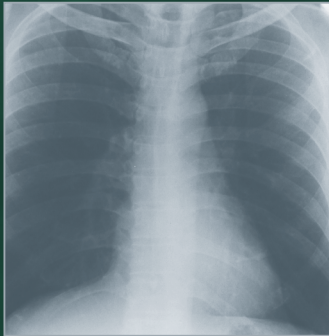


National COPD Audit Programme



Planning for every breath

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme:
Primary care audit (Wales) 2015–17

**National report
December 2017**

Prepared by:



**Royal College
of Physicians**



Royal College of
General Practitioners

**Imperial College
London**

In partnership with:



**British
Thoracic
Society**



Commissioned by:



Working in wider partnership with and endorsed by:



The Royal College of Physicians

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Healthcare Quality Improvement Partnership (HQIP)

The National COPD Audit Programme is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit (NCA) Programme. 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, and in particular to increase the impact that clinical audit has on healthcare quality in England and Wales. HQIP holds the contract to manage and develop the NCA Programme, comprising more than 30 clinical audits that cover 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 individual audits, also funded by the Health Department of the Scottish Government, DHSSPS Northern Ireland and the Channel Islands.

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Royal College of Physicians

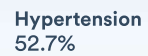
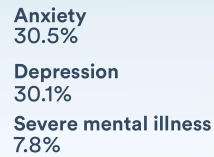
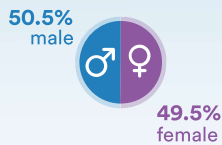
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Report at a glance

Demographics and comorbidities

Patients also had

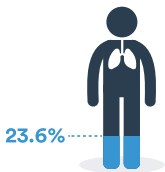


Diagnosis



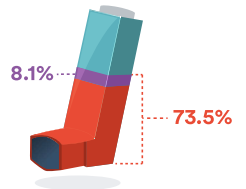
54.3% of patients diagnosed in the last 2 years had a record of a spirometric diagnostic test, and a result consistent with COPD (ie FEV1/FVC ratio of between 0.2 and 0.7).

Exacerbations and appropriate therapies



23.6% of patients had 2 or more exacerbations in the last year, placing them in **GOLD** categories C or D with an indication for an ICS combined with a LABA or LAMA.

In the last 6 months, **73.5%** of patients prescribed inhaled therapies were issued a prescription for an ICS. **8.1%** of these were for ICS alone, which is not indicated in COPD.



Equity and parity

Smokers

Current smokers were:



10% less likely to have been referred to pulmonary rehabilitation



47% less likely to have received a flu vaccination

than those who hadn't smoked for at least 4 years.

People from a lower socioeconomic group

The **10%** most deprived patients were:



7% less likely to have an MRC score recorded in the past year



27% less likely to have received a flu vaccination

than the **50%** least deprived.

Mental illness

People with severe mental illness were:



19% less likely to have been referred to pulmonary rehabilitation



27% less likely to have received a flu vaccination

than those without a severe mental illness.

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How to use this report

This report contains the main messages and key recommendations derived from an extensive analysis of data. The full data analyses, as well as the rationale for each question's inclusion, are available online (via www.rcplondon.ac.uk/planningeverybreath) for in-depth perusal. These can be accessed either in full (Planning for every breath. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Primary care audit (Wales) 2015–17. Data analysis and methodology) or in the following component sections:

- Demographics and comorbidities
- Getting the diagnosis right
- Assessing severity and future risk
- Providing high-value care
- Ensuring equal and equitable care

The data are presented largely in tabular form, with explanatory notes throughout. Although these data are available to the interested reader, it is not necessary to review them to appreciate the key messages, which are outlined below. We strongly advise discussion of these findings within and between GP surgeries at cluster level, and further review at health board level.

Please note that all appendices for this report, including the full methodology, can be found in the online data report. The online data report also contains the rationale (including the guidelines and standards that they map to) for the inclusion of each query.

Introduction

This report presents national and health board data from the second cycle of the National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme's Welsh primary care audit, which were extracted in June 2017 to capture activity between April 2015 and March 2017. Cluster results are available in the health board reports, which are available at www.rcplondon.ac.uk/planningeverybreath. Primary care providers can access their data via the NHS Wales Primary Care Information Portal.

In the first audit cycle (2014-15), data to answer 29 queries were extracted from GP systems. Feedback from stakeholders and learning from that work resulted in a reduction (via clinical and stakeholder consensus) to 14 queries for this extraction, with an increased focus on queries that directly relate to opportunities for improving quality.¹ We have also specifically focused (in section 5) on diagnostic and care issues through a lens of equity and parity, and we would recommend further analysis at a local level where disparities are identified.

The methodology employed in the first cycle of audit has not been replicated in this round of audit and, therefore, like-for-like comparisons have not been undertaken. Essentially, in the first round of audit the denominator used was all people on the COPD register, as determined by the use of Quality and Outcomes Framework (QOF) codes. Recent work looking at the accuracy of COPD coding with respect to the QOF register has shown that use of other Read codes^a (ie not necessarily included on the register) is more suggestive of COPD with high positive predictive value, and equally, some of the codes used in the QOF do not have a high sensitivity for identifying people with COPD.^{1,2} Therefore, in this audit the denominator population is likely to be more accurate (potentially excluding some of the people on the QOF register, but also including others who are not), than if we had simply included people on the COPD QOF register. It is intended that this improved process will be replicated in any future rounds of audit, thus providing assurance on future measurement to determine change.

In the first report,² our results revealed that processes of care for people with COPD in primary care were not as well assured as had been hoped. For example, the proportion of patients with a record of the most appropriate diagnostic test for COPD was sub-optimal, and fewer patients than expected were referred to pulmonary rehabilitation, or prescribed smoking cessation interventions. The findings of this second report suggest that this remains the case.

^a Read Codes are a coded thesaurus of clinical terms. They provide a standard vocabulary for clinicians to record patient findings and procedures in health and social care IT systems.
<https://digital.nhs.uk/article/1104/Read-Codes>

Key findings and quality improvement opportunities

Primary care providers actively opted in to this audit. No data were extracted from practices unless written confirmation of this opt-in was provided. In this cycle, **408 practices** (94% of all GP practices in Wales) opted in, providing –after data cleansing– **82,696 patient records** for analysis.



Demographics and comorbidities

To see the data analysis in full, please access the analysis and methodology report at www.rcplondon.ac.uk/planningeverybreath



Key findings

- The average age of the patient cohort was **70.7 years old**.
- There were a **similar number of men and women** (50.5% vs 49.5%). This is consistent with the findings of other studies conducted in the UK, but different from the COPD demographic internationally, where the disease is considerably more prevalent in men.^{3,4,5}
- The data confirm what has been found in other published literature:^{6,7} people with COPD are likely to have at least one other long-term condition.
 - The most common physical comorbidities were **cardiovascular**; hypertension (52.7%) and coronary heart disease (40.0%), **diabetes** (22.6%), osteoporosis (12.9%), painful conditions^b (12.6%) and stroke (10.4%).
- Mental health problems were common in the cohort:
 - **30.5%** of the cohort have a current diagnosis of **anxiety**.
 - **30.1%** have a current diagnosis of **depression**.
 - Despite these high rates, in the past 2 years, at most **17.5% had a record of screening for depression or anxiety**; National Institute for Health and Care Excellence (NICE) guidance recommends that primary care be alert to possible depression or anxiety in patients with a chronic physical health problem.^{8,9} Anxiety and depression significantly reduce quality of life, and can impede self-management (for example, attendance and completion of pulmonary rehabilitation (PR)).^{10,11,12,13}
 - **7.8%** had ever had a diagnosis of a **severe mental (ie psychotic) illness (SMI)**. This is approximately eight times higher than the rates in the general population.¹⁴
- In addition, **41.9%** of this cohort had a **co-diagnosis of asthma** recorded. This is likely to reflect diagnostic uncertainty, and is not in keeping with epidemiological data of validated diagnostic overlap.^{1,15,16,17} This finding should, therefore, not be accepted at face value. Treatment pathways are different for these conditions and poor-value healthcare is a likely outcome if diagnostic confusion exists.^{18,19}

^b Defined as patients who had a record of four or more prescription analgesia medications in the past 12 months, or four or more specified anti-epileptics in the absence of an epilepsy Read code in the past 12 months.



Quality improvement opportunities

- COPD and asthma overlap:
 - Define the proportion of people with a dual diagnosis of asthma and COPD and review the evidence for each diagnosis.
 - Where there is diagnostic uncertainty, follow national or local guidelines on differentiating asthma from COPD (eg NICE guidance on COPD,²⁰ the British Thoracic Society (BTS) / Scottish Intercollegiate Guidelines Network (SIGN) guideline on asthma,²¹ the Global Initiative for Chronic Obstructive Lung Disease (GOLD) guide on COPD¹⁹ or the NICE guidance on asthma²²).
 - Where both diagnoses do co-exist, ensure that treatment is tailored to the patient and appropriate pharmacotherapy (inhaled corticosteroids (ICS)) is used to manage the asthma component of disease. Collaboration between airways specialists and primary care teams is particularly important to ensure that proper local pathways are described, to assure both best-value diagnosis and therapy options.
 - Where a diagnosis of asthma is not justified on review, use the guidelines outlined above to withdraw inappropriate therapy.
- COPD and mental wellbeing:
 - Is screening for anxiety and depression part of the annual COPD review?
 - What proportion of patients identified with symptoms of depression or anxiety are treated in line with NICE guidelines?⁸



Getting the diagnosis right

To see the data analysis in full, please access the analysis and methodology report at www.rcplondon.ac.uk/planningeverybreath

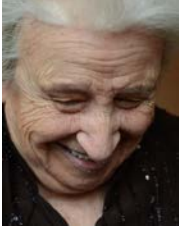


Key findings

- NICE guidance and quality standards state that **all patients over the age of 35** who present with symptoms of COPD should have a spirometry test to confirm their diagnosis.^{20,23}
 - **54.3%** of patients **diagnosed since the last round of audit** (ie within the last two years) had a **record of FEV1/FVC^c ratio^d** with a corresponding result consistent with COPD (eg between 0.2 and 0.7).
 - However, only **11.1%** of patients diagnosed within the last two years had a record of the gold standard **diagnostic test for COPD** (a post-bronchodilator FEV1/FVC, as recorded by **Read code 339m**).
 - **8.5% of the population** (76.0% of those with code 339m) had a result for this test that was consistent with airways obstruction and COPD (ie an

^c Forced expiratory volume (FEV1) / forced vital capacity (FVC).

^d Using the list of 339 Read codes included in appendix C of the data report.

 <p>Case study 2:</p> <p>Deborah Kelly (75 years old)</p>	<p>History:</p> <ul style="list-style-type: none"> • Diagnosed with COPD without a spirometry test 2 years ago. • She has no MRC score or exacerbation count on her record. • She is on a long-acting beta adrenoceptor agonist (LABA), a long-acting muscarinic antagonist (LAMA) and a high-dose inhaled corticosteroid. • She is a smoker (10 pack-years).
<p>Incident:</p> <p>She is more breathless than usual and attends A&E, where she is diagnosed with an exacerbation of COPD. However, she goes back to her GP practice because she does not respond to oral prednisolone. Her new GP notices the absence of spirometry on her record, and so initiates a new breathlessness assessment.</p> <p>She feels faint when she stands up and she has a cardiac murmur in the apex of her chest, as well as bilateral basal crackles. Her echocardiogram confirms severe mitral stenosis and atrial dilatation. She confirms that she had rheumatic fever as a child. Subsequent spirometry does not show airflow limitation.</p>	<p>Lessons learned:</p> <p>COPD can only be diagnosed in the presence of a risk factor, symptoms and confirmatory spirometry (and possibly further lung function tests or a CT scan).</p>



Quality improvement opportunities

- Spirometry should be performed by people who are trained to do and interpret the test.
 - In Wales, the Association for Respiratory Technology and Physiology (ARTP) with the Institute of Clinical Science and Technology (ICST) has developed a programme of training and certification for people in primary care wishing to perform or interpret spirometry that is supported by the Welsh Respiratory Health Implementation Group (RHIG).^{32,33,34}
- Identify those people with a COPD diagnosis who do not have a chest X-ray result coded within 6 months of their diagnosis.
 - Review the notes and, if a record of a chest X-ray can be found, add an appropriate code. If no record can be found, and the patient has only recently been diagnosed (ie in the past 6 months), order an X-ray.
 - Where diagnosis is in question, carry out a breathlessness assessment that looks for COPD and other causes.



Quality improvement case study

Mark Allen, a clinical practice pharmacist from Cardiff, describes a QI project that

he performed locally to improve the accuracy of the COPD register.

The diagnostic spirometry results (based on Read code 339m – FEV1/FVC ratio after bronchodilation) of all patients on our COPD register were identified. In some cases, this required extensive review of the notes and calculation of the ratio (from full spirometry results). If patients had been diagnosed by another means (eg chest X-ray), the earliest spirometry after diagnosis date was used. All values were entered into a spreadsheet.

For those patients whose first recorded ratio was >0.7 (ie not consistent with COPD), subsequent spirometry results (if available) were reviewed, to see whether their condition had deteriorated to bring them into diagnostic range. Patients who had a result inconsistent with COPD are currently being reviewed by a clinician.

Going forward, a new spirometry template has been written and the Read code 339m has been instigated as the diagnostic results' code of choice. Our work has also led to recording of MRC score at every review, and recording of annual exacerbation counts.

Results:

- Number of patients on register at start of project = **180**
 - **two patients** were removed from the register because of erroneous codes (one asthma patient; one bronchiectasis patient).
- Of the remaining **178 patients**:
 - **only four cases had the 339m code** in their records, two of which were expressed as a percentage, and the other two had no value attached, but instead an FEV1 score inserted as text in the notes section.
- For the **174** cases where a code was not readily available (and review of the notes was required):
 - **32 patients (18%)** had an FEV1/FVC ratio >0.7 (ie not consistent with COPD)
 - **142 patients** had a record of a ratio consistent with COPD.

Actions taken:

- The notes of **five of the 32 patients with a FEV1/FVC ratio >0.7** have been reviewed:
 - one has been diagnosed with emphysema
 - two others have been concluded to have COPD
 - two have been reviewed in person with spirometry (one has COPD and one does not).
- **The records of all 142 patients with an FEV1/FVC ratio consistent with COPD** have been updated with a 339m code.

Resources

- Primary Care Commissioning. Improving the quality of diagnostic spirometry in adults: the National Register of certified professionals and operators. www.pcc-cic.org.uk/article/quality-assured-diagnostic-spirometry [Accessed November 2017].



Assessing severity and future risk

To see the data analysis in full, please access the analysis and methodology report at www.rcplondon.ac.uk/planningeverybreath

The majority of people with COPD will be self-managing, with only a small proportion receiving treatment in secondary care in any one year.²⁰ Personalised care approaches in primary care should help to ensure that:

- people are supported to self-manage
- those with current tobacco dependence or high relapse get intensive input¹⁸
- those who are able to exercise but are functionally limited by breathlessness receive PR²⁰
- pharmacotherapy is provided in a way that maximises effectiveness and reduces harm³⁵
- people with greater severity get expert advice on managing their symptoms^{36,37}
- people who are hypoxic get access to life-prolonging long-term oxygen therapy.



Key findings

- NICE guidelines recommend that MRC score be used to grade the breathlessness of all patients with COPD.^{20,23}
 - Almost **40% of audited patients did not have an MRC score recorded** in the past year.
 - The majority of patients with a score had either **MRC score 2 (26.8%) or 3 (16.6%)**, reflecting a similar distribution of breathlessness to that found in the first round of audit.
- **FEV1 %-predicted** (results of which can determine treatment thresholds for inhaled therapies)²³ was recorded in only **27.5% of the population** in the past year.
 - Large reductions in FEV1 beyond what would be expected in usual COPD decline (>100 mL) should also trigger a breathlessness cause reassessment that can detect other treatable causes such as lung cancer.
- Tobacco smoking is the cause of COPD in the vast majority of people.^{41,42,43} NICE quality statements say that people should be asked whether they smoke by their healthcare practitioner annually, and those who smoke should be offered advice on how to stop.³⁸
 - **22.6% of the cohort had no record of their smoking status in the past year.**
 - A further **26.5% were self-reported current smokers.**
- Using a combination of lower respiratory tract infections and the concurrent recording of antibiotics and oral prednisolone Read codes, a validated methodology for identifying **exacerbations** in primary care,^{2,39} results revealed that **58.1% of patients had zero indication of exacerbations in the past year** and **14.6%** of patients were recorded as having **more than two exacerbations.**²³
 - This is in contrast to Read-coded records of exacerbations (using either 66Yf (annual exacerbation number) or counts of HY3122, H370, H3y1 (individual exacerbation)), which suggest that exacerbations are infrequent; **82.8%** of patients were recorded

as having **zero exacerbations in the past year** and only **2.9%** of patients were recorded as having **more than two exacerbations**.

- People with **low oxygen saturations** (ie of $\leq 92\%$)⁴⁰ should have evidence of an **arterial blood gas** measurement or be referred for **home oxygen** therapy;²⁰ however, in the last two years, this happened for only **11.1%** of relevant patients.



Quality improvement opportunities

- MRC score:
 - Review those patients who **have not** had a recent (ie annual) MRC score or FEV1 %-predicted recorded.
 - Is their MRC score 3 or above (ie indicating significant functional impairment)?
 - 1) If so, consider:
 - a. appropriateness of PR referral
 - b. have they had a finger pulse oximetry test when stable?
- Exacerbations:
 - In order to personalise pharmacotherapy and obtain an accurate picture of local exacerbation rates, ensure that the 66Yf Read code and its subsequent SNOMED replacement is in the annual review consultation template.
 - Prioritise for special review people with two or more exacerbations per year. Is there overuse of home supply of steroids? Are they receiving supported self-management? Would liaison with an integrated respiratory specialist be helpful?
- Keeping tobacco status up to date:
 - Tobacco dependence is relapsing, so this is a key measure at the annual review in current smokers and ex-smokers.^{41,42,43}
- Persistent low finger pulse oximetry indicates a need for oxygen assessment:
 - Recheck the finger pulse oximetry for all patients with a value of $\leq 92\%$ when stable.⁴⁴ If the result persists, refer for home oxygen assessment.

Resources

- British Thoracic Society. BTS guidelines for home oxygen use in adults. [www.brit-thoracic.org.uk/document-library/clinical-information/oxygen/home-oxygen-guideline-\(adults\)/bts-guidelines-for-home-oxygen-use-in-adults/](http://www.brit-thoracic.org.uk/document-library/clinical-information/oxygen/home-oxygen-guideline-(adults)/bts-guidelines-for-home-oxygen-use-in-adults/) [Accessed November 2017].
- To treat your patients effectively, it is important to understand them and their experience of living with COPD. The British Lung Foundation (BLF) has a range of patient stories, including Chris's video on daily life with COPD: www.blf.org.uk/your-stories/copd-affects-every-part-of-my-daily-living



Providing high-value care

To see the data analysis in full, please access the analysis and methodology report at www.rcplondon.ac.uk/planningeverybreath



Key findings

- Proper use of an inhaler ensures that the patient receives their medication in the way it should be delivered. The rates of critical error across devices vary between 14% and 92%.⁴⁵ NICE quality standards recommend that people with an inhaler should have their technique checked regularly.⁴⁶
 - 35,572 or **46.9%** of patients who were prescribed an inhaler had their **inhaler technique checked in the past year**.
- Flu vaccination is the highest-value intervention for the treatment of COPD.⁴⁷ According to NICE guidelines, all patients with COPD should be offered an annual flu vaccination.²⁰
 - **34.0% of patients had not received a flu vaccination** between 1 August 2016 and 31 March 2017.
- Of the **current smokers** in the audit cohort, **12.5%** had a record of having been referred to a behavioural change intervention **and** prescribed smoking cessation pharmacotherapy in the past 2 years. Smoking cessation reduces the decline of lung function and exacerbation rates, and enhances other COPD therapeutic options.
- NICE quality standards recommend that all COPD patients with an MRC score of 3–5 be referred for PR.^{23,23}
 - **50.2% of patients with an MRC score of 3–5** had a record of a PR referral in the past 3 years.
 - This was reduced to **21.2%** of patients when patients with any MRC score (please note that MRC score 2 referrals, in particular, are increasingly common)^{48,49} were included in the denominator.
- **73.5%** of people who were issued an inhaler prescription in the last 6 months of the audit received an **ICS** prescription. This included:
 - **8.1%** who received a prescription for **ICS alone** (this is not indicated in COPD)
 - 29.5% who received a prescription for LABA and ICS combination therapy
 - 35.9% who received a **triple therapy prescription** (LABA + ICS + LAMA).



Quality improvement opportunities

- Prescribing responsibly. A guideline should be agreed that:
 - clearly communicates to prescribers and dispensers of COPD medication that patient inhaler technique, and the opportunity for device choice, is a priority
 - is consistent about the use of inhalers and their potential combinations and frequencies.
- Clusters and health boards should identify where variation in flu vaccine uptake in people with COPD exists and aim to improve vaccination rates in this group.⁵⁰
- Where current smoking in COPD is proving hard to treat, ensure that:
 - stop smoking specialists are available locally to deliver more intensive support
 - prescribers should be educated so they can prescribe stop smoking drugs at an appropriate dose and for an appropriate length of time.^{51,52}
- Review those patients with an MRC score 3 or above who have not been asked about / referred to PR in the past 3 years. Review models of engagement (eg group consultation) to improve communication with potential recipients.⁵³
- Screen patients for anxiety and depression annually, and before referral to PR. If appropriate, consider psychological intervention before referral to maximise completion.^{13,54}

Resources

- UK Inhaler Group. Inhaler standards and competency document. www.respiratoryfutures.org.uk/media/69774/ukig-inhaler-standards-january-2017.pdf [Accessed November 2017].
- NHS Employers. National Wales influenza campaign. www.nhsemployers.org/campaigns/flu-fighter/flu-fighter-cymru [Accessed November 2017].
- Hopkinson N, Williams S. Flu vaccination protects you, your family and your patients – still time to make a difference. Influenza vaccine for health professionals: information sheet. www.networks.nhs.uk/nhs-networks/london-lungs/documents/flu-vaccination-protects-you-your-family-and-your-patients-still-time-to-make-a-difference/file_popview [Accessed November 2017].



Ensuring equal and equitable care

To see the data analysis in full, please access the analysis and methodology report at www.rcplondon.ac.uk/planningeverybreath

People with mental illness have higher rates of hospital admission, longer lengths of stay and higher mortality than others.^{55,56,57} Standards and guidelines state that healthcare professionals should

have heightened awareness of the increased risk of adverse outcomes for both asthma and COPD patients with mental illness.^{8,21,58} In addition, literature suggests that patients of certain characteristics (eg lower socioeconomic groups) may be less likely to receive high-quality, evidence-based care.^{59,60}

Please note, as the prevalence is high for all outcomes other than FEV1/FVC ratio, that the odds ratios (ORs) outlined below will not approximate the relative risk for these outcomes.⁶¹



Key findings

- People with **severe mental illness (SMI)** (relative to those without) were:
 - **25% less likely** (OR: 0.75 (95% confidence interval (CI): 0.71–0.79)) to have an **MRC score recorded** in the past year
 - **27% less likely** (OR: 0.73 (95% CI: 0.69–0.77)) to have received **flu immunisation** in the preceding 1 August – 31 March
 - **28% more likely** (OR: 1.28 (95% CI: 1.16–1.42)) to have received or had a referral to a **behavioural change intervention** and had a stop smoking drug prescribed if they were a current smoker
 - **19% less likely** (OR: 0.81 (95% CI: 0.72–0.91)) – have been **referred to PR** in the past 3 years if they had an MRC score of 3–5.
- **Current smokers** relative to people who hadn't smoked for at least 4 years were:
 - **31% more likely** (OR: 1.31 (95% CI: 1.12–1.52)) to have a **post-bronchodilator FEV1/FVC <0.7 recorded**
 - **47% less likely** (OR: 0.53 (95% CI: 0.51–0.54)) to have received **flu immunisation** in the preceding 1 August–31 March
 - **10% less likely** (OR: 0.90 (95% CI: 0.85–0.94)) to have been **referred to PR** in the past 3 years if they had any MRC score.
- The 10% most deprived patients (by Welsh Index of Multiple Deprivation) relative to the 50% least deprived were:
 - **7% less likely** (OR: 0.93 (95% CI: 0.89–0.98)) to have an **MRC score recorded** in the past year
 - **26% more likely** (OR: 1.26 (95% CI: 1.19–1.33)) to be **asked about smoking**. There was a significant trend of increasing likelihood with increasing deprivation ($p < 0.0001$)
 - **27% less likely** (OR: 0.73 (95% CI: 0.69–0.77)) to receive the flu immunisation. There was a **significant trend of decreasing likelihood of immunisation with increasing deprivation** ($p < 0.0001$)
 - **29% more likely** (OR: 1.29 (95% CI: 1.14–1.46)) to have received or had a referral to a **behavioural change intervention** and had a stop smoking drug prescribed if they were a current smoker. There was a significant trend of increasing likelihood with increasing deprivation ($p < 0.0001$)
 - **19% more likely** (OR: 1.19 (95% CI: 1.10–1.28)) to have been **referred to PR** in the past 3 years if they had any MRC score. There was a significant trend of increasing likelihood with increasing deprivation ($p < 0.0001$).



Quality improvement opportunities

- Health boards should work closely with public health teams to examine their data and to see whether these differences are factors that impact on the known variation in outcomes between socioeconomic groups, those with SMI, and those who smoke.
- SMI:
 - What proportion of patients on your SMI register have been assessed for breathlessness and cough?
 - Have they had appropriate diagnostic tests for COPD?
 - Have they been referred to PR or invited to an annual review? What are the barriers that prevent them from attending these? It is important that we understand and address the factors that might prevent people from attending.

Recommendations

Primary care

- Start with a comprehensive breathlessness assessment. If the cause is COPD, then ensure that the correct spirometric test is appropriately documented and the reason for doing the assessment is clearly explainable to your patient's satisfaction.
- If a patient has a co-diagnosis of asthma and COPD, ensure the rationale is documented.
- Use Read codes/recording systems consistently, so you can be assured of the accuracy of patient records; for example, use the code 339m when recording spirometry.
- Use your time productively at annual review. Ask about breathlessness and tobacco use, assess quality of life, and record exacerbations.
- Ensure parity and equity of care by working to deliver the most appropriate care to those more vulnerable or in need of more tailored care (eg patients with SMI).

People with or worried about COPD, their families and carers

- Ask your GP or specialist why they think COPD is the cause of your breathlessness. If you are worried about your breathing, do the BLF online breathlessness test: www.blf.org.uk/support-for-you/breathlessness/blf-breath-test
- Understand whether you are receiving the care you are entitled to by completing the BLF's 10 steps to good COPD care: <https://passport.blf.org.uk/>
- If you smoke, do not be embarrassed to ask for medical help. Stopping smoking will be the most effective treatment for your COPD.

Respiratory specialists

- Work with primary care health professionals to develop respiratory symptom assessment processes for COPD (eg breathlessness) that can be used regionally. Ensure that you work with relevant stakeholders (eg cardiologists/breathlessness services).
- Communicate results to GPs using agreed terminology to avoid duplication.

System managers

- Ensure that contracts and pathways demand that people are adequately trained for the jobs they do, particular in relation to spirometry.
- Work with providers of PR to ensure that PR referral takes place and that there is suitable resource to deliver it.
- Reconsider the measurement of quality and outcomes in COPD. Work with local and primary care specialists to select and use metrics that drive continuous improvement.

Document purpose

Document purpose	To disseminate the results of the national COPD primary care audit (Wales) 2015–17
Title	Planning for every breath. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Primary care audit (Wales) 2015–17. National report. December 2017
Author	Baxter N, McMillan V, Holzhauer-Barrie J, Robinson S, Stone P, Quint J, Roberts CM (on behalf of the National COPD Audit Programme’s primary care workstream group)
Publication date	14 December 2017
Audience	Healthcare professionals; NHS managers, chief executives and board members; service commissioners; policymakers; voluntary organisations; patient support groups; COPD patients and their families/carers; and the public.
Description	<p>This is the second of the Welsh COPD primary care audit reports, published as part of the National COPD Audit Programme. This report details national data relating to primary-care-delivered COPD care in Wales.</p> <p>The report is relevant to anyone with an interest in COPD. It provides a broad view of primary care services, and will enable lay people, as well as experts, to understand how COPD services function currently, and where change needs to occur.</p> <p>The information, key findings and recommendations outlined in the report are designed to provide readers with a basis for identifying areas in need of change and to facilitate development of improvement programmes that are relevant not only to primary care providers, but also to commissioners and policymakers.</p>
Supersedes	This report adds to the learning contained in the first Welsh primary care audit report, which was published in October 2016. There is no scheduled review date for the report, which details the results of a discrete primary care audit.
Related publications	<p>Baxter N, Holzhauer-Barrie J, McMillan V, Saleem Khan M, Skipper E, Roberts CM. Time to take a breath. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical audit of COPD in primary care in Wales 2014–15. National clinical audit report. London: RCP, 2016.</p> <p>www.rcplondon.ac.uk/projects/outputs/primary-care-time-take-breath</p>
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