Abstract

Systematic Approaches for Telemedicine and Data Coordination for COVID-19 in Baja California, Mexico

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Abstract

Background: In 2019, the State of Baja California had a total population of 3,682,063 inhabitants; in the city of Tijuana, there were only 13 Red Cross ambulances and 1 fire department ambulance to attend to the prehospital emergencies of almost 2 million inhabitants.

Objective: This study aimed to provide information to the public; evaluate COVID-19 in real time; and track regional, municipal, and state-wide data in real time that inform supply chains and resource allocation with the anticipation of a surge in COVID-19 cases.

Methods: Our model is based on human-centric design factors and cross-disciplinary collaborations for the scalable, data-driven enablement of smartphone teleconsultation technologies to link hospitals, clinics, and emergency medical services for point-of-care assessments of COVID-19 testing and subsequent treatment and quarantine decisions.

Results: The Telehealth System handled 28,964 telephone calls in the period from April 1, 2020, to January 30, 2022, and accumulated 20,287 working hours. In total, 13,721 follow-up calls were made to quarantined patients, providing medical and psychological counseling, and 12,643 calls were received and transferred from the 911 system, of which 4964 calls from patients with respiratory symptoms required urgent ambulance dispatch.

Conclusions: Telehealth offers capabilities for remote detection, care, and treatment to help with supervision, surveillance, discovery, and prevention, as well as to mitigate the effects of health care indirectly related to COVID-19.

(iproc 2022;8(1):e41059) doi: 10.2196/41059

KEYWORDS

telemedicine; COVID-19; systems design; digital health

Conflicts of Interest

None declared.

Edited by B Dinesen; this is a non–peer-reviewed article. Submitted 13.07.22; accepted 17.08.22; published 19.08.22.

Please cite as:
Castillo Olea Jr C, Vera Hernandez Sr C, Mendias Alarcon A, Conte Galvan Sr R
Systematic Approaches for Telemedicine and Data Coordination for COVID-19 in Baja California, Mexico
iproc 2022;8(1):e41059
URL: https://www.iproc.org/2022/1/e41059
doi: 10.2196/41059
PMID: