

Knowledge Gaps and Digital Readiness among Patients with COPD: Preliminary Results from the European JARED Project

Arianna Baldassari⁽¹⁾, Ayman Lakhla⁽²⁾, Andrea Faragalli⁽³⁾, Martina Bonifazi⁽⁴⁾, Brigid Unim⁽⁵⁾, Flavia Carle⁽²⁾, Edlira Skrami^(1,2), Jelena Ostojic⁽⁶⁾, Andrea Vukić Dugac⁽⁶⁾, Rosaria Gesuita^(2,7)

(1) Postgraduate School of Medical Statistics and Biometry, Department of Biomedical Sciences and Public Health, Politecnica delle Marche University, Ancona, Italy

(2) Centre for Epidemiology, Biostatistics and Medical Informatics, Politecnica delle Marche University, Ancona, Italy

(3) Department of Life Sciences, Health and Healthcare Professions, Link Campus University, Rome, Italy

(4) Interstitial Lung Diseases, Pleural Diseases and Bronchiectasis Unit, Azienda Ospedaliero- Universitaria "Ospedali Riuniti", Ancona, Italy

(5) Department of Cardiovascular, Endocrine-metabolic Diseases and Aging, Istituto Superiore di Sanità, Italy

(6) Clinic for respiratory diseases, University Hospital Centre Zagreb, Croatia

(7) IRCCS INRCA, Ancona, Italy

CORRESPONDING AUTHOR: Arianna Baldassari, Postgraduate School of Medical Statistics and Biometry, Department of Biomedical Sciences and Public Health, Politecnica delle Marche University, Ancona, Italy. E-Mail: a.baldassari@pm.univpm.it

INTRODUCTION

Chronic obstructive pulmonary disease (COPD) is a progressive chronic respiratory disease and major cause of morbidity. Critical objectives of COPD management are to preserve patients' functional status and quality of life.

Knowledge and awareness on the disease are critical for self-management but evidence on these aspects remains limited.

OBJECTIVES

This study, conducted within the European project 'Joint Action on Chronic Respiratory Diseases' (JARED), aimed to assess COPD-related knowledge and self-management awareness and willingness to use digital tools in patients with COPD.

METHODS

This cross-sectional study included patients attending routine outpatient visits at the Pulmonology Department of the AOU Ospedali Riuniti delle Marche (Italy) and the Department of Pulmonary Diseases Jordanovac, University Hospital Centre Zagreb (Croatia). Patients completed a questionnaire consisting of patients' knowledge on the disease in general (5 items), risk factors (4 items), pharmacological treatment (5

items), non-pharmacological treatments (4 items), and acute exacerbations (4 items). Two additional sections assessed willingness to use digital tools (4 items) and self-management awareness (5 items). Knowledge was dichotomized at optimal level if patients gave at least three or four correct answers in sections with four items or five items respectively, according to a predefined cut-off. Likewise, willingness and awareness were set with at least three or four positive answers respectively. The associations between knowledge, willingness, awareness, and demographic and anamnestic characteristics were evaluated by Chi-square or Fisher exact test when appropriate.

RESULTS

Overall, 231 COPD patients were recruited, 53% were male, with a mean age of 68 years, 78% retired, 73% lived in urban areas, 37% had high education, 38% current smoker, 52% former smoker, mean smoking duration 36 years and 19 cigarettes per day, 66% with a disease duration ≥ 4 years.

The percentage of patients with an optimal knowledge ranged between 55% in COPD risk factors and 87% in acute exacerbations. Current or former smokers had more frequently an optimal general knowledge than a sub-optimal one (96% vs 86%, $p=0.009$); patients with disease duration ≥ 4 years had more frequently optimal knowledge in general, on risk factors, on non-pharmacological treatments than sub-optimal

(respectively, 71% vs 52%, $p=0.009$; 73% vs 56%, $p=0.011$; 69% vs 51%, $p=0.036$); optimal knowledge in non-pharmacological treatments was more frequent than sub-optimal when patients had high education (41% vs 19%, $p=0.010$).

Sixty percent of participants were willing to use digital tools. They were younger than those not willing (66 vs 71 years, $p<0.001$), more frequently employed (22% vs 7.6%, $p=0.006$), and more likely to live in urban areas (79% vs 66%, $p=0.031$).

Forty percent of participants were aware of own disease and self-management, and they had longer smoking duration than those who were not (38 vs 34 years on average, $p=0.035$).

CONCLUSIONS

Although overall COPD-related knowledge was satisfactory, substantial gaps persist in key aspects of COPD, particularly regarding disease risk factors and self-management awareness. Patients less inclined to use digital health tools may require tailored educational strategies. These findings support the need for tailored educational interventions to improve disease management and promote patient engagement in COPD care.