Supplementary Table 2: TIDieR checklist table

Author	Intervention groups	Training protocol at the start of the training program	Who provided the intervention (any specific training)	Mode of delivery and setting (format, setting)	Dose (no. of sessions, frequency, duration per session, duration of program)	Was the intervention personalised/ progressed, titrated or adapted	Any modification of intervention	Planned to assess adherence or fidelity	Extent to which intervention was delivered as planned
Mador 2009	Continuous training (cycle + treadmill)	Cycle at 50% Wmax on cycle ergometer. Treadmill exercise at a speed set at 80% of average speed during the 6MWT	Unclear	Face to face in group setting, outpatient PR	24 sessions, 3x/week, unclear, 8 weeks	When able to exercise for 20 minutes without intolerable dyspnea/ leg fatigue, cycle workload was increased by 10% and treadmill speed by 5-10%	NR	NR	Participants missed on average 2 out of 24 sessions (range, 0–7 sessions). Missed sessions were made up at the end of the 8-week program.
	Interval training (cycle + treadmill)	1 minute at 150% and 2 minutes at 75% of the cycle workload and treadmill speed estimated for continuous group	Unclear	Face to face in group, outpatient PR	24 sessions, 3x/week, unclear, 8 weeks	When able to exercise for 21 minutes without intolerable dyspnea/ leg fatigue, cycle workload increased by 10% and treadmill speed was increased by 5% to 10%	NR	NR	
Vogiatzis 2002	Continuous (cycling)	40 minutes cycling at an intensity equivalent to 50% of baseline PWR	Physical therapist	Face to face in group, outpatient PR	24 sessions, 2x/week, 40 min, 12 weeks	Increased intensity monthly by 10% (i.e. 60% in second month, 70% in third month)	NR	NR	Attendance rate 88 +/- 4%
	Interval (cycling)	30 second cycling at 100% baseline PWR, followed by	Physical therapist	Face to face in group,	24 sessions, 2x/week,	Increased intensity monthly by 20% (i.e. 120% in second month,	NR	NR	Attendance rate 90 +/- 4%

		30 second rest (total 40 mins)		outpatient PR	40min, 12 weeks	140% in third month)			
Puhan 2006	High intensity continuous (cycling)	20 minutes of cycling at workload of 70% or more of maximum exercise capacity	Team of 12 physical therapist	Face to face in group, in hospital in patient PR	12-15sessions, 5x/week, 20min, 3 weeks	Workload was the increased by 10% if the modified Borg rating was less than three	NR	Unintended breaks lasting more than 1 minute were recorder by physiotherapists	Adherence to planned exercise protocol = 24%
	Interval (cycling)	20 seconds at 50% of short-term maximal exercise capacity, followed by 40 seconds at 10% of short term maximal exercise (total 20 mins)	Team of 12 physical therapist	Face to face, group, in hospital	12-15sessions, 5x/week, 20 min, 3 weeks	Workload was the workload by 10% if the modified Borg rating was less than three	NR		Adherence to planned exercise protocol = 47.9%
Lopez Lopez 2018	cycling (cycling)	30 minutes of pedalling on a cycle ergometer. (unclear intensity/workload)	Same investigator	Face to face individual, hospital	Unknown, 1x/day, 45 min session, different length of stay at hospital per patient	Cycling was modified based on participant fatigue and pulse oximetry readings	NR	NR	NR
	calisthenic exercise (elastic band)	30 minutes of lower-limb elastic band resistance exercises (unclear exercise movement/ target mm group)	Same investigator	Face to face individual, hospital	Unknown, 1x/day, 45 min session, different length of stay at	Exercise was adapted to fatigue and dyspnea of patient	NR	NR	NR

					hospital per patient				
Dodia 2012	LL Endurance training (treadmill)	20 minutes of treadmill walking according to ATS guidelines	Study investigator	Face to face, unclear, hospital outpatients	18 sessions, 3x/week, 20 mins, 6 weeks	RPE maintained between 12 and 14 on Borg RPE and dyspnoea rating of 3 on modified Borg scale	NR	NR	NR
	Unsupported UL endurance training (weights)	Shoulder flexion and lateral shoulder abduction with dumbbell (3 sets of 30 repetitions)	Study investigator	Face to face, unclear, hospital outpatients	18 sessions, 3x/week, 20 mins, 6 weeks	Weight of dumbbell periodically increased by 0.5kg to maintain a load that achieved a rating of 12 to 14 on Borg's scale of RPE and a dyspnoea rating of 3 on the Borg's scale	NR	NR	NR
Normandin 2002	high intensity, lower extremity aerobic endurance conditioning (treadmill + cycle)	30 minutes of training on treadmill and bike set at 80% max achieved at baseline incremental exercise testing	Rehabilitation staff member	Face to face in group, outpatient PR	16 sessions, 2x/week, 30-45 mins, 8 weeks	The exercise intensity was adjusted based on the subjects' Borg-scale rated dyspnea and/or leg fatigue or if the heart rate approached the maximum observed in exercise testing	NR	Any missed sessions made up at end of 8 week program to	NR
	low intensity peripheral muscle training (repetition of body weight + weight exercise)	A range of chair exercises, standing exercises, exercise with weights and sticks (8 to 10 repetitions for each exercise)	Rehabilitation staff ember	Face to face in group, outpatient PR	16 sessions, 2x/week, 45 mins, 8 weeks	No	NR	ensure all subjects completed 16 sessions	NR
Duruturk	Cycle exercise	20-30 minutes of	Physical	Face to	18	Exercise intensity	NR	NR	Attended

2016	(Cycling)	continuous cycling at 50-70% of the VO_2max	therapist	face, unclear, in physical therapy clinic	sessions, 3x/week, each session between 20 and 45 min, 6 weeks	adjusted based on modified Borg rated dyspnea or leg fatigue.			on average 17 of 18 sessions (94% sessions)
	Calisthenic exercise training (body weight exercise in supine, side lying, chair and standing)	16 rhythmical, calisthenic exercise including strength and stretching of the lower and upper extremity muscles (repeat exercises 10-15 times per session)	Physical therapist	Face to face, unclear, in physical therapy clinic	18 sessions, 3x/week, each session between 20 and 45 min, 6 weeks	Weeks 3 - 4 repeat exercises 15-20 times per session. Weeks 5 – 6 repeat exercises 25-30 times per session.	NR	NR	attended 16 of the 18 (89%) sessions
McFarland 2012	Aerobic exercise (walking / cycling exercise)	Supervised walking or restorator (cycling) exercise, or a combination of the two (goal 30 mins)	physical therapist and nurses, “everyone was trained in both protocol”	Face to face, individual, home	20 physical therapy visits, 4 nursing visits, unclear, 8 week program	Progressed up to 30 minutes at a pace tolerable for the patient	NR	Recorded activities and time for each session	NR
	Functional strengthening (e.g. sit to stand, heel raises)	12 to 18 trunk and multi-joint exercises including lower body strengthening exercises, resistance exercise with elastic bands/weights and	physical therapist and nurses, “everyone was trained in both protocol ”	Face to face, individual, home	16 physical therapy sessions + 8 nursing visits, unclear, unclear, 8 weeks	intensity was adjusted to patient capability and tolerance of exercise	NR	Recorded resistance and number of reps	NR

		balance activities (total 30 min)							
Probst 2011	Low intensity (crunches, trunk rotation and flexion)	5 sets of exercise: breathing exercise(diaphragmatic breathing and pursed-lips breathing); strengthening of the abdominal muscles (crunches); and calisthenics (trunk rotation and flexion, associated with pursed lips breathing and prolonged expiration). Each set = 12 exercise, repeated 15 times each	physiotherapist	Face to face, group, outpatient clinic	36 sessions, 3x/week, 60 min, 12 weeks	Every 7 sessions each patient began a new set of exercises. Intensity was increased in each new set of exercises by a progression in difficulty regarding the execution of the exercises: set 1 was the easiest, and set 5 the most difficult.	NR	NR	NR
	High intensity and strength (cycling + treadmill)	cycling ergometry the training intensity was initially set at 60% of the initial maximum work rate. treadmill walking the training intensity was	physiotherapist	Face to face, group, outpatient clinic	36 sessions, 3x/week, 60 min, 12 weeks	cycling ergometry the training intensity was initially set at 60% of the initial maximum work rate treadmill walking the training intensity was initially set at 75% of the average walking speed during the	NR	NR	NR

		initially set at 75% of the average walking speed during the baseline 6-min walk test. strength training (quadriceps, biceps and triceps) the training intensity was initially set at 70% of the baseline one-RM test				baseline 6-min walk test. strength training the training intensity was initially set at 70% of the baseline one-RM test. The physiotherapist increased the patient's work rate or duration every week, guided by a pre-determined schedule and driven by the patient's perception of symptoms (measured via Borg dyspnea and fatigue scoring).			
Ortega 2002	Endurance (cycling)	40 minutes of cycling exercise at 70% peak work rate	Group of chest physiotherapist, exercise physiologist, and respiratory physician)	Face to face, group, unclear	36 sessions, 3x/week, 1 hr, 12 weeks	The work rate corresponding to 70% of the peak work rate achieved during the baseline incremental exercise test was selected as the target training intensity	NR	NR	NR
	Strength (weight lifting exercise with gymnastic apparatus)	5 weight lifting exercises (chest pull, butterfly, neck press, leg flexion, leg extension) performed with gymnastic	Group of chest physiotherapist, exercise physiologist, and	Face to face, group, unclear	36 sessions, 3x/week, 1 hr, 12 weeks	strength-training program at a workload of 70 to 85% of the one RM. This test was repeated each 2 weeks for new adjustment of the workload	NR	NR	NR

		apparatus. (4 sets, 6-8 repetition)	respiratory physician						
	Combined (weight lifting + cycling)	Five weight lifting exercise (as in strength group) (2 sets, 6-8 repetition) AND 20 minutes of cycling at 70% peak work rate	Group of chest physiotherapist, exercise physiologist and respiratory physician	Face to face, group, unclear	36 sessions, 3x/week, 1 hr, 12 weeks	Initial cycle: 70% max. Initial weights 70-85% max	NR	NR	NR
Mador 2004	Endurance training (cycling, treadmill)	Cycle at 50% of maximal work capacity. Treadmills exercise started at 1.1-2.0 miles per hour based on 6MWT results	unclear	Face to face, group, outpatient PR	24session, 3x/week, unclear, 8 weeks	Cycling workload increased by 10% when able to exercise for 20 minutes without intolerable dyspnea. Treadmill speed+/- elevation increased when able to exercise for 15 min without intolerable dyspnea	NR	missed sessions made up at end of 8 week program	NR
	Endurance + strength (cycling, treadmill, weights)	Four strength exercises (knee flexion, knee extension, seated chest press, combined movement of shoulder adduction and elbow flexion) (1 set of 10 repetition at 60%	unclear	Face to face, group, outpatient PR	24session, 3x/week, unclear, 8 weeks	Gradually increased from 1 set to 3 sets of 10 repetitions, then weight was increased by 5 lb.	NR		NR

		of their 1 RM) AND Endurance training (same protocol as other group)							
Zambom Ferraresi 2015	Resistance (resistance machines)	Exercises for lower limbs (leg press, knee extension and knee flexion) and upper limbs (chest press, seated row, shoulder press). (3-4 sets of 6-12 repetitions)	NR	Face to face, group, unclear	24 sessions, 2x/week, 90 min, 12 weeks	Training loads were 50% - 70% one RM	NR	NR	96% compliance to training
	Resistance + endurance (resistance machine +cycling)	Alternating between resistance and endurance training. 20-35 minutes of cycling at 40-85% maximal aerobic power. AND Resistance training (same protocol as other group)	NR	Face to face, group, unclear	24 session, 2x/week, (one day endurance, one day resistance) 90 mins(resistance), 20-30 min (endurance), 12 weeks	Cycling training load at 40-85% maximal aerobic power Resistance training load was 50% - 70% one RM	NR	NR	95% compliance to training
Ramos 2014	Resistance training (with elastic tubing)	Resistance exercises for knee extension and flexion, shoulder abduction and flexion, and elbow flexion were performed using	Senior physical therapists specialised in PR +/- musculoskeletal rehabilitati	Face to face, group, outpatient clinic	24 sessions, 3x/week, 60 min, 8 weeks	Number of repetitions per set based on results of fatigue resistance test After four weeks of training, the fatigue resistance test was repeated to determine	NR	NR	NR

		elastic tubing (2 - 7 sets, each set consisted of the number of repetitions achieved during 20 seconds of the fatigue resistance test)	on and four physical therapists			new number of repetitions for second half of program			
	Conventional resistance training (with weight machine)	Resistance exercises for knee extension and flexion, shoulder abduction and flexion, and elbow flexion were performed using weight machines (three sets of 10 repetitions)		Face to face, group, outpatient clinic	24 sessions, 3x/week, 60min, 8 week	The conventional group started at 60% of their one-RM. The load was increased by 4% every four sessions until they reached 80% of their initial 1-RM at the end of the protocol	NR	NR	NR
McNamara 2013	Water based exercise (walking, leg cycling, UL endurance)	exercised in a hospital hydrotherapy pool 8 min warm up (punching and kicking), 20 min lower limb endurance (stationary and travelling, jogging), 3 min rest, 15 min lower limb endurance (seated on floatation	same experienced physiotherapist	Face to face, group, hospital	36 sessions, 3x/week, 60 min, 8 weeks	choose the most comfortable level of water immersion in the standing position to perform the majority of exercises, which was always between the xiphisternum and the clavicles for each participant; encouraged to exercise at an intensity rating of three to five on the	NR	NR	Attended mean of 21 (2) sessions out of 24

		device, cycling, kicking, jumping), 2 min rest, 10 min upper limb endurance (with plastic bottle or foam dumbbells 3x 10 rep), 2 min cool down				modified Borg scale for dyspnoea and perceived exertion			
	Land based exercise (walking, cycling + UL endurance)	Exercised in a temperature-controlled hospital gymnasium 8 min warm up (punching, kicking), 20 min lower limb endurance (walking on ground/treadmill), 3 min rest, 15 min lower limb endurance (cycling on stationary or dual action bike), 2 min rest, 10 min upper limb endurance (hand held dumb bells, 3x 10 rep), 2 min cool down	same experienced physiotherapist	Face to face, group, hospital	36 sessions, 3x/week, 60 min, 8 weeks	walked at an intensity of 80% of the average 6MWT speed	NR	NR	Attended mean of 19 (4) out of 24 sessions
Klijn 2013	Endurance and progressive resistance training (EPR)	Leg press, leg extension, pull down and chest press (2 sets of 8-	Exercise therapist (physical education	Face to face, group, hospital	30 sessions, 3x weekly, Each	Resistance training progress to 3 sets with load increasing to 60-80% of 1 RM)	NR	NR	81.5% (9.7%) attendance rate

	10 repetitions at 50% of 1 RM) 10 minutes of treadmill walking at 50% of average speed from 6MWT 10 minutes of cycling at 30% of maximum work rate	teachers) and 8 Cesar practice therapists (Training sessions were twice weekly supervised by a clinical 9 exercise physiologis t (PK) to ensure that		session 45-90 minutes, 10 weeks	Treadmill walking – increased with aim to reach 15 mins with 75% 6MWT at week 10 Cycling progressed to 24 minutes at 75% maximum work rate Exercise intensity was increased when dyspnea Borg scores were less than 5.			
nonlinear periodized exercise program (cycling, weight machines) (varies intensity and volume per session)	Aerobic cycling (2 sets of 3-5 minute of cycling at 50-60% maximum work rate) and resistance exercise (as above 2 set of 12-15 repetitions at 40-50% of 1 RM) Aerobic cycle training with combined with high volume and very low intensity resistance training and anaerobic cycling with low-volume, moderate high intensity	all essential program characterist ics were strictly 10 enforced.)	Face to face, group, hospital	30 sessions, 3x weekly, Each session 45-90 minutes, 10 weeks	After the first two to three training sessions, adding anaerobic high intensity cycle exercise (3-5 sets of 2-3 minutes cycling at 65-70% maximum work rate and increase leg press to more than 20 repetitions. Aerobic cycling – increase to 2-3 sets of 6-8 minutes Anaerobic 2-3 series 5 minute Resistance training – increase repletion volume	NR	NR	82.7 (8.2%) attendance rate

		resistance training							
Holland 2004	unsupported upper limb endurance training (unsupported UL exercise with stick)	Consisted of five upper limb exercises performed in a sitting position with a 500-g stick until each exercise could be performed for 3 minutes	physiotherapist	Face to face, group, hospital	12 sessions, 2x/week, unclear, 6 weeks	The weight then was increased by 0.5-kg increments to maintain a load that achieved a perceived exertion rating of 12 to 14 on the Borg scale13 and a dyspnea rating of 3 on the modified Borg scale	NR	NR	NR
	control group (supported UL training with Purdue pegboard test)	Four timed tasks in which as many pins as possible are placed on a pegboard within a defined time, in a sitting position with the arms supported on the table	physiotherapist	Face to face, group, hospital	12sessions, 2x/week, unclear, 6 weeks	NR	NR	NR	NR
Mkacher 2015	PR only (supervised exercise training)	inpatient PR, which included (1) supervised exercise training twice per day, 3 times a week, (2) daily breathing exercises, and (3) self-management education and psychological and	Unclear	Face to face, group, hospital in patient	Unclear	NR	NR	NR	NR

	social support							
PR + balance (stance, transition, gait, functional strengthening)	Inpatient PR program, swapped balance training with one of the supervised exercise training three times a week Balance training consisted of 4 main types of exercise: (1) stance exercises, (2) transition exercises, (3) gait exercises, and (4) functional.	Health professional	Face to face, group, hospital	72 sessions, 3x/week, 30 min, 24 weeks	When a participant was able to complete a task independently and with little instability, the difficulty level was increased progressively by introducing more challenging conditions (e.g., eyes closed, addition of a secondary cognitive task, increased speed/repetition, or perturbations)	NR	NR	NR

TIDieR: Template for Intervention Description and Replication checklist; Wmax: maximal work capacity; 6MWT: 6 Minute Walk Test; PR: Pulmonary Rehabilitation; PWR: Peak Work Rate; RPE: Rate of Perceived Exertion; NR: Not Reported; ATS: American Thoracic Society; LL: Lower Limb; UL: Upper Limb; VO_2max: maximal oxygen uptake; RM: Repetition Maximum