

# An Internet-mediated exercise program improves quality of life in COPD patients

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A pedometer-based walking program supported by Internet-based instruction and support can improve health-related quality of life (HRQOL) in patients with chronic obstructive pulmonary disease (COPD), according to a new study presented at the 2014 American Thoracic Society International Conference.

"Low levels of physical activity among individuals with COPD can contribute to impaired quality of life and have been linked to higher risk of exacerbations, hospitalizations, and death. However, getting patients to change behavior and stick to an [exercise program](#) can be difficult," said lead author Marilyn Moy, MD of the Department of Veterans Affairs, VA Boston Healthcare System and Assistant Professor of Medicine at Harvard Medical School. "In our study, supporting an exercise program with online resources that provided instruction, individualized goals and timely feedback, COPD-specific education, and support improved HRQOL and daily step count in COPD patients compared with those who were given a pedometer alone ."

The study involved 238 Veterans with COPD who were recruited nationally and 45% of whom lived in rural areas. Participants were randomized to either the pedometer-based exercise program with access to the support website or to the group using a pedometer alone. HRQOL at baseline and four-month follow-up was measured with the St. George's Respiratory Questionnaire (SGRQ). Daily step count to assess engagement in physical activity was a secondary outcome.

A significantly greater proportion of persons in the [intervention group](#) than in the [control group](#) had at least a 4-unit improvement in SGRQ-TS (53% vs. 39% respectively,  $P=0.05$ ), the minimum clinically important difference. There was no significant between-group difference in 4-month SGRQ-TS (2.3 units,  $P=0.14$ ). For domain scores, the intervention group had a significantly lower (reflecting better HRQL) mean than control group by 4.6 units for Symptoms ( $P=0.046$ ) and by 3.3 units for Impact ( $P=0.049$ ). Compared to control group, participants in the intervention group walked 779 more steps per day at 4 months ( $P=0.005$ ).

"This Internet-based intervention significantly improved HRQOL and daily step count in our patients with COPD," said Dr. Moy. "The results are exciting because patients can walk more to make themselves feel better and potentially change the disease course. The potential for this safe and accessible home-based intervention to sustain exercise in persons with COPD, to complement existing pulmonary rehabilitation programs, and to be integrated into COPD self-management programs merits further study."

Dr. Moy and her colleagues are launching a study funded by VA Rehabilitation R&D which will look at whether this intervention impacts 6 minute walk test distance and risk of exacerbations and hospitalizations in persons with COPD.

**More information:** Abstract 50511, An Internet-Mediated, Pedometer-Based Walking Program Improves HRQL In Veterans With COPD , Scientific Abstract , 15.04 - Pulmonary Rehabilitation: Education/Self-Management/Action Plans (PR) , M.L. Moy<sup>1</sup>, R. Collins<sup>2</sup>, C.H. Martinez<sup>2</sup>, R. Kadri<sup>3</sup>, P. Roman<sup>3</sup>, R.G. Holleman<sup>3</sup>, H.M. Kim<sup>3</sup>, H.Q. Nguyen<sup>4</sup>, M.D. Cohen<sup>5</sup>, D.E. Goodrich<sup>2</sup>, N.D. Giardino<sup>2</sup>, C.R. Richardson<sup>3</sup>; <sup>1</sup>Department of Veterans Affairs, VA Boston Healthcare System, Harvard Medical School - Boston, MA/US, <sup>2</sup>University of

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