Home monitoring methods can help reduce the risk of contracting COVID-19 for NHS patients and staff

March 31 2021

Credit: Unsplash/CC0 Public Domain

A new study led by the National Institute for Health Research (NIHR) BRACE and RSET Rapid Evaluation Centres and undertaken by

researchers at UCL and the University of Birmingham say NHS staff feel remote home monitoring methods enable improved patient care and also reduce the risk of staff and patients contracting COVID-19.

The COVID Oximetry @ Home study which has been published in *EClinicalMedicine* reveals that NHS staff felt remote home monitoring methods reduced their risk of contracting COVID-19 from patients, and highlighted how to ensure these services are readily accessible to patients for whom it is considered appropriate.

Since the outbreak of COVID-19, patients who are admitted to hospital with an advanced case of the disease require invasive treatment and potential admission to an intensive care unit (ICU). Remote home monitoring models (sometimes referred to as oximetry at home or 'virtual wards') allow patients most at risk of deteriorating to monitor their symptoms at home and report readings from their oximeter to NHS staff, who can then ensure they receive appropriate home care or referral to hospital. This form of healthcare could help avoid unnecessary hospital admissions.

The study involved eight NHS sites which set up and implemented a range of COVID Oximetry @ home models during the first wave of the pandemic. Phase 1 of the evaluation explored staff experiences of using tools such as pulse oximeters with patients at home, the use of data for monitoring progress, and documented how staffing and resource allocation can affect the success of remote monitoring models.

The study also highlighted that in order for remote monitoring to work effectively, it must be inclusive of people without internet access or understand the use of technology. There also needs to be better integration with NHS Test and Trace to ensure that referring people for remote monitoring is as streamlined as possible.

Dr. Cecilia Vindrola from RSET and lead author of the study said: "The pandemic has provided a unique opportunity for us to study changes in models of care used by the health service. Better understanding of remote home monitoring models could help patients access treatment at the right time and reduce the pressure that COVID-19 hospitalisations have placed on the NHS. Our analysis provides much-needed insight for the use of these models of care in future, including care for non-COVID-19 conditions."

The project drew out lessons for development and implementation of this model of care across the country for winter 2020-21 and were disseminated widely across the NHS.

Findings from the research informed the decision by the NHS National Incident Response Board to support the national roll out of this model in December 2020: COVID Oximetry@home (CO@h).

Dr. Manbinder Sidhu from the University of Birmingham (BRACE team) and a co-author of the study said: "The Phase 1 evaluation findings have supported NHS England & Improvement to develop guidance for NHS staff to deliver the COVID Oximetry @ Home service while a synthesis of the main lessons learnt has been presented to over 500 NHS colleagues planning and developing virtual wards across England."

Phase 2 of the study will evaluate the models of remote monitoring care implemented during the second wave of the pandemic, while also studying their clinical and cost-effectiveness, more widespread implementation, and patient and staff experiences of using remote monitoring for COVID-19r.

The COVID Oximetry @ Home study which has been published in *EClinicalMedicine*.

More information: Cecilia Vindrola-Padros et al. The implementation of remote home monitoring models during the COVID-19 pandemic in England, *EClinicalMedicine* (2021). DOI: 10.1016/j.eclinm.2021.100799