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Effectiveness of face mask mandates in 4 suburban US communities during the SARS-CoV2 Omicron surge

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use of immunosuppressive drug therapy, chronic kidney disease/dialysis, or chronic respiratory disease), along with complications were done. Multivariate regression models were produced from the most significant variables and factors for ICU admission. The final, reduced regression model, a p-value <0.05 was considered statistically significant and confidence intervals were reported at a level 95%.

**Results:** Of the 156 hospitalized patients, 63.5% (99) were male, 132 (84.6%) admitted for respiratory failure, average age was 67.2 (+/-12.2). There were 71 (45.5%) patients who required intensive care. Those > 65 years old had a higher frequency of ICU admission. Seventy-nine percent (49) of the ICU patients had a BMI over 25. Most common comorbidities were diabetes, hypertension, and coronary artery disease/hyperlipidemia. The regression model showed that males had a 4.4 (95% CI 1.576, 12.308) odds of ICU admission (p=0.0047). Those who developed acute kidney injury (AKI) and BMI 25-29.9 were strong predictors of ICU admission (p<0.001 and p=0.0020, respectively). No single comorbidity was associated with ICU admission. However, those with at least one comorbidity, there was 1.984 increased odds (95% CI 1.313, 2.998) of an ICU admission. Of those admitted in the ICU, 72% (16) died.

**Conclusion:** In this study, suburban communities with mask mandates had a lower SARS-CoV2 peak percent positivity rate and an earlier peak than communities without mask mandates. Face mask requirements in indoor public spaces may reduce transmission of SARS-CoV2 during variant surges, and may be particularly effective in communities with lower vaccination rates.

![Figure 1. Weekly SARS-CoV2 PCR positive cases per 100k population in 4 suburban Boston communities December 2020-February 2022.](image)

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**Effectiveness of face mask mandates in 4 suburban US communities during the SARS-CoV2 Omicron surge**

Julie McCarthy; Robert Partridge; Stephen K. Epstein; Tiffany Zike; Timothy McDonald

**Objectives:** To evaluate the effectiveness of face mask mandates in four suburban communities in the metropolitan Boston area during the SARS-CoV2 Omicron surge.

**Background:** Face mask mandates have been implemented by local, state and national governments to limit the transmission of illness during the SARS-CoV2 pandemic.

**Methods:** A retrospective review of state reported, PCR positive cases of SARS-CoV2 and vaccination rates in four communities during the Omicron surge from 01/11/21-01/31/22. Data was analyzed using descriptive statistics.

**Results:** Two communities had a face mask mandate in place for all indoor public spaces throughout the study period, and two communities did not. Brookline (population 59,180, fully vaccinated rate per capita 62%) and Newton (population 88,593, vaccination rate 87%) implemented face mask mandates prior to the surge on 08/27/21 and 09/02/21, respectively, that remained in place through 02/18/22. Needham (population 31,248, vaccination rate 93%) and Framingham (population 72,308, vaccination rate 76%) issued mask recommendations but not a mask mandate. SARS-CoV2 percent positive rate per 100,000 population, reported weekly for each community is shown in Figure 1. Prior to Omicron, on 10/14/21 percent positive rates were 1% or less in all four communities. Percent positivity at the peak of Omicron was lower in Newton (13.18%) and Brookline (12.28%) than in Needham (14.92%) and Framingham (22.38%). Brookline had the lowest peak positivity rate and the lowest vaccination rate. Percent positivity also peaked and declined earlier in both communities with mask mandates.

**Conclusion:** In this study, suburban communities with mask mandates had a lower SARS-CoV2 peak percent positivity rate and an earlier peak than communities without mask mandates. Face mask requirements in indoor public spaces may reduce transmission of SARS-CoV2 during variant surges, and may be particularly effective in communities with lower vaccination rates.

**Proportion of Emergency Department Visits for Alcohol Abuse Increased After the Arrival of COVID-19**

Barnet Eskin; Claire DeLong; John R. Allegra

**Objectives:** The goal of our study was to determine whether there was a change in the proportion of ED visits for alcohol abuse following the arrival of COVID-19.

**Background:** In March of 2020, COVID-19 arrived in the New York Metropolitan area. Total ED visits decreased markedly, likely because of fear of exposure to the virus as well as social isolation mandates. Concerns have been raised regarding the possible adverse effects that COVID-19 may have on increased abuse of alcohol. COVID-19 triggered bouts of anxiety, isolation from peers, and increased family tensions because of job disruptions and quarantining within families. A CDC study showed that despite decreased total ED visits, compared to 2019, the proportion of ED mental health related visits in 2020 increased. The goal of our study was to determine whether