Characteristics of Healthcare Visits Surrounding COVID-19 Hospitalization: A Cross-Sectional Analysis

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BACKGROUND

- The COVID-19 pandemic has rapidly altered traditional healthcare settings due to concerns about preserving personal protective equipment, establishing high-volume testing sites, and limiting infectious exposures.
- Understanding how patients navigate between the screening, outpatient, and inpatient settings is key to optimizing care.
- We performed a retrospective chart review of 184 patients hospitalized with COVID-19 between 2/28/2020 and 5/13/2020.
- Our goals were 1) to investigate patterns of healthcare utilization before and after index hospitalization for COVID-19, and 2) to characterize reasons for each encounter to determine opportunities for improvement.

METHODS

Study design: Retrospective chart review

Study population: 184 adult, non-pregnant patients with COVID-19 were discharged from Harborview Medical Center and UW Medical Center between 2/28/20 and 5/13/20. Patients were considered to have multiple visits if they either 1) were diagnosed with COVID-19 prior to hospitalization or 2) had a repeat encounter (a "revisit") at the emergency department (ED) and/or hospital readmission after discharge. Focused chart review was performed on the 88/184 patients who met criteria for multiple visits.

Variables of interest: Patient demographics, medical comorbidities, diagnostic visit information, and outcomes of index hospitalization and revisits. Reason for hospitalization was documented as directly, indirectly, or not related to COVID-19 based on physician note content.

Statistical analysis: We calculated descriptive statistics using frequency counts with percentages as well as medians with interquartile range (IQR) for non-normally distributed data.

RESULTS

Demographics and Outcomes of Multiple-Visit Cohort (n = 88)

Patient Characteristics	
Mean age, years	60.3
Sex, n (%)	
Female	52 (59%)
Male	36 (41%)
Race/Ethnicity, n (%)	
White/Non-Hispanic	36 (41%)
Hispanic/Latino	20 (23%)
Black/African-American	13 (15%)
Asian	13 (15%)
Other/Multiple Races	6 (7%)
Primary Language, n (%)	
English	55 (63%)
Spanish	16 (18%)
Other	17 (19%)
Concern for access to healthcare, n (%)	23 (26%)
Index Hospitalization Outcomes	
Median length of stay (IQR), days	5 (2-14.5)
Received care in the intensive care unit, n	26 (30%)
Died during hospitalization, n	6 (7%)
Cleared of COVID-19 prior to discharge, n	11 (13%)
30-day revisit rate*	20%
ED only	19
Hospital readmission	16

COVID-19 Encounter Characteristics

	Frequency N (%)	Days to/from index hospitalization Median (IQR)	Presentation directly related to worsening COVID-19 N (%)
Diagnostic encounter prior to hospitalization*	66 (36%)	5 (3-8)	48 (73%)
Vital signs reported	25-28		
Revisit after hospitalization*	40 (22%)	9 (3.5-23.5)	17 (43%)
ED only	24	9 (4-22.5)	7
Hospital readmission	16	12 (2-23.5)	10

**calculated using 184 total COVID-19 index hospitalizations*

DISCUSSION AND CONCLUSIONS

- Nearly half of patients with COVID-19 had an additional healthcare encounter before and/or after index hospitalization.
- Many of these encounters were within the time period of potential infection transmission and reasons for visits were not always related to COVID-19.
- Our study highlights the need to coordinate transitions of care as patients navigate the healthcare system.
- Areas for growth include clarifying patients' expected clinical trajectory and developing qualitative screening tools to assess disease severity.