2.14 A new initiative: Progressive Resistance Training (PRT) in patients with Chronic Obstructive Pulmonary Disease (COPD) in Pulmonary Rehabilitation (PR) exercise class.

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PRT provides a training modality for increasing peripheral muscle strength in COPD[1]. The increase in muscle strength obtained after resistance training is higher than that obtained after endurance training[2]. PRT evokes less dyspnoea during exercise, thereby making it easier to tolerate than endurance training[2]. Studies demonstrate 20-30% reduction in quadriceps strength in patients with COPD compared with healthy subjects[3]. This reduction in quadriceps strength contributes significantly to exercise intolerance in COPD[3]. Results of 16 participants were analysed post PR. They showed that only 50% of participants achieved the minimal clinically important improvement (MCID) in their 1 minute STS, 69% achieved the MCID in their COPD Assessment Test and 44% achieved the MCID in the Modified Medical Research Council Dyspnoea scale. The previous design of the PR was endurance based primarily using time for progression for each exercise depending on how the patient was feeling. It was unspecific and non-prescriptive for strength training. It is hoped that with an additional strength focused assessment and PRT focused exercise prescription using sets and reps, alongside the Rating of Perceived Exertion scale, that patients will increase strength and improve outcomes overall. This 8 week pilot is ongoing and results will be analysed thereafter.

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3. Vaes, A.W. *et al.* (2021) ‘The correlation between quadriceps muscle strength and endurance and exercise performance in patients with COPD’, *Journal of Applied Physiology*, 131(2), pp. 589–600.

Conflict of Interest: None to declare.