## Exercise testing and training in cystic fibrosis clinics in the United Kingdom: A 10 year update

<u>Craig A. Williams<sup>1,2</sup></u>, Zoe L Saynor<sup>3,4</sup>, Daniel Stevens<sup>5,6</sup>, Don S. Urquhart<sup>7,8</sup>, & Owen W. Tomlinson<sup>1,2,9</sup>

- Children's Health and Exercise Research Centre, Sport and Health Science, University of Exeter, St Luke's Campus, Heavitree Road, Exeter, United Kingdom.
- Royal Devon and Exeter NHS Foundation Trust Hospital, Barrack Road, Exeter, United Kingdom.
- Physical Activity, Health and Rehabilitation Thematic Research Group, School of Sport, Health & Exercise Science, Faculty of Science & Health, University of Portsmouth, Portsmouth, United Kingdom.
- Wessex Cystic Fibrosis Unit, University Hospitals Southampton NHS Foundation Trust, Southampton, United Kingdom.
- School of Health and Human Performance, Division of Kinesiology, Dalhousie University, Stairs House, 6230 South Street, Halifax, Canada.
- Department of Pediatrics, Division of Respirology, Faculty of Medicine, Dalhousie University, 1459 Oxford Street, Halifax, Canada.
- 7. Department of Paediatric Respiratory and Sleep Medicine, Royal Hospital for Children and Young People, 50, Little France Crescent, Edinburgh, United Kingdom.
- Department of Child Life and Health, University of Edinburgh, Edinburgh Bioquarter, Edinburgh, United Kingdom.
- College of Medicine and Health, University of Exeter, St Luke's Campus, Heavitree Road, Exeter, United Kingdom.

**OBJECTIVES:** Regular exercise testing, particularly cardiopulmonary exercise testing (CPET), is recommended best practice in the United Kingdom (UK) for people with cystic fibrosis (pwCF), as is providing and regularly reviewing training programmes. This study aimed to ascertain exercise testing and training practices the UK, as well as any barriers/facilitators to implementation a decade on from the last review.

**METHODS:** An online survey (Qualtrics XM; Provo, Utah, USA) was distributed electronically to healthcare professionals involved in exercise management of pwCF in the UK via professional networks.

**RESULTS:** 31 CF centres participated (11 adult, 16 paediatric, 4 combined), 24 of which were specialist, and 7 were networked clinics. Of these, 94% reported using exercise testing (vs. 53% in 2010). The six-minute walk test was the most used exercise test (used in 55% of centres), whilst 48% are using CPET. Exercise testing most commonly occurred at annual review (93%) and was typically supervised by physiotherapists (62%). Space was the main barrier to exercise testing (31% of centres). For exercise training, all centres discussed this with pwCF (vs. 82% in 2010); with 94% doing so at every clinic appointment. Physiotherapists predominantly undertake these discussions (74%), with staff training and availability cited as common barriers to subsequent implementation of training programmes.

**CONCLUSIONS:** The present data provides a contemporary insight into UK clinical exercise testing and training practice for pwCF, a decade on from when last surveyed. Encouragingly, more clinical exercise testing and exercise counselling appears to be taking place, perhaps reflecting increased understanding of the benefits of exercise across the CF community as well as recent published guidance. This survey provides evidence with which to standardise further exercise services for pwCF.

## 1896/2000 CHARACTERS