

Pulmonary Rehabilitation Maintenance Framework: Guidance for post-rehabilitation programs



**Lung
Foundation
Australia**

Introduction

Lung Foundation Australia has made the strategic decision to step away from the governance and delivery of the Lungs in Action (LIA) maintenance program after 16 years of implementation. During this time, LIA supported thousands of individuals living with chronic lung and heart conditions, providing safe, structured exercise programs and building capacity among health professionals nationwide.

As Lung Foundation Australia transitions out of direct program delivery, we recognise the ongoing need for evidence-based maintenance programs that support people after completing pulmonary rehabilitation (PR). To address this, Lung Foundation Australia has developed the Pulmonary Rehabilitation Maintenance Framework, drawing on the extensive resources, research, and experience gained through LIA.

This framework is not a clinical standard, but a set of practical recommendations designed to guide health professionals and exercise providers in establishing and/or to continue delivering pulmonary rehabilitation maintenance programs (PRMP). It aims to ensure continuity of care, safety, and quality for participants while empowering local providers to take ownership of program delivery.

Acknowledgement of Country



Lung Foundation Australia acknowledges the Traditional Custodians of the lands on which we work throughout Australia and their unceded sovereignty of and continuing connection to land and sea. We pay our respects to First Nations' cultures and to Elders past and present. We acknowledge the overrepresentation of Aboriginal and Torres Strait Islander people in lung disease and lung cancer. We commit to working with communities to Close the Gap on lung health and build on the strengths of communities to lead the path to healthy lungs for all.

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Executive summary

This document provides:

- **Governance expectations**, including instructor responsibilities, compliance, safety and risk management.
- **Participant eligibility criteria** for participants, including conditions and contraindications.
- **Program design principles**, covering exercise program structure, safety, and venue requirements.
- **Instructor training pathways**, with online and practical training recommendations.
- **Core competencies** recommended for safe and effective delivery of PRMP.

By following this framework, health professionals and exercise providers should be able to confidently deliver programs that aim to maintain the benefits of PR, reduce hospitalisations, and maintain or improve long-term health outcomes for people living with chronic lung conditions.

Governance

Delivery of classes

For the delivery of any PRMP it is recommended that an instructor:

- ✓ Hold a Certificate III/IV in Fitness or relevant degree (Physiotherapy, Exercise Physiology, Nursing etc)
- ✓ Hold a current and valid CPR and first aid certificate
- ✓ Hold a current and valid national police clearance certificate
- ✓ Hold a current insurance certificate complying with delivery of group exercise classes, and at a minimum including professional indemnity, public liability, and business (insurances)
- ✓ Verify that the venue complies with the safety requirements.

Additional recommendations:

- Older adult competency
- Completion of pulmonary exercise professional development training (e.g. **Pulmonary Rehabilitation Online Training**).

Referrals

In addition to a valid referral, the instructor must obtain from the referrer the participant's:

- discharge summary from PR program; and
- any medical information relevant for the participant's involvement in the PRMP.



Example **referral form** and **general medical assessment form** can be accessed on the **Pulmonary Rehabilitation Toolkit**.

Participant register



The instructor should maintain a register of participants (participant register) that includes each participant's:

- full name
- physical address
- contact telephone or mobile number
- email address
- emergency contact details / next of kin.

The participant register and the information recorded must be kept accurate, up to date and stored in a secure place.

The instructor must notify each participant that they are collecting the participant's, and their emergency contact's, personal information.

Safety and Duty of Care

The instructor should ensure:

- ✓ they work within their professional scope of practice
- ✓ the venue and any equipment used at the venue is safe to minimise the risk of injury
- ✓ that appropriate first aid equipment and support is available at the venue
- ✓ medical assistance suitable for the participants is accessible and in close proximity to the venue
- ✓ the emergency exits are accessible and clear of obstruction
- ✓ they verify any applicable emergency equipment (for example, a defibrillator or fire extinguisher) at the venue is operational, compliant, and checked regularly by authorised personnel
- ✓ the emergency plan and primary survey (DRSABCD) is displayed in a visible location
- ✓ the exercise environment is safe, hazard-free, temperature-controlled when appropriate, and suitable for physical activity, with consideration of environmental risks such as extreme weather or natural disasters
- ✓ an appropriate class size is maintained (no more than 12 participants per instructor)
- ✓ easy access to toilet facilities at all times.

Participant eligibility criteria



A person is eligible to commence an ongoing pulmonary exercise maintenance program (PEMP) if they:

- have a stable chronic lung condition (see list of eligible conditions below)
- have completed PR and remain in stable health (see contraindications below).



Eligible conditions

People with the following stable lung conditions are eligible for PRMP:

- Chronic obstructive pulmonary disease (COPD)
- Bronchiectasis
- Asthma
- Lung transplant recipient
- Alpha-1 Antitrypsin Deficiency
- Interstitial lung disease
- Lung cancer
- Post TB lung disease (PTLD).



Contraindications

People with the following medical concerns should not participate in PEMP:

- Complex or unstable arrhythmia or new onset of another arrhythmia
- Medical conditions that are unstable or that may impact upon safety (e.g., poorly controlled blood sugar levels, unstable angina)
- Severe, symptomatic pulmonary hypertension
- Severe aortic stenosis
- Poorly controlled or decompensated heart failure
- Participants who experience a significant and/or symptomatic drop in heart rate and/or systolic blood pressure during exercise.

Considerations

It is recommended that participants requiring supplemental oxygen provide their own portable oxygen equipment with sufficient oxygen supply for the class and travel to and from the location.

Program design

Exercise programming

Programs should be individualised and designed to ensure safety, effectiveness, and inclusivity for participants with chronic lung conditions. Key elements include:



Warm-up and cool-down

- Provide a clear warm-up and cool-down sequence.



Cardiovascular component

- Include a minimum of 30 minutes of aerobic exercises (using large muscle groups) e.g.
 - walking (overground or on treadmill)
 - stationary cycling
 - Does not need to be continuous, recommend adjusting based on overall class length, space, participant abilities (could be 3 x 10 minutes).



Strength training

- Integrate strength training exercises tailored to participant needs.
- Examples of strength training using minimal equipment:
 - for lower limbs try exercises using body weight (e.g. squats, sit-to-stand)
 - for upper limbs try hand weights using cans of food, bags of rice etc (e.g. biceps curls, shoulder flexion/abduction, upright row) or these same movements using resistance bands.

Other components that may be included in exercise prescription are:

Circuit design

- Clearly outline station times and recovery periods.
- Ensure adequate rest intervals and variety in exercises.

Flexibility and stretching exercises

- Participants should only spend about 5 minutes within each class performing flexibility and stretching exercises as the emphasis within the class should be on endurance and strength training.

Balance exercises

- Static and dynamic stance exercises, lower limb muscle strength training and gait exercises
- Tai chi.



Other considerations:




- Provide adequate rest periods and exercise variety
- Prescribe activities without equipment where appropriate
- Exercise intensity should be monitored through breathlessness or fatigue scales (see page 11)
- Exercise delivery standards
- Exercises performed competently, with clear explanation and necessary modifications.

Program delivery

Instruction and communication

-  **Communication:** clear instructions, individualised, appropriate language
-  **Rapport:** confidence, motivation, leadership
-  **Voice:** modulation, pitch, tone variation, projection
-  **Management:** maintained focus and control
-  **Enthusiasm:** animated and motivating
-  **Body language:** open, relaxed, non-intimidating
-  **Listening skills:** active, attentive, appropriate responses
-  **Pacing:** varied progression, Borg breathlessness/dyspnoea and or fatigue scale, appropriate speed
-  **Technique:** identify and correct errors
-  **Feedback:** positive, modifications as needed
-  **Breathlessness management:** identify, calm approach, appropriate strategies.

Use of aids

-  **Music:** appropriate tempo, volume, age-appropriate
-  **Equipment:** safe, maintained, positioned correctly
-  **Floor plan:** consider oxygen and walking aid equipment hazards.

Responses to questions

- Provide accurate answers within scope
- Refer participants to other services appropriately when unsure.

Instructor training framework

Theory training

It is recommended that an exercise professional who desires to upskill in the provision of pulmonary exercise, completes at minimum the **Pulmonary Rehabilitation Online Training** (PRT online).

PRT online is a comprehensive, clinically relevant course designed to build workforce capacity and capability in pulmonary exercise prescription. It equips providers to deliver both PR and ongoing PRMP that support long-term health and wellbeing for those living with lung disease.



Course Details:

- Price: \$175
- Duration: 6-8 hours
- CPD points: 10 (ESSA)
- Link: **Pulmonary Rehabilitation Online Training**

Lung Foundation Australia believes this training offers an up-to-date and robust foundation in pulmonary exercise, making it an excellent option for professional development in pulmonary exercise.

Practical training

Lung Foundation Australia will no longer coordinate practical training or mentorship. These activities should be arranged by the PRMP in collaboration with local PR providers. You can identify local PR programs using Lung Foundation Australia's **service directory**.



Recommended practical training steps

- **Pulmonary rehabilitation:** Observe at least two PR classes at a rehabilitation facility under the guidance of a PR Mentor. After completing the observations, meet with your mentor to review and sign off on the Core Competency Checklist (see page 11).

Table 1: Recommended Pulmonary Rehabilitation Training Pathways by Qualification

Qualification	Experience	Theory training recommendation	Practical training recommendation
Physiotherapist or Accredited Exercise Physiologist	Currently delivering PR	Not required	Not required
	Observed at least 2 PR classes in the last year	Complete PRT online if not completed in the past 12 months	If all core competencies can be confidently demonstrated, no additional practical training required
	No prior experience in PR	Complete PRT online	Undertake practical training until all core competencies can be confidently demonstrated
Non-Accredited Exercise Physiologist or Exercise Scientist	At least 1 year of industry experience	Complete PRT online	Undertake practical training until all core competencies can be confidently demonstrated
Certificate III/IV Fitness Instructor	Older adults' competency and minimum 2 years' experience working with participants with chronic lung disease	Complete PRT online	Undertake practical training until all core competencies can be confidently demonstrated
Nurse	Currently delivering PR	Not required	Not required
	Observed at least 2 PR classes in the last year	Complete PRT online if not completed in the past 12 months	If all core competencies can be confidently demonstrated, no additional practical training required
	No prior experience in PR	Complete PRT online	Undertake practical training until all core competencies can be demonstrated

In addition to the training recommendations outlined above, clinicians should demonstrate the following core competencies before delivering any PEMP sessions.

Recommended PRMP core competencies

Oxygen saturation

- ✓ Accurately measure and monitor oxygen saturation
- ✓ Explain the relationship between oxygen saturation and exercise
- ✓ Describe the safe range for participant oxygen saturation
- ✓ Respond confidently and appropriately to a participant who desaturates
- ✓ Understand that breathlessness rating does not correlate with oxygen saturation
- ✓ Describe how variations in oxygen saturation and breathlessness affect the management of a participant in a class situation.

Breathlessness scale

- ✓ Identify the optimum range of exercise intensity for participant benefit - modified Borg 0-10 scale: aim for 3-4 (moderate to somewhat severe breathlessness) or on the Borg 6-20 scale this is as score of 9-13.
- ✓ Understand the subjective nature of the Borg scale and respond appropriately
- ✓ Use and interpret the modified Borg scale to adjust exercise intensity.

Recovery positions

- ✓ Demonstrate seated and standing variations of recovery positions
- ✓ Apply pacing strategies to manage breathlessness and maintain safe oxygen saturation
- ✓ Support participants to resume exercise safely using recovery positions.

Breathing techniques

- ✓ Recognise signs of excessive breathlessness (e.g., shoulder hunching)
- ✓ Prescribe and teach breathing techniques (such as pursed-lip breathing) to reduce breathlessness
- ✓ Encourage use of cool air - fans to reduce the sensation of breathlessness.

Breathing coordination

- ✓ Explain when participants should coordinate breathing with movement (e.g., bending, lifting)
- ✓ Ensure participants avoid breath-holding or Valsalva manoeuvre.

Class design concepts

- ✓ Identify continuous or interval training as acceptable options for cardiovascular exercise
- ✓ Demonstrate knowledge of interval training and when to encourage its use
- ✓ Describe essential components of a PR class, including duration and intensity.

Inhaler devices

- ✓ Identify inhaled medication devices and demonstrate correct **inhaler technique**.

Portable oxygen concentrators and oxygen cylinders

- ✓ Identify relevant oxygen equipment and delivery mechanisms
- ✓ Describe policies for oxygen therapy prescription (do not prescribe or alter doctor-set dosage).

Exercise technique

- ✓ Demonstrate correct technique for all prescribed exercises and modify for musculoskeletal conditions or co-morbidities.



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