

National Respiratory Audit Programme (NRAP)


Pulmonary rehabilitation (PR) audit - clinical audit dataset

Version 5: (April 2025)


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Generic Data				
Item No.	Question	Text under question	 Pop-up help note	Validation
	Patient data	<p>Include patients:</p> <ul style="list-style-type: none"> • Who attend an initial assessment for pulmonary rehabilitation • who are 18 years or over on the date of assessment <p>For those assessed before 1 April 2024, patients should only be included if they have read the patient information sheet and provided consent (written or verbal) on the audit consent form or via the required verbal consent process.</p>		
1.1	NHS number	<p>The field will accept valid NHS Numbers which are ten digits long.</p> <p>Optionally, you can enter spaces or dashes or 3-3-4 format.</p>	<p>Permission has been granted to use the NHS number as a patient identifier for patients assessed from 1 April 2024.</p> <p>Patients assessed before 1 April 2024 should have given express consent for the NHS number to be used as a patient identifier. Their data should not be entered into this audit unless the patient has read the patient information sheet and signed the patient consent form.</p> <p>This will be used to determine:</p> <ul style="list-style-type: none"> • case-mix • admission rate • mortality. 	<p>Look of answer option:</p> <p>___-___-___ or ___-___-___</p>


Generic Data


Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>The NHS number is essential to create a Patient Record. It should only consist of digits.</p> <ul style="list-style-type: none"> • It may be formatted as 000 000 0000 (spaces) or 000-000-0000 (dashes) • It should contain exactly 10 digits. • NHS Numbers start with a 4, 6 or 7 • A warning will be given if the number appears invalid. <p>Use '[NONNHS]' for patients that reside in the UK, but do not have an NHS number.</p>	
1.2	Date of birth	dd/mm/yyyy	<p>Patients must be at least 18 years old. Date of birth may be entered numerically e.g. 01/03/1957 can be inputted as 1 3 57.</p>	<p>Date required.</p> <p>The web tool only allows patients that are:</p> <ul style="list-style-type: none"> ○ aged 18 years and over ○ aged under 115 years old at the date of assessment. <p>Cannot be a future date.</p>
1.3	Gender identity	Please enter the patient's gender as it appeared in the notes/referral information.		<p>Radio buttons five options:</p> <ul style="list-style-type: none"> • Male (including trans man) • Female (including trans woman) • Non-binary • Not known (not recorded/asked)

Generic Data				
Item No.	Question	Text under question	 Pop-up help note	Validation
				<ul style="list-style-type: none"> Not stated (person asked but declined to provide a response) Can select one option only.
1.3a	Is the patient's gender identity the same as at birth indicator?			Radio buttons four options: <ul style="list-style-type: none"> Yes – the person's identity is the same as their gender assigned at birth No – the person's identity is not the same as their gender assigned at birth Not known (not recorded/asked) Not stated (person asked but declined to provide a response)
1.4	Home postcode	Please enter the full postcode. For patients with no fixed abode use '[NFA]'	Permission has been given to facilitate case-mix adjustment and understand local referral trends.	Allows '[NFA]' for patients with no fixed abode.
1.5	Ethnicity		Permission has been given to collect data on ethnicity to facilitate case-mix adjustments and understand variances in clinical outcomes for different groups. The options listed align with NHSE ethnicity category codes.	Drop down list options: <ul style="list-style-type: none"> White British White Irish Any other White background White and Black Caribbean White and Black African White and Asian Any other mixed background Indian Pakistani Bangladeshi Any other Asian background


Generic Data				
Item No.	Question	Text under question	 Pop-up help note	Validation
				<ul style="list-style-type: none"> • Caribbean • African • Any other Black background • Chinese • Any other ethnic group • Not known (not recorded/asked) • Not stated (person asked but declined to provide a response) <p>Can select one option only</p>
1.6	Does this patient have a current mental illness or cognitive impairment recorded?		<p>It is not expected that services ask patients about their current mental health. Please answer this question based on the information recorded in the patient notes.</p> <p>'Other' should be used where the patients is considered to have a mental health illness or cognitive impairment but this does not appear in the options given.</p>	<p>Radio button options</p> <ul style="list-style-type: none"> • None • Anxiety • Depression • Severe mental illness • Dementia/mild cognitive impairment • Other • Not recorded <p>Select all that apply, or choose none / not recorded</p>


Generic Data				
Item No.	Question	Text under question	 Pop-up help note	Validation
1.7	What is the patient's primary respiratory condition?	<p>Pre/post thoracic surgery includes lung cancer/Lung Volume Recruitment/lung transplant.</p> <p>Pulmonary hypertension includes chronic thromboembolic pulmonary hypertension.</p>	Range of conditions included in BTS Oct 2023 clinical statement.	<p>Radio button options</p> <p>Can select one option only</p> <ul style="list-style-type: none"> • COPD • Asthma • Bronchiectasis • Interstitial lung disease • Long COVID • Pre/post thoracic surgery (including lung cancer/ LVR / lung transplant) • Pulmonary hypertension • Chronic heart failure • Other chronic respiratory disease
1.7a	If 'other chronic respiratory disease' selected, please enter the disease.			<p>Free text box to appear only if 'other chronic respiratory disease' selected for 1.7.</p> <p>Maximum 30 characters</p>
1.7b	Does the patient have any of the following other conditions?	COPD, asthma, bronchiectasis, interstitial lung disease, long COVID, pre/post thoracic surgery (including lung cancer/LVR/lung transplant), pulmonary hypertension, chronic heart failure, other chronic respiratory disease		<p>Radio button options</p> <ul style="list-style-type: none"> • No /none • COPD • Asthma • Bronchiectasis • Interstitial lung disease

Generic Data				
Item No.	Question	Text under question	 Pop-up help note	Validation
				<ul style="list-style-type: none"> • Long COVID • Pre/post thoracic surgery (including lung cancer /LVR/ lung transplant) • Pulmonary hypertension • Chronic heart failure • Other chronic respiratory disease • Not recorded <p>Select all that apply or choose 'none' or 'not recorded'</p> <p>Cannot select same condition as Q.1.7</p>
1.7c	If 'other chronic respiratory disease' selected, please enter the disease.			<p>Free text box to appear only if 'other chronic respiratory disease' selected for 1.7b.</p> <p>Maximum 30 characters</p>


Programme referral				
Item No.	Question	Text under question	 Pop-up help note	Validation
2.1	Date of receipt of referral	dd/mm/yyyy	For this question, please enter the date the referral letter was received by your programme, <u>not</u> the date of the letter.	<p>Look of answer options:</p> <p>--/--/----</p> <p><input type="checkbox"/> Not known</p>


Programme referral

Item No.	Question	Text under question	 Pop-up help note	Validation
		If this is not known, please leave the date box blank and select 'Not known'.	<i>This maps to the British Thoracic Society's 'Quality Standards for Pulmonary Rehabilitation in Adults' quality statements 1b and 3b (all subsequent references to these quality standards will solely list the relevant quality statement).</i>	Can enter date value <u>OR</u> select 'Not known' only. Date options: <ul style="list-style-type: none"> • Enable entry of: Date OR 'Not known' • Date should not be in the future Date should not be before 01/01/18
2.2a	Where was the patient referred from?		If the source of the referral was an integrated care setting, please select the option most relevant to the employer of the referrer e.g. primary or secondary care. <i>This maps to BTS quality statement 3.</i>	Radio buttons three options: Can select one option only. Where was the patient referred from? <ul style="list-style-type: none"> - Primary / community care - Secondary care - Self-referral
2.2b	If COPD is the patient's primary respiratory condition, at the time of referral was the patient stable or post-acute exacerbation of COPD?			Question to appear only if 'COPD' is selected for 1.7 Radio buttons, two options: <ul style="list-style-type: none"> • Stable • Post-acute exacerbation
2.2c	If patient was referred from primary / community care post treatment for AECOPD in hospital, what date was the patient discharged from hospital			Question to appear only if 'Primary / community care' selected for 2.2a AND 'Post-acute exacerbation' selected for 2.2b. Look of answer options: <ul style="list-style-type: none"> • __/__/_____ • Not known


Programme referral				
Item No.	Question	Text under question	 Pop-up help note	Validation
	following their admission for AECOPD?			<ul style="list-style-type: none"> • Patient was not admitted to hospital <p>Can enter date value <u>OR</u> select 'Not known' only OR patient was not admitted to hospital.</p> <p>Date options:</p> <ul style="list-style-type: none"> • Enable entry of: Date <u>OR</u> 'Not known' <u>OR</u> 'patient was not admitted to hospital' • Date should not be in the future
2.3	Date of initial Pulmonary Rehabilitation (PR) assessment appointment	dd/mm/yyyy Please enter the first date the patient was assessed with the view of enrolling them onto a PR programme. This may be an in-person assessment but could also be a telephone call during which there is a clinical interaction with a healthcare professional. Does not include telephone contact that is exclusively to book assessment. Does not include date offered, if patient DNAs or rearranges assessment.	<i>This maps to BTS quality statements 1b and 3b.</i>	Date required. Date options: <ul style="list-style-type: none"> • Cannot be before date in 2.1, if date is entered. • Cannot be in the future. Cannot be before 01/03/19

Key clinical information at time of assessment


Item No.	Question	Text under question	 Pop-up help note	Validation
What were the most recent available values for the following:				
3.1	What was the patient reported MRC (Medical Research Council) score at assessment	Give the score as reported by the patient at assessment or select 'Not assessed'.	<p>Grade 1 – Not troubled by breathlessness except on strenuous exercise.</p> <p>Grade 2 – Short of breath when hurrying or walking up a slight hill.</p> <p>Grade 3 – Walks slower than contemporaries on level ground because of breathlessness or has to stop for breath when walking at own pace.</p> <p>Grade 4 – Stops for breath after walking about 100 metres [109 yards] or after a few minutes on level ground.</p> <p>Grade 5 – Too breathless to leave the house or breathless when dressing or undressing.</p> <p><i>This maps to BTS quality statements 1a and 2.</i></p>	<p>Radio buttons six options:</p> <ul style="list-style-type: none"> • Grade 1 • Grade 2 • Grade 3 • Grade 4 • Grade 5 • Not assessed <p>Can select one option only.</p>

Assessment tests and questionnaires				
Item No.	Question	Text under question	 Pop-up help note	Validation
What exercise tests were recorded at initial assessment?				
4.1	Which walking test did you record during initial assessment?	Pick one walking test OR select 'No walking test conducted' OR 'No walking test conducted - assessment done remotely'.	<p><i>This maps to BTS quality statements 8 and 9.</i></p> <p><i>'No walking test conducted - assessment done remotely' should be selected for those patients whose walking test could not be completed due to the PR programme being conducted remotely.</i></p>	<p>Radio buttons four options:</p> <ul style="list-style-type: none"> Incremental shuttle walk test (ISWT) Six-minute walk test (6MWT) No walking test conducted No walking test conducted - assessment done remotely <p>Can select one option only.</p>
4.1a	What was the value in metres recorded for the first walking test?	Record as a whole number between 0 and 1020.	Record the distance completed (in metres) during the first test.	<p>Greyed out if 'No walking test conducted' OR 'no walking test conducted - assessment done remotely' selected for 4.1.</p> <p>If test selected, numeric value required.</p> <p>Numeric option must be:</p> <ul style="list-style-type: none"> a whole number only between 0 and 1020
4.1b	What was the value in metres recorded for the second walking test?	Record as a whole number between 0 and 1020.	Record the distance completed (in metres) during the second test. The second walk test must be completed before the PR programme starts. It is recommended that a minimum of 30 minutes should elapse between the two walk tests. (This is important to overcome the learning effect and evaluate the impact of rehab).	<p>Greyed out if 'No walking test conducted' OR 'no walking test conducted - assessment done remotely' selected for 4.1.</p> <p>If test selected at 4.1, radio buttons two options:</p> <p>Numeric option must be:</p> <ul style="list-style-type: none"> a whole number only between 0 and 1020 <p>Radio button</p>


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
			https://publications.ersnet.org/content/erj/44/6/1428#b80	<ul style="list-style-type: none"> A second walking test was not conducted Can select one option only.
4.2	Did you also record the Endurance shuttle walk test (ESWT)?	Only answer if ESWT was performed.	<i>This maps to BTS quality statements 8 and 9.</i>	Radio buttons two options: <ul style="list-style-type: none"> Yes No Can select one option only.
4.2a	If 'Yes', what was the value in seconds?	Record as a whole number between 0 and 1200.		Greyed out if 'No' selected for 4.2. If 'Yes' selected, numeric value required. Numeric option must be: <ul style="list-style-type: none"> a whole numbers only between 0 and 1200
Please indicate any health status questionnaires completed at initial assessment and provide values if recorded. Selection of disease specific health questionnaire to be decided by clinical team if appropriate for patient.				
4.3	- CRQ (Chronic respiratory questionnaire)	Please answer 'No' if no questionnaire conducted. Otherwise, enter a value between 1 and 7 for each score	The CRQ includes four areas: dyspnoea, fatigue, emotional function, and mastery. In each area, scores are obtained by adding the scores for the items that make up the area and dividing this by the number of items (the value can never therefore be greater than 7). <i>This maps to BTS quality statements 8 and 9.</i>	Radio buttons Options: <ul style="list-style-type: none"> Yes No If 'Yes' selected, enter a value between 1 and 7 for each of the following scores: <ol style="list-style-type: none"> Dyspnoea score Fatigue score Emotion score Mastery score Must enter a value for all options.


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
4.4	- CAAT Chronic Airways Assessment Test (formerly known as COPD Assessment Test (CAT))	Please answer 'No' if no CAT/CAAT conducted.	<i>This maps to BTS quality statements 8 and 9.</i>	Radio buttons Options: <ul style="list-style-type: none"> • Yes • No CAT/CAAT conducted If 'Yes' selected, enter a value between 0-40
4.5	- EQ5D (EuroQol- 5 Dimension)	Please answer 'No' if EQ5D questionnaire not completed. Otherwise, please complete the EQ5D elements. The EQ5D 'thermometer value': please enter a value between 0 and 100, where 100 means the best health and 0 means the worst possible health imaginable.	<i>This maps to BTS quality statements 8 and 9.</i>	Radio buttons Options: <ul style="list-style-type: none"> • Yes • No EQ5D questionnaire conducted If 'Yes' selected, please complete these EQ5D elements. a. Mobility <ul style="list-style-type: none"> • I have no problems in walking about • I have slight problems in walking about • I have moderate problems in walking about • I have severe problems in walking about • I am unable to walk about b. Self-care


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
				<ul style="list-style-type: none"> • I have no problems washing or dressing myself • I have slight problems washing or dressing myself • I have moderate problems washing or dressing myself • I have severe problems washing or dressing myself • I am unable to wash or dress myself <p>c. Usual activities</p> <ul style="list-style-type: none"> • I have no problems doing my usual activities • I have slight problems doing my usual activities • I have moderate problems doing my usual activities • I have severe problems doing my usual activities • I am unable to do my usual activities <p>d. Pain/ discomfort</p> <ul style="list-style-type: none"> • I have no pain or discomfort • I have slight pain or discomfort • I have moderate pain or discomfort • I have severe pain or discomfort • I have extreme pain or discomfort


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
				<p>e. Anxiety/ depression</p> <ul style="list-style-type: none"> • I am slightly anxious or depressed • I am moderately anxious or depressed • I am severely anxious or depressed • I am extremely anxious or depressed <p>f. Thermometer value Please enter a value between 0 and 100, where 100 means the best health and 0 means the worst possible health imaginable.</p>
4.6	<p>- Was an objective measure of lower limb muscle strength recorded at initial assessment?</p>	<p>A value for the strength test does not need to be entered.</p>	<p>Strength is assessed pre-PR to allow a tailored exercise prescription to be developed for each individual patient and to assess the impact of PR after completion. A validated measure of strength is required as an outcome measure. Lower limb strength</p> <ol style="list-style-type: none"> 1. Lower limb strength should be assessed pre- and post- PR. 2. Approaches to estimate a 1RM* strength/training load include the following calculations deploying a sub maximal approach. These can be useful in the field to estimate the training load 	<p>Radio buttons</p> <p>Options:</p> <ul style="list-style-type: none"> • Yes • No


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>for strength prescription as a % of the 1RM for both upper and lower limb. These calculations are most accurate when a weight is chosen that results in the maximum number of repetitions managed being close to 10. Leg weights that are strapped around the ankle can be used.</p> <p>It should be noted that this approach allows for a more accessible prescription of a training load.</p> <p>a) Brzycki Formula (1993) $1 \text{ RM}^* = (\text{weight lifted}) / [1.0278 - (\text{number of repetitions} \times 0.0278)]$ Eg $1 \text{ RM} = 5\text{kg} / [1.0278 - (10 \text{ reps} \times 0.0278)]$ $= 5 / 0.7498 = 6.6\text{kg}$ If the participant lifts 5kg 10 times before 'failing'.</p> <p>b) Epley formula (1985) $1 \text{ RM}^* = \text{weight lifted} [1 + (\text{number of repetitions} / 30)]$ Eg $1 \text{ RM} = 5\text{kg} [1 + (10/30)]$ $= 5 \times 1.3333 = 6.6 \text{ kg}$ If the participant lifts 5kg 10 times before 'failing'.</p> <p>c) 10 RM test Testing for a 10 RM is similar to that of the 1 RM test. A 10RM is the maximum</p>	


Assessment tests and questionnaires

Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>weight that can be lifted 10 times. Begin by allowing the participant to warm up with 10 repetitions with 50% of the estimated 10 RM. Then attempt a 10 RM lift at 60% to 80% of estimated maximum. It is desirable to achieve a 10 RM maximum on the next load increase if possible.</p> <p>*1RM = one-repetition maximum (one-rep max or 1RM) in weight training is the maximum amount of weight that a person can possibly lift for one repetition.</p> <p>3. Isometric muscle strength can also be assessed with sophisticated equipment, eg an isokinetic dynamometer; however this equipment is usually only located in research active sites. Alternatives include a strain gauge, or a hand-held dynamometer. Both are acceptable alternatives and are valid but require a minimum of 3 attempts to have a reproducible effort. For lower limb strength testing the healthcare professional needs to be able to offer resistance to the movement to ensure a valid measure.</p>	


Key information relating to the programme


Item No.	Question	Text under question	 Pop-up help note	Validation
5.1	Post assessment, was the patient enrolled onto a PR programme?	If a patient was not enrolled onto a PR programme, then you will not need to answer any further questions.	<p>If the patient was not enrolled onto PR after assessment on clinical grounds (e.g. co-morbidities, psycho-social problems, hospitalisation, death etc.) please record 'No - Clinically unsuitable'.</p> <p>If the patient declined an offer of PR (e.g. for personal, social, transport reasons) please record 'No - Patient choice'.</p> <p><i>This maps to BTS quality statements 1b and 3b.</i></p>	<p>Radio buttons three options:</p> <ul style="list-style-type: none"> • Yes • No – Clinically unsuitable • No – Patient choice <p>Can select one option only.</p>
5.1a	If 'Yes', enter start date	dd/mm/yyyy	If the patient was enrolled onto a PR programme, please enter the start date of the course.	<p>If 'Yes' selected for 5.1, date required.</p> <p>Date options:</p> <ul style="list-style-type: none"> • Cannot be before date entered in 2.1, if date is entered • Cannot be before date entered in 2.3 • Cannot be in the future
5.2	Was the patient enrolled on a centre-based or home-based PR programme?	Tick all that apply.	A centre-based PR programme is a PR programme which is actively supervised in a venue provided by the service, by an appropriate healthcare professional.	<p>Radio button, two options:</p> <ul style="list-style-type: none"> • Centre-based • Home-based <p>Can select all that apply.</p>


Key information relating to the programme

Item No.	Question	Text under question	 Pop-up help note	Validation
			Home-based includes any PR programme that is delivered in the patient’s home. This includes any home-based PR delivered: <ul style="list-style-type: none"> • In-person • Video calls • Phone calls • App (mobile or other) • Written communication (e.g. email) with health professional • Self-guided written material (e.g. printed material, website) 	
5.2a	If home-based, what was the method of provision?	Tick all that apply.		Grey out if ‘Centre-based’ is selected at 5.2. ‘Check box’ type if ‘Home-based’ selected for 5.2, four options: <ul style="list-style-type: none"> • In-person • Video calls • Phone calls • App (mobile or other) • Written communication (e.g. email) with health professional • Self-guided written material (e.g. printed material, website) Can select all that apply.
5.2b	If an app (mobile or other) was used to support PR,		Please confirm any apps used as part of the PR programme, including any that	Question to appear only if ‘App (mobile or other)’ selected for 5.2a three options, can select all that apply:


Key information relating to the programme

Item No.	Question	Text under question	 Pop-up help note	Validation
	please confirm the app used		were used in addition to other methods of provision. <i>This maps to Nice Guidance HTE18</i>	<ul style="list-style-type: none"> myCOPD SPACE Other <p>If other, please specify: Free text box max 30 characters</p>
5.3	Total number of supervised PR sessions scheduled	Please enter the total number of supervised sessions (centre or home-based) that were planned for this patient <u>at initial assessment</u> , as a whole number.	<p>A supervised PR session is a PR session which is actively supervised by the service, by an appropriate healthcare professional.</p> <p>The supervision must be structured and relate directly to the exercise completed by the patient as part of their prescribed PR programme.</p> <p><i>This maps to BTS quality statement 4.</i></p> <p>The evidence base is that programmes should last for a minimum of 6 weeks, not including assessments, supervised, and delivered twice weekly.</p>	<p>Numeric value required.</p> <ul style="list-style-type: none"> Whole numbers only <p>Must be between 1 – 50</p>
5.4	Total number of supervised PR sessions received		If the patient did not receive any supervised sessions in either category, please enter 0 (zero). If the patient dropped out before beginning PR or during the programme, then please record 0 or the relevant number of	<p>Look of answer options:</p> <p>a) Group sessions = __</p> <p>b) 1:1 sessions = __</p> <p>Numeric options:</p> <ul style="list-style-type: none"> Must be whole numbers only


Key information relating to the programme				
Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>sessions and record the drop-out reason in section 6.</p> <p>Do not include initial or discharge assessment.</p> <p><i>This maps to BTS quality statement 4.</i></p>	<ul style="list-style-type: none"> Options must be between 0 – 50

Key information at discharge				
Item No.	Question	Text under question	 Pop-up help note	Validation
6.1	Was a discharge assessment performed?	<p>If you answer 'No' to this question, you will be able to save the record as complete and will not need to complete the rest of the dataset.</p> <p>If the patient dropped out part way through the programme select the drop-out reason.</p> <p>If the patient completed the PR programme but did not attend the discharge assessment, select 'No - DNA'.</p>	<p><i>This maps to BTS quality statement 4.</i></p> <p>We are collecting mortality information to identify the safety profile of PR. Please see guidance below on answer options.</p> <ul style="list-style-type: none"> 'No – patient died during a PR session or as a consequence of participating in PR' – this may include a patient who dies during the session, or died as a consequence of an event that occurred 	<p>Radio buttons four options:</p> <ul style="list-style-type: none"> Yes No – drop-out – health reasons No – drop-out – patient choice No – DNA No – patient died during a PR session or as a consequence of participating in PR No – patient died for any other reason <p>Can select one option only.</p>


Key information at discharge

Item No.	Question	Text under question	 Pop-up help note	Validation
			during the programme - this may include an accident, fall or cardiovascular event) <ul style="list-style-type: none"> • 'No – patient died for any other reason' – patient died as a consequence of their respiratory disease or any other illness or event during the period of planned engagement with the PR service. 	
6.1a	If 'Yes', what was the date of the discharge assessment?	dd/mm/yyyy		If 'Yes' selected for 6.1, date required. Date options: <ul style="list-style-type: none"> • Cannot be before date in 5.1a • Cannot be in the future
6.1b	If 'Yes', was an individualised written discharge exercise plan provided for the patient?		The exercise plan should be co-produced by rehabilitation staff together with individuals completing the programme. <i>This maps to BTS quality statement 7.</i>	Enable if 6.1=Yes Radio buttons two options: <ul style="list-style-type: none"> • Yes • No Can select one option only.


Discharge tests

Item No.	Question	Text under question	 Pop-up help note	Validation
7.1	What was the patient reported MRC score at discharge?	Give the score as reported by the patient at assessment or select 'Not assessed.	<p>Grade 1 – Not troubled by breathlessness except on strenuous exercise.</p> <p>Grade 2 – Short of breath when hurrying or walking up a slight hill.</p> <p>Grade 3 – Walks slower than contemporaries on level ground because of breathlessness, or has to stop for breath when walking at own pace.</p> <p>Grade 4 – Stops for breath after walking about 100 metres [109 yards] or after a few minutes on level ground.</p> <p>Grade 5 – Too breathless to leave the house or breathless when dressing or undressing.</p> <p><i>This maps to BTS quality statements 1a and 2.</i></p>	<p>Enable if 6.1=Yes</p> <p>Radio buttons six options:</p> <ul style="list-style-type: none"> • Grade 1 • Grade 2 • Grade 3 • Grade 4 • Grade 5 • Not assessed <p>Can select one option only.</p>
7.2	Which walking test did you record during the discharge assessment?	You can only answer this question if an initial walking test (4.1) and discharge assessment was performed, and you can only choose the same test as recorded in 4.1.	<p><i>This maps to BTS quality statements 8 and 9.</i></p> <p><i>'No walking test conducted - assessment done remotely'</i> should be selected for those patients whose walking test could not be completed</p>	<p>Enable if 6.1=Yes</p> <p>Greyed out if 'No walking test conducted' OR 'no walking test conducted - assessment done remotely' is selected at 4.1.</p> <p>Radio buttons four options:</p> <ul style="list-style-type: none"> • Incremental shuttle walk test (ISWT)


Discharge tests

Item No.	Question	Text under question	 Pop-up help note	Validation
			due to the PR programme being conducted remotely.	<ul style="list-style-type: none"> Six-minute walk test (6MWT) No walking test conducted No walking test conducted - assessment done remotely <p>Can select one option only. Can only choose same test as recorded in 4.1 OR 'No walking test conducted' OR 'no walking test conducted - assessment done remotely'</p>
7.2a	What was the value in metres?	Record as a whole number between 0 and 1020.		Enable if 6.1=Yes Greyed out if 'No walking test conducted' OR 'no walking test conducted - assessment done remotely' selected for 7.2. If 'ISWT' or '6MWT' selected, numeric value required. Numeric option must be: <ul style="list-style-type: none"> a whole number only between 0 and 1020
7.3	Did you also record the ESWT at discharge?	Can only record as yes if yes recorded in 4.2.	<i>This maps to BTS quality statements 8 and 9.</i>	Enable if 6.1=Yes Radio buttons two options: <ul style="list-style-type: none"> Yes No <p>Can select one option only. Can only record as yes if yes recorded in 4.2.</p>


Discharge tests


Item No.	Question	Text under question	 Pop-up help note	Validation
7.3a	If 'Yes', what was the value in seconds?	Record as a whole number between 0 and 1200.		<p>Enable if 6.1=Yes</p> <p>Greyed out if 'No' selected for 7.3.</p> <p>If 'Yes' selected for 7.3, numeric value required.</p> <p>Numeric option must be:</p> <ul style="list-style-type: none"> a whole numbers only between 0 and 1200
<p>Please indicate any health status questionnaires completed at discharge and provide values if recorded. Selection of disease specific health questionnaire to be decided by clinical team if appropriate for patient.</p>				
7.4	- CRQ (Chronic respiratory questionnaire)	<p>Please answer 'No' if no questionnaire conducted.</p> <p>Otherwise, enter a value between 1 and 7 for each of the following scores:</p> <p>Note This section can only be completed if an initial CRQ questionnaire was completed (q4.3).</p>	<p>Scoring guidelines:</p> <p>In each domain, add the scores for those questions and divide by the number of questions in that domain.</p> <p><i>This maps to BTS quality statements 8 and 9.</i></p>	<p>Enable if 6.1=Yes</p> <p>Greyed out if 'No questionnaire conducted' is selected at 4.3.</p> <p>Radio buttons:</p> <ul style="list-style-type: none"> Yes No questionnaire conducted <p>If 'Yes' selected, numeric values required:</p> <ol style="list-style-type: none"> Dyspnoea score Fatigue score Emotion score Mastery score <p>Must enter a value for all options.</p>
7.5	CAAT Chronic Airways Assessment Test (formerly	Please answer 'No' if no questionnaire conducted.	<i>This maps to BTS quality statements 8 and 9.</i>	Enable if 6.1=Yes

Discharge tests


Item No.	Question	Text under question	 Pop-up help note	Validation
	known as COPD Assessment Test (CAT))	Note This section can only be completed if an initial CAT/CAAT score was completed (q4.4).		Greyed out if 'No CAT conducted' is selected at 4.4. Radio buttons: <ul style="list-style-type: none"> • Yes • No CAT/CAAT conducted If 'Yes' selected, numeric values required: Enter single score between 0-40
7.6	- EQ5D (EuroQol- 5 Dimension)	Please answer 'No' if questionnaire not completed. Otherwise, please complete these EQ5D elements. Note This section can only be completed if an initial EQ5D questionnaire was completed (q4.5). EQ5D 'thermometer value: Please enter a value between 0 and 100, where 100 means the best health and 0 means the worst possible health imaginable.	<i>This maps to BTS quality statements 8 and 9.</i>	Enable if 6.1=Yes Greyed out if 'No EQ5D conducted' is selected at 4.5. Radio buttons: <ul style="list-style-type: none"> • Yes • No EQ5D conducted If 'Yes' selected, please complete these EQ5D elements. <p>a. Mobility</p> <ul style="list-style-type: none"> • I have no problems in walking about • I have slight problems in walking about • I have moderate problems in walking about • I have severe problems in walking about • I am unable to walk about

Discharge tests


Item No.	Question	Text under question	 Pop-up help note	Validation
				<p>b. Self-care</p> <ul style="list-style-type: none"> • I have no problems washing or dressing myself • I have slight problems washing or dressing myself • I have moderate problems washing or dressing myself • I have severe problems washing or dressing myself • I am unable to wash or dress myself <p>c. Usual activities</p> <ul style="list-style-type: none"> • I have no problems doing my usual activities • I have slight problems doing my usual activities • I have moderate problems doing my usual activities • I have severe problems doing my usual activities • I am unable to do my usual activities <p>d. Pain/ discomfort</p> <ul style="list-style-type: none"> • I have no pain or discomfort • I have slight pain or discomfort • I have moderate pain or discomfort • I have severe pain or discomfort

Discharge tests				
Item No.	Question	Text under question	 Pop-up help note	Validation
				<ul style="list-style-type: none"> I have extreme pain or discomfort <p>e. Anxiety/ depression</p> <ul style="list-style-type: none"> I am slightly anxious or depressed I am moderately anxious or depressed I am severely anxious or depressed I am extremely anxious or depressed <p>f. Thermometer value</p> <p>Please enter a value between 0 and 100, where 100 means the best health and 0 means the worst possible health imaginable.</p>
7.7	- Was an objective measure of lower limb muscle strength recorded at discharge assessment?	A value for the strength test does not need to be entered.	<p>A validated measure of strength is required as an outcome measure.</p> <p>Lower limb strength</p> <ol style="list-style-type: none"> Lower limb strength should be assessed pre- and post- PR. Approaches to estimate a 1RM* strength/training load include the following calculations deploying a sub maximal approach. These can be useful in the field to estimate the training load for strength prescription as a % of the 1RM for both upper and lower limb. These calculations are most accurate 	<p>Enable if 6.1=Yes</p> <p>Radio buttons</p> <p>Options:</p> <ul style="list-style-type: none"> Yes No

Discharge tests

Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>when a weight is chosen that results in the maximum number of repetitions managed being close to 10. Leg weights that are strapped around the ankle can be used.</p> <p>It should be noted that this approach allows for a more accessible prescription of a training load.</p> <p>a) Brzycki Formula (1993) $1 \text{ RM}^* = (\text{weight lifted}) / [1.0278 - (\text{number of repetitions} \times 0.0278)]$ Eg $1 \text{ RM} = 5\text{kg} / [1.0278 - (10 \text{ reps} \times 0.0278)]$ $= 5 / 0.7498 = 6.6\text{kg}$ If the participant lifts 5kg 10 times before 'failing'.</p> <p>b) Epley formula (1985) $1 \text{ RM}^* = \text{weight lifted} [1 + (\text{number of repetitions} / 30)]$ Eg $1\text{RM} = 5\text{kg} [1 + (10/30)]$ $= 5 \times 1.3333 = 6.6 \text{ kg}$ If the participant lifts 5kg 10 times before 'failing'.</p> <p>c) 10 RM test Testing for a 10 RM is similar to that of the 1 RM test. A 10RM is the maximum weight that can be lifted 10 times. Begin by allowing the participant to warm up with 10 repetitions with 50%</p>	

Discharge tests

Item No.	Question	Text under question	 Pop-up help note	Validation
			<p>of the estimated 10 RM. Then attempt a 10 RM lift at 60% to 80% of estimated maximum. It is desirable to achieve a 10 RM maximum on the next load increase if possible.</p> <p>*1RM = one-repetition maximum (one-rep max or 1RM) in weight training is the maximum amount of weight that a person can possibly lift for one repetition.</p> <p>3. Isometric muscle strength can also be assessed with sophisticated equipment, eg an isokinetic dynamometer; however this equipment is usually only located in research active sites. Alternatives include a strain gauge, or a hand-held dynamometer. Both are acceptable alternatives and are valid but require a minimum of 3 attempts to have a reproducible effort. For lower limb strength testing the healthcare professional needs to be able to offer resistance to the movement to ensure a valid measure.</p>	