National COPD Audit Programme



Pulmonary rehabilitation: An exercise in improvement

National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Clinical and organisational audits of pulmonary rehabilitation services in England and Wales 2017

Benchmarked key indicators for pulmonary rehabilitation services April 2018

Prepared by:



Benchmarked key indicators for pulmonary rehabilitation (PR) services

The process and outcome performance indicators identified in the dashboard (Table 2) have been chosen as they are:

- objective and easily recordable,
- map to accepted quality standards (Appendix A)
- have been discriminatory in the current audit cycle
- can be quantitatively compared with national data.

The detailed rationale for each process and outcome measure is provided in the table below:

Benchmarking dashboard performance indicator	Rationale
Process items	
Start date offered within 90 days of receipt (if known)	 Poor current performance nationally. Maps to QS1. Improvement is likely to enhance patient outcomes, particularly PR uptake rates.
Patients undertaking practice exercise test (for incremental shuttle walk test (ISWT) or 6-minute walk test (6MWT) only if one test done; for both if both tests done)	 Poor current performance nationally. Maps to QS8. Performance of practice tests linked to better uptake and outcome in sub-analysis of 2015 audit.^a Likely to improve clinical outcomes through more accurate exercise prescription.
Patients with a discharge assessment who received a written discharge exercise plan	 Poor current performance nationally. Maps to QS7. Improvement will increase the likelihood of benefits of PR being maintained in longer term.
Outcome items	
Patients assessed for PR who go on to have a discharge assessment	 Substantial numbers of patients currently do not complete PR. Improvement in completion rates would extend benefits of PR to larger number of patients. Could reduce subsequent hospitalisation rates as suggested by 2015 outcomes report.^b

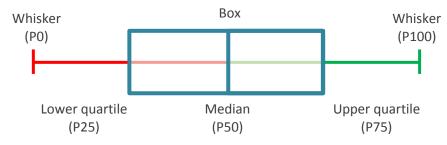
^a Hakamy A, McKeever TM, Steiner MC, Roberts CM, Singh SJ, Bolton CE. The use of the practice walk test in pulmonary rehabilitation program: National COPD Audit Pulmonary Rehabilitation Workstream. *Int J Chronic Obstr Pulm Dis* 2017;12:2681–86. doi:10.2147/COPD.S141620.

^b Steiner M, McMillan V, Lowe D, Saleem Khan M, Holzhauer-Barrie J, Van Loo V, Roberts CM.*Pulmonary rehabilitation: Beyond breathing better. National Chronic Obstructive Pulmonary Disease (COPD) Audit Programme: Outcomes from the clinical audit of pulmonary rehabilitation services in England 2015.* National supplementary report. London: RCP, December 2017.

	• Causes of non-completion are multifactorial and therefore will prompt quality improvement activity across the system.
At least one exercise minimal clinically important differences (MCID) achieved for ISWT/6MWT	 Key patient-centred measure of outcome. May identify services where care processes are suboptimal. Maps to QS8.
At least one health status MCID achieved	 Key patient-centred measure of outcome. May identify services where care processes are suboptimal. Maps to QS8.

Table 1 illustrates the cut-points for the median and interquartile ranges for the metrics that have been used in the benchmarking table for all services (Table 2). These values have been represented graphically as a box and whisker plot (Figure 1). To create the 'box', data for each key indicator were ordered numerically from smallest (whisker; P0), to largest (whisker; P100) to find the median (P50) – the middle point of the values, which divide the data into two halves. These two halves were then divided in half again, to identify the lower quartile(P25) and the upper quartile (P75).

Figure 1. Box and whisker plot



The colour codes refer to the quartile in which each programme lies, as follows:

ED = result below the lower quartile for that metric

LIGHT RED = result equal or above the lower quartile, but below the median for that metric

LIGHT GREEN = result equal or above the median, but below the upper quartile (UQ) for that metric

GREEN = result equal or above the UQ for that metric

GREY = sample too small for meaningful interpretation (< 10 cases)

'Audit cases' refers to the case ascertainment for PR services which was derived from the total number of cases submitted by services to the clinical audit divided by the number of eligible patients as reported by services in question 7.1^c of the organisational audit dataset. Please note, the method of services self-reporting their total case numbers was used as no other third-party data source was available.

'De' in Table 2 refers to the number of cases submitted to the audit for the metric at hand (ie the denominator). Where this is fewer than five cases the figure and corresponding percentage has been supressed and replaced by a '<5' and a '-' in the percentage column. These supressed figures have however been included when calculating the median and intequartile range values presented in Table 1.

Table 1: The median and interquartile ranges for the metrics used in the benchmarking

				Process items			Outcome items	
		Audit cases ^d	Start date offered within 90 days of receipt	Patients undertaking practice exercise test ^e	Patients with a discharge assessment who received a written discharge exercise plan	Patients assessed for PR who go on to have a discharge assessment	At least one exercise MCID achieved for ISWT/6MWT	At least one health status MCID achieved
N	Services with valid records	180	184	181	184	182	178	175
	Services with missing records	4	0	3	0	2	6	9
Median and	4th quartile							≤ 46
interquartile	3rd quartile	64 to 84	31 to 62		70 to 98	55 to 64	52 to 62	47 to 60
ranges % ^f	2nd quartile	85 to 95	63 to 87	1 to 76	99	65 to 74	63 to 74	61 to 72
	Top quartile	96 to 100	88 to 100	77 to 100	100	75 to 100	75 to 100	73 to 100

Identified in the table above are the median and interquartile ranges for each of the metrics. These have been highlighted in the colours that are used in the dashboard of Table 2.

^c How many patients were eligible for this audit? How many patients with a primary respiratory diagnosis of COPD attended an assessment appointment (or if no assessment appointment, attended their first session of PR) between 3 January 2017 and 31 March 2017.

^d Number of patients entered to the clinical audit/number of patients eligible entered in the organisational audit.

^e For ISWT or 6MWT only if one test done; for both if both tests done.

^f The cut-points for the third and fifth indicator suggest excessive clusterings at the extremes.

					Proces	s items					Outcom	e items		
Service name	Audit cases ^g % ^j n/N ^k		within 9	e offered 0 days of f known)	Pation under practice test (for 6MWT on test done if both te	taking exercise ISWT or nly if one ; for both	assessm received discharge	arge ent who a written	for PR w to have a	assessed ho go on discharge sment	exercis achiev	st one e MCID ved for 5MWT ^h	At least o status achie	MCID
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60			6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85	85					70					
Abertawe Bro Morgannwg University Health Board PR Service	-	38/		36		32	85	26	68	38	62	21	36	25
ABUHB PR	85	11/13	22	9		11	0	9	82	11	89	9	100	9
ACERs – Respiratory Medicine	87	33/38	88	32	97	33	94	16	48	33		13	43	14
Aintree PR Programme	100	13/13	100	10	92	12	-	<5	31	13	-	<5	-	<5
Airedale and Wharfedale PR Service	75	15/20	47	15		15	100	10	67	15		10	60	10
Anglian Community PR Service	93	40/43		35	87	39	100	29	73	40		27	86	28
ARAS Team		34/60	58	31		32	100	21	62	34	71	21	48	21
Atrium Health Limited	84	27/32	78	27	71	7	100	12	44	27	58	12	63	8
Barking and Dagenham PR Service		8/15	0	8	0	7	0	7	88	8	83	6	86	7
Barnet COPD Respiratory Service	79	44/56	70	44	76	38	100	31	70	44		27	43	30

Table 2: All PR services that participated in the 2017 clinical and organisational audits, and their benchmarking against the selected metrics

^g Number of patients entered to the clinical audit/number of patients eligible entered in the organisational audit.

^h For the ISWT the MCID is 48 metres and for the 6MWT the MCID is 30 metres.

¹ For the SGRQ the MCID was taken as a reduction of 4 points in the total score, for the CRQ the MCID was an increase of 0.5 points in the average of the four domain scores, and for the CAT the MCID was a reduction of 2 points.

¹ For instances where the number of cases entered by services to the clinical audit was greater than that of the number of cases eligible reported in the organisational, the percentage has been capped at 100% as the figure provided in the organisational audit has been assumed to be an error (given that it was inputted prior to the end of the clinical audit).

^k For instances in this column where a '--' appears as the denominator this is due to services not completing question 7.1 of the organisational audit dataset.

			Process items								Outcom	ne items		
Service name	Au	dit cases ^g	Start dat within 9 receipt (i		under practice test (for 6MWT o test done	ents taking exercise ISWT or nly if one ;; for both sts done)	disch assessm received discharge	s with a harge ent who a written e exercise an	Patients for PR w to have a assess	ho go on	exercis achiev	st one e MCID ved for 5MWT ^h		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Bassetlaw PR programme		21/95	100	21		21	100	19	90	21	53	19	68	19
BCUHB PR Service – Centre	70	14/20		14		14	100	11	79	14	64	11	91	11
BCUHB PR Service – East	64	46/72		44		41	100	33	72	46	88	32	73	33
Bedford Hospital PR	96	103/107	96	95		94	100	50		103	64	44	56	50
BEET: Breathing Exercise Education Training		30/54	90	30	-	<5	96	24	80	30	-	<5	92	24
Berkshire East PR	97	38/39	33	36	33	36	100	26	68	38	88	24	68	25
Berkshire West PR	100	49/49	41	49		49	100	42	86	49		42	62	42
Birmingham Community Healthcare – PR Service	-	18/	94	18	24	17	92	13	72	18	85	13	77	13
Blackburn PR Programme	87	41/47	92	36	92	36	96	25	61	41	96	25	48	21
Bournemouth and Christchurch PR	79	61/77	100	51	91	56	93	41	67	61	54	41	60	40
Breathing Space	100	53/53	44	52	100	52	100	32	60	53		32	44	32
Brent PR Service	85	28/33	100	26	100	26	100	16	57	28	73	15	45	11
Bristol Community Health Respiratory Team	87	96/110	55	83	69	64	100	47		96	93	42	55	42
Bromley Healthcare PR	78	51/65	54	50		50	97	38	75	51	66	38	41	37
Buckinghamshire PR Services	81	82/101	44	82	0	75		68	83	82	43	58	70	61
C&P NHST Community Respiratory Team/PR	39	13/33	46	13	36	11	0	13	100	13	54	13	31	13

				Process items							Outcom	e items		
Service name	Au	Audit cases ^g		e offered 0 days of f known)	under practice test (for 6MWT o test done	ents taking exercise ISWT or nly if one e; for both ests done)	disch assessm received discharge	s with a harge ent who a written e exercise an	for PR w to have a	assessed ho go on discharge sment	exercis	st one e MCID ved for 5MWT ^h		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Calderdale PR Service	100	38/37	38	34	0	37	90	21	55	38	52	21	80	20
Cambridgeshire PR Programme	100	84/84	90	84	0	77	93	54	64	84		51	50	54
Camden Community Respiratory Team	64	35/55	94	35	88	34	100	26	74	35	65	26	64	25
Cannock Chase PR Programme		27/52	100	24	0	27	88	17	63	27	88	16	82	17
Cardiac/PR & Community COPD Team	82	37/45	94	33	77	31	100	26	70	37	88	25	73	26
Carmarthenshire PR Programme		22/35		19	0	14	100	19	86	22	69	16	87	15
Central Cheshire PR Service	83	30/36	47	30	0	30	100	27	90	30	63	27	41	27
Central Manchester Community Service	79	37/47	84	31	0	24	100	17		37	80	15	69	16
Chelsea and Westminster Hospital PR	88	15/17	100	11	0	14	44	9	60	15	56	9	67	9
City Healthcare PR Programme	-	50/	36	39	81	31		15		50		13	62	13
Community Cardio-Respiratory Service	90	52/58	87	52	84	49	100	31	60	52	69	29	61	28
COPD & Heart Failure North		27/48	7	27	100	27	94	18	67	27	61	18	27	15
COPD Brighton & Hove		28/52	37	27	96	27	77	13		28	54	13	62	13
COPD Coastal Service		11/18		11	100	11	71	7	64	11	67	6	57	7
COPD Team Carlisle	100	44/44	36	44	24	41	94	31	70	44		25	54	28
Copeland & Allerdale Community	90	43/48		42	100	42		20		43		20	22	18

				Process items							Outcom	e items		
Service name	Au	dit cases ^g	within 9	e offered 0 days of f known)	under	nly if one ; for both	disch assessm received discharge	s with a harge ent who a written e exercise an	for PR w to have a	assessed ho go on discharge sment				one health 6 MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
PR Programme														
Countywide COPD Team	80	69/86	78	64	2	66	100	48	70	69	79	48	68	47
Craven PR Service	100	10/10	90	10		10	100	9	90	10	67	9	44	9
Croydon PR Programme	90	37/41	61	28		24	80	15		37	79	14	85	13
CSH Surrey PR Programme	100	35/35		33		35	100	30	86	35	83	30	73	30
DDES PR Programme		41/76	84	38		39		29	71	41	69	29	64	14
Doncaster Community Respiratory Services – PR	100	85/84	68	75		75	23	31	36	85	57	28	44	25
Dorset County Hospital PR Service	87	26/30	92	24		24	94	17	65	26	88	16	53	17
Dorset Healthcare PR Programme	100	53/50	84	44		42	100	29	55	53	56	27	66	29
Dudley PR Programme	93	65/70		64	66	64	100	45	69	65	56	45	78	45
Ealing PR Service	84	41/49	97	38	83	41	100	28	68	41	89	28	89	28
East Lancashire Hospitals PR Programme	51	94/184	46	76	1	81	91	32	34	94	80	30	-	<5
East Riding PR Programme	79	31/39		29		22		20	65	31		17	50	18
Enfield Respiratory Service	90	37/41	55	22	48	27		16		37	67	15	67	15
First Community Respiratory Team		10/17	50	10	100	10	100	8	80	10	75	8	-	<5
Furness Respiratory Care Team	70	7/10	14	7	0	7	100	6	86	7	-	<5	83	6
Gateshead Community PR	64	25/39	52	25		22	100	16	64	25	81	16	69	16

					Proces				Outcom	e items				
Service name	Audit cases ^g		within 9	e offered 0 days of f known)	under practice test (for 6MWT of test done	ents taking exercise ISWT or nly if one s; for both sts done)	disch assessm received discharge	s with a harge ent who a written e exercise an	for PR w to have a	assessed ho go on discharge sment	exercis	st one e MCID ved for 5MWT ^h		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60			6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Gateshead Foundation Trust PR	67	20/30	100	17	0	11	-	<5		20	-	<5	-	<5
GEH PR Physiotherapy	100	18/18	67	18	0	18	75	12	67	18		12	55	11
Glenfield and Leicester Hospitals PR Programme	70	98/140	81	62	69	64	97	31	32	98	47	30	72	25
Glenroyd Medical PR Service		27/61	100	16	0	19		15	56	27	67	15	57	7
Greater Huddersfield PR Service	100	10/10		10	0	9	100	6	60	10	100	6	-	<5
Greenwich PR		20/39	100	15	100	15	100	13	65	20	62	13	-	<5
Halton PR service	100	48/44	43	47	13	48	100	29	60	48	62	29	55	29
Harefield PR Unit	94	109/116	100	109	99	109	100	74	68	109	58	74	81	73
Harrogate District Hospital	95	20/21	63	19	5	20	100	12	60	20	75	12	50	12
Harrow COPD Respiratory Service	100	21/21	95	21	100	21	100	20	95	21	65	17	60	20
Havering PR programme	84	46/55		46	91	46	90	21		46	100	21	90	20
Healthy Lives PR Programme		17/27		17	0	17		11	65	17	91	11	82	11
HEFT PR Programme	89	67/75		64	3	66		39	58	67	74	39	63	35
Herefordshire PR Programme	94	15/16	0	8	7	15	100	9	60	15	63	8	63	8
Hope Street Specialist Service	94	59/63	79	58	0	53	100	34	58	59	53	34	82	34
IMPACT Team	84	27/32	38	26	0	25	100	21	78	27		20	26	19
Integrated Community Respiratory Team East Cornwall (ICRTEC)	100	25/24	36	25	76	25	100	14	56	25	79	14	29	14

					Proces					Outcom	e items			
Service name	Au	Audit cases ^g		e offered 0 days of if known)	under practice	exercise ISWT or nly if one ; for both	disch assessm received discharge	ent who a written	for PR w to have a	assessed ho go on discharge sment	exercis	st one e MCID red for 5MWT ^h	status	ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60			6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Kent Community Health PR Service	75	152/202		135	99	135	94	108	71	152		108	61	108
King's College Hospital PR Team	76	38/50	34	38	3	37	94	18		38	67	18	47	17
Kirklees PR Programme	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5
Knowsley Community Respiratory Service	50	43/86	75	40	26	38	100	18	42	43	79	14	69	16
Lancashire Clinic Based Services	85	51/60	70	50	20	5	97	29	57	51	82	28	76	17
Leeds Respiratory – PR (Long Term Conditions)		37/86	39	33		35	100	29	78	37	59	27	37	27
Leicestershire Community PR Programme	-	66/	32	65	75	57		44	67	66	58	43	48	44
Lewisham LEEP PR Programme	88	56/64	94	52		55	100	28		56	75	28	36	28
Lincolnshire County Wide PR Service	77	112/146		112	79	112	89	82	73	112	46	82	62	81
Liverpool PR programme		85/136	88	74		73		40		85	53	30	-	<5
Livewell SW Community Respiratory Service	94	46/49	21	42		44		23		46	70	23	41	22
Lung Exercise & Education Programme (LEEP)	91	21/23	62	21	100	21	100	16	76	21	81	16	81	16
Luton & Dunstable University Hospital PR Service	94	59/63	67	58	0	54	97	35	59	59	60	35	57	35
Luton Community Respiratory Service	52	11/21	64	11	0	8	0	7	64	11	-	<5	43	7

					Proces	s items					Outcom	ne items		
Service name	Au	dit cases ^g	Start dat within 9 receipt (i		under practice	; for both	disch assessm received discharge		for PR w to have a	assessed ho go on discharge sment	exercis achiev	st one e MCID ved for 5MWT ^h		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Manchester Hospital based PR	100	11/9	82	11		11	-	<5		11	-	<5	-	<5
Mansfield and Ashfield Respiratory Service		14/51	93	14		14	100	13	93	14	55	11	38	13
Medway Community Healthcare Community Respiratory Team		33/55	94	33	100	33		20	61	33	53	19	75	20
Mid West North Cornwall PR Programme	58	29/50		26	25	28		16	55	29	71	14	45	11
Milton Keynes Community PR Service	87	27/31		26		20	100	18	67	27	100	11	76	17
Milton Keynes Hospital PR Programme	83	15/18	93	14		13	-	<5		15	-	<5	-	<5
Musgrove Park PR Programme	77	10/13	40	10		10	100	9	90	10	22	9	22	9
My Therapy Services	95	79/83		78	100	75	100	35		79		35	77	35
Newark and Sherwood Respiratory Service	84	16/19		16	100	16	100	12	75	16	75	12	42	12
Newcastle PR	94	45/48	84	43		43	92	25	56	45	88	25	74	23
Newport PR	100	16/16	69	16	100	16	100	16	100	16		16	87	15
Norfolk and Norwich PR Service	85	17/20	94	17		17		17	100	17	-	<5	64	11
Norfolk Community PR Service	99	124/125	74	123		120	100	85	69	124	79	77	64	85
North Bristol PR Service	96	44/46	100	43		44	100	32	73	44		28	78	32
North Cumbria Hospitals PR Programme	57	12/21	-	<5	-	<5	-	<5	8	12	-	<5	-	<5

				Process items							Outcom	e items		
Service name	Au	Audit cases [®]		e offered 0 days of f known)	under practice test (for 6MWT of test done	ents taking exercise ISWT or nly if one s; for both sts done)	disch assessm received discharge	s with a harge ent who a written e exercise an	for PR w to have a	assessed ho go on discharge sment	exercis	st one e MCID red for 5MWT ^h		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
North Devon PR Service	100	25/23		25		25	100	22	88	25	62	21	55	22
North Durham PR Programme	75	44/59	86	44		41	97	33	75	44		30	52	27
North Somerset PR	100	45/44	33	43		45	100	28	62	45		28	79	28
North Tees and Hartlepool Foundation Trust PR Service	100	169/169	75	143		136	100	84	50	169	72	71	56	59
North West Wales PR service	80	44/55		41		40		33	75	44	63	32	42	31
Northumbria Healthcare PR Service	90	100/111	93	74	64	77	85	60	60	100	71	51	78	54
Nottingham Integrated Respiratory Service	100	71/70	83	69	66	71	100	42	59	71	52	42	54	41
Nottingham North and East Adult Community Services	71	20/28		20	100	19	95	19	95	20		19	74	19
Nottingham West PR		14/36	100	14		14		11	79	14	82	11	45	11
NW Surrey Respiratory Care Team	100	11/11		11	100	11	100	7	64	11	-	<5	100	6
Oxfordshire PR Service	86	96/111	48	96	1	76		74	77	96	73	59	49	73
PACE Wiltshire Community PR Programme	90	19/21		19		17	95	19	100	19		15	42	19
Papworth Hospital PR Programme	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5
Pembrokeshire PR Programme	90	19/21		19	63	19	100	11	58	19	82	11	73	11
Pennine Care Community PR Team	43	6/14	17	6	0	6	-	<5	67	6	-	<5	-	<5
Pennine Lung Service	77	27/35	58	26	8	26	93	15	56	27	71	14	43	14

					Proces	s items					Outcom	e items		
Service name	Au	dit cases ^g	Start dat within 9 receipt (i		Pati under practice test (for 6MWT of test done if both te	exercise ISWT or nly if one ; for both	disch assessm received discharge	s with a harge ent who a written e exercise an	for PR w to have a	assessed ho go on discharge sment	exercis	ed for		ne health MCID eved ⁱ
	% ^j	n/N ^k	%	% De		De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60			6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Pennine PR		16/31	63	16	0	16	100	14	88	16	79	14	43	14
Peterborough & Stamford Hospitals NHS Foundation Trust PR	70	26/37	23	26	0	24	100	13		26	75	12	33	12
Prince Charles Hospital PR Programme	100	20/19	87	15	0	15	-	<5	25	20	-	<5	-	<5
PR – St Richards Hospital	90	35/39	97	31	91	34	100	26	74	35	77	26	58	26
PR Gloucestershire Respiratory Team	93	69/74	28	69	3	69	4	52	75	69	52	52	65	51
PR HCT	98	122/124	54	121	14	120	99	79	65	122	55	77	55	77
PR Service	69	22/32		22	0	19	90	21	95	22	76	21	71	21
PR Service Fylde and Wyre	100	46/46	52	46	0	46	100	27	59	46	74	27	74	27
PR Service- Redbridge	81	22/27	74	19	0	17	100	16	73	22		12	56	16
PR Stockport	98	41/42		36	0	40	100	27	66	41	67	27	47	19
Regional East Sussex Pulmonary Service (RESPS)		21/50	42	19	56	16	100	14	67	21		14	64	14
Restart Team Northampton General Hospital	64	41/64	72	39	3	39	100	32	78	41	52	31	33	30
Richmond Respiratory PR Programme	100	27/26	90	21	-	<5	0	17	63	27	-	<5	53	17
Rocket Team	93	124/134	92	122	0	35	82	72	58	124		18	64	50
Royal Brompton PR Service		2/18	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5

			Process items						Outcome items						
Service name	Audit cases ^g		Start date offered within 90 days of receipt (if known)		Patients undertaking practice exercise test (for ISWT or 6MWT only if one test done; for both if both tests done)		Patients with a discharge assessment who received a written discharge exercise plan		Patients assessed for PR who go on to have a discharge assessment		At least one exercise MCID achieved for ISWT/6MWT ^h		At least one health status MCID achieved ⁱ		
	% ^j	n/N ^k	%	De	%	De	%	De	%	De	%	De	%	De	
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169	
National QI aim	100		85		100				70						
Royal Devon & Exeter Hospital PR Programme		7/14	86	7	0	7	100	7	100	7	100	7	29	7	
Royal Free Hospital PR		1/8	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5	
Royal Glamorgan Hospital PR Programme	75	9/12	-	<5	0	7	-	<5	0	9	-	<5	-	<5	
Royal Surrey PR Programme	98	39/40	78	37	100	38	87	30	77	39		29	-	<5	
Royal United PR Programme	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5	-	<5	
Rushcliffe Cardio-respiratory service	100	24/21	58	24	96	24	94	18	75	24	56	16	50	18	
S&SOT Community Respiratory Team	87	191/219	65	182	0	182		109	57	191	90	106	66	109	
Salford's Breathing Better PR Programme	90	55/61	100	53	26	50	100	21	38	55	76	21	71	21	
Sandwell and West Birmingham Community Respiratory Service	93	25/27	72	25	100	25	83	18	72	25	71	17	50	18	
SEPT PR Programme		24/58	63	24		24		21	88	24		21	74	19	
Sheffield Community PR Service	83	112/135	84	105		110	100	62	55	112	57	60	63	32	
Shropshire PR	94	67/71	73	64		62	95	42	63	67	74	38	64	42	
Solent Hampshire PR Programme	75	65/87	68	60		60	98	50	77	65	62	50	64	50	
Solent Portsmouth PR Programme		21/38	35	20		20	100	16	76	21	75	16	69	16	
Solihull Community Respiratory Team	100	27/25	54	24	28	25	33	21	78	27	67	21	57	14	

					Proces	s items		Outcome items						
Service name	Audit cases ^g		Start date offered within 90 days of receipt (if known)		Patients undertaking practice exercise test (for ISWT or 6MWT only if one test done; for both if both tests done)		Patients with a discharge assessment who received a written discharge exercise plan		Patients assessed for PR who go on to have a discharge assessment		At least one exercise MCID achieved for ISWT/6MWT ^h		At least one health status MCID achieved ⁱ	
	% ^j	n/N ^k	%	De	%	De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Solway Community PR Programme	100	10/10	22	9	89	9	83	6	60	10	33	6	67	6
South Doc Community PR Service	78	64/82	93	55		64	100	21		64	62	21	62	21
South Gloucestershire PR	71	12/17	100	12	83	12	56	9	75	12	50	8	78	9
South Lakes Community Respiratory Service		8/21	50	8	100	8	-	<5	63	8	-	<5	-	<5
South Manchester PR Programme		14/50	86	14	-	<5	100	10	71	14		10	29	7
South Tees PR Service	100	77/50	70	77		75		42	55	77	66	41	45	42
South Tyneside PR Programme (Acute)		31/51		30		26	93	14	45	31	54	13	64	11
South Warwickshire PR Programme	100	26/26		26		26	100	18	69	26	72	18	61	18
South West Surrey Respiratory Care Team	100	10/9		10	100	10	100	7	70	10	-	<5	57	7
Southampton Integrated COPD Team PR Programme		52/90	86	51	90	51	100	35	67	52	78	32	53	32
Southend PR Programme	98	58/59	66	56		58		40	69	58	69	39	46	37
Southport and Ormskirk Hospital PR service	95	20/21	90	20		13	0	9		20	13	8	50	8
St Mary's Hospital PR Programme	91	30/33	86	29		29	88	24	80	30	71	24	52	23
St Thomas' Hospital PR programme	94	63/67	52	52	79	57	100	24		63	55	22	64	22
St Helens PR Service	86	51/59	71	48		48	100	27		51	-	<5	70	27
Stafford PR Programme	72	18/25	94	17		18	100	18	100	18	72	18	61	18

					Proces	s items		Outcome items						
Service name	Audit cases ^g		Start date offered within 90 days of receipt (if known)		Patients undertaking practice exercise test (for ISWT or 6MWT only if one test done; for both if both tests done)		Patients with a discharge assessment who received a written discharge exercise plan		Patients assessed for PR who go on to have a discharge assessment		At least one exercise MCID achieved for ISWT/6MWT ^h		At least one health status MCID achieved ⁱ	
	% ^j	n/N ^k	%	De	%	De	%	De	%	De	%	De	%	De
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169
National QI aim	100		85		100				70					
Suffolk PR Team	100	97/82	62	95	63	82	90	61	63	97	61	59	58	60
Sunderland Community PR Programme		13/42	92	13	0	9	-	<5		13	-	<5	-	<5
Tier 2 Respiratory Service	100	24/24		21		17	100	13		24	62	13	69	13
Torbay PR Programme		27/62	86	21		22	100	16	59	27	63	16	57	14
Tower Hamlets PR Service	67	47/70	69	45	80	41	100	28	60	47	63	27	42	24
University Hospital Llandough PR Service	76	22/29		22		22		20	91	22		20	80	20
University Hospital Southampton PR Programme		6/20	83	6	50	6	-	<5	33	6	-	<5	-	<5
Walsall PR Service	86	30/35	33	30		30	100	19	63	30	-	<5	74	19
Waltham Forest PR	100	58/52	55	53	17	58	100	45	78	58	71	45	38	45
Wandsworth PR Service	71	35/49	31	32	67	33		21	60	35	62	21	31	16
Warrington PR Service	100	25/25	40	25		25	100	17	68	25	65	17	59	17
West Herts Community Respiratory Service	92	81/88	89	75	100	74	100	54	67	81	69	48	69	54
West Kent PR Service	81	76/94	50	76	86	76	100	55	72	76	61	51	57	54
Whittington PR		35/132	76	34		21	75	20	57	35	53	19	44	18
Wirral COPD PR & Oxygen Service	95	74/78	82	66		68	100	48	65	74		48	-	<5
Wolverhampton PR Service	100	23/22	95	22		23		15	65	23		15	53	15

			Proces	s items		Outcome items									
Service name	Audit cases ^g		within 9	date offered pr in 90 days of te pt (if known) 6N tes		Patients undertaking rractice exercise est (for ISWT or MWT only if one st done; for both both tests done)		Patients with a discharge assessment who received a written discharge exercise plan		Patients assessed for PR who go on to have a discharge assessment		At least one exercise MCID achieved for ISWT/6MWT ^h		At least one health status MCID achieved ⁱ	
	% ^j	n/N ^k	%	De	%	De	%	De	%	De	%	De	%	De	
National mean (all services combined)	81	7,476/9,279	60	6,965	32	6,623	81	4,637	62	7,476	63	4,254	60	4,169	
National QI aim	100		85		100				70						
Worthing & Southlands PR Programme	88	38/43	92	38	94	35	97	32	84	38		31	55	31	
York PR	79	33/42		31	0	31		23	70	33	68	22	45	20	

Appendix A: BTS Summary of Quality Standards for Pulmonary Rehabilitation in Adults (2014)

No.	Quality statement
1	 Referral for pulmonary rehabilitation: a. People with COPD and self-reported exercise limitation (MRC dyspnoea 3–5) are offered pulmonary rehabilitation. b. If accepted, people referred for pulmonary rehabilitation are enrolled to commence within 3 months of receipt of referral.
2	Pulmonary rehabilitation programmes accept and enrol patients with functional limitation due to other chronic respiratory diseases (for example bronchiectasis, ILD and asthma) or COPD MRC dyspnoea 2 if referred.
3	 Referral for pulmonary rehabilitation after hospitalisation for acute exacerbations of COPD: a. People admitted to hospital with acute exacerbations of COPD (AECOPD) are referred for pulmonary rehabilitation at discharge. b. People referred for pulmonary rehabilitation following admission with AECOPD are enrolled within 1 month of leaving hospital.
4	Pulmonary rehabilitation programmes are of at least 6 weeks duration and include a minimum of twice-weekly supervised sessions.
5	Pulmonary rehabilitation programmes include supervised, individually tailored and prescribed, progressive exercise training including both aerobic and resistance training.
6	Pulmonary rehabilitation programmes include a defined, structured education programme.
7	People completing pulmonary rehabilitation are provided with an individualised structured, written plan for ongoing exercise maintenance.
8	People attending pulmonary rehabilitation have the outcome of treatment assessed using as a minimum, measures of exercise capacity, dyspnoea and health status.
9	Pulmonary rehabilitation programmes conduct an annual audit of individual outcomes and process.
10	Pulmonary rehabilitation programmes produce an agreed standard operating procedure.

British Thoracic Society. *BTS quality standards for pulmonary rehabilitation in adults*. London: BTS, 2014. www.brit-thoracic.org.uk/standards-of-care/quality-standards/bts-pulmonary-rehabilitation-quality-standards/

For further information on the overall audit programme or any of the workstreams, please see our website or contact the national asthma and COPD audit team directly:

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#COPDPRbreathebetter

If you would like to join our mailing list and be kept informed of updates and developments in the National Asthma and COPD Audit Programme, please send us your email address and contact details.

Commissioned by:

