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| **The Registry for Better Understanding of ILD (RE-BUILD) smartphone application pilot study** |
| L.M. Glenn1,2,3, D. Jackson2, C. Barton1, L. Fuhrmeister4, K. Symons5, L. Turnour5, B. Tefay6, A.E. Holland3,7,8,9, N.S.L. Goh4,8,10, L.K. Troy1,2,3, M. Brooke11, I.N. Glaspole3,5,12, T.J. Corte1,2,3 on behalf of the AILDR Steering Committee |
| *1Department of Respiratory and Sleep Medicine, Royal Prince Alfred Hospital, Sydney, NSW, Australia*  *2The University of Sydney School of Medicine (Central Clinical School), Sydney, NSW, Australia*  *3NHMRC Centre of Research Excellence in Pulmonary Fibrosis, Australia*  *4Department of Respiratory and Sleep Medicine, Austin Health, Heidelberg, Victoria, Australia*  *5Department of Respiratory and Sleep Medicine, Alfred Health, Melbourne, Victoria, Australia*  *6Stacktrace Pty Ltd., Brisbane, Queensland, Australia*  *7Department of Physiotherapy, Alfred Health, Melbourne, Victoria, Australia*  *8Institute for Breathing and Sleep, Melbourne, Victoria, Australia*  *9Department of Allergy, Clinical Immunology and Respiratory Medicine, Monash University, Victoria, Australia*  *10Faculty of Medicine, University of Melbourne, Melbourne, Victoria, Australia*  *11Lung Foundation Australia*  *12Central Clinical School, Monash University, Melbourne, Victoria, Australia* |
| **Introduction/Aim:** The Registry for Better Understanding of Interstitial Lung Disease (RE-BUILD) platform is the first smartphone application piloted across multiple sites in Australia for specific use by ILD patients. Its long-term aims include enhancement of opportunities for self-monitoring and remote assessment of patients, as well as incorporation of patient-reported outcome measures (PROMs) into interstitial lung disease (ILD) care and research.  **Methods:** This was a prospective, multicentre pilot study investigating usability of the RE-BUILD smartphone application by patients with ILD aged ≥18 years old. Participants trialled using the app for six months. They were sent the mHealth App Usability Questionnaire (MAUQ) at 1,3 and 6 months. Telephone interviews were performed with 10 patients.  **Results:** Between November 2021 and November 2022, we enrolled 50 patients: 25(50%) women; mean age 66.9 years (SD 10.3); forced vital capacity 76.0% (SD 18.9); diffusing capacity for carbon monoxide 57.0% (SD 16.9), 14/50(28%) using supplemental oxygen at baseline. Over six months, participants used the app an average of 17.62 times (SD 22.77) per month; the most frequent users 47.42 times per month (SD 26.50). Participants completed an average of 23.56 PROM questionnaires (SD 14.09).  Participants agreed or strongly agreed that the app was easy to use (79/104,76.0%), easy to learn to use (83/104,79.8%) and well-organised with accessible information (77/103,74.8%). Themes identified from questionnaires and telephone interviews included: the value of self-monitoring capabilities in prompting participants to be more aware of their lung health; and the importance of extra information and support in providing hope and motivation. Additional themes included ease of operation of the app, and utility for patients living alone or remotely. Participants also identified unmet support needs which could be addressed in future developments.  **Conclusion:** RE-BUILD is a usable platform for patient self-monitoring and data collection, with exciting potential for use in collaborative ILD research in Australia and globally.  **Grant Support:** This project was supported by the Centre of Research Excellence in Pulmonary Fibrosis which is funded by the NHMRC (GNT1116371 and GNT2015613), Lung Foundation Australia, Boehringer Ingelheim, and anonymous philanthropy. |