



Diverse Needs in Pulmonary Rehabilitation

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Representing MDT/PRP's at GOLD COAST



Chronic Lung Disease (CLD)

- CLD can be considered to have several domains, both inside and outside the lungs, that contribute to the airflow obstruction and clinical characteristics of patients.
- Systemic inflammation contributes to the pathophysiology effects of CLD
- Respiratory disease is systemic & concurrent chronic diseases can influence hospitalisations; morbidity & mortality; cardiovascular disease, skeletal muscle dysfunction, metabolic syndrome, osteoporosis, depression, anxiety & lung cancer





CHARACTERISTICS of Chronic Lung Disease (CLD)

Obstructive

- Difficulty to exhale all the air
- Sputum production
- Susceptible to exacerbations
- Chronic cough –un/productive
- Recurrent wheeze
- Alpha-1 antitrypsin deficiency
- Multi inhaler devices combo/trio
- Pulmonary artery pressures may be elevated higher risk if combined ILD

Restrictive

- Difficulty to fully expand lungs
- Breathlessness after periods of rest
- Cough dry & persistent
- ILD-variety of different type disorders treatments & prognosis
- Connective tissue disease involving joint pain & stiffness
- Pulmonary artery pressures may be elevated
- Slower heart rate recovery

Both share

- SOB with any physical exertion
- Exertional hypoxia
- Reduced Exercise tolerance
- Exertional dyspnoea
- Reduced skeletal muscle function
- Supplemental oxygen to address hypoxia
- Depression/Anxiety/Panic





Multidisciplinary Team

- Respiratory Physicians/ GPs: Medical management, specialist care, clinical governance.
- Nursing: Assessment, Care planning & education
- Physiotherapy: Musculoskeletal Ax, breathing mechanics, secretion clearance techniques & exercise prescription
- Occupational Therapy: Pacing & breathing techniques to maximise ADL
- Pharmacy: Medication optimisation, smoking cessation
- Social Work: ACP, Mindfulness, anxiety mgmt.
- Dietetics: Nutritional Ax & weight management incl. PG-SGA
- Psychology: Significant anxiety & depression, smoking cessation
- Speech Pathology: swallowing difficulties, VCD





Pulmonary Rehabilitation (PR)

- Program designed to improve physical and psychological function and long-term adherence to health-enhancing behaviours through education and exercise
- Typical duration of 8 weeks = 2 x supervised exercise sessions per week + education to promote health literacy & self-mangement
- PR on the GC consists of both rolling & stop-start Programs





Helensvale Respiratory/PRP Team





Robina Respiratory PRP Team





Monitoring of Participants PRP

- Infection control standards
- Participant wellness
 - assess any changes: cough/sputum/fever/low-energy/increased SOB
 - any concerns GP app is attended same day/acute QAS-ED
- Observations pre, post & during exercise
- Individualised dependent on specific comorbidities/needs
 - IDDM BGL pre/post
 - Hypoxia –Rx oxygen set up oxygen/4ww
 - Pulmonary HTN-history of dizziness/fainting
 - Anxiety/panic assess distraction/refocus supportive strategies
 - Low weight monitoring for dietitian
 - Social issues / carer for partner/MAC/
 - Musculoskeletal issues –PT Ax as required





PRP Participants from Gold Coast

- Provided written consent & feedback to share today
- <https://goldcoasthealth.sharefile.com/share/view/see7f971b2e140a4a>





ASSESSMENT TOOLS

- 6MWT
- SGRQ
- CAT
- MMRC
- BODE

Other tools not reported on:

- HADS
- GST
- PG – SGA





Total of 117 participants completed >70% GC PRP 2017

Obstructive (GOLD-2017)	Restrictive	Mixed
103/117 (88.9%)	8/117 (6.8%)	5/117 (4.3%)
Mild: 16.5%		
Moderate: 34.9%		
Severe: 33.9%		
V/Severe: 14.7%		

TABLE 1. GRADING OF SEVERITY OF AIRFLOW LIMITATION IN COPD (BASED ON POST-BRONCHODILATOR FEV₁)

In patients with FEV₁/FVC < 0.70:

GOLD 1:	Mild	FEV ₁ ≥ 80% predicted
GOLD 2:	Moderate	50% ≤ FEV ₁ < 80% predicted
GOLD 3:	Severe	30% ≤ FEV ₁ < 50% predicted
GOLD 4:	Very severe	FEV ₁ < 30% predicted





Exercise Capacity

6MWT

Minimal Clinical Importance Distance (MCID):

- Obstructive MCID > 23-33m
- Restrictive MCID > 36m

64% (66/104) clients achieved MCID > 25-33m

- Mean Distance Improvement (MDI)
 - Obstructive – 63% (61/97) achieved 84m
 - Restrictive – 33% (2/6) achieved 35m
 - Mixed – 43% (3/7) achieved 106m
 - Known PH – 67% (4/6) achieved 83m





Symptoms – Fatigue & Dyspnoea

MMRC – MCID > 1 point

- 42% (46/110) achieved significant change > 1 point

BODE – MCID > 1 unit

- 36% (40/110) achieved significant change > 1 unit

	Obstructive	Restrictive	Mixed
MMRC	44% (43/97)	33% (2/6)	14% (1/7)
BODE	38% (37/97)	17% (1/6)	29% (2/7)



Health Related Quality of Life

St George Respiratory Questionnaire (SGRQ)

- Significant minimal difference +/- 4 points

	Obstructive	Restrictive	Mixed
Symptoms	58% (56/97)	33% (2/6)	43% (3/7)
Activity	55% (53/97)	50% (3/6)	71% (5/7)
Impact	61% (59/97)	67% (4/6)	43% (3/7)
Total	58% (56/97)	67% (4/6)	57% (4/7)





Results

COPD Assessment Test (CAT)

- Obstructive (incl. mixed airways disease)
 - 61% (56/104) achieved significant change > 2 units

CAT to detect change of health & awareness beneficial to know “**wellness baseline**”



References

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Respiratory Director visits PR

