Examples of outcome measures under the WHO categories of Assessment

Examples of each component of the assessment broken down into the WHO Categories are outlined below and information found in the Outcomes Resource Folder:

### BODY FUNCTION:

1. Physiological baseline measures:
	1. Heart rate, blood pressure, respiratory rate, oxygen saturations, height and weight and estimate body mass index (BMI). The results of these outcomes pre and post exercise field testing will guide the lead physiotherapist in determining patient suitability for inclusion onto the PRP.
2. Measures of Dyspnoea:
	1. Three Classifications of Dyspnoea
		1. Sensory-Perceptual Dimension
		2. Affective/Emotional
		3. Symptom Burden

For an in-depth exploration of exertional dyspnoea in patients with COPD please refer to an article written by Bruno-Pierre et al ([*2017*](https://www.archbronconeumol.org/en-pdf-S1579212916302646)).

1. Measure of Strength:
	1. Manual Muscle Testing (MMT) (Grade 0-5)
	2. Grip Strength using a dynometer
	3. 1 Repetition Max using the Oddvar Holten Diagram (Appendix)
2. Measure of Co-Ordination:
	1. Overlapping Pentagon
	2. Finger Nose Test
3. Measure of Cognitive Function;
	1. Montreal Neurocognitive Assessment (MoCA)
4. Measure of Balance:
	1. 4 Point Balance Test

### ACTIVITY AND PARTICIPATION

* Exercise Field Tests
* 6 Minute Walk Test
* Shuttle Walk Test

For exercise testing, at least one measure is required from measures of functional exercise capacity such as the Six-Minute Walk Test (6MWT) or the Incremental Shuttle Walk Test (ISWT) (15-21). Each test should be ***repeated twice*** with appropriate rest period in-between to rule out a learning effect. Following the ISWT, an Endurance Shuttle Walk Test (ESWT) may be performed to measure exercise endurance.

* Functional Testing
* Short Performance Physical Battery (SPPB) test
* Timed get up and go (TUG) Test
* Grip Strength
* 5 Sit to Stand (5-STS)
* 1min Sit to Stand (1min STS)

Functional Tests in combination with other outcome measures can provide a good insight into patient frailty and help capture benefits of PR in this area.

### HEALTH

1. Agreed goals
2. Health Related Quality of Life (HRQoL) measures are considered primary outcome measures in PRPs (2). For Quality of life (QoL) measures, one generic and one disease specific questionnaire should be used from the following list: (22-26, 76 )
3. Disease Specific Questionnaires
	1. The COPD Assessment Test (CAT)
	2. The COPD Clinicat Questionnaire (CCQ)
	3. The Chronic Respiratory Disease Questionnaire (four formats) (CRDQ)
	4. St. George’s Respiratory Questionnaire (SGRQ)
4. Psychiatric Questionnaires
	1. The Hospital Anxiety and Depression scale (HADs)
	2. General Anxiety Disorder 7-item (GAD-7)
	3. The Patient Health Questionnaire (PHQ-9)
5. Generic QOL Questionnaire
	1. The EuroQol 5D-5L (EQ-5D-5L).
6. Medication Adherence Questionnaire

### Test of Adherence to Inhalers (TAI) Other considerations

1. Frailty screening
	1. Clinical Frailty Score
	2. Combination of Grip Strength, 5-STS and TUG.
2. Sarcopenia screening
	1. Combination of grip strength and 5-STS
		1. Greater than 15secs to complete a 5-STS and grip strength < 27kg in men and <16kg in women).
3. Patient Knowledge of COPD
	1. Bristol COPD Questionnaire
	2. Understanding of COPD Questionnaire

For minimum clinically important difference for the assessment tools see the Outcome Resource Folder.

***N.B. Some of the questionnaires require a license to use.***