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Title

Changes in primary care inbox message volume during COVID-19 pandemic

Priority 1 (Research Category)

Population health and epidemiology

Presenters

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Abstract

Background: The SARS CoV-2 virus (COVID-19) and associated lockdown have impacted healthcare practice in the United States. Technology has played an emerging role in providing access to care while also reducing iatrogenic infection amongst patients and providers. This rapid adoption of technology has resulted in unintended consequences. Since COVID-19 lockdown, providers have noticed an increase in the volume of patient messages to request various clinical services from their primary care providers, which has placed further stress on an already overwhelmed healthcare system. However, quantitative information about the volume of electronic messages as a result of the COVID-19 lockdown is lacking.

Methods: In one large academic healthcare system, all incoming inbox items (telephone calls, refill requests, and electronic messages) received by providers from patients were retrospectively analyzed between March 1, 2019 and March 31, 2021. Inbox item rates were evaluated as a ratio of items per patient encounters (in person or telemedicine) each week. Trends in inbox rates were assessed during the 12 months before lockdown in March 2020 and 12 months post-lockdown. Logistic regression was utilized to examine effects of post-COVID-19 lockdown on inbox message volume as compared to the pre-lockdown period.

Results: There was an increase in total new inbox volume, from 2.07 before COVID lockdown and 2.87 items post-lockdown, although this was not statistically significant. However, the rate of patient-initiated messaging increased dramatically after lockdown and stabilized at a rate higher than pre-COVID-19 pandemic rates (RR 1.27, p-value < 0.001). Prescription refill requests and telephone calls spiked quickly and then returned to pre-pandemic levels.

Conclusion: On average, if a provider saw 20 patients per day before COVID-19, they would expect to receive 40 new inbox items per day. Post-COVID they would expect to receive 57 new inbox items per day, with the majority being electronic messages. These messages require additional time that adds to the workload of administrators, staff and clinical providers typically devoted to healthcare responsibilities. Interventions are needed to reduce the amount of time that healthcare providers and staff spend on increasing rates of electronic patient requests.