US Military Health System Sees Facility-Level Cost Savings in the First Year of Virtual Care Program

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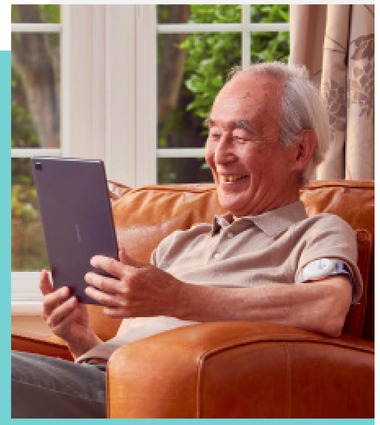
Study: Financial and Clinical Impact of Virtual Care During the COVID-19 Pandemic: Difference-in-Differences Analysis

An analysis conducted by the Defense Health Agency (DHA) and Current Health

Background

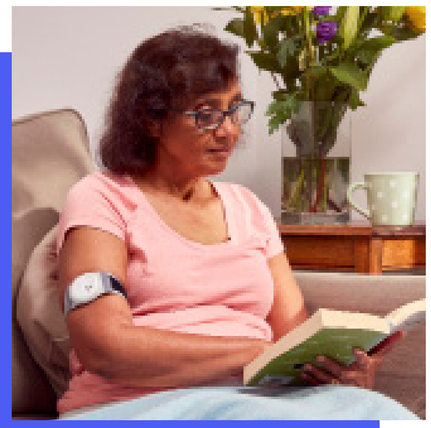
Virtual care (VC) and remote patient monitoring programs were deployed widely during the COVID-19 pandemic. Deployments were heterogeneous and evolved as the pandemic progressed, complicating subsequent attempts to quantify their impact.

The unique arrangement of the US Military Health System (MHS) enabled direct comparison between facilities that did and did not implement a standardized VC program. The VC program enrolled patients symptomatic for COVID-19 or at risk for severe disease. Patients' vital signs were continuously monitored at home with a wearable device (Current Health). A central team monitored vital signs and conducted daily or twice-daily reviews (the nurse-to-patient ratio was 1:30).



Objective

Our goal was to describe the operational model of a virtual care program for COVID-19, evaluate its financial impact, and detail its clinical outcomes.



Results

Clinical Outcomes

12%
lower length of stay averaged acrossall COVID-19 patients at an MTF with a VC program

85.7%
of patients were **monitored at home** and then **directly discharged**

11.4%
were **escalated** to a physical **hospital bed**

Zero
increases in 30-day readmissions or emergency department visits

Activation and Adherence

Among patients in a VC program

97.5%
patient activation rate with the Current Health

7.9
median days each patient was monitored

85%
wearable **adherence** rate

1.6
vital sign alarms per patient per day (median)

Cost Savings

$2,047
cost savings per COVID-19 patient at a participating MTF

$3,816
total cost per day to establish, equip, and staff the program

$2.3m
total net savings in the first year of the program across the MHS

Methods

This was a retrospective difference-in-differences (DiD) evaluation that compared 8 military treatment facilities (MTFs) with and 39 MTFs without a VC program. Tricare Prime beneficiaries diagnosed with COVID-19 who were eligible for care within the MHS and aged 21 years and or older between December 2020 and December 2021 were included.

The primary outcomes were length of stay and associated cost savings. The secondary outcomes were escalation to physical care from home, 30-day readmissions after virtual care discharge, adherence to the wearable, and alarms per patient-day.

We compared patients with COVID-19 in 8 military treatment facilities with, and 39 MTFs without, a Current Health program.

237 patients enrolled in a virtual care program during the study.

Conclusion

Monitored patients were adherent to the wearable device and triggered a manageable number of alarms per day for the monitoring-team-to-patient ratio.

The program offered substantial savings averaged across **all patients** in those centers without adversely affecting clinical outcomes.

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