



**Catching our
breath: Time
for change in
respiratory care**

Data deep dives

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Variation in the completion of a discharge bundle

NRAP clinical audit data for 2023–24 and *Organisational audit 2024* service-level data showed variation in completion of an asthma discharge bundle at hospital level.

What the data show

The percentage of patients receiving a discharge bundle varied widely between different hospitals (see Fig 1). Performance across 163 hospitals ranged from 0–100%, with a median of 80% and interquartile range of 45–96%.

There was similar variation across integrated care systems (ICSs), where the percentage of patients receiving a discharge bundle ranged from 6% to 100% completion. This can be viewed on the [ICS map](#).

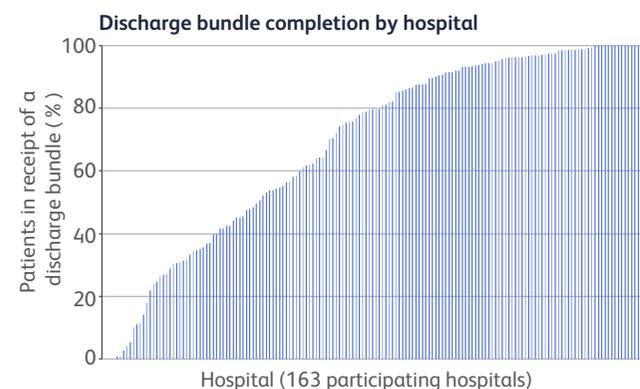


Fig 1. The percentage of patients who received a discharge bundle in each of the 163 hospitals, ordered from lowest to highest performing across the x-axis. Each purple bar represents one hospital that contributed data to the audit.

Additionally, there are interesting insights when comparing average organisational factors between the top 25% performing hospitals for discharge bundles and all other hospitals,* as reported in Table 1.³

Table 1. A comparison of data from the 2024 NRAP OA between the top 25% of hospitals that achieved discharge bundle completion, with all others.

	Top 25%	All other hospitals
Named asthma clinical lead	81%	92%
RNS per 300 adult asthma admissions	5.7	4.5
RNS availability at weekend	31%	20%

The top 25% of hospitals for delivery of the asthma discharge bundles self-reported as having higher respiratory nurse specialist (RNS) per asthma admission, and higher rates of weekend availability. However, there was no difference in proportion of hospitals with a named asthma clinical lead.

While there are likely to be a number of complex factors associated with local delivery of asthma discharge bundles, these data highlight the commendable achievement of the top 25% of hospitals and represent an opportunity for services across England and Wales to consider RNS staffing and 7-day working in the delivery of basic asthma care.

Why is this important?

Discharge bundle provision is important because evidence shows that it improves outcomes in patients with asthma.^{4,5}

Additionally, this forms part of the best practice tariff (available in England), which provides important resources for respiratory teams.⁶

Provision of all discharge bundle elements also aligns with NRAP's [healthcare improvement goals](#) (2023–26) relating to self-management plans and inhaler technique.

Please access our [healthcare improvement resource](#) to review suggested methods to improve care locally.

*NRAP Organisational audit data was available for a total of 128 hospitals.

Elements of care received by children admitted with near-fatal asthma

NRAP clinical audit data show variability in the care of children and young people (CYP) with asthma, including for those who were most unwell and received intravenous (IV) medication and/or were admitted to the intensive care unit (ICU) or high dependency unit (HDU).

What the data show

In 2023–24, 2,871 CYP with asthma were given IV medication and 1,218 of them were then admitted to an ICU, HDU or both. 54% of the CYP with asthma who were on IV treatment received a personalised asthma action plan (PAAP), 69% had their inhaler technique checked, and 50% were referred for a 2-day or 4-week follow-up at discharge.

The data were similar for the 1,404 CYP who were admitted to the ICU or HDU due to asthma attacks. Of these, only 57% received a PAAP on discharge, while 71% had their inhaler technique checked. In this group, 54% of CYP were reported to have been referred for either a 2-day or 4-week follow-up appointment.

Additionally, the data show that within the group of CYP with asthma admitted to the ICU/HDU, only 54% received steroids within 1 hour of their arrival at the hospital. In those receiving IV medication, this figure was 53%.

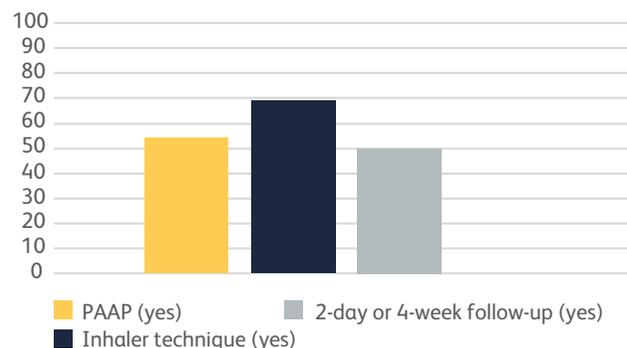


Fig 2. The percentage of CYP who received IV medication during their admission and received each element of discharge planning.

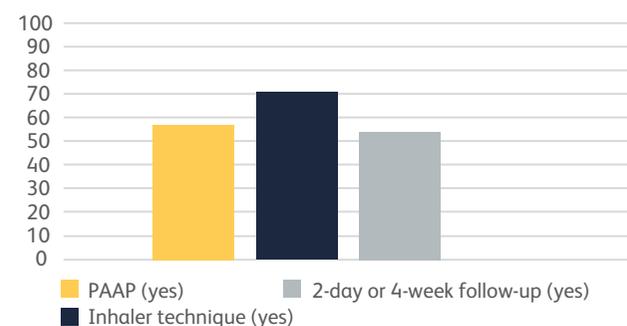


Fig 3. The percentage of CYP who were transferred to ICU or HDU during their admission and received each element of discharge planning.

Why is this important?

A recent National Child Mortality Database report highlighted that there were 54 CYP asthma deaths between 2019 and 2023.⁷ It is extremely important that all children, and particularly those with near-fatal asthma, receive all core elements of care to prevent death.⁸ Furthermore, 65% of those who died had an emergency department visit or emergency admission in the preceding year, which indicates that there was an opportunity for prevention.⁷

Reviewing or issuing a PAAP, checking patient inhaler technique, and providing a referral for a follow-up with asthma-trained clinicians are all core elements of the discharge bundle as recommended by the National Bundle of Care for Children and Young People with Asthma.⁹

The administration of systemic steroids within 1 hour of arrival is known to reduce the likelihood of hospital admission and is recommended by the guidelines. NRAP data indicate that approximately half of children with near-fatal asthma did not receive systemic steroids within 1 hour of arrival.^{9,10}

Please access our [healthcare improvement resource](#) to review suggested methods to improve care locally.

COPD: Key elements of discharge bundle provided as part of discharge

NRAP clinical audit data show that the delivery of discharge bundles for people admitted to hospital with an exacerbation of COPD varies across England and Wales.

What the data show

Delivery of the discharge bundle was the worst performing key performance indicator (KPI) in the COPD workstream, with only 28% of admissions receiving all elements of the discharge bundle. Performance across 171 hospitals ranged from 0–100% with a median of 15% and interquartile range of 1–43%.

Audit data highlights a difference between the discharge bundle box being ticked and the delivery of the separate elements of the discharge bundle. Despite its strong evidence base as an intervention, assessment for pulmonary rehabilitation (PR) was only completed in 58% of all cases and in just 6% of admissions in Wales.

Completion of the discharge bundle elements varied nationally, with a trend towards integrated care systems (ICSs) with the highest levels of deprivation and COPD prevalence having the lowest percentage of patients receiving fully completed discharge bundles, suggesting healthcare inequality. This can be viewed on the [ICS map](#).

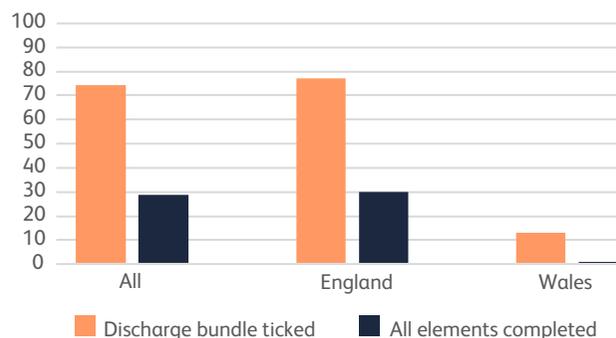


Fig 4. The percentage of patients with COPD who were reported by hospitals as receiving all discharge bundle elements, compared to the percentage of patients with COPD who had all discharge bundle elements completed by England, Wales and all.

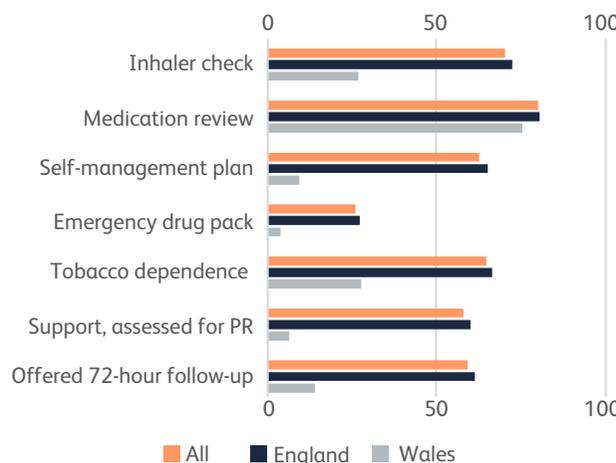


Fig 5. The percentage of patients who received each element of the COPD discharge bundle by England, Wales and all.

Why is this important?

Discharge care bundles are designed to ensure consistent provision of high-quality care for patients. Studies have suggested that COPD discharge bundles may result in fewer hospital readmissions, lower risk of mortality and improvement of quality of life.¹¹ Hospital readmission for patients with COPD is also associated with an increase in additional health conditions and use of healthcare resources.

Resource constraints, lack of staff engagement and knowledge, and complexity of the COPD population have been identified as some of the key barriers inhibiting the effective delivery of discharge bundles.¹²

The 2024 NRAP *Breathing well* report¹³ highlighted that nearly 60% of COPD admissions are for people from the most deprived proportion of the population (IMD1–2). This is reflected in the current NRAP audit data, which also suggests that those patients are least likely to have a discharge bundle completed. These data also align with the recent Asthma + Lung UK ICS respiratory review 2024/2025,¹⁴ which showed high levels of respiratory admission and death rates in the same regions.

Please access our [healthcare improvement resource](#) to review suggested methods to improve care locally.

* The latest version of the NRAP dataset (release date 1 April 2025) features each discharge bundle element separately, with the option to tick discharge bundle removed to prevent the historic data discrepancy.

Timely access to pulmonary rehabilitation

NRAP clinical audit data show that a limited number of people with COPD are being referred for pulmonary rehabilitation (PR) in a timely way.

What the data show

In 2023–23, only 40% of individuals with stable COPD who were referred for PR started the programme within 90 days of referral

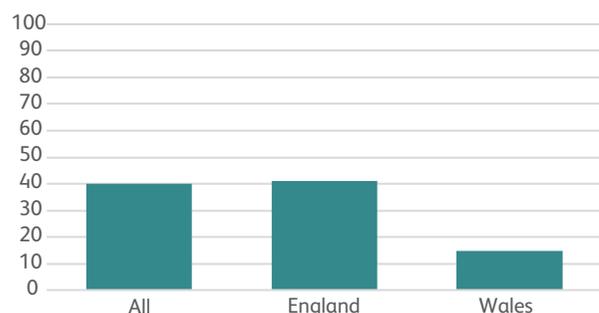


Fig 6. The percentage of patients with stable COPD who started PR within 90 days of referral by England, Wales and all.

Additionally, there was considerable variation in performance between integrated care system (ICS), which ranged from 3% to 75% of COPD patients starting PR within 90 days of referral. This can be viewed on the [ICS map](#). It is crucial for services to work with the ICS to reduce variation and improve access to PR in the management of COPD.

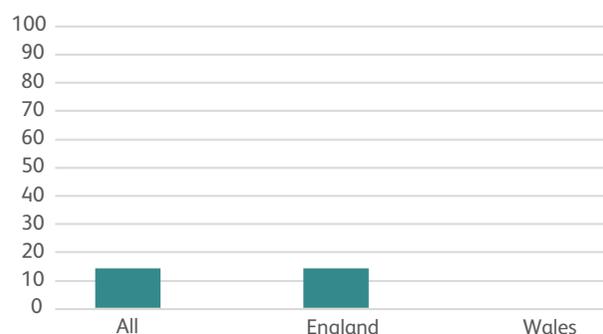


Fig 7. The percentage of patients who started PR within 30 days of referral following AECOPD by England, Wales and all.

For individuals who had been referred for PR following hospitalisation for an acute exacerbation of COPD (AECOPD), 14% started the programme within 30 days of referral.

NRAP data show that only 4% of people included in the PR audit were referred for PR after AECOPD, which was managed in secondary care. We would expect this figure to be higher and it indicates a missed opportunity for the majority of individuals.

Why is this important?

It is important that all individuals eligible for PR are able to access the intervention in a timely way to prevent differences in access to care across geographical regions, which may lead to health inequalities.

[Guidelines](#) state that people with stable COPD (if suitable) should start PR within 90 days of receipt of referral. This is important as PR is a cost-effective intervention¹⁵ that has been proven to improve [quality of life](#) and [survival](#).¹⁵

The standards also state that people hospitalised for AECOPD should be enrolled for PR within 30 days of leaving hospital. According to [guidance](#), participation in PR following AECOPD within 30 days of discharge may reduce the risk of hospital readmission, improve health-related quality of life and exercise capacity.

There are complex reasons why these targets are not being consistently met, including insufficient staff or services to meet demand. The [British Thoracic Society report](#) estimates that at least 600 registered clinician posts and 400 non-registered posts are required to meet demand. The [NHS Long Term Plan \(2019\)](#) aims to expand PR services in the next 10 years.

Please access our [healthcare improvement resource](#) to review suggested methods to improve care locally.

Guidelines and standards

[BTS/NICE/SIGN Joint guideline on asthma: diagnosis, monitoring and chronic asthma management](#). NG245. NICE, 2024.

NICE. *Chronic obstructive pulmonary disease in over 16s: diagnosis and management*. NG115. NICE, 2018 (updated 2019): 1.3 Management of exacerbations of COPD

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