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Title

Patient Survey Superior to EMR Extraction for Eliciting Positive Symptoms at COVID-19 Illness Onset

Priority 1 (Research Category)

COVID-19

Presenters

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Abstract

Context: COVID-19 has ravaged nations around the world, with New York City (NYC) and the NYC suburbs being particular epicenters of COVID-19 infection. Suffolk County, NY, has reported over 200,000 cases and 3,000 deaths to date.

Most initial COVID-19 research concerned hospitalized patients. Presenting symptomology in the outpatient setting was poorly characterized, as were the implications of specific presenting symptoms, beyond respiratory distress or hypoxia, for eventual disease severity. This made it difficult for primary care physicians to predict which patients would require hospitalization for COVID-19 disease or decompensate while being managed at home during a time when hospital and ICU beds were limited.

Objective: To characterize presenting symptoms of COVID-19 infection in the outpatient setting and evaluate for correlation with severity, duration, and chronicity of disease.

Study Design and Analysis: We collected survey data from both patient telephone interviews and electronic medical record (EMR) extraction. Patient characteristics were described using means and percentages when appropriate. Percentage of symptoms by severity level, symptom duration, COVID-19 testing and escalating medical care were calculated. To evaluate association of risk factors with positive testing, severity, duration and chronicity of symptoms, logistic regression was used. Patient characteristics, medications and repeat measures were evaluated as risk factors in logistic regression.

Setting or Dataset: 107 patients with suspected and confirmed COVID-19 cases at the 3 primary care practices of Stony Brook University Hospital between March and December, 2020.

Population Studied: adult, English speaking primary care patients with suspected or confirmed COVID-19

Intervention/Instrument: patient self report telephone survey, EMR data extraction survey

Outcome Measures: symptom duration, symptom severity, persistence of symptoms at 3 month time point

Significant Results: Patient self-report survey elicited nearly twice as many symptoms described at illness onset vs. those recorded in the EMR.

Conclusions: Early in the setting of newly emerging infectious diseases, particularly those such as COVID-19 which involve multiple organ systems, patient self report of symptoms of illness rather than EMR extraction alone may be crucial both for identifying cases and in order to characterize pathophysiology of disease in real time.