

Trend of Louisiana COVID-19 Outbreaks in Religious Services, March 2020 – February 2021

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Background

- The coronavirus disease 2019 (COVID-19) is a viral respiratory disease that has a wide myriad of symptoms, potentially leading to hospitalization or death
- As of March 2, 2021, Louisiana has identified 431,271 cases and 9,647 deaths
- Louisiana identified its first COVID-19 outbreak in a religious service, or place of worship for faith-based communities, in March 2020
- As a mitigation response, during Phase 1, maximum building capacity was reduced to 25% and masking and social distancing were enforced
- As religious services return to maximum building capacity in Revised Phase 3, there is concern about the role that these settings will contribute to the burden of disease

Objective

- To better understand the impact of the transmission of COVID-19 in religious services in Louisiana.

Methods

- COVID-19 outbreaks in religious services were identified by the Louisiana Office of Public Health Infectious Disease Epidemiology Section (IDEpi)
- An outbreak was defined as two or more COVID-19 cases within 14 days of onset of each other that do not have the same residential address
- Facilities contacted IDEpi directly to report an outbreak
- IDEpi used contact tracing data to identify an outbreak
- An electronic survey was created in REDCap to record outbreaks that were identified in Louisiana
- COVID-19 outbreaks in religious services from March 2020 to February 2021 were extracted from REDCap, including the number of outbreaks, cases, hospitalizations, and deaths by the report week
- Welch Two Sample t-test, Fisher's exact tests, and frequency analyses were performed in R Version 4.0.2.

Results

Table 1. Demographic information of cases by gender.

	All N=218	Male n=84	Female n=134	p-value	
Mean (SD)					
Age	51.2 (18.4)	51.7 (19.9)	51.0 (17.5)	0.80	
n (%)					
Race	White	173 (79.4)	64 (76.2)	109 (81.3)	0.53
	Black	33 (15.1)	14 (16.7)	19 (14.2)	
	Other	12 (5.5)	6 (7.1)	6 (4.5)	
Position	Staff	40 (18.4)	19 (22.6)	21 (15.7)	0.43
	Attendee	174 (79.8)	63 (75.0)	111 (82.8)	
	Unknown	4 (1.8)	2 (2.4)	2 (1.5)	

Figure 1. New COVID-19 religious service data by report week.

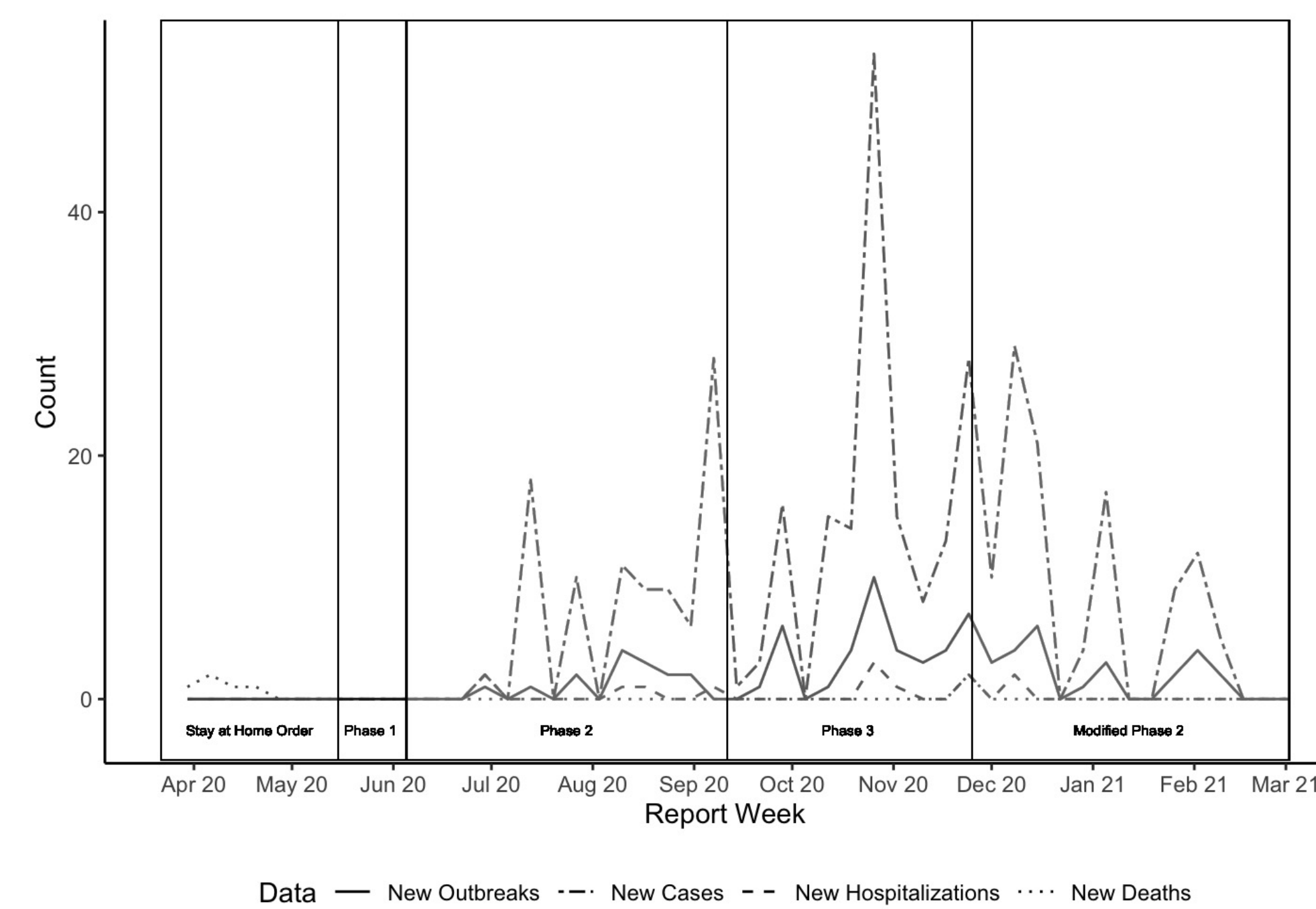
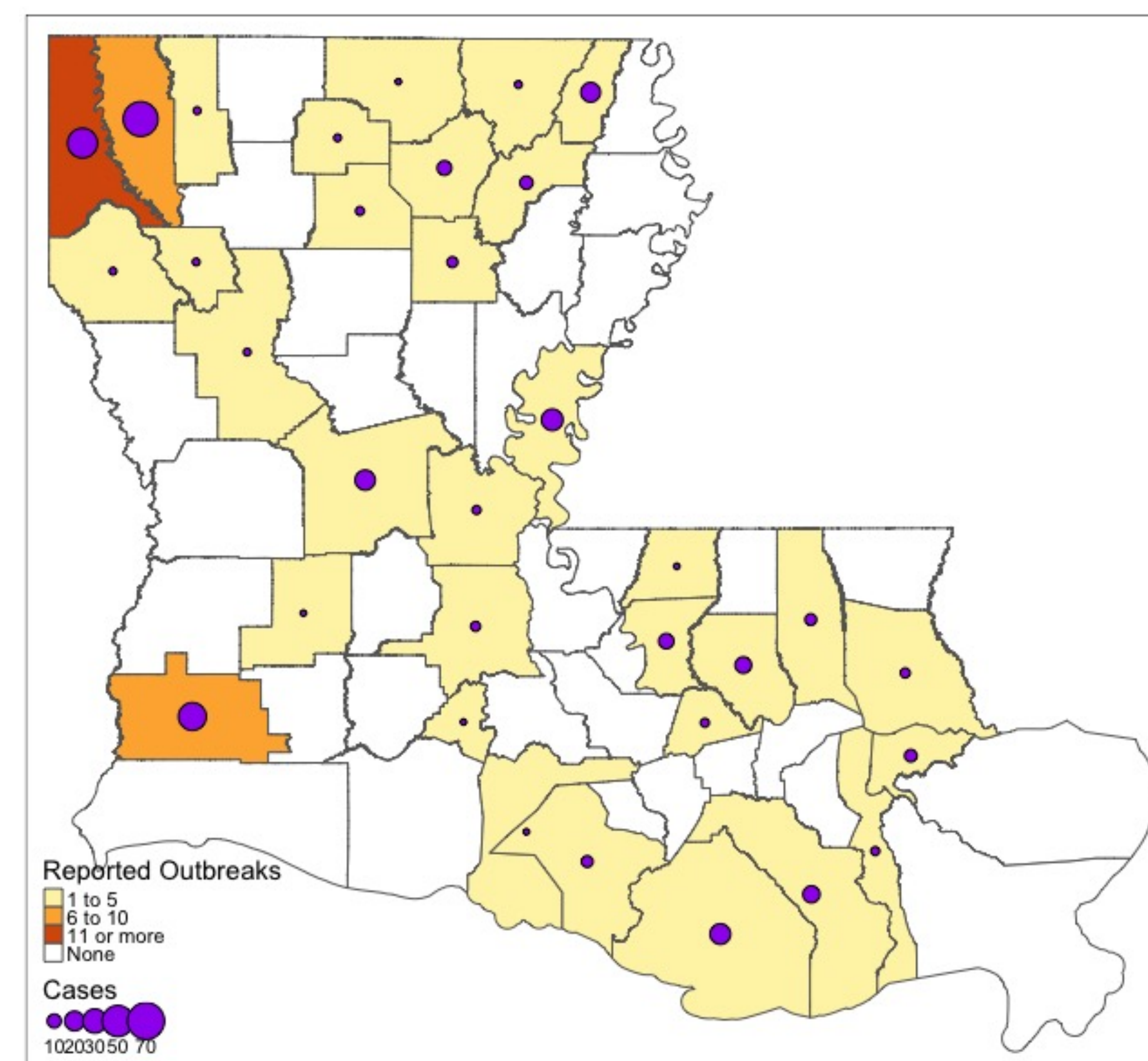


Figure 2. COVID-19 religious service outbreaks and cases by parish.



Discussion

- As of March 2, 2021, Louisiana has identified 81 outbreaks, 381 cases, 28 hospitalizations, and 7 deaths associated with religious services
- All outbreaks were services held inside of a building
- Demographic information on 218 of 381 cases was analyzed
- The average age of the cases are 51.2 years old and most of the cases are white and visited the church as a member of the congregation
- The first outbreak was related to a religious event that took place prior to the Stay-at-Home order on March 22, 2020
- Reported outbreaks, cases, and hospitalizations peaked on October 26, 2020, during Phase 3, when restrictions were more lax
- Northwest Louisiana reported the highest number of outbreaks and cases
- Through interviews it became apparent that there was a lack of social distancing, masking, and services exceeded maximum capacity for the phases

Limitations

- Not every outbreak is reported to IDEpi.
- Incomplete case data was provided by the religious service
- Limited contact tracing data was available after interviews
- Some religious services were affiliated with primary schools that had active outbreaks, which could contribute to transmission
- Proclamations made by the Governor was not always adhered to

Conclusion

- Outbreaks in religious services were identified in higher numbers as restrictions were lifted across the state
- With less restrictions in place, it is imperative to encourage proper mask wearing and social distancing throughout the duration of the pandemic in places of worship
- COVID-19 outbreak data should be publicly reported to allow the community to make informed decisions regarding the risk associated with visiting specific settings