

## Digital technology access among patients with chronic respiratory diseases

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**Background:** Pulmonary rehabilitation (PR) is a well-established and evidence-based intervention to manage chronic respiratory diseases (CRD), but its benefits diminish over time. Self-management can slow down this tendency and digital technologies may have a key-role in such approaches. However, few studies have evaluated the access to digital technology among patients with CRD, which is fundamental for the implementation of technology-based self-management strategies.

**Aims:** The objective of this study was to explore if patients with CRD have access to digital technology and if they feel confident in using it.

**Methods:** This was an exploratory cross-sectional study. Patients with CRD were recruited from community-based PR programmes between October 2017 and September 2018. Patients were surveyed regarding access to computers, smartphones, tablets, cell phones and internet. Their confidence in using these technologies was assessed using a numerical scale from 0 (not at all confident) to 10 (completely confident). Patients were considered confident when a score higher than 5 was selected. Chi-square tests were used to explore if access to digital technology was related to age, sex, marital status, education or occupation.

**Results:** 123 patients (n=76; 62% male; 67±11 [32-87] years) were included. Chronic obstructive pulmonary disease (n=73; 59%) and asthma (n=23; 19%) were the most common diagnosis. 80% of patients reported having access to digital technology: 34% reported having a computer, 44% owned a smartphone or tablet and 36% a cell phone. 81% of patients reported themselves as confident in using these technologies (median 7, interquartile range 5-8.5). About half of them (n=64; 52%) used the internet and, from these, 84% felt confident in using it (median 8, interquartile range 5-9). Patients with access to digital technology and internet were younger (p=.029 and p<.001) and with higher levels of education (p=.010 and p<.001). No further associations were found.

**Conclusions:** Patients with CRD have access to and feel confident in using digital technologies. **These** results reinforce the potential of using digital technologies as a resource for the implementation of selfmanagement strategies in this population.

**Keywords:** digital technology, chronic respiratory diseases, self-management

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