NRAP Good Practice Repository – Pulmonary Rehabilitation

RESTART

Northampton General Hospital

Northamptonshire Healthcare NHS Foundation Trust

KPI 3:
Patients enrolled who go on to have a discharge assessment
Northampton General Hospital changed from 68% in 2024 to 77.8% in 2025*

Outline of your improvement project

The percentage of patients completing a pulmonary rehabilitation (PR) discharge assessment (KPI 3) was 68% (as per benchmark NRAP data figure averaged April- October 2024) when we started this quality improvement project last year. Our aim was to improve this to 75% and set a target of 1 year to achieve this. The primary drivers we identified were ensuring that we were enrolling the right patients for the programme, identifying those who may not be appropriate for our class and signposting to other services, and recognising potential factors that may inhibit someone from attending. We also wanted to look in closer detail at our own local drop out data and the reasons for

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not completing the programme. We have areas of high IMD in Northamptonshire, some are in the worst 10% of measured IMD in the country. Our Pulmonary Rehabilitation classes are run in or near these areas of high IMD to try and meet local population needs.

What has been achieved during this improvement project?

- We started the quality improvement programme in October 2024 and since then our completion rates have improved. Our NRAP data for KPI 3 is currently 77% (data from April to August 2025).
- The main reason for dropouts was being unwell with non-respiratory related health issues (see figure 2). From our own local data there is a lower completion rate at one of our venues. This is also our largest group of around 20 patients on average. We will continue to monitor this over the coming months to see if class size is an influencing factor on our completion rates or whether there are other contributing factors.
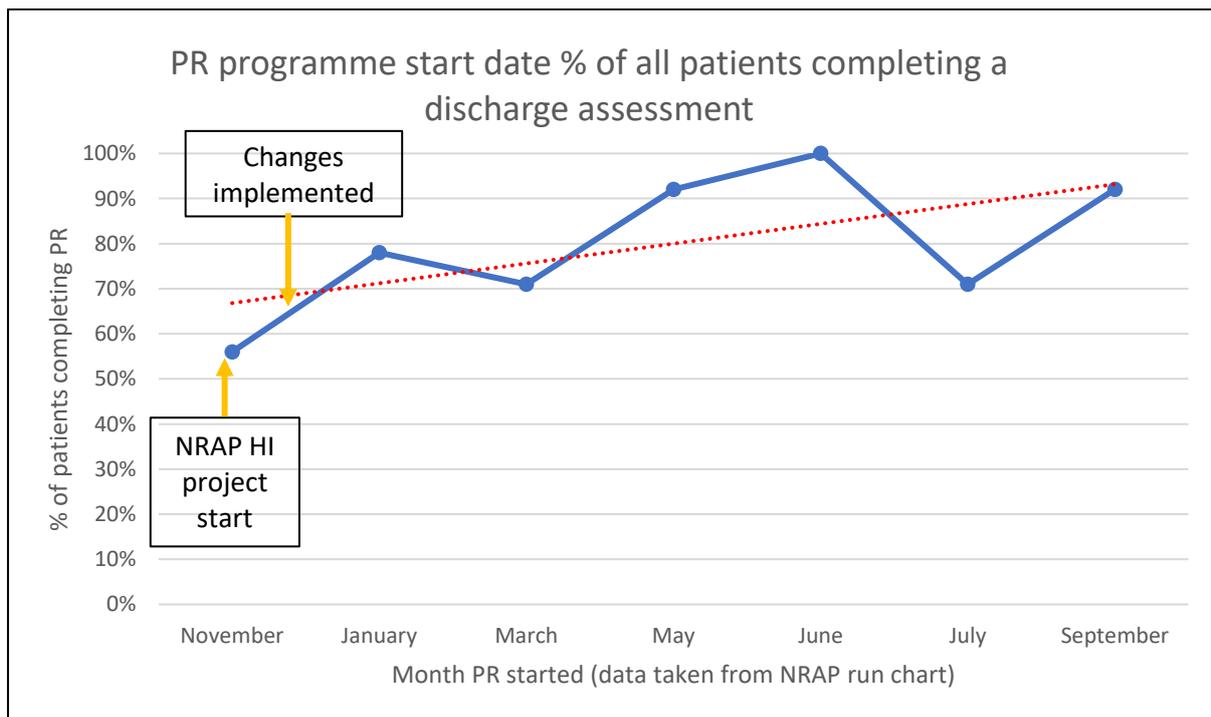

Figure 1: Graph to show trend in PR completion rates since starting the NRAP project. Data is taken from the monthly run charts on NRAP. The red line is the trendline of these data points running from November 2024 to September 2025.

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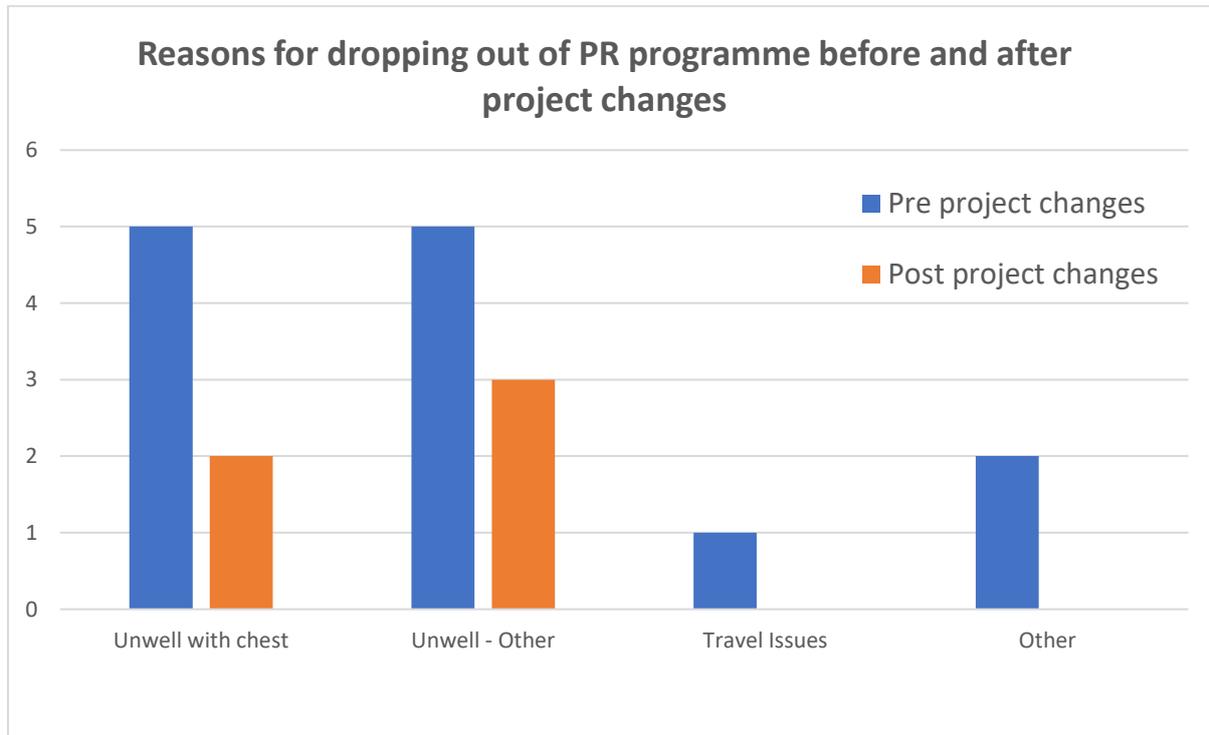**Reasons for dropping out of PR programme before and after project changes**

Figure 2: Graph to demonstrate the reasons patients stated for dropping out of the PR programme 3 month prior to project change and 3 month after project changes implemented. 'Other' included family bereavement and housing issues.

How did you achieve this improvement?

- We identified 3 key drivers that we wanted to work on (see appendix 1).
  - Improving our triage and initial assessment paperwork to ensure we were selecting the right patients for the programme and identifying early on any potential barriers to attending and mitigating these where possible. (e.g. travel, other commitments, other planned events/procedures, concerns of exercising in a group, mental health). As part of this we also ensured that at every patient contact we were reminding them of the class commitment and expectations of the programme. This had the greatest impact on change (see table 1).
  - We engaged and met with other local services to understand what else was available locally to signpost/refer patients onto who we felt weren't appropriate for pulmonary rehabilitation.
  - Updated our Did Not Attend (DNA) policy. We contacted patients if they DNA'd assessment or class to understand the reasons why and again mitigate where possible. We also captured our own local data on dropout rates and reasons to identify any common themes.

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	PRE	POST
Of those that attended their assessment we deemed suitable to start PR	95% (43)	81% (48)
Of those that were assessed, actually started PR	76% (33)	97% (47)
Drop out during PR	39% (13)	10% (5)
Did not complete final assessment	<1% (3)	<1% (4)
Completed PR (of those that started)	51% (17)	80% (38)

- Table 1: 3 month snapshot of local data taken before the changes and after the changes. Demonstrates that by being more selective with our assessments meant a greater percentage of those that were assessed started the classes and meant a lower drop out rate.

How are you going to ensure your intervention is going to lead to sustainable improvement in future?

- The changes made so far are now embedded in our practice as paperwork, and procedures are in place. The data collection spreadsheet is also set up, so it is easier to keep track of our drop-out rates and recording reasons why. We will continue to complete PDSA cycles where new issues are identified.
- There are still some secondary drivers that we have not looked at yet including our venues where we run the programme and whether we need to consider one of these being a rolling programme rather than all being cohort programmes. However, these are bigger challenges, but we will consider these in future as they will also likely impact the other KPIs.

Did you face any challenges or difficulties when implementing your project? If so, how did you overcome them?

We are currently carrying a vacancy in the team which has meant there are currently only two permanent staff running the service. Despite this we were both invested in the quality improvement project and could recognise its potential benefits. We worked together to identify and implement changes, but one person was identified to have the main responsibility of leading on it to ensure its continued progress and to ensure data collection was kept up to date.

The temptation to change too much at once! From the driver diagram lots of potential changes were suggested but we focussed on just changing three things that we identified as potential 'easy wins'. Sometimes changing the smaller things collectively can make the biggest difference.

Additionally, we are aware of the ongoing challenge of working with a patient population who have significant comorbidities that make completing an exercise programme even more challenging. Fine tuning our triage and assessment process runs the risk of excluding patients who have co-morbidities that affect their likelihood of completing the course. These patients are limited by breathlessness but also by their other co-morbidities particularly musculoskeletal problems. When accepting them on the programme modification of exercises and tailoring the programme to an individual is always undertaken. However, this in turn has a risk of causing negative balancing measures in a KPI such as

MCID for an objective measure. An alternate would be to exclude patients who have comorbidities that affect their likelihood of completing the course, but this would significantly reduce the reach of the service. It should also be noted that this patient group is at more risk of prolonged effects of any circulating illnesses which also impact completion rates.

What advice would you give to other respiratory services hoping to replicate your service improvement idea?

1) Use the driver diagram and sit down as a team to discuss/identify problems and possible solutions.
2) Don't change too much at once as then it becomes difficult to know the impact of each change.
3) Use the NRAP HI meetings with your tutor and other teams to discuss barriers and issues as often they may have faced similar challenges and may identify things you may not have thought of.
4) Collect own data where possible as you can then be more specific and be able to identify trends in a timelier way.
5) Keep your eye out for negative balancing factors, we are aware that although our completion rate has improved, our MCID on walking distance has dropped.

Have you generated any supporting resources you would like to share with others?

Use the good practice repository as it's a great source of information from other teams that have faced similar challenges.

We found the Driver Diagram useful as a way of identifying issues and documenting potential changes. It's helpful to then look back at this as you go to help keep on track and you may find further things to add.

Use of the Flesch-Kincaid reading ease score which we accessed on word documents to ensure that all patient letters and information is written in a way that is easy to understand.

It is important that services NRAP promotes within the good practice repository are aware of quality standards in their area of practice. Which quality standards are relevant to your QIP, and how did your project fit within the quality standards in general?

Our project fit within the BTS quality standards for Pulmonary Rehabilitation in Adults and the BTS Clinical Statement for pulmonary rehabilitation. Our project was focussed on improving the completion rates of our pulmonary rehabilitation programme.

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National Respiratory Audit Programme (NRAP)

Appendix 1: Healthcare improvement driver diagram

AIM	PRIMARY DRIVERS	SECONDARY DRIVERS	CHANGE IDEAS
RESTART PR aims to increase the number of patients completing pulmonary rehabilitation from 68% to 75% by September 2025	Suitability for PR	Patient selection/suitability	Review and update triage and assessment paperwork
			Liaise with other services and signpost/refer onwards if not suitable for PR
		Commitment and expectations	Reinforcement of programme commitment and expectations at every contact
	Programme Delivery	Patient Feedback	Patient questionnaires, review feedback
		Venues	Patient feedback, questionnaires, review current venues
		Adhering to PR standards	Check current programme meeting standards
	Drop outs/DNA's	Patient drop outs during programme	Record data on drops outs and reasons
			Contact DNA's
		DNA/UTA final assessment	Record data on why not attending
			Where possible offer alternative date/time
		Waiting list	Review of those waiting longer for nearest venue and if this impacts on completion
			Rolling programme

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