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Research Article

Implementation and use of technology-enabled remote monitoring for chronic obstructive pulmonary disease: a rapid qualitative evaluation

Nikki Newhouse,[1] Agne Ulyte,[2] Zuzanna Marciniak-Nuqui,[2] Jackie van Dael,[1] Sonja Marjanovic,[2] Sharon Brennan[3] and Sara Shaw[1*]

[1]Nuffield Department of Primary Care Health Sciences, Radcliffe Observatory Quarter, Oxford University, Oxford, UK
[2]Health and Care Department, RAND Europe, Cambridge, UK
[3]National Voices, London, UK

[*]**Corresponding author** sara.shaw@phc.ox.ac.uk

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Plain language summary

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Chronic obstructive pulmonary disease affects about 2% of the United Kingdom population. Managing the condition effectively is critical to preventing worsening symptoms. One approach is technology-enabled remote monitoring, which uses medical devices (e.g. an inhaler or oximeter) to help monitor patients with chronic obstructive pulmonary disease at home. While these services have potential, we need to understand how they can be used well.

We examined how, where, why and by whom these services are being used to care for patients with chronic obstructive pulmonary disease. We interviewed 19 people working across four United Kingdom areas that offered technology-enabled remote monitoring for chronic obstructive pulmonary disease. We shared and refined findings in a workshop with 23 healthcare staff, interviewed 6 patients and ran another workshop to ask 9 patients for their help in designing resources that healthcare teams might use to support patients.

We found that technology-enabled remote monitoring is usually introduced in response to local patient needs. These services aim to monitor and support patients with chronic obstructive pulmonary disease remotely in the comfort of their own home, but how services work varies in the technology used and nature of support provided. To work well, technology-enabled remote monitoring services need to have a clear purpose, appropriate technology characteristics, value for NHS staff and patients and be user-friendly. Patients value services that help them feel more connected to healthcare providers and provide timely information and support. Healthcare staff want to support high-quality patient care but also need to consider technology-enabled service affordability and how it affects their workload.

In conclusion, technology-enabled remote monitoring can benefit chronic obstructive pulmonary disease care but must be thoughtfully included in existing healthcare systems, making sure that the technology complements current services, is affordable, and maintains quality and safety. More research is needed on the long-term effectiveness and affordability of such services, and potential impact on patient access and equity.