

# **The Impact of COVID-19 on Restaurants and Bars in Michigan**

**Presented By:**

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**MIS 6380.0U1**

**Group 7**

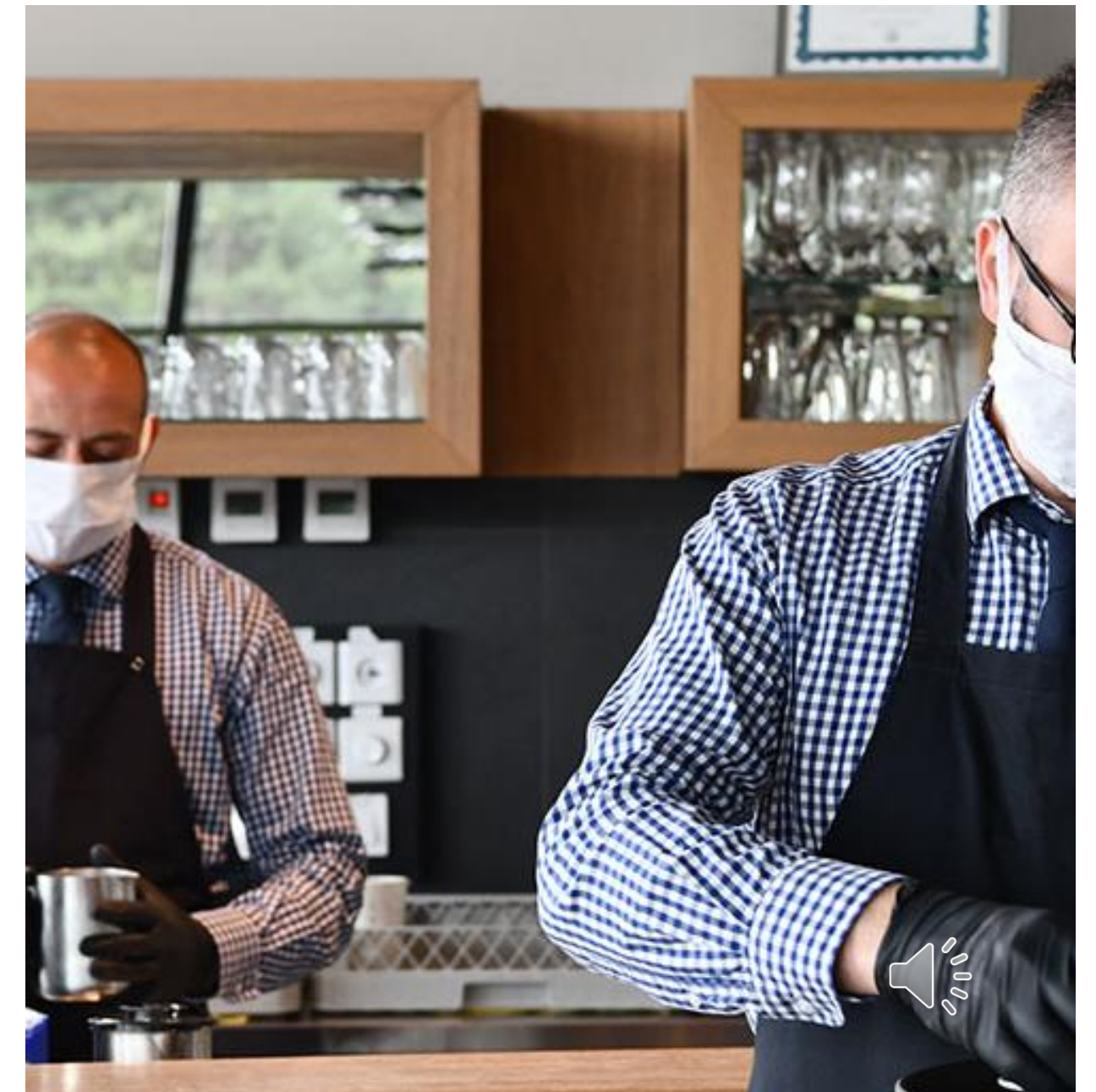




# Project Overview & General Introduction

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- The primary aim of our was to explore the ramifications of COVID-19 in Michigan, with a specific focus on the performance of the food industry. Through the creation of visualizations, we seek to gain deeper insights into how the pandemic has impacted Michigan's food businesses. To achieve this overarching goal, the following was used for our findings:
  - Number of COVID-19 Cases
  - Number of COVID-19 Deaths
  - Mask Mandate Updates
  - Operational Status of Restaurants and Bars
  - Geographic Locations





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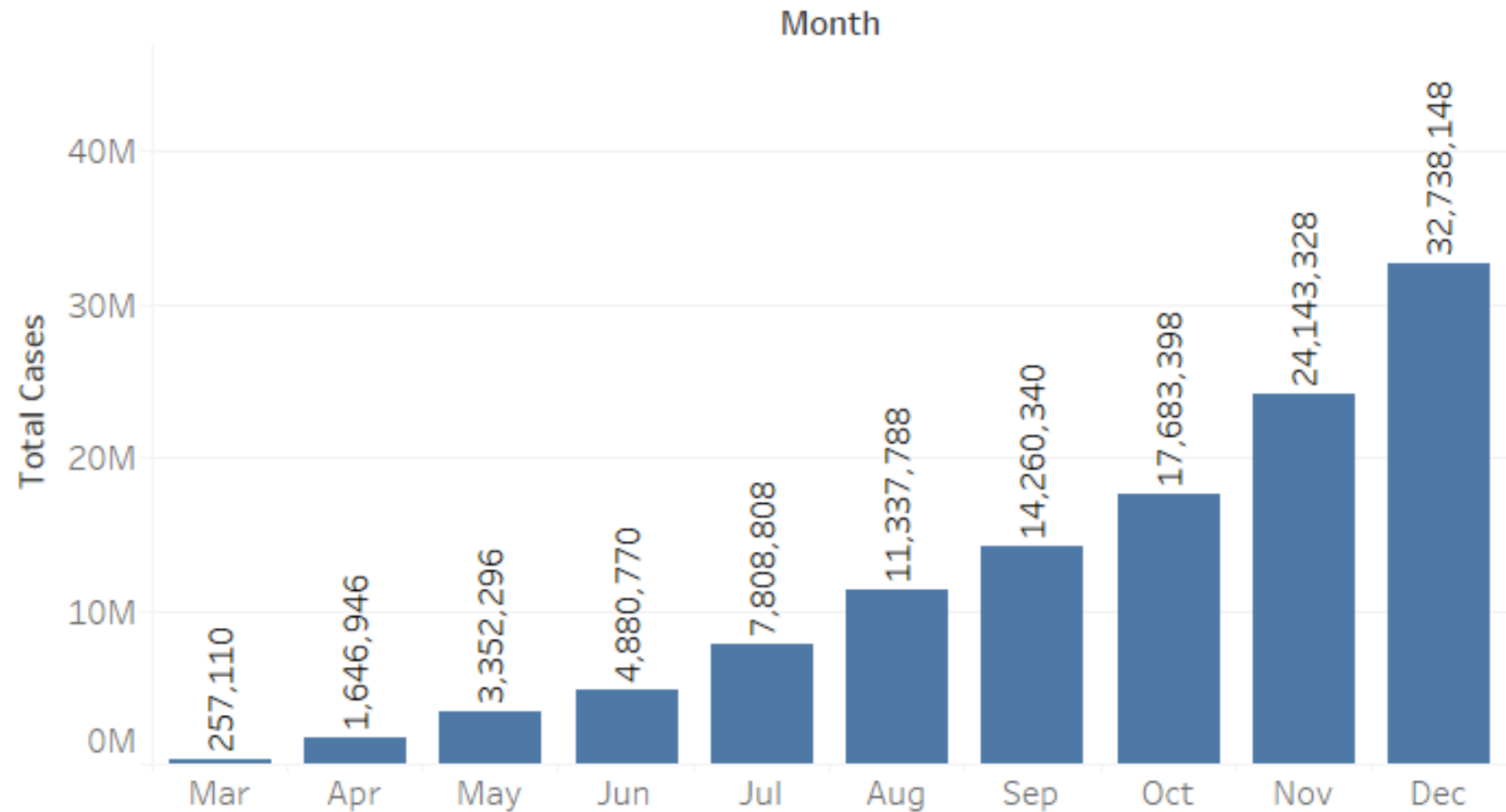
# Hypothesis 1

In April, the peak increase of total number of COVID-19 cases resulted in the change in the operational status of restaurants in Michigan, limited to only curbside/ delivery only.

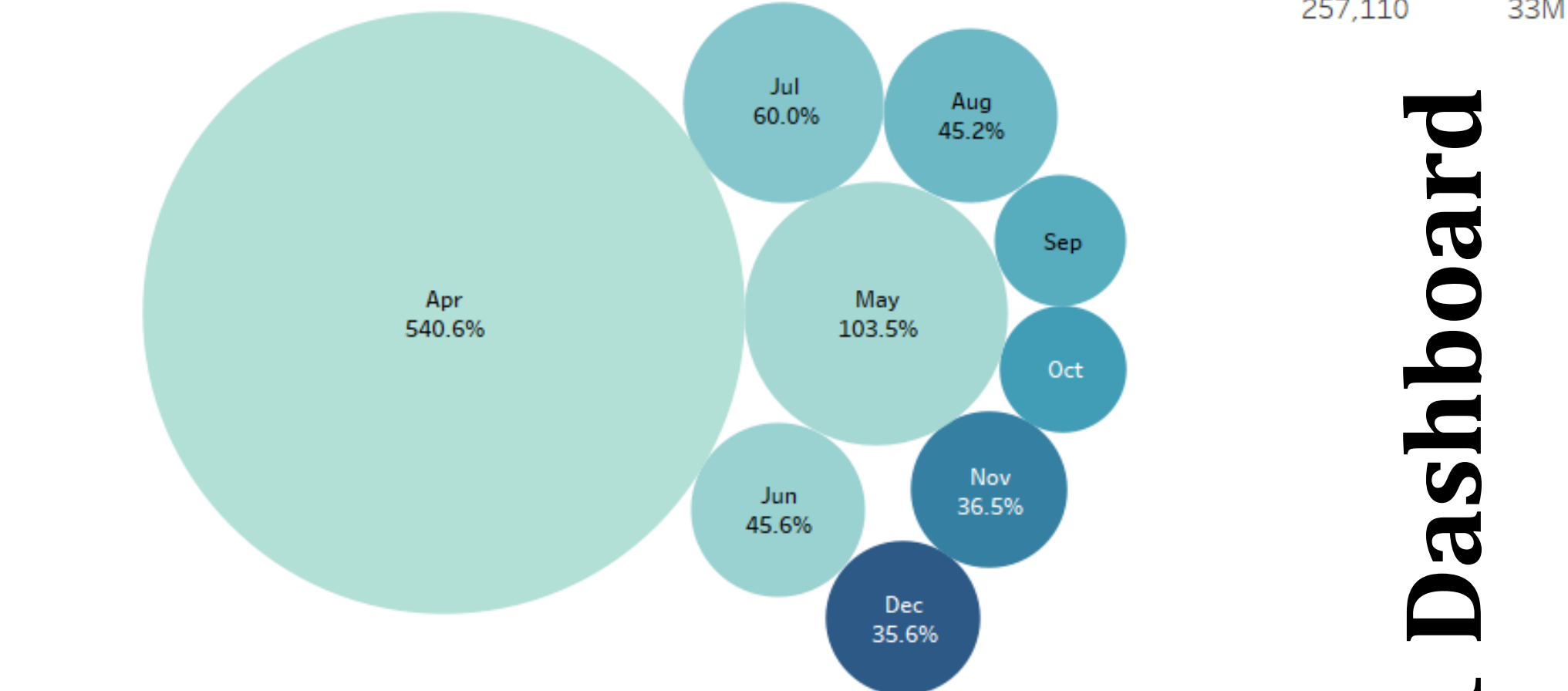




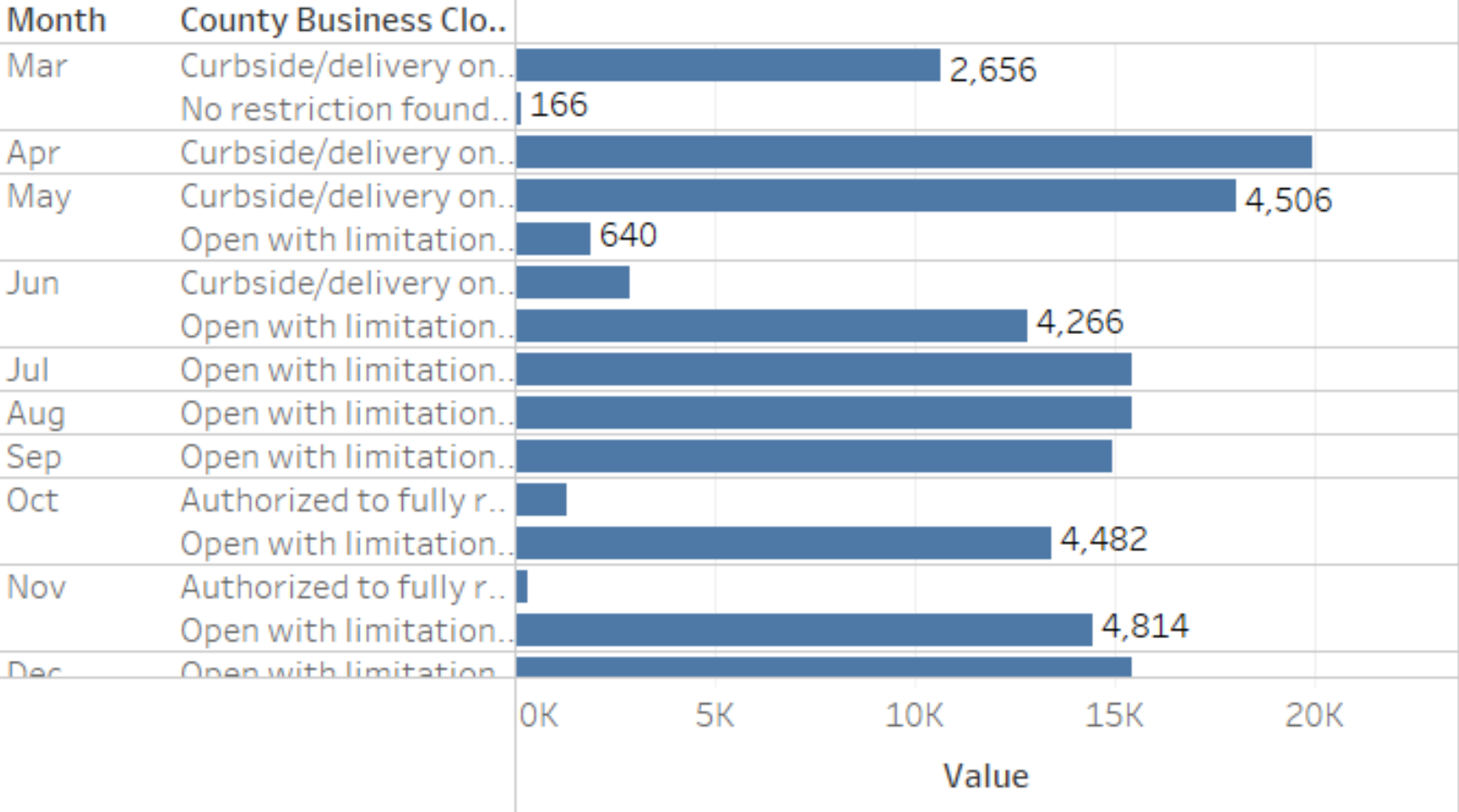
Monthly COVID Cases in 2020



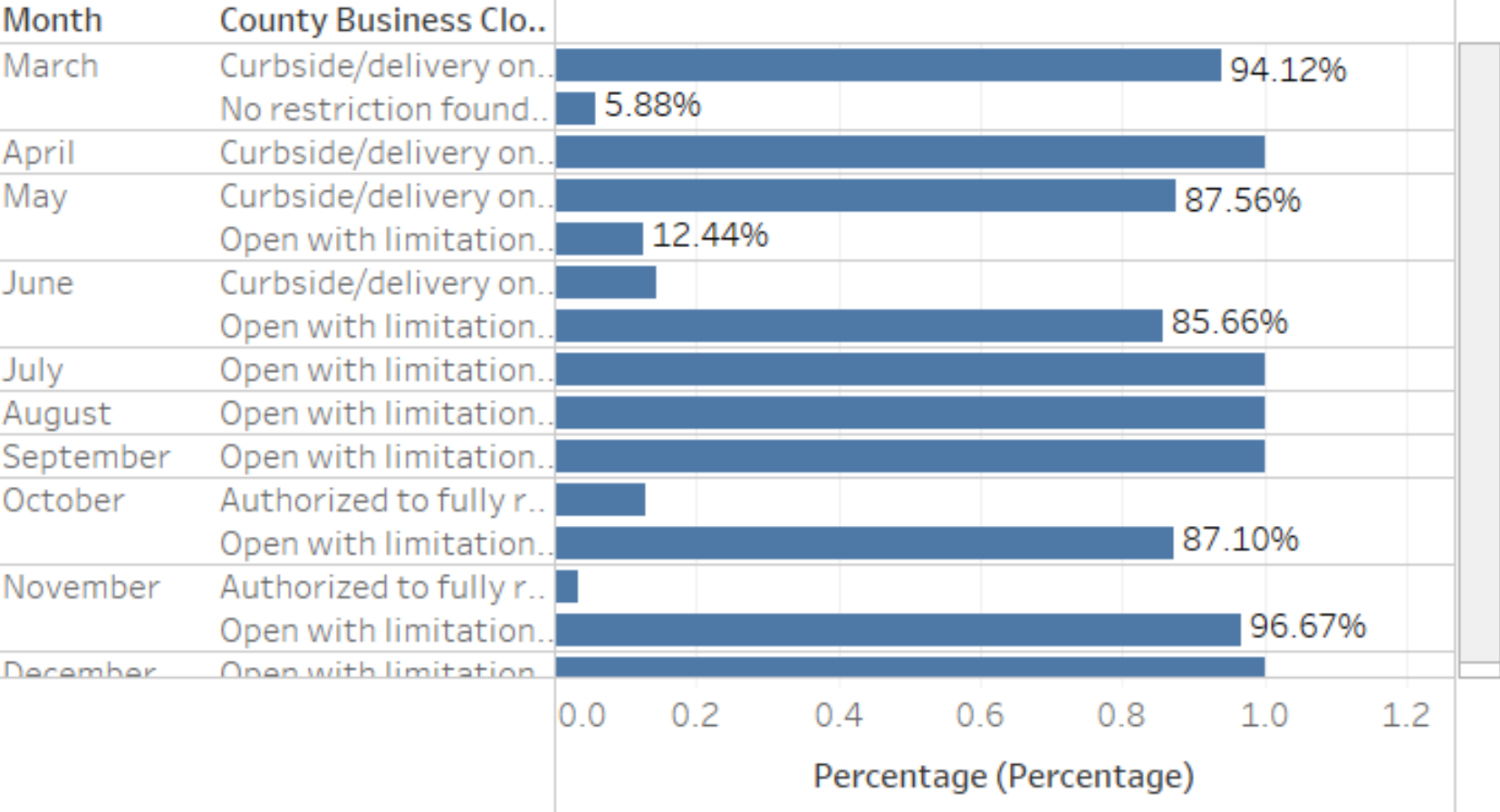
Percentage Change in Monthly COVID Cases in 2020



Monthly Count of Business Status in 2020



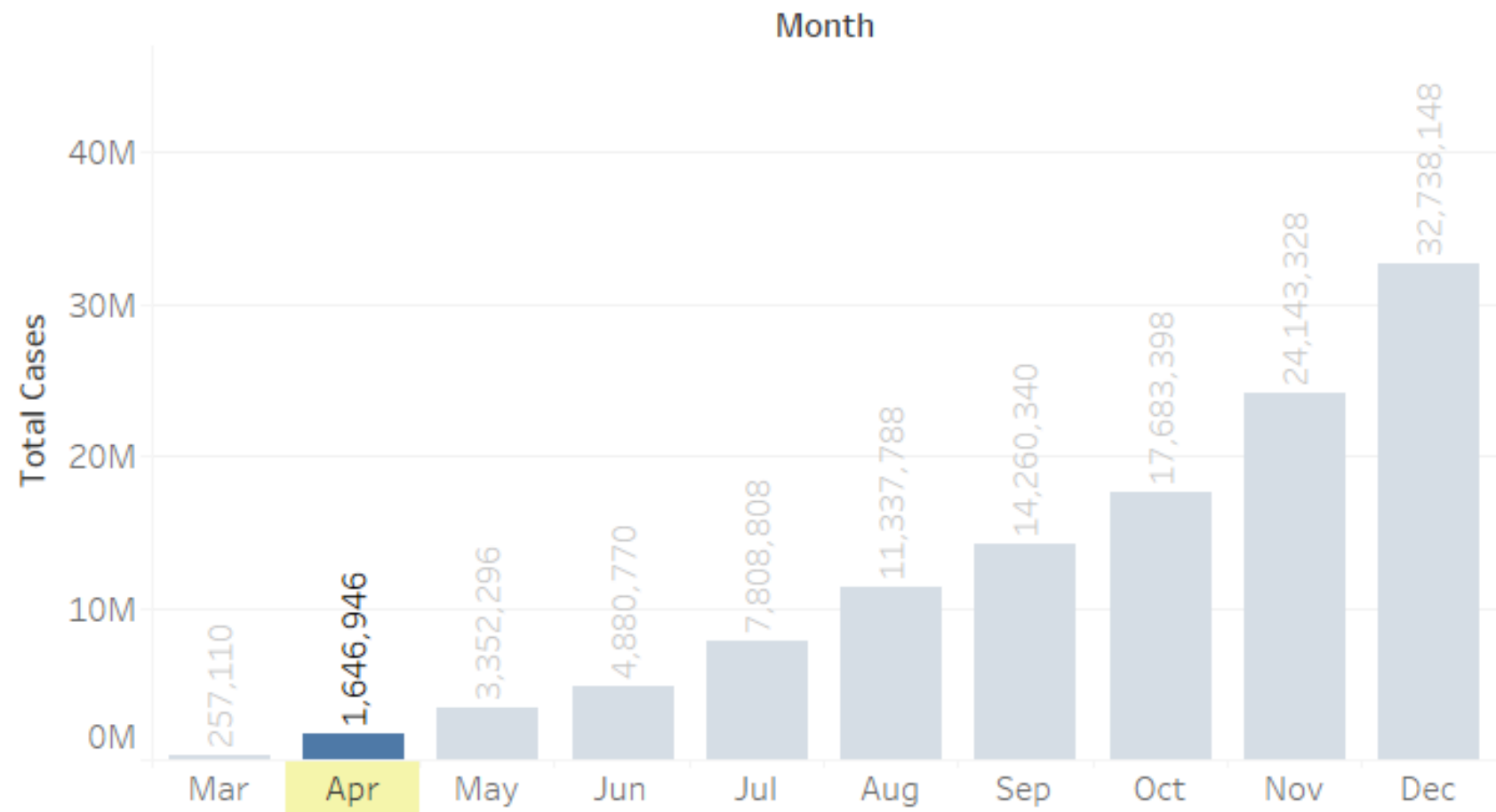
Monthly % of Business Status in 2020



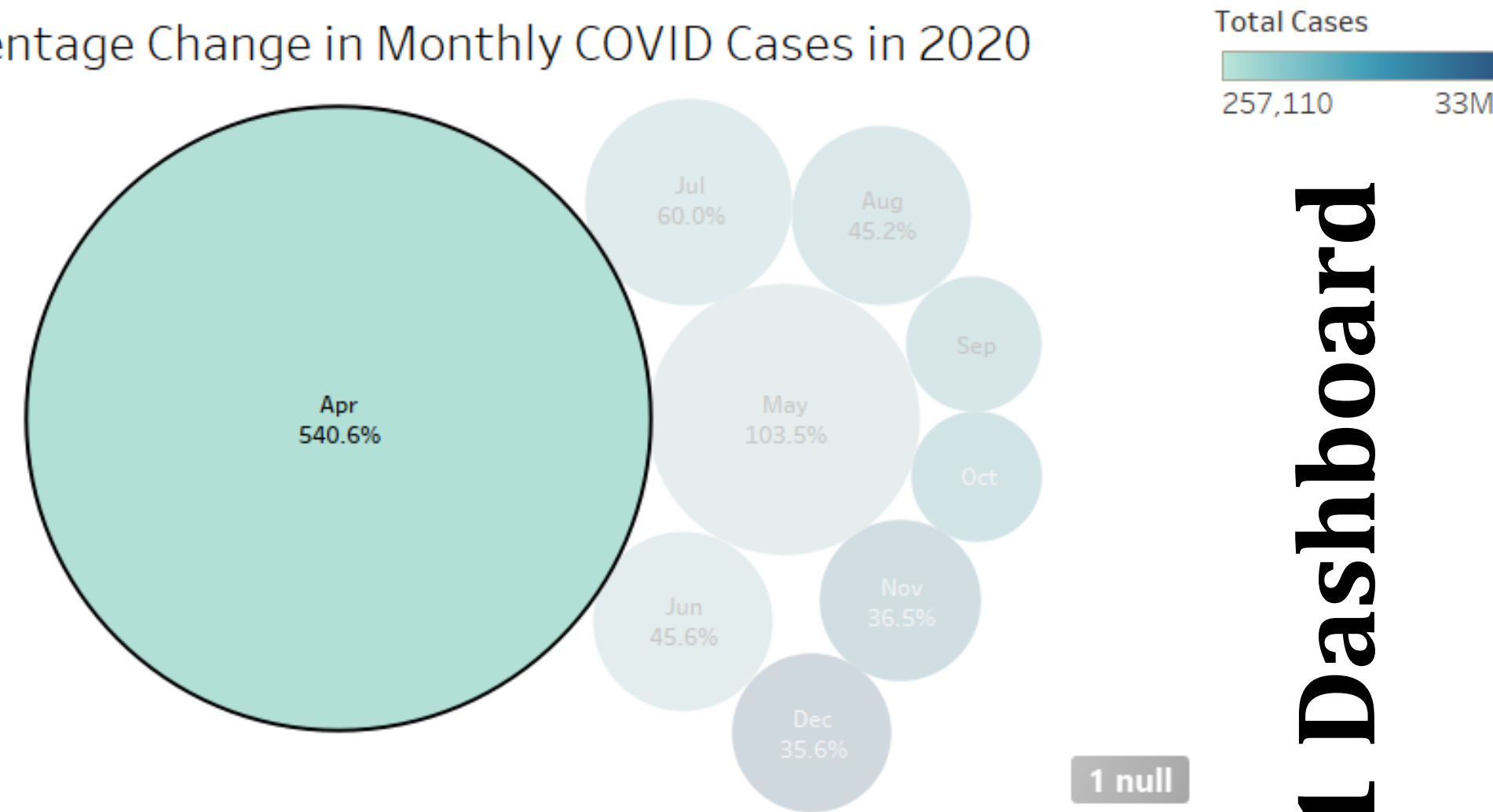
Hypothesis 1 Dashboard



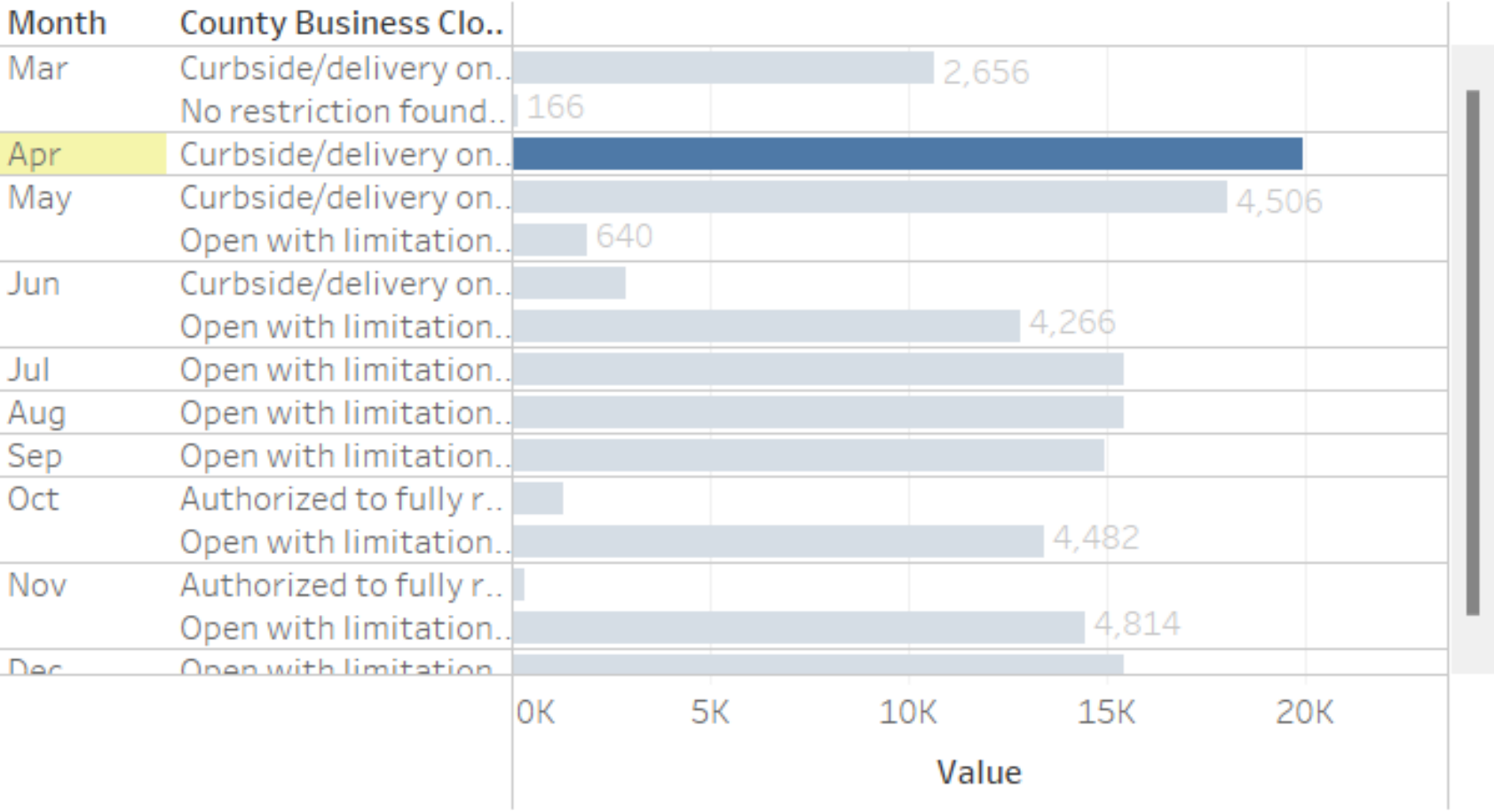
Monthly COVID Cases in 2020



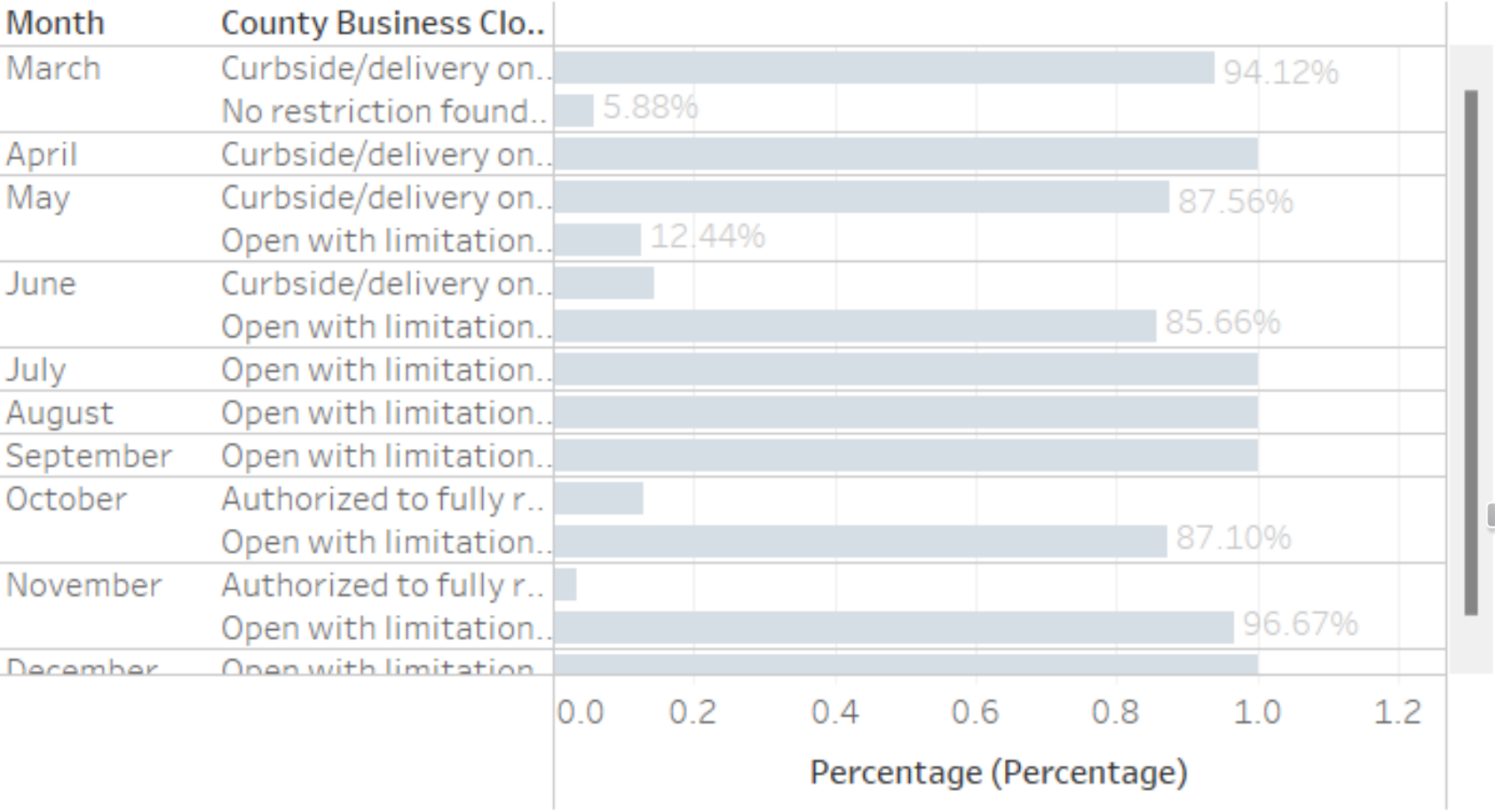
Percentage Change in Monthly COVID Cases in 2020



Monthly Count of Business Status in 2020



Monthly % of Business Status in 2020



Hypothesis 1 Dashboard

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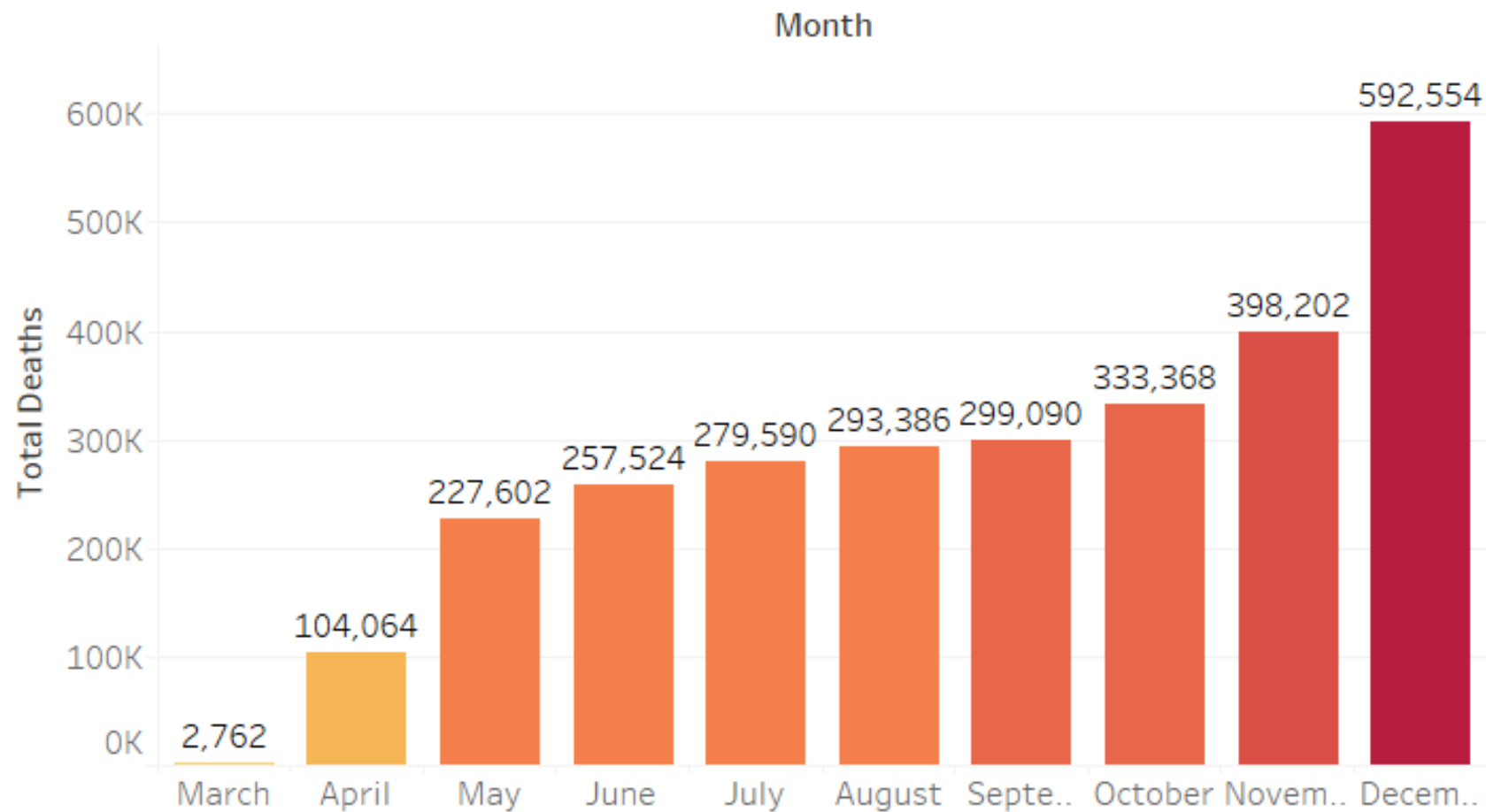
# Hypothesis 2

In April, the peak increase of total number of COVID-19 death cases resulted in the change in the operational status of restaurants in Michigan, limited to only curbside/ delivery only.

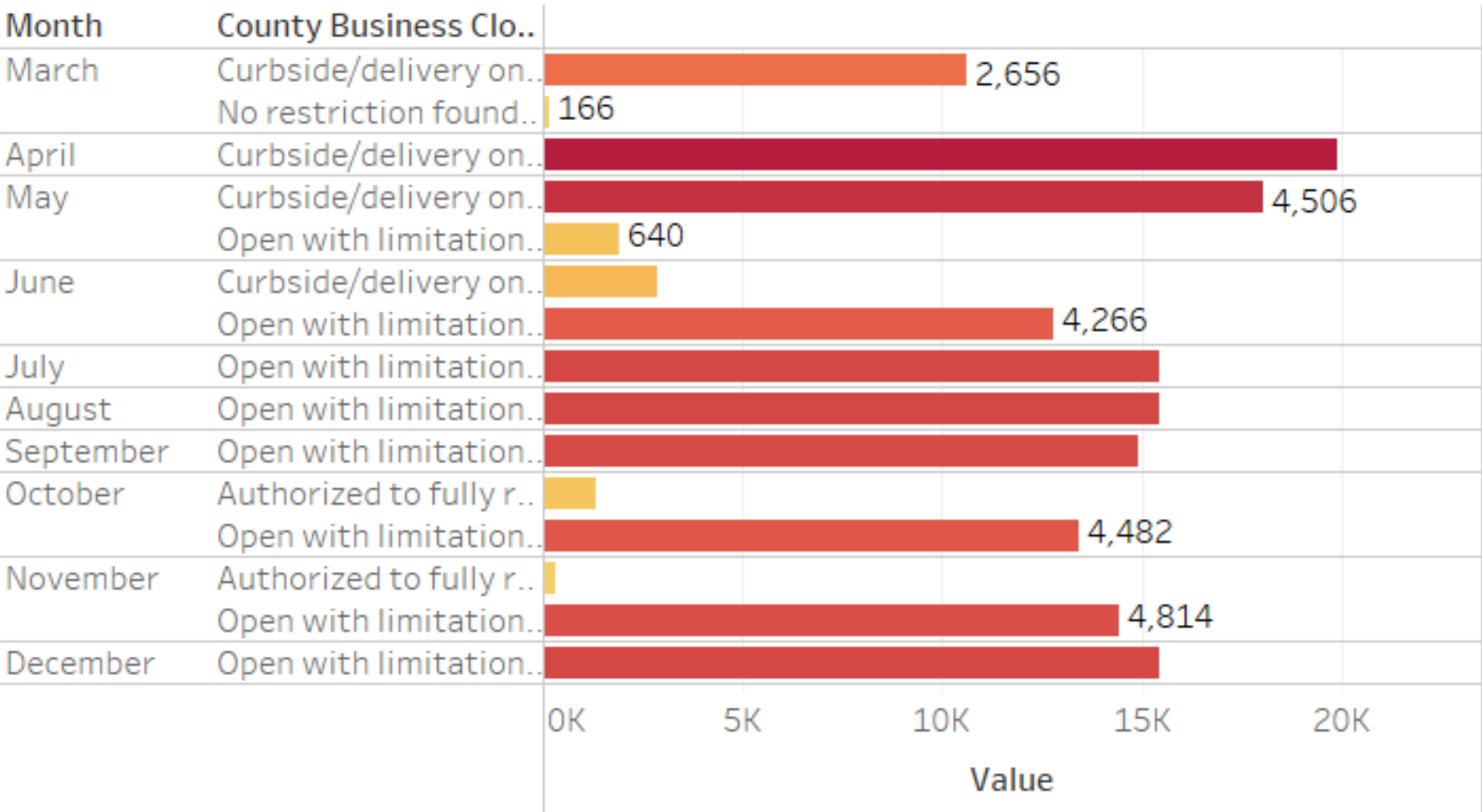




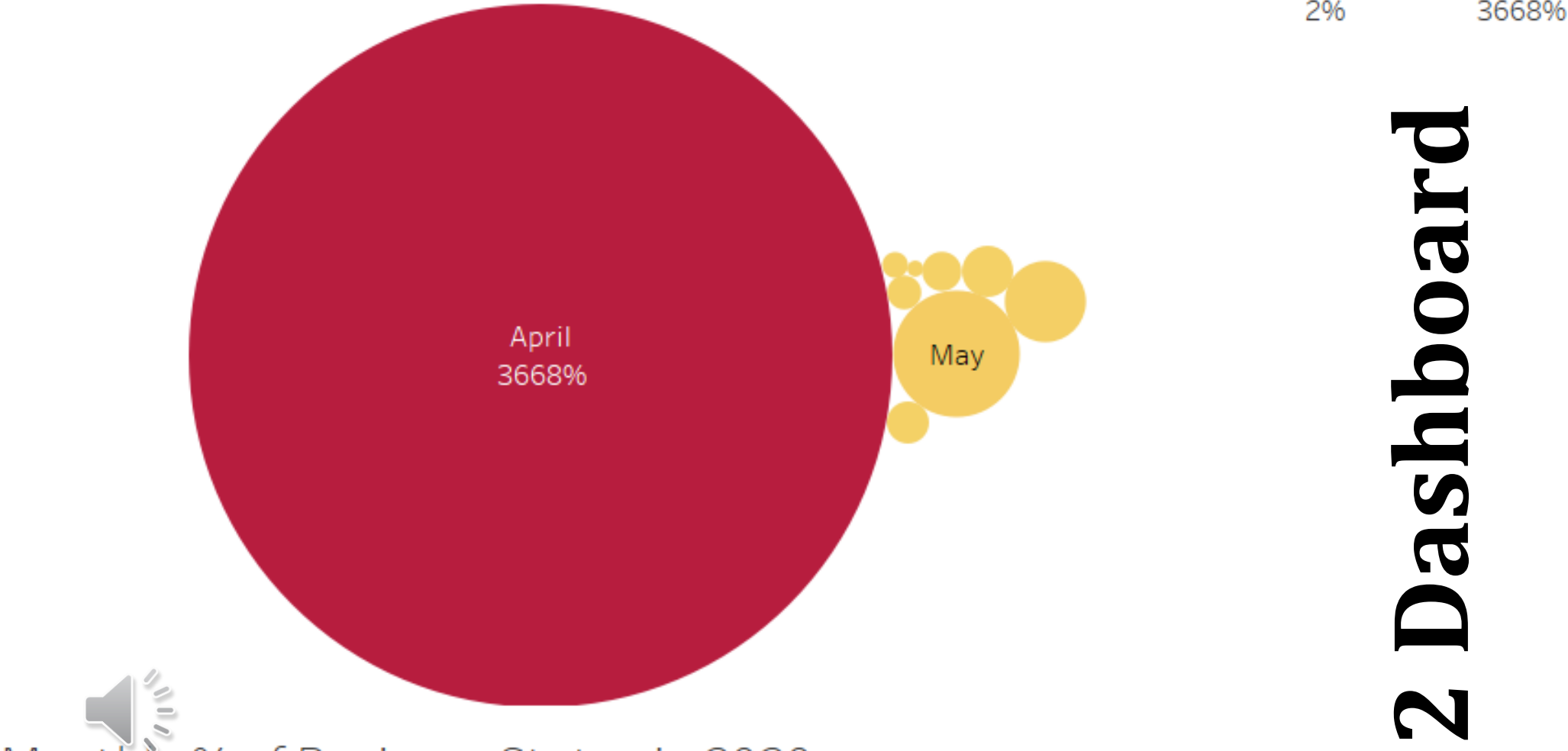
Monthly COVID Deaths in 2020



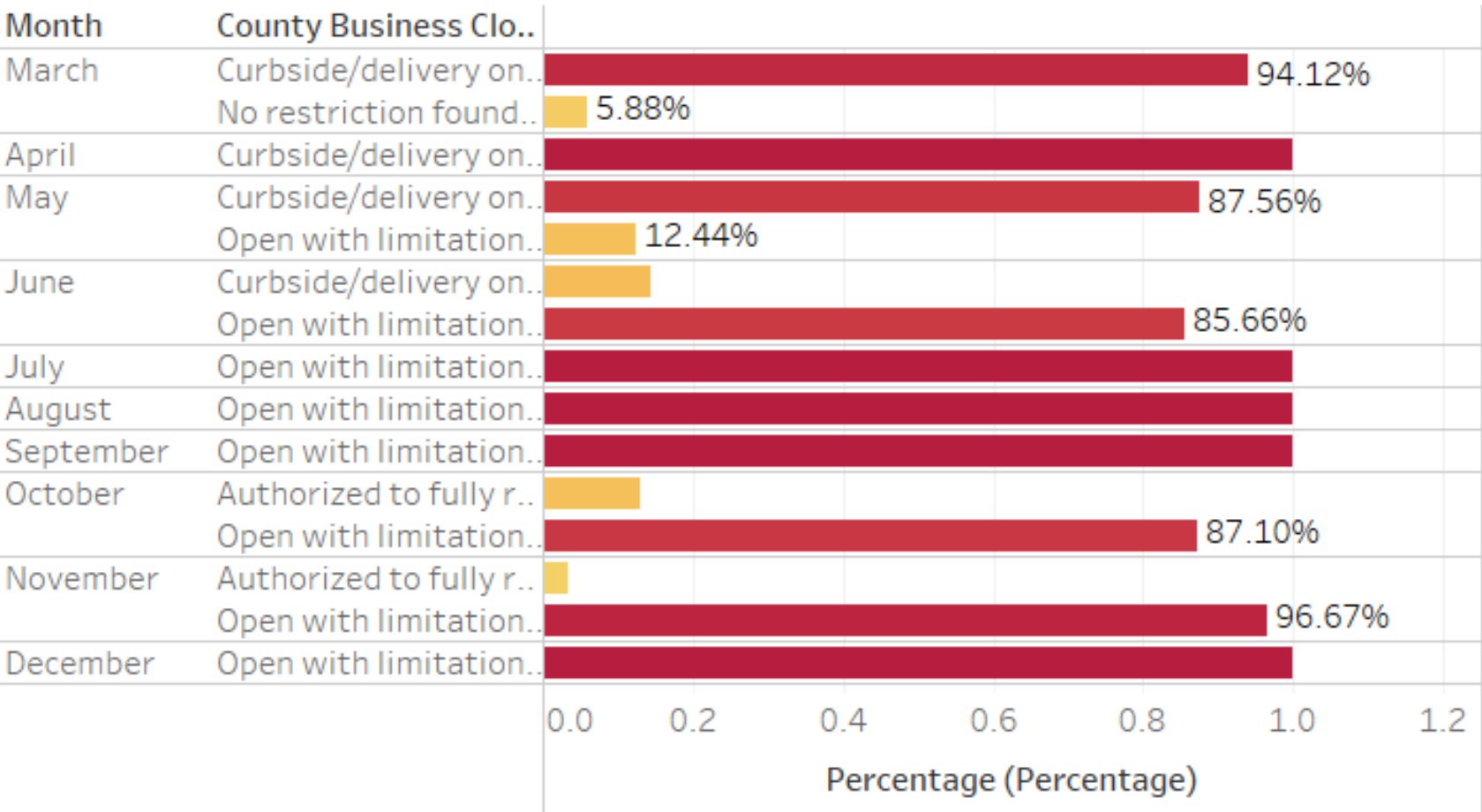
Monthly Count of Business Operation Status



Monthly COVID Deaths in 2020

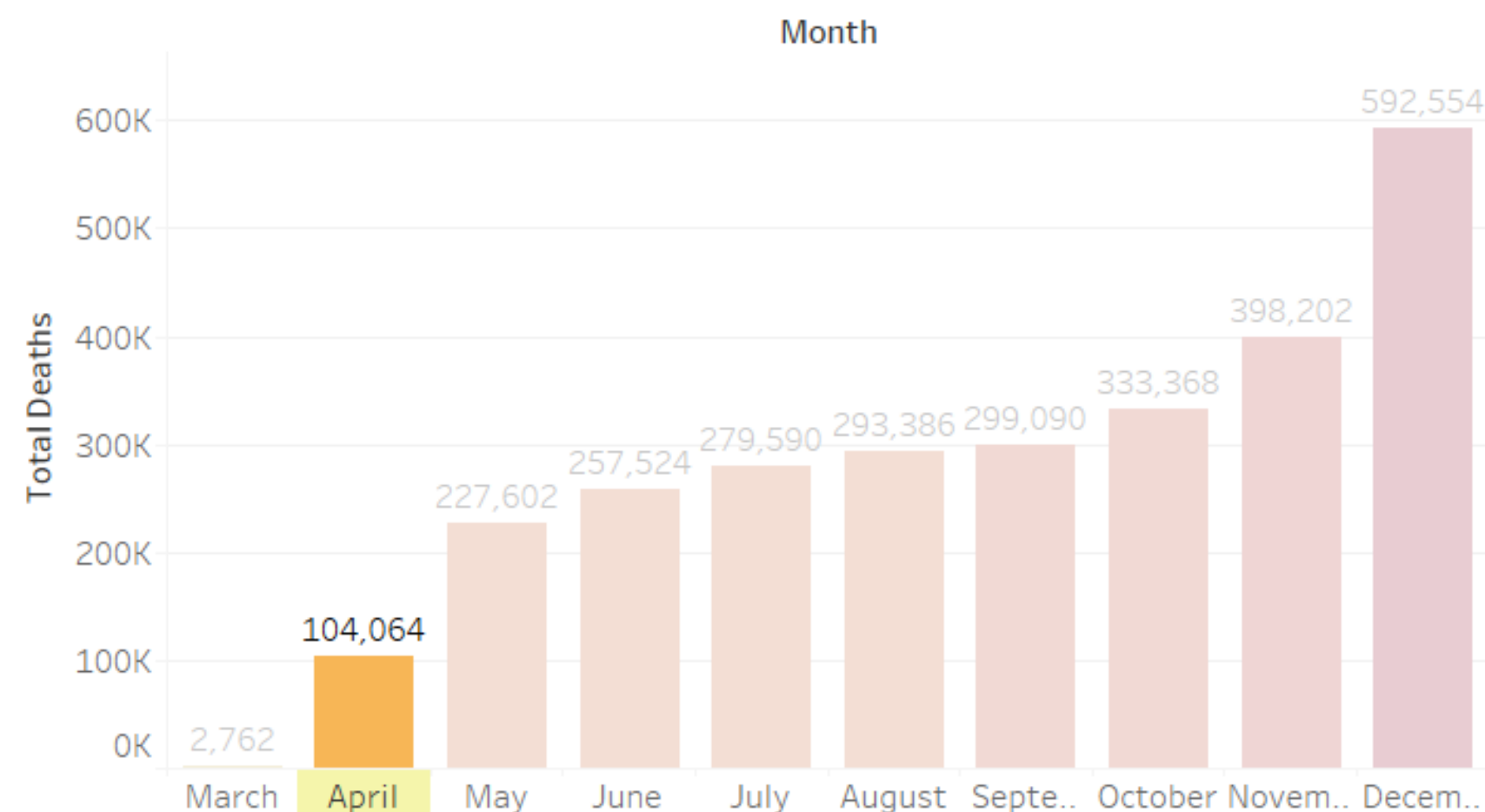


Monthly % of Business Status in 2020

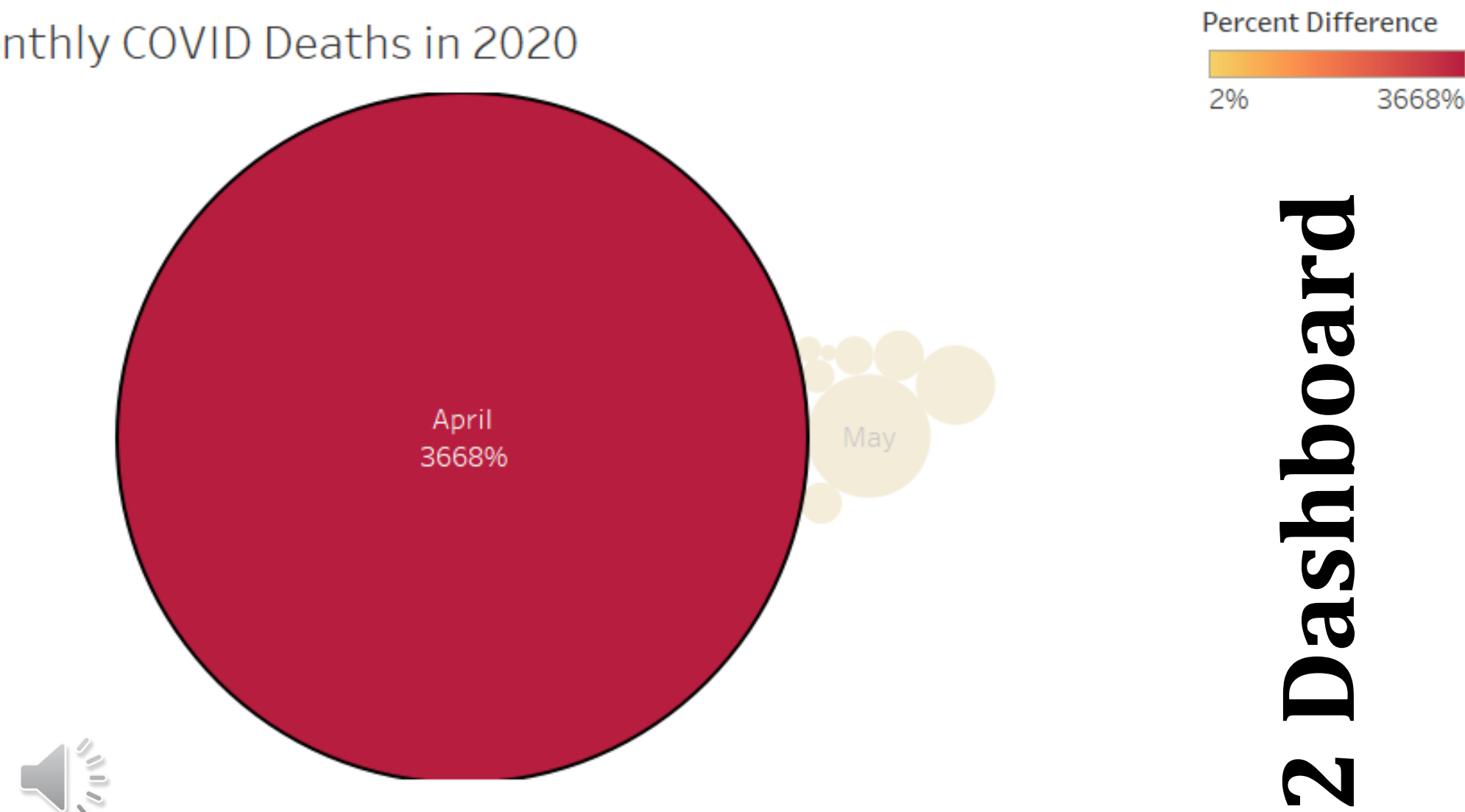


Hypothesis 2 Dashboard

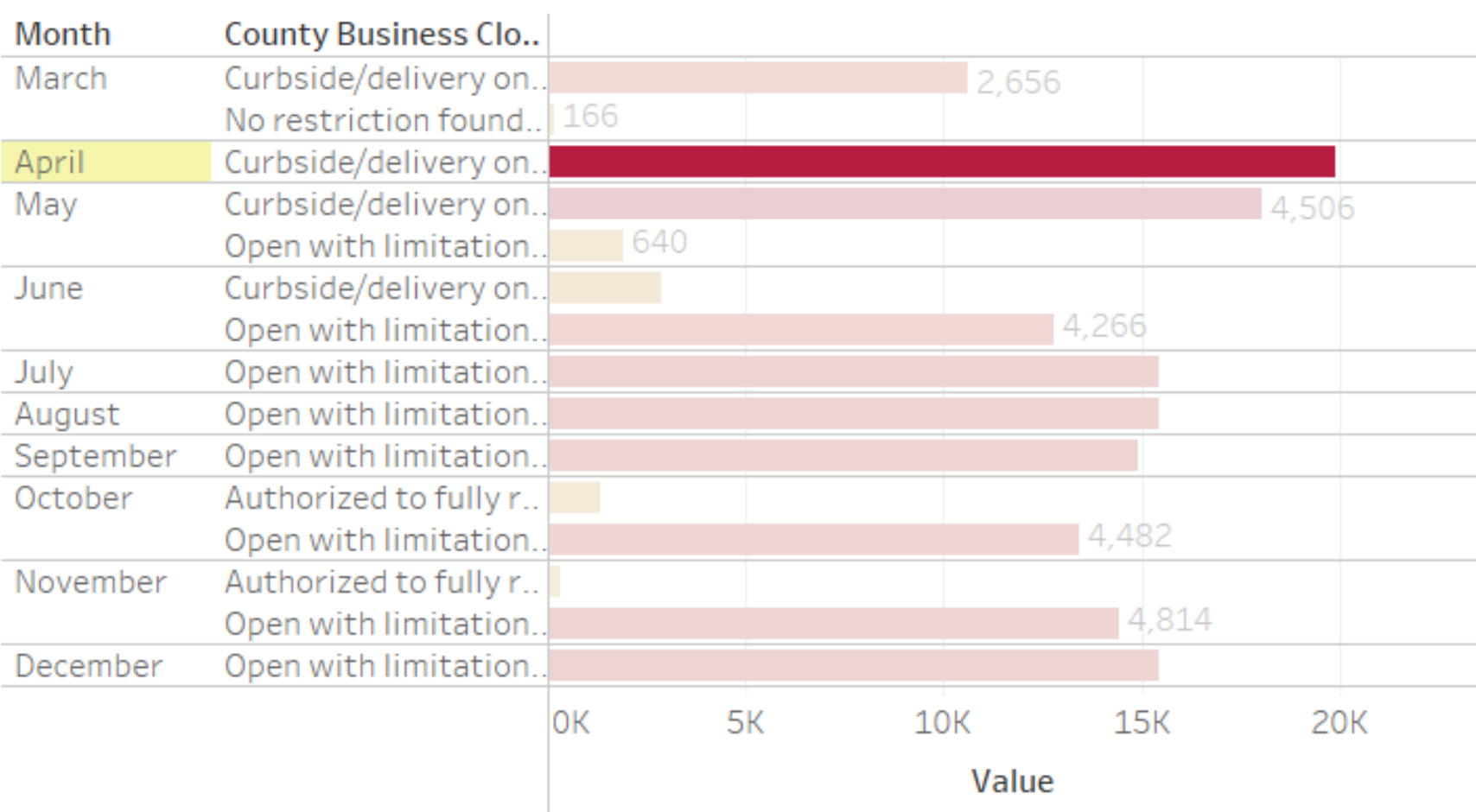
Monthly COVID Deaths in 2020



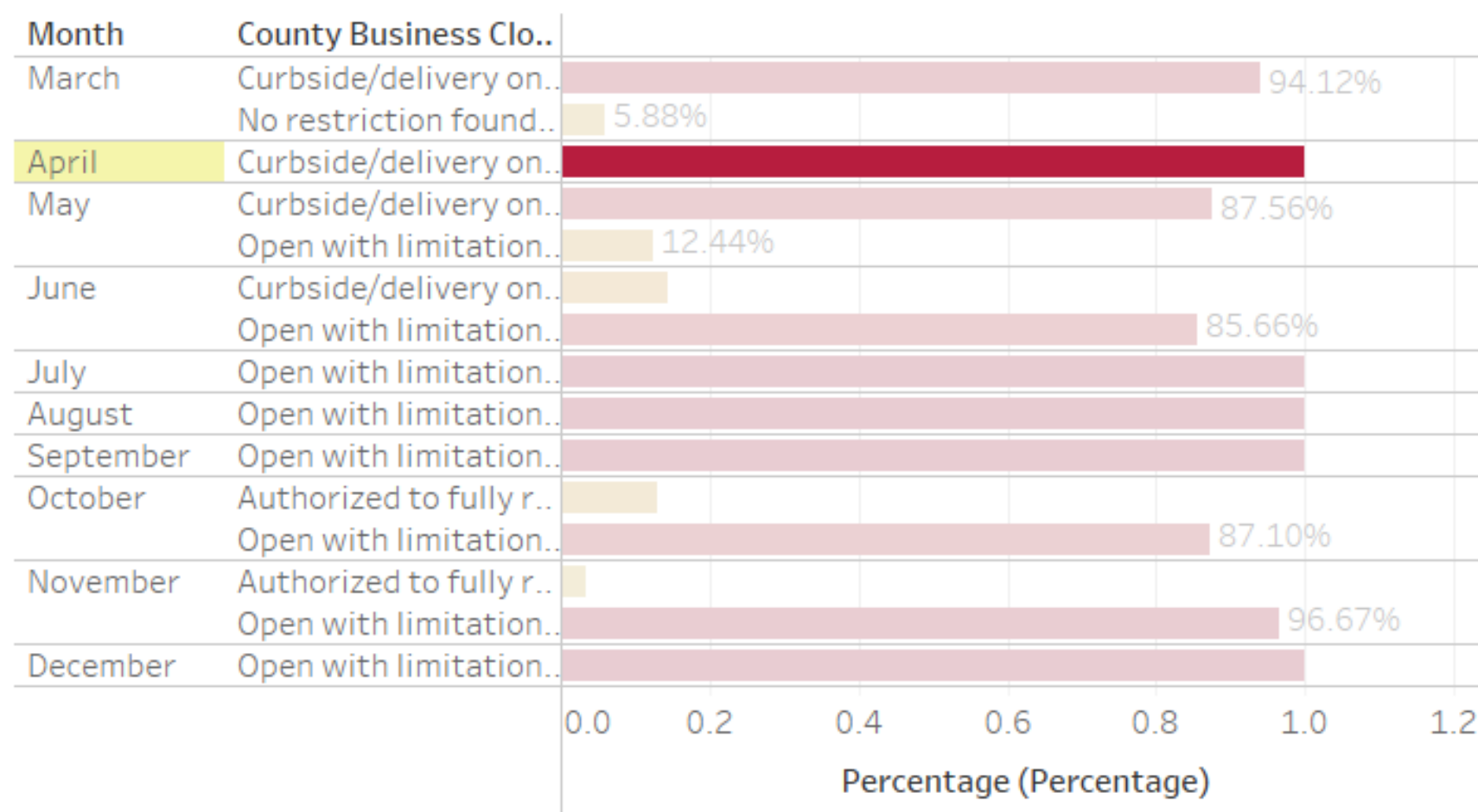
Monthly COVID Deaths in 2020



Monthly Count of Business Operation Status



Monthly % of Business Status in 2020



Hypothesis 2 Dashboard





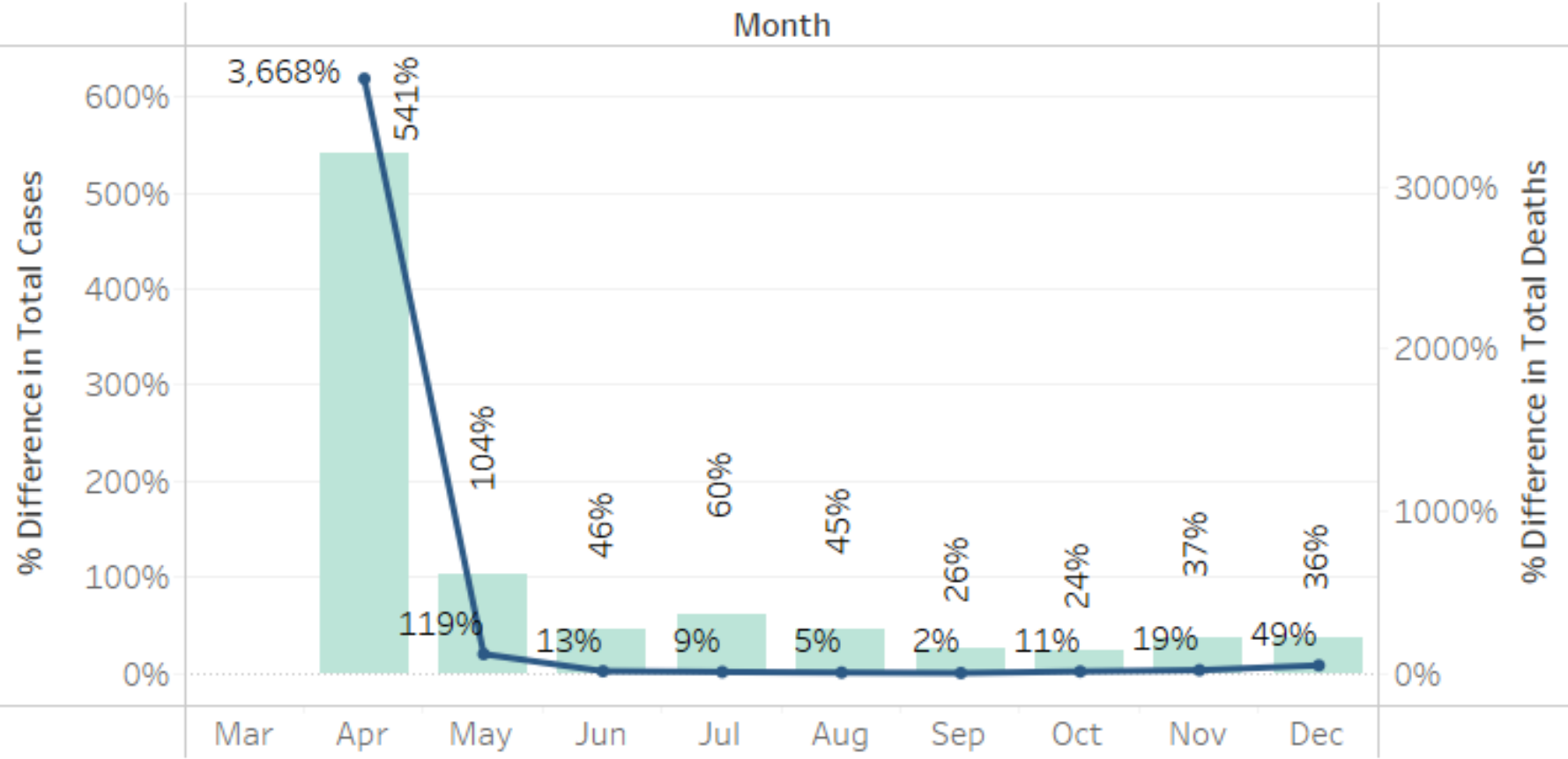
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# Hypothesis 3

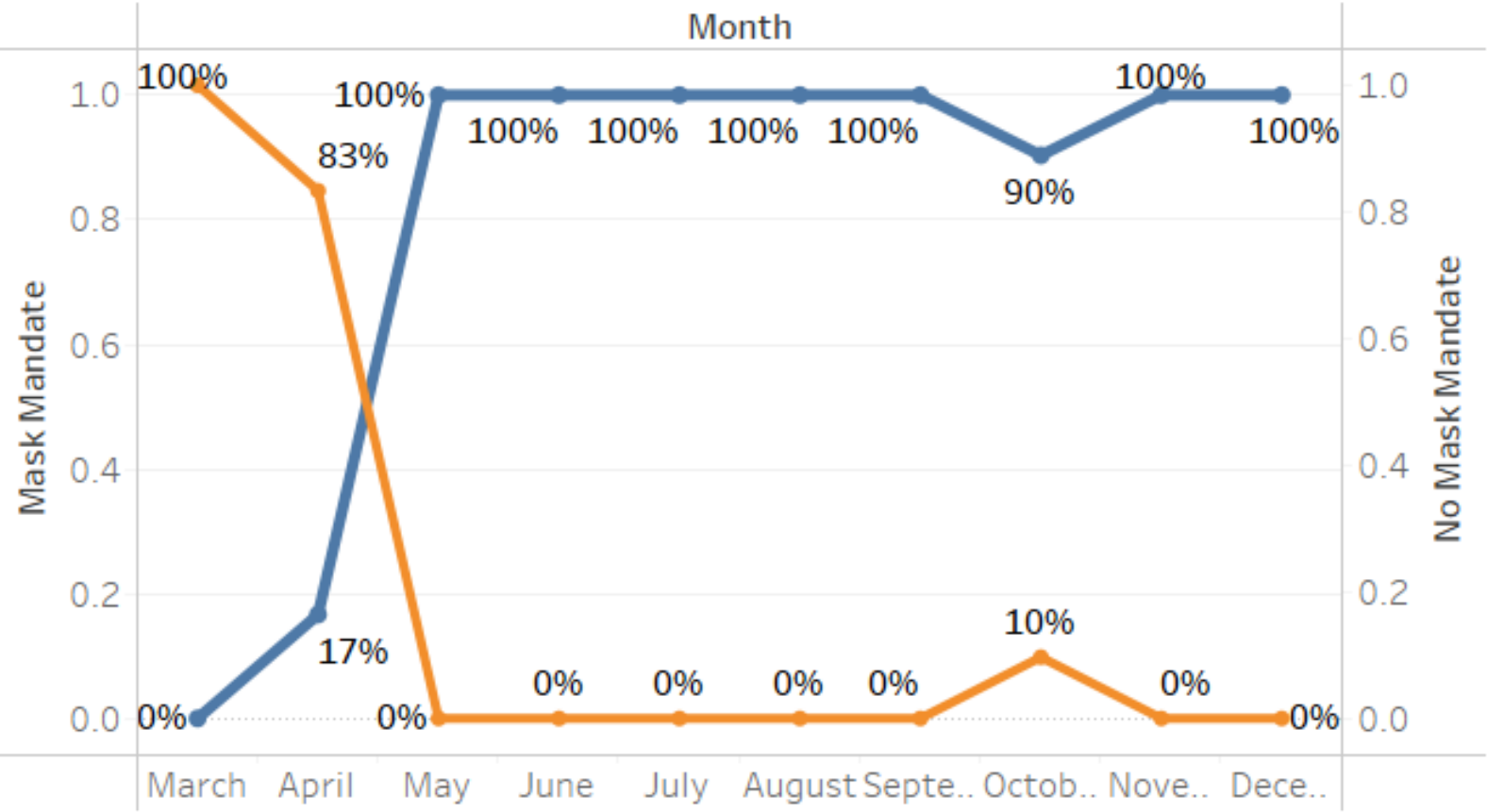
In October, since 10% of counties shifted to a no mask mandate policy, the restaurants and bars shifted to the status of open with limitations with a 10% increase.



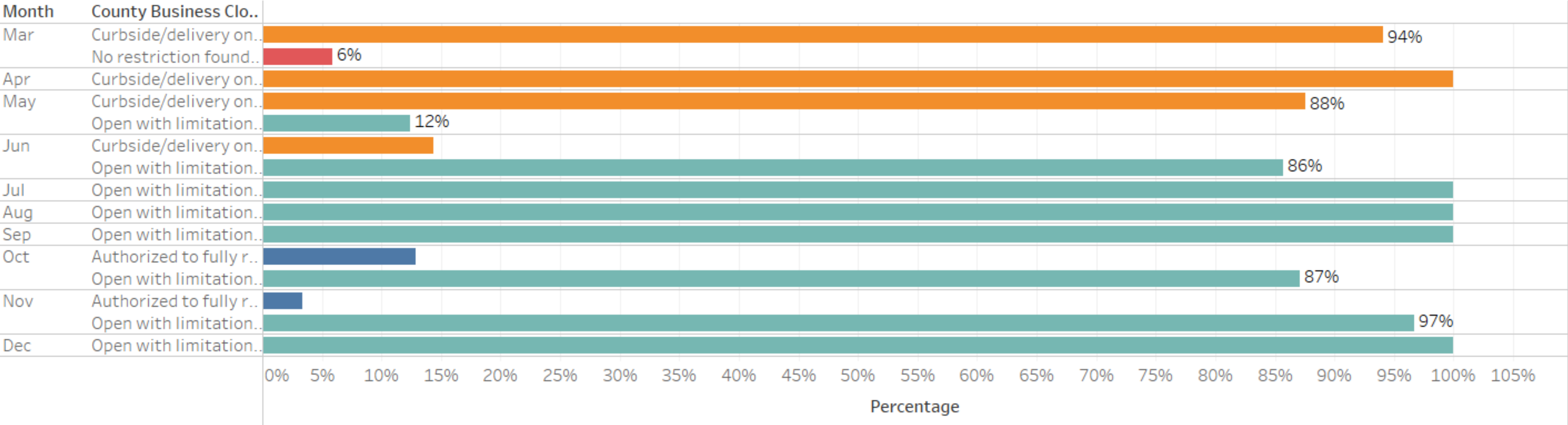
Overview of COVID Cases and COVID Deaths in 2020



Overview of Mask Mendate Policy in 2020



Business Operations in 2020



Hypothesis 3  
Dashboard





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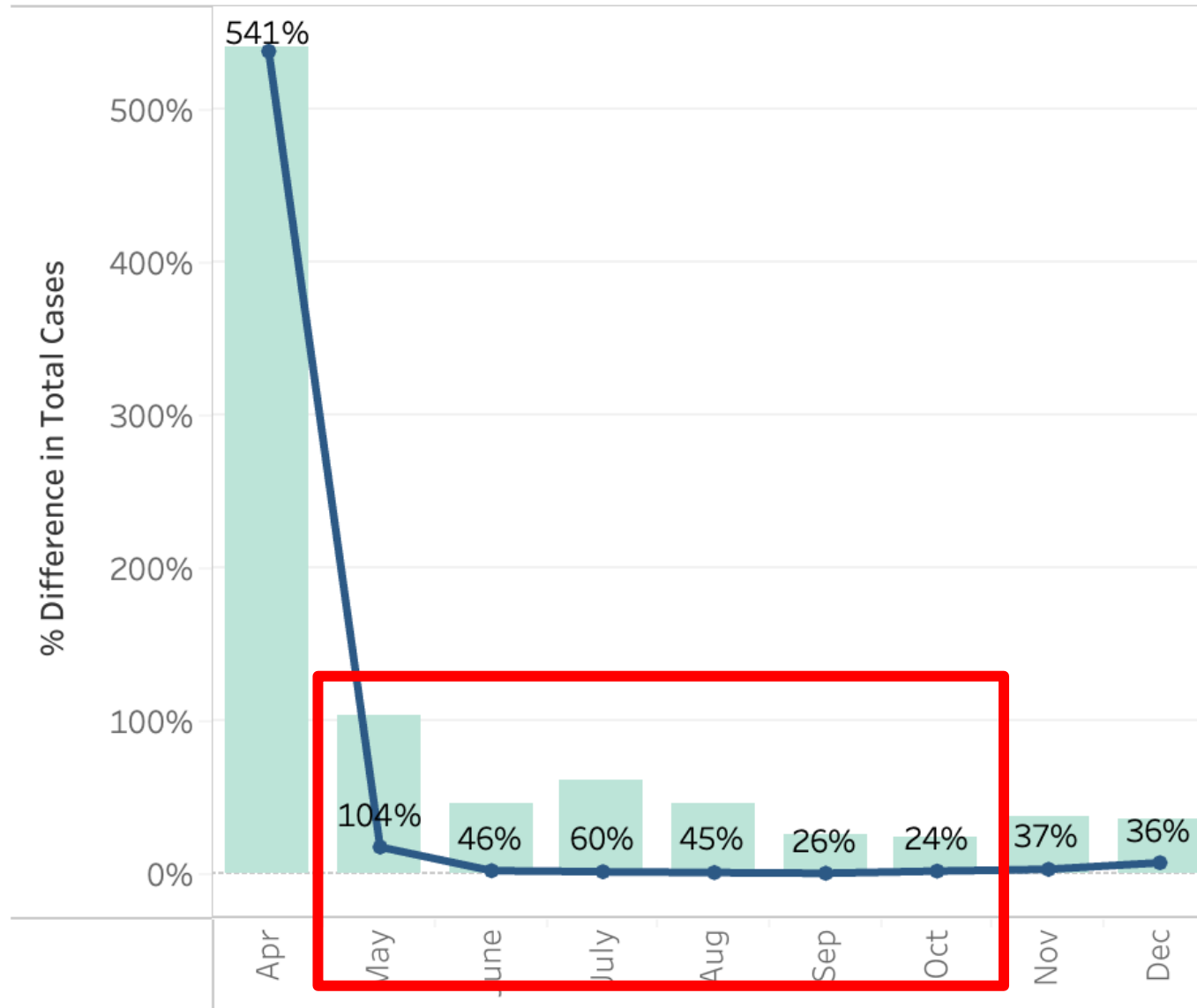
# Hypothesis 4

The mask mandate policy during May to September resulted in 13% of the restaurants and bars changing in the operational status from "open with limitations" to "authorized to full reopen" in October.

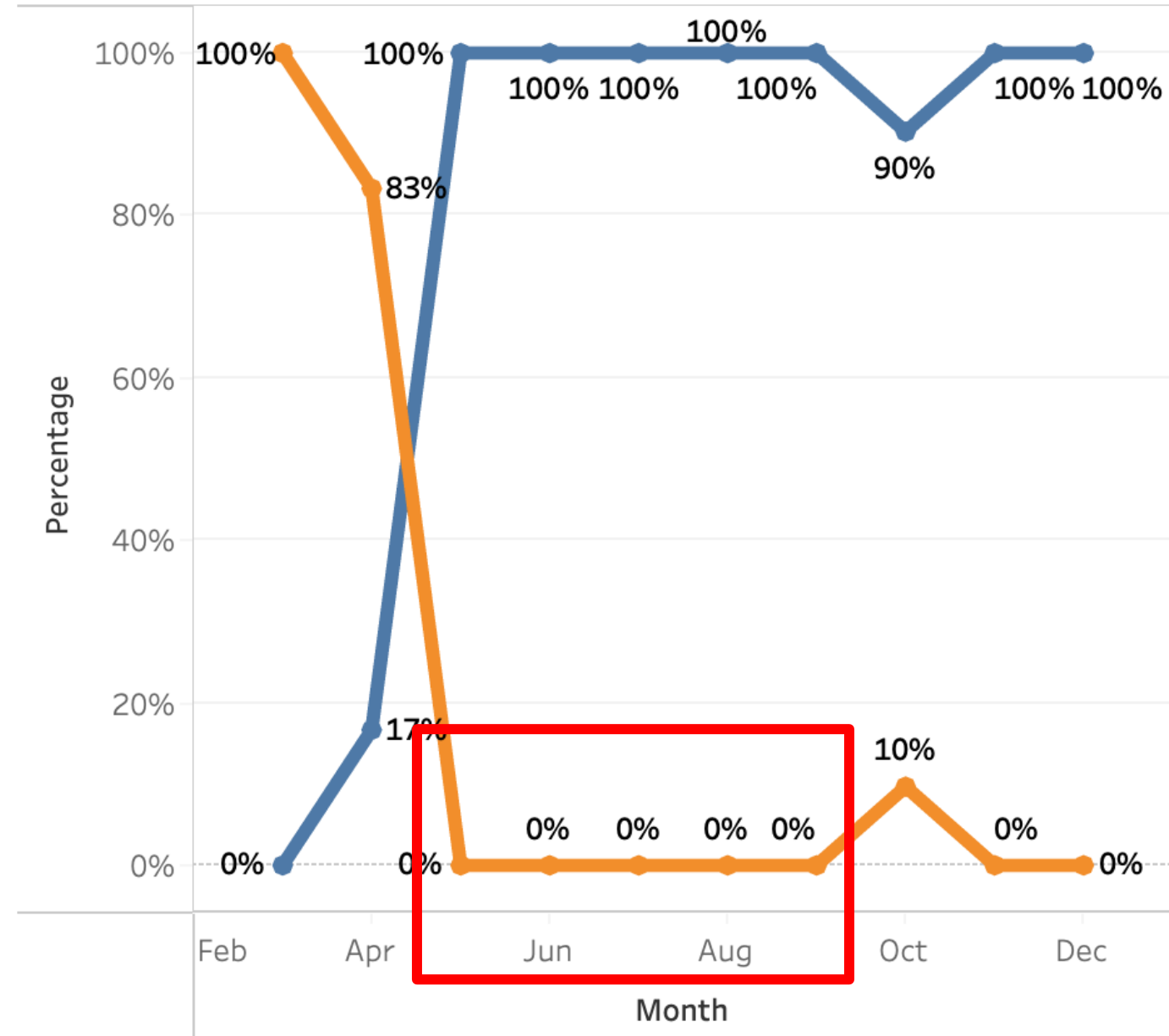




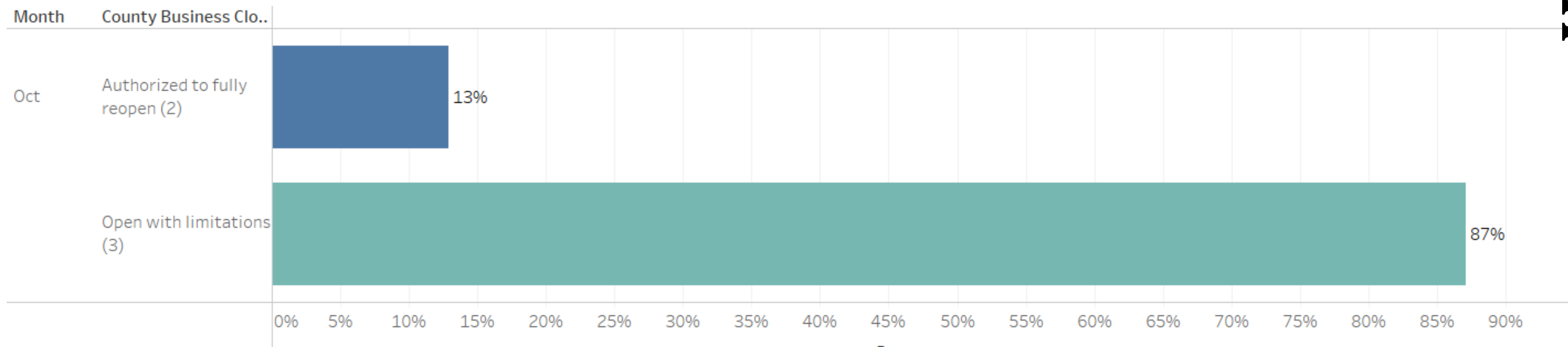
Overview of COVID Cases and COVID Death in 2020



Overview of Mask Mendate Policy in 2020



Business Operations in 2020



Hypothesis 4  
Dashboard

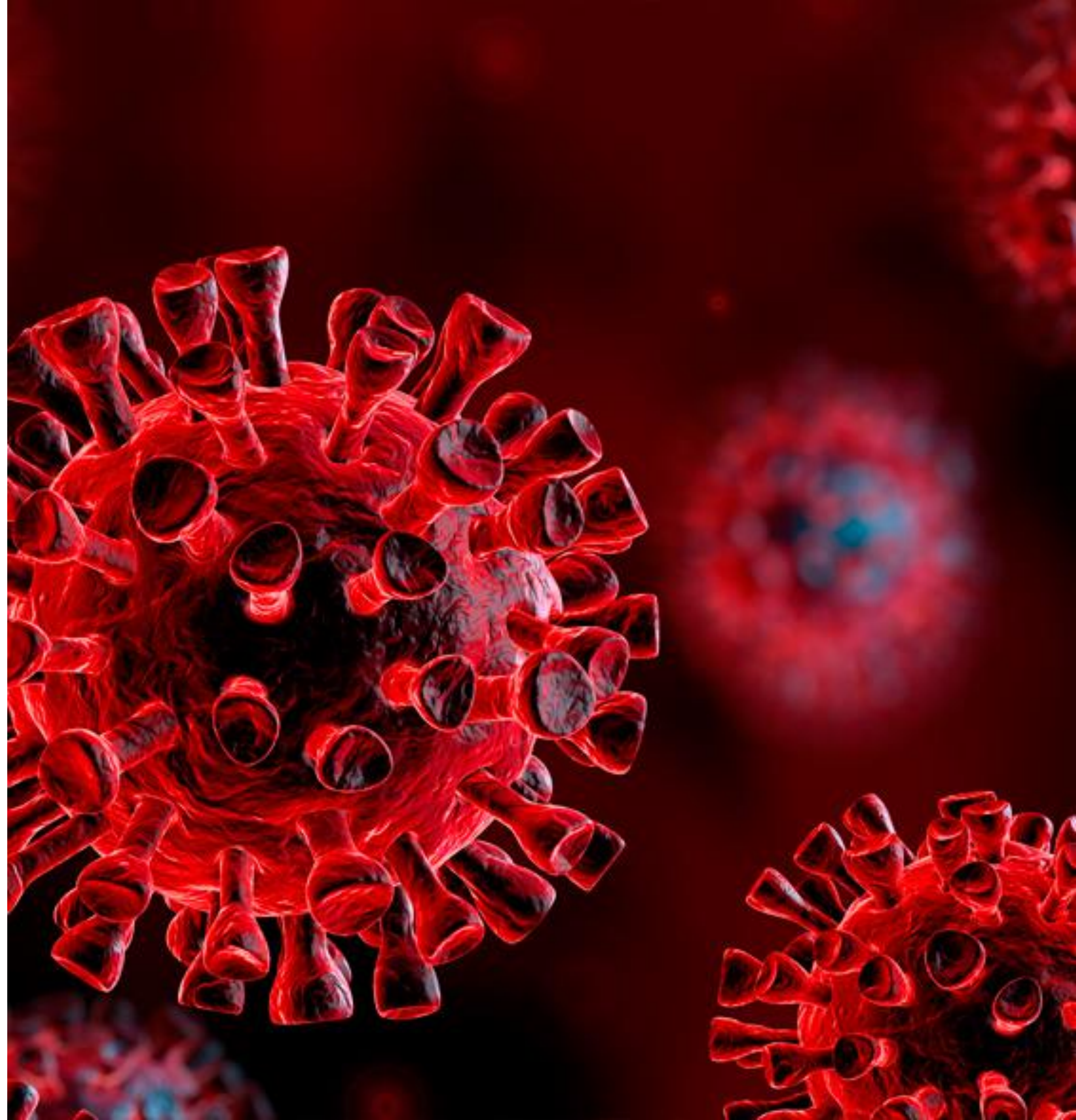




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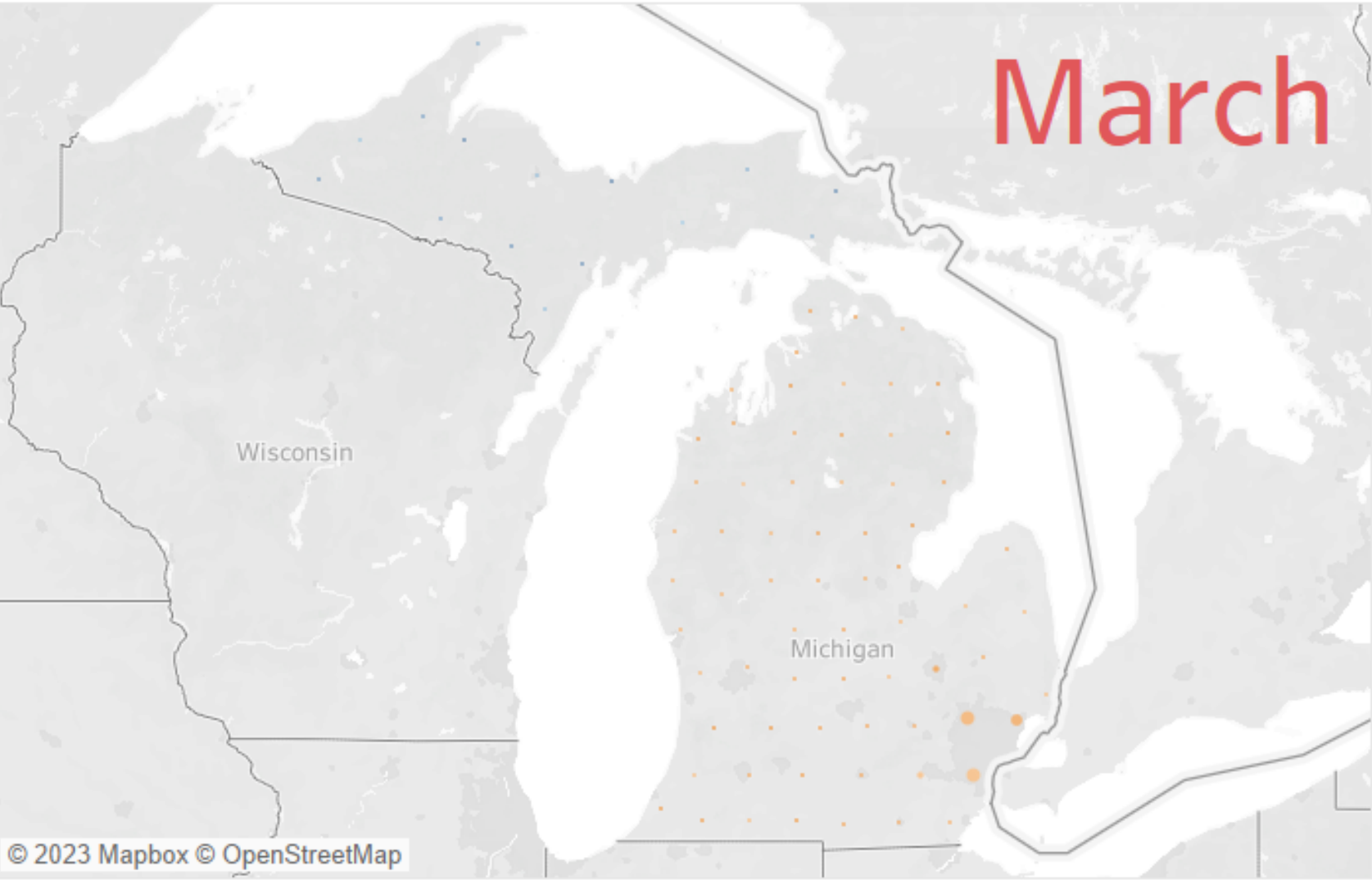
# Hypothesis 5

In April, due to lower growth rate of total COVID-19 cases in South Michigan, the limitations of business operation are eased in South Michigan than North Michigan in May.

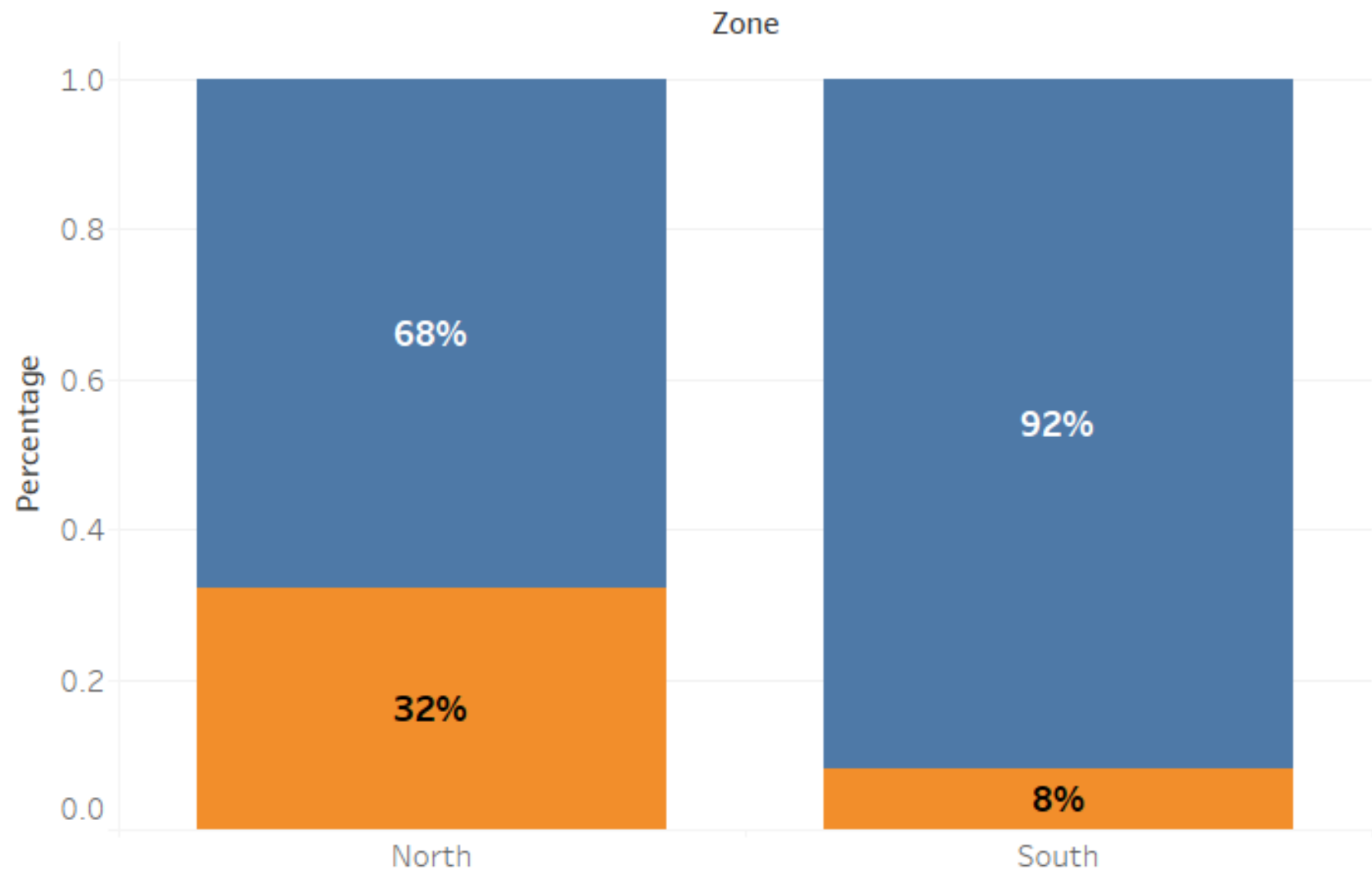




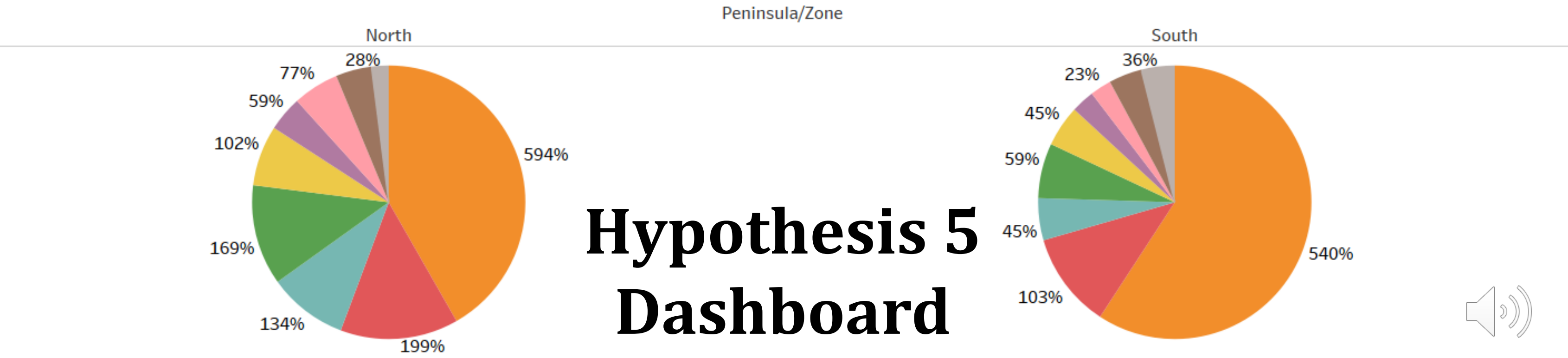
Total Cases Over Time (Animation)



North vs South Business Status Comparison



Month Wise & Zone Wise % Increase in Total Covid Cases



# Hypothesis 5 Dashboard

Month  
March  
☐ Show history

Peninsula/Zone, Cou..

- North, Alger, Mic..
- North, Baraga, M..
- North, Chippewa, ..
- North, Delta, Mic..
- North, Dickinson, ..
- North, Gogebic, ..
- North, Houghton, ..
- North, Iron, Mich..
- North, Keweenaw, ..
- North, Luce, Mich..
- North, Mackinac, ..
- North, Marquett, ..
- North, Menominee, ..
- North, Ontonagon

Total Cases

- 0
- 1,000,000
- 2,000,000
- 3,000,000
- 4,475,012

Month

- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

County Business Clo..

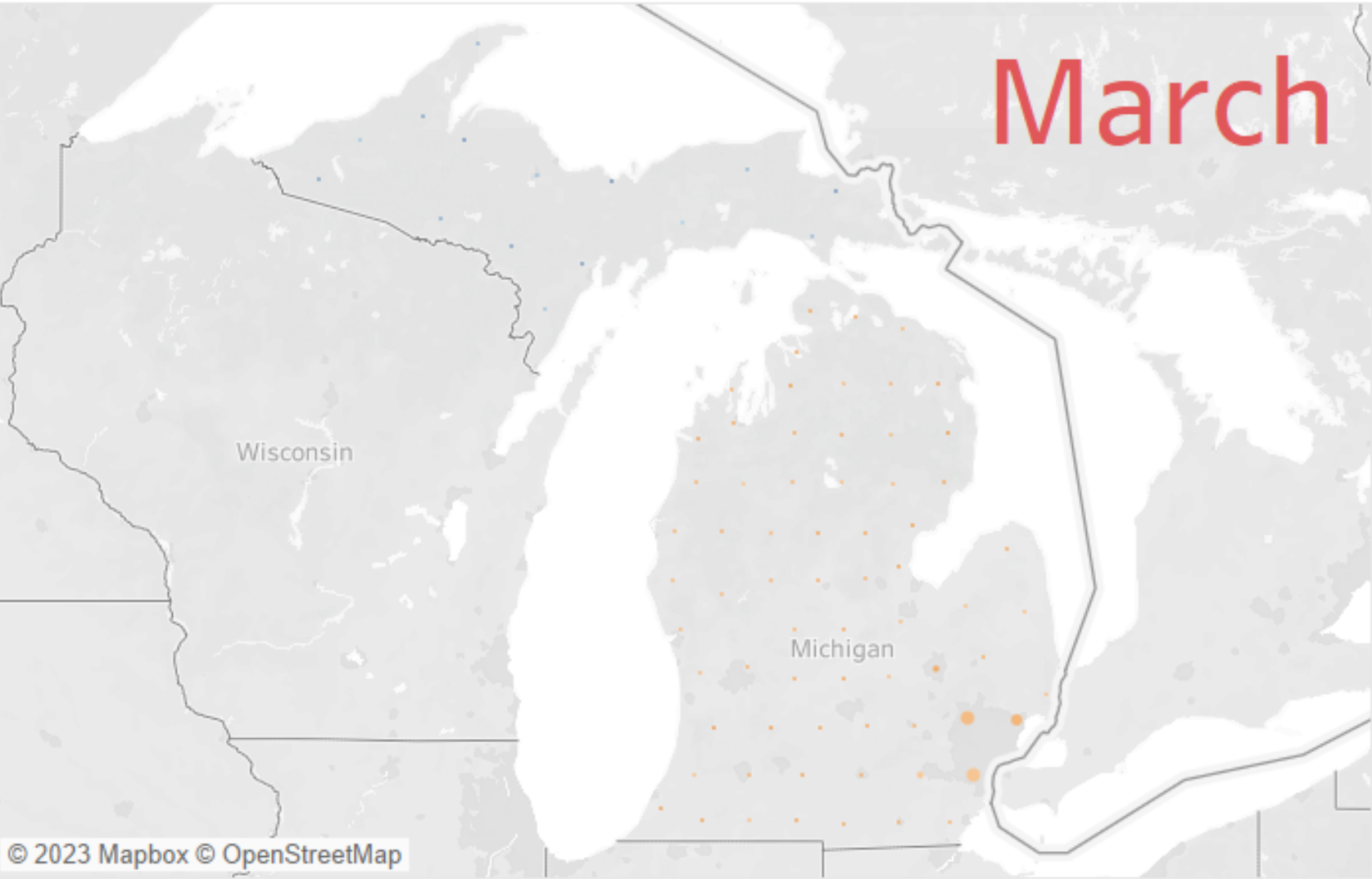
- Curbside/deliver..
- Open with limitat..



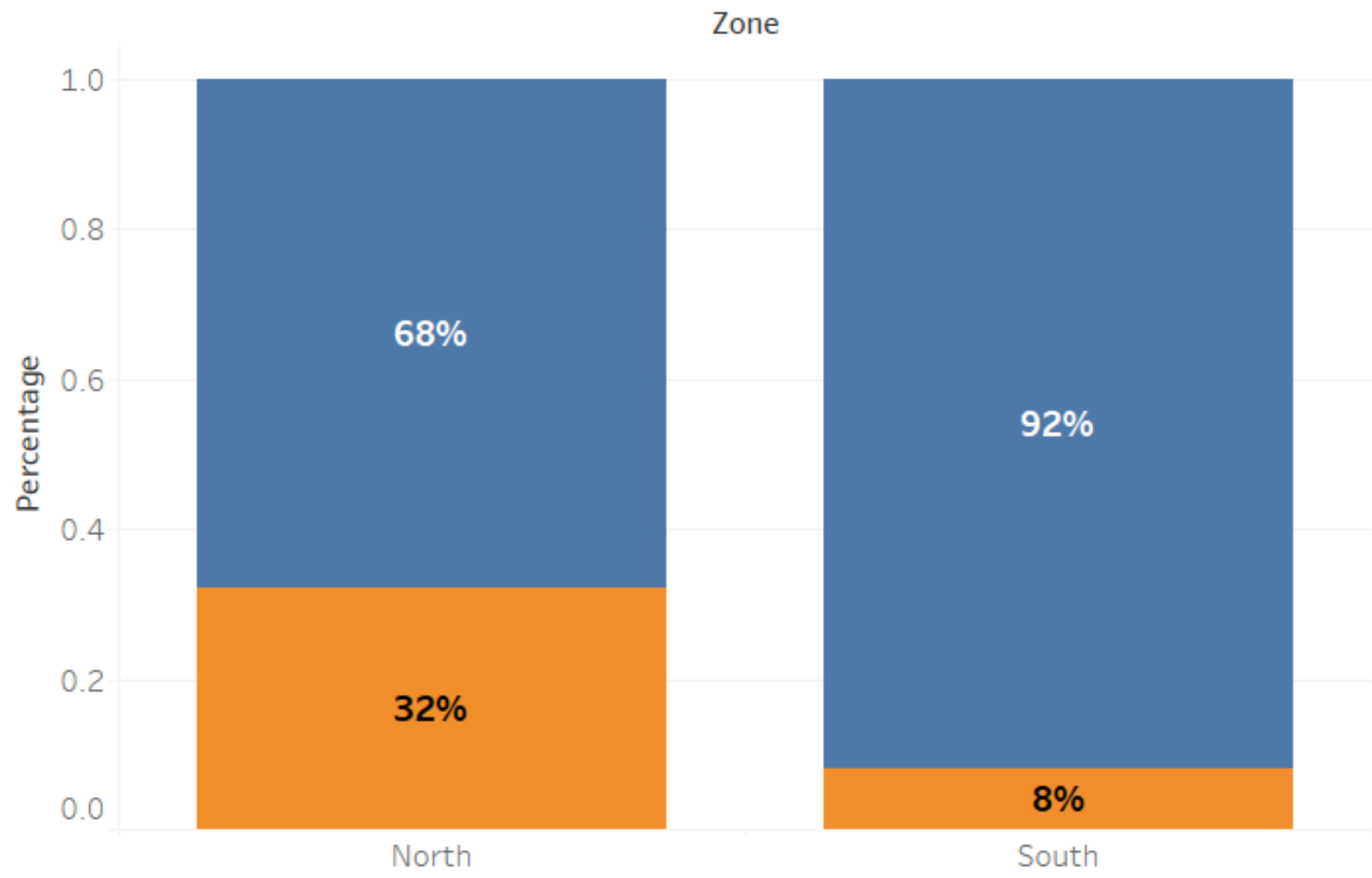


Month Wise & Zone Wise % Increase in Total Covid Cases

Total Cases Over Time (Animation)



North vs South Business Status Comparison



Month  
March  
☐ Show history

Peninsula/Zone, Cou..

- North, Alger, Mic..
- North, Baraga, M..
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- North, Houghton, ..
- North, Iron, Mich..
- North, Keweenaw, ..
- North, Luce, Mich..
- North, Mackinac, ..
- North, Marquett, ..
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- North, Ontonagon

Total Cases

- 0
- 1,000,000
- 2,000,000
- 3,000,000
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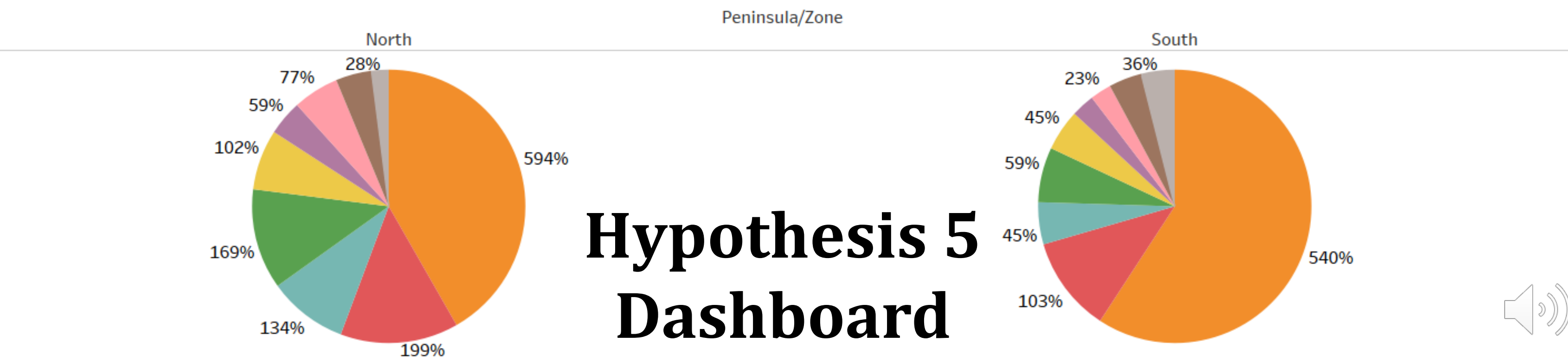
Month

- March
- April
- May
- June
- July
- August
- September
- October
- November
- December

County Business Clo..

- Curbside/deliver..
- Open with limitat..

Month Wise & Zone Wise % Increase in Total Covid Cases





# Conclusion

## Three aspects

- Operational status of business in Michigan
- Mask mandate policy in Michigan
- Geographical variations in Michigan

