Royal College of Physicians | NACAP

National Asthma and Chronic Obstructive Pulmonary Disease Audit Programme (NACAP)

Wales primary care clinical audit 2017/18

(adults and children with COPD and/or asthma registered at GP practices in Wales between April 2017 and September 2018)

National data report

Published March 2020

In association with:

ARNS Association of Respiratory Nurse Specialists

asthma UK | British Lung Foundation

THE ASTHMA UK AND BRITISH LUNG FOUNDATION PARTNERSHIP

British Thoracic Society

Imperial College London

PCRS Primary Care Respiratory Society UK

RCGP Royal College of General Practitioners

RCPCH Royal College of Paediatrics and Child Health

sam The Society for Acute Medicine

Commisioned by: HQIP Healthcare Quality Improvement Partnership

Working with: Noddir gan Lywodraeth Cymru Sponsored by Welsh Government

The Royal College of Physicians
Royal College of Physicians (RCP) plays a leading role in the delivery of high-quality patient care by setting standards of medical practice and promoting clinical excellence. The RCP provides physicians in over 30 medical specialties with education, training and support throughout their careers. As an independent charity representing over 37,000 fellows and members worldwide, the RCP advises and works with government, patients, allied healthcare professionals and the public to improve health and healthcare.

Healthcare Quality Improvement Partnership (HQIP)
The National Asthma and COPD Audit Programme is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit and Patient Outcomes Programme (NCAPOP). HQIP is led by a consortium of the Academy of Medical Royal Colleges, the Royal College of Nursing, and National Voices. Its aim is to promote quality improvement in patient outcomes, and in particular, to increase the impact that clinical audit, outcome review programmes and registries have on healthcare quality in England and Wales. HQIP holds the contract to commission, manage and develop the National Clinical Audit and Patient Outcomes Programme (NCAPOP), comprising around 40 projects covering care provided to people with a wide range of medical, surgical and mental health conditions. The programme is funded by NHS England, the Welsh Government and, with some with some individual projects, other devolved administrations and crown dependencies www.hqip.org.uk/national-programmes

National Asthma and Chronic Obstructive Pulmonary Disease (COPD) Audit Programme
NACAP is a programme of work that aims to improve the quality of care, services and clinical outcomes for patients with asthma and COPD in England, Scotland and Wales. Spanning the entire patient care pathway, NACAP includes strong collaboration with asthma and COPD patients, as well as healthcare professionals, and aspires to set out a vision for a service which puts patient needs first. To find out more about the NACAP visit: www.rcplondon.ac.uk/nacap

Primary Care: 2017/18 annual clinical report
This report was prepared by the following people, on behalf of the COPD and Asthma advisory groups (the full list of members can be found on the NACAP resources page here: www.rcplondon.ac.uk/nacap-resources).

Dr Katherine Hickman, primary care clinical lead, NACAP, Care Quality Improvement Department (CQID), RCP, London; and GP, Low Moor Medical Practice, Bradford; and respiratory lead for Leeds and Bradford Clinical Commissioning Groups.
Ms Viktoria McMillan, programme manager, NACAP, CQID, RCP, London (until June 2019).
Mr Liam Shanahan, project manager, NACAP, CQID, RCP, London.
Ms Rachael Andrews, project manager, NACAP, CQID, RCP, London.
Ms Eloya Imoedemhe, project manager, NACAP, CQID, RCP, London
Ms Myriam Moussaif, programme coordinator, NACAP, CQID, RCP, London.
Mr Philip Stone, research assistant in statistics/epidemiology, National Heart and Lung Institute, Imperial College London.
Dr Jennifer Quint, analysis lead, NACAP, CQID, RCP, London; and reader in respiratory epidemiology, National Heart and Lung Institute, Imperial College London; and honorary respiratory consultant, Royal Brompton and Imperial NHS Trusts.
Professor C Michael Roberts, senior clinical lead, NACAP, CQID, RCP, London; and consultant integrated respiratory care, The Princess Alexandra NHS Trust; and managing director, UCLPartners Academic Health Science Network.

Citation for this document: Hickman K, McMillan V, Shanahan L, Andrews R, Imoedemhe E, Moussaif M, Stone P, Quint J, Roberts CM. *National Asthma and COPD Audit Programme (NACAP). Wales primary care clinical audit 2017/18 (adults and children with COPD and/or asthma registered at GP practices in Wales between April 2017 and September 2018).* National data report. London: RCP, 2020.

ISBN: 978-1-86016-789-8
eISBN: 978-1-86016-790-4

Royal College of Physicians
Care Quality Improvement Department
11 St Andrews Place
Regent's Park
London NW1 4LE

Registered charity no 210508

www.rcplondon.ac.uk/nacap @NACAPaudit

Contents

Report at a glance

Diagnosis

COPD

of patients had a **chest X-ray or CT scan** within 6 months of their diagnosis.

QI recommendation

Ensure all patients with COPD diagnosed in the past 12 months have a record of a chest X-ray within 6 months.

Asthma

had some kind of objective test recorded. Only **24% of adults and 9% of children had a spirometry test** (isolated spirometry or PEF alone is not enough to diagnose asthma).

QI recommendation

Ensure all asthma patients have a diagnosis based on clinical assessment supported by objective tests demonstrating variable airflow obstruction or airway inflammation.

Smoking

COPD

had their **smoking status recorded** in the past year. **29% are current smokers**.

Asthma

of adults and **34% of children** (over 6 years) had their smoking status recorded in the past year. **17% of adults are current smokers**. **<0.6%** of patients have been asked about exposure to **second-hand smoke**.

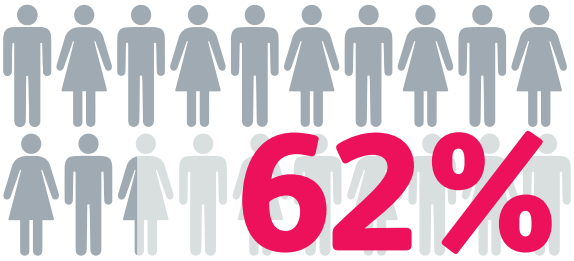
QI recommendation

Ensure smoking status is recorded for all patients and that exposure to second-hand smoke is discussed and coded.

COPD = chronic obstructive pulmonary disease
PEF = peak expiratory flow

Providing high-value care

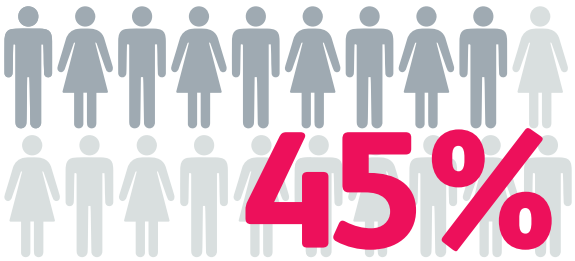
COPD



of eligible patients had a **record of a PR referral** in the past 3 years.

Asthma

of adults and **80% of children** had no evidence of a personalised asthma action plan in the past year.



of patients prescribed an inhaler had evidence of an **inhaler technique check** in the past year.

of adults and **35% of children** prescribed an inhaler had evidence of an inhaler technique check in the past year.

QI recommendation

Ensure all patients have a personalised asthma action plan.

QI recommendation

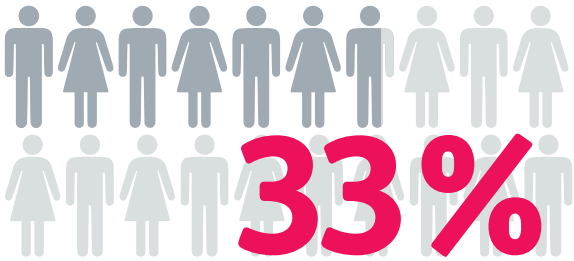
Ensure inhaler technique checks are completed for all patients.

Mental health

COPD

of patients had a diagnosis of **anxiety**. **32%** had a diagnosis of **depression**.

Asthma



of patients had a diagnosis of **anxiety**. **31%** had a diagnosis of **depression. 10% of 6–18 year olds had mild/moderate mental health illness**.

QI recommendation

Ensure patients are screened for mental health conditions as part of their annual review.

PR = pulmonary rehabilitation

Foreword by Dr Katherine Hickman, primary care clinical lead

As a GP with a passion for respiratory medicine, I see a lot of patients with COPD and asthma. Respiratory care, though, is still only a small part of my day job but it remains my comfort zone. For many GPs and nurses, respiratory is not their comfort zone. A person with poorly controlled asthma unable to remember to take their inhaled corticosteroid, a patient with COPD struggling to use their new inhaler because they don't like the taste or a patient coming for interpretation of their breathing test does not fill them with a sense of excitement. In fact, for many it fills them with a sense of dread. Before I became interested in respiratory it was a sense of dread I knew only too well. A sense of not knowing where to start, not knowing which guidelines should or shouldn't be followed and not having a clue which inhaler to prescribe. Respiratory care can be a minefield.

I'm delighted that for the first time we now have data on asthma for both adults and children as well as COPD. Unfortunately, the numbers of participating practices dropped from 97% in 2017 to 47% this year. I hope that the experience of those practices who did participate was seamless. A strong communication strategy, highlighting the security and success of this current extraction makes us confident that when we do a further data extraction in 2020, we will get our figures up to previous numbers. We strongly encourage all practices to participate in this vital piece of work to present a comprehensive picture of respiratory care in Wales.

The Respiratory Health Implementation Group (RHIG) set the national strategy for addressing respiratory health across Wales, which is outlined in the Respiratory health delivery plan 2018–2020. The national approach for Wales is to reduce inappropriate variation in care by standardising the way things are done. The aim is that healthcare professionals in primary and secondary care become experts at doing the basic things that really matter, consistently well. RHIG has developed and published a host of national diagnostic, management and prescribing guidelines, National Welsh Standards and structured quality improvement, with NHS Wales self-management apps for patients. This is a digital, joined up approach and accessible to everyone in Wales.

We are definitely starting to see some improvements in the quality of care in Wales with an increase in the proportion of patients having a record of the post-bronchodilator (FEV1/FVC) <0.7 gold standard diagnostic test (however, less than 10% of patients have a record of this). 62% of patients with an MRC score of 3–5 were considered for a pulmonary rehabilitation referral (including patients who were referred, patients deemed unsuitable or patients who declined a referral). Encouragingly, 79.3% of all adults diagnosed with asthma in the past 2 years had one or more objective measurement ever recorded and for children (>6 years old) there was an equally high figure of 71.9%. Interestingly, though, virtually nobody had a pre- or post-bronchodilator spirometry result in their notes or a FeNO (fractional exhaled nitric oxide) test recorded. Sadly, only 25% of patients had a record of a personal asthma action plan in their notes.

The data collected in this primary care audit reflects what basic quality care looks like. Care that all patients with COPD and asthma should be entitled to. As a practice you don't have to commit to overnight transformation in all aspects of care, but how about picking one or two elements you could work on together? I hope the quality improvement suggestions provide the basics of a framework to enable practices to start to make small but significant changes and improve the quality of respiratory care patients are receiving.

How to use this report

1. Scope and report structure

This report presents national and health board data from the first cycle of the National Asthma and Chronic Obstructive Pulmonary Disease (COPD) Audit Programme (NACAP) Welsh primary care audit, which were extracted in July 2019 to capture activity between April 2017 and September 2018. Contributing to the overarching National Quality Improvement (QI) Objectives of the NACAP, this report serves to empower stakeholders to use audit data to facilitate improvements in the quality of care.

A separate data analysis and methodology report is available at: www.rcplondon.ac.uk/primary-care clinical 2017-18 and provides the following information:

- the full data analyses
- unadjusted summary of key indicators for local health boards in Wales
- appendices, including the methodology for the audit.

Participating practices can view individualised practice level reports via the NHS Wales Informatics Service (NWIS) Primary Care Information Portal with benchmarking against national and health board results to support practices in improving the quality of patient care (http://isdapps.wales.nhs.uk/pcip). Due to NWIS receiving audit data later than anticipated, these reports will be available in summer 2020.

This first national report on asthma and COPD in Welsh primary care follows an earlier programme of work that focused solely on COPD and published reports in 2015 and 2017. The analysis methodology employed in the second cycle of the COPD audit has been replicated this year. Like-for-like comparisons have, therefore, been undertaken for COPD, but are not yet possible for asthma.

References to the appropriate National Institute for Health and Care Excellence (NICE) clinical guidelines and quality statements, and British Thoracic Society (BTS) guidelines relevant to asthma and COPD care, are inserted throughout the key findings.

Due to problems accessing data, engaging potential participating sites and agreement on methodology, there were delays in the extraction of this set of data.

2. Report coverage

A number of caveats must be placed on the data and when interpreting the results, chief among which is the participation of only 47% of Welsh practices and the fact that 97% of participating practices come from three local health boards (LHBs) – Aneurin Bevan University Health Board, Betsi Cadwaladr University Health Board and Cardiff and Vale University Health Board. Caution must therefore be taken when making assumptions about the quality of care delivered nationally.

LHB reports have been produced for those three covering the bulk of participating practices and are available at www.rcplondon.ac.uk/nacap-primary-care. Another three LHBs (Cwm Taf Morgannwg University Health Board, Hywel Dda University Health Board and Swansea Bay University Health Board) had fewer than 10 participating practices each and the final LHB (Powys Teaching Health Board) had no participating practices and so do not have LHB reports.

3. Intended audience

This report is intended to be read by primary care healthcare professionals, NHS managers, local health boards (LHB), policy makers, as well as voluntary organisations. A separate report has been produced for patients and the public and is available at: www.rcplondon.ac.uk/primary-care-clinical2017-18.
We strongly advise that primary care teams discuss these findings with their LHBs as a basis for informing future integrated care partnership service development.

QI recommendations

For providers – COPD

1. Ensure all patients with COPD diagnosed in the past 12 months have a record of a chest X-ray within 6 months. Patients without a chest X-ray should be sent for one. **(NICE 2019 NG115)**
2. Ensure all COPD patients have evidence of post-bronchodilator spirometry showing an FEV_1/FVC ratio of <0.7. **(NICE 2016 QS10 (QS1))**
3. Ensure that patient exacerbations are recorded using the appropriate Read code (eg 66Yf).
4. Ensure that patients' breathlessness is graded during their COPD annual review using the MRC score. **(NICE 2019 NG115)**
5. Ensure that patients with an MRC score of 3 and above are offered a pulmonary rehabilitation referral.

For providers – asthma

1. Ensure all patients with asthma have evidence of objective testing (spirometry, peak flow (>1 reading or evidence of peak flow diary) or fractional exhaled nitric oxide (FeNO)) recorded. **(NICE 2018 QS25 (QS1))**
2. Ensure that the patient's best peak expiratory flow (PEF) is recorded. **(NICE 2018 QS25 (QS1))**
3. Ensure that asthma attacks are recorded using the appropriate Read code (eg H33z0 or H33z1)
4. Ensure that exposure to second-hand smoke is coded in every child and young person's (CYP) notes (eg 137I0 or 13WF1–13WF4) and that asking whether a child is exposed to second-hand smoke becomes a routine question whenever they attend their GP about their asthma.
5. Ensure that all asthma patients have a personalised asthma action plan. **(NICE 2017 NG80)**

For providers – COPD and asthma

1. Ensure smoking status is recorded for all patients and that exposure to second-hand smoke is discussed and coded. **(NICE 2019 NG115)**
2. Ensure all inhaler technique checks are completed for all patients. **(NICE 2016 QS10 (QS2), NICE 2018 QS25 (QS3))**
3. Ensure patients are screened for mental health conditions as part of their annual review. **(NICE 2009 CG91, NICE 2019 CG113)**

Local health boards, healthcare professionals, NHS managers, chief executives and board members, service commissioners, policy makers and voluntary organisations

1. Ensure all LHBs and GP practices in Wales are taking part in the audit and using audit data to support QI. There should be sight of this at government level.
2. Ensure all practices have timely access to trained clinicians who are able to perform diagnostic post-bronchial spirometry.
3. Invest in high-value interventions with robust evidence of benefit in COPD, notably smoking cessation services and pulmonary rehabilitation.
4. Ensure all practices are making a diagnosis of asthma based on clinical assessment supported by objective tests that seek to demonstrate variable airflow obstruction or the presence of airway inflammation.
5. Ensure all GP providers are adequately trained to carry out effective inhaler technique checks
6. Ensure that patients who are current smokers have access to high-quality smoking cessation services. **(BTS/SIGN 2019 [Guideline 6.2.3] / NICE 2013 QS43 [QS1-5])**

For people living with COPD and/or asthma, their families and carers

1. Make sure you tell your GP about your smoking status and whether you are regularly exposed to second-hand smoke.
2. Make sure you visit your GP for an annual review of your asthma or COPD.

For more patient-specific recommendations please view the primary care clinical audit patient report, available at: **www.rcplondon.ac.uk/nacap-primary-care**

Key findings and quality improvement opportunities

Section 1:
Demographics and comorbidities

Back to contents

Key findings

COPD

- The average age of the COPD patient cohort was 69.9 years old.
- There were a similar number of men and women with COPD (49.8% vs 50.2%).
- The most common physical comorbidities were hypertension (50.6%), obesity (33.6%), coronary heart disease (19.5%), diabetes (18.8%) and painful conditions (13.8%).
- Mental health problems were common in the COPD cohort:
  - 32.3% of the cohort have a current diagnosis of anxiety.
  - 32.5% have a current diagnosis of depression.
  - Despite these high rates, in the past 2 years, at most 10.9% had a record of screening for depression or anxiety.
  - 91.6% have never had a diagnosis of a severe mental illness (SMI) - Schizophrenia, bipolar disorder and other psychotic illness.

Asthma

- The average age for the adult asthma cohort was 52 years old. There was also a higher prevalence in women compared with men (58.7% vs 41.3%).
- The most common comorbidities in the adult asthma cohort were:
  - Atopy (45.7%), obesity (35.6%), eczema (33.2%), hypertension (28%) and allergic rhinitis (26.5%).
- As for COPD, anxiety and depression were also common in the asthma cohort: 32.5% and 30.7% respectively.
- The average age of children with asthma was 4 years (in the 1–5 years cohort) and 12 years (in the 6–18 years cohort). The prevalence was consistently higher among boys than girls; 61.8% vs 38.2% in the 1–5 years cohort and 57.4% vs 42.6% in the 6–18 years cohort.
- The most common comorbidities coded in the children's asthma cohort were:
  - For 1–5 years old, eczema (42.6%), atopy (32.5%), reflux (11.6%) and a family history of asthma (9.6%)
  - For 6–18 year olds, eczema (50.6%), atopy (50.0%), allergic rhinitis (20.6%) and hay fever (19.1%)

Key standards – comorbidities

NICE 2016 NG56: *Taking account of multimorbidity in tailoring the approach to care* and *How to identify people who may benefit from an approach to care that takes account of multimorbidity.*[1]

NICE 2009 CG91: *Depression in adults with a chronic physical health problem: recognition and management* recommend primary care be alert to possible depression (particularly in patients with a past history of depression or a chronic physical health problem with associated functional impairment) and consider asking patients who may have depression two screening questions.[2]

NICE 2019 CG113: *Generalised anxiety disorder and panic disorder in adults: management* recommend primary care consider the diagnosis of generalised anxiety disorder in people presenting with anxiety or significant worry, and in people who attend primary care frequently who have a chronic physical health problem.[3]

Discussion and quality improvement recommendations

Asthma

- Obesity was the second highest comorbidity after atopy. Studies have shown that people with asthma who are also obese have poor asthma control and more severe asthma. They are more likely to have a worse quality of life, more daily symptoms, and more exacerbations as well as use more rescue medications.[4]

COPD and comorbidities

- Identify patients with COPD on your register who have a BMI of >30. Invite them for a lifestyle discussion and assessment of their weight and diet. Refer to local weight management services.
- High dose corticosteroids in patients with diabetes and COPD have an increased risk of diabetes-related hospitalisations.[5] Our data showed that nearly 19% of COPD patients also had diabetes. Identify patients with COPD who have had 2 or more courses of prednisolone in the past year and/or are on high dose steroid inhalers and test their HbA1c in order to identify their diabetic or pre-diabetic status.
  - Depending on the result:
  - refer for appropriate management
  - review the need for high dose steroid inhalers and
  - ensure the lowest possible dose of prednisolone is used in exacerbations.

Asthma and comorbidities

Identify patients with asthma on your register who have a BMI of >30. Invite them for a lifestyle discussion and assessment of their weight and diet. Refer to local weight management services.

Section 2:
Getting the diagnosis right

Back to contents

Diagnosing COPD

Key standards – diagnosing COPD

NICE 2016 QS10 (QS1): *People aged over 35 years who present with a risk factor and one or more symptoms of chronic obstructive pulmonary disease (COPD) have post-bronchodilator spirometry.*[6]

NICE 2019 NG115: *At the time of their initial diagnostic evaluation in addition to spirometry all patients should have a chest radiograph to exclude other pathologies.*[7]

Key findings

- The proportion of patients diagnosed within the past 2 years and who had a record of the gold standard diagnostic test for COPD (post-bronchodilator FEV_1/FVC, as recorded by Read code 339m) was 9.6% (up from 8.5% in 2017).
- 49.4% of patients diagnosed in the past 2 years had a record of any spirometry code, a reduction from 54.3% in the previous audit.
- Of the cohort of patients diagnosed in the past 2 years, 34.8% had a chest X-ray or CT scan within 6 months of their diagnosis.

Diagnosing asthma

Key standards – diagnosing asthma

NICE 2018 QS25 (QS1): *People aged 5 years and over with suspected asthma have objectives tests to support diagnosis.*[8]

NICE 2017 NG80: *Offer a FeNO test to adults (aged 17 and over) if a diagnosis of asthma is being considered. Regard a FeNO level of 40 parts per billion (ppb) or more as a positive test. Consider a FeNO test in children and young people (aged 5–16) if there is diagnostic uncertainty after initial assessment and they have either normal spirometry or obstructive spirometry with a negative bronchodilator reversibility test. For children under 5 with suspected asthma, treat symptoms based on observation and clinical judgement, and review the child on a regular basis. If they still have symptoms when they reach 5 years, carry out objective tests.*[9]

Key findings

- 79.3% of all adults diagnosed with asthma in the past 2 years had one or more objective measurements ever recorded (spirometry, peak flow (>1 reading or evidence of peak flow diary) or fractional exhaled nitric oxide (FeNO)). 71.9% of children had evidence of at least one objective measurement.
- However, only 3.6% of adults and 1.1% of children had evidence of a spirometry test with reversibility.
- Approximately 75% of patients diagnosed with asthma (adults and children) in the past 2 years have a record of a peak flow test (reading/and or diary records).
- Only 0.2% adults and 0% of children had evidence of FeNO testing.

Discussion

Diagnosing COPD

In order to make an accurate diagnosis of COPD, a confirmatory post-bronchodilator spirometry demonstrating an FEV_1/FVC ratio of <0.7 must be performed.[6] A thorough history and examination is an essential part of the diagnosis because patients may not present with COPD per se. Typically they present with breathlessness, a symptom associated with a multitude of other conditions. The clinician will only be able to decide as to which test is best suited for their patients by listening to what they are saying and unpicking their history. Misdiagnosing patients may lead to poorer outcomes because of adverse effects of inappropriate medication or incorrect treatment.[10]

Diagnosing asthma

A defining feature of asthma is variable airflow obstruction caused by airway bronchoconstriction but unfortunately there is no single diagnostic test. Demonstrating this variable airflow obstruction can be a challenge as airway physiology may be normal when an individual with asthma is asymptomatic.[11] This is reflected in estimates for the negative predictive value of spirometry in adults and children which varies between 18 and 54%, indicating that more than half of patients who have a negative result (non-obstructive spirometry) will have asthma.[12] Primary care is ideally placed to repeat objective testing, such as peak expiratory flow and spirometry with reversibility, over time and demonstrate variable airflow obstruction.

Quality improvement recommendations

COPD

- Identify all patients with COPD who have been diagnosed in the past year and have no record of a chest X-ray within 6 months of diagnosis. This may simply be a missing Read code, however patients without a chest X-ray should be sent for one.
- Design a diagnostic template for COPD to form the first page of the annual review template. This should include evidence of a confirmatory post-bronchodilator spirometry demonstrating an FEV_1/FVC ratio of <0.7. An alert can be put in place so that before any further detail is entered the clinician is asked to confirm whether or not COPD has been accurately diagnosed.

Asthma

- Design a diagnostic template for asthma to form the first page of the annual review template. This should include evidence of objective testing confirming the diagnosis of asthma. An alert can be put in place so that before any further detail is entered the clinician is asked to confirm whether or not asthma has been accurately diagnosed.
- As part of this diagnostic template, ensure that the patient's best PEF is recorded. Add this PEF reading to prescription notes as a way to alert paramedics of the reading, especially if the patient doesn't have a personalised asthma action plan to hand.

Section 3:
Assessing severity and future risk

COPD

Key standards – COPD

NICE 2019 NG115: *One of the primary symptoms of COPD is breathlessness. The Medical Research Council (MRC) dyspnoea scale should be used to grade the breathlessness according to the level of exertion required to elicit it.* [7]

NICE 2016 QS10 (QS3): *People with stable chronic obstructive pulmonary disease (COPD) and a persistent resting stable oxygen saturation level of 92% or less have their arterial blood gases measures to assess whether they need long-term oxygen therapy (LTOT).* [13]

Key findings

- Almost 55% of audited patients had an MRC score recorded in the past year.
- The majority of patients with a score had either MRC score 2 (22.8%) or 3 (15.1%), reflecting a similar distribution of breathlessness to that found in the last audit.
- Only 24.4% of people with a stable resting oxygen saturation (two measurements within 3 months) of 92% or less in the past 2 years had an arterial blood gas measurement recorded or a referral for home oxygen assessment.

Asthma

Key standards – asthma

NICE 2018 QS25 (QS5): *People with suspected severe asthma are referred to a specialist multidisciplinary severe asthma service.* [8]

Key findings

Data for this section was not able to be extracted accurately as the majority of prescription Read codes are no longer in use. The extraction provider was not able to access codes from the more widely used NHS Dictionary of Medicines and Devices.

COPD and asthma

Key standards – COPD and asthma

NICE 2019 NG115: *Document and up-to-date smoking history, including pack years smoked for everyone with COPD. At every opportunity, advise and encourage every person with COPD who is still smoking (regardless of their age) to stop, and offer them help to do so. Unless contraindicated, offer nicotine replacement therapy, varenicline or bupropion as appropriate to people who want to stop smoking, combined with an appropriate support programme to optimise smoking quit rates for people with COPD.*7

BTS/SIGN 2019 [6.2.3]: *People with asthma and parents/carers of children with asthma should be advised about the dangers of smoking and second-hand tobacco smoke exposure, and should be offered appropriate support to stop smoking.*[14]

NICE 2013 QS43 (QS1): *People should be asked if they smoke by their healthcare practitioner, and those who smoke should be offered advice on how to stop.*[15]

Key findings

- 20.7% of the COPD cohort had no record of their smoking status in the past year. A further 28.8% were self-reported current smokers.
- 28.2% of the adult asthma cohort had no record of their smoking status in the past year. A further 16.6% were self-reported current smokers.
- 65.7% of children with asthma over the age of 6 had no record of their smoking status.
- Less than 1.0% of all people with asthma (adults and children) had a record of being asked about exposure to second-hand smoke.

Discussion

- In the UK around 2 million children are estimated to be regularly exposed to second-hand smoke (SHS) in the home. In the UK, between 6.5%–20% of children are reported to be exposed to SHS in cars. Children are particularly vulnerable to the effects of SHS exposure, which has been linked to an increased risk of lower respiratory tract infections, asthma, wheezing, middle ear infections, sudden unexpected death in infancy and invasive meningococcal disease. These disorders generate over 300,000 GP consultations and about 9,500 hospital admissions every year, costing the NHS about £23.3 million.[16]
- This does not necessarily mean that these conversations aren't happening and parents aren't being asked about their children's exposure to SHS, but currently it is not being recorded.

Quality improvement recommendations

COPD

- Ensure that patient exacerbations are recorded using the appropriate Read code (eg 66Yf).
- In order to assess whether or not a patient is eligible to be referred for pulmonary rehabilitation (PR) we first need to assess their breathlessness status. The simplest way to do this is to use the MRC score. If this is not recorded, is the patient potentially being denied a referral to PR? As part of the COPD annual review recall letter include the MRC scale and ask patients to score themselves. Print off a laminated copy of the scale and stick it to your desk so that it is a prompt when the patient sits down to tell you their score and a reminder, as their clinician, to ask them for it.

Asthma

- Ensure that asthma attacks are recorded using the appropriate Read code (eg H33z0 or H33z1).
- Ensure that exposure to second-hand smoke is coded in every child and young person's (CYP) notes (eg 137I0 or 13WF1–13WF4) and that it becomes a routine question as part of the asthma template. Highlight in the asthma recall letter that questions will be asked about smoking in the house or car and that these are non-judgemental and routine questions. Any parents or family members who are struggling to quit can be signposted to local smoking cessation clinics or offered support at the surgery. Encourage staff to undertake online training on how to talk to parents and family about SHS www.ncsct.co.uk/publication_Public-Health-Wales-training-and-assessment-programme.php

COPD and asthma

Very brief advice (VBA) is a simple and powerful approach designed to be used opportunistically in less than 30 seconds in almost any consultation with a smoker. VBA can be a powerful tool and its use as an intervention should be taken as seriously as prescribing a medicine.[17] Asking patients about their smoking status is everybody's job. Commit as a practice to ensure that all staff who have contact with patients undertake online VBA training www.ncsct.co.uk/publication_Public-Health-Wales-training-and-assessment-programme.php

Section 4:
Providing high-value care

COPD only

Key standards – COPD

NICE 2019 NG115: *Make pulmonary rehabilitation available to all appropriate people with COPD, including people who have had a recent hospitalisation for an acute exacerbation. Offer pulmonary rehabilitation to all people who view themselves as functionally disabled by COPD (usually MRC grade 3 and above).*[7]

Key findings

- 62.3% of patients with an MRC score of 3–5 had a record of being offered a PR referral (including people who refused a referral) in the past 3 years, an increase from 50.2% in 2017.
- This was reduced to 39.1% when patients with any MRC score were included in the denominator, an increase from 21.2% in 2017.

Asthma

Key standards – asthma

NICE 2017 NG80: *Offer an asthma self-management programme, comprising a written personalised action plan and education, to adults, young people and children aged over 5 and over with a diagnosis of asthma (and their families or carers if appropriate).*[9]

Key findings

- 75% of the adult asthma cohort had no evidence of a personalised asthma action plan (PAAP).
- 83% of 1–5 year olds and 77% of 6–18 year olds had no evidence of a PAAP.
- 57.8% of adults, 35.9% of children aged 1–5 and 47.8% of children aged 6–18 had evidence of being asked the RCP three questions during the past year.

COPD and asthma

Key standards – COPD and asthma

NICE 2016 QS10 (QS2): *People with chronic obstructive pulmonary disease (COPD) who are prescribed an inhaler have their inhaler technique assessed when starting treatment and then regularly during treatment.*[6]

NICE 2018 QS25 (QS3): *People with asthma have their asthma control monitored at every asthma review. If suboptimal asthma control is identified, the person should have an assessment to identify possible reasons for this, including adherence and inhaler technique, before their treatment is adjusted.*[8]

NICE 2019 NG115: *Document and up-to-date smoking history, including pack years smoked for everyone with COPD. At every opportunity, advise and encourage every person with COPD who is still smoking (regardless of their age) to stop, and offer them help to do so. Unless contraindicated, offer nicotine replacement therapy, varenicline or bupropion as appropriate to people who want to stop smoking, combined with an appropriate support programme to optimise smoking quit rates for people with COPD.*[7]

BTS/SIGN 2019 [6.2.3]: *People with asthma and parents/carers of children with asthma should be advised about the dangers of smoking and second-hand tobacco smoke exposure, and should be offered appropriate support to stop smoking.*[14]

NICE 2013 QS43 (QS1): *People should be asked if they smoke by their healthcare practitioner, and those who smoke should be offered advice on how to stop.*[15]

Key findings

- An inhaler technique check was recorded in the past year for:
  - 44.6% of people with COPD
  - 49.1% of adults with asthma
  - 28.3% of children aged 1–5 years and 42.8% aged 6–18 years.
- 72.9% of people with COPD had a record of having the influenza vaccine in the preceding winter period.
- 57.0% of adults, 57.5% of children aged 1–5 and 43.4% of children aged 6–18 had a record of having the influenza vaccine in the preceding winter period.

Discussion

Asthma

- For a variable condition such as asthma, the hallmark of self-management is the provision of an action plan with advice on recognising and responding to deterioration in control.[18] Self-management, including provision of a personalised asthma action plan (PAAP) and supported by regular medical review almost halves the risk of hospitalisation, significantly reduces emergency department attendances and unscheduled consultations and improves markers of asthma control and quality of life.[19]
- The National Review of Asthma Deaths (NRAD), (https://www.rcplondon.ac.uk/projects/outputs/why-asthma-still-kills) highlighted that 77% of those who died had no evidence in their medical records of being provided with a PAAP detailing how their medication was to be taken, how to recognise danger signals and when to call for help.[20]

COPD and asthma

- Smoking cessation reduces the decline of lung function and exacerbation rates. Equally, asthma and active cigarette smoking interact to cause more severe symptoms, accelerated decline in lung function, and impaired short-term therapeutic response to corticosteroids.[21]

Quality improvement recommendations

COPD

- Recording of MRC status has improved significantly from the last audit and it is important that we use this improvement to also increase referral rates for PR. Entering an MRC score of 3 or above should prompt a referral for PR. Many patients are put off when they hear the term ‘rehab’ or the clinician talks about ‘exercise’ or ‘breathlessness’. Rather than attempting to ‘sell’ PR to a patient, try simplifying the message: After entering an MRC score of 3 or above you could say to the patient ‘I am going to refer you to see an expert to help you breathe better’.

Asthma

- In order to increase the use of PAAPs, consider sending out your practice’s chosen PAAP as part of the recall for the patient’s asthma review. Ask the patient to read through the document, fill out any details they can prior to their appointment and get them to bring any questions with them to their review so it can be filled in together.

Asthma and COPD

- An inhaler shouldn’t be prescribed without knowing the person receiving it can use it. Set up a protocol for whenever a patient is prescribed a new inhaler. This may involve referring the patient to a nurse or healthcare assistant trained in inhaler technique or to your community or practice pharmacist. Commit to at least one member of the practice working through the UK Inhaler Group standards and competencies to enable them to work with patients to optimise technique and maximise the benefit of the medication.[22]

Section 5:
2018 Focus topic – ensuring equal and equitable care in people with mental illnesses

Serious mental illness (SMI), anxiety and depression in adults with COPD

Key standards – mental illness

NICE 2016 NG56: *Taking account of multimorbidity in tailoring the approach to care* and *How to identify people who may benefit from an approach to care that takes account of multimorbidity.*[1]

NICE 2009 CG91: *Depression in adults with a chronic physical health problem: recognition and management recommend primary care be alert to possible depression (particularly in patients with a past history of depression or a chronic physical health problem with associated functional impairment) and consider asking patients who may have depression two screening questions.*[2]

NICE 2019 CG113: *Generalised anxiety disorder and panic disorder in adults: management recommend primary care consider the diagnosis of generalised anxiety disorder in people presenting with anxiety or significant worry, and in people who attend primary care frequently who have a chronic physical health problem.*[3]

Key findings

- 8.4% of the cohort had a severe mental illness (SMI)
- 37.1% of the cohort had anxiety and/or depression
- People with SMI (relative to those without mental illness) had:
  - lower prevalence of post-bronchodilator spirometry demonstrating airway obstruction for patients diagnosed in the past 2 years (8.3% compared with 9.9%)
  - similar prevalence of referral for pulmonary rehabilitation (MRC score 3–5) (61.6% compared with 62.9%).
- People with anxiety and/or depression (relative to those without) had:
  - similar rates of post-bronchodilator spirometry demonstrating airway obstruction for patients diagnosed in the past 2 years (9.5% compared with 9.9%)
  - similar rates of referral for pulmonary rehabilitation (MRC score 3–5) (61.8% compared with 62.9%)

Serious mental illness (SMI), anxiety and depression in adults with asthma

Key standards – mental illness

NICE 2016 NG56: *Taking account of multimorbidity in tailoring the approach to care* and *How to identify people who may benefit from an approach to care that takes account of multimorbidity.*[1]

NICE 2009 CG91: *Depression in adults with a chronic physical health problem: recognition and management recommend primary care be alert to possible depression (particularly in patients with a past history of depression or a chronic physical health problem with associated functional impairment) and consider asking patients who may have depression two screening questions.*[2]

NICE 2019 CG113: *Generalised anxiety disorder and panic disorder in adults: management recommend primary care consider the diagnosis of generalised anxiety disorder in people presenting with anxiety or significant worry, and in people who attend primary care frequently who have a chronic physical health problem.*[3]

Key findings

- 6.2% of the cohort had a severe mental illness (SMI)
- 37.6% of the cohort had anxiety and depression
- People with SMI (relative to those without mental illness) had:
  - similar recording of peak flow in their notes (92.7% compared with 93.9%)
  - slightly lower prevalence of being asked the RCP three questions (54.2% compared with 58.9%)
- People with anxiety and/or depression (relative to those without) had:
  - slightly higher recording of peak flow in their notes (94.4% compared with 93.9%)
  - slightly lower incidence of being asked the RCP three questions (56.8% compared with 58.9%)

Mild and moderate mental illness and learning disabilities in children with asthma

Key findings

- 3.6% of 1–5 year olds had mild/moderate mental health illness and 0.1% had a learning disability
- 10.2% of 6–18 year olds had mild/moderate mental health illness and 1.3 % had a learning disability
- Children aged 6–18 years with mild/moderate mental health illness (relative to those without) had:
  - slightly higher recording of peak flow in their notes (85.5% compared with 82.1%)
  - slightly lower prevalence of being asked the RCP three questions (46.3% compared with 48.1%)
- Children aged 6–18 years with learning disability (relative to those without) had:
  - similar recording of peak flow in their notes (82.6% compared with 82.1%)
  - slightly lower incidence of being asked the RCP three questions (46.3% compared with 48.1%)

- Children aged 1–5 years with mild/moderate mental health illness (relative to those without) had:
  - slightly higher incidence of being asked the RCP three questions (39.1% compared with 35.8%)

Discussion

It can be challenging to identify and treat anxiety and depression in patients with COPD. Under-recognised and untreated symptoms of depression and anxiety have deleterious effects on physical functioning and social interaction which can increase fatigue and healthcare utilisation. Barriers to adequate treatment of depression or anxiety in COPD patients may include:[23]

- patient reluctance to disclose symptoms
- lack of standardised diagnosis approach for anxiety and depression
- short consultation time
- low physician confidence in assessing patients for depression or anxiety
- poor communication links between primary care and community mental health teams
- inadequate resources for providing mental health treatment.

Quality improvement recommendations

COPD

- Ensure depression screening is part of the annual COPD review. Although there are no screening tools specifically validated in COPD, tools such as the Geriatric Depression Scale[24] and the Hospital Anxiety and Depression Scale[25] have been validated for use in patients with somatic conditions. Consider adding the Whooley Questions to the recall letter so patients know that they will be routinely asked about their mood at review:
  - During the past month, have you often been bothered by feeling down, depressed or hopeless?
  - During the past month, have you often been bothered by little interest or pleasure in doing things?

Asthma

- As part of all asthma reviews introduce simple screening questions to identify patients with anxiety which may be contributing to their symptoms. For patients demonstrating anxiety, separate to their asthma, ensure they are appropriately managed and signposted to local mental health support services. Examples include:
  - Over the past 2 weeks, have you felt nervous, anxious or on edge? Have you felt unable to stop or control worrying? Do you find yourself avoiding places or activities and does this cause you problems?
  - Do you find yourself avoiding social situations or activities? Are you fearful or embarrassed in social situations?[26]

Appendix A: Document purpose

Document purpose	To disseminate the results of the national primary care audit of adults and children with COPD and/or asthma registered at GP practices in Wales 2017/2018
Title	Primary care clinical audit 2017/18
Authors	National Asthma and Chronic Obstructive Pulmonary Disease Audit Programme (NACAP), Royal College of Physicians
Publication date	March 2020
Audiences	Healthcare professionals, NHS managers, chief executives and board members, service commissioners, policy makers and voluntary organisations.
Description	This report presents the results of the cohort of patients that were registered at GP practices in wales between 1 April 2017 and 30 September 2018 The information, key findings and recommendations outlined in the report are designed to provide readers with a basis for identifying areas that are in need of change, and to facilitate the development of improvement programmes that are relevant to primary care. There is no scheduled review date for this report.
Supersedes	Not applicable
Contact	nacap@rcplondon.ac.uk

Appendix B: References

1 National Institute for Health and Care Excellence. *Multimorbidity: clinical assessment and management (NG56).* London: NICE, 2016. www.nice.org.uk/guidance/ng56 [Accessed 1 November 2019].

2 National Institute for Health and Care Excellence. *Depression in adults with a chronic physical health problem: recognition and management (CG91).* London: NICE, 2009. www.nice.org.uk/guidance/cg91 [Accessed 1 November 2019].

3 National Institute for Health and Care Excellence. *Generalised anxiety disorder and panic disorder in adults: management (CG113).* London: NICE, 2019. www.nice.org.uk/guidance/cg113 [Accessed 1 November 2019].

4 Shannon Novosad, Supriya Khan, Bruce Wolfe, Akram Khan. Role of obesity in asthma control, the obesity-asthma phenotype. *Journal of Allergy (Cairo)* 2013;2013:538642.

5 Caughey GE, Preiss AK, Virty AI, Gilbert AL, Roughead EE. Comorbid diabetes and COPD: impact of corticosteroid use on diabetes complications. *Diabetes Care* 2013;36(10):3009–14. doi: 10.2337/dc12-2197. Epub 2013 Jun 4.

6 National Institute for Health and Care Excellence. *Chronic obstructive pulmonary disease (QS10).* London: NICE, 2018. www.nice.org.uk/guidance/qs10/ [Accessed 1 October 2019].

7 National Institute for Health and Care Excellence. *Chronic obstructive pulmonary disease in over 16s: diagnosis and management.* London: NICE, 2019. www.nice.org.uk/guidance/ng115/ [Accessed 1 October 2019].

8 National Institute for Health and Care Excellence. *Asthma.* London: NICE, 2018. www.nice.org.uk/guidance/qs25/ [Accessed 1 October 2019].

9 National Institute for Health and Care Excellence. *Asthma: diagnosis, monitoring and chronic asthma management.* London: NICE, 2017. www.nice.org.uk/guidance/ng80/ [Accessed 1 October 2019].

10 Miller M, Levy M. Chronic obstructive pulmonary disease: missed diagnosis versus misdiagnosis. *BMJ* 2015;351:h3021

11 Primary Care Respiratory Society. *Asthma Guidelines in Practice – A PCRS-UK Consensus 2018.* www.pcrs-uk.org/sites/pcrs-uk.org/files/resources/Asthma-Guidlines.pdf [Accessed 1 October 2019].

12 Schneider A, Gindner L, Tilemann L *et al*. Diagnostic accuracy of spirometry in primary care. *BMC Pulm Med* 2009;9:31.

13 National Institute for Health and Care Excellence. *Chronic obstructive pulmonary disease (QS10).* London: NICE, 2018. www.nice.org.uk/guidance/qs10/chapter/quality-statement-3-assessment-for-longterm-oxygen-therapy#quality-statement-3-assessment-for-longterm-oxygen-therapy [Accessed 1 October 2019].

14 British Thoracic Society (BTS)/Scottish Intercollegiate Guidelines Network (SIGN). *SIGN 153: British guidelines on the management of asthma – A national clinical guideline.* BTS/SIGN, 2019. www.brit-thoracic.org.uk/quality-improvement/guidelines/asthma [Accessed 1 November 2019].

15 National Institute for Health and Care Excellence. *Smoking: supporting people to stop (QS43).* London: NICE, 2013. www.nice.org.uk/guidance/qs43 [Accessed 1 November 2019].

16 Action on Smoking and Health. *Secondhand smoke: the impact on children.* ASH, March 2014. https://ash.org.uk/wp-content/uploads/2018/12/ASH-Report-The-Impact-of-Secondhand-Smoke-and-Children.pdf [Accessed 1 October 2019].

17 Primary Care Respiratory Society. *Become a quit catalyst.* PCRS, March 2019. www.pcrs-uk.org/sites/pcrs-uk.org/files/resources/Becoming-a-Quit-Catalyst.pdf [Accessed 1 October 2019].

18 Pinnock H. Supported self-management for asthma. *Breathe* 2015;11:98–109; DOI: 10.1183/20734735.015614

19 Pinnock H, Parke H, Maria P *et al*. Systematic meta-review of supported self-management for asthma: a healthcare perspective. *BMC Medicine* 2017;15:64.

20 Royal College of Physicians. *National Review of Asthma Deaths.* London: RCP, 2014. www.rcplondon.ac.uk/projects/national-review-asthma-deaths [Accessed 1 October 2019].

21 Thomson NC, Chaudhuri R, Livingston E. Asthma and cigarette smoking. *Euro Resp J* 2004;24:822–33. DOI: 10.1183/09031936.04.00039004

22 Education for Health. *UK Inhaler Group Standards for Inhaler Technique.* 2017. https://ukiginhalerstandards.educationforhealth.org/ukig-standards/ [Accessed 1 October 2019].

23 Yohannes AM, Alexopoulos GS. Depression and anxiety in patients with COPD. *Eur Resp Rev* 2014;23:345–9. DOI**:** 10.1183/09059180.00007813

24 Julian LJ, Gregorich SE, Earnest G *et al*. Screening for depression in chronic obstructive pulmonary disease. *COPD* 2009;6:452–8.

25 Bjelland I, Dahl AA, Haug TT *et al*. The validity of the Hospital Anxiety and Depression Scale. An updated literature review. *J Psychosom Res* 2002;52:69–77.

26 National Institute for Health and Care Excellence. *Common mental health problems: identification and pathways to care* https://www.nice.org.uk/researchrecommendation/generalized-anxiety-disorder-scale-gad-2-for-people-with-suspected-anxiety-disorders-in-people-with-suspected-anxiety-disorders-what-is-the-clinical-utility-of-using-the-gad-2-compared-with-routine-case-identification-to-accurately-identify-different-anxi [Accessed 20 January 2020]

National Asthma and COPD Audit Programme (NACAP)

Royal College of Physicians
11 St Andrews Place
Regent's Park
London NW1 4LE

Tel: +44 (020) 3075 1526
Email: copd@rcplondon.ac.uk
www.rcplondon.ac.uk/nacap

@NACAPaudit

Royal College of Physicians | NACAP