD passport”<br>Results:<br>– 19% reduction in acute admissions;<br>– 66% reduction in readmissions;<br>– Pulmonary rehabilitation referrals from GPs from 0 - 462 in 12 months.<br>http://www.hsj.co.uk/journals/2011/11/21/o/c/i/HSJBP2011.pdf See p52.<br><br>There is also evidence from the National COPD audit secondary care reports on discharge bundles. |
| 64 | British Thoracic Society | Question 6 | (Statement 8) There are several publications looking at care bundles. Many hospitals across the UK have developed care bundles and the British Thoracic Society has led |

| ID | Stakeholder | Comment on | Comments |
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| | | | the way in the use of care bundles and evidence of their benefit is available. There are several publications on the use of care bundles and if further advice is required I would suggest you discuss this with the British Thoracic Society who have a wealth of experience in this area. |
| 65 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | Question 6 | British Thoracic Society (2014) The British Thoracic Society Pilot Care Bundle Project, British Thoracic Society Reports, Volume 6, No 4. This document is accessible via www.brit.thoracic.org.uk The project focuses on the drivers for improving care for patients presenting with an acute exacerbation of COPD both on admission and discharge using a bundle approach. |
| 66 | Novartis Pharmaceuticals | Question 6 | We believe that the hospital discharge bundle should include:<br>• Review of patients inhaler technique and management options<br>• Review conducted by a member of the respiratory team before discharge from hospital<br>• Appropriate follow-up appointments arranged before discharge<br>• Patients should be provided with educational resources about COPD<br>• Patients should be provided with smoking cessation advice<br>Relevant publications and sources:<br>• http://www.copdcarebundle.com/<br>• https://www.brit-thoracic.org.uk/document-library/audit-and-quality-improvement/care-bundles-project/bts-pilot-care-bundle-project-report-2014/<br>• Jennings JH et al. Predischarge bundle for patients with acute exacerbations of COPD to reduce readmissions and ED visits: a randomized controlled trial. Chest. 2015 May;147(5):1227-34<br>• Laverty AA, et al. Impact of a COPD discharge care bundle on readmissions following admission with acute exacerbation: interrupted time series analysis. PLoS One. 2015 Feb 13;10(2):e0116187<br>• Jennings JH, et al. Pre-Discharge Bundle for Patients with Acute Exacerbations of Chronic Obstructive Pulmonary Disease to Reduce Readmissions and Emergency Department Visits: a Randomized, Controlled Trial. Chest. 2014 Dec 24. [Epub ahead of print]<br>• Matthews H, et al. Care bundles reduce readmissions for COPD. Nurs Times. 2013 Feb 19-25;109(7):18-20.<br>• Hopkinson NS et al. Designing and implementing a COPD discharge care |

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| | | | bundle. Thorax. 2012 Jan;67(1):90-2. |
| 67 | British Thoracic Society | Question 7 | (Statement 9) There were numerous studies outlining the benefits and multidimensional assessment tools. There is a difficulty however between collecting information specifically for an assessment tool by using information / data that is already available vs the use of specific multi-assessment questionnaires which are complex and difficult to administer / interpret. For example changes in breathlessness can be assessed readily by using Mahler's transitional dyspnoea index and quality of life can be accurately assessed and changes in quality of life determined by looking at changes in the St George's questionnaire. These however tend to be research based. Simple measures such as the CAT and BODE index are things that we should consider using and in some respects the simpler the better if we are going to be collecting data from primary care and across the interface. |
| 68 | Primary Care Respiratory Society UK | 1 | Our view is that post bronchodilator spirometry is only relevant for those with FEV1:FVC ratio of less than 0.7, not for all patients. |
| 69 | British Lung Foundation | 1 | We strongly welcome a quality statement aimed at promoting earlier and more accurate diagnosis of all lung diseases, including COPD. However, given under-diagnosis and misdiagnosis of COPD is endemic throughout the NHS, and can have a significant impact on outcomes, we believe this statement should be strengthened. |
| 70 | British Lung Foundation | 1 | A family history of COPD might also be included in the list of risk factors, to capture individuals with a genetic predisposition to the disease (notably those with Alpha-1 Antitrypsin Deficiency) who may not be aware of their increased risk. Given smoking/tobacco use is more prevalent in families where other family members currently or have previously smoked, questions over regarding family history will also help identify those with a greater risk of developing COPD. |
| 71 | British Lung Foundation | 1 | Exposure to biomass fuel fumes, a significant risk factor for immigrant communities, should be included in the list. Reference to 'smoking' might also be expanded to clarify that this includes all methods of tobacco smoking (shisha as well as hand-rolled and manufactured cigarettes), and the smoking of drugs: for instance, heroin has been associated with early onset COPD, while cannabis is often smoked with tobacco and has also been linked with early onset COPD. |
| 72 | British Lung Foundation | 1 | The NICE pathway includes a recommendation that health professionals should also ask about the following factors where COPD is suspected: weight loss; effort |

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| | | | intolerance; waking at night; ankle swelling; fatigue; occupational hazards; chest pain; haemoptysis. For consistency, this recommendation should be included in the Standard. |
| 73 | British Lung Foundation | 1 | We know that not all healthcare professionals are confident in the use of spirometry, and welcome the specific reference to the need for healthcare professionals to be 'trained and competent in its use'. However, we believe that formal accreditation is needed to ensure that this training is appropriately tested and updated. Spirometry should be included in the Core Medical Curriculum as a specific practical procedure, as this will drive competency assessed training for doctors in training. Given the current under-use of spirometry we also believe it would be beneficial if the attractions of this form of testing, which are that it is quick, simple and harmless, be stated on the face of the Quality Standard to encourage uptake. |
| 74 | British Lung Foundation | 1 | We welcome 'exertional breathlessness' as a key symptom of COPD, and one that is often flagged by patients as among their most significant concerns. However, we feel more information is required for healthcare professionals to allow them to raise this with patients, given that many patients do not volunteer this information. Much of IMPRESS' work including Breathless IMPRESS Tips (BITs) addresses this. |
| 75 | British Thoracic Society | 1 | Those individuals who are 35 who have a history of tobacco use or perhaps an exposure to fumes in an occupation should be considered for spirometry. It is worth being specific here and stating the symptoms of cough, sputum, acute bronchitis, regular use of inhaled beta-agonists for breathlessness or wheeze rather than "symptoms of COPD" which may mean nothing.<br>Whilst the statement it states very clearly that quality assured spirometry is essential, it is important that we state specifically in the structure about quality assured spirometry and attainment of qualifications e.g. the ARTP / BTS standard. Moreover it is important that individuals who gain this qualification continue to show competence and perhaps audit of practices where spirometry is being performed should be included in the statement. |
| 76 | Boehringer Ingelheim Ltd | 1 | Add in genetic factors to the risk factors e.g. alpha 1-antitrypsin deficiency; under symptoms of COPD, it would be helpful to put numbers to the definition of "frequent winter bronchitis" e.g. 2 courses of oral antibiotics or more for respiratory tract infections |

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| 77 | Association of Respiratory Nurse Specialists | 1 | ARNS strongly welcome a quality statement aimed at promoting earlier and more accurate diagnosis of lung disease. Given that under-diagnosis and misdiagnosis of COPD is endemic throughout the NHS, and can have a significant impact on outcomes, we believe this statement should be strengthened.<br>ARNS recognises that in the QS you have made reference to training and competency, however, ARNS feels that within these specific QS that additional recommendations on the level of training and competency should be measurable. Without this change we will not be able to full fill the 'quality assured spirometry' asked by the standard. |
| 78 | Novartis Pharmaceuticals | 1 | We suggest that the following is added to the Healthcare Professionals section:<br><br>Healthcare Professionals should ensure that post-bronchodilator spirometry is conducted using appropriate devices that are adequately maintained and calibrated. |
| 79 | Novartis Pharmaceuticals | 1 | We suggest that the marked information is added to section b:<br><br>Evidence of local arrangements and written clinical protocols to ensure that healthcare professionals using post-bronchodilator spirometry are trained and competent in its use ***and interpretation of results. There should also be evidence that spirometry devices are adequately maintained and calibrated.*** |
| 80 | Chartered Society of physiotherapy | 1 | An accredited spirometry course for all healthcare professionals undertaking quality assured spirometry would help support improvement |
| 81 | Orion Pharma | 1 | How is spirometry assessment going to be measured to ensure staff perform quality-assured post-bronchodilator spirometry? There is much need in Primary care for spirometry training that is both informative and practical, not just looking at the numbers predicted but how these numbers should be interpreted in real-life patients.<br><br>How are organisations conducting Spirometry training going to be accredited and checked that they are providing appropriate training for HCPs? |
| 82 | Great Western Hospital NHS Trust | 1 | • The barrier to point b) will be the cost and access of formal training. Please clarify the level of training recommended by the NICE guidelines, as formal spirometry training costs >300pounds which trusts do not have funding for.<br>• Please address wording of the paragraph for 'rationale'.<br>• What register is being referred to in 'data source'?<br>• Do you need to add the following risk factors;<br>  ○ Family history, |

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| | | | ○ History of Asthma,<br>○ Poor response to bronchodilators. |
| 83 | RCGP | 1 | I wonder if it would be better to be clearer about a risk factor (smoking) as this might be perceived as low socioeconomic class (risk factor, but usually linked to smoking). Should everyone have post bronchodilator spirometry or only those with obstructive ratio or a low FEV1 on screening spirometry? |
| 84 | Primary Care Respiratory Society UK | 2 | The rationale (p14) states 'Post-bronchodilator therapy is usually delivered using a hand-held inhaler device.' We think this is a typo and are not sure what was intended in this sentence, but 'post bronchodilator' can't be right. |
| 85 | GSK | 2 | We believe the following (bold) text should be inserted into QS2 (p17)<br>- Patient assessment should be **carried out and patient choice should be considered** prior to choosing the most appropriate device for delivery of inhaled **therapy with the opportunity for patients to try demonstration devices to establish their device preferences**.<br><br>The source guidance (NICE CG101) recommends that if patients are unable to use a device satisfactorily an alternative should be found. (This approach would also be consistent with the NHS policy document "Liberating the NHS: No decision about me, without me.)<br><br>Problems with inhaler technique are widely accepted to be a significant issue in COPD management this should be an integral part of the individualised management plan as in QS2 2011 which includes a wider range of information.<br><br>Inhaler technique should be part of a wider annual review as in QS4 2011 which assesses overall management.<br><br>The level of inhaler technique training and re-training at GP practice-level or hospital-level is currently not measured consistently. Incentivisation (eg. through QOF measurement) may be a way to ensure this element is included in all reviews. |
| 86 | British Lung Foundation | 2 | In addition to the recommendation that health professionals should have access to national standards in training and reviewing the inhaler technique of patients (which should be conducted for each individual type of inhaler used by the patient), we'd also |

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| | | | welcome more overt reference to the need for healthcare professionals themselves to be adequately trained in correct inhaler use. |
| 87 | British Lung Foundation | 2 | On the question of appropriate standards for health care professionals training and assessment of inhaler technique, we recommend NICE look at the diplomas run by the National Asthma and Respiratory Training Centre or Education for Health. The UK Inhaler Group is also currently drafting standards on inhaler technique and training that would constitute a recommended reference point for these Quality Standards. |
| 88 | Royal Pharmaceutical Society | 2 | Pharmacists have the opportunity to identify patients who may need additional support and help with the use of inhalers through many of the services they provide, often checking inhaler technique with patients who have been supplied new devices.<br>For example in community pharmacy, COPD patients who have been issued with a new medicine to manage their condition are offered the New Medicines Service (NMS). Pharmacists will provide general advice on how to use new medicines and also check inhaler technique. They will also arrange a follow up after a certain period and discuss any concerns and issues patients may be experiencing with their new medicines. Information about the service is recorded and could be a useful source of data for audits, in particular whether inhaler technique was checked.<br>Community pharmacists also provide Medicines Use Reviews (MURs); another opportunity where inhaler technique can be checked. Records of MURs are also maintained, and again, this may be useful for assessing impact in this particular setting. |
| 89 | British Thoracic Society | 2 | It is essential that inhaler technique is checked –more specific than “regularly” as stated in structure, a.<br><br>State that if the technique is poor, education is provided and the patient is reassessed earlier, rather than providing education and reviewing the patient again at 12 months. There needs to be an assessment and recognition that if they cannot use the inhaler device then the device is changed, and then re-assessed.<br><br>There are a few standards for inhaler technique although an “inhaler project” is being developed. There are recognised “meters” that can be used to ensure that the correct flow is generated during such devices to optimise intrapulmonary deposition of drugs. Such meters are not particularly expensive and should be made more widely available, |

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| | | | as should education to try and improve the standards. Regrettably there does remain some variation in how patients are taught to use inhalers. Some of this relates to the general plethora of different devices, dry powder and metered dose inhalers and which particular metered dose inhalers require a large volume spacer to improve drug deposition.<br><br>With regards to the outcomes: exacerbation rates are perhaps not an ideal measure. Would not the number or prescriptions collected versus the number of anticipated be a much better target i.e. if a patient has a device per month there should be 12 devices issued within a year. Query whether hospital admissions are a useful marker. |
| 90 | Boehringer Ingelheim Ltd | 2 | Under the equality and diversity section, it could be noted that while most people are able to acquire and maintain correct inhaler technique if given adequate instruction, persistence with technique generally deteriorates with time since last instruction. We are pleased to see the suggestion that technique is checked on commencement with an inhaler, when an inhaler is changed, and at least annually. We propose this could be further strengthened to suggest that a person's inhaler technique is checked at every interaction related to their respiratory condition management with their health care professional. |
| 91 | Association of Respiratory Nurse Specialists | 2 | As a member of the UK Inhaler Group (UKIG) ARNS supports the statement made by this group. |
| 92 | Novartis Pharmaceuticals | 2 | We suggest that the marked information is added to the following sentence in the Healthcare Professional section:<br><br>Healthcare professionals ensure that they assess the person's inhaler technique when starting treatment and throughout their treatment, ***especially if there is a significant change in patients symptom control.***<br><br>We suggest that the following sentence is added to the Healthcare Professionals section: |

| ID | Stakeholder | Comment on | Comments |
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| | | | Healthcare Professionals should remain up to date with training and competencies in performing, training and assessing inhaler technique by having annual inhaler technique and device training. |
| 93 | Teva | 2 | A patient assessment should be undertaken *and correct technique demonstrated* before the most appropriate device is prescribed, *and alternative devices where correct technique can be demonstrated should be offered if needed, taking account of patient preference.* |
| 94 | Teva | 2 | Healthcare professionals ensure that they assess the person's inhaler technique when starting treatment and throughout their treatment *and the patient demonstrates correct technique and this is recorded. An alternative inhaler treatment should be prescribed if the patient is unable to demonstrate correct technique.* |
| 95 | Teva | 2 | People with COPD who are prescribed an inhaler have their inhaler technique assessed *and demonstrate correct technique* when starting treatment and then regularly during treatment. *If not demonstrated correctly, alternative should be prescribed where patient can demonstrate correct technique.* |
| 96 | Teva | 2 | **People with COPD** who have an inhaler have a check to make sure that they can use it correctly *and that this is demonstrated* when they start treatment and at least once a year at their annual review *and this is recorded.* They should also have a check if their treatment changes or after a hospital stay. *An alternative inhaler treatment should be prescribed if the patient is unable to demonstrate correct technique.* |
| 97 | Teva | 2<br>Process | a) Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed and *demonstrate correct technique* at the start of treatment.<br>Numerator – the number of people in the denominator who had their inhaler technique assessed and demonstrate correct technique at the start of treatment. |
| 98 | Teva | 2<br>Process | Should include a new numerator - Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed and demonstrate incorrect technique at the start of treatment and are changed to an inhaler where they can demonstrate correct technique |
| 99 | Teva | 2<br>Process | b) Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed *and demonstrate correct technique* at their annual review. |
| 100 | Teva | 2 | c) Proportion of people with COPD prescribed an inhaler who have their inhaler |

| ID | Stakeholder | Comment on | Comments |
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| | | Process | technique assessed *and demonstrate correct technique* after a change in treatment. |
| 101 | Teva | 2<br>Process | Numerator – the number of people in the denominator who had their inhaler technique assessed *and demonstrate correct technique* after a change in treatment. |
| 102 | Teva | 2<br>Process | d) Proportion of discharges from hospital of people with COPD who have their inhaler technique assessed *and demonstrate correct technique* before discharge after an exacerbation. |
| 103 | Teva | 2<br>Process | Numerator – the number of people in the denominator who had their inhaler technique assessed *and demonstrate correct technique* before discharge from hospital. |
| 104 | Teva | 2<br>Rationale | Post-bronchodilator therapy is usually delivered using a hand-held inhaler device. People must be able to use *and demonstrate their* inhaler use correctly to ensure that they receive the optimal treatment dose. There are several types of inhaler and it is important that training and assessment are specific to each device. Training and assessing technique should take place at the initial prescription and be reassessed throughout the duration of a person's treatment *and if not demonstrated correctly, alternative should be prescribed where patient can demonstrate correct technique.* |
| 105 | Chartered Society of physiotherapy | 2 | Is it possible to make the regular review aspect of the quality statement more specific? For example, could state no less than every 12 months, in line with the quality measures. |
| 106 | Orion Pharma | 2 | People with COPD who are prescribed an inhaler have their inhaler technique assessed when starting treatment and then regularly during treatment.<br><br>Would it be wise to also include detail about what type of inhalers should be prescribed for patients with COPD? Bearing in mind many may have pursed lips or dexterity issues? What are the determinants for which inhaler should be prescribed for patients with COPD? Patients should be provided with an informed decision about the different devices that are available and the molecules available in each inhaler device.<br><br>The HCP needs to be able to effectively train the patient on correct use of the device; consequently it is important that the HCP can use it correctly and that training is easy as well as the device being easy for the patient to use.<br>If HCPs do not teach correct inhaler technique which affects drug delivery causing a clinical and symptomatic impact as well as increased admissions, waste and overprescribing. This can then also lead to patients being moved to a higher dose, or combination product too early in their disease progression. An alternative device being |

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| | | | offered and taught to the patient can aid patient compliance, manage symptoms and also reduce costs to the NHS.<br><br>How will inhaler technique trainers be assessed to ensure they are providing correct inhaler technique training and being kept up to date with all of the latest information regarding availability of data and types of inhalers that are licensed for COPD |
| 107 | Great Western Hospital NHS Trust | 2 | • Other points at which inhaler technique should be checked;<br>○ Hospital at home or Specialist service input,<br>○ At point of collection in pharmacy (due to potential swapping of devices on generic prescription). |
| 108 | RCGP | 2 | Perhaps people with COPD who are prescribed an inhaler should be taught first to use it and be assessed as being able to use it on initiation and then regularly during their treatment? |
| | | | |
| 109 | London Respiratory Network | 3 | Oxygen therapy is NOT used to relieve breathlessness in people with COPD (QS3)<br>Oxygen should NOT be commonly used to relieve symptoms (QS6)<br>Oxygen should be used to SAFELY raise arterial oxygen saturation when needed.<br>We also feel there should be an explicit statement about risk assessment for oxygen use, particularly with respect to smoking.<br>Please see our statement here: https://www.networks.nhs.uk/nhs-networks/london-lungs (added Mon 22 July 2015) |
| 110 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 3 | A few times ABG is mentioned should clarify the difference between ABG and CBG as HOS-AR services routinely use CBG measurement for community assessment of oxygen therapy |
| 111 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 3<br>page 18 | The statement indicates that oxygen is used in COPD for breathlessness relief. The statement also mentioned that it is used to correct hypoxemia. My concern is that we should not be encouraging oxygen therapy to be used for breathlessness relief especially in non-hypoxemia patient, other methods may be suggested first eg fan therapy, encouraging Pulmonary Rehab and opioid use. |
| 112 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 3<br>page 19 | Capillary blood gases can also be performed by Home Oxygen Service-Assessment Review (HOS-AR) to identify the needs for LTOT for patients with sp02<92%. Patients are best assessed by the HOS-AR and the importance for the services to be commissioned. |
| 113 | Primary Care Respiratory | 3 | 'People with COPD and a resting stable oxygen saturation level of 92% or less have |

| ID | Stakeholder | Comment on | Comments |
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| | Society UK | | their arterial blood gases measured to assess eligibility for long-term oxygen therapy'. This should add that people whose oximetry has been checked in stable condition shows persistent resting saturations of <92% on more than one occasion, as this follows the CG 101 advice. Under 'Structure' (p18)– there is a typo. ARRESTING needs to be corrected to read A RESTING |
| 114 | British Lung Foundation | 3 | Appropriate oxygen therapy is a welcome addition to this guideline. However, we are concerned that the current wording which states that 'oxygen therapy is used to relieve breathlessness in people with COPD' may be confusing. We recommend that this is amended to 'Oxygen therapy is used as a treatment for people with severe COPD whose disease has led to the development of a low oxygen level in the blood'. The aim of oxygen therapy is to correct this low level, rather than serving as a treatment for breathlessness, as might be inferred from the original wording. This is important because some breathless patients are not hypoxic, and hypoxic patients are not always breathless. Oxygen has not been shown to have any effect on the sensation of breathlessness in non-hypoxaemic patients. Oxygen saturation during exercise should also be assessed, as patients with normal saturation at rest may still experience drops on exertion, at which point portable oxygen therapy may be indicated. |
| 115 | British Lung Foundation | 3 | As well as an initial assessment there is also a need for regular review of LTOT. We would therefore recommend that either an additional quality statement is included to this end, or that the above statement amended to state that 'Oxygen is a medicine that should always be planned, prescribed and reviewed, at least annually, by staff trained in oxygen prescription and use such as a Home Oxygen Service Assessment and Review team'. We have been advised by a number of patients that they have needed to chase healthcare professionals themselves to have their oxygen reviewed, suggesting that other patients who have not chased are going without this essential review. |
| 116 | British Lung Foundation | 3 | BTS Guidance (2015) states of patients receiving LTOT:<br><br>• They should receive follow-up at 3 months after LTOT has been ordered, which should include assessment of blood gases and flow rate to ensure LTOT is still indicated and therapeutic.<br>• They should receive follow-up visits at 6– 12 months after their initial 3-month follow-up, which can be either home based or in combination with hospital visits.<br>• Their follow-up visits should be conducted by a specialist home oxygen |

| ID | Stakeholder | Comment on | Comments |
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| | | | assessment team with the necessary skills to deliver patient education and manage withdrawal of home oxygen.<br>• All patients for whom LTOT has been ordered should be visited at home within 4 weeks by a specialist nurse or healthcare professional with experience of domiciliary oxygen therapy. The visit provides an opportunity to highlight potential risks and should be used to reinforce education and offer support to the patient and carer. Compliance may be checked, along with smoking status, symptoms of hypercapnia and oxygen sets. |
| 117 | British Lung Foundation | 3 | A LTOT quality statement should include a statement similar to inhaled therapies competencies so that oxygen is provided by fully trained healthcare professionals. A statement could also include information about access to and use of portable hand held oximetry to help ensure oximetry is always measured. |
| 118 | British Thoracic Society | 3 | The comment on the rationale of oxygen use is completely wrong. Oxygen therapy is used to treat hypoxaemia in people who have daytime hypoxaemia, as measured by a PaO2 of 7.3 or less. The comments about nocturnal hypoxaemia is a complete fallacy and the studies suggest that treating overnight arterial oxygen desaturation is not an important outcome measure (NOTT verses COTT American studies from the mid-1980's).<br><br>The process seems acceptable but is mortality an appropriate outcome? Given that it is often 18 months before there will be any difference in survival in those patients receiving oxygen there will be too many confounding factors to make this a useful tool. Likewise hospital admissions are open to so many vagaries that this is not a good outcome. Subtle changes in cognitive impairment which have been confirmed with oxygen therapy or the prevention of the development of cor pulmonale are hard to determine. |
| 119 | Boehringer Ingelheim Ltd | 3 | In the denominator section, is there guidance as to how this should be measured in primary care, if so it would be helpful to refer to it? For example, definition of "resting" and "stable". |
| 120 | ResMed UK Ltd | 3 | Have the standards committee considered the use of non-invasive transcutaneous blood gas monitoring as a potential alternative to arterial blood gas as a means to confirm hypoxaemia? |

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| | | | Clinical studies suggest that this non-invasive measure is highly correlated with arterial blood gas measurements and yet is less invasive for the patient, requires lower training on the behalf of the user and can provide results in a reduced amount of time than traditional arterial blood gas sampling.<br><br>References:<br>Storre, J.H.; Magnet, F.S.; Dreher, M.; Windisch, W. *Transcutaneous monitoring as a replacement for arterial PCO(2) monitoring during nocturnal non-invasive ventilation* Respiratory Medicine 2011 105 143-150<br>Chhajed, P.N.; Miedinger, D.; Baty, F.; Bernasconi, M.; Heuss, L.T.; Leuppi, J.D.; Tamm, M. *Comparison of combined oximetry and cutaneous capnography using a digital sensor with arterial blood gas analysis* Scandinavian Journal of Clinical and Laboratory Investigation Vol70 Issue 1 60-64 |
| 121 | Association of Respiratory Nurse Specialists | 3 | ARNS supports the need for assessment for appropriate oxygen therapy and is a welcome addition to this guideline.<br>However, ARNS are concerned that the current wording which states that 'oxygen therapy is used to relieve breathlessness in people with COPD' will be confusing. We recommend this is amended to 'oxygen therapy is used as a treatment for COPD.' This is important because some breathless patients are not hypoxic and hypoxic patients are not always breathless. BTS guidelines state that: Oxygen is a treatment for hypoxaemia, not breathlessness. Oxygen has not been shown to have any effect on the sensation of breathlessness in non-hypoxaemic patients.<br>In addition, as well as an initial assessment there is also a need for review of Long-term oxygen therapy. We would therefore recommend that either an additional quality statement is included to this end, or the above statement amended to include the statement that 'People prescribed long-term oxygen therapy should have that therapy reviewed at least annually by a Home Oxygen Service Assessment and Review team' BTS Guidance (2015) States that follow-up of long term oxygen therapy (LTOT) patients:<br>•LTOT patients should receive follow-up at 3 months after LTOT has been ordered, which should include assessment of blood gases and flow rate to ensure LTOT is still indicated and therapeutic.<br>•LTOT patients should receive follow-up visits at 6– 12 months after their initial 3-month follow-up, which can be either home based or in combination with hospital visits. |

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| | | | •Follow-up visits should be conducted by a specialist home oxygen assessment team with the necessary skills to deliver patient education and manage withdrawal of home oxygen.<br>•All patients for whom LTOT has been ordered should be visited at home within 4 weeks by a specialist nurse or healthcare professional with experience of domiciliary oxygen therapy. The visit provides an opportunity to highlight potential risks and should be used to reinforce education and offer support to the patient and carer. Compliance may be checked, along with smoking status, symptoms of hypercapnia and oxygen saturations. |
| 122 | Chartered Society of physiotherapy | 3 | The rationale of using oxygen therapy for breathlessness is incorrect, oxygen is given to relieve hypoxia.<br>The wording of the rationale is slightly confusing, consider clarifying the different scenarios of hypoxia that would warrant LTOT i.e. separate out nocturnal hypoxia and hypoxia for more than 30% of the time.<br>Unsure of why "$SaO_2$ less than 90%" is used in the rationale, whereas "$SaO_2$ less than 92%" is used throughout the rest of this section.<br>Typo: "arresting" – a resting<br>No reference to other types of oxygen therapy e.g. ambulatory, nocturnal, short burst whereas these are specifically mentioned in the BTS guidelines.<br>Barrier: Some areas do not have a Home Oxygen Service Assessment and Review (this quality standard could help to improve the availability of these services) |
| 123 | Great Western Hospital NHS Trust | 3 | Oxygen therapy is NOT used to relieve breathlessness in people with COPD. We would not like to see this written in the guidelines, long term oxygen therapy is prescribed to reduce the risk of hypoxic organ damage, heart failure and the progression of pulmonary hypertension.<br>It is not clear if the rest of the rationale statement is talking just about nocturnal oxygen or about general LTOT prescription, it appears to recommend LTOT only for those with nocturnal hypoxaemia. |
| 124 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 4 | PR- could this be an opportunity to recommend that PR should be offered to all because the benefits around education should be given at the early stages of the disease not just once someone is limited by their breathlessness? Prevention better than cure? |
| 125 | Staffordshire and Stoke-on-Trent Partnership, Community | 4 | PR, starting PR within 4 weeks post discharge might not be achievable for some service. Also, patients might not be psychologically ready for it regardless of research |

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| | Respiratory Team | | evidence of the early benefit of starting PR early post discharge. From our service, we tend to find that DNA rate are high post hospital discharge. |
| 126 | British Lung Foundation | 4 | Patients have often reported that, although pulmonary rehabilitation services exist across the country, referral to these services is not consistent, and drop-out rates are high (the publication of the BTS/RCP COPD Audit of pulmonary rehabilitation will shed further light on this when the results are published later in the year). We therefore strongly welcome a quality statement which aims to improve referral to, and the consistency of, pulmonary rehabilitation across the country. |
| 127 | British Lung Foundation | 4 | For many patients, pulmonary rehabilitation is a life line to managing their condition, providing them with an understanding of their disease that they might not (patients have reported) have received from their doctor. Patients have commented that being made aware of, and referred to a PR programme upon diagnosis, would give them the strongest start to managing their condition. |
| 128 | British Lung Foundation | 4 | The content and quality of PR courses vary across the country. To support service improvement we would like to see the core elements of good PR made explicit on the front page of the Quality Standard. |
| 129 | British Lung Foundation | 4 | We know that PR can benefit a broad range of people with COPD, rather than just those with moderate to severe breathlessness. This quality statement should therefore be broadened so that it may also apply to people who have MRC score 1 and 2. The statement also makes specific reference to “stable” COPD, although this is not defined and is not supported by evidence that ‘unstable’ patients yield no benefit from PR. We would recommend the removal of this word. |
| 130 | British Lung Foundation | 4 | Given the often lengthy lead in times between referral and initiation of PR, this statement would benefit from time limit, similar to that featured in quality statement 5, limiting this wait to a maximum of four weeks. |
| 131 | British Lung Foundation | 4 | It is also important in PR referrals that staff have sufficient understanding of the importance of behavioural change to promote PR effectively. This will in turn help patients view it as an important part of managing their condition. |
| 132 | British Lung Foundation | 4 | While PR has shown significant benefit for a large number of people with lung disease, exercise outside PR programmes is an important part of self-management, and has been shown to promote symptom control and reduce exacerbations. We would welcome recognition of the importance of ongoing exercise (so called ‘top-up’/ ‘refresher’/ ‘maintenance’ courses) within the text of the statement. |
| 133 | British Lung Foundation | 4 | Input from a psychologist should be a core component of PR. We know that PR is |

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| | | | effective for those who complete the programme, but that completion rates are poor, particularly for those with patients with complex needs who might benefit most from PR. Structuring PR in a psychologically informed way will help improve completion rates, and support the development of self-efficacy and thus capacity for self-management. |
| 134 | British Thoracic Society | 4 | The rationale for pulmonary rehabilitation could perhaps be expanded as there is a huge evidence base. Pulmonary rehabilitation services are generally available but more information of this will be available in the near future with the forthcoming publication of the Royal College of Physicians organisational audit of pulmonary rehabilitation services. Generally most areas will provide pulmonary rehabilitation, however they are limited by the number of places that patients can access. Developing this point further it is important to realise that if there is an expectation of patients to move into pulmonary rehabilitation 4 weeks after an exacerbation there will need to be a wide variation over the months in the provision of services. Whilst exacerbations of COPD do occur throughout the year there are clearly peaks which occur during the periods of infection.<br><br>Clarity about the process. It should not be individuals “referred” into the process, though this may be one metric that would need to be captured, but it is the number of people who start the programme and the number that complete. Otherwise aspects like transport, venue will be lost in the overall issues.<br><br>Outcome measures - hospital admissions and mortality rates are really very difficult to measure and a poor indicator. Perhaps reduction in attendances at GP surgeries may be a more useful measure.<br><br>Recognition needed that patients may not go onto pulmonary rehabilitation on one occasion but may receive this on several occasions over the course of their illness. There is no comment made about on-going support groups and “maintenance” programmes. It needs to be made clear that that patients who should be referred are those who have MRC3 score and above and if we accept that this is an MRC grading system then the denominator is a little confusing. Is this the number of patients with |

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| | | | known COPD with an MRC3 score at the GP's surgery who have been referred for rehabilitation in the last 12 months. Of course this misses the "hidden millions" with COPD who unless we make an accurate diagnosis will not access one of the most beneficial treatment interventions. |
| 135 | Boehringer Ingelheim Ltd | 4 | This statement should be made more specific, include an outcome measure, and a timeline. Evidence of referral to a service doesn't reveal whether patients are being seen promptly or having to wait a long time for rehabilitation, or indeed if they are actually attending. It could also capture whether people are choosing not to attend, or are unable to attend due to factors outside of their control, e.g. mobility, transport |
| 136 | Association of Respiratory Nurse Specialists | 4 | ANRS believe that this Quality Standard is appropriate but feels it needs further strengthening<br>Numerator – should indicate number of appropriate people referred for PR, not everyone with COPD is appropriate.<br>ARNS wonders if the exclusion criteria might also include those who have already completed PR within 12months.<br>Pulmonary Rehabilitation is a treatment for dyspnoea – although this isn't really clear. Exercise limitation is due to dyspnoea – need to exclude reason for limitation by other co-morbidities. Difficulty walking could be a number of other conditions. COPD may actually not be limiting factor and therefore PR not the most appropriate intervention.<br>Most people measure QoL, exercise capacity, Referral and completion rates. ?unrealistic to try and measure hospital admissions/mortality without long term follow u and therefore we wonder how achievable this is in clinical practice.<br>PR should include exercise and education related to patients chronic lung condition and should not exclude other Chronic respiratory conditions. Education sessions related to COPD and therefore ARNS believes that there should be some reference to content/quality of PR? I.e. to include individualised prescribed exercise training programme & appropriate education to support effective self-management/symptom management?<br>.<br>MRC grade 2+ if limited by dyspnoea, not MRC 3+ - this has been changed on BTS PR guidelines (2015).<br>ARNS is also aware that PR services are not always widely available, there is also a wide variation in standard of services. ARNS are also aware of the recent BTS Quality Standards for PR and awaiting results of the National PR Audit of which may also |

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| | | | influence this quality standard. |
| 137 | Chartered Society of physiotherapy | 4 | Unsure why people with locomotor or neurological difficulties are excluded from rehabilitation. Service should be inclusive and adaptations made to the programme on an individual needs basis. Exercises can be modified safely for them and can be beneficial for arthritis and peripheral vascular disease. |
| 138 | Great Western Hospital NHS Trust | 4 | • The national COPD audit programme is collecting responses from pulmonary rehabilitation providers, who will provide you with the numbers referred to pulmonary rehab, but won't necessarily provide you with the number who presented themselves initially with self-reported exercise limitation (presumably they presented themselves at their surgery).<br>• MRC grades 2-4 are offered pulmonary rehabilitation. Grade 1 are offered stop smoking advice (if appropriate) and referral to active health services, Grade 5 are offered home visit from COPD matron.<br>PR services are widely available in Wiltshire, led by the PACE team. All GP surgeries are provided with referral/criteria forms. Referral rates differ across surgeries. |
| 139 | RCGP | 4 | Why does it have to be self reported exercise limitation – if I ask the patient and they respond does that still count? Would suggest change to stable COPD and reported exercise limitation. |
| 140 | Primary Care Respiratory Society UK | 5 | On post discharge pulmonary rehabilitation. This is very difficult to make happen in practice, even if centres are well set up to deliver it, due to patient and organisational factors. This could be reworded to be more realistic as follows: 'Pulmonary rehabilitation should be offered to people on discharge from hospital and facilities should be made available so that this can be provided within the first six weeks post-discharge.' There should not be a target around the number of patients who accept and attend post-discharge rehab as this is affected by many patient factors outside the control of the system. |
| 141 | British Lung Foundation | 5 | We strongly support this statement and are pleased that NICE has recognised that timely referral to PR is a significant problem within the NHS. Referral to PR should be included as standard in a hospital discharge bundle. Given the scale of the current shortfall in timely provision this is a useful stand-alone quality statement. In time, however, we suggest this Quality Standard be wrapped up in a strong statement on appropriate hospital discharge bundles. |
| 142 | British Lung Foundation | 5 | Exacerbation and hospitalisation are often 'teachable moments' when patients are most ready to consider change. However, low self-efficacy, breathlessness-related |

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| | | | anxiety and patients' beliefs that PR is not relevant to their needs may all be barriers to engagement. These barriers should be addressed by integration of psychology into respiratory care. |
| 143 | British Thoracic Society | 5 | Early pulmonary rehabilitation may have an impact on hospital admissions but again we need to be careful about the aspects of using mortality as a marker of an outcome.<br><br>One of the major issues for commissioners is not that they commission the service but that they commission insufficient services. As mentioned previously there needs to be recognition that there need to be spare capacity, especially over the winter months to allow patients when there is an increased frequency of hospital admissions to allow all patients to enter the programme. |
| 144 | Boehringer Ingelheim Ltd | 5 | Services for pulmonary rehabilitation are still not universal so somehow incentivising commissioners and providers to address this issue would be welcome. |
| 145 | Boehringer Ingelheim Ltd | 5 | While we support the intention of this quality statement, we question how likely it is that this is achievable in the current resource model. This should not mean that the statement is removed. There should be some provision to make more pulmonary rehabilitation services available. |
| 146 | Association of Respiratory Nurse Specialists | 5 | ARNS supports this quality statement, however, ARNS believes that recruitment to Post Exacerbation PR is very difficult and not all pathways reflect this.<br>ARNS feels that the statement needs to address clinically those appropriate for who PEPR are likely to be referred. ARNS believe that it is estimated that it's only a small amount of patients that are referred due to the needs and that there is some reflect that those admitted now are now very sick. Rarely is it that those admitted have a straight forward COPD exacerbation, experience suggests its normally pneumonia or respiratory failure and therefore require more medical input which would exclude them from attending PR within 4 weeks.<br>ARNS also feel that the MDT needs strengthening including support from psychological services to help manage the anxiety and depression associated with change in symptoms and also disease. As well as the anxieties around admission.<br>New evidence suggesting can do more harm if started too early<br>ARNS also believes that the QS does not reflect current Admission Avoidance Teams and pathways – as most appropriate patients most are now more likely to cared for at |

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| | | | home and therefore don't fit the current pathway of post exacerbation rehabilitation. Evidence comes from standalone programs. Numbers not big enough to run a standalone group, also requires higher staffing levels and completion rates often small. |
| 147 | Novartis Pharmaceuticals | 5 | We suggest that the following is added to the Healthcare Professionals section:<br><br>Healthcare Professionals should ensure that people with COPD admitted to hospital for an acute exacerbation should have their inhaler technique and management reviewed before discharge and as part of the rehabilitation programme. |
| 148 | Gloucestershire Hospitals NHS Foundation Trust | 5 | Extremely challenging to deliver for all patients suffering an exacerbation of COPD given the extremely seasonal nature of this condition and the limited resources for pulmonary rehabilitation which is a very labour-intensive treatment. |
| 149 | Chartered Society of physiotherapy | 5 | Barriers: poor uptake by patients so soon after hospital admission, especially with Early Supported Discharge schemes, going home with IV antibiotics etc. Potentially more beneficial to say four weeks after returning to baseline observations?<br>This could need to be commissioned separately from "stable" PR services to reflect the increased demand on the service.<br>As with quality statement 4, unsure why people with locomotor or neurological difficulties are excluded from rehabilitation. Service should be inclusive and adaptations made to the programme on an individual needs basis. Exercises can be modified safely for them and can be beneficial for arthritis and peripheral vascular disease. |
| 150 | Great Western Hospital NHS Trust | 5 | • Is this a realistic guideline? Although there are some documented benefits, there will be lots of barriers to implementing this;<br>o Uptake and retention,<br>o Getting referrals in a timely manner,<br>o Availability of a program within 4 weeks of discharge,<br>o Travelling (patients feeling unwell within 4 weeks of discharge may not feel up to travelling),<br>o Suitability and safety of mainstream PR for patients who are more frail post-discharge, are they stable, is their BMI suitable or do they need nutritional input prior to any exercise, is their mobility at a sound level for exercise? Certainly there will be benefits to PR but potentially a specifically designed post-discharge program, which will be difficult to implement with limited resources. |

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| | | | • This is quite a generalised statement which will not always be appropriate to implement particularly with patients moving towards end of life.<br>• There is some evidence suggesting those who do early post-discharge rehabilitation have a higher rate of mortality although a better quality of life. It is not always appropriate and so should it really be included in the standards.<br>• How to implement early rehab has not yet been determined, there are some safety issues.<br>• All post-exacerbation COPD patients should be referred for pulmonary rehabilitation, but not necessarily to start PR within 4 weeks.<br>The point at the end (equality and diversity) will exclude a significant proportion of those referred. |
| 151 | RCGP | 5 | Considering the paper in the BMJ (Greening NJ, Williams JEA, Hussain SF, et al. An early rehabilitation intervention to enhance recovery during hospital admission for an exacerbation of chronic respiratory disease: randomised controlled trial. *British Medical Journal.* 2014;349.) and the lack of generalizability due to careful selection methods of the Cochrane Review on early PR – should we still be recommending the earlier the better? |
| 152 | London Respiratory Network | 6 | Oxygen should NOT be commonly used to relieve symptoms (QS6)<br>Oxygen should be used to SAFELY raise arterial oxygen saturation when needed.<br>We also feel there should be an explicit statement about risk assessment for oxygen use, particularly with respect to smoking.<br>Please see our statement here: https://www.networks.nhs.uk/nhs-networks/london-lungs (added Mon 22 July 2015) |
| 153 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 6 | Would it be appropriate to identify the BTS emergency oxygen guidelines oxygen target saturation, 88-92% for COPD patients? Would it be also appropriate as the emergency use of oxygen is mentioned to identify the device of choice for a COPD patient (venturi) as recommended by the BTS Emergency oxygen guidelines? Should we reference the above with the BTS Emergency oxygen use for adult patient, 2008? |
| 154 | Society for Acute Medicine | 6 | Fully endorse this statement |
| 155 | British Lung Foundation | 6 | We are supportive of this quality statement. Getting the right emergency oxygen is important and not consistently achieved. |
| 156 | British Lung Foundation | 6 | Safe COPD oxygen care is best achieved as part of a systematic approach to all oxygen prescribing for all patients in hospital, many at risk patients are not diagnosed so therefore we need to have staff trained to decide who needs controlled oxygen. This |

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| | | | is why we should include oxygen prescribing and assessment of skills in undergraduate and postgraduate curriculum and assessments, as is the case for smoking cessation and spirometry. |
| 157 | British Lung Foundation | 6 | The rationale for this quality statement highlights oxygen as a reliever of symptoms for people with COPD, when in fact oxygen in used to correct respiratory failure and raise arterial oxygen saturation. The explanation of what the quality statement means for patients and carers should read: 'People with COPD who need emergency oxygen because they have developed respiratory failure receive the correct amount of oxygen to keep the oxygen and carbon dioxide levels in their blood within their target range.' |
| 158 | Society for Acute Medicine | 6 | Fully indorse this statement |
| 159 | British Thoracic Society | 6 | Emergency oxygen: There is an issue regarding the rationale - perhaps the phraseology should be changed to "during exacerbations of COPD patients develop worsening gas exchange (not breathlessness). This may be associated with hypoxia and oxygen is commonly used. This is not necessarily for symptom relief but to improve cardiac, renal and cortical function by maintaining adequate tissue oxygenation. However uncontrolled oxygen therapy in some individuals may reduce both the depth and frequency of the breathing. This can lead to carbon dioxide levels which rise having two effects. The raised carbon dioxide can reduce conscious level and produce carbon dioxide narcosis but a more important problem, is the fall in the body pH i.e. increasing acidosis which leads to cardiac arrest. People are often given …..<br><br>Emergency oxygen should be administered though low flow nasal cannulae or ideally as the only way of confirming controlled oxygen is through a Venturi mask.<br><br>Mortality is given as an outcome but perhaps one we should perhaps avoid. Perhaps a better outcome measure would be the number of times that non-invasive ventilation is required because of oxygen toxicity. |
| 160 | Boehringer Ingelheim Ltd | 6 | Availability of oxygen therapy is very variable so this would need to be standardised if the statement is to be meaningful. This standard will be challenging to measure if it is a community based exacerbation with home O2. |
| 161 | Association of Respiratory Nurse Specialists | 6 | ARNS are supportive of this quality statement. Getting the right emergency oxygen is important and not consistently achieved.<br>This quality statement should be consistent with the recommendations of the BTS |

| ID | Stakeholder | Comment on | Comments |
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| | | | oxygen guidelines (2015) i.e. appropriate target range ***prescribed*** and FiO2 adjusted (& documented) according to pulse oximetry recordings |
| 162 | Chartered Society of physiotherapy | 6 | Again, the wording of the rationale suggests that hypoxia and breathlessness are intrinsically linked, which is not always the case. Suggest removing reference to breathlessness, and focus on the hypoxia as this would be the reason that oxygen is administered. |
| 163 | Great Western Hospital NHS Trust | 6 | • We prefer not to see the statement saying oxygen is used to 'improve the symptoms', it is used to reduce the physiological effects of hypoxia.<br>• We suggest adding in uncontrolled oxygen therapy 'in those with chronic hypercapnia' can…<br>• In the process, perhaps a system to flag up at risk patients?<br>Quantify the target range (is this 88-92?) |
| 164 | Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team | 7 | I would suggest mentioning about the "oxygen alert card" for patients who are known to have a raised carbon dioxide. This is reinforced by the BTS emergency oxygen guidelines. I think that this is especially important for patients who required acute Non-Invasive Ventilation. |
| 165 | Society for Acute Medicine | 7 | We agree with this statement but are slightly concerned that the current BTS guidelines that are under discussion around this area might work against this. The guideline pre discussion was suggesting that NIV should only be performed in dedicated Respiratory units whereas in practice it is delivered very safely and effectively in most Acute Medical Units. The Society for Acute Medicine has responded to the BTS around this. |
| 166 | British Lung Foundation | 7 | It would be useful to define 'persistent' in this statement. This statement could also be reworded to make it clearer: "COPD patients presenting during an exacerbation with hypercapnic respiratory failure, in spite of maximal bronchodilation and appropriate oxygen therapy, should be considered for immediate non-invasive ventilation." |
| 167 | Society for Acute Medicine | 7 | We agree with this statement but are slightly concerned that the current BTS guidelines that are under discussion around this area might work against this. The guideline pre discussion was suggesting that NIV should only be performed in dedicated Respiratory units whereas in practice it is delivered very safely and effectively in most Acute Medical Units. The Society for Acute Medicine has responded to the BTS around this. |
| 168 | British Thoracic Society | 7 | The rationale here regrettably is incorrect. The statement should be "Non-invasive ventilation is used for treating *acidosis* due to respiratory failure (pH 7.3 or less). In the process the numerator / denominator needs to be changed to be recognise it is the number of people who are acidotic secondary to hypercapnic respiratory failure that |

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| | | | *need* to be considered for NIV not just pure raised hypercapnoea and acidosis.<br><br>Emphasise in the "process" to recognise that in some individuals hypercapnoea and acidosis is an end of life issue and the introduction of non-invasive ventilation may well be against both clinical good practice and patient's wishes. Perhaps the numerator should be the number of patients who receive non-invasive ventilation when it is "clinically appropriate".<br><br>Non-invasive ventilation should be delivered not only in a dedicated area but there should be sufficient beds available with access to these beds in a timely fashion. |
| 169 | ResMed UK Ltd | 7 | In light of the patient safety alert regarding the "Risk of death from unintentional interruption of non-invasive ventilation" have the standards committee considered advocating the use of non-invasive ventilators with disconnection alarms and event logs (recording of all interactions with the device including alarms) during acute exacerbation? |
| 170 | ResMed UK Ltd | 7 | With respect to your comment "NIV should be delivered in a dedicated setting by staff trained and experienced in its use", in our experience as a manufacturer selling to the NHS, there appears to be a lack of consistency in delivery as well as awareness and expertise with respect to the use of NIV for acute exacerbations of COPD. |
| 171 | Association of Respiratory Nurse Specialists | 7 | ARNS supports this statement however, there needs to be clearer guidance and definitions on the training required including possible competencies.<br>There has also been questioned raised round Is 'immediate' always appropriate? ARNS presumes this refers to those who do not respond to acute medical management, but it is not clear in what time frame this refers to.<br>ARNS also feel that there should be a stronger focus on the nursing care needed and rationale for safe staffing of NIV on respiratory / acute wards to provide NIV in this timely manner.<br>Alongside side this statement ARNS believes that there should also be some inclusion on withdrawing NIV and thinking and discussion palliative/end of life care including ceilings of treatments. ARNS believe that failure of NIV often relates to inappropriate patient selection rather than treatment failure as such. |
| 172 | Chartered Society of physiotherapy | 7 | The information in "what does this mean for patients" is slightly misleading. Consider re-wording this statement as some of the accuracy of the definition on page 33 has |

| ID | Stakeholder | Comment on | Comments |
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| | | | been lost in making it “patient-friendly”. |
| 173 | RCGP | 7 | What is the definition of persistent hypercapnic ventilator failure during an exacerbation – would this be clear to every clinician? If so, what is immediate non-invasive ventilation? (20 seconds after the failure becomes persistent, or a minute or 10 minutes? How would I audit this standard?) |
| 174 | London Respiratory Network | 8 | We do feel that there is evidence to warrant promoting the use of COPD discharge bundle: Designing and implementing a COPD discharge care bundle (Thorax 2012; **67:** 90-92) |
| 175 | British Lung Foundation | 8 | The British Lung Foundation is very pleased to see NICE include a quality statement on hospital discharge bundles. There is emerging evidence on the value that the discharge bundle can bring in reducing readmission. |
| 176 | British Lung Foundation | 8 | In addition to recommendations on what should be included within discharge bundles, this quality statement should also include guidance on how discharge bundles should be delivered. The BTS/RCP COPD audit published earlier this year recommended that each unit should nominate a respiratory clinical lead for discharge care and integrating services: ‘this individual having designated time to improve the uptake of discharge bundles and improve the quality of discharge information and work collaboratively with colleagues in primary care to improve integrated pathways for COPD.’ |
| 177 | British Lung Foundation | 8 | The British Lung Foundation has also published information for patients ‘Going Home from Hospital’ to help them ensure that they are getting the support they need. These include advice on how to use medications; advice on oxygen use and the provision of an oxygen alert card if relevant; referral to an early supported discharge scheme; a date for a post-discharge review; discussions about managing anxiety and depression; referral for pulmonary rehabilitation; smoking cessation support and advice on and access to flu or pneumonia vaccinations. |
| 178 | British Lung Foundation | 8 | In addition, hospital discharge bundles should also include advice on self-management such as the British Lung Foundation COPD booklet: Living with COPD, and in particular peer to peer support, for example the British Lung Foundation Breathe Easy support groups. We are currently undertaking a review of these services and would be happy to share the outcomes of this exercise with NICE once available. |
| 179 | British Lung Foundation | 8 | It is important that patients are given a named contact (with appropriate respiratory training) at the time of discharge to support ongoing self-management. |
| 180 | British Lung Foundation | 8 | The value of smoking cessation advice at the time of discharge should also be emphasised in the quality statement. 34% of first time hospital admissions for COPD |

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| | | | are from previously undiagnosed patients. There is evidence to suggest that a new diagnosis provides motivation for patients to quit smoking, and services should be encouraged to capitalise on this opportunity. |
| 181 | Royal Pharmaceutical Society | 8 | Some research conducted about COPD bundles that we have received include:<br>http://bmjopenrespres.bmj.com/content/1/1/e000035.full<br>http://imperialcollegehealthpartners.com/our-work/our-projects/copd/ |
| 182 | British Thoracic Society | 8 | The components of the care bundle are selected because they are evidence based so their use is essentially a tool for the delivery of NICE guidance. Several before and after studies suggest they reduce readmissions.<br>Please see this paper just out http://thorax.bmj.com/content/early/2015/07/21/thoraxjnl-2015-206833.full.pdf+html<br>Many hospitals across the UK have developed care bundles and the British Thoracic Society has led the way in the use of care bundles and evidence of their benefit is available. There are several publications on the use of care bundles and if further advice is required suggest this is discussed with the British Thoracic Society who have a wealth of experience in this area. |
| 183 | ResMed UK Ltd | 8 | With reference to the NICE CG101 for COPD have the standards committee considered how those patients who fit the criteria detailed in section 1.2.6 can most appropriately be identified during the discharge planning process?<br>**1.2.6 Non-invasive ventilation**<br>1.2.6.1 Adequately treated patients with chronic hypercapnic respiratory failure who have required assisted ventilation (whether invasive or non-invasive) during an exacerbation or who are hypercapnic or acidotic on LTOT should be referred to a specialist centre for consideration of long-term NIV. **[2004]** |
| 184 | ResMed UK Ltd | 8 | As part of the discharge planning process have the standards committee considered those patients who may benefit from longer term use of non-invasive ventilation and, are they familiar with the following publication?<br><br>Kohnlein T. et al *Non-invasive positive pressure ventilation for the treatment of severe stable chronic obstructive pulmonary disease: a prospective, multicentre, randomised, controlled clinical trial;* Lancet Respir Med 2014; 2: 698-705 |

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| | | | The study suggests that stable COPD patients with persistent hypercapnia who use non-invasive ventilation over a minimum twelve month period experience reduced mortality (hazard ratio 0.24 (95% CI 0.11-0.49; p=0.0004) as well as potentially impacting on emergency admissions to hospital. Unlike previous studies in this area the study specifically targeted a reduction in carbon dioxide levels (to <6.5kPa or <20% if baseline) and therefore patient's blood gases were monitored throughout the study to demonstrate treatment efficacy.<br><br>Based on indicative pricing taken from the national tariff the prevention of a single acute admission for COPD that involves NIV would save the healthcare system £1499 - £3361 if admitted (depending on the presence and severity of any complications).<br><br>These costs can be compared with those of a non-invasive ventilator designed for home use whose list price is in the region of £2250 – £2625 depending on the inclusion of humidification and algorithms specifically designed to target alveolar ventilation. |
| 185 | Association of Respiratory Nurse Specialists | 8 | ARNS support the inclusion of Hospital Discharge Bundles as part of NICE quality statement<br>We support the British Lung Foundation's statement that in addition to recommendations on what should be included within discharge bundles, this quality statement should also include guidance on how discharge bundles should be delivered, ARNS experience is that they are completed at different times some have additional areas included. ARNS supports The BTS/RCP COPD audit which published earlier this year recommended that each unit should nominate a respiratory clinical lead for discharge care and integrating services: 'this individual having designated time to improve the uptake of discharge bundles and improve the quality of discharge information and work collaboratively with colleagues in primary care to improve integrated pathways for COPD.' In many areas this is normally a specialist nurse but the role needs to be clearly defined and resourced.<br>The British Lung Foundation has also published information for patients 'Going Home from Hospital' to help them ensure they to ensure they are getting the support they need. These include advice on how to use medications; advice on oxygen use and the provision of with an oxygen alert card if relevant; referral to an early supported discharge scheme; an date for a post-discharge review; discussions about managing anxiety and depression; referral for pulmonary rehabilitation; smoking cessation |

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| | | | support and advice on and access to flu or pneumonia vaccinations.<br>In addition, hospital discharge bundles should also include advice on self-management, and in particular peer to peer support, such as the British Lung Foundation Breathe Easy support groups. We are currently undertaking a review of these services and would be happy to share the outcomes of this exercise with NICE once available.<br>It is important that patients are given a named contact (with appropriate respiratory training) at the time of discharge to support ongoing self-management.<br>ARNS support the value of smoking cessation advice at the time of discharge should also be emphasised in the quality statement. 34% of first time hospital admissions for COPD are from previously undiagnosed patients. There is evidence to suggest that a new diagnosis provides motivation for patients to quit smoking, and services should be encouraged to capitalise on this opportunity.<br>The BTS work on The Case for Change: Why dedicated, comprehensive and sustainable stop smoking services are necessary for hospitals : https://www.brit-thoracic.org.uk/document-library/clinical-information/smoking-cessation/bts-case-for-change/ would support this further.<br>There have been a number of posters at European Respiratory Society (ERS) and BTS on the use of discharge care bundles in a variety of settings which have improved care. However, the patient experience also needs to be captured. |
| 186 | Gloucestershire Hospitals NHS Foundation Trust | 8 | Evidence about discharge care bundles for COPD is being developed by the BTS in a clinical trial being run in the south west (lead centre – NBT) |
| 186 | Chartered Society of physiotherapy | 8 | We would welcome evidence-based guidance on hospital discharge care bundles. This would have the potential to improve practice by standardising hospital discharge and ensuring that the immediate and medium term plan from the full MDT perspective is addressed prior to discharge. |
| 187 | RCGP | 8 | It is unclear what the standards are here for quality improvement. |
| 188 | NHS England | 8 | I am deeply concerned about the lack of acknowledgement that patients with severe COPD have very poor prognosis and attention needs to paid to their end of life care. The evidence shows that about half of patients discharged after a hospital admission for COPD will die within two years. The most reliable predictor of mortality is the frequency of exacerbations, and the best predictor of frequency of exacerbations is previous exacerbations. At the very least, there should be clear signposting to the QS for End of Life Care within this document, but even so, I think there needs to be some |

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| | | | acknowledgement of the preparation for dying and death in this QS. I appreciate that you won't want to add another QS – if that is the case, I would suggest that this is built into QS 8. Without that, this QS is at risk of exacerbating the current inequity of access to palliative and end of life care that is known for non-malignant conditions, including COPD.<br>References:<br>1. Pinnock et al. Living and dying with severe chronic obstructive pulmonary disease: multi-perspective longitudinal qualitative study. BMJ 2011; 342:d142. doi:10.1136/bmj.d142<br>2. Taylor R. COPD, end of life and ceiling of treatment. Thorax 2014;69:497–499. doi:10.1136/thoraxjnl-2013-204943 |
| 189 | British Lung Foundation | 9 | The British Lung Foundation welcomes the addition of a quality statement on multidimensional assessment tools. COPD should not be viewed by looking at lung function alone. The role of exacerbations, quality of life and exercise tolerance are more important and impactful for patients than solely spirometry. A single, standardised and validated multidimensional assessment (to replace the range of tools currently used throughout the country) would help support more effective personalised management. |
| 190 | British Lung Foundation | 9 | In developing this quality statement we recommend that NICE include a psychological assessment component to multidimensional assessment. It will also be important for this quality statement to make recommendations on the services which should be offered to patients following the assessment. In this context we would again like to ensure that self-management and the value of peer-to-peer support are referenced. |
| 191 | British Lung Foundation | 9 | New evidence based guidance on the use of multidimensional assessment tools would be helpful, although this work is already being done and will lead to a focus on personalised management. |
| 192 | British Thoracic Society | 9 | Multidimensional tool: patients should have the components of the various multidimensional tools recorded annually (breathlessness (MRC score), airflow obstruction, exacerbation rate, health status (eg CAT score) smoking status and BMI. Evidence that the multicomponent scores guide management of individual patients per se is lacking. |

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| | | | This is clearly a complex area and with any multidimensional tool there needs to be a clear rationale why the tool is being used. Is this to measure changes in the care, an improvement in patients self being an ability to monitor changes more closely etc.<br><br>There were numerous studies outlining the benefits and multidimensional assessment tools. There is a difficulty however between collecting information specifically for an assessment tool by using information / data that is already available vs the use of specific multi-assessment questionnaires which are complex and difficult to administer / interpret. For example changes in breathlessness can be assessed readily by using Mahler's transitional dyspnoea index and quality of life can be accurately assessed and changes in quality of life determined by looking at changes in the St George's questionnaire. These however tend to be research based. Simple measures such as the CAT and BODE index are things that we should consider using and in some respects the simpler the better if we are going to be collecting data from primary care and across the interface. |
| 193 | ResMed UK Ltd | 9 | We are not aware of any evidence relating to specific multidimensional assessment tools for COPD. However, data is available that suggests that the daily monitoring of respiratory rate may help to identify exacerbations and potentially enable earlier intervention. Non-contact technology is now available that enables multi-parameter monitoring on a long term basis should the guidelines committee wish to explore this as a potential tool.<br><br>Yañez AM et al *Monitoring Breathing Rate at Home Allows Early Identification of COPD Exacerbations* CHEST 2012, 142, 6, 1524- 1529 |
| 194 | Association of Respiratory Nurse Specialists | 9 | ARNS welcomes the addition of a quality statement on multidimensional assessment tools.<br>In developing this quality statement we recommend that NICE include a psychological assessment component to multidimensional assessment. It will also be important for this quality statement to make recommendations on the services which should be offered to patients following the assessment.<br>The need and importance of self-management should also be addressed in this area along with strengthening the need for multi-disciplinary working alongside this. |

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| | | | ARNS also believes capturing and recording the patient experience of living with COPD is an important aspect also to this assessment tools. |
| 195 | Chartered Society of physiotherapy | 9 | A multidimensional tool would be useful across all elements of COPD care, and would help tailor treatment accordingly to the prognosis and severity of the disease, enabling more timely recognition when there is a need for referral to palliative care services. |
| 196 | Great Western Hospital NHS Trust | 9 | • We use DOSE as a multidimensional score,<br>Prof. Paul Jones presented a lecture in which he described the development of a multidimensional tool which would help predict prognosis etc in COPD patients. Is this still under development? |
| 197 | RCGP | 9 | It is unclear what the standards are here for quality improvement. |

## *Registered stakeholders who submitted comments at consultation*

- Association of Respiratory Nurse Specialists
- British Lung Foundation
- Boehringer Ingelheim Ltd
- British Geriatrics Society
- British Infection Association
- British Society for Antimicrobial Chemotherapy
- British Specialist Nutrition Association
- British Thoracic Society
- Chartered Society of physiotherapy
- Department of Health

- Education for Health
- Gloucestershire Hospitals NHS Foundation Trust
- Great Western Hospital NHS Trust
- GlaxoSmithKline
- London Respiratory Network
- National Aspergillosis Centre – Wythenshawe Hospital
- NHS England
- Novartis Pharmaceuticals
- Nutricia Advanced Medical Nutrition
- Orion Pharma
- Primary Care Respiratory Society UK
- Royal College of General Practioners
- Royal College of Nurses
- ResMed UK Ltd
- Royal Pharmaceutical Society
- Society for Acute Medicine
- Staffordshire and Stoke-on-Trent Partnership, Community Respiratory Team
- Teva
- The Royal College of Pathologists

- UK Inhaler Group