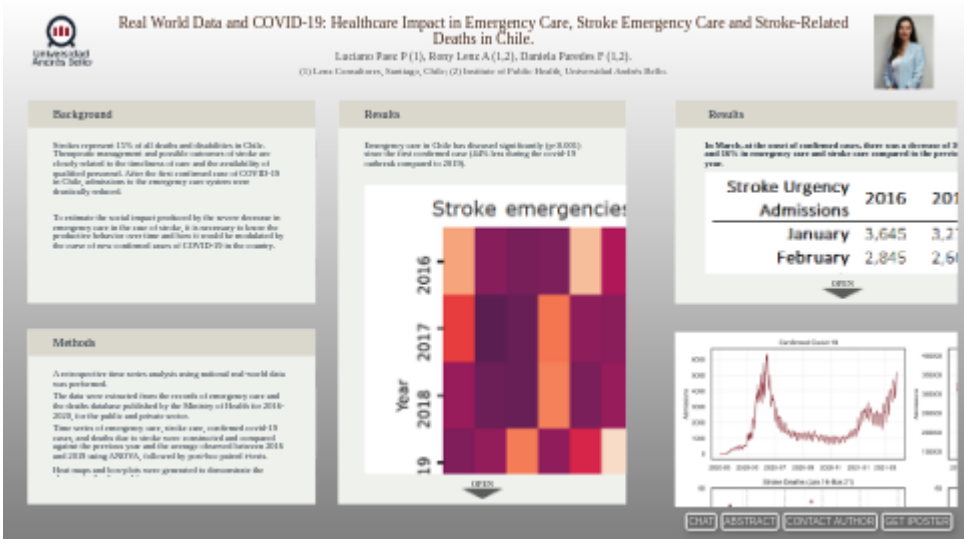
Real World Data and COVID-19: Healthcare Impact in Emergency Care, Stroke Emergency Care and Stroke-Related Deaths in Chile.



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PRESENTED AT:

BACKGROUND

Strokes represent 15% of all deaths and disabilities in Chile. Therapeutic management and possible outcomes of stroke are closely related to the timeliness of care and the availability of qualified personnel. After the first confirmed case of COVID-19 in Chile, admissions to the emergency care system were drastically reduced.

To estimate the social impact produced by the severe decrease in emergency care in the case of stroke, it is necessary to know the productive behavior over time and how it would be modulated by the curve of new confirmed cases of COVID-19 in the country.

METHODS

A retrospective time series analysis using national real-world data was performed.

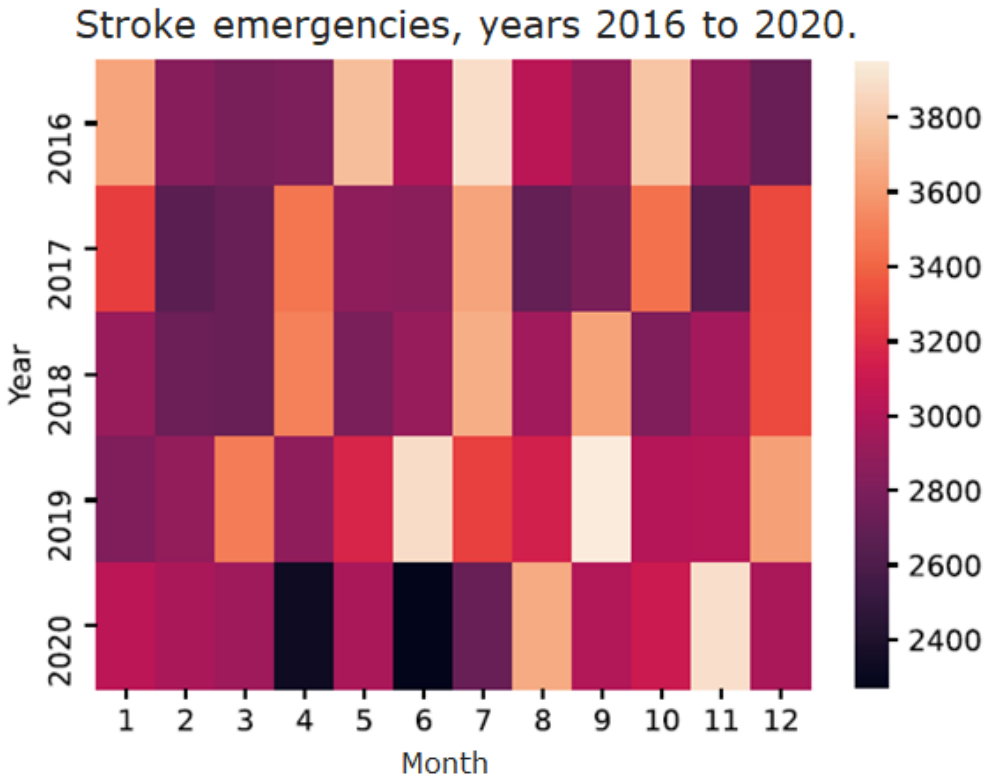
The data were extracted from the records of emergency care and the deaths database published by the Ministry of Health for 2016-2020, for the public and private sector.

Time series of emergency care, stroke care, confirmed covid-19 cases, and deaths due to stroke were constructed and compared against the previous year and the average observed between 2016 and 2019 using ANOVA, followed by post-hoc paired t-tests.

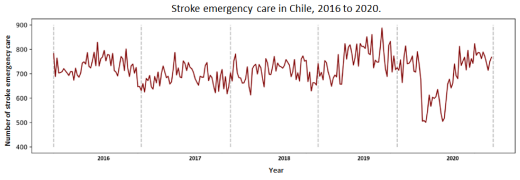
Heat maps and box-plots were generated to demonstrate the changes in the demand for emergency care.

RESULTS

Emergency care in Chile has diseased significantly ($p<0.001$) since the first confirmed case (44% less during the covid-19 outbreak compared to 2019).



Admissions for stroke decreased 18% and 7% compared to 2019 and 2016-2019 period. In 2020, in January and February, care for stroke increased 8% and 3%, respectively.



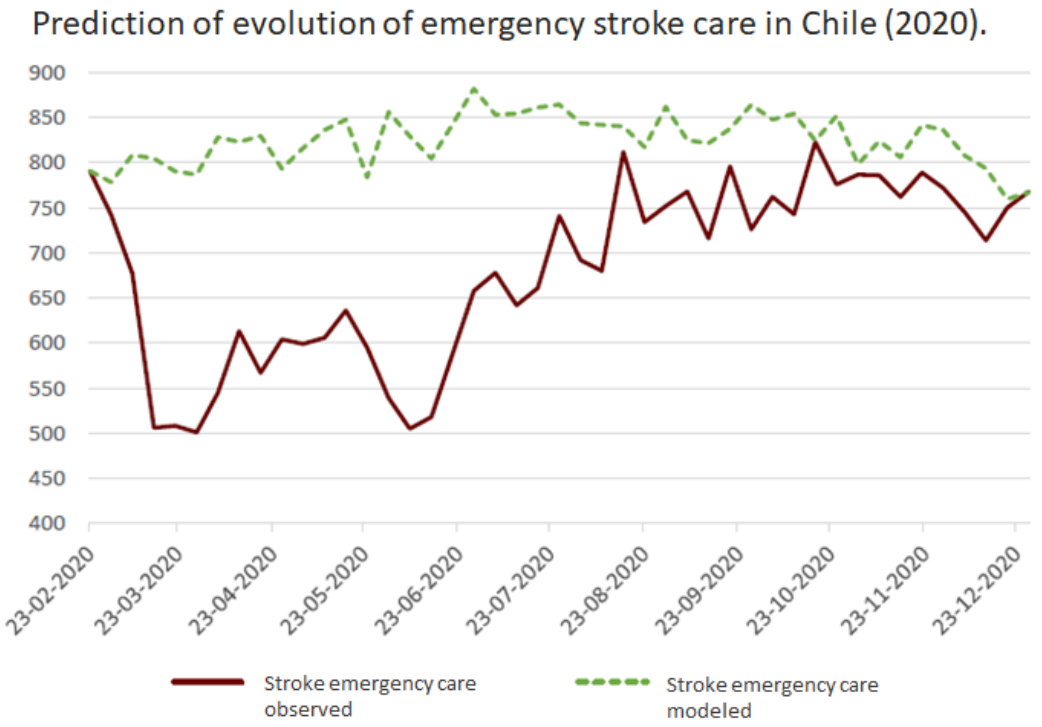
RESULTS

In March, at the onset of confirmed cases, there was a decrease of 30% and 16% in emergency care and stroke care compared to the previous year.

Stroke Urgency Admissions	2016	2017	2018	2019	2020	TES (2020)	UP* (2019-2020)	UP* (%)
January	3,645	3,270	2,908	2,813	3,051			
February	2,845	2,666	2,733	2,891	2,981			
March	2,785	2,722	2,721	3,492	2,934	3,970	558	-16.0%
April	2,806	3,471	3,505	2,877	2,329	3,275	548	-19.0%
May	3,750	2,869	2,792	3,173	2,975	4,141	198	-6.2%
June	2,998	2,848	2,901	3,880	2,269	3,359	1,611	-41.5%
July	3,888	3,648	3,687	3,280	2,722	3,434	558	-17.0%
August	3,042	2,705	2,944	3,147	3,670	4,206	-523	16.6%
September	2,895	2,795	3,637	3,952	3,006	3,349	946	-23.9%
October	3,778	3,446	2,810	3,021	3,104	3,379	-83	2.7%
November	2,884	2,649	2,948	3,030	3,896	4,107	-866	28.6%
December	2,723	3,311	3,318	3,627	3,010	3,129	617	-17.0%
Total	**38,039**	**36,400**	**36,904**	**39,183**	**35,947**	**36,347**	**3,564**	**-8.3%**

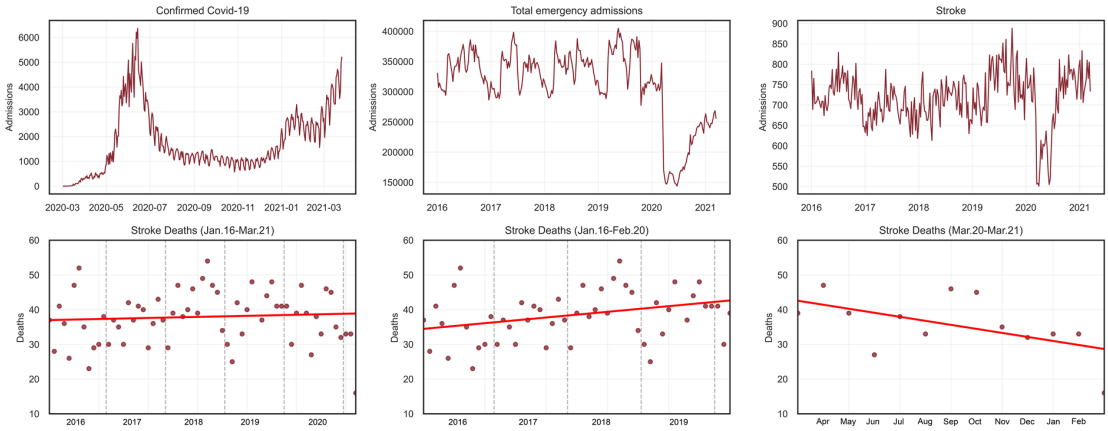
** TES: Triple exponential smoothing forecasting model; UP: Untreated patients*

Stroke-related deaths decreased 17% in all types of stroke and 6% for ischemic stroke when compared to 2019.



CONCLUSION

- Results demonstrate that access to stroke care has fallen in Chile during the covid-19 outbreak.
- Future studies are needed to quantify the effects on disease burden due to the lack of interventions.
- Authorities shall bring this information into the design of future strategies to avoid unnecessary and harmful lack of access for groups at risk.



ABSTRACT

Real World DATA and COVID-19: Healthcare IMPACT in Emergency Care, Stroke Emergency Care and Stroke-Related Deaths in Chile.

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Objectives
Stroke is a disabling condition and a leading cause of premature deaths in Chile. Before thecovid-19 outbreak, access to first-line and second-line treatments was scarce already. The covid-19 outbreak was pointed-out as responsible for decreasing general emergency care, stroke emergency care, and stroke-related death rates, and there is a need to quantify those effects.

Methods

A retrospective time series analysis using national real-world data was performed. The data were extracted from the records of emergency care and the deaths database published by the Ministry of Health for 2016-2020, for the public and private sector. Time series of emergency care, stroke care, confirmed covid-19 cases, and deaths due to stroke were constructed and compared against the previous year and the average observed between 2016 and 2019 using ANOVA, followed by post-hoc paired t-tests. Heat maps and box-plots were generated to demonstrate the changes in the demand for emergency care.

Results

Emergency care in Chile has diseased significantly ($p<0.001$) since the first confirmed case (44% less during the covid-19 outbreak compared to 2019). Admissions for stroke decreased 18% and 7% compared to 2019 and 2016-2019 period. In 2020, in January and February, care for stroke increased 8% and 3%, respectively. In March, at the onset of confirmed cases, there was a decrease of 30% and 16% in emergency care and stroke care compared to the previous year. Stroke-related deaths decreased 17% in all types of stroke and 6% for ischemic stroke when compared to 2019.

Conclusion

Results demonstrate that access to stroke care has fallen in Chile during the covid-19 outbreak. Future studies are needed to quantify the effects on disease burden due to the lack of interventions. Authorities shall bring this information into the design of future strategies to avoid unnecessary and harmful lack of access for groups at risk.