National COPD Audit Programme

Planning for every breath

Primary Care Audit (Wales) 2015-17

Findings and quality improvement
The audit programme partnership

Working in strategic partnership:

Royal College of Physicians
PCRS
Royal College of General Practitioners
British Lung Foundation
British Thoracic Society
Imperial College London

Supported by:

ACPRC
Academic Health Science Network
North East and North Cumbria
Association for Respiratory Technology & Physiology
ARNS
Association of Respiratory Nurse Specialists
British Geriatrics Society
Improving healthcare for older people
Care Quality Commission

Endorsed by:

GIG Cymru
Gwasanaeth Gwybodeg Informatics Service
Royal Pharmaceutical Society
Llywodraeth Cymru
Welsh Government
Respiratory Health Implementation Group

Commissioned by:

HQIP
Healthcare Quality Improvement Partnership
Setting higher standards
Key findings and recommendations
## Participation

<table>
<thead>
<tr>
<th>Local Health Board (LHB) name</th>
<th>Number of participating practices per LHB</th>
<th>Number of participating clusters per LHB</th>
<th>Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wales</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abertawe Bro Morgannwg University Health Board</td>
<td>95% (69/73)</td>
<td>11</td>
<td>14,395</td>
</tr>
<tr>
<td>Aneurin Bevan Health Board</td>
<td>99% (79/80)</td>
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<td>16,428</td>
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<tr>
<td>Betsi Cadwaladr University Health Board</td>
<td>97% (105/108)</td>
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<td>Cardiff and Vale University Health Board</td>
<td>80% (53/66)</td>
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<td>7,892</td>
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<tr>
<td>Cwm Taf Health Board</td>
<td>91% (38/42)</td>
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<td>8,904</td>
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<tr>
<td>Hywel Dda Health Board</td>
<td>100% (50/50)</td>
<td>7</td>
<td>10,348</td>
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<tr>
<td>Powys Teaching Health Board</td>
<td>81% (13/16)</td>
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</tr>
</tbody>
</table>
Demographics and comorbidities

**Patient demographics**

- **82,696** Patients included
- The average age was **70.7**
- **50.5%** Male
- **49.5%** Female

**Patient comorbidities**

- **52.7%** had hypertension
- **40.0%** had coronary heart disease
- Mental health problems were common:
  - **30.1%** Depression
  - **30.5%** Anxiety
  - **7.8%** Severe mental illness

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Royal College of Physicians

Setting higher standards
Only 11.1% of patients diagnosed within the last 2 years had a record of the gold standard diagnostic test for COPD (post-bronchodilator FEV1/FVC; 339m).

54.3% of patients diagnosed within the last 2 years had a record of any spirometry ratio with a result consistent with COPD.

8.5% of patients had a result for this test (339m) that was consistent with COPD.

2.7% of patients had a result recorded for 339m that was inconsistent with COPD or was invalid.
Assessing severity and future risk

Recording of MRC score in the past year

- MRC score 1: 26.8%
- MRC score 2: 16.6%
- MRC score 3: 8.5%
- MRC score 4: 7.7%
- MRC score 5: 1.4%
- MRC score not recorded: 39.1%

Smoking status recorded in the past year

- Current smoker: 41.8%
- Ex-smoker: 26.5%
- Never smoked: 9.2%

Exacerbations (using a validated methodology)

- 0 exacerbations: 58.1%
- 1 exacerbation: 18.3%
- 2 exacerbations: 9.0%
- >2 exacerbations: 14.6%
Providing high value care

- **46.9%** of patients prescribed an inhaler had their inhaler technique checked in the past year.

- **34.0%** of patients had not received a flu vaccination between 1 August 2016 and 31 March 2017.

- **50.2%** of patients with an MRC score of 3-5 had a record of pulmonary rehabilitation referral in the past 3 years.

- **12.5%** of smokers had a record (in the past 2 years) of:
  - having received/referred to a combination of behavioural change intervention and,
  - prescribed smoking cessation pharmacotherapy.
Ensuring equal and equitable care

People with severe mental illness were:
- 25% less likely to have an MRC score recorded in the past year,
- 27% less likely to have received influenza immunisation in the preceding 1 Aug – 31 Mar, than those without a severe mental illness.

Current smokers were:
- 31% more likely to have a post-bronchodilator FEV1/FVC <0.7 recorded,
- 47% less likely to have received influenza immunisation in the preceding 1 Aug – 31 Mar, than those who hadn’t smoked for at least 4 years.

The 10% most deprived patients were:
- 27% less likely to have received influenza immunisation,
- 7% less likely to have an MRC score recorded in the past year, than the 50% least deprived.
### Key recommendations

#### For primary care

- If a patient has a **co-diagnosis** of **asthma** and **COPD**, ensure the rationale is **documented**.
- Use **Read codes/recording systems** consistently.
- At **annual review**, ask the patient about **breathlessness** and **tobacco use**, assess **quality of life**, and record **exacerbations**.

#### For respiratory specialists

- **Communicate** results to **GPs** using **agreed terminology** to avoid duplication.
- Work with **primary care health professionals** to develop **respiratory symptom assessment processes** for **COPD** that are applicable regionally.

#### For system managers

- Work with **providers** of **PR** to ensure that **PR referral** takes place and that there is suitable **resource** to deliver it.
- Work with local and primary care specialists to select and use **metrics to drive continuous improvement**.
So, what happens next...?
Quality improvement

Using quality improvement methodology to plan a change (SMART)

Look for areas where you can realistically make improvements.

Make a case to your manager and/or GP partnership to focus direction and help you get the right support.

Create a realistic plan for when to revisit and feedback to other members of your practice and plan next steps.

Plan how you will achieve your aim.

Aims should be SMART.
Quality improvement

Defining your overall aim (driver diagrams)

To decide what to start on for your overall improvement aim, you may find it helpful to use a driver diagram.

The Institute for Healthcare Improvement has a helpful guide on how to use them [http://www.ihi.org/resources/Pages/Tools/Driver-Diagram.aspx](http://www.ihi.org/resources/Pages/Tools/Driver-Diagram.aspx)
Quality improvement

A model for improvement

To plan your change, it is important to regularly measure and study your activity using:

- **Aim**: What are we trying to accomplish?
- **Measure**: How will I know that a change is an improvement?
- **Change**: What changes can we make that will result in improvement?

Rapid cycle improvement

Act

Plan

Study

Do
Quality improvement

The PDSA cycle

Act

- What changes are to be made?
- Next cycle?

Plan

- Objective
- Questions and predictions (why)
- Plan to carry out the cycle (who, what, where, when)

Study

- Complete the analysis of the data
- Compare data to predictions
- Summarise what was learned

Do

- Carry out the plan
- Document problems and unexpected observations
- Begin analysis of the data

Next cycle?
Quality improvement

The PDSA cycle example: Diagnosis – Chest x-ray

**PLAN:** Identify those with a diagnosis of COPD who do not have a chest x-ray coded within 6 months of their diagnosis.

**DO:** Review notes for record of chest x-ray. If no record order one. If unconfirmed diagnosis: conduct breathlessness assessment and look for COPD and other causes.

**STUDY:** Analyse data to see if the rate has improved. Plot the change over time and summarise what you have learned.

**ACT:** Identify what still needs to change to improve further and plan what you will do next. (Next PDSA cycle)
Quality improvement

The PDSA cycle example: COPD and mental well-being

**ACT:** Identify what still needs to change to improve further and plan what you will do next. (Next PDSA cycle)

**PLAN:** Identify COPD patients with symptoms of depression or anxiety.

**DO:** Check they are being treated in line with NICE guidelines¹ and that screening for anxiety and depression is part of their annual COPD review.

**STUDY:** Analyse data to see if the rate has improved. Plot the change over time and summarise what you have learned.

Useful quality improvement resources

Case study

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.

https://www.rcplondon.ac.uk/projects/outputs/primary-care-time-take-breath
Useful quality improvement resources

Spirometry

The Association for Respiratory Technology and Physiology (ARTP) with the Institute for Clinical Science and Technology have developed a programme of training and certification in spirometry.

http://www.clinicalscience.org.uk/course/artp-spirometry-e-learning-full/

The Primary Care Commissioning (PCC) have produced a guide to performing quality assured diagnostic spirometry.

https://www.pcc-cic.org.uk/article/quality-assured-diagnostic-spirometry
Useful quality improvement resources

Treating patient effectively

The British Thoracic Society have produced guidelines for home oxygen use in adults.


The British Lung Foundation (BLF) has a range of patient stories to help health care professionals understand how to better treat COPD patients

National COPD Audit Programme

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