

The background of the slide features a close-up, artistic rendering of several COVID-19 virus particles. These particles are depicted as spherical, greyish-blue structures with a textured, almost fibrous surface. Scattered across these surfaces and in the surrounding space are numerous small, bright red, crown-like structures, which represent the viral glycoprotein spikes. Some yellowish-gold dots are also visible, likely representing the nucleocapsid proteins. The overall effect is a detailed, scientific-looking illustration of the virus's morphology.

# **Covid-19 Positive Cases in California**

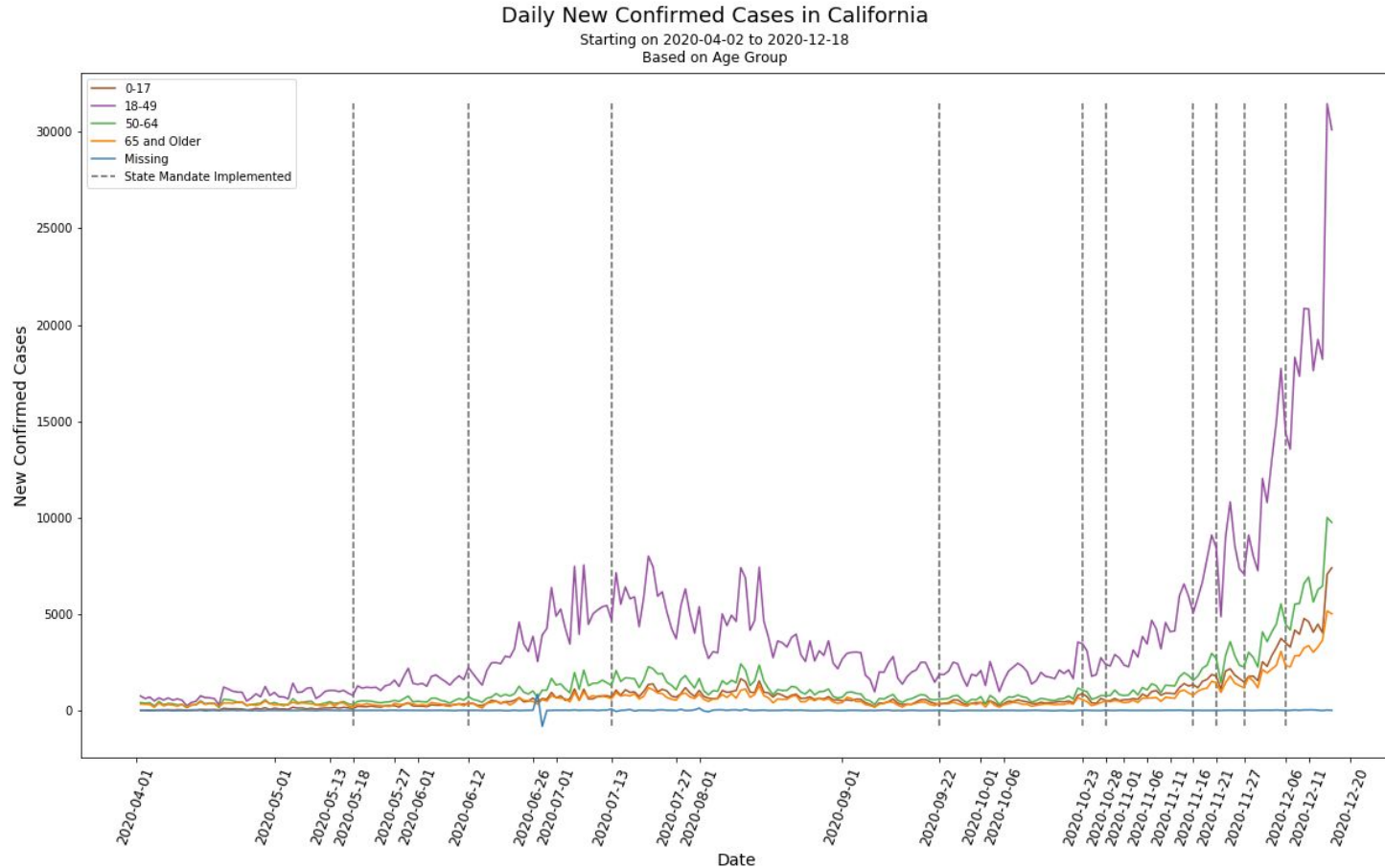
Data Exploration and Exploratory Data Analysis

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# Background & Motivation

- Covid-19 is a new illness that affects one's respiratory system. It's spread through respiratory droplets and can be deadly, especially for people over the age of 65.
- The United States have had a difficult time handling the pandemic and state governors are told that they are responsible for handling the pandemic with little to no federal help.
- On March 16, 2020, stay-at-home orders were put into place in California to slow the spread of Covid-19.

# Data Exploration



# Data Exploration

Date	Age Group	Total Positive Cases	New Confirmed Cases
2020-04-02	0-17	120	17
2020-04-02	18-49	5302	748
2020-04-02	50-64	2879	406
2020-04-02	65 and Older	2342	330
2020-04-02	Missing	58	8

Date	Age Group	Total Positive Cases	New Confirmed Cases
2020-12-16	0-17	208045	5221
2020-12-16	18-49	1043558	23502
2020-12-16	50-64	331246	8031
2020-12-16	65 and Older	180273	4243
2020-12-16	Missing	1252	15

# Data Exploration

Date	Age Group	(Positive Cases) / (Age Group Population)	(New Cases by Age) / (Total New Cases)
2020-04-02	0-17	0.00001	0.011258
2020-04-02	18-49	0.00030	<b>0.495364</b>
2020-04-02	50-64	<b>0.00040</b>	0.268874
2020-04-02	65 and Older	<b>0.00040</b>	0.218543
2020-04-02	Missing	N/A	0.005298

Date	Age Group	(Positive Cases) / (Age Group Population)	(New Cases by Age) / (Total New Cases)
2020-12-16	0-17	0.02305	0.127304
2020-12-16	18-49	<b>0.05999</b>	<b>0.573052</b>
2020-12-16	50-64	0.04566	0.195821
2020-12-16	65 and Older	0.03090	0.103458
2020-12-16	Missing	N/A	0.000366

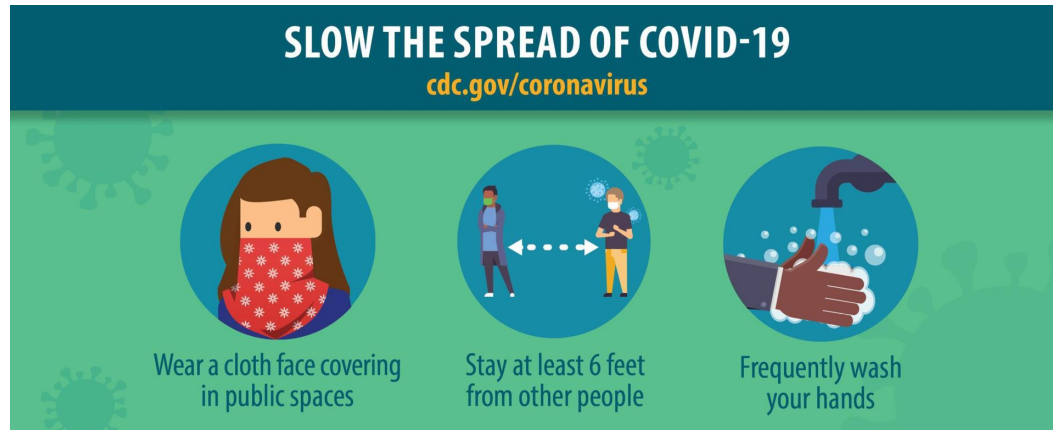
# **Q: Is the positive cases for each age group in California a sample of the positive cases for each age group in the United States?**

After careful analysis, no, positive cases for each age group California is not a sample of the positive cases for each age group in the US.

Age Group	Observed Cases in California	Expected Cases in California
0-17	208045	181748
18-49	1043558	960402
50-64	331246	359721
65 and Older	180273	252994
Missing	1252	9528

# Conclusion

- Spread of Covid-19 is still getting worse as the months continue to pass
- Need some enforcement of stay-at-home orders and some type of aid to help those who were affected financially by Covid-19, especially aid for people of the ages 18-49.
- No indication that positive cases for each age group in California is a sample of the positive cases for each age group in the United States.



# References

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