Current Status of Pulmonary Rehabilitation in the World

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Pulmonary rehabilitation (PR) is an evidence-based, multidisciplinary intervention that improves exercise capacity, reduces symptoms, enhances quality of life, and lowers exacerbation risk and mortality in patients with chronic respiratory disease, particularly chronic obstructive pulmonary disease (COPD). Despite its strong benefits, global implementation remains limited and inconsistent. A nationwide Korean cohort demonstrated that PR participation, though low (1.43% of COPD patients), was associated with significant reductions in exacerbations and mortality. Similarly, U.S. statewide data showed that PR initiation within 30 days of hospitalization occurred in fewer than 1% of patients, underscoring systemic underuse. New models of delivery are expanding access. Randomized controlled trials confirm that home-based PR during outpatient-managed COPD exacerbations is safe and effective. Tele-rehabilitation, including smartphone-based and remote coaching programs, produces comparable improvements to center-based PR, with higher adherence in home-based settings. A large European trial further showed that PR with minimal equipment is noninferior to gym-based programs, suggesting feasibility in low-resource environments. The optimal structure of PR is also being clarified. The PuRe Duration Trial demonstrated equivalent improvements between 8- and 12-week programs, allowing flexibility in program design. Conversely, long-term physical activity coaching offered no clear advantage over light coaching interventions. Beyond physical outcomes, systematic reviews indicate that PR, especially exercise training, can enhance cognitive function in COPD patients. In conclusion, PR is a proven, life-extending intervention that remains underutilized worldwide. Expanding access will require flexible, resource-appropriate delivery models, integration of digital health solutions, and stronger policy prioritization. Global collaboration is essential to overcome disparities and ensure equitable availability of PR, ultimately improving outcomes for patients with chronic respiratory diseases.