Chronic obstructive pulmonary disease

NICE quality standard

Draft for consultation

July 2015

Introduction

This quality standard covers the assessment, diagnosis and management of chronic obstructive pulmonary disease (COPD). It does not cover prevention, screening or case finding. For more information see the COPD topic overview.

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

Quality statement 2 in the NICE quality standard (QS43) on smoking cessation sets out the high-quality requirements for ensuring that all people who smoke are offered referral to an evidence-based smoking cessation service.

Why this quality standard is needed

COPD is a long-term respiratory condition characterised by airflow obstruction that is not fully reversible. The airflow obstruction does not change markedly over several months and is usually progressive. COPD is predominantly caused by smoking. Other factors, particularly occupational exposures, such as harmful dust and chemicals may also contribute to the development of COPD. People with COPD often have exacerbations, when there is rapid and sustained worsening of symptoms beyond their usual day-to-day variation.

In the UK, it is estimated that 3 million people have COPD, of whom 2 million are undiagnosed. Prevalence increases with age and most people are not diagnosed until they are in their 50s. There are significant geographic variations in the prevalence of COPD, and it is closely associated with levels of deprivation. Unlike many other common chronic diseases, the prevalence of COPD has not declined in recent years.

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.

COPD is treatable but not curable, and early diagnosis and treatment can help to slow the decline in lung function and increase the amount of time that people with COPD have to enjoy an active life. Pharmacological and other therapies can help to manage symptoms and disability caused by COPD, and improve the person's quality of life, despite having only limited or no impact on the airflow obstruction.

The quality standard is expected to contribute to improvements in the following outcomes:

- mortality
- acute exacerbations
- hospital admissions
- A&E attendance
- quality of life
- change in breathlessness
- exercise capacity.

How this quality standard supports delivery of outcome frameworks

NICE quality standards are a concise set of prioritised statements designed to drive measurable improvements in the 3 dimensions of quality – patient safety, patient experience and clinical effectiveness – for a particular area of health or care. They are derived from high-quality guidance, such as that from NICE or other sources accredited by NICE. This quality standard, in conjunction with the guidance on which it is based, should contribute to the improvements outlined in the following 3 outcomes frameworks published by the Department of Health:

- NHS Outcomes Framework 2015–16
- Public Health Outcomes Framework 2013–16
- Adult Social Care Outcomes Framework 2015–16

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 and over) 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 Patient 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 carers' 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, 2013–16

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, while reducing the gap between communities ***Indicators*** 4.7 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	

Patient experience and safety issues

Ensuring that care is safe and that people have a positive experience of care is vital in a high-quality service. It is important to consider these factors when planning and delivering services relevant to COPD.

A patient safety alert on Risk of severe harm and death from unintentional interruption of non-invasive ventilation has been issued by NHS England to raise awareness of patient safety incidents. Non-invasive ventilation is used in some people with COPD who have acute exacerbations that do not respond to medical therapy.

NICE has developed guidance and an associated quality standard on patient experience in adult NHS services (see the NICE pathway on patient experience in adult NHS services), which should be considered alongside this quality standard. They specify that people receiving care should be treated with dignity, have opportunities to discuss their preferences, and are supported to understand their options and make fully informed decisions. They also cover the provision of

information to patients and service users. Quality statements on these aspects of patient experience are not usually included in topic-specific quality standards. However, recommendations in the development sources for quality standards that affect patient experience and are specific to the topic are considered during quality statement development.

Coordinated services

The quality standard for COPD specifies that services should be commissioned from and coordinated across all relevant agencies encompassing the whole COPD care pathway. A person-centred, integrated approach to providing services is fundamental to delivering high-quality care to adults with COPD in secondary, primary and community services.

The Health and Social Care Act 2012 sets out a clear expectation that the care system should consider NICE quality standards in planning and delivering services, as part of a general duty to secure continuous improvement in quality. Commissioners and providers of health and social care should refer to the library of NICE quality standards when designing high-quality services. Other quality standards that should also be considered when choosing, commissioning or providing a high-quality COPD service are listed in Related quality standards. [Link to section in web version]

Training and competencies

The quality standard should be read in the context of national and local guidelines on training and competencies. All healthcare professionals involved in assessing, caring for and treating adults with COPD should have sufficient and appropriate training and competencies to deliver the actions and interventions described in the quality standard. Quality statements on staff training and competency are not usually included in quality standards. However, recommendations in the development source(s) on specific types of training for the topic that exceed standard professional training are considered during quality statement development.

Role of families and carers

Quality standards recognise the important role families and carers have in supporting adults with COPD. If appropriate, healthcare professionals should ensure that family

members and carers are involved in the decision-making process about investigations, treatment and care.

List of quality statements

[In final web version hyperlink each statement to the full statement below.]

Statement 1. People aged over 35 years who present with a risk factor and one or more symptoms of COPD have post-bronchodilator spirometry.

Statement 2. People with COPD prescribed an inhaler have their technique assessed when starting treatment and then regularly during their treatment.

Statement 3. People with COPD and a resting stable oxygen saturation level of less than or equal to 92% have their arterial blood gases measured to assess eligibility for long-term oxygen therapy.

Statement 4. People with stable COPD and self-reported exercise limitation are referred to a pulmonary rehabilitation programme.

Statement 5. People with COPD admitted to hospital for an acute exacerbation start pulmonary rehabilitation within 4 weeks of discharge.

Statement 6. People with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

Statement 7. People with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation.

Statement 8. (Placeholder) Hospital discharge care bundle.

Statement 9. (Placeholder) Multidimensional assessment tool.

Questions for consultation

Questions about the quality standard

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

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

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

Questions about the individual quality statements

Question 4 For draft quality statement 2: Please provide details of any national standards for healthcare professionals for the training and assessment of inhaler technique in people with COPD that you are aware of?

Question 5 For draft quality statement 4: Are pulmonary rehabilitation services widely available for people with stable COPD who have self-reported exercise limitation, please provide details?

Question 6 For draft placeholder statement 8: Do you know of any evidence-based guidance that could be used to develop this placeholder statement? If so, please provide details. If not, would new evidence-based guidance relating to hospital discharge care bundles have the potential to improve practice? If so, please provide details.

Question 7 For draft placeholder statement 9: Do you know of any evidence-based guidance that could be used to develop this placeholder statement? If so, please provide details. If not, would new evidence-based guidance relating to multidimensional assessment tools have the potential to improve practice? If so, please provide details.

Quality statement 1: Diagnosis with spirometry

Quality statement

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

Rationale

A diagnosis of COPD is confirmed by post-bronchodilator spirometry. To ensure early diagnosis spirometry should be done in primary care when an people presents with a risk factor, which is usually smoking, and one or more symptoms of COPD.

Quality measures

Structure

a) Evidence of local arrangements and written clinical protocols to ensure that people aged over 35 years presenting with a risk factor and one or more symptoms of COPD have post-bronchodilator spirometry.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Evidence of local arrangements and written clinical protocols to ensure that healthcare professionals using post-bronchodilator spirometry are trained and competent in its use.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

Process

a) Proportion of people aged over 35 years presenting with a risk factor and one or more symptoms of COPD who have post-bronchodilator spirometry.

Numerator – the number in the denominator who have post-bronchodilator spirometry.

Denominator – the number of people aged over 35 years presenting with a risk factor and one or more symptoms of COPD.

Data source: Local data collection. Quality and Outcomes Framework indicator COPD002: The percentage of patients with COPD in whom the diagnosis has been confirmed by post-bronchodilator spirometry between 3 months before and 12 months after entering on to the register. Health and Social Care Information Centre National COPD Audit Primary Care Element (planned 2015).

Outcome

COPD diagnosis.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (primary care services) ensure staff perform quality-assured post-bronchodilator spirometry in people aged 35 years and over who have a risk factor and one or more symptoms of COPD, to confirm diagnosis. Service providers ensure that staff are trained and competent in the performance and interpretation of post-bronchodilator spirometry.

Healthcare professionals in primary care services ensure that they perform quality-assured post-bronchodilator spirometry in people aged 35 years and over who have a risk factor and one or more symptoms of COPD, to confirm diagnosis. Healthcare professionals ensure they remain up to date with training and competencies in performing and interpreting post-bronchodilator spirometry.

Commissioners (clinical commissioning groups) ensure that they commission services in which people over 35 years who present with a risk factor and one or more symptoms of COPD receive quality-assured post-bronchodilator spirometry to confirm a diagnosis of COPD.

What the quality statement means for patients, service users and carers

People aged 35 or older who are at increased risk of COPD (this is usually because they smoke or have smoked in the past, but may also be because they have been exposed to harmful fumes, dust or chemicals, often at work) and have one or more symptoms of COPD, such as breathlessness, long-lasting cough, often coughing up phlegm, frequent winter 'bronchitis', or wheeze, receive testing for COPD using post-bronchodilator spirometry when they visit their GP surgery. Post-bronchodilator spirometry checks how well the lungs work and is used to diagnose COPD.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendations 1.1.1.1 (key priority for implementation), 1.1.2.2 (key priority for implementation), 1.1.2.4 (key priority for implementation), 1.1.2.6

Definitions of terms used in this quality statement

Risk factors

Risk factors for COPD are:

- smoking history
- occupational exposure to harmful fumes, dust or chemicals
- exposure to fumes, such as biomass fuels. [Chronic obstructive pulmonary disease (NICE guideline CG101) and expert opinion]

Symptoms of COPD

Symptoms of COPD are:

- exertional breathlessness
- chronic cough
- regular sputum production
- frequent winter 'bronchitis'
- wheeze. [Chronic obstructive pulmonary disease (NICE guideline CG101) recommendation 1.1.1]

Post-bronchodilator spirometry

Post-bronchodilator spirometry is used to identify abnormalities in lung volumes and air flow. Spirometry should be performed by a healthcare professional who has had appropriate training and who has up-to–date skills. The use of post-bronchodilator spirometry should be supported by quality control processes. [adapted from Chronic obstructive pulmonary disease (NICE guideline CG101) recommendations 1.1.2.5 and 1.1.2.6]

Quality statement 2: Inhaler technique

Quality statement

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

Rationale

Post-bronchodilator therapy is usually delivered using a hand-held inhaler device. People must be able to use their inhaler correctly to ensure that they receive the optimal treatment dose. There are several types of inhaler and it is important that training and assessment are specific to each device. Training and assessing technique should take place at the initial prescription and be reassessed throughout the duration of a person's treatment.

Quality measures

Structure

a) Evidence of local arrangements and written clinical protocols to ensure that people with COPD who are prescribed an inhaler should have their technique assessed at the start of treatment and then regularly during their treatment.

Data source: Local data collection. Royal College of Physicians National COPD audit programme.

Process

a) Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed at the start of treatment.

Numerator – the number of people in the denominator who had their inhaler technique assessed at the start of treatment.

Denominator – the number of people with COPD prescribed an inhaler.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed at their annual review.

Numerator – the number of people in the denominator whose last inhaler annual review was no longer than 12 months since the previous one or since inhaler initiation.

Denominator – the number of people with COPD prescribed an inhaler for more than 12 months.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

c) Proportion of people with COPD prescribed an inhaler who have their inhaler technique assessed after a change in treatment.

Numerator – the number of people in the denominator who had their inhaler technique assessed after a change in treatment.

Denominator – the number of people with COPD who have had their inhaler changed.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

d) Proportion of discharges from hospital of people with COPD who have their inhaler technique assessed before discharge after an exacerbation.

Numerator – the number of people in the denominator who had their inhaler technique assessed before discharge from hospital.

Denominator – the number of discharges from hospital of people with COPD after an exacerbation.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

Outcome

a) Exacerbation rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Hospital admissions.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

What the quality statement means for service providers, healthcare professionals and commissioners.

Service providers (primary care services and secondary care services) ensure that systems are place for people with COPD who are prescribed an inhaler to be trained in the correct inhaler technique and have their inhaler technique assessed when starting treatment and regularly during their treatment.

Healthcare professionals (nurses, GPs, secondary care doctors and pharmacists) ensure that they provide training in the correct inhaler technique to people with COPD when they prescribe them with an inhaler. Healthcare professionals ensure that they assess the person's inhaler technique when starting treatment and throughout their treatment.

Commissioners (clinical commissioning groups) ensure that they commission services in which people with COPD who are prescribed an inhaler are trained and assessed in the correct inhaler technique when they start treatment, and have their technique reassessed throughout their treatment.

What the quality statement means for patients.

People with COPD who have an inhaler have a check to make sure that they can use it correctly when they start treatment and at least once a year at their annual review. They should also have a check if their treatment changes or after a hospital stay.

Source guidance

Chronic obstructive pulmonary disease (2010) NICE guideline CG101 recommendations 1.2.2.13, 1.2.2.14 and 1.3.11.2

Equality and diversity considerations

Most people are able to acquire and maintain correct inhaler technique if given adequate instruction. The exception to this is those who have significant cognitive impairment. Consideration should be given to the amount of time a person might need to learn and remember the correct technique, especially in older people. A patient assessment should be undertaken before the most appropriate device is prescribed, and alternative devices should be offered if needed.

Question for consultation

Please provide details of any national standards for healthcare professionals in training and assessing people's inhaler technique in people with COPD that you are aware of?

Quality statement 3: Assessment for long-term oxygen therapy

Quality statement

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

Rationale

Oxygen therapy is used to relieve breathlessness in people with COPD. Long-term oxygen therapy aims to improve survival in people with COPD who have nocturnal hypoxaemia, less than 90% oxygen saturation of the arterial blood for more than 30% of the time, as well as reducing the incidence of polycythaemia, reducing the progression of pulmonary hypertension and improving neuropsychological health.

Quality measures

Structure

Evidence of local arrangements and written clinical protocols to ensure that people with COPD and arresting stable oxygen saturation level of 92% or less have their arterial blood gases measured to assess whether they need long-term oxygen therapy.

Data source: Local data collection Royal College of Physicians National COPD Audit Programme.

Process

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

Numerator – the number of people in the denominator who have their arterial blood gases measured to assess whether they need long-term oxygen therapy.

Denominator – the number of people with COPD and a resting stable oxygen saturation level of 92% or less.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

Outcome

a) Mortality rate.

Data source: Local data collection.

b) Hospital admission.

Data source: Local data collection.

c) Quality of life.

Data source: Local data collection.

What the quality statement means for service providers, healthcare professionals and commissioners

Service providers (primary care services and secondary care services) ensure that systems are in place for people with COPD and an oxygen saturation level of 92% or less to have their arterial blood gases measured to assess whether they need long-term oxygen therapy.

Healthcare professionals ensure that they measure the arterial blood gases of people with COPD to assess whether they need long-term oxygen therapy if they have an oxygen saturation level of 92% or less.

Commissioners (clinical commissioning groups) ensure that they commission services that ensure that people with COPD and an oxygen saturation level of 92% or less have their arterial blood gases measured to assess whether they need long-term oxygen therapy.

What the quality statement means for patients.

People with COPD who have low levels of oxygen in their blood (when checked using a device that clips to their finger) have this confirmed by a blood test, to assess whether they need long-term oxygen therapy. This is treatment with oxygen breathed through a tube (placed just inside the nose) or a mask connected to an oxygen supply, for at least 15 hours during the day and night.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendation 1.2.5.4
- BTS (2015) Guidelines for home oxygen use in adults, Referral and assessment of patients for LTOT, page i11, bullet point 5

Quality statement 4: Pulmonary rehabilitation for stable COPD

Quality statement

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

Rationale

Pulmonary rehabilitation programmes aim to improve a person's exercise capacity, quality of life, symptoms and levels of anxiety and depression. There is currently national variation in the provision of pulmonary rehabilitation programmes.

Quality measures

Structure

Evidence of local arrangements and written clinical protocols to ensure that people with stable COPD and self-reported exercise limitation are referred to a pulmonary rehabilitation programme.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme: Pulmonary rehabilitation clinical audit and organisational audit.

Process

Proportion of presentations of stable COPD and self-reported exercise limitation who have been referred to a pulmonary rehabilitation programme.

Numerator – the number in the denominator who are referred to a pulmonary rehabilitation programme.

Denominator – the number of presentations of stable COPD and self-reported exercise limitation.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme: Pulmonary rehabilitation clinical audit.

Outcome

a) Hospital admissions.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Mortality rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

c) Quality of life.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

d) Exercise capacity.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme: Pulmonary rehabilitation clinical audit.

What the quality statement means for service providers, healthcare professionals and commissioners.

Service providers (secondary care services and community services) ensure that systems are in place for people with stable COPD and self-reported exercise limitation to be referred to a pulmonary rehabilitation programme.

Healthcare professionals ensure that people with stable COPD and self-reported exercise limitation are referred to a pulmonary rehabilitation programme.

Commissioners (clinical commissioning groups) ensure that they commission services in which people with stable COPD and self-reported exercise limitation are referred to a pulmonary rehabilitation programme.

What the quality statement means for patients.

People with COPD that is stable who have difficulty walking and have to walk slowly and stop often or soon become breathless, are referred to a pulmonary

rehabilitation programme. This may include exercises, information about COPD, diet advice and support depending on the person's needs.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendation 1.2.8.2

Definitions of terms used in this quality statement

Self-reported exercise limitation

Medical Research Council dyspnoea scale of breathlessness grade 3 and above. A breathlessness of grade 3 is defined as 'walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace'.[Chronic obstructive pulmonary disease (NICE guideline CG101)]

Pulmonary rehabilitation programme

A multidisciplinary programme of care for people with chronic respiratory impairment that is individually tailored and designed to optimise each person's physical and social performance and autonomy. [Chronic obstructive pulmonary disease (NICE guideline CG101)]

Programmes comprise individualised exercise programmes and education. [BTS guideline on pulmonary rehabilitation in adults]

Equality and diversity considerations

Pulmonary rehabilitation is not suitable for people with unstable cardiac disease, locomotor or neurological difficulties precluding exercise such as severe arthritis or peripheral vascular disease, and people in a terminal phase of an illness or with significant cognitive or psychiatric impairment.

Question for consultation

Are pulmonary rehabilitation services widely available for people with stable COPD and self-reported exercise limitation, please provide details?

Quality statement 5: Pulmonary rehabilitation after an acute exacerbation

Quality statement

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

Rationale

Starting a pulmonary rehabilitation programme within 4 weeks of hospital discharge after an acute exacerbation improves the short-term risk of future hospital admissions, the quality of life and the short-term exercise capacity of people with COPD.

Quality measures

Structure

Evidence of local arrangements and written clinical protocols to ensure that people with COPD admitted to hospital for an acute exacerbation start a pulmonary rehabilitation programme within 4 weeks of discharge.

Data source: Local data collection. Royal College of Physicians National COPD audit programme: Pulmonary rehabilitation clinical audit and organisational audit.

Process

Proportion of discharges from hospital after an acute exacerbation of COPD who start a pulmonary rehabilitation programme within 4 weeks of discharge.

Numerator – the number in the denominator who start a pulmonary rehabilitation programme within 4 weeks of discharge.

Denominator – the number of discharges from hospital after an acute exacerbation of COPD.

Data source: Local data collection. Royal College of Physicians National COPD audit programme: Pulmonary rehabilitation clinical audit.

Outcome

a) Hospital admissions.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Mortality rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

c) Quality of life.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

d) Exercise capacity.

Data source: Local data collection. Royal College of Physicians National COPD audit programme: Pulmonary rehabilitation clinical audit.

What the quality statement means for service providers, healthcare professionals and commissioners.

Service providers (secondary care services and community services) ensure that systems are in place for people with COPD admitted to hospital for an acute exacerbation to start a pulmonary rehabilitation programme within 4 weeks of discharge.

Healthcare professionals ensure that people with COPD admitted to hospital for an acute exacerbation are referred for and receive a pulmonary rehabilitation programme within 4 weeks of discharge.

Commissioners (clinical commissioning groups) ensure that they commission services that make sure that people with COPD admitted to hospital for an acute exacerbation are referred for and receive a pulmonary rehabilitation programme within 4 weeks of discharge.

What the quality statement means for patients.

People with COPD who have had a hospital stay because their symptoms have suddenly worsened (called an acute exacerbation), start a pulmonary rehabilitation programme within 4 weeks of leaving hospital. This may include exercises, information about COPD, diet advice and support depending on the person's needs.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendation 1.2.8.1
- BTS guideline on pulmonary rehabilitation in adults (2013), Post-exacerbation pulmonary rehabilitation page ii15, paragraph 6

Definitions of terms used in this quality statement

Acute exacerbation

An exacerbation is a sustained worsening of a persons symptoms from their usual stable state and which is beyond usual day-to-day variations and acute in onset. Commonly reported symptoms are: worsening breathlessness, cough, increased sputum production and change in sputum colour. [adapted from Chronic obstructive pulmonary disease (NICE guideline CG101)]

Exercise capacity and physical activity levels are impaired during and after an exacerbation, contributing to skeletal muscle dysfunction, particularly of the lower limbs. [adapted from BTS guideline on pulmonary rehabilitation in adults]

Pulmonary rehabilitation programme

A multidisciplinary programme of care for people with chronic respiratory impairment that is individually tailored and designed to optimise each person's physical and social performance and autonomy. [Chronic obstructive pulmonary disease (NICE guideline CG101)]

Programmes comprise individualised exercise programmes and education. [BTS guideline on pulmonary rehabilitation in adults]

Equality and diversity considerations

Pulmonary rehabilitation is not suitable for people with unstable cardiac disease, locomotor or neurological difficulties precluding exercise such as severe arthritis or peripheral vascular disease, and people in a terminal phase of an illness or with significant cognitive or psychiatric impairment.

Quality statement 6: Emergency oxygen

Quality statement

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

Rationale

During exacerbations of COPD people develop worsening breathlessness. This may be associated with hypoxia, and oxygen is commonly used to relieve the symptoms and raise arterial oxygen saturation. However, uncontrolled oxygen therapy can result in breathing to stop, carbon dioxide narcosis and may eventually cause respiratory arrest. People are often given oxygen during their transfer to hospital in an ambulance, while being assessed at hospital and during the treatment of their exacerbation.

Quality measures

Structure

Evidence of local arrangements and written clinical protocols to ensure that people with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

Process

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

Numerator – the number in the denominator who receive oxygen at flow rate maintaining oxygen saturation within target range.

Denominator – the number of people with COPD who need emergency oxygen during an exacerbation.

Outcome

a) Mortality rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

b) Morbidity rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

What the quality statement means for service providers, healthcare professionals and commissioners.

Service providers (secondary care services, ambulance trusts, accident and emergency departments) ensure that people with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

Healthcare professionals ensure that people with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

Commissioners ensure that they commission services that make sure that people with COPD who need emergency oxygen during an exacerbation receive it at a flow rate maintaining oxygen saturation within target range.

What the quality statement means for patients and carers.

People with COPD who need emergency oxygen because their symptoms have a suddenly worsened receive the correct amount of oxygen to keep the oxygen levels in their blood within their target range.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendation 1.3.6.2

Definitions of terms used in this quality statement

Individualised target range

An individualised target oxygen saturation level is normally between 88-92% for people having an acute exacerbation of COPD. [Expert opinion]

Quality statement 7: Immediate non-invasive ventilation

Quality statement

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

Rationale

Non-invasive ventilation is used for treating respiratory failure occurring during exacerbations of COPD, without needing to use an endotracheal tube. To maximise the benefit of non-invasive ventilation it should be delivered immediately (within 1 hour of admission). Non-invasive ventilation should be delivered in a dedicated setting by staff trained and experienced in its use because there are safety concerns with the use of equipment.

Quality measures

Structure

Evidence of local arrangements and written clinical protocols to ensure that people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

Process

Proportion of people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation who have immediate non-invasive ventilation.

Numerator – the number in the denominator who have immediate non-invasive ventilation.

Denominator – the number of people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation.

Outcome

Mortality rates.

Data source: Local data collection. Royal College of Physicians National COPD Audit Programme.

What the quality statement means for service providers, healthcare professional and commissioners

Service providers (secondary care services and accident and emergency departments) ensure that people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation.

Healthcare professionals ensure that people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation. Healthcare professionals are trained and experienced in using non-invasive ventilation and only provide it within a dedicated setting.

Commissioners (clinical commissioning groups) ensure that they commission services in which people with COPD who have persistent hypercapnic ventilatory failure during an acute exacerbation have immediate non-invasive ventilation.

What the quality statement means for patients.

People with COPD who are not breathing deeply enough and cannot get enough oxygen into their blood (called persistent hypercapnic ventilatory failure) during an acute exacerbation have immediate non-invasive ventilation.

Source guidance

- Chronic obstructive pulmonary disease (2010) NICE guideline CG101, recommendation 1.3.7.1.

Definitions of terms used in this quality statement

Acute exacerbation

An acute exacerbation is a sustained worsening of a person's symptoms from their usual stable state, and which is beyond usual day-to-day variations and acute in

onset. Commonly reported symptoms are worsening breathlessness, cough, increased sputum production and change in sputum colour. [adapted from Chronic obstructive pulmonary disease (NICE guideline CG101)]

Persistent hypercapnic ventilatory failure

Acute hypercapnic respiratory failure results from an inability of the respiratory system, to provide sufficient alveolar ventilation to maintain a normal arterial PCO2. Co-existent hypoxaemia is usually mild and easily corrected. Conventionally, a pH < 7.35 and a PCO2 > 6.5 kPa, persisting after initial medical therapy, define acute respiratory acidosis and have been used as threshold values for considering the use of non-invasive ventilation. More severe degrees of acidosis, such as pH < 7.25, have been used as a threshold for considering provision of invasive mechanical ventilation.

Immediate non-invasive ventilation

Within 1 hour of admission. [Expert opinion]

Non-invasive ventilation

Non-invasive ventilation is a method of providing ventilatory support that does not require an endotracheal tube. It is usually delivered through a mask that covers the nose, but occasionally a mask covering the nose and the mouth is needed. The ventilators themselves are compact and portable and some can be run off car batteries as well as mains electricity. [Chronic obstructive pulmonary disease (NICE guideline CG101)]

Quality statement 8 (placeholder): Hospital discharge care bundle

What is a placeholder statement?

A placeholder statement is an area of care that has been prioritised by the Quality Standards Advisory Committee but for which no source guidance is currently available. A placeholder statement indicates the need for evidence-based guidance to be developed in this area.

Rationale

Hospital discharge care bundles are designed to ensure that every person receives the best care, by emphasising the key interventions in any management pathway. It is recognised that there are a number of elements of ongoing care and treatment that an adult with COPD should have before discharge, but there is currently a lack of consensus about the detail that should be included in these care bundles.

Question for consultation

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

Quality statement 9 (placeholder): Multidimensional assessment tool

What is a placeholder statement?

A placeholder statement is an area of care that has been prioritised by the Quality Standards Advisory Committee but for which no source guidance is currently available. A placeholder statement indicates the need for evidence-based guidance to be developed in this area.

Rationale

There is a lack of multidimensional assessment tools to assess accurately in primary care the prognosis, severity and outcomes for people with COPD. The NICE COPD Guideline Development Group made a recommendation for research to be carried out multidimensional assessments for COPD.

Question for consultation

Do you know of any relevant evidence-based guidance that could be used to develop this placeholder statement? If so, please provide details. If not, would new evidence-based guidance relating to a multidimensional assessment tool for COPD have the potential to improve practice? If so, please provide details.

Status of this quality standard

This is the draft quality standard released for consultation from 23 July to 20 August 2015. It is not NICE's final quality standard on COPD. The statements and measures presented in this document are provisional and may change after consultation with stakeholders.

Comments on the content of the draft standard must be submitted by 5pm on 20 August 2015. All eligible comments received during consultation will be reviewed by the Quality Standards Advisory Committee and the quality statements and measures will be refined in line with the Quality Standards Advisory Committee's considerations. The final quality standard will be available on the NICE website from January 2016.

Using the quality standard

Quality measures

The quality measures accompanying the quality statements aim to improve the structure, process and outcomes of care in areas identified as needing quality improvement. They are not a new set of targets or mandatory indicators for performance management.

We have indicated if current national indicators exist that could be used to measure the quality statements. These include indicators developed by the Health and Social Care Information Centre through its Indicators for Quality Improvement Programme. If there is no national indicator that could be used to measure a quality statement, the quality measure should form the basis for audit criteria developed and used locally.

See NICE's What makes up a NICE quality standard? for further information, including advice on using quality measures.

Levels of achievement

Expected levels of achievement for quality measures are not specified. Quality standards are intended to drive up the quality of care, and so achievement levels of

100% should be aspired to (or 0% if the quality statement states that something should not be done). However, NICE recognises that this may not always be appropriate in practice, taking account of safety, choice and professional judgement, and therefore desired levels of achievement should be defined locally.

Using other national guidance and policy documents

Other national guidance and current policy documents have been referenced during the development of this quality standard. It is important that the quality standard is considered alongside the documents listed in Development sources [Link to section in web version].

Diversity, equality and language

During the development of this quality standard, equality issues have been considered and equality assessments [add correct link] are available.

Good communication between health, public health and social care practitioners and people with COPD in primary, community and secondary care is essential. Treatment, care and support, and the information given about it, should be culturally appropriate. It should also be accessible to people with additional needs such as physical, sensory or learning disabilities, and to people who do not speak or read English. People with COPD in primary, community or secondary care should have access to an interpreter or advocate if needed.

Commissioners and providers should aim to achieve the quality standard in their local context, in light of their duties to have due regard to the need to eliminate unlawful discrimination, advance equality of opportunity and foster good relations. Nothing in this quality standard should be interpreted in a way that would be inconsistent with compliance with those duties.

Development sources

Further explanation of the methodology used can be found in the quality standards Process guide.

Evidence sources

The documents below contain recommendations from NICE guidance or other NICE-accredited recommendations that were used by the Quality Standards Advisory Committee to develop the quality standard statements and measures.

- BTS guideline for home oxygen use in adults (2015) British Thoracic Society
- BTS guideline for pulmonary rehabilitation in adults (2013) British Thoracic Society
- Chronic obstructive pulmonary disease (2010) NICE guideline CG101

Policy context

It is important that the quality standard is considered alongside current policy documents, including:

- Department of Health (2012) An outcomes strategy for people with chronic obstructive pulmonary disease (COPD) and asthma in England
- Department of Health (2012) An outcomes strategy for COPD and asthma: NHS companion document

Definitions and data sources for the quality measures

- Royal College of Physicians (2015) National chronic obstructive pulmonary disease (COPD) audit programme

Related NICE quality standards

Published

- Smoking cessation: supporting people to stop smoking (2013) NICE quality standard 43
- Asthma (2013) NICE quality standard 25
- Patient experience in adult NHS services (2012) NICE quality standard 15
- End of life care for adults (2011) NICE quality standard 13
- Chronic obstructive pulmonary disease (2011) NICE quality standard 10

In development

- Pneumonia Publication expected January 2016.

Future quality standards

This quality standard has been developed in the context of all quality standards referred to NICE, including the following topics scheduled for future development:

- Bronchiolitis

The full list of quality standard topics referred to NICE is available from the quality standards topic library on the NICE website.

Quality Standards Advisory Committee and NICE project team

Quality Standards Advisory Committee

This quality standard has been developed by Quality Standards Advisory Committee 3. Membership of this committee is as follows:

Ms Deryn Bishop
Public Health Behaviour Change Specialist, Solihull Public Health Department

Jan Dawson
Registered Dietitian

Dr Matthew Fay
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Dr Malcolm Fisk
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Margaret Goose
Lay member

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Mrs Geeta Kumar

Clinical Director, Women's Services (East) Betsi Cadwaladr University Health Board

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Clinical Quality Assurance and Performance Manager, NHS Stockport Clinical Commissioning Group

The following specialist members joined the committee to develop this quality standard:

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Nurse, Education for Health

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Mr Alex Woodward

Physiotherapist and Manager of Long Term Conditions, Leicestershire Partnership NHS Trust

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Consultant Physician, Barts Health

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About this quality standard

NICE quality standards describe high-priority areas for quality improvement in a defined care or service area. Each standard consists of a prioritised set of specific, concise and measurable statements. NICE quality standards draw on existing NICE

or NICE-accredited guidance that provides an underpinning, comprehensive set of recommendations, and are designed to support the measurement of improvement.

The methods and processes for developing NICE quality standards are described in the quality standards process guide.

This quality standard has been incorporated into the NICE pathway on COPD.

NICE produces guidance, standards and information on commissioning and providing high-quality healthcare, social care, and public health services. We have agreements to provide certain NICE services to Wales, Scotland and Northern Ireland. Decisions on how NICE guidance and other products apply in those countries are made by ministers in the Welsh government, Scottish government, and Northern Ireland Executive. NICE guidance or other products may include references to organisations or people responsible for commissioning or providing care that may be relevant only to England.

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