CovidCare@Home Demonstrates Benefits of Remote Patient Monitoring

Byteflies

THE PROBLEM | The recent COVID-19 global health crisis placed enormous pressure on traditional brick and mortar healthcare systems, at times requiring care venues to turn away patients requiring life-saving care.

THE INTERVENTION | CovidCare@Home (CC@H) is a Belgian technology and healthcare consortium, including Byteflies, a virtual first care (V1C) company enabling continuous vital sign monitoring and digital biomarkers with user-friendly wearable patches. CC@H recognized the V1C opportunity to provide pragmatic monitoring at home as an alternative to hospital care where it's safe to manage a patient virtually. CC@H includes Byteflies' solution including BioMeTs to monitor vital signs, an app collecting patient surveys, and a clinician dashboard, complemented by a telemonitoring team. The provider dashboard lists patients, their vital measures, survey responses and associated trends ranked according to the National Early Warning Score (NEWS2). The dashboard integrates with the EMR, and when a person's vitals deteriorate, the hospital or GP is alerted. Patients can also initiate contact with the telemonitoring team (technical support), or their hospital or GP (medical questions). Multiple patient populations are supported: post-hospitalization people discharged from the hospital continue their recovery at home with CC@H; a pre-hospitalization experience allows people with suspected or confirmed infection to be followed at home, and brought in if their CC@H data requires exam or admission; assisted living facilities use CC@H to monitor high-risk patients proactively.
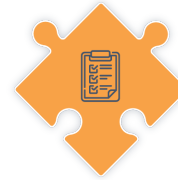
Components:

| Synchronous and/or asynchronous virtual interactions between a clinical team and individual | Interdisciplinary approach that includes consults with specialists and other disciplines to provide comprehensive and longitudinal care | Use of biometric and other sensor technologies (e.g. blood pressure cuff, smartwatch) | Patient self-report (e.g. symptom survey, pain scale) | Technical support to accommodate literacy, language, access, and technological barriers to adoption |

THE RESULTS | CC@H kicked off late September 2020 in Flanders (6.6M inhabitants) and was integrated at 28 hospitals in 3 months. As of Spring 2020, almost 1,000 patients were enrolled and monitored for 7 days on average. Preliminary data indicates patients were discharged from the hospital on average one day earlier with CC@H. In addition, patients overwhelmingly reported that CC@H gave them peace of mind, especially vital sign monitoring and direct communication with healthcare provider features. If prolonged patient surveillance at home leads to improvements in the standard of care is still being investigated. The National Institute for Health and Disability Insurance (RIZIV/INAMI) launched a pilot reimbursement initiative for COVID-19 digital health solutions that included CC@H. Finally, in the initial stages of CC@H, Byteflies built more than 30 new features into the application based on feedback from the hospital partners, demonstrating that agile co-development and safe medical devices can go hand-in-hand in V1C.

THE BENEFITS | ⑤ **Affordability** + ✕ **Interconnectedness**

CC@H demonstrated that replacing and extending a part of care traditionally provided inside the hospital or clinic with remote patient monitoring is feasible and can be orchestrated quickly when a critical mass of stakeholders rally around providing a safe and pragmatic V1C solution. For CC@H, the speed of roll-out and affordability of the solution were critical, as well as the program's ability to connect people to the right level of care amidst limited resources and social distancing measures.

LEARN MORE about Byteflies role in CC@H