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PCC and nationally did not increase when compared to previous years. However, the number of exposures listed as occurring in “own residence” increased significantly from March through May 2020 when compared to the year prior, particularly in the age group six to twelve years. This is important for emergency physicians to be aware of as many predictions call for “a second wave,” as with the usual course of other coronaviruses. Additional stay-at-home orders to help mitigate spread of the virus may occur, along with an increase in school-aged children with reported poisonings.

104 Associations between Neighborhood Disadvantage Measures and COVID-19 Case Clusters

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Study Objectives: The spatial distribution of COVID-19 remains to be described, though there is growing evidence of an increased burden among already disadvantaged populations and neighborhoods. Understanding the pattern of population risk is critically important for health systems and policy makers responding to the pandemic. Our aims were: 1) to describe the association between neighborhood factors and incident cases of COVID-19; and 2) to examine the changes in cases over time. We hypothesized that there would be an association between disadvantaged neighborhoods and case clusters.

Methods: We analyzed data from patients presenting to a large health care system in Boston, MA from 2/5/20 to 5/4/20. Patient mailing addresses were geocoded to census tracts within a 20-mile radius of Boston. COVID-19 incidence per census tract was calculated using Empirical Bayes smoothed rates to adjust for small area estimation. Clustering of cases at the census tract level were assessed using local Moran's I, accounting for multiple comparisons. Quantile local spatial autocorrelation was used to determine the spatial association between neighborhood demographic and disadvantage measures (from the American Community Survey) and census tracts with high incidence of COVID-19. Poisson regression models were used to assess the independent associations between neighborhood factors and COVID-19. Finally, we mapped the distribution of cases in the study area over time.

Results: As of May 4, 2020, there were 9,898 patients in the study area who had been treated in the health care system for COVID-19. The overall crude incidence was 31.8 cases per 10,000 population; adjusted incidence per census tract ranged from 2.3 to 405.1 per 10,000 population. Two case clusters were identified in the Chelsea/Everett and Lynn areas ($p=0.007$). We found statistically significant co-location of the top quintile of cases with several neighborhood factors (all $p<0.05$): % of population Hispanic ($n=72$ census tracts), black ($n=36$), uninsured ($n=33$), receiving Supplemental Nutrition Assistance Program (SNAP) benefits ($n=39$), and living in poverty ($n=23$). In the adjusted model, factors associated with increased incidence of COVID-19 were a higher proportion of Hispanic population (aIRR 1.24, 95% CI 1.21-1.28) and households receiving SNAP benefits (aIRR 1.08, 95% CI 1.02-1.13). The distribution of cases varied over time, but with persistently high incidence in communities north of Boston.

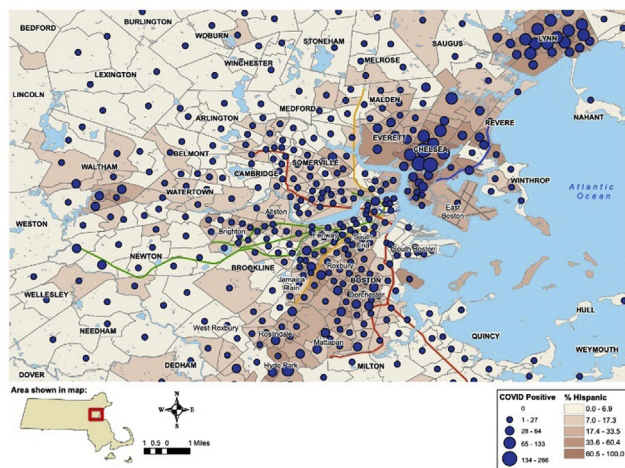


Figure 2. Hispanic population and COVID-19 cases in the study area, from 2/5/20 to 5/4/20.

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105 Studying the Impacts of To-Go Medications for Vulnerable Populations Discharged from the Emergency Department during the COVID-19 Pandemic

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Study Objectives: Emergency departments (EDs) function as a safety net for vulnerable populations who lack reliable access to health care, including those who face housing insecurity and who lack or possess limited insurance. These groups commonly utilize emergency care for low acuity conditions including asthma, pneumonia, cellulitis, and urinary tract infections, which can be treated with short courses of steroids or antibiotics, respectively. However, vulnerable patients face multiple barriers to filling prescriptions including cost, transportation and wait times at the pharmacy. Providing these patients with full courses of pre-packaged medications has the potential to improve medication compliance and health outcomes. The COVID-19 pandemic has created unique challenges for discharging patients with low acuity conditions from the ED. Not only have vulnerable and disadvantaged populations been affected disproportionately by COVID-19, but also, barriers to filling prescriptions are now compounded by pharmacy closures and social distancing. In the face of increased demand for medications used to treat respiratory disease and infection, the goal of this work was to examine a potential solution to enhancing patients' access to medications during the COVID-19 pandemic.

Methods: In a large urban academic hospital in Boston, a “to-go” medication program was used for patients discharged from the ED during the local surge of the COVID-19 pandemic (March 2020 - April 2020). Patients diagnosed with asthma, cellulitis, COPD, pneumonia, or urinary tract infection who did not require hospitalization received pre-packaged to-go medications free of charge prior to discharge. A monthly report was generated for each to-go medication through the electronic medical record. Retrospective chart review was conducted to obtain de-identified demographic information for those patients. Microsoft Excel was used to generate descriptive statistics. This study was approved by the Institutional Review Board of Partners Healthcare, Boston.

Results: A total of 50 patients from March 13 - April 30, 2020 were discharged with to-go medications. Demographics are listed in [Table 1](#). During the surge of the COVID-19 pandemic at our institution, 66% of patients who received to-go medications were diagnosed with a respiratory illness. Of the patients in the to-go medications program, 56% did not have private insurance, 26% did not speak English as their primary language, and 30% were undomiciled.

Conclusion: The “to-go” medications program has the potential to improve medication adherence while also reducing infection transmission by promoting social distancing through avoiding pharmacy visits. In future research, we aim to continue to analyze the effects of this program on vulnerable populations in order to improve equitable access to health care for all as well as to study how this program affects ED return visits and by extension overall hospital costs.

Table 1. Demographics of Patients who Received To-Go Medications

March - April 2020		% (n)
Sex		
	Female	46% (23)
	Male	54% (27)
Age		
	19-49	52% (26)
	50-64	26% (13)
	65 - 99	22% (11)