

3.20 Assessment of functional ability and frailty in Pulmonary Rehabilitation; An evaluation of outcomes in the Longford Westmeath Pulmonary Rehabilitation Service

¹Kate Plunkett, ¹Gemma Donohoe, ²Mark Sheehy

¹Longford Westmeath Chronic Disease Hub, CHO8, Mullingar, Co. Westmeath

²Regional Hospital, Mullingar, Co. Westmeath

Background: Frailty is a multidimensional syndrome characterised by decreased functional reserve (1) affecting up to one in four patients with Chronic Obstructive Pulmonary Disease (COPD) (2). The Short Physical Performance Battery (SPPB), a mobility and balance test incorporating static balance, 4 Metre Gait Speed and 5 Repetition Sit-to-stand can identify people living with frailty (3) and has been shown to be responsive to Pulmonary Rehabilitation (PR) with a proposed minimum clinically important difference (MCID) of 1 (4). The aim of this evaluation was to assess the impact of our PR service on functional ability in a group of patients with chronic respiratory disease using the SPPB.

Methods: 26 patients attending the Longford Westmeath PR service between January and June 2023 were included in the study. The SPPB was completed at pre- and post-assessment stage by a registered physiotherapist.

Results: 20 (77%) patients met the MCID of 1 at programme completion. Using a cut-off score of ≤ 7 (5), 6 patients (23%) were defined as frail at pre-assessment stage, but this figure dropped to 3 (11%) on completion of the programme.

Conclusion: In this sample of patients completing PR we demonstrated a reduction in the number of patients defined as frail at programme completion. Over three-quarters of patients had a clinically significant improvement in total SPPB score indicating overall improvements in physical function.

Conflict of Interest: The authors have no conflicts of interest to declare.

References:

1. Rodríguez-Mañas L, Sinclair AJ. Frailty: the quest for new domains, clinical definitions and subtypes. Is this justified on new evidence emerging? *J Nutr Health Aging*. 2014;18(1):92-94. doi:10.1007/s12603-013-0433-9
2. Maddocks M, Kon SSC, Canavan JL, et al. Physical Frailty and pulmonary rehabilitation in COPD: a prospective cohort study. *Thorax* 2016;71:988 – 995 doi:10.1136/thoraxjnl-2016-208460
3. Brighton LJ, Nolan CM, Barker RE, et al. Frailty and Mortality Risk in COPD: A Cohort Study Comparing the Fried Frailty Phenotype and Short Physical Performance Battery. *Int J Chron Obstruct Pulmon Dis*. 2023;18:57-67. Published 2023 Jan 20. doi:10.2147/COPD.S375142

4. Stoffels AA, De Brandt J, Meys R, et al. Short Physical Performance Battery: Response to Pulmonary Rehabilitation and Minimal Important Difference Estimates in Patients With Chronic Obstructive Pulmonary Disease [published correction appears in Arch Phys Med Rehabil. 2022 Oct;103(10):2068-2072]. *Arch Phys Med Rehabil*. 2021;102(12):2377-2384.e5. doi:10.1016/j.apmr.2021.05.011
5. European Medicines Agency. Reflection paper on physical frailty: instruments for baseline characterisation of older populations in clinical trials; 2018. Available from: http://www.ema.europa.eu/ema/index.jsp?curl=pages/regulation/clinical_general/general_content_001232.jsp&mid=WC0b01ac0580032ec4. Accessed June 1, 2018.