NATIONAL INSTITUTE FOR HEALTH AND CARE EXCELLENCE

Health and social care directorate

Quality standards and indicators

Briefing paper

Quality standard topic: Chronic obstructive pulmonary disease (COPD) update

Output: Prioritised quality improvement areas for development.

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Contents

1 Introduction

This briefing paper presents a structured overview of potential quality improvement areas for chronic obstructive pulmonary disease (COPD). It provides the Committee with a basis for discussing and prioritising quality improvement areas for development into draft quality statements and measures for public consultation.

This quality standard will update the NICE quality standard for chronic obstructive pulmonary disease (QS10), which was identified as needing updating by the 2014 annual review of published quality standards.

1.1 *Structure*

This briefing paper includes a brief description of the topic, a summary of each of the suggested quality improvement areas and supporting information.

If relevant, recommendations selected from the key development source below are included to help the Committee in considering potential statements and measures.

1.2 *Development source*

The key development source(s) referenced in this briefing paper is:

Chronic obstructive pulmonary disease NICE guideline CG101 (2010)

Review decision made July 2014 not to update the guideline.

2 Overview

2.1 *Focus of quality standard*

This quality standard will cover the assessment, diagnosis and management of chronic obstructive pulmonary disease in adults. It will not cover prevention, screening or case finding.

It will update the existing quality standard for chronic obstructive pulmonary disease.

2.2 *Definition*

COPD is characterised by airflow obstruction that is not fully reversible. The airflow obstruction does not change markedly over several months and is usually progressive in the long term. COPD is predominantly caused by smoking. Other factors, particularly occupational exposures, may also contribute to the development

of COPD. Exacerbations often occur, where there is a rapid and sustained worsening of symptoms beyond normal day-to-day variations.

The airflow obstruction is present because of a combination of airway and parenchymal damage. The damage is the result of chronic inflammation that differs from that seen in asthma and which is usually the result of tobacco smoke. Significant airflow obstruction may be present before the person is aware of it.

COPD produces symptoms, disability and impaired quality of life which may respond to pharmacological and other therapies that have limited or no impact on the airflow obstruction.

COPD is the preferred term for the conditions in patients with airflow obstruction who were previously diagnosed as having chronic bronchitis or emphysema.

There is no single diagnostic test for COPD. Making a diagnosis relies on clinical judgement based on a combination of history, physical examination and confirmation of the presence of airflow obstruction using spirometry.

2.3 *Incidence and prevalence*

An estimated three million people are affected by COPD in the UK. About 900,000 have been diagnosed with COPD and an estimated two million people have COPD which remains undiagnosed. Most patients are not diagnosed until they are in their fifties.

Prevalence increases with increasing age and there are significant geographic variations in the prevalence of COPD. COPD is closely associated with levels of deprivation. Unlike many other common chronic diseases the prevalence of COPD has not declined in recent years. Prevalence rates appear to be increasing steadily in women but have reached a plateau in men.

It is difficult to be certain of the true mortality rate due to COPD. Some patients die with the disease rather than because of it. Others will die of causes related to COPD, but their death may be certified as being due to these complications. Analysis of trends in death rates is also complicated by changes in the diagnostic labels. COPD accounts for approximately 30,000 deaths each year in the UK, with more than 90%

of these occurring in the over 65 age group in 2004. The rate of mortality for respiratory disease in the UK is almost double the European average. Chronic Obstructive Pulmonary Disease (COPD) is the fifth biggest killer disease in the UK, killing approximately 25,000 people a year in England[1]. Mortality varies between hospitals and is higher in those with fewer respiratory consultants and in those serving more deprived communities.

COPD is an important co-morbidity in those dying from other smoking related diseases, most commonly ischaemic heart disease and lung cancer. The mean age of death of patients with severe COPD is 74.2 years compared with 77.2 years in patients with mild disease and 78.3 years in individuals who did not have COPD.

An average general practice in the UK which cares for about 7,000 people will have up to 200 people with COPD on its practice list, for many of whom the condition will be undiagnosed. This equates to around 1.4 million consultations with GPs each year, up to four times more than the number of consultations for angina. COPD patients admitted to hospital are frequent users of primary care in the 12 months prior to their admission.

One in eight (130,000) emergency admissions to hospital is for COPD, making it the second largest cause of emergency admission in the UK, and one of the most costly inpatient conditions treated by the NHS. About 30% of patients admitted with COPD for the first time will be readmitted within three months. Rates of admission to hospital vary by up to five times in different parts of England, reflecting differences in the prevalence of COPD as well as wide variations in the quality of care that is provided in the community. COPD admissions also show some seasonality and are more common in the winter months.

2.4 *Management*

COPD is treatable but not curable, early diagnosis and treatment can markedly slow decline in lung function and hence lengthen the period in which someone can enjoy an active life[2].

[1] NHS England
[2] COPD Outcomes strategy

An individual patient will not experience all the problems, but there is no predictable pattern or progression, and some may experience several problems. Some exacerbations can be managed at home whilst others require hospital treatment. In each of these settings there is more uniformity in the management but individual patients may still have specific problems, such as respiratory failure.

COPD is a heterogeneous disease that affects different patients in different ways. Some patients may be more troubled by breathlessness, others may develop ankle swelling and others may be experiencing frequent hospital admissions. The management of an individual patient's disease should be guided by the symptoms and disability that they experience. At different times in the natural history of their disease different features may predominate and their management will change to reflect this. COPD also has effects outside the lung for example on peripheral muscles and may lead to mood or cognitive changes which should also be assessed.

2.5 *National Outcome Frameworks*

Tables 1–3 show the outcomes, overarching indicators and improvement areas from the frameworks that the quality standard could contribute to achieving.

Table 1 NHS Outcomes Framework 2015–16

Domain	Overarching indicators and improvement areas
1 Preventing people from dying prematurely	***Improvement areas*** **Reducing premature mortality from the major causes of death** 1.2 Under 75 mortality rate from respiratory disease*
2 Enhancing quality of life for people with long-term conditions	***Overarching indicator*** 2 Health-related quality of life for people with long-term conditions** ***Improvement areas*** **Ensuring people feel supported to manage their condition** 2.1 Proportion of people feeling supported to manage their condition** **Reducing time spent in hospital by people with long-term conditions** 2.3i Unplanned hospitalisation for chronic ambulatory care sensitive conditions (adults) **Improving quality of life for people with multiple long-term conditions**

	2.7 Health-related quality of life for people with three or more long-term conditions **
3 Helping people to recover from episodes of ill health or following injury	***Improvement areas*** **Helping older people to recover their independence after illness or injury** 3.6i Proportion of older people (65 an dover) who were still at home 91 days after discharge from hospital into reablement/rehabilitation service* 3.6ii Proportion offered rehabilitation following discharge from acute or community hospital*
4 Ensuring that people have a positive experience of care	***Overarching indicator*** 4a Patient experience of primary care i. GP services ii. GP Out-of-hours services 4b Patients experience of hospital care 4c Friends and family test 4d Patient experience characterised as poor or worse i. Primary care ii. Hospital care ***Improvement areas*** **Improving people's experience of outpatient care** 4.1 Patient experience of outpatient services **Improving hospital's responsiveness to personal needs** 4.2 Responsiveness to in-patients personal needs **Improving the experience of care for people at the end of their lives** 4.6 Bereaved carer's views on the quality of care in the last 3 months of life
Alignment across the health and social care system * Indicator is shared ** Indicator is complementary	

Table 2 Public health outcomes framework for England, 2013–2016

Domain	Objectives and indicators
2 Health improvement	***Objective*** People are helped to live healthy lifestyles, make healthy choices and reduce health inequalities ***Indicators*** 2.14 Smoking prevalence – adults (over 18s)
4 Healthcare public health and preventing premature mortality	***Objective*** Reduced numbers of people living with preventable ill health and people dying prematurely, whilst reducing the gap between communities ***Indicators*** 4.7 Under 75 mortality rate from respiratory diseases* 4.11 Emergency readmissions within 30 days of discharge from hospital* 4.13 Health-related quality of life for older people
Alignment across the health and social care system * Indicator shared with the NHS Outcomes Framework.	

Table 3 The Adult Social Care Outcomes Framework 2015–16

Domain	Overarching and outcome measures
2 Delaying and reducing the need for care and support	***Overarching measure*** 2A Permanent admissions to residential and nursing care homes, per 100,000 population ***Outcome measures*** Everybody has the opportunity to have the best health and wellbeing throughout their life, and can access support and information to help them manage their care needs. Earlier diagnosis, intervention and reablement means that people and their carers are less dependent on intensive services 2B Proportion of older people (65 and over) who were still at home 91 days after discharge from hospital into reablement/rehabilitation services*
Aligning across the health and care system * Indicator shared ** Indicator complementary	

Summary of suggestions

2.6 *Responses*

In total 19 stakeholders responded to the 2-week engagement exercise 23/03/15 – 08/04/15.

Stakeholders were asked to suggest up to 5 areas for quality improvement. Specialist committee members were also invited to provide suggestions. The responses have been merged and summarised in table 4 for further consideration by the Committee.

NHS England's patient safety division submitted comments during stakeholder engagement, which are summarised in this paper and can be found in full in appendix 2.

Full details of all the suggestions provided are given in appendix 2 for information.

Table 4 Summary of suggested quality improvement areas

Suggested area for improvement	**Stakeholders**
Spirometry • Quality of spirometry • Case finding	SCM ARNS NP ACPRC
Assessment • Assessment of severity and prognostic factors • Recognition and management of comorbidities	SCMs NP
Smoking cessation	SCM BTS BLF PCRS
Inhaled therapy • Appropriate therapy • Inhalers	SCM AZ ACPRC SAM NHSE PCRS
Oxygen therapy • Long term oxygen therapy • Controlled oxygen flow	SCM BTS BLF PCRS
Self-management	SCM CSP BLF

Suggested area for improvement	**Stakeholders**
Pulmonary rehabilitation • Service provision • Post admission for acute exacerbation	SCMs BTS ARNS ACPRC BLF PCRS
Surgical procedures • Lung surgery • Bronchial stenting?	BTS
Comprehensive review	NP PCRS
Admission to hospital	SCM ARNS
Discharge • Discharge planning • Early supported discharge • Discharge bundles	BTS SCMs NP CSP ACPRC SAM BLF PCRS
Palliative care	ARNS
Non Invasive Ventilation	NHS England

SCM, Specialist Committee Member
BTS, British thoracic Society
ARNS, Association of Respiratory Nurse Specialists
NP, Novartis Pharmaceuticals
CSP, Chartered Society of Physiotherapy
AZ, AstraZeneca
ACPRC, Association of Chartered Physiotherapists in respiratory care
SAM, The Society for Acute Medicine
BLF, British Lung Foundation
PCRS, Primary Care Respiratory Society

3 Suggested improvement areas

3.1 *Spirometry*

3.1.1 Summary of suggestions

Quality of spirometry

Stakeholders highlighted that the use of quality assured diagnostic spirometry is key to accurately diagnosing COPD and ensuring people receive appropriate care. They commented that currently there is variation in the accuracy, measurement, calibration and understanding of spirometry. They also highlighted that spirometry results should be clearly recorded within the person's medical notes.

Case finding

Stakeholders report that earlier diagnosis of COPD is needed to ensure that treatment can influence the course of the disease. Stakeholder specifically acknowledged there is a lack of access to spirometry in primary care and an absence of services commissioned to facilitate early diagnosis and case finding.

3.1.2 Selected recommendations from development source

Table 5 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 5 to help inform the Committee's discussion.

Table 5 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Quality of spirometry	**Spirometry** NICE CG101 Recommendation 1.1.2.5 NICE CG101 Recommendation 1.1.2.6
Case finding	Not directly covered in NICE CG101 and no recommendations are presented

Spirometry

NICE CG101 – Recommendation 1.1.2.5

Spirometry can be performed by any healthcare worker who has undergone appropriate training and who keeps his or her skills up to date. [2004]

NICE CG101 – Recommendation 1.1.2.6

Spirometry services should be supported by quality control processes. [2004]

Current statement wording

NICE QS 10 – Statement 1: Diagnosis

People with COPD have one or more indicative symptoms recorded, and have the diagnosis confirmed by post-bronchodilator spirometry carried out on calibrated equipment by healthcare professionals competent in its performance and interpretation.

3.1.3 Current UK practice

Quality of spirometry

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported that the management of acute respiratory failure has improved, with the overwhelming majority of patients receiving prompt assessment, appropriate measurement of blood gases (albeit with some unacceptable delays between the first and second samples) and management of respiratory acidosis with NIV.
The audit recommends the following to improve the recording and documentation of spirometry.

- All hospitals/units should make spirometry results, normally available on lung function laboratory software, accessible from every computer desktop via their IT department's browser system/intranet.
- All admission units and respiratory wards should have a basic portable spirometer as part of their standard equipment.
- All hospitals/units should introduce mandatory training for key health professionals to ensure that the measurement/recording of spirometry is understood and undertaken, when appropriate, as part of routine practice.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute NHS units in England and Wales 2014 report concluded that all hospitals/units should make spirometry results accessible from every computer desktop; there should be a data sharing agreement between primary and secondary care that allows general practice spirometry data to be made universally available.

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 recommended that Health Education England should work with professional bodies such as the Primary Care Respiratory Society UK and British Thoracic Society to ensure high, consistent standards of training and

competency assessment for all healthcare professionals treating people with respiratory conditions. This should include working with NHS England to establish a system to assess and certify the competence of all healthcare professionals undertaking and interpreting quality-assured diagnostic spirometry.

QOF COPD 002: *The percentage of patients with COPD (diagnosed on or after 1 April 2011) in whom the diagnosis has been confirmed by post bronchodilator spirometry between 3 months before and 12 months after entering on to the register* 2013/14: 90% achievement, 10% exception reporting.

Case finding

A retrospective analysis of a clinical cohort in the UK with data from Jan 1, 1990 to Dec 31, 2009 taken from the General Practice Research Database and Optimum Patient Care Research Database concluded that opportunities to diagnose COPD at an earlier stage are being missed, and could be improved by case-finding in patients with lower respiratory tract symptoms and concordant long-term comorbidities.

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 recommended that Public Health England should introduce a case-finding spirometry test component as part of the NHS Health Check for people aged 40-74.

3.2 *Assessment of disease*

3.2.1 Summary of suggestions

Assessment of severity and prognostic factors

Stakeholders highlighted that recording of elements included within the assessment of severity checklists is not consistently done in all healthcare settings, the correct recording aids the assessment of prognosis and is key to ensuring disease management is appropriate.

Recognition and management of comorbidities

Stakeholders report that the recognition and active management of common comorbidities can improve the quality of life and health status of people with COPD. Stakeholders specifically report that the early identification and correct management of cardiac impairment and anxiety and depression would benefit many people with COPD.

3.2.2 Selected recommendations from development source

Table 6 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 6 to help inform the Committee's discussion.

Table 6 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Assessment of severity and prognostic factors	**Assessment of severity and prognostic factors** NICE CG101 Recommendation 1.1.5.1 NICE CG101 Recommendation 1.1.6.1
Recognition and management of comorbidities	**Further investigations** NICE CG101 Recommendation 1.1.3.1 NICE CG101 Recommendation 1.1.3.2 **Referral for specialist advice** NICE CG101 Recommendation 1.1.8.1 **Identifying and managing anxiety and depression** NICE CG101 Recommendation 1.2.12.5

Assessment of severity and prognostic factors

NICE CG101 Recommendation 1.1.5.1

Be aware that disability in COPD can be poorly reflected in the FEV1. A more comprehensive assessment of severity includes the degree of airflow obstruction and disability, the frequency of exacerbations and the following known prognostic factors:

- FEV1
- TLCO
- breathlessness (MRC scale)
- health status
- exercise capacity (for example, 6-minute walk test)
- BMI
- partial pressure of oxygen in arterial blood (PaO2)
- cor pulmonale.

Calculate the BODE index (BMI, airflow obstruction, dyspnoea and exercise capacity) to assess prognosis where its component information is currently available. [new 2010]

NICE CG101 Recommendation 1.1.6.1

The severity of airflow obstruction should be assessed according to the reduction in FEV1 as shown in table 4. [new 2010]

Recognition and management of comorbidities

Further investigations

NICE CG101 Recommendation 1.1.3.1

At the time of their initial diagnostic evaluation in addition to spirometry all patients should have:

- a chest radiograph to exclude other pathologies
- a full blood count to identify anaemia or polycythaemia
- body mass index (BMI) calculated. **[2004]**

NICE CG101 Recommendation 1.1.3.2

Additional investigations should be performed to aid management in some circumstances (see table 2). **[2004]**

Referral for specialist advice

NICE CG101 Recommendation 1.1.8.1

It is recommended that referrals for specialist advice are made when clinically indicated. Referral may be appropriate at all stages of the disease and not solely in the most severely disabled patients (see table 5). **[2004]**

Identifying and managing anxiety and depression

NICE CG101 Recommendation 1.2.12.5

Healthcare professionals should be alert to the presence of depression in patients with COPD. The presence of anxiety and depression should be considered in patients:

- who are hypoxic
- who have severe dyspnoea
- who have been seen at or admitted to a hospital with an exacerbation of COPD. **[2004]**

Refer to 'Depression in adults with a chronic physical health problem' (NICE clinical guideline 91), which updates the recommendations on the treatment of depression in patients with COPD.

NICE CG91 Recommendation 1.1.1.2

When working with patients with depression and a chronic physical health problem and their families or carers:

- provide information appropriate to their level of understanding about the nature of depression and the range of treatments available
- avoid clinical language without adequate explanation
- ensure that comprehensive written information is available in the appropriate language and in audio format if possible
- provide and work proficiently with independent interpreters (that is, someone who is not known to the patient) if needed.

NICE CG91 Recommendation 1.1.1.3

Inform patients with depression and a chronic physical health problem about self-help groups, support groups and other local and national resources for people with depression.

NICE CG91 Recommendation 1.1.1.4

Make all efforts necessary to ensure that a patient with depression and a chronic physical health problem can give meaningful and informed consent before treatment starts. This is especially important when a patient has severe depression or is subject to the Mental Health Act.

Current statement wording

NICE QS 10 Statement 4: Annual comprehensive assessment

People with COPD have a comprehensive clinical and psychosocial assessment, at least once a year or more frequently if indicated, which includes degree of breathlessness, frequency of exacerbations, validated measures of health status and prognosis, presence of hypoxaemia and comorbidities.

3.2.3 Current UK practice

Assessment of severity and prognostic factors

An Outcomes Strategy for Chronic Obstructive Pulmonary Disease (COPD) and Asthma 2011, report that failing to diagnose accurately and assess disease severity can overestimate the prevalence and severity of COPD and thus lead to wasted resources or underestimate the severity of the disease and interventions that could be beneficial in controlling symptoms and progression. Inaccuracies in assessing lung function can also affect the type of treatment that people receive.

QOF COPD003: *The percentage of patients with COPD who have had a review, undertaken by a healthcare professional, including an assessment of breathlessness using the Medical Research Council dyspnoea scale in the preceding 12 months.* 2013/14 89% achievement, 10% exception reporting.

QOF COPD004: *The percentage of patients with COPD with a record of FEV1 in the preceding 12 months.* 2013/14: 86% achievement, 13% exception reporting.

QOF COPD005: *The percentage of patients with COPD and Medical Research Council dyspnoea grade ≥3 at any time in the preceding 12 months, with a record of oxygen saturation value within the preceding 12 months, NICE 2012 menu ID: NM63.* 2013/14 94% achievement, 2% exception reporting.

Recognition and management of comorbidities

An Outcomes Strategy for Chronic Obstructive Pulmonary Disease (COPD) and Asthma 2011, report that COPD is often associated with other long-term conditions. For example, 40% of people with COPD also have heart disease, and significant numbers have depression and/or anxiety disorder. Furthermore COPD is often associated with other conditions that also require-assessment and effective interventions in a holistic care approach. For example, about 40% have heart disease, about 10% have diabetes, and significant numbers have high blood pressure, and osteoporosis. They also report that a significant proportion of people with COPD also have depression and/or anxiety disorder. It is important that both the physical and mental health of people with COPD are assessed and addressed to ensure their people access care in a holistic way.

3.3 *Smoking cessation*

3.3.1 Summary of suggestions

Stakeholders highlighted that smoking cessation is an important first line intervention which can change disease progression. One stakeholder reported that it is an area which is no longer being focussed on or invested in. Stakeholders also highlighted that smoking cessation services within secondary care are disjointed and need to be improved.

Stakeholders commented that support for stopping smoking should be available at all points in the COPD pathway as it has such a large impact upon the disease progression. They also acknowledge that key times for smoking interventions to be offered to people with COPD are at exacerbation, during first time admission and discharge. They report that the prevalence of smoking among people with COPD is currently unknown.

3.3.2 Selected recommendations from development source

Table 7 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 7 to help inform the Committee's discussion.

Table 7 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Smoking cessation	**Smoking cessation** NICE CG101 Recommendation 1.2.1.1 NICE CG101 Recommendation 1.2.1.2 NICE CG101 Recommendation 1.2.1.3

Smoking cessation

NICE CG101 Recommendation 1.2.1.1

An up-to-date smoking history, including pack years smoked (number of cigarettes smoked per day, divided by 20, multiplied by the number of years smoked), should be documented for everyone with COPD. [2004]

NICE CG101 Recommendation 1.2.1.2

All COPD patents still smoking, regardless of age, should be encouraged to stop, and offered help to do so, at every opportunity. [2004]

NICE CG101 Recommendation 1.2.1.3

Unless contraindicated, offer NRT, varenicline or bupropion, as appropriate, to people who are planning to stop smoking combined with an appropriate support programme to optimise smoking quit rates for people with COPD. [2010]

Current statement wording

NICE QS10 Statement 5: Smoking cessation support

People with COPD who smoke are regularly encouraged to stop and are offered the full range of evidence-based smoking cessation support.

NICE QS43: Statement 2: Referral to smoking cessation services

People who smoke are offered a referral to an evidence-based smoking cessation service.

3.3.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported that 58% of current smokers had evidence of smoking cessation advice being given. The audit recommended that, all hospitals/units should have a fully funded and resourced smoking cessation programme delivered by dedicated smoking cessation practitioners.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported that 37% of units have no access to inpatient smoking cessation services whilst in an additional 34% less than 0.5 of a WTE member of staff is available to undertake this vital service. They reported that over a third of COPD patients continue to be smokers after their diagnosis. An exacerbation is seen as a critical time when a behaviour change intervention is likely to be successful. Furthermore, 34% of first-time hospital admissions for COPD are from previously undiagnosed patients. This is a key time for an intervention, as there is evidence to show that a new diagnosis has an effect on the motivation to quit smoking.

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 recommended that NHS England should prioritise the promotion of smoking cessation as an essential treatment for all people with COPD who smoke.

3.4 *Inhaled therapy*

3.4.1 Summary of suggestions

Appropriate therapy

Stakeholders highlighted the importance of people with 'mild' disease being offered the correct inhaled therapy, LAMA or LABA and not inappropriately given inhaled costicosteroids. They report that people with FEV1 ≥ 50% predicted and no history of exacerbations are incorrectly being started on a LABA+ICS combination inhaler rather than LAMA or LABA monotherapy. Stakeholders reported that people should be offered inhaled therapies to address their symptomatic needs and effective delivery of respiratory medicines has been shown to reduce exacerbations, improve quality of life and day to day impact on symptoms. They commented that people should be optimally and maximally treated.

One stakeholder reported that treatment prescribed should be personalised and not 'blanket treatment' for all, the risks and benefits of different treatment types should be personalised.

Inhalers

Stakeholders reported that it is important the people are trained in the correct inhaler technique to ensure they receive the correct dose of treatment. They also report that some staff do not teach correct inhaler technique which affects drug delivery causing a clinical and symptomatic impact as well as increased admissions, waste and overprescribing.

3.4.2 Selected recommendations from development source

Table 8 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 8 to help inform the Committee's discussion.

Table 8 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Appropriate therapy	**Inhaled combination therapy** NICE CG101 Recommendation 1.2.2.4 NICE CG101 Recommendation 1.2.2.6 NICE CG101 Recommendation 1.2.2.10 **Inhalers** NICE CG101 Recommendation 1.2.2.14

Inhalers	**Inhalers** NICE CG101 Recommendation 1.2.2.13

Inhaled combination therapy

NICE CG101 Recommendation 1.2.2.4

The effectiveness of bronchodilator therapy should not be assessed by lung function alone but should include a variety of other measures such as improvement in symptoms, activities of daily living, exercise capacity, and rapidity of symptom relief. [2004]

NICE CG101 Recommendation 1.2.2.6

In people with stable COPD who remain breathless or have exacerbations despite using short-acting bronchodilators as required, offer the following as maintenance therapy:

- if $FEV_1 \geq 50\%$ predicted: either long-acting $beta_2$ agonist (LABA) or LAMA
- if $FEV_1 < 50\%$ predicted: either LABA with an inhaled corticosteroid (ICS) in a combination inhaler, or LAMA. **[new 2010]**

NICE CG101 Recommendation 1.2.2.10

The choice of drug(s) should take into account the person's symptomatic response and preference, and the drug's potential to reduce exacerbations, its side effects and cost. [2010]

Inhalers

NICE CG101 Recommendation 1.2.2.13

Inhalers should be prescribed only after patients have received training in the use of the device and have demonstrated satisfactory technique. [2004]

NICE CG101 Recommendation 1.2.2.14

Patients should have their ability to use an inhaler device regularly assessed by a competent healthcare professional and, if necessary, should be re-taught the correct technique. [2004]

Current statement wording

NICE QS 10 Statement 3: Inhaled and oral therapies

People with COPD are offered inhaled and oral therapies, in accordance with NICE guidance, as part of an individualised comprehensive management plan.

3.4.3 Current UK practice

BTS Pilot Care Bundle Project: A Care Bundles-Based Approach to Improving Standards of Care in Chronic Obstructive Pulmonary Disease and Community Acquired Pneumonia 2014, found that on direct questioning 98% of respiratory patients included within the pilot report using their inhaler correctly. On testing however 8% show a correct technique. They concluded that the problem can be exacerbated in the elderly where issues such as visual acuity, manual dexterity and cognitive impairment can act as an additional barrier to correct inhaler use. However, correct use of inhalers is associated with improved outcomes for patients including a reduction in risk of exacerbations and hospital admission. Repeated instruction is required to ensure that inhaler technique is optimised. Every opportunity must be taken to promote good inhaler technique. They concluded that ‘All patients should have their respiratory medications and inhaler technique assessed prior to discharge’ (Care Bundle Statement 1).

3.5 *Oxygen therapy*

3.5.1 Summary of suggestions

Long term oxygen therapy (LTOT)

Stakeholders commented that the identification and follow up of people who need LTOT is not being managed appropriately, people who would benefit from LTOT are not being identified and others are being continued on it inappropriately. Stakeholders highlighted the importance of oxygen therapy being given after a comprehensive assessment, by a trained professional to ensure saturation levels are optimised and oxygen is appropriately prescribed. Stakeholders also report there is national variation within the access to proper assessment and review services for home oxygen use.

Controlled oxygen flow for AECOPD

Stakeholders commented that the use of controlled flow oxygen should be improved within the ambulance, A&E and inpatient services as the use of high flow oxygen in people with AECOPD can cause morbidity and mortality.

3.5.2 Selected recommendations from development source

Table 9 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 9 to help inform the Committee's discussion.

Table 9 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Long term oxygen therapy	**Oxygen** NICE CG101 Recommendation 1.2.5.1 NICE CG101 Recommendation 1.2.5.5 NICE CG101 Recommendation 1.2.5.6 NICE CG101 Recommendation 1.2.5.7 **Discharge planning** NICE CG101 Recommendation 1.3.11.5
Controlled oxygen flow for AECOPD	BTS guidelines for Home Oxygen Use in Adults **LTOT flow rates page i14,** Patients eligible for LTOT should be initiated on a flow rate of 1 L/min and titrated up in 1 L/min increments until SpO2 >90%. An ABG should then be performed to confirm that a target PaO2 ≥8 kPa (60 mm Hg) at rest has been

	achieved. (Grade B) Good practice point Flow rates may be increased at 20 min intervals during an oxygen titration until a target PaO2 is achieved. (√)

Oxygen

NICE CG101 Recommendation 1.2.5.1

Clinicians should be aware that inappropriate oxygen therapy in people with COPD may cause respiratory depression. [2004]

NICE CG101 Recommendation 1.2.5.5

To ensure all patients eligible for LTOT are identified, pulse oximetry should be available in all healthcare settings. [2004]

NICE CG101 Recommendation 1.2.5.6

The assessment of patients for LTOT should comprise the measurement of arterial blood gases on two occasions at least 3 weeks apart in patients who have a confident diagnosis of COPD, who are receiving optimum medical management and whose COPD is stable. [2004]

NICE CG101 Recommendation 1.2.5.7

Patients receiving LTOT should be reviewed at least once per year by practitioners familiar with LTOT and this review should include pulse oximetry. [2004]

Discharge planning

NICE CG101 Recommendation 1.3.11.5

Patients (or home carers) should be given appropriate information to enable them to fully understand the correct use of medications, including oxygen, before discharge. [2004]

Controlled oxygen flow for AECOPD

BTS guidelines for Home Oxygen Use in Adults

LTOT flow rates page i14, paragraph 10

Patients eligible for LTOT should be initiated on a flow rate of 1 L/min and titrated up in 1 L/min increments until SpO2 >90%. An ABG should then be performed to confirm that a target PaO2 ≥8 kPa (60 mm Hg) at rest has been achieved. (Grade B)

Good practice point page i14, paragraph 15

Flow rates may be increased at 20 min intervals during an oxygen titration until a target PaO2 is achieved. (√)

Current statement wording

NICE QS 10 Statement 8: Initial assessment for long-term oxygen therapy

People with COPD potentially requiring long-term oxygen therapy are assessed in accordance with NICE guidance by a specialist oxygen service.

NICE QS 10 Statement 9: Review of long-term oxygen therapy

People with COPD receiving long-term oxygen therapy are reviewed in accordance with NICE guidance, at least annually, by a specialist oxygen service as part of the integrated clinical management of their COPD.

3.5.3 Current UK practice

LTOT

An Outcomes Strategy for Chronic Obstructive Pulmonary Disease (COPD) and Asthma 2011 highlighted the need for a proper oxygen assessment service run by appropriately qualified professionals.

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 reported that CCGs should undertake a regular review of all COPD patients regarding their need for oxygen and refer on to an appropriate assessment centre to ensure that a personalised plan is put together for those requiring long-term oxygen use, as per NICE guidance.

QOF COPD005: *The percentage of patients with COPD and Medical Research Council dyspnoea grade ≥3 at any time in the preceding 12 months, with a record of oxygen saturation value within the preceding 12 months, NICE 2012 menu ID: NM63.* 2013/14: 94% achievement, 2% exception reporting.

Controlled oxygen flow for AECOPD

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported that fewer patients are being treated inappropriately with high-flow oxygen at the time of admission.
They also recommend that units should ensure that they have a mandatory, rolling training programme in place to support better prescribing and titration of emergency

oxygen therapy. The training programme should extend to all medical and nursing staff, and should be a core topic within junior doctors' induction programmes.

3.6 *Self-management*

3.6.1 Summary of suggestions

Stakeholders comment that self-management programmes lead to improved health related quality of life and a reduction in hospital admissions. Stakeholders highlighted the need for people to be given the details of a named contact with a respiratory background in addition to signposting to local peer support groups as part of their self-management plan. Some stakeholders commented that people with COPD should have access to a respiratory specialist nurse to ensure a high quality of care is provided during the person's journey. They report that there is wide variation in access to respiratory CNS across the country and there has been a decrease in numbers recently despite an increase in hospital admissions.

Stakeholders report that exacerbations could be more successfully managed if people are educated in the identification of symptoms of an exacerbation and are equipped with a self-management plan. They also report that people should have access to 7 days a week out of hours on call specialist respiratory service.

3.6.2 Selected recommendations from development source

Table 10 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 10 to help inform the Committee's discussion.

Table 10 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Self- management	**Self-management** NICE CG101 Recommendation 1.2.12.21 NICE CG 101 Recommendation 1.2.12.22 NICE CG101 Recommendation 1.2.12.25 **Discharge planning** NICE CG101 Recommendation 1.3.11.5

Self-management

NICE CG101 Recommendation 1.2.12.21

Patients at risk of having an exacerbation of COPD should be given self-management advice that encourages them to respond promptly to the symptoms of an exacerbation. [2004]

NICE CG101 Recommendation 1.2.12.22

Patients should be encouraged to respond promptly to the symptoms of an exacerbation by:

- starting oral corticosteroid therapy if their increased breathlessness interferes with activities of daily living (unless contraindicated)
- starting antibiotic therapy if their sputum is purulent
- adjusting their bronchodilator therapy to control their symptoms. **[2004]**

NICE CG101 Recommendation 1.2.12.25

Patients given self-management plans should be advised to contact a healthcare professional if they do not improve. [2004]

Discharge planning

NICE CG101 Recommendation 1.3.11.5

Patients (or home carers) should be given appropriate information to enable them to fully understand the correct use of medications, including oxygen, before discharge. [2004]

Current statement wording

NICE QS10 Statement 2: Management planning

People with COPD have a current individualised comprehensive management plan, which includes high-quality information and educational material about the condition and its management, relevant to the stage of disease.

NICE QS10 Statement 7: Management of exacerbations

People who have had an exacerbation of COPD are provided with individualised written advice on early recognition of future exacerbations, management strategies (including appropriate provision of antibiotics and corticosteroids for self-treatment at home) and a named contact.

3.6.3 Current UK practice

A 2014 Cochrane review[3] of 29 studies that evaluated the effects of self management concluded that self management training improved health-related quality of life in patients with COPD compared with usual care. The number of patients with at least one hospital admission related to lung disease and other causes was reduced among those who participated in a self management

[3] Zwerink M et al, Self management for patients with chronic obstructive pulmonary disease. Cochrane Database Syst Rev. 2014 Mar 19;3

intervention. These patients also experienced less shortness of breath. However they were unable to make any no clear recommendations on the most effective content of self management training.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported that community care and self-management behaviour have improved markedly over the last 20 years but may paradoxically have resulted in a lower threshold for admission to hospital, which may have some bearing on the reduction of length of stay and mortality. Also, those patients who have successfully adopted self management behaviours as a result of pulmonary rehabilitation may be able to leave hospital sooner than their predecessors.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported that only 58% of units have a respiratory interest represented at clinical commissioning group (CCG) level. The availability of a respiratory nurse to see COPD patients has fallen back to the level of 2003 (74% from 80%). Eleven per cent of units have no respiratory nurse available to see COPD patients.

3.7 *Pulmonary rehabilitation*

3.7.1 Summary of suggestions

Service provision

Stakeholders highlighted that the availability of pulmonary rehabilitation services was variable for both routine management, after admission and post exacerbation. Stakeholders report that follow-on classes should be provided to ensure the benefits of the therapy is long lasting, classes such as BLF active classes enable support for healthy lifestyles long term. Stakeholders commented that services need to be available within 4 weeks post discharge.

Post admission for acute exacerbation

Stakeholders report that there is evidence that post exacerbation pulmonary rehab is safe and effective but both the availability and uptake of the programmes is low. Stakeholders comment that post-exacerbation pulmonary rehab reduces the 30-day re-admission rate for COPD patients. The number of pulmonary rehab programs has increased over the last few years but timely referral and commencement on the program is still an area for development. Stakeholders comment that pulmonary rehabilitation should be accessed within 4 weeks of a hospital admission as the greatest benefits come from interventions in the first few weeks after an exacerbation.

3.7.2 Selected recommendations from development source

Table 11 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 11 to help inform the Committee's discussion.

Table 11 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Service provision	**Pulmonary rehabilitation** NICE CG 101 Recommendation 1.2.8.1 NICE CG 101 Recommendation 1.2.8.3
Post admission for acute exacerbation	**Pulmonary rehabilitation** NICE CG 101 Recommendation 1.2.8.1 **Post exacerbation pulmonary rehabilitation** BTS Guideline on Pulmonary Rehabilitation in Adults: Outcomes in post-exacerbation pulmonary rehabilitation, page ii15, paragraph 6

	Patients hospitalised for acute exacerbation of COPD should be offered pulmonary rehabilitation at hospital discharge to commence within 1 month of discharge. (Grade A)

Pulmonary rehabilitation

NICE CG101 Recommendation 1.2.8.1

Pulmonary rehabilitation should be made available to all appropriate people with COPD (see 1.2.8.2) including those who have had a recent hospitalisation for an acute exacerbation. [new 2010]

NICE CG101 Recommendation 1.2.8.3

For pulmonary rehabilitation programmes to be effective, and to improve concordance, they should be held at times that suit patients, and in buildings that are easy for patients to get to and have good access for people with disabilities. Places should be available within a reasonable time of referral. [2004]

Post exacerbation pulmonary rehabilitation

BTS Guideline on Pulmonary Rehabilitation in Adults: Outcomes in post-exacerbation pulmonary rehabilitation. Page ii15, paragraph 6.

Patients hospitalised for acute exacerbation of COPD should be offered pulmonary rehabilitation at hospital discharge to commence within 1 month of discharge. (Grade A)

Current statement wording

NICE QS10 Statement 6: Pulmonary rehabilitation

People with COPD meeting appropriate criteria are offered an effective, timely and accessible multidisciplinary pulmonary rehabilitation programme.

3.7.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported 44% of patients had no assessment of suitability for pulmonary rehabilitation at the time of discharge.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported that 92% of units had potential access to pulmonary rehabilitation for

patients after discharge and 38% of units reported pulmonary rehabilitation was available within 4 weeks.

A 2011 Cochrane review of 9 studies assessing pulmonary rehabilitation therapy in people with COPD found that pulmonary rehabilitation is highly effective and safe intervention which reduces hospital admissions and mortality to improve health related quality of life in people with COPD who have recently experienced an exacerbation.

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 reported that CCGs should invest in pulmonary rehabilitation services so that:

- all patients with limiting breathlessness can access services within a month of referral;
- rapid access to pulmonary rehabilitation is available for COPD patients following discharge from hospital;
- and an NHS-funded long-term exercise programme is available following completion of pulmonary rehabilitation.

3.8 *Surgical procedures*

3.8.1 Summary of suggestions

Stakeholders report that lung volume reduction surgery (LVRS) improves survival for people with COPD, they report that there is currently a lack of systematic approaches in identifying people who should be referred for LVRS and a consistent multidisciplinary team (MDT) approach is needed.

3.8.2 Selected recommendations from development source

Table 12 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 12 to help inform the Committee's discussion.

Table 12 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Lung surgery	**Lung surgery** NICE CG101 Recommendation 1.2.10.2

Lung surgery

NICE CG101 Recommendation 1.2.10.2

Patients with severe COPD who remain breathless with marked restrictions of their activities of daily living, despite maximal medical therapy (including rehabilitation), should be referred for consideration of lung volume reduction surgery if they meet all of the following criteria:

- FEV_1 more than 20% predicted
- $PaCO_2$ less than 7.3 kPa
- upper lobe predominant emphysema
- T_LCO more than 20% predicted. **[2004]**

3.8.3 Current UK practice

A 2014 report into the 'Attitudes and access to lung volume reduction surgery for COPD of British Thoracic Society members' [4]concluded that Patients with COPD

[4] Attitudes and access to lung volume reduction surgery for COPD: a survey by the British Thoracic Society. McNulty 2014

require a systematic and multidisciplinary approach to assessment for LVRS and these survey data suggest that work is needed to deliver this evidence-based therapy in a consistent and comprehensive way across the UK.

A 2014 report[5] which reviewed clinical practice data on the surgical approaches for lung volume reduction in emphysema reported that there were historical concerns about the high levels of morbidity and mortality associated with procedures. They reviewed lung volume reduction procedures at their hospital from January 2000 to September 2012 and concluded that concerns about surgical mortality should not discourage LVRS in selected patients with COPD, provided that it is undertaken within a multidisciplinary team environment involving appropriate patient selection.

[5] Surgical approaches for lung volume reduction in emphysema. Clark 2014

3.9 *Comprehensive review*

3.9.1 Summary of suggestions

Stakeholders highlighted the importance of people with COPD having an annual comprehensive assessment to aid management of their condition. A regular review and assessment of the person's condition could identify changes in their needs and treatment options ensuring they have the appropriate access to expert care.

Stakeholders reported that there should be a regular systematic review in hospital and community care settings which includes a person's disease status, use of the MRC dyspnoea scale, spirometry, information on exacerbations, BMI and smoking status.

3.9.2 Selected recommendations from development source

Table 13 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 13 to help inform the Committee's discussion.

Table 13 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Comprehensive review	**Follow-up of patients with COPD** NICE CG101 Recommendation 1.2.14.1 NICE CG101 Recommendation 1.2.14.2 NICE CG101 Recommendation 1.2.14.4

Follow-up of patients with COPD

NICE CG101 Recommendation 1.2.14.1

Follow-up of all patients with COPD should include:

- highlighting the diagnosis of COPD in the case record and recording this using Read codes on a computer database
- recording the values of spirometric tests performed at diagnosis (both absolute and percent predicted)
- offering smoking cessation advice
- recording the opportunistic measurement of spirometric parameters (a loss of 500 ml or more over 5 years will select out those patients with rapidly progressing disease who may need specialist referral and investigation). **[2004]**

NICE CG101 Recommendation 1.2.14.2

Patients with COPD should be reviewed at least once per year, or more frequently if indicated, and the review should cover the issues listed in table 6. [2004]

NICE CG101 Recommendation 1.2.14.4

When patients with very severe COPD are reviewed in primary care, they should be seen at least twice a year, and specific attention should be paid to the issues listed in table 6. [2004]

Current statement wording

NICE QS10 Statement 4: Annual comprehensive assessment

People with COPD have a comprehensive clinical and psychosocial assessment, at least once a year or more frequently if indicated, which includes degree of breathlessness, frequency of exacerbations, validated measures of health status and prognosis, presence of hypoxaemia and comorbidities.

3.9.3 Current UK practice

All Party Parliamentary Group (APPG) on Respiratory Health: Report on enquiry into respiratory deaths 2014 reported that a regular review and assessment of the progression of COPD and regular testing of lung function is just as important as the initial diagnosis in determining appropriate management to improve the patient's quality and length of life.

QOF COPD003: *The percentage of patients with COPD who have had a review, undertaken by a healthcare professional, including an assessment of breathlessness using the Medical Research Council dyspnoea scale in the preceding 12 months.* 2013/14:89% achievement, 10% exception reported.

3.10 *Admission to hospital*

3.10.1 Summary of suggestions

Stakeholders report there are problems surrounding follow up on hospital admission for people with COPD. Stakeholders highlight the importance of people seeing a respiratory specialist on admission to hospital.

3.10.2 Selected recommendations from development source

Table 14 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 14 to help inform the Committee's discussion.

Table 14 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Admission to hospital	**Assessment of need for hospital treatment** NICE CG101 Recommendation 1.3.2.1 NICE CG101 Recommendation 1.3.3.2

Assessment of need for hospital treatment

NICE CG101 Recommendation 1.3.2.1

Factors that should be used to assess the need to treat patients in hospital are listed in table 7. [2004]

NICE CG101 Recommendation 1.3.3.2

In all patients with an exacerbation referred to hospital:

- a chest radiograph should be obtained
- arterial blood gas tensions should be measured and the inspired oxygen concentration should be recorded
- an ECG should be recorded (to exclude comorbidities)
- a full blood count should be performed and urea and electrolyte concentrations should be measured
- a theophylline level should be measured in patients on theophylline therapy at admission
- if sputum is purulent, a sample should be sent for microscopy and culture

- blood cultures should be taken if the patient is pyrexial. **[2004]**

Current statement wording

NICE QS 10 Statement 10: Care in hospital

People admitted to hospital with an exacerbation of COPD are cared for by a respiratory team, and have access to a specialist early supported-discharge scheme with appropriate community support.

3.10.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported,

- 42% of patients seen by a middle-grade doctor (SpR/ST3 or above) were seen within 4 hours.
- 85% of patients seen by a consultant of any specialty other than respiratory were seen within 24 hours, respiratory consultants saw only 54% of patients within 24 hours.
- 46% of patients were seen by a respiratory nurse/member of the COPD/respiratory team within 24 hours.
- 42% of patients who were discharged after a length of stay less than or equal to 1 day were not seen by a respiratory consultant or respiratory nurse/member of the COPD/respiratory team.
- 42% of patients received their care on a respiratory ward.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported, particular concerns around the marked variation in care offered to COPD patients across England and Wales, the access to specialist respiratory care, the availability of care at weekends and the observation that many patients are not cared for on respiratory wards and recommended that patients admitted with COPD exacerbation should receive a respiratory specialist opinion within 24 hours, 7 days a week. They found;

- 84% of units had access to a daily specialist respiratory review on respiratory wards
- 27% of units had access to a daily specialist respiratory review on non-respiratory wards
- 82% of units have access to an early / supported discharge service.

3.11 *Hospital discharge*

3.11.1 Summary of suggestions

Stakeholders report that there needs to be integrated and coordinated care between primary and secondary care for COPD patients discharged from hospital, seamless care can reduce readmissions after an acute exacerbation. Stakeholders highlight that improved coordination of care at discharge; with appropriate discharge information would enable better continuity of care in the community, and decrease the need for readmission.

Stakeholders report that care at discharge is variable and there is a variation in the input from respiratory specialists, in addition communication needs to be improved between hospitals and respiratory community teams after discharge. Stakeholders comment that although the number of people with a care bundle at discharge is increasing there is wide variation nationally.

Early supported discharge services

Stakeholders highlight that there needs to be greater availability of access to early/supported discharge services to support providing care closer to home, stakeholders report that levels of access are increasing but there is national variability.

Discharge care bundles

Stakeholders report that using discharge bundles ensure that people get evidence based interventions and help support people when they have a crisis.

Too many patients are leaving hospital care without a systematic discharge process, and without adequate communication on to and collaboration with the carers in primary and community care. Use of a formal discharge bundle needs to become routine, Lack of communication results in episodic and disjointed care for the patient, and failure to put in place measures that could prevent readmissions.

3.11.2 Selected recommendations from development source

Table 15 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 15 to help inform the Committee’s discussion.

Table 15 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Discharge planning	**Discharge planning** NICE CG101 Recommendation 1.3.11.1 NICE CG101 Recommendation 1.3.11.4 NICE CG101 Recommendation 1.3.11.5 NICE CG101 Recommendation 1.3.11.6 NICE CG101 Recommendation 1.3.11.7
Early supported discharge	**Hospital-at-home and assisted-discharge schemes** NICE CG101 Recommendation 1.3.4.1 NICE CG101 Recommendation 1.3.4.2 NICE CG101 Recommendation 1.3.4.4
Discharge bundles	**Discharge planning** NICE CG101 Recommendation 1.3.11.5

Discharge planning

NICE CG101 Recommendation 1.3.11.1

Spirometry should be measured in all patients before discharge. [2004]

NICE CG101 Recommendation 1.3.11.4

All aspects of the routine care that patients receive (including appropriateness and risk of side effects) should be assessed before discharge. [2004]

NICE CG101 Recommendation 1.3.11.5

Patients (or home carers) should be given appropriate information to enable them to fully understand the correct use of medications, including oxygen, before discharge. [2004]

NICE CG101 Recommendation 1.3.11.6

Arrangements for follow-up and home care (such as visiting nurse, oxygen delivery, referral for other support) should be made before discharge. [2004]

NICE CG101 Recommendation 1.3.11.7

Before the patient is discharged, the patient, family and physician should be confident that he or she can manage successfully. When there is remaining doubt a formal activities of daily living assessment may be helpful. [2004]

Hospital-at-home and assisted-discharge schemes

NICE CG101 Recommendation 1.3.4.1

Hospital-at-home and assisted-discharge schemes are safe and effective and should be used as an alternative way of caring for patients with exacerbations of COPD who would otherwise need to be admitted or stay in hospital. [2004]

NICE CG101 Recommendation 1.3.4.2

The multi-professional team required to operate these schemes should include allied heath professionals with experience in managing COPD, and may include nurses, physiotherapists, occupational therapists and generic health workers. [2004]

NICE CG101 Recommendation 1.3.4.4

Patients' preferences about treatment at home or in hospital should be considered. [2004]

Current statement wording

NICE QS 10 Statement 10: Care in hospital

People admitted to hospital with an exacerbation of COPD are cared for by a respiratory team, and have access to a specialist early supported-discharge scheme with appropriate community support.

NICE QS 10 Statement 12: Review within 2 weeks of discharge

People admitted to hospital with an exacerbation of COPD are reviewed within 2 weeks of discharge.

3.11.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 reported that 51% of patients were under the care of a respiratory consultant when the decision was made to discharge or transfer to an early/supported discharge service (compared with 54% in 2008). They reported that COPD admissions have risen by 13% since 2008 and although the 2015 National COPD Audit has demonstrated some important improvements in the management of COPD exacerbations since the last audit in 2008, there is still marked variation in care. The audit data show high front-end efficiency, but there needs to be more emphasis on safe discharge.

The BTS Pilot Care Bundle Project: A Care Bundles-Based Approach to Improving Standards of Care in Chronic Obstructive Pulmonary Disease and Community Acquired Pneumonia 2014 found that the use of a care bundle was associated with a

reduction in 30 day in-patient mortality from CAP from 13.6% to 8.8%. In addition, analysis of the association of the elements of the COPD admission bundle with outcomes of care demonstrated a statistically significant reduction in mortality from AECOPD in patients in whom oxygen was prescribed at admission and in patients in whom care was delivered within 4 hours of admission. The presence of an oxygen prescription was also associated with a reduction in length of stay for those with COPD. They concluded that wide implementation of the BTS CAP and COPD care bundles is practically feasible, and has the potential to impact not only on processes of care, but also on important measurable clinical outcomes.

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported 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, improve the quality of discharge information and work collaboratively with colleagues in primary care to improve integrated pathways for COPD.

3.12 *Palliative care*

3.12.1 Summary of suggestions

Stakeholders report that access to palliative care for people with COPD remains limited nationally. They report that people with advanced COPD have worse symptoms than those with lung cancer for whom provision of palliative care is better.

3.12.2 Selected recommendations from development source

Table 16 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 16 to help inform the Committee's discussion.

Table 16 Specific areas for quality improvement

Suggested quality improvement area	Selected source guidance recommendations
Palliative care	**Palliative care** NICE CG101 Recommendation 1.2.12.10

Palliative care

NICE CG101 Recommendation 1.2.12.10

Patients with end-stage COPD and their family and carers should have access to the full range of services offered by multidisciplinary palliative care teams, including admission to hospices. [2004]

Current statement wording

NICE QS10 Statement 13: Palliative care

People with advanced COPD, and their carers, are identified and offered palliative care that addresses physical, social and emotional needs.

3.12.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported that 87% of units have an on-site palliative care service (50% in 2008).

The Palliative and end of life care Priority Setting Partnership (PeolcPSP) 2015 report has identified those with COPD as an important group of people for whom palliative care support needs improving. Area six of the report asks 'what are the best ways to determine a person's palliative care needs, then initiate and deliver this

care for patients with non-cancer diseases (such as chronic obstructive pulmonary disease (COPD))'.

3.13 Non-invasive ventilation

3.13.1 Summary of suggestions

Stakeholders highlighted the recent NPSA safety alert on the use of non-invasive ventilation (NIV). The alert highlighted the importance of giving NIV in an appropriate environment by appropriately trained staff.

3.13.2 Selected recommendations from development source

Table 17 below highlights recommendations that have been provisionally selected from the development source(s) that may support potential statement development. These are presented in full after table 17 to help inform the Committee's discussion.

Table 17 Specific areas for quality improvement

Suggested quality improvement area	Suggested source guidance recommendations
Non-invasive ventilation	**Non-invasive ventilation (NIV) and COPD exacerbations** NICE CG101 Recommendation 1.3.7.2

NICE CG101 Recommendation 1.3.7.2

It is recommended that NIV should be delivered in a dedicated setting with staff who have been trained in its application, who are experienced in its use and who are aware of its limitations. [2004]

NICE QS10 Statement 11: Non-invasive ventilation in hospital

People admitted to hospital with an exacerbation of COPD and with persistent acidotic ventilatory failure are promptly assessed for, and receive, non-invasive ventilation delivered by appropriately trained staff in a dedicated setting.

3.13.3 Current UK practice

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Resources and organisation of care in acute units in England and Wales 2014 reported that 81% of units of respiratory wards now provide this treatment (74% in 2008) and 90% of units provide a training programme for staff undertaking NIV.

3.14 Additional areas

3.14.1 Summary of suggestions

The improvement areas below were suggested as part of the stakeholder engagement exercise. However they were felt to be either unsuitable for development as quality statements, outside the remit of this particular quality standard referral or require further discussion by the Committee to establish potential for statement development.

There will be an opportunity for the QSAC to discuss these areas at the end of the session on 20 May 2015.

Nutrition and dietary supplementation

A stakeholder felt that vitamin D and omega 3 supplementation and the use of other foods, vitamins and minerals could be used to help treat COPD. This area is not contained within the development source (NICE CG101).

Usefulness of prognostic scores

A stakeholder commented that although prognostic scores are useful for stratifying populations they felt the evidence was insufficient to use them to guide the management of an individual's condition. The use of prognostic scores will be covered in the assessment section of this briefing paper.

Patient experience surveys

A stakeholder reported that capturing the experience of patients living with COPD is a fundamental aspect of identifying the quality of care being provided. The mechanisms for capturing patient reported outcomes relating to quality of care will be included within the measurement sections of the individual quality standard statements.

Telehealth

A stakeholder commented that the use of telehealth solutions would not be useful for the treatment of COPD highlighting the lack of evidence to support their effects in reducing unnecessary admissions. This area is not contained within the development source (NICE CG101).

New bronchodilator inhalers and timing of the update

Stakeholders report that there is widespread confusion relating to the launch of new bronchiodilator inhalers. The surveillance review decision in July 2014 reviewed the

evidence around inhaled therapies and concluded that the guideline should not be updated at this time.

Endobronchial lung volume reduction techniques

A stakeholder reported that there has been an increase in the number of unregulated devices recently developed for endobronchial lung volume reduction. NICE IPG 465 and NICE IPG 517 recommend that specific interventional procedures for this procedure are only done in the context of research.

E-cigarettes

A stakeholder suggested that the use of E-cigarettes could form the basis of a developmental area of emergent practice. The use of nicotine replacement therapies is covered within the Quality Standard 82: Smoking: reducing tobacco use.

Information for patients

A stakeholder identified the British Lung Foundation patient passport as a useful tool for patients to use to assess the quality of the care they are receiving. The published quality standard will be accompanied by an 'information for the public' version which identifies what the statements mean for people with COPD and the care they should expect to receive.

Use of BiPAP for Type 2 respiratory failure

A stakeholder commented that Bi-level Positive Airway Pressure (BiPAP) is a key intervention in the management of severe COPD causing respiratory failure and has been shown to reduce ICU ventilation. This area is not contained within the development source (NICE CG101).

Appendix 1: Key priorities for implementation (CG101)

Recommendations that are key priorities for implementation in the source guideline and that have been referred to in the main body of this report are highlighted in grey.

Diagnose COPD

Symptoms

A diagnosis of COPD should be considered in patients over the age of 35 who have a risk factor (generally smoking) and who present with one or more of the following symptoms

- exertional breathlessness
- chronic cough
- regular sputum production
- frequent winter 'bronchitis'
- wheeze. **[2004]** [recommendation 1.1.1.1]

The presence of airflow obstruction should be confirmed by performing post-bronchodilator* spirometry. [recommendation1.1.2.2]

All health professionals involved in the care of people with COPD should have access to spirometry and be competent in the interpretation of the results. **[2004] [*added 2010]** [recommendation 1.1.2.4]

Managing stable COPD

Smoking cessation

All COPD patients still smoking, regardless of age, should be encouraged to stop, and offered help to do so, at every opportunity. **[2004]** [recommendation 1.2.1.2]

Inhaled combination therapy

In people with stable COPD who remain breathless or have exacerbations despite use of short-acting bronchodilators as required, offer the following as maintenance therapy:

- if FEV_1 ≥ 50% predicted: either long-acting $beta_2$ agonist (LABA) or long-acting muscarinic antagonist (LAMA)
- if FEV_1 < 50% predicted: either LABA with an inhaled corticosteroid (ICS) in a combination inhaler, or LAMA. **[new 2010]** [recommendation 1.2.2.6]

Offer LAMA in addition to LABA+ICS to people with COPD who remain breathless or have exacerbations despite taking LABA+ICS, irrespective of their FEV_1. **[new 2010]** [recommendation 1.2.2.8]

Pulmonary rehabilitation

Pulmonary rehabilitation should be made available to all appropriate people with COPD including those who have had a recent hospitalisation for an acute exacerbation. **[new 2010]** [recommendation 1.2.8.1]

Managing exacerbations

Patients at risk of having an exacerbation of COPD should be given self-management advice on responding promptly to the symptoms of an exacerbation [recommendation 1.2.12.21]

Patients should be encouraged to respond promptly to the symptoms of an exacerbation by:

- starting oral corticosteroid therapy if their increases breathlessness interfered with activities of daily living (unless contraindicated)
- starting antibiotic therapy if their sputum is purulent
- adjusting their bronchodilator therapy to control their symptoms **[2004]**[recommendation 1.2.12.22]

Multidisciplinary management

COPD care should be delivered by a multidisciplinary team. **[2004]** [recommendation 1.2.12.1]

Management of exacerbations of COPD

Non-invasive ventilation (NIV) and COPD exacerbations

Non-invasive ventilation (NIV) should be used as the treatment of choice for persistent hypercapnic ventilatory failure during exacerbations not responding to medical therapy [recommendation 1.3.7.1]

It is recommended that NIV should be delivered in a dedicated setting with staff trained in its application, who are experienced in its use and aware of its limitations. [recommendation 1.3.7.2]

When patients are started on NIV, there should be a clear plan covering what to do in the event of deterioration and ceilings of therapy should be agreed. [2004] [recommendation 1.3.7.3]

Appendix 2: Suggestions from stakeholder engagement exercise – registered stakeholders

ID	Stakeholder	Suggested key area for quality improvement	Why is this important?	Why is this a key area for quality improvement?	Supporting information
001	SCM1	Accurate diagnosis of COPD with quality assured diagnostic spirometry	There is increasing evidence of misdiagnosis of COPD as a result for poorly performed spirometry.	The Guide to performing quality assured diagnostic spirometry was a multi professional document published by the DoH as aspirational document to underpin this diagnostic test.	In primary care there is a 'mandate' that anyone undertaking cytology samples has to have accredited training and a PIN number to ensure feedback on performance. This is a screening test. For spirometry which is a diagnostic test there is no such expectation. There is in existence a register for those competent to perform and interpret spirometry and this standard needs to be set. http://www.pcc-cic.org.uk/article/guide-quality-assured-diagnostic-spirometry
002	SCM1	Availability of PR in all areas both for routine management and post exacerbation	There is strong evidence for PR post exacerbation as well as part of initial diagnosis.	The NICE guidelines were unable to assess post exacerbation PR as evidence was lacking. There is now more evidence available and this should be considered.	
003	SCM1	The use of self-management – which is more than a rescue pack-should be explored/discussed. Personalised care plans come into this and into the prescribing element below.	There is still confusion within primary care about the benefit or rescue packs and guidance about self-management plans. The lack of evidence for their use adds to confusion. Could this be reviewed/	Admission avoidance and ESD teams are in some cases being disbanded and this cannot be the case when admissions are still increasing?	

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004	SCM1	Personalisation of treatment prescribed and not 'blanket treatment' for all.	Understanding the risk benefit of treatments and the need to personalise according to phenotypes	Over use of guideline and local guidelines approach to treatment which is blindly accepted and has usually been implemented as a cost saving exercise rather than an understanding of evidence and application to practice.	
005	SCM1	Smoking cessation as first line intervention	This seems to be disappearing of agendas and not being invested in. There are areas where smoking cessation service have been disbanded and are actively not being invested in.	As the primary intervention and the only intervention that changes disease progression this should be high priority.	
0056	SCM1	Additional developmental areas of emergent practice	E cigarettes.		
007	NHS England	Ensuring the QS development group is mindful of potential for safety risk related to non-invasive ventilation	For the QS to recognise the issues of safety as well as effectiveness of a key treatment for patients with exacerbations of COPD	As the QS group will be well aware, non-invasive ventilation has potential for harming patients, especially if an unintentional interruption of the therapy is not recognised in a timely manner. Safety advice was recently issued by the Patient Safety Division at NHS England (see link).	Patient safety alert – Risk of severe harm and death from unintentional interruption of non-invasive ventilation http://www.england.nhs.uk/ourwork/patientsafety/psa/
008	SCM2	In general I think all the current quality statements are pertinent. Evidence from the 2014 National COPD Audit comes only from secondary carte so I think we need to be careful not to throw out any primary care -based statements in response to the Nation al			www.pcc-cic.org.uk/article/guide-quality-assured-diagnostic-spirometry

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		Audit. However it does throw up continuing problems with early. 1. pulmonary rehabilitation after an admission , 2. problems surrounding follow up on hospital admission for COPD including use care bundles 3. seeing a respiratory specialist on admission. From my point of view in addition; 4. Health care professionals are still not following NICE COPD pharmacology guidelines.....probably because they are out of date and in urgent need of revision. 5. Diagnosis of COPD using QUALITY -ASSURED post -bronchodilator spirometry(the emphasis on the quality-assured). The case for this is outlined join the Department of Health /primary care commissioning document:			
009	HQT Diagnostics	GP to test Vitamin D and adjust level so that 25(OH)D is between 100-	There is good RCT evidence that boosting 25(OH)D to between 100-150nmol/L helps to treat COPD	Increasing 25(OH)D has anti-inflammatory, anti-oxidative and antimicrobial functions.	www.vitamindwiki.com/Vitamin+D+treats+COPD+thru+many+pathways+%E2%80%93

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		150 nmol/L Review condition of COPD after 3 months			+March+2015 www.vitamindwiki.com/tiki-index.php?page_id=4724 www.grassrootshealth.net/media/download/scientists_call_to_daction_020113.pdf www.efsa.europa.eu/en/efsajournal/doc/2813.pdf
010	HQT Diagnostics	Review targeted food and nutritional strategies	Reference shows studies of different foods, vitamins and minerals that have produced good results in treating COPD	Low cost food and nutritional changes have been shown to provide significant benefit to sufferers of COPD	www.lef.org/Protocols/Respiratory/Copd/Page-01
011	HQT Diagnostics	GP to test Fatty Acids and supplement to achieve: **Omega-3 Index >8%** **Omega-6/3 Ratio <3:1** GP to refer patient to Dietitian or Nutritional Therapist to provide dietary advice Review condition of COPD after 3 months	There is good RCT evidence that adjusting Fatty Acids to achieve target levels helps to treat COPD	Major improvements in COPD have been seen within 1-3 months of adjusting levels of Fatty Acids to achieve: • **Omega-3 Index >8%** • **Omega-6/3 Ratio <3:1** The Omega-3 Index is designed to provide a more reliable indicator of the levels of specific Fatty Acids than any other test. Omega-3 levels can be increased by eating more oily fish or taking Fish Oil supplements. The Omega-6/3 Ratio shows the level of Omega-6 compared to Omega-3. High levels of specific Omega-6 Fatty Acids	http://omega3care.com/wp-content/uploads/2013/11/Omega-3LiteratureListJuly2013.pdf (8 references about COPD) www.omegaquant.com www.omegametrix.eu/?lang=EN www.hqt-diagnostics.com

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				contribute to high Inflammation. This can be reduced by eating less Sunflower oil (Omega-6=64%), less Corn oil (52%) and less Soybean oil (51%). Typical Omega-6/3 Ratio in UK people before advice & supplementation range between 15:1 and 35:1. Inflammation is reduced when the ratio is <3:1 The HQT Diagnostics Fatty Acid Test shows an average of all Fatty Acids eaten over the previous 60-90 days	
012	Nick Hopkinson – British Thoracic Society	Controlled flow oxygen in AECOPD	A new quality statement around the use of controlled flow oxygen for AECOPD to include ambulance service, A&E and inpatient care is needed because high flow oxygen can be harmful for patients with acute exacerbation of COPD causing respiratory acidosis resulting in considerable morbidity and avoidable mortality.	Guidance exists but is inconsistently followed leading to variation.	Emergency Oxygen Use in Adult Patients Guideline https://www.brit-thoracic.org.uk/guidelines-and-quality-standards/emergency-oxygen-use-in-adult-patients-guideline/ 2014 RCP national COPD audit https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_national_full_report_2014_final_web.pdf
013	Nick Hopkinson – British Thoracic Society	Post exacerbation pulmonary rehabilitation.	There is strong evidence for benefit with a NNT of 4 to prevent one readmission following AECOPD.	The National COPD audit revealed that this was not offered to 44% patients admitted with AECOPD.	Pulmonary rehabilitation following exacerbations of chronic obstructive

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				Could be added to QS10	pulmonary disease. Puhan et al. Cochrane 2011 http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD005305.pub3/full
014	Nick Hopkinson – British Thoracic Society	Smoking cessation in hospitals COPD.	Smoking cessation is high value treatment for COPD improving symptoms and survival.	Guidance exists but is inconsistently followed leading to variation. The RCP audit shows support not offered to 42% of smokers with AECOPD	2014 RCP national COPD audit https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_national_full_report_2014_final_web.pdf
015	Nick Hopkinson – British Thoracic Society	The use of care bundles or similar approaches to deliver systematic quality care to patients with AECOPD	Care bundles can be used to create a system that delivers high value care systematically including smoking cessation, pulmonary rehabilitation, written advice and assistance with inhaler technique and a clear post discharge pathway.	Despite improvements in care there is still unacceptable variation in AECOPD care. QS10	http://www.ncbi.nlm.nih.gov/pubmed/25679218 http://thorax.bmj.com/content/67/1/90.long
016	Nick Hopkinson – British Thoracic Society	Evaluating smoking rates in COPD patients	Confirmed smoking rates in the community -smoking cessation is the highest value treatment for COPD.	The actual proportion of COPD patients who smoke needs to be evaluated (i.e. the outcome not the process)	Current QS5
017	Nick Hopkinson – British Thoracic Society	Systematic approach to lung volume reduction	LVRS is one of the few therapies that improves survival in COPD. Appropriate patients have heterogeneous emphysema, exercise limitation but whose lung disease is not too severe for safety. An advanced COPD MDT approach and a considered referral pathway is needed.	There is a lack of systematic approaches to this which means that eligible patients are missing out or are referred to late.	Attitudes and access to lung volume reduction surgery for COPD: a survey by the British Thoracic Society. McNulty 2014 http://www.ncbi.nlm.nih.gov/pubmed/25478175 Surgical approaches for lung

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					volume reduction in emphysema. Clark 2014 http://www.clinmed.rcpjournal.org/content/14/2/122.long
018	Nick Hopkinson – British Thoracic Society	Order of statements	Ideally we would have the statements in order of value so that smoking and pulmonary rehabilitation come ahead of inhaled and oral therapies.		London Resp Team pyramid of value
019	Nick Hopkinson – British Thoracic Society	QS4 – prognostic scores	These scores may be useful for stratifying populations but we do not feel that there is sufficient evidence base that they are useful for categorising/managing individual patients to mandate their use in a quality standard. We would favour adding the “surprise question” here. “would you be surprised		
020	Christopher Dyer – British Geriatrics Society		The society has put this out to topic experts for review and they thought the standard was comprehensive with no significant oversights. We therefore support and endorse the quality standard in full and would like to congratulate NICE on their excellent work.		
021	SCM3	Pulmonary rehab for COPD patients after a hospital admission for an acute exacerbation of COPD	There is good evidence available that post-exacerbation pulmonary rehab is safe and effective. However, the availability of these programmes and the uptake of them remains low.	Post-exacerbation pulmonary rehab reduces the 30-day re-admission rate for COPD patients. The number of pulmonary rehab programs has increased over the last few years but timely referral and	National COPD Audit BTS Pulmonary Rehab Quality Standards

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				commencement on the program is still an area for development.	
022	SCM3	Integrated and coordinated care between primary and secondary care for COPD patients discharged from hospital	Seamless COPD care between secondary and primary care has been repeatedly shown to reduce readmissions following an acute exacerbation of COPD	With the current push to reduce length of stay within acute hospitals and prevent admissions there needs to be strong links and efficient referral pathways between primary and secondary care to ensure patients receive the right specialist care when and where they need it.	National COPD Audit
023	SCM3	Spirometry	To ensure correct and early diagnosis and that these results then follow the patient no matter where they present for an assessment of their COPD. This spirometry also needs to be of a high quality standard.	High quality spirometry is key to ensure patients get the correct diagnosis and can then receive the correct care. The results need to follow the patient and be available to all professionals involved in their care so the patients receive the treatment they need	National COPD Audit
024	SCM3	Smoking cessation services across primary and secondary care	Smoking cessation reduces mortality in COPD patients	Current provision particularly in secondary care is often disjointed. Adequate resources are required to ensure all current smokers are offered a smoking cessation service either in the hospital or in the community	National COPD Audit NICE Smoking Cessation
025	SCM4	Key area for quality improvement 1	Severity/impact assessment as recommended by NICE includes multicomponent assessment including lung function, breathlessness such as MRC dyspnoea scale, smoking status, exacerbation frequency, BMI and co-morbidities.	The recording of these elements is haphazard in all healthcare sectors yet these items determine management according to NICE guidance as well as helping to assess prognosis. There is confusion introduced by GOLD categories and whether health status questionnaires should be used. All sectors including primary care, intermediate care and hospitals should have the same criteria for severity assessment which clarified and	

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				routinely completed which will allow rational drug and non drug treatment such as smoking cessation and pulmonary rehab	
026	SCM4	COPD managed as a multi-morbid condition	Significant evidence that COPD patients suffer with both comorbidities and multimorbidities and that management of a person must take into account the interaction between conditions and move away from a single condition approach	It has not yet been recognised in any UK recommendations for COPD beyond the annual review en passant eg depression	Multiple research papers Calls for guidelines to be reformatted to recognise the interaction between management of multiple conditions on the individual
027	SCM4	Key area for quality improvement 2 Diagnostic accuracy and the need to differentiate COPD from other airway conditions	If the diagnosis remains unclear or is incorrect then gold standard management is irrelevant	Evidence suggests that many clinicians and patients are unclear about the diagnosis and this affects appropriate management and for that matter health service planning and commissioning of services	Research data and audit data that demonstrates lack of confirmatory spirometry in some patients and primary care data that demonstrates multiple co diagnoses of airways obstruction in the same patients notably COPD and asthma
028	SCM4	Key area for quality improvement 1 **Recognition and Management of Common Comorbidities**	The recognition and active management of common comorbidities can improve the quality of life and health status of people with COPD.	CG101 was produced in 2010, and although it did mention some common comorbidities (e.g. cardiac impairment, anxiety and depression), it did not adequately emphasise that active management of these, and other, comorbidities could do a lot to improve a COPD patient's symtomatology, and sometimes obviate the need for any increase in specific COPD treatment. Correct management of cardiac comorbitities can improve mortality. The early identification and correct	NICE CG 101, 1.1.3.1 (ECHO), 1.1.8.1 (cardiac impairment), and 1.2.12.5 (anxiety and depression). NICE QS 10, Statement 4.

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				management of (i) cardiac impairment and (ii) anxiety and depression would be of great benefit to many individuals.	
029	SCM4	Key area for quality improvement 2 **Inhaled bronchodilator therapy**	Ensuring that people with COPD, especially those with the "milder" spectrum of disease, are offered the correct initial inhalation therapy with LAMA or LABA and not inappropriately offered ICS is the most fundamental decision relating to inhalation therapy.	There are now a significant number of studies (mainly looking at prescribing databases in primary care) showing that many patients with $FEV_1 \geq 50\%$ predicted and no history of exacerbations are incorrectly being started on a LABA+ICS combination inhaler rather than LAMA or LABA monotherapy. Although there is an important role for ICS in the pharmacological management of COPD, these drugs should not be used for initial therapy in "mild" disease.	NICE CG 101, 1.2.2.6. NICE QS 10, Statement 3.
030	SCM4	Key area for quality improvement 3 **Long term oxygen therapy LTOT**	The correct identification and follow-up of people with COPD who may require LTOT is a crucial part of management which is still suboptimal.	Many people with COPD who might benefit from LTOT are not currently being identified, and – conversely – a significant number of people with COPD who do not require LTOT are still being supplied with it. CG 101 (published in 2010) did not update any of the 2004 recommendations relating to LTOT; nevertheless QS 10 contained two statements relating to LTOT. A new BTS guideline on LTOT (which will be NICE accredited) is due to be published in April/May 2015, and will undoubtedly form a basis for at least one or two new quality improvement statements.	NICE CG 101 Section 1.2.5 (LTOT). NICE QS 10 Statements 8 and 9. BTS guideline on home oxygen in adults (due to be published in April/May 2015).
031	SCM4	Key area for quality improvement 4 **Discharge planning after**	Improved coordination of care at discharge, with appropriate discharge information, should enable better	COPD admissions have risen by 13% since 2008. Although the 2015 National COPD Audit has demonstrated some	NICE CG 101 Section 1.3.11 (discharge planning). NICE QS 10 Statements 1,5,6 and

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		hospital admission for acute exacerbation	continuity of care in the community, and decrease the need for readmission.	important improvements in the management of COPD exacerbations since the last audit in 2008, there is still marked variation in care. The audit data show high front-end efficiency, but there needs to be more emphasis on safe discharge. The audit recommends that the following discharge information should be provided: • MRC breathlessness score • Latest spirometry • BMI • Decisions re escalation of care • Smoking cessation advice • Pulmonary rehab referral • Presence of Type 2 respiratory failure • Evidence of follow-up arrangements	12. National COPD Audit Programme 2015 recommendation 7 for providers.
032	SCM4	Key area for quality improvement 5 **Pulmonary Rehabilitation**	Pulmonary Rehabilitation (PR) remains one of the most important non-pharmacological (and most cost-effective) interventions to improve quality of life and exercise ability in people with COPD.	Offering effective, timely and accessible PR programmes was identified as an important area in NICE QS 10 (published in July 2011). This was based on recommendations in NICE CG 101. Updated NICE-accredited guidelines on PR were produced by the BTS in 2013, and the National COPD Audit 2015 has highlighted that hospitals and CCGs should clarify and formalise their pathways to improve referral to community PR programmes. It may well be appropriate to include in this new COPD Quality Standard the original Statement 6 from QS 10: People	NICE CG 101 Section 1.2.8. NICE QS 10 Statement 6. NICE-accredited BTS guideline on PR Thorax 2013; 68: ii1-ii30.

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				with COPD meeting appropriate criteria (which are documented in CG 101) are offered an effective, timely and accessible multidisciplinary PR programme (structure, frequency, duration, and content of the programme are all outlined in BTS guideline). Measures should include numbers of people offered the programme, numbers who start the programme, and numbers who complete the programme.	
033	SCM4	Additional developmental areas of emergent practice	The original NICE CG 101 is now out of date as regards its recommendation for surgery and other interventional techniques (e.g. bronchial stenting).		
034	Association of Respiratory Nurse Specialists	Key Area Quality Improvement 2 **Pulmonary rehabilitation for chronic obstructive pulmonary disease (COPD)** **(Agree with example given)**	There is good evidence that appropriate and effective pulmonary rehabilitation can drive significant improvements in the quality of life and health status of people with COPD. Pulmonary rehabilitation is recommended within NICE guidance. Rehabilitation should be considered at all stages of disease progression when symptoms and disability are present. The threshold for referral should be breathlessness equivalent to MRC dyspnoea grade 3, based on the NICE guideline.	The National Audit for COPD found that the number of areas offering pulmonary rehabilitation has increased in the last three years and although many people are offered referral, the quality of pulmonary rehabilitation and its availability is still limited in the UK. Individual programmes differ in the precise exercises used, are of different duration, involve variable amounts of home exercise and have different referral criteria.	Please see the Royal College of Physicians national COPD audit which highlights findings of data collection for quality indicators relating to pulmonary rehabilitation. http://www.rcplondon.ac.uk/resources/chronic-obstructive-pulmonary-disease-audit BTS Quality Standards on PR https://www.brit-thoracic.org.uk/document-

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					library/clinical-information/pulmonary-rehabilitation/bts-quality-standards-for-pulmonary-rehabilitation-in-adults/
035	Association of Respiratory Nurse Specialists	Key Area Quality Improvement 2 **Need for Quality Assured Spirometry**	The need for the quality assured spirometry, by healthcare professionals competent in its performance and interpretation.	Whilst this is already in the current quality standards – we believe there is a need to ensure a real focus in primary care to ensure that healthcare professionals are trained to prevent mis-diagnosis and provide timely diagnosis. National COPD Audit suggests that the problems continue to exist - still many patients are being diagnosed too late, or whilst as a acute admission in hospital. It is suggested that this is due to the lack of access to quality assured spirometry within primary care and following through in the NICE quality standards already set . We believe that within some CCGs , respiratory care is not a key focus and as a result early diagnosis or case finding is not part of commissioned services.	The study below gives an excellent account of the opportunities to diagnosis COPD supporting the quality area. Opportunities to diagnose chronic obstructive pulmonary disease in routine care in the UK: a retrospective study of a clinical cohort http://www.sciencedirect.com/science/article/pii/S2213260014700086
036	Association of Respiratory Nurse Specialists	Key Area Quality Improvement 3 **Patients and/or HealthCare Professionals**	The need for access to a Respiratory Specialist Nurse, we believe is principal to the quality of care provided to patients throughout all of the current quality standards and on	The National COPD Audit clearly identifies, that there is a wider variation of resources, organisation services and access across the country, it also highlighted that the number of respiratory	Royal College of Physicians national COPD audit, 2014 highlights findings of data collection for quality indicators in secondary care.

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		have access to a Respiratory Specialist Nurse	a patient's journey from diagnosis to end of life care. Patients experience, effectiveness and safety are the drivers behind quality. We strongly believe getting quality respiratory care right, and is fundamental to the respiratory specialist's nurse's role.	CNS's have decreased despite an increase in COPD hospital admissions. To maintain and improve Quality standards already set by NICE, we need to ensure that the respiratory CNS is appropriately funded and commissioned locally, to provide specialist support to general practice in reviewing COPD patients and education to reviewing and supporting patients in acute phases, pulmonary rehabilitation, smoking cessation and end of life care	https://www.rcplondon.ac.uk/projects/national-copd-audit-programme-starting-2013 The VANGUARD project, is currently examining nursing sensitive indicators for the respiratory CNS in COPD. We are awaiting results from this national project/study. Evidence supporting Respiratory CNS • Improved patients knowledge (BLF, 2008) • Reduced mortality (Cockcroft, 1987) • Patient Value the role (BLF, 2008) • Reduce impairment, disability (Littlejohns, 1991) • Provide management of acute exacerbations out of hospital setting (BLF, 2008. Ram, 2004, Hermandez, 2003; Davies, 2000; Cotton 2000)Improved Health Related

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					Quality of Life (Wong, 2012. BLF, 2008) • Support Carers (BLF, 2008).
037	Association of Respiratory Nurse Specialists	Key area Quality Improvement 4 **People with COPD have appropriate access to palliative and end of life care including hospice and domiciliary support**	COPD and palliative care are documented in the NICE (2010) guidelines, ARNS believes that access to services and its availability is still limited in the UK. Evidence informs us that people with advanced COPD have worse symptoms than those who have been diagnosed with Lung Cancer – such as severe breathlessness being managed inappropriately or not addressed. However, evidence and professional opinion suggests that some people living with COPD still have limited access to appropriate palliative care interventions and support, some still receiving it too late.	The Palliative and End of Life Care Priority Setting Partnership, suggests that Palliative and End of Life Care is an under researched area and requires greater attention, it lists 10 key priority areas. Area six suggests 'what are the best ways to determine a person's palliative care needs, then initiate and deliver this care for patients with non-cancer diseases (such as chronic obstructive pulmonary disease (COPD))'. https://www.mariecurie.org.uk/globalassets/media/documents/research/PeolcPSP_ExecSummary_English.pdf	Although the exact determinations are known there are examples of good practice : Breathing Space Clinic http://spcare.bmj.com/content/1/2/204.2.abstract Space to Breathe http://thorax.bmj.com/content/68/Suppl_3/A204.1
038	Association of Respiratory Nurse Specialists	Additional developmental areas of emergent practice Improvements in the non-pharmacological aspects of COPD	Capturing the experience of patients living with COPD is fundamental and part of the triangulation of quality care.	For service development and quality improvements, the need to demonstrate improvements in the care provided to patients is becoming increasing in the performance of services. Having a tool/instrument to demonstrate and support this need is of paramount need,	An emerging patient experience questionnaire in COPD has been designed. https://www.brit-thoracic.org.uk/document-library/clinical-information/copd/developing-

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				for capturing improving patient centred care.	a-patient-reported-experience-measure-copd/ Stage 2 – COPD PREM Development http://erj.ersjournals.com/content/44/Suppl_58/P3032.short
039	Novartis Pharmaceuticals	Key area for quality improvement 1: **COPD Diagnosis**	Identification of patients with early COPD symptoms and appropriate screening of patients at risk of COPD using quality assured spirometry would improve diagnosis and management. With the current management and treatment options there is good evidence on the potential to slow or modify the progressive nature of this disease with appropriate management. A comprehensive assessment of disease severity can enable effective proactive disease management. A late diagnosis may mean that the effectiveness treatments are limited in controlling symptoms and disease progression. Inaccuracies in assessing lung function may affect the type of treatment that people receive. Diagnosis of COPD is clearly	Evidence in the APPG Report on the inquiry into respiratory deaths highlight that there are a significant number of undiagnosed, misdiagnosed and late diagnosed COPD patients in the UK. The DoH estimates that over 3 million people have COPD but only about 835,000 (mainly those with severe disease) are registered with the NHS as having COPD. Many of these undiagnosed 2.2 million people interact with the health system on a regular basis but remain undiagnosed because they do not recognise their symptoms, or because they think it is normal to have a cough and to be short of breath, or because doctors often treat the symptoms but fail to diagnose the underlying lung disease. In a recent study, the ratio of diagnosed to expected prevalence varied from 0.20 to 0.95, with a mean of 0.52.	Please see the APPG Report which highlights findings and recommendations on COPD Diagnosis: http://www.blf.org.uk/Page/Report-on-inquiry-into-respiratory-deaths See also the Department of Health Respiratory Team: An Outcomes Strategy for COPD and Asthma: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/216139/dh_128428.pdf Nacul L et al. COPD in England: a comparison of expected, model-based prevalence and observed prevalence from general practice data. Journal of Public Health, June 2010, pp.

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			described in NICE guidelines.		1-9.
040	Novartis Pharmaceuticals	Key area for quality improvement 2 **Review after hospital discharge**	Patients should be appropriately managed after discharge from hospital for COPD to improve their outcomes, quality of life and reduce the risk of readmissions. There is evidence that care of patients at discharge is variable and input from respiratory specialists varies. A hospital admission should not be considered as an isolated incident. Communication with the community respiratory teams on discharge is vital to improve the overall care and appropriate management of the patients.	The RCP Audit highlighted that there are variations in care, input of a specialist respiratory services and the coordination of discharge care at discharge and beyond. A BTS Report has identified that the number of patients with a COPD discharge bundle has increased however, overall total number of patients who received a COPD bundle was small compared with the total number of patients who had been admitted and there is variability between centres.	Please see the Royal College of Physicians Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 and the BTS report for care bundles which highlights findings and recommendation related to management and review of COPD patients following discharge from hospital: https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_report_2014_executive_summary_final_web.pdf https://www.brit-thoracic.org.uk/document-library/audit-and-quality-improvement/care-bundles-project/bts-pilot-care-bundle-project-report-2014/
041	Novartis Pharmaceuticals	Key area for quality improvement 3 **COPD Treatment**	Regular review of patient's disease is important to ensure appropriate management for patients to help improve patients' quality of life and	The APPG report and audits have highlighted that recommendations in COPD Management in Guidelines are not routinely implemented in clinical practice.	Please see the APPG Report which highlights findings and recommendations on COPD Management:

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			length of life. Any worsening of symptoms needs to be identified, investigated and managed. Appropriate management of COPD patients will mean ensuring patients have the correct diagnosis, including assessment of severity, and are managed proactively. Pharmacological management of COPD is clearly described in GOLD Guidelines and NICE Guidelines.	Audits of routine prescribing have shown that some patients receive no treatment despite experiencing symptoms. Among treated patients, most receive ICS irrespective of severity of airflow limitation, asthma diagnosis, and exacerbation history, despite GOLD Guideline recommendation for ICS treatment for patients in Groups C&D only. Many patients on treatment continue to have symptoms. The role of ICS in the management of COPD is changing given the evidence of increased risk of side effects including pneumonia. These reports also highlight the needs for regular review and assessment of patients to identify changes in patient's condition and assessment of changes in management and treatment options. The report also highlights the need for clear management plans and education for COPD patients to improve outcomes.	http://www.blf.org.uk/Page/Report-on-inquiry-into-respiratory-deaths Small M, Broomfield S, Higgins V. Quantification and Treatment Patterns of Real-World Patients Classified by the GOLD 2011 Strategy. Thorax 2012; 67: Suppl 2 A144-A145 Wilkie M, Finch S, Schembri S. Inhaled Corticosteroids for Chronic Obstructive Pulmonary Disease-The Shifting Treatment Paradigm.COPD. 2015 Mar 16. [Epub ahead of print] Price D. et al. Management of COPD in the UK primary-care setting: an analysis of real-life prescribing patterns.Int J Chron Obstruct Pulmon Dis. 2014; 9: 889–905 Thornton Snider J et al. Inhaled corticosteroids and the risk of pneumonia in Medicare patients with COPD. Curr Med Res Opin.

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					2012 Dec;28(12):1959-67
042	Novartis Pharmaceuticals	Key area for quality improvement 4 **Annual comprehensive assessment**	Better management of COPD would result in; slower disease progression, as exacerbations can be minimised by identifying complications early, fewer planned and unplanned acute episodes and shorter lengths of hospital stay. This can be achieved through proactive management by healthcare professionals starting with an accurate diagnosis, monitoring and assessment of severity, co-morbid conditions and impact of disease, with regular review with specialist input depending on severity of condition.	The APPG report highlights the needs for regular review and assessment of patients to identify changes in patient's condition and assessment of the need changes in management and treatment options. It recommends that there should be specific plans to ensure that all patients with COPD are appropriately supported to manage their condition; and that all high-risk patients with COPD are identified and have appropriate access to expert care.	Please see the APPG Report which highlights findings and recommendations on COPD management: http://www.blf.org.uk/Page/Report-on-inquiry-into-respiratory-deaths
043	Novartis Pharmaceuticals	Key area for quality improvement 5 **Management of exacerbations**	Prompt treatment at the onset of exacerbation symptoms or changes in symptoms may result in control of symptoms, reduced lung damage and reduced hospital admissions/readmissions and reduced bed days. Education of patients to identify symptoms and their management plan may reduce the rate of disease progression; improve recovery time following an exacerbation; and promote independence and quality of life.	The RCP report highlights that there has been a reduction in access to specialist respiratory nurse care in the hospital setting despite an increase in the number of people admitted with COPD. The majority of hospitals do not have an on-call respiratory service operating 7 days a week out-of-hours service. A significant proportion of outreach teams do not operate out-of-hours during weekdays and do not operate at the weekend.	Please see the Royal College of Physicians Clinical audit of COPD exacerbations admitted to acute units in England and Wales 2014 which highlights findings and recommendation related to management of exacerbations: https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_report_2014_executive_summary_final_web.pdf

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044	Novartis Pharmaceuticals	Additional developmental areas of emergent practice	No comment.		
045	Kate Bennett – Chartered Society of Physiotherapy	Key area for quality improvement 2: **Self management of COPD**	There are a number of studies showing that self- management programmes for COPD patients have a number of health related and economic benefits. A Cochrane review carried out in 2014 showed that self- management programmes for COPD patients resulted in significant improvements in this patient group including improved health related quality of life and dyspnoea scores and a reduction in hospital admissions.	There are no current formal recommendations for self-management programmes to be included in the management of this patient group. Currently self-management programmes (where implemented) differ in the content and duration of the programme, the amount of support offered from healthcare professionals and how the programme is delivered, for example, as part of pulmonary rehabilitation or as a standalone programme.	Please see the findings of the 2014 Cochrane review which indicates that self management programmes had statistically significant effects on several outcomes. http://www.cochrane.org/CD002990/AIRWAYS_self-management-for-patients-with-chronic-obstructive-pulmonary-disease
046	Chartered Society of Physiotherapy	Key area for quality improvement 3: **Access to Early/Supported Discharge services**	There is an increasing emphasis on care closer to home, which is especially pertinent to people with long term conditions such as COPD. A Cochrane review in 2012 indicated that hospital at home schemes may help to reduce readmission rates, therefore enabling patients to stay in their homes or get home sooner.	The National Audit for COPD found that the percentage of patients discharged under the care of an early/ supported discharge team has increased to 40% (compared to 18% in 2008). There is variability in the availability of these teams to support early discharge over the weekend, or indeed to support patients to stay in the home rather than being admitted to hospital.	Please see the findings of the National Audit for COPD: https://www.brit-thoracic.org.uk/audit-and-quality-improvement/national-copd-audit-2013-%E2%80%93-2016/ Please also see the Cochrane review which indicates that hospital at home schemes may reduce readmission rates: http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD003573.pub2/abstract;jsessioni

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					d=6ACCC1F63EA606E3BC5342C29E414F21.f04t02
047	Royal College of Nursing	This is to inform you that the Royal College of Nursing has no comments to submit to inform on the above topic engagement at this time. Thank you for the opportunity, we look forward to participating in the next stage of the development process.			
048	AstraZeneca	Patients are offered inhaled therapies that address their symptomatic needs and offer benefits to their long term disease management	Effective delivery of respiratory medicines has been shown to reduce exacerbations, improve quality of life and day to day impact on symptoms. Every patient should be optimally and maximally treated, to allow for activity and participation in pulmonary rehabilitation	Inhaled therapies can be effective at reducing exacerbations, improving quality of life, and improving day to day impact on symptoms. COPD symptoms vary on a patient by patient basis, and therefore, with a variety of inhaled therapies available, each pharmacological treatment regimen needs to be patient-specific, guided by symptoms and patient response.	2015 Global Strategy for the Diagnosis, Management and Prevention of COPD, Global Initiative for Chronic Obstructive Lung Disease (GOLD) NICE COPD Clinical Guideline, CG101. June 2010
049	AstraZeneca	Patients should be offered medicines in devices suitable for their needs and physical condition and for which they have undergone suitable initial training	In line with the Asthma Quality Standards, people with COPD need to be able to use their inhaler correctly to ensure they receive the correct dose of treatment. There are several types of inhaler and it is important that training and assessment are specific to each inhaler. Delivery of inhaled medicines	A high proportion of patients with COPD have poor inhaler technique, which appears to negatively affect outcomes. Choosing the right device for a given patient, educating on inhaler technique, and regularly checking inhaler use are important components of COPD management. There are several types of inhaler and it is important that training and	NICE Asthma Quality Standards, QS 25. Feb 2013 An official American Thoracic Society/European Respiratory Society statement: research questions in COPD

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			can only be successful if patients know how to correctly administer the medicine using the device they are familiar and confident with.	assessment are specific to each inhaler.	
050	Association of Chartered Physiotherapists in respiratory care	Follow-on classes for patients who complete Pulmonary Rehab.	The physical, emotional and psychosocial gains from PR diminish over time if patients do not have access to (or do not attend) a follow on class. Repeat programmes and re-referrals are often made which puts strain on the systems, and the patient benefits are only short term	Some areas in the UK have informal follow-on classes, or BLF active classes but the distribution is patchy and the delivery/effectiveness is inconsistent. A more structured and consistent approach which encourages and support healthy lifestyles even after PR is vital for long-term benefits	BTS guideline for PR https://www.brit-thoracic.org.uk/guidelines-and-quality-standards/pulmonary-rehabilitation-guideline/
051	Association of Chartered Physiotherapists in respiratory care	Inhaler Technique	Patients and NHS staff do not know how to use inhalers/teach technique appropriately and therefore drugs are not being delivered effectively. There is both a clinical and symptomatic impact and also a cost impact of poor inhaler technique within this patient group due to poor control-related admission, waste and overprescribing.	The amount of money spent on inhalers is increasing, along with the number and range of inhaler devices. Staff are not trained effectively in inhaler technique therefore programmes which improve this would be welcomed.	http://www.ncbi.nlm.nih.gov/pubmed/24304046 http://www.ncbi.nlm.nih.gov/pubmed/22529403
052	Association of Chartered Physiotherapists in respiratory care	Implementation of discharge bundles	Checklists in hospital prior to discharge ensure that evidence based interventions are made available to patients at a crisis moment.	Admitting patients to hospital should be seen as a last resort, and is often the result of ineffective disease-management/control. On admission to hospital, there is an opportunity to review the cause of admission and deliver interventions which are necessary to prevent further admissions. DC bundles should become mandatory for COPD admissions.	*Gruffydd-Jones K et al. What are the needs of patients following discharge from hospital after an acute exacerbation of chronic obstructive pulmonary disease (COPD)? Prim Care Resp J 2007;**16**(6):363-368.* http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4332682/

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053	Association of Chartered Physiotherapists in respiratory care	Spirometry Quality	Spirometry underpins diagnosis of COPD but there is variation in the accuracy, measurement, calibration and understanding of spirometry.	Ineffective or inaccurate spirometry can affect whether a patient is diagnosed correctly, which can have a huge impact on the patient's QoL, symptom control and cost to the taxpayer. Staff should be formally trained and receive extensive support	http://www.artp.org.uk/en/about-artp/artp-reports.cfm/ARTP-Survey-2012
054	The Society for Acute Medicine	Key area for quality improvement 1 Use of BiPAP for Type 2 Respiratory failure due to COPD	BIPAP is a key intervention in the management of severe COPD causing Resp failure and has been shown to reduce ICU ventilation	Audit data from the BTS shows variable provision and implementation of this and its availability varies between hospitals- eg AMU, HDU, ICU, specialist resp units. As far as I know there is no robust data around any of these	BTS national audits
055	The Society for Acute Medicine	Key area for quality improvement 2 Early Supported discharge schemes for COPD	With growing pressure on beds many organisations are trying to design and implement schemes to avoid admission to acute bed	This is a growing trend along the lines of Amb Care and to my knowledge there is no evidence as to the best approach	?BTS have audit standards?
056	The Society for Acute Medicine	Key area for quality improvement 3 Clear guidance as to which inhalers are best for which stage of disease	There have been many single/combination inhalers launched over the last 12-18 months and there is no real head-to-head guide as to which is most cost effective/effective	Vital in management of this disease	
057	NHS England	Celia Ingham-Clarke Key area for quality improvement 1	Better case finding		I was disappointed that the Quality Standard doesn't plan to cover case-finding. I understand that one of the biggest opportunities for quality improvement in management of COPD is earlier diagnosis to get people onto treatment before too much lung function lost. Michael Morgan, NCD for

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					respiratory disease will have supporting information on this
058	NHS England	General issue around the timing of QS review	QS 10 remains a useful document but apart from the RCP audit programme there has been no major new guideline document in the interim. The main COPD guideline is now 11 years old and the update in 2010 was only partial.	The QS no longer links tightly to the clinical guideline because of the profusion of new bronchodilator drugs, telehealth initiatives, endobronchial volume reduction and other advances that have occurred in the interim.	NICE updates ESN 8,9,21,33,47,49,52,54. TA244
059	NHS England	New bronchodilator inhalers	Wide confusion with the launch of many new products of individual drugs and combinations	Lack of clear guidance	ESN 8,9,21,33,47,49,52,54. TA244
060	NHS England	Telehealth	Great pressure from industry and government to introduce telehealth solutions	The scientific evidence does not wholeheartedly support the widespread introduction of telemonitoring for COPD to reduce unnecessary admissions in the absence of underlying self- management support structure	Pinnock H, Hanley J, McCloughan L, et al. Effectiveness of telemonitoring integrated into existing clinical services on hospital admission for exacerbation of chronic obstructive pulmonary disease: researcher blind, multicentre, randomised controlled trial. BMJ : British Medical Journal. 2013;347
061	NHS England	Endobronchial lung volume reduction techniques	Growth of devices (coils and valves) together with public pressure to consider.	Potential for unregulated development of expensive procedures	IPG 465, 517
062	NHS England	Case-finding spirometry	This is specifically excluded from the QS	Recent evidence confirms that the diagnosis of COPD is made late in the course of the disease. Opportunities to influence the course of COPD can only be made if earlier diagnosis is made before symptoms develop by case finding at risk	Opportunities to diagnose chronic obstructive pulmonary disease in routine care in the UK: a retrospective study of a clinical cohort

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				groups.	Jones, Rupert C M et al. The Lancet Respiratory Medicine , Volume 2 , Issue 4 , 267 - 276
063	BLF	Smoking cessation should be kept as a quality standard and strengthened to include adequate access both within hospital and in the community, where respiratory patients may be treated for an exacerbation	Stopping smoking has one of the biggest impacts on COPD disease progression, by significantly slowing lung function decline. It has also been shown that this service is one of the most cost effective interventions for COPD. Tobacco dependency in people with COPD exacerbations is usually severe and requires intensive support with pharmacotherapy from specialists. Professional help should be available at all points in the COPD pathway, to reflect the importance of this treatment.	Recent data published as part of the COPD Audit suggests that the smoking cessation support in secondary care settings is inadequate: cessation services are non-existent in 37% of units, whilst in an additional 34% less than 0.5 of a WTE member of staff is available to undertake this vital service. Over a third of COPD patients continue to be smokers after their diagnosis. An exacerbation – the worsening of symptoms of COPD - is seen as a critical time when a behaviour change intervention is likely to be successful. Furthermore, 34% of first-time hospital admissions for COPD are from previously undiagnosed patients. This is a key time for an intervention, as there is evidence to show that a new diagnosis has an effect on the motivation to quit smoking.	PAUL D. SCANLON, et al, Lung Health Study Research Group "Smoking Cessation and Lung Function in Mild-to-Moderate Chronic Obstructive Pulmonary Disease", American Journal of Respiratory and Critical Care Medicine, Vol. 161, No.2 (2000), pp. 381-390. Abstinence in COPD Patients: Smoking Cessation by Hospitalization Nicotine Tob Res (2008) 10 (5): 883-890 doi:10.1080/14622200802023890 COPD: Who cares? Organisational Audit 2014: Full Report, Royal College of Physicians, 2014. Balcells E et al. Characteristics and prognosis of undiagnosed COPD patients at their first hospitalisation. BMC Pulmonary Medicine 2015;

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					15: 4 Smoking cessation in secondary care: acute, maternity and mental health services, NICE, Nov 2013 https://www.nice.org.uk/guidance/qs82/chapter/quality-statement-7-healthcare-settings-nicotine-containing-products-and-stop-smoking-pharmacotherapies
064	BLF	Access to pulmonary rehabilitation within 4 weeks of a hospital admission	NICE already recognises the importance of access to pulmonary rehabilitation for COPD patients following a hospital admission. There is also evidence that the greatest benefit could be derived from this intervention in the first few weeks following an exacerbation, yet recently-published national data suggests that this is not happening in practice.	Recent evidence from the COPD Audit has found that although 92% of units had potential access to pulmonary rehabilitation for patients after discharge, only 38% reported that it was available within 4 weeks. This means that less than half of all eligible patients are able to access this NICE recommended service in a timely way. In addition to the importance of QS6, where every appropriate COPD patient being offered access to pulmonary rehabilitation(PR), it is vital that all patients being discharged from hospital are given a place on a PR course, which starts within 4 weeks of discharge. This target should be supported by a CQUIN to aid implementation in practice.	COPD: Who cares? Organisational Audit 2014: Full Report, Royal College of Physicians, 2014. https://www.nice.org.uk/guidance/cmg43/chapter/41-specifying-a-pulmonary-rehabilitation-service

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065	BLF	The provision of long-term oxygen therapy and appropriate access to emergency oxygen should be retained as a quality standard	Oxygen use can cause harm as well as good if it is given to patients without a proper assessment at the wrong saturation level. It is therefore important to keep both emergency and long-term oxygen provision as a quality standard until evidence shows that this service has improved significantly.	For emergency oxygen provision, a recent BTS audit from 2013 showed that 45% of patients were still receiving oxygen without a prescription. Giving the incorrect flow of oxygen to a very ill patient can make them worse because of CO2 retention in their body. The need for oxygen should be assessed by a trained professional and properly prescribed in all healthcare settings. For long-term home oxygen use, no new nationwide data has been collected since the 2008 COPD Audit and it is therefore likely that large variations between different areas remain. A quality standard for oxygen assessment and review should therefore be retained until new evidence is published.	Emergency Oxygen Audit Summary, British Thoracic Society, 2013. Implementation Programme: NICE support for commissioners and others using the quality standard for Chronic obstructive pulmonary disease (COPD), NICE, Jul 2011.
066	BLF	Discharge from hospital quality standards (Q10 & 12) should be strengthened	There is currently some weakness around discharge from hospital following an exacerbation and how a seamless transition between primary, secondary and community care should be implemented in practice.	Discharge from hospital is already covered by QS10 and QS12. However these may not provide enough guidance about what should ideally happen to patient before and at the point of discharge. Recently-published COPD Audit recommends 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, improve the quality of discharge information and work collaboratively with colleagues in primary care to improve integrated pathways for COPD.'	COPD: Who cares? Organisational Audit 2014: Full Report, Royal College of Physicians, 2014. http://www.blf.org.uk/Page/going-home-from-hospital-COPD

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				The BLF also has produced a patient-facing booklet 'Going home from hospital', which is Information Standard certified. This booklet includes a 10 point list of what should ideally happen to a COPD patient being discharged from hospital. These 10 points should be considered for incorporation into the current quality standards for COPD in order to strengthen them.	
067	BLF	Strengthen quality standard on self-management, by equipping patients with a named contact with a respiratory background and signposting patients to peer-to-peer support groups in the local area	QS7 already advises for a named contact to be provided but does not specify what kind of contact this should be or whether they should have a medical specialism. This would improve self-management as the patient would be able to access accurate information quickly as their symptoms develop. Patients should also be offered information about peer-to-peer support groups in their local areas.	It is important that the named contact for a COPD patient who is feeling unwell is someone with a respiratory background so that the maximum benefit can be derived from such an arrangement. A respiratory professional may be more likely to have the knowledge to advise a patient on a specific issue, which may prevent a hospital admission, than a general healthcare professional or any other type of named contact. There is some evidence to suggest that quality of life improves for those part of peer support groups. Peer-to-peer support groups, such as the network of Breathe Easy groups should form part of the self-management support that is offered to patients. Most Breathe Easy groups also organise healthcare professional speakers to give talks at the monthly meetings, which provides an opportunity for patients to learn more about how to best manage	Sara Corben and Rebecca Rosen, Self-management for Long-term Conditions Patients' perspectives on the way ahead, King's Fund, Jul 2005. Zwerink M et al, Self management for patients with chronic obstructive pulmonary disease. Cochrane Database Syst Rev. 2014 Mar 19;3 Improving earlier diagnosis and the long term management of COPD: Testing the case for Change, NHS Improvement - Lung: National Improvement Projects, NHS IQ, 2011.

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				their condition and to ask questions about any particular problems or symptoms.	http://www.nhsiq.nhs.uk/improvement-programmes/long-term-conditions-and-integrated-care/long-term-conditions-improvement-programme/house-of-care-toolkit/local/engagement/group-and-peer-support.aspx
068	PCRS	Communication between secondary/community/ primary care post discharge in order for follow up and seamless care to be provided Adapt and strengthen existing statement 10 in line with recommendations of National COPD audit	Too many patients are leaving hospital care without a systematic discharge process, and without adequate communication on to and collaboration with the carers in primary and community care. Use of a formal discharge bundle needs to become routine, and this should be supported by a CQUIN to ensure it is implemented. There should be a designated respiratory clinical lead overseeing the discharge process and liaising with other services/ settings to ensure continuity of care for the patient. This individual should spend a part of their role liaising with CCG/ community service to set up systems and processes to ensure this happens and to audit it.	Highlighted as an area of variation and for improvement in the National COPD audit. All points made are taken from the National COPD audit. Lack of communication results in episodic and disjointed care for the patient, and failure to put in place measures that could prevent readmissions.	RCP National COPD audit https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_national_full_report_2014_final_web.pdf https://www.rcplondon.ac.uk/sites/default/files/national_copd_secondary_care_organisational_audit_2014_national_report_web.pdf Respiratory Atlas of variation highlights readmission rates for COPD http://www.rightcare.nhs.uk/index.php/atlas/respiratorydisease/
069	PCRS	Early access to pulmonary rehabilitation Strengthen existing statement 6 by being specific about timeframe	Pulmonary rehab needs to be available within 4 weeks of discharge for 100% patients referred to PR service. This should be supported by a CQUIN	Highlighted as an area of variation and for improvement in the National COPD audit.	https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_national_full_report_2014_final_web.pdf

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					https://www.rcplondon.ac.uk/sites/default/files/national_copd_secondary_care_organisational_audit_2014_national_report_web.pdf http://www.cochrane.org/CD005305/AIRWAYS_pulmonary-rehabilitation-for-people-who-have-been-in-hospital-with-an-exacerbation-of-chronic-obstructive-pulmonary-disease
070	PCRS	Systematic regular review Adapt and strengthen existing statement 4 - applies in all settings and add BMI	Systematic assessment of disease status in regular review, comprising MRC dyspnoea scale, spirometry , exacerbation info, BMI and smoking status	Detailed in QOF guidance but not necessarily happening in practice systematically. This also needs to happen in hospitals and community care routinely and should be built into service specifications and contracts.	http://bma.org.uk/qofguidance
071	PCRS	Pharmacological treatments Need to retain statement 3 and update guideline.	Pharmacological treatments are mainstay interventions in COPD and costly to the NHS. A raft of new treatments has become available in the last 18 months.	The current NICE COPD guideline is not up to date with recent developments in pharmacological treatment. Including a statement about pharmacological treatments is important, but only if the guideline underpinning it is up to date. The urgent need to update the guideline is a serious issue for the QS group to refer back to the guidelines group in NICE.	http://www.impressresp.com/index.php?option=com_docman&task=doc_view&gid=51&Itemid=82 All 7 NICE evidence for new product summaries.
072	PCRS	Smoking cessation in hospitals Amend and strengthen existing statement 5	An exacerbation represents a key moment in the COPD pathway when patients may be particularly receptive to interventions to prevent further exacerbations. Smoking cessation	Highlighted as an area of variation and for improvement in the National COPD audit. Many hospitals were providing no support for quitting smoking.	https://www.rcplondon.ac.uk/sites/default/files/nat_copd_audit_prog_secondary_care_clinical_audit_national_full_report_2014_final_web.pdf

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			support should be a formal part of discharge process after hospital admission– and this should be supported by a CQUIN to make this happen		https://www.rcplondon.ac.uk/sites/default/files/national_copd_secondary_care_organisational_audit_2014_national_report_web.pdf
073	PCRS	Assessment for oxygen Retain existing statement 9	Many areas still have no access to a proper assessment and review service for home oxygen.	'The Outcomes strategy for COPD and asthma' highlighted the need for a proper oxygen assessment service run by appropriately qualified professionals, and the 'Good practice guide for home oxygen' reinforces this.	https://www.networks.nhs.uk/nhs-networks/respiratory-leads/news/new-good-practice-guide-home-oxygen-assessment-review https://www.gov.uk/government/publications/an-outcomes-strategy-for-people-with-chronic-obstructive-pulmonary-disease-copd-and-asthma-in-england
074	PCRS	Information for patients Amend and strengthen existing statement 2 to incorporate BLF patient passport	In the absence of any formal auditing of whether the QS is being implemented in practice, it makes sense to provide patients with a way of determining whether they are receiving high quality care.	In a patient centred NHS, patients need to know what care they should be receiving in order that they can work in partnership with healthcare professionals to achieve the best outcomes possible. The BLF is promoting a COPD Patient passport, which enables patients to check whether they are getting best practice care	http://shop.blf.org.uk/products/copd-passport