Royal College of Physicians | NACAP

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

Pulmonary rehabilitation 2021 organisational audit

Resourcing and organisation of care in services in England and Wales

Summary report

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In association with: ARNS, Asthma + Lung UK, British Thoracic Society, Imperial College London, PCRS, RCGP Royal College of General Practitioners

Commissioned by: HQIP Healthcare Quality Improvement Partnership

One in five people in the UK have a long-term respiratory illness, and one of the most common is chronic obstructive pulmonary disease (COPD).[1] For people living with COPD, pulmonary rehabilitation (PR) can be a crucial part of their treatment; **90%** of people who complete a PR programme report an improved quality of life.[2] We know there is a link between the resourcing and structure of respiratory services and the quality of care they can provide[4] and this report aims to show how PR services are currently organised and help to identify variation in structure and resourcing. This is especially important as the NHS Long Term Plan aims to increase access to PR over the next 10 years,[3] and as services expand to meet this target, it is essential that the quality of care they provide is maintained.

This report presents information on 133 out of 200 (**66.5%**) PR services in England and Wales (compared with **63.2%** in 2019).[5] Data were gathered between 1 November and 3 December 2021 and measured against six key performance indicators (KPIs) recommended by the National Asthma and COPD Audit Programme (NACAP) to support good practice in the delivery of pulmonary rehabilitation. NACAP has identified three of the KPIs as improvement priorities* which, if delivered, can drive marked improvements to care. We provide guidance and recommendations to enable these improvement priorities to be achieved more widely.

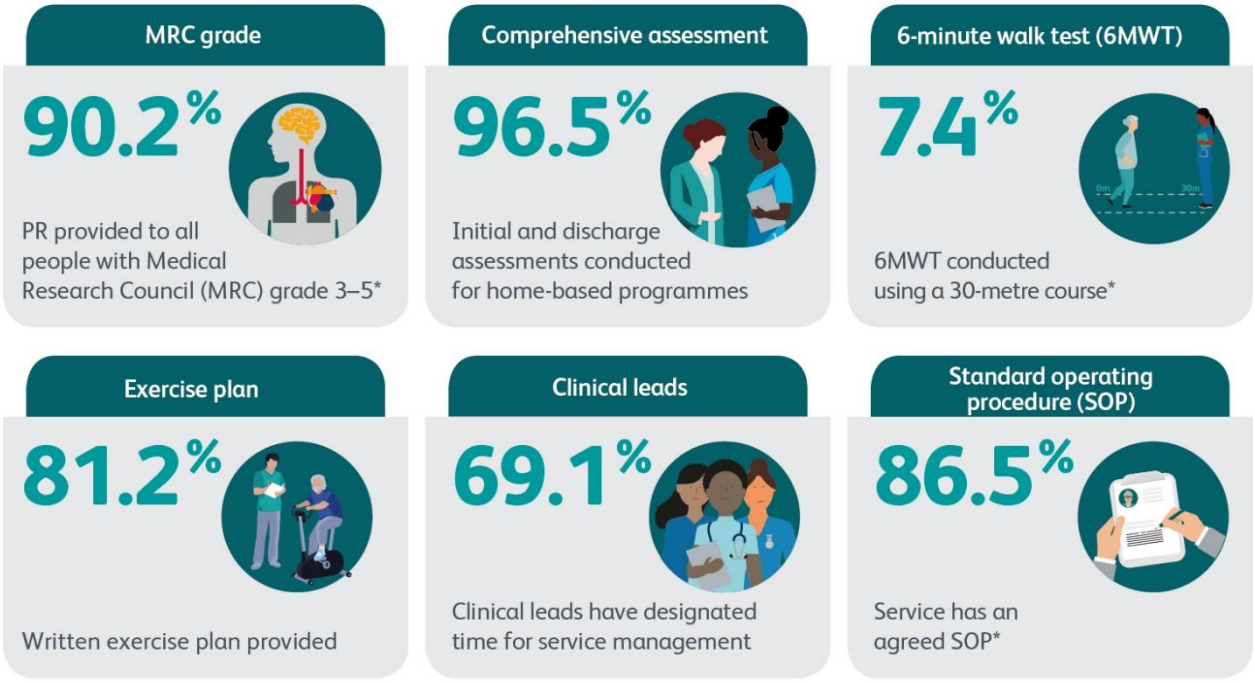
This report is intended to support service providers, commissioners and clinical teams in England and Wales to:

- review service organisation against national standards of care and identify areas of need
- review service organisation against national averages and NACAP's KPIs using the full data file and benchmarked key indicator report and identify where changes are needed or where successes offer opportunities for shared learning
- review guidance on improving service organisation in the areas that NACAP have identified as improvement priorities
- influence change and support collaborative working to ensure services are sufficiently resourced to facilitate high-quality care for all people who could benefit from PR.

'The audit is a great way … to encourage health professionals to work toward best practice, which will then improve the lives of all of us with lung conditions.'
Member of NACAP patient panel

**In NACAP reports and publications released before 2022, improvement priorities are referred to as quality improvement (QI) priorities.*

Summary of performance against KPIs



*improvement priority

The infographic summarises the national position of services against NACAP's KPIs. Data demonstrate variation in service provision across England and Wales. Related data from NACAP's first organisational audit of PR services in 2019[5] are presented where available:

- **94%** of services provide PR to people with MRC grade 4 (**92.4%** in 2019) and **90.1% to grade 5** (**88.5%** in 2019)
- **86.5%** of PR services offer home-based programmes (**34%** in 2019)
- Of **60.9%** of services conducting the 6MWT, **7.4%** do so using a 30m course (in 2019, **62.5%** were conducting the 6MWT and of these **11.1**% were using a 30m course)
- **81.2%** of services provide written plans for ongoing exercise maintenance (**82.6%** in 2019)
- **69.1%** of services provide clinical leads with dedicated sessional time for service development (**65.9%** in 2019)
- **86.5%** have a standard operating procedure (SOP) which sets out a delivery framework for the service (**84%** in 2019).

COVID-19 has impacted the way pulmonary rehabilitation is delivered, and PR teams should be congratulated for all that they achieved throughout this period. Moving forwards, it is important that services are restored to continue to deliver high-quality care to ensure the best outcomes for people with COPD and other lung conditions.

Recommendation 1: National recommendation

This recommendation is for commissioners, service providers and clinical teams

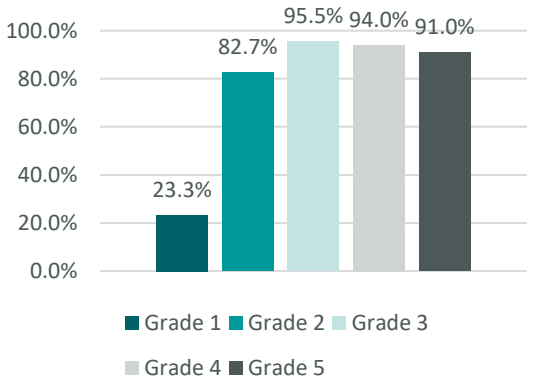
To drive improvement in care, NACAP urges commissioners, service providers and clinicians to review the way in which they provide pulmonary rehabilitation and work together to effect service-level change by implementing the individual recommendations highlighted in this report.

KPI: Provide PR to all people with a COPD self-reported exercise limitation Medical Research Council (MRC) grade 3–5

The benefits of PR in adults with COPD have a strong evidence base across the spectrum of disease severity.[6] Those identified as MRC grade 5 are most significantly impacted by their COPD and stand to benefit most from the intervention. Current guidance from The British Thoracic Society (BTS) recommends that all people with grades 3–5 are offered PR.[7] The Taskforce for Lung Health additionally recommends that PR is offered to all those who could benefit from it, including people with MRC grade 2.[7]

This audit reported that **90.1%** of services provide PR to people with MRC grades 3-5 (**95.5%** provide PR to MRC grade 3 (**94.4%** in 2019)**, 94%** to MRC grade 4 (**92.4%** in 2019) and **91.0%** to grade 5 (**88.5%** in 2019)). This means that some of the most severely affected people are unable to access essential treatment. Access to PR may be further limited by the location of PR centres and whether people have access to transport. However, transport is provided by just **27.8%** of services, a decrease from **34.7%** in 2019.

Fig 1: Services providing PR to people with MRC grades 1–5



Improvement priority

Recommendation 2: MRC grade

Provide PR to all people with a COPD self-reported exercise limitation (MRC grade 3–5) This recommendation is for service providers and clinical teams

Rationale

- The BTS quality standards for PR in adults (QS1a) state that people with COPD with a self-reported exercise limitation MRC grade 3–5 should be offered PR[8]
- The Taskforce for Lung Health recommends that every person with an MRC dyspnoea scale breathlessness score of grade 2 and above is referred to and has the opportunity to complete a PR programme[9]

Practical steps to help to achieve this priority

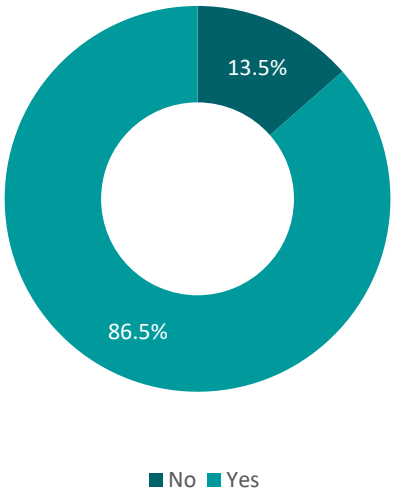
- Consider local referral pathways and work with primary, secondary and community care providers to optimise systems to support referral. Getting it Right First Time – Respiratory Medicine[4] includes information and case studies on integrated care
- Consider ways to improve accessibility for people with COPD and a self-reported exercise limitation of MRC grade 5, eg ensuring step-free access
- Work with commissioners to identify a need for and provide funded transportation to PR centres for initial assessment
- Consider tailoring PR programmes to the MRC grade and symptom severity of individuals

KPI: Conduct initial and discharge assessments for home-based PR programmes

The COVID-19 pandemic has had a significant impact upon the provision of PR. In response, services have developed a range of different delivery models to support individuals with COPD. Prior to the pandemic, **34%** of services offered a home-based programme, but this has now increased to **86.5%**. Of these services, **96.5%** conduct initial and discharge assessments as part of home-based intervention. It is important that novel interventions are fully evaluated to ensure that we continue to offer high-quality PR services. Importantly, home-based PR needs to be evidence-based and deliver similar outcomes to centre-based programmes. It is therefore essential to conduct a comprehensive assessment (reflecting all elements of the NACAP PR audit)[5] at baseline and at discharge for all home-based PR programmes to evaluate the intervention in terms of the impact on the individual participant, and in terms of the service delivering it.

An exercise test is critical to allow full assessment of the benefit for people with COPD and allow an individualised prescription of exercise. Services operating home-based PR programmes could consider providing transport to initial and discharge assessments to facilitate attendance.

Fig 2: Services offering a home-based PR programme



Recommendation 3: Comprehensive assessment

This recommendation is for service providers

Service providers offering home-based pulmonary rehabilitation should ensure that the intervention is guided by the best available evidence and includes comprehensive initial and discharge assessments (including exercise capacity). For recent guidance on delivering PR, read the American Thoracic Society (ATS) paper *Defining modern pulmonary rehabilitation*.

KPI: If 6-minute walk tests (6MWT) are being used to measure exercise capacity, use a 30-metre course to adhere to technical standards

An exercise test remains a crucial measure for the evaluation of PR services and for the prescription of an individualised exercise programme. The BTS guidance recommends using either the 6-minute walk test (6MWT) or the incremental shuttle walking test (ISWT).[8] The 6MWT should be conducted over a 30m course,[10] both at baseline and upon discharge. The ISWT is conducted over a 10m course.

The audit reports that **60.9%** of services use the 6MWT. Of these, **7.4%** use the correct 30m course. The lack of standardisation means that national benchmarking using results from the 6MWT is very difficult.

The pandemic, and resulting increase in home-based PR programmes, has made it more difficult for services to conduct either a 6MWT or an ISWT. As services resume face-to-face contact it is imperative that a walking test is included and this is conducted in line with international technical standards as set out by the European Respiratory Society (ERS) and American Thoracic Society (ATS).

Improvement priority

Recommendation 4: 6-minute walk test (6MWT)

If a 6MWT is being used to measure exercise capacity, use a 30-metre course to adhere to technical standards

This recommendation is for service providers and clinical teams

Rationale

- BTS guidance recommends using the 6MWT or ISWT as a measure of exercise capacity[5]
- Ensuring that walk tests are conducted to recommended standards,[10] including using a 30m track for the 6MWT, will ensure:
  - assessments are reliable
  - exercise can be accurately prescribed
  - outcome assessments following PR are unbiased

Practical steps which may help to achieve this priority

- Ensure adequate assessment time for patients to complete a 30m walk test
- Consider using the ISWT if space is limited
- To ensure walk tests are conducted correctly, consider joining the Pulmonary Rehabilitation Services Accreditation Scheme (PRSAS) (www.prsas.org) which helps teams highlight and share good practice as well as expert, targeted advice on where to focus improvement efforts
- Refer to the Respiratory Futures template SOPS for conducting the 6MWT

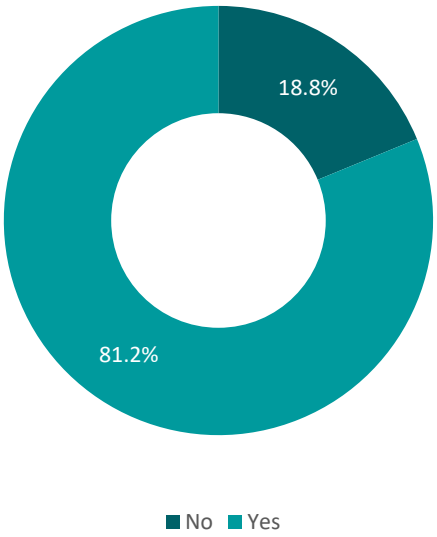
KPI: Provide people with a written plan for ongoing exercise maintenance

One of the aims of PR is to reduce the burden of symptoms for people with lung diseases including COPD and promote sustainable lifestyle changes. It is important that people with COPD are supported to continue with their exercise plan after discharge from the programme. To enable this, all participants should be provided with an individualised structured, written plan for ongoing exercise maintenance.[8] This audit reports that **81.2%** of services provide a written plan with advice for people to continue with their exercise plan following discharge (**82.6%** in 2019).

In addition to the recommendation for this KPI, services which do not currently offer individualised exercise plans should also consider:

- using the full data file and benchmarked key indicators report to identify hospitals of a similar capacity, and see what resources and staffing they have in place for discharge processes

Fig 3: Written exercise plan routinely provided



- referring to the Asthma + Lung UK exercise handbook for examples of content to include in individualised plans
- consulting people attending PR on whether written exercise plans are accessible. Consider the possibility of using digital resources, including versions adapted for use with screen readers and resources in other languages.

Recommendation 5: Exercise plans

This recommendation is for service providers and clinical teams

Include provision of a written exercise plan as a key element of discharge. To facilitate this:

- build designated time into discharge assessments for provision of an exercise plan
- develop a standardised exercise plan that can be customised for each person with COPD

KPI: Provide clinical leads with designated sessional time to coordinate and manage/develop the service

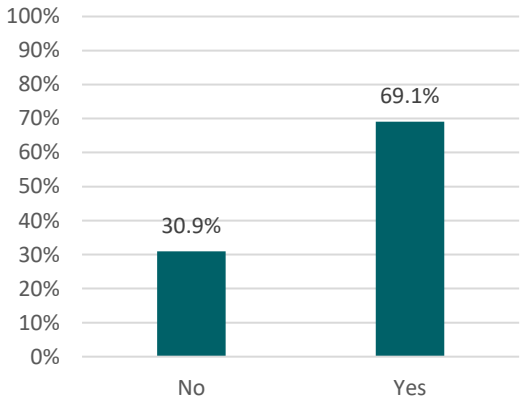
PR is a complex intervention provided by a multidisciplinary team (MDT). Good clinical leadership is required to ensure service improvement and to address gaps in service delivery to ensure equity of access. While leadership can come from any member of the MDT team delivering PR, it is essential that services have a designated clinical lead with dedicated time for managing and developing services. This is increasingly important as services re-open and adapt to the challenges posed by COVID-19.

Dedicated leadership time would also allow services to focus on achieving national accreditation with the PRSAS. Fig 4 shows that clinical leads receive designated time for leadership activities in **69.1%** of services (**65.9%** in 2019).

In addition to the recommendation for this KPI, services not meeting this KPI should consider:

- using the full data file and benchmarked key indicators report to identify hospitals of a similar capacity, and see what staffing structure they have in place
- joining the PRSAS to gain expert targeted advice on where to focus your improvement efforts for meeting this and other KPIs: www.prsas.org

Fig 4: Clinical lead receives dedicated sessional time to manage/develop service



Recommendation 6: Clinical leads

This recommendation is for commissioners and service providers

All service providers must ensure time for leadership activities is built into job plans for clinical leads, and work with commissioners to identify and assign additional resources where necessary to enable this.

KPI: Ensure all PR services have an agreed standard operating procedure (SOP)

The BTS quality standards (QS10) indicate that *all* PR services should have an SOP in place[8] which sets out a delivery framework for the service and details policies and procedures for:

- accessibility
- patient safety
- minimum staffing levels
- capacity
- physical environment.

This audit reported that **86.5%** of services have an agreed SOP (**84%** in 2019). All services without an SOP must put one in place as a priority. This is particularly important as an SOP is a key document for services to achieve accreditation with the Pulmonary Rehabilitation Services Accreditation Scheme.

Improvement priority

Recommendation 7: SOP

Ensure all PR services have an agreed standard operating procedure (SOP)

This recommendation is for service providers and clinical teams

Rationale

- The BTS quality standards for PR in adults[8] state that PR programmes should produce an agreed SOP (QS10)

Practical steps which may help to achieve this priority

- Ensure that your service has an SOP that relates specifically to the rehabilitation service (this may include existing documents addressing broader issues by the host organisation)
- Collaborate with other rehabilitation services to share best practice
- Use forums such as Respiratory Futures for example of best practice and SOP templates: www.respiratoryfutures.org.uk
- Consider joining the PRSAS to see and share examples of SOPs from other local services: www.prsas.org

References

1 National Institute for Health and Care Excellence. *Respiratory conditions: reducing pressure on emergency hospital services*. London: NICE, 2022. indepth.nice.org.uk/respiratory-reducing-emergency-pressure/index.html [Accessed March 2022].

2 British Lung Foundation. *Chronic obstructive pulmonary disease (COPD) statistics*. [Updated 2022] https://statistics.blf.org.uk/copd [Accessed March 2022].

3 National Health Service (NHS). *The NHS Long Term Plan*. London: NHS, 2019 (p65).

4 Allen M. *Respiratory Medicine: GIRFT Programme National Specialty Report*. London: NHS, 2021.

5 Singh S et al. National Asthma and Chronic Obstructive Pulmonary Disease Audit Programme (NACAP). *Pulmonary rehabilitation clinical audit 2019. Clinical audit of pulmonary rehabilitation services in England, Scotland and Wales. Patients assessed between 1 June and 30 November. Data analysis and methodology report*. London: RCP, 2020.

6 National Institute for Health and Care Excellence (NICE). *Chronic obstructive pulmonary disease in over 16s: diagnosis and management. NICE guideline 115*. London: NICE, 2018. www.nice.org.uk/guidance/ng115 [Accessed March 2022].

7 British Lung Foundation. Taskforce for Lung Health. *A National Five Year Plan for Lung Health.* BLF, 2018. www.blf.org.uk/taskforce/plan [Accessed 1 April 2022].

8 British Thoracic Society (BTS). *Quality Standards for Pulmonary Rehabilitation in Adults*. London: BTS, 2014. www.brit-thoracic.org.uk/quality-improvement/quality-standards/pulmonary-rehabilitation [Accessed January 2022].

9 British Lung Foundation. Taskforce for Lung Health. *Living with a lung condition: treatments that don't use drugs*. www.blf.org.uk/taskforce/plan/living/treatments-that-dont-use-drugs [Accessed March 2022].

10 Holland EA, Spruit A, Troosters T et al. *An official European Respiratory Society/American Thoracic Society technical standard: field walking tests in chronic respiratory disease*. Eur Resp J 2014;44:1428–46.

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Healthcare Quality Improvement Partnership

The National Asthma and Chronic Obstructive Pulmonary Disease (COPD) Audit Programme (NACAP) is commissioned by the Healthcare Quality Improvement Partnership (HQIP) as part of the National Clinical Audit Patient Outcomes Programme (NCAPOP) and works within a governance structure that includes the Programme's Board, Advisory Group and Patient Panel groups. 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, 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 individual projects, other devolved administrations and crown dependencies **www.hqip.org.uk/national-programmes**

NACAP

More than 9 million people are living with a diagnosis of asthma or COPD in the UK. The National Asthma and COPD Audit Programme (NACAP) aims to improve the quality of their care, services and clinical outcomes. We do this by supporting and training clinicians, empowering people living with asthma and COPD, and their carers, and informing policy. We have a track record of delivery and are critical to assessing progress against the NHS Long Term Plan. To find out more about NACAP visit: **www.rcp.ac.uk/nacap**

Pulmonary rehabilitation 2021 organisational audit report

This report was prepared by the following people, on behalf of our governance groups. The full list of members can be found on the NACAP resources page: **www.rcp.ac.uk/nacap**

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