

UC Irvine

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health

Title

ICU admission Risk Factors of Latinx/Hispanic COVID-19 patients at a US Mexico Border Hospital

Permalink

<https://escholarship.org/uc/item/0n54r2g2>

Journal

Western Journal of Emergency Medicine: Integrating Emergency Care with Population Health, 23(5.1)

ISSN

1936-900X

Authors

LaFree, Andrew

Tomaszewski, Christian

Coyne, Christopher

et al.

Publication Date

2022

DOI

10.5811/westjem.58908

Copyright Information

Copyright 2022 by the author(s). This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

making tools, rotation advice, and the application and match process. Mentors were instructed to meet with their mentees and to check-in weekly. Following the rotation, students were sent an online anonymous survey consisting of 6 multiple choice and 3 free response questions. Simple descriptive statistics and qualitative methods were employed for data analysis. Initial coding was performed independently by two study authors and then reviewed by a third author with experience in qualitative methodology. Suggestions were merged via consensus into a final code set that was used for thematic analysis.

Results: Six audition rotations occurred over the study period. Of the 47 students, 74% (n=35) responded to our survey. 97% (n=34) of participants recommended continuing this program, 91% (n=32) rated this program helpful, and 64% (n=16) stated that this improved their success on the rotation. Preliminary qualitative analysis of students' responses revealed the themes in Figure 1.

Conclusion: Preliminary data suggests that students found having a mentor during their audition rotations was meaningful. We believe students can benefit from a resident-driven mentorship program during their auditions.

Figure 1:

Theme	Student Response
Clerkship Success	"I met him the first week of the clerkship and he provided me with some useful information on how to tackle the rest of the rotation. He helped me understand what my role should be."
Application Advice	"Getting outside feedback from someone who has so recently experienced the same challenges and found their way through those hurdles was just what I needed."
Enhanced Medical Knowledge	"They can teach from a supervising role because they went through intern year and learned from their own mistakes."
Team Camaraderie	"It can be hard adjusting to a new environment and a friendly face definitely helped."
Program Insights	The "mentor program was very good for general information and also to get a feel for the type of program..."
Safe Space	"It was helpful to have support from someone who truly wanted me to succeed and was willing to help me through the challenges I faced."

Figure 1.

Figure 2:

Survey Question	% Yes	% No
Should we continue this program in the future?	97.1% (34/35)	2.9% (1/35)
Did you ever meet with your mentor?	88.6 (31/35)	11.4 (4/35)
Was this program helpful?	91.4% (32/35)	8.6% (3/35)
Do you feel this program helped improve your clerkship performance?	64% (16/25)	36% (9/25)
Did this program positively influence your perception of our program?	81.5% (22/27)	18.5% (5/27)
Will you try to keep in touch with your mentor?	88.6% (31/35)	11.4% (4/35)

Figure 2.

13 ICU admission Risk Factors of Latinx/Hispanic COVID-19 patients at a US Mexico Border Hospital

Andrew LaFree; Christian A. Tomaszewski; Christopher John Coyne; Faith C. Quenzer

Presenter: *L.E. Gomez*

Objectives: To describe the association of demographics of sex, comorbidities, age with the risk of severe (Coronavirus Disease 2019) COVID-19 requiring intensive care unit level of care, and death in a primarily Latinx/Hispanic U.S.-Mexico border hospital operating at surge capacity.

Background: According to the CDC, the Latinx/Hispanic population in the U.S. have been particularly affected by severe COVID-19 complications and high mortality rates. Border hospitals and their emergency departments (ED) are particularly vulnerable to widespread communicable respiratory infections and severe COVID-19 complications and poor outcomes such as surges of hospitalizations and death. Multiple factors such as inadequate healthcare infrastructure in border areas, access to preventative healthcare and subsequently higher prevalence of comorbidities that increase the risk for severe COVID-19 in the Latinx/Hispanic patient population overall. At the U.S.-Mexico border region, there is a paucity of research and data regarding how COVID-19 affects this predominantly Latinx/Hispanic community. Our study seeks to identify demographic, and clinical risk factors that make this specific community vulnerable to severe COVID-19 complications such as intensive care unit (ICU) utilization and death.

Methods: This was a retrospective, observational chart review of 156 hospitalized COVID-19 patients during a surge at a border hospital. Adult patients (> 18 years) diagnosed with SARS-CoV-2 and met admission criteria from April 10, 2020 to May 30, 2020 were included. Excluded were pediatric patients (< 18 years of age), patients who did not consent for treatment, pregnant women, patients who did not meet the above inclusion criteria. Descriptive statistics of sex, age categories of 18-49, 50-64, and > 65 years or older, BMI, presence of at least one comorbidity (coronary artery disease, hypertension, diabetes, cancer/lymphoma, current

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: The Latinx/Hispanic border populations have a high prevalence of comorbidities and potential complications that increase their risk for COVID-19 complications that lead to ICU admissions and death.

14 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.

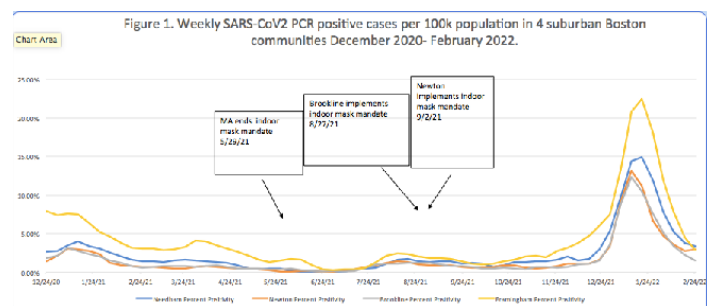


Figure 1. Weekly SARS-CoV2 PCR positive cases per 100k population in 4 suburban Boston communities December 2020-February 2022.

15 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