

Cost evaluation of COVID-19 remote home monitoring services' patients in England during wave 2 from October 2020-April 2021

Sonila M Tomini^{1*}, Efthalia Massou^{2*}, Stephen Morris², Chris Sherlaw-Johnson³, Theo Georghiou³, Holly Walton¹, Manbinder S Sidhu⁴, Ian Litchfield⁴, Nadia Crellin³, Jo Ellins⁴, Lauren Herlitz⁵, Cecilia Vindrola-Padros¹, Naomi J Fulop¹

¹University College London, ²Cambridge University, ³Nuffield Trust, ⁴University of Birmingham, ⁵NIHR Children and Families Policy Research Unit;

*These authors contributed equally to this article and are joint first authors.

Background

During the COVID-19 pandemic, the NHS delivered a community-based remote home monitoring service that came in two models: 1. **COVID Oximetry@home (CO@h)** => home-based care to ensure the right people were admitted at hospital at the right time; 2. **Covid-19 Virtual Ward (CVW)** => facilitation of patients' transition when discharged home.

Aims

The aim of this study was to evaluate the costs of implementing remote home monitoring for COVID-19 patients during wave 2 of the pandemic in England (October 2020-April 2021):

- ❑ What were the costs of setting up the CO@h and CVW services?
- ❑ What were the mean costs per patient monitored when running the CO@h and CVW services?

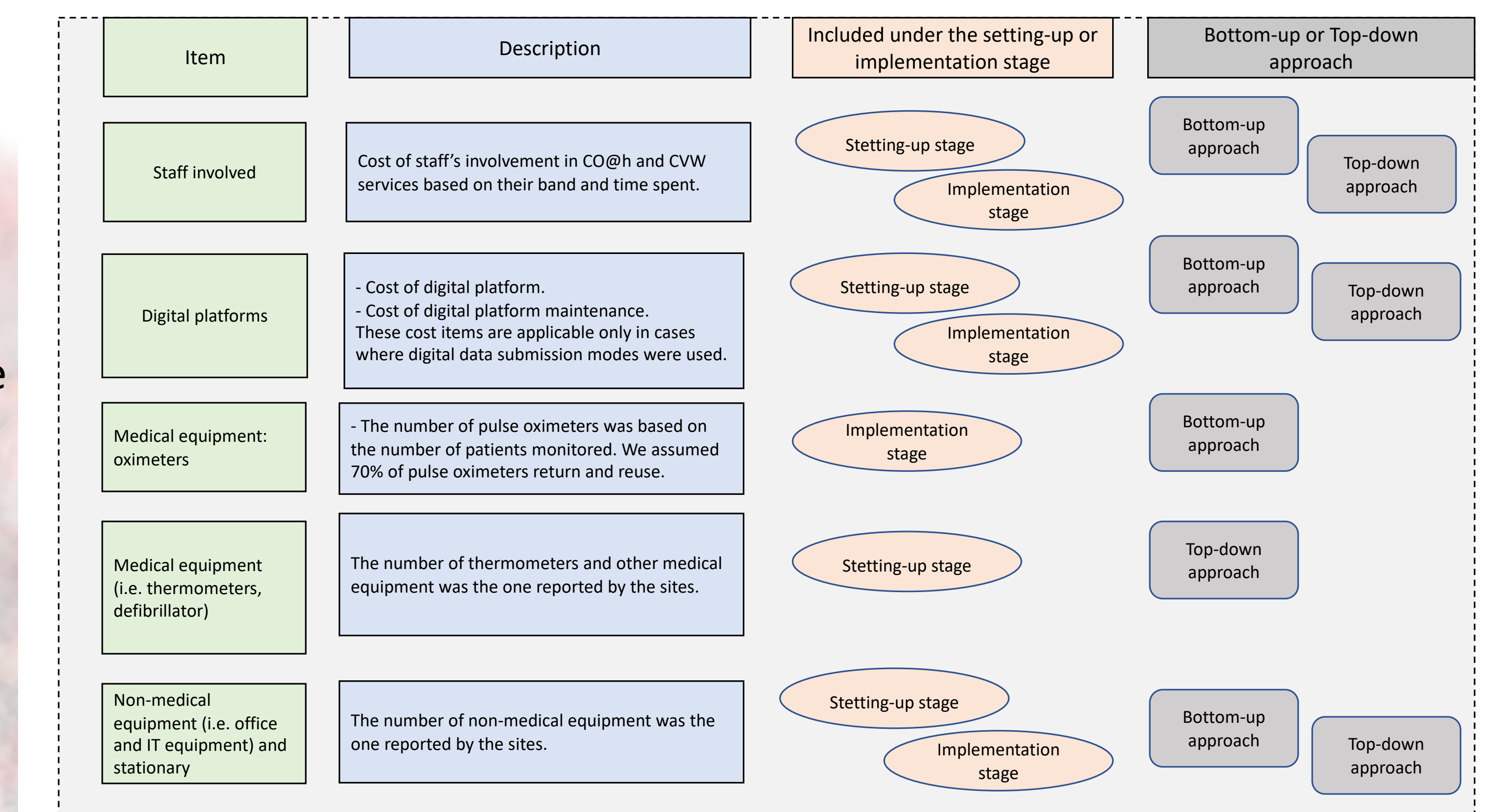
Methods

We used a top-down costing approach to describe the costs of setting-up and running the service. 26 sites reported the number of patients and staff members involved in the service, and other used resources.

Descriptive statistics and multivariate regression analysis were used appropriately.

Results

Figure 1. Categories of costs required to set up and run the CO@h and CVW services.



- The mean cost per patient monitored was lower in the CO@h service compared to the CVW (£527.5 vs. £599.1).
- The corresponding cost was lower for sites using tech-enabled and analogue data submission mode compared to sites using analogue-only mode for both CO@h (£515 vs. £561) and CVW (£584 vs. £612) services.
- The number of patients enrolled in the service, and the service type significantly affected the mean cost per patient (coef=0.62 , p= 0.001; coef=-457.99, p=0.05 correspondingly).

Conclusions.

Our analysis offers a model for future research since it covers sites of various sizes and raises questions about different approaches within the overall remote monitoring services.