The Effect of Covid-19 on Length of Stay for Non-Covid-19 Patients: A Single Center Study.

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RESEARCH QUESTION

How does the number of admitted Covid-19 patients affect the length of stay (LOS) for non-Covid-19 patients in acute care and intensive care units?

BACKGROUND

Covid-19 had a large impact on healthcare systems and various populations. US hospitals saw reduced admissions during the height of the pandemic that had severe repercussions. More research examining specific populations could be used to guide how to best serve a healthcare system's patient population.

METHODS

We compiled deidentified patient information from the EMR of a large, single center in North Texas and grouped the information into two timeframes – Pre and Post Covid-19.

SCAN ME

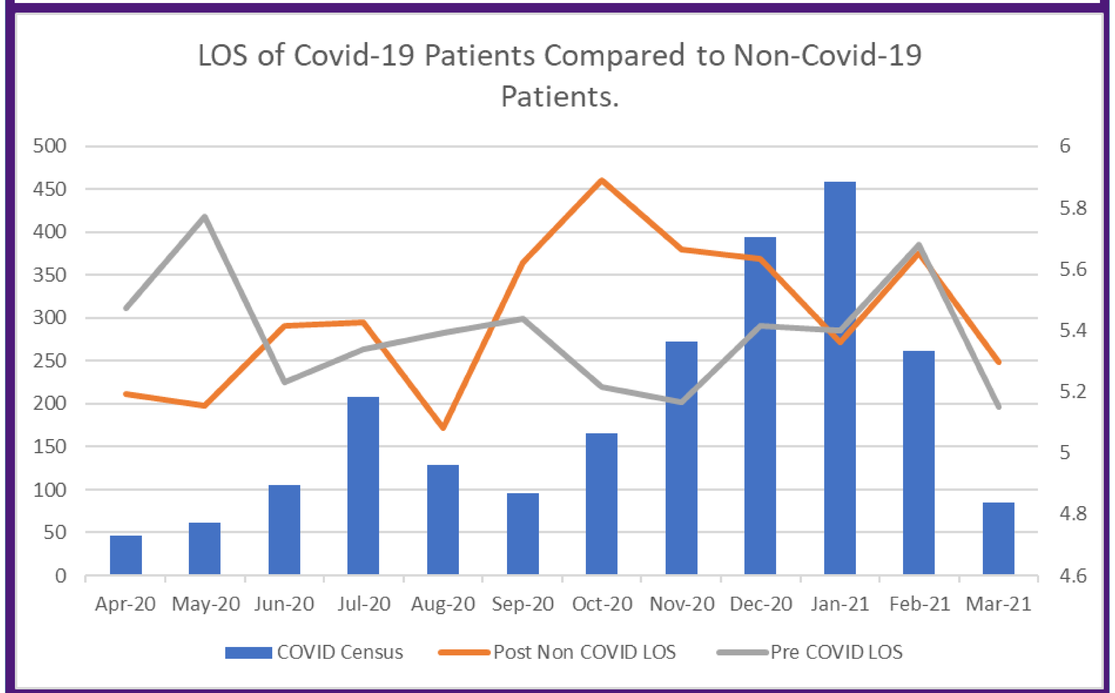
QR code for poster

Despite differences between demographics and factors that affected length of stay (LOS), our article found that length of stay for non-Covid-19 patients was not affected by the Covid-19 inpatient census compared to the pre-Covid-19 period.

Exhibit 1: Demographics

	2020-2021	2019-2020	P-Value
Total Encounters, No.	11660	11508	
Age, Avg.	61.67	61.52	0.246
Sex, %			
Female	51.30%	50.30%	0.117
Race, %			
American Indian or Alaskan Native	0.09%	0.23%	0.378
Asian	1.52%	1.50%	0.769
African American	18.87%	19.29%	0.568
Hawaiian / Pacific Islander	0.14%	0.05%	0.051
Other/ Unknown/ Declined	**3.13%**	**2.44%**	**0.001**
White	76.24%	76.48%	0.367
Hispanic, %	**22.82%**	**17.14%**	**<0.001**
Average Number of Diagnoses, Avg.	**20.65**	**17.79**	**<0.001**

Bolding Denotes P < 0.05



RESULTS

The number of diagnoses was found to be higher in the 2020-2021 timeframe than the 2019-2020 timeframe ($p < 0.001$). Comparing LOS across quarters, October through December was found to be statistically significant ($p=0.0363$). A regression model for the 2019-2020 dataset, the number of diagnoses, age, and being of an unknown or declining to list race were statistically significant ($p<0.05$). The regression for the 2020-2021 dataset had age, being female, having race listed as unknown/ other, African American, or Asian, being Hispanic, number of diagnoses, and Covid-19 census as all statistically significant ($p<0.05$). Overall, there was not an overall statistically significant difference between the 2019-2020 population and the 2020-2021 non-Covid-19 population LOS ($p=0.2837$).

FUTURE DIRECTIONS

This same design can be applied to various specialties (ie pediatrics, obstetrics, surgery). Examining other medical centers could highlight regional differences in how the pandemic was handled. A broader look at various quality metrics could also provide useful insight into administrative decision making.