National COPD Audit Programme

Planning for every breath

Primary Care Audit (Wales) 2015-17

Findings and quality improvement

Royal College of Physicians

Setting higher standards

The audit programme partnership

Working in strategic partnership:

Royal College of Physicians

PCRS Primary Care Respiratory Society UK

RCGP 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

BGS British Geriatrics Society Improving healthcare for older people

Care Quality Commission

GIG Cymru NHS Wales Gwasanaeth Gwybodeg Informatics Service

Endorsed by Royal Pharmaceutical Society

Llywodraeth Cymru Welsh Government

Respiratory Health Implementation Group

sam The Society for Acute Medicine

Royal College of Nursing

GIG Cymru NHS Wales Iechyd Cyhoeddus Cymru Public Health Wales

Commissioned by: HQIP Healthcare Quality Improvement Partnership

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Setting higher standards

Key findings and recommendations

Participation

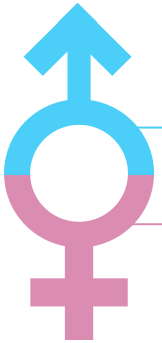
Local Health Board (LHB) name	Number of participating practices per LHB	Number of participating clusters per LHB	Patients
Wales	**94% (407/435)**	**64**	**82,696**
Abertawe Bro Morgannwg University Health Board	95% (69/73)	11	14,395
Aneurin Bevan Health Board	99% (79/80)	12	16,428
Betsi Cadwaladr University Health Board	97% (105/108)	14	21,511
Cardiff and Vale University Health Board	80% (53/66)	9	7,892
Cwm Taf Health Board	91% (38/42)	8	8,904
Hywel Dda Health Board	100% (50/50)	7	10,348
Powys Teaching Health Board	81% (13/16)	3	3,218

Demographics and comorbidities

Patient demographics

82,696 Patients included

The average age was



50.5% Male

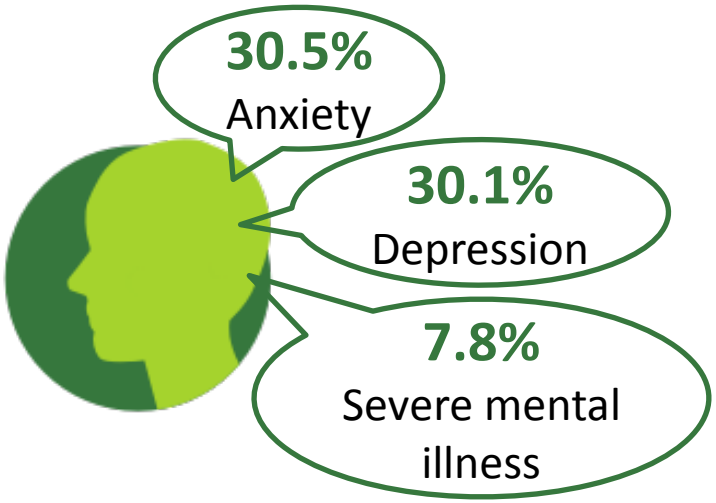
49.5% Female

Patient comorbidities

52.7% had hypertension

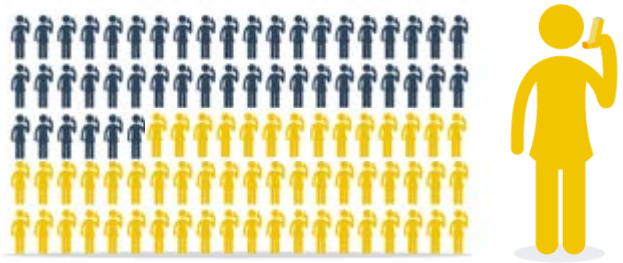
40.0% had coronary heart disease

Mental health problems were common:



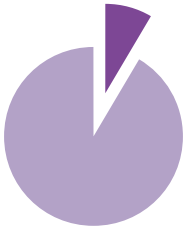
Getting the diagnosis right

Spirometry

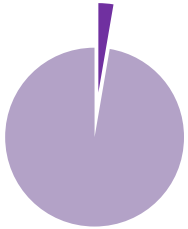


54.3% of patients diagnosed within the last 2 years had a **record of any spirometry ratio** with a result consistent with COPD.

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)**.



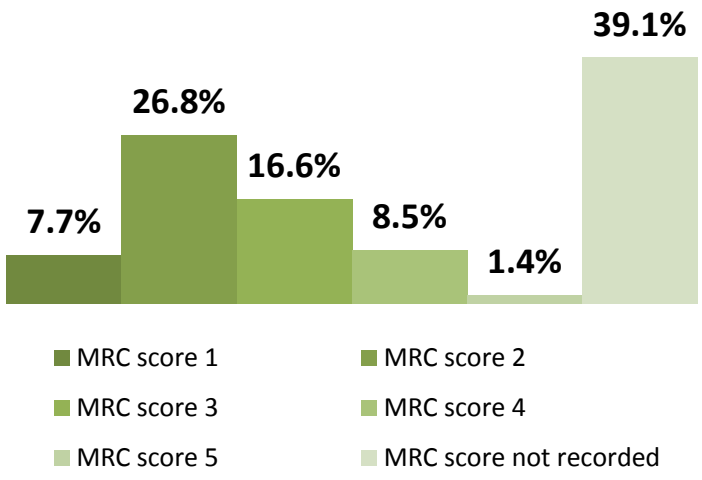
8.5% of patients had a result for this test (339m) that was consistent with COPD.



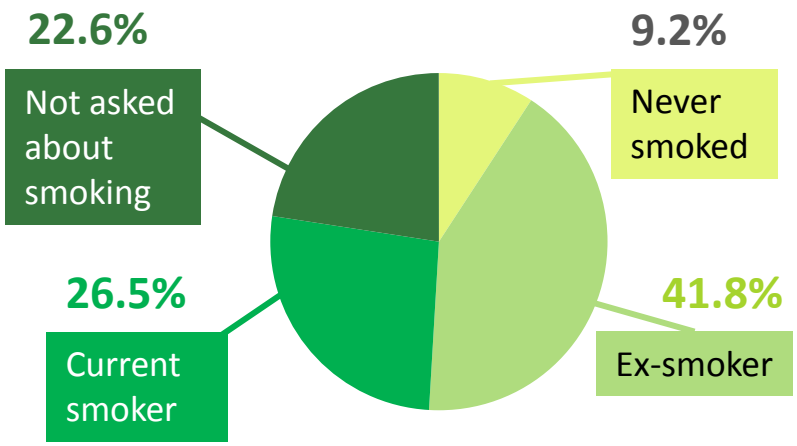
2.7% of patients had a result recorded for 339m that was inconsistent with COPD or was invalid.

Assessing severity and future risk

Recording of MRC score in the past year



Smoking status recorded in the past year



Exacerbations (using a validated methodology)

58.1% of patients had **0** exacerbations in the past year

18.3% of patients had **1** exacerbations in the past year

9.0% of patients had **2** exacerbations in the past year

14.6% of patients had **>2** exacerbations in the past year

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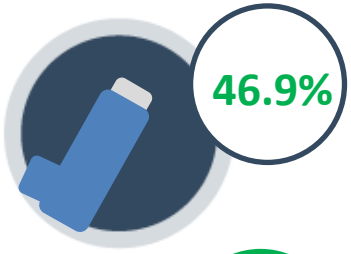
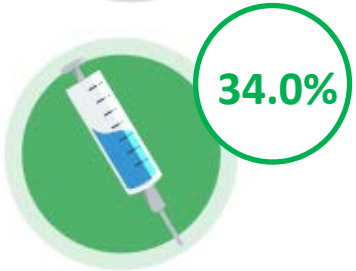
Setting higher standards

Providing high value care



of patients **prescribed an inhaler** had their inhaler technique checked in the past year



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

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

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**.

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Setting higher standards

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)

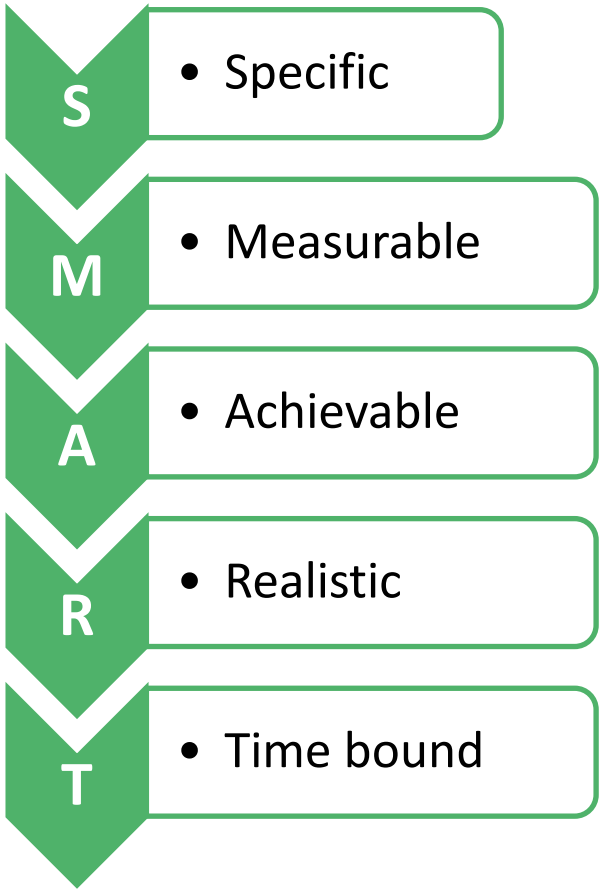
Look for areas where you can **realistically** make improvements.

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**.

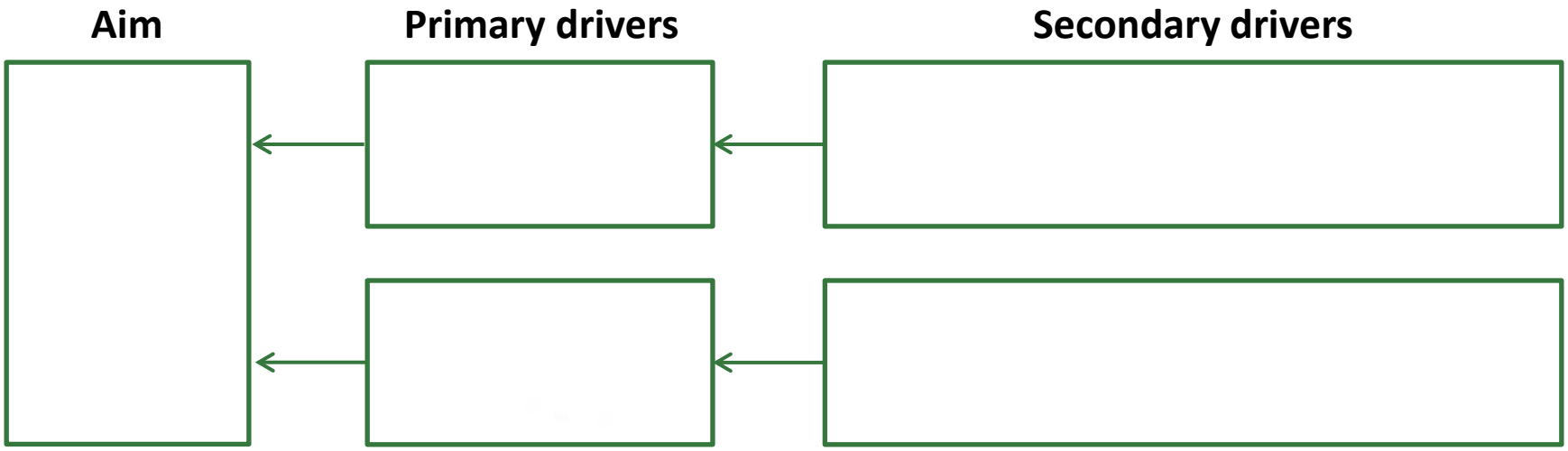


Quality improvement

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



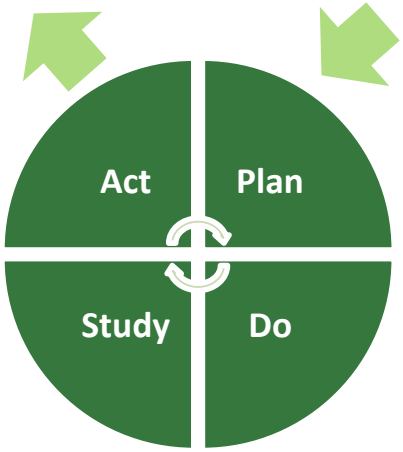
Quality improvement

A model for improvement

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

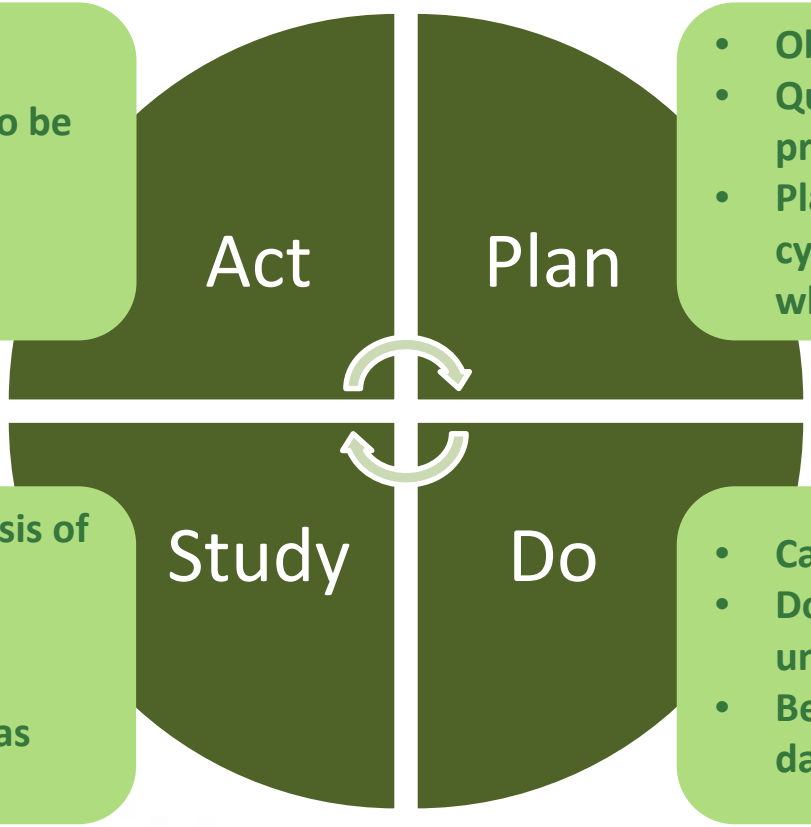
Model for improvement	
Aim	What are we trying to accomplish?
Measure	How will I know that a change is an improvement?
Change	What changes can we make that will result in improvement?

Rapid cycle improvement



Quality improvement

The PDSA cycle



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

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

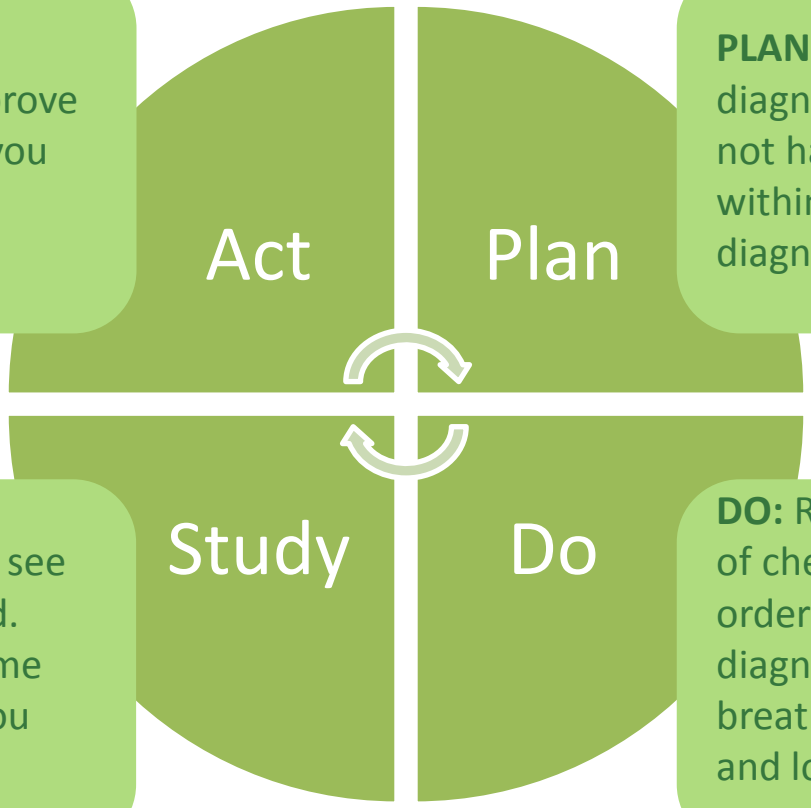
- Complete the analysis of the data
- Compare data to predictions
- Summarise what was learned

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

Quality improvement

The PDSA cycle example: Diagnosis – Chest x-ray

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



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

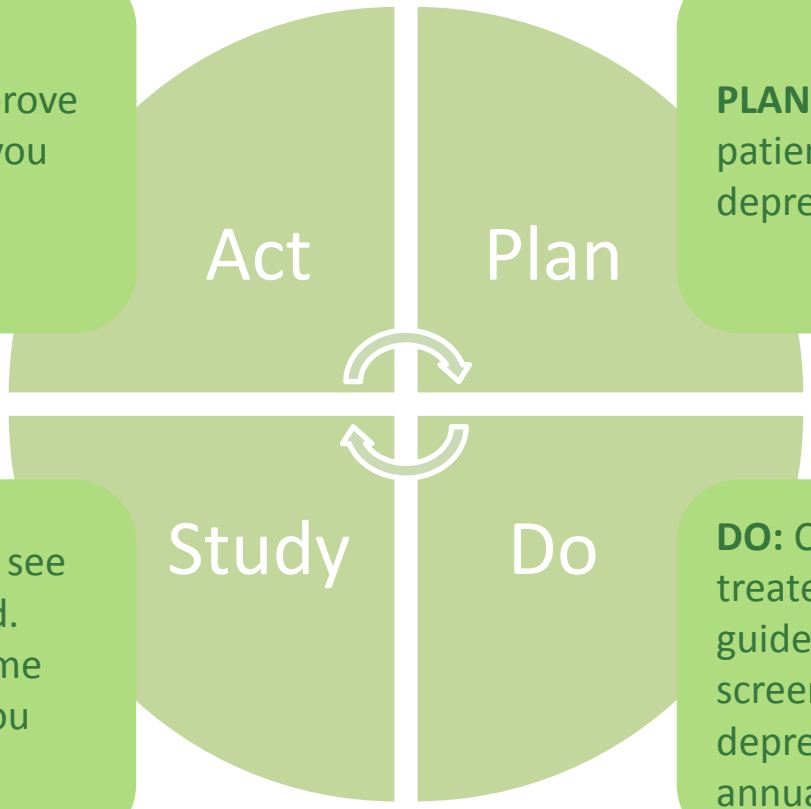
STUDY: Analyse data to see if the rate has improved. Plot the change over time and summarise what you have learned.

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.

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.

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

DO: Check they are being treated in line with NICE guidelines[1] and that screening for anxiety and depression is part of their annual COPD review.

[1]National Institute for Health and Care Excellence. *Chronic obstructive pulmonary disease in adults (QS10)*. London: NICE, 2016. www.nice.org.uk/Guidance/QS10

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

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:

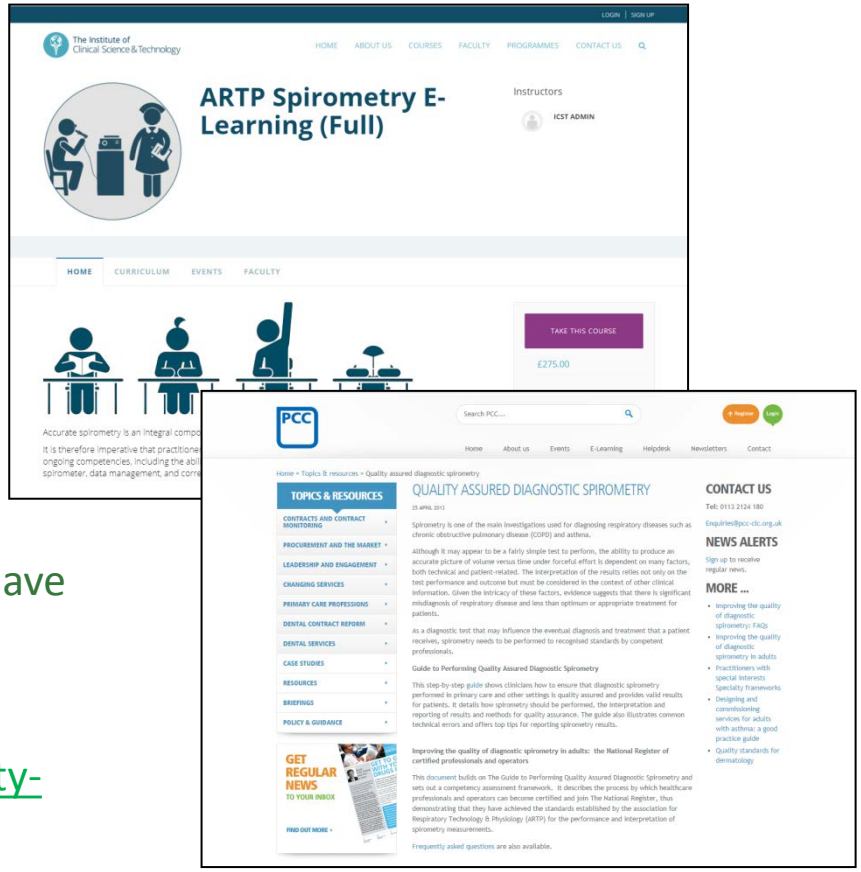
- The notes of **five of the 32 patients with a FEV1/FVC ratio >0.7** have been reviewed:
  - one has been diagnosed with emphysema
  - two others have been concluded to have COPD
  - two have been reviewed in person with spirometry (one has COPD and one does not).
- **The records of all 142 patients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

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.

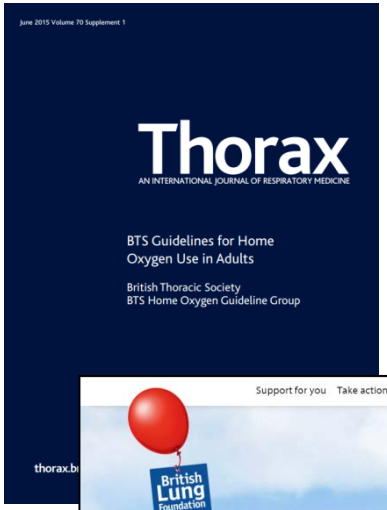
https://www.pcc-cic.org.uk/article/quality-assured-diagnostic-spirometry

Useful quality improvement resources

Treating patient effectively

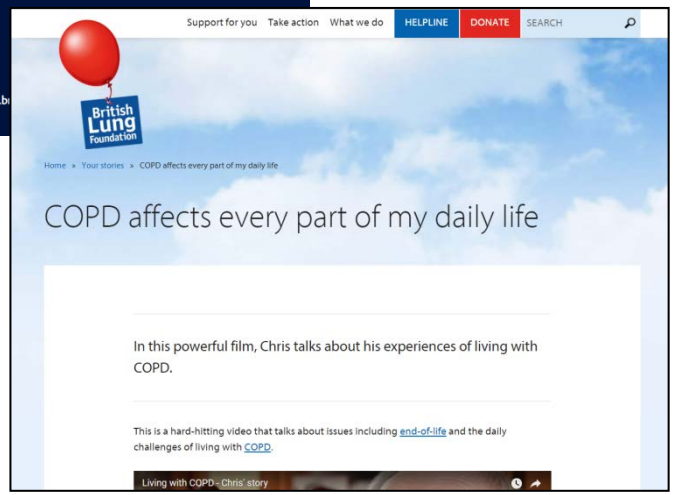
The British Thoracic Society have produced guidelines for home oxygen use in adults.

https://www.brit-thoracic.org.uk/document-library/clinical-information/oxygen/home-oxygen-guideline-(adults)/bts-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

https://www.blf.org.uk/your-stories/copd-affects-every-part-of-my-daily-living



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