

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. They are densely covered with small, protruding proteins that are colored in bright red and yellow. The particles are scattered across the frame, with some in sharp focus in the foreground and others blurred in the background, creating a sense of depth. The overall color palette is dominated by the greys of the virus capsids, the vibrant reds of the spike proteins, and the occasional yellow highlights.

Covid-19 Positive Cases in California

Data Exploration and Exploratory Data Analysis

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Background & Motivation

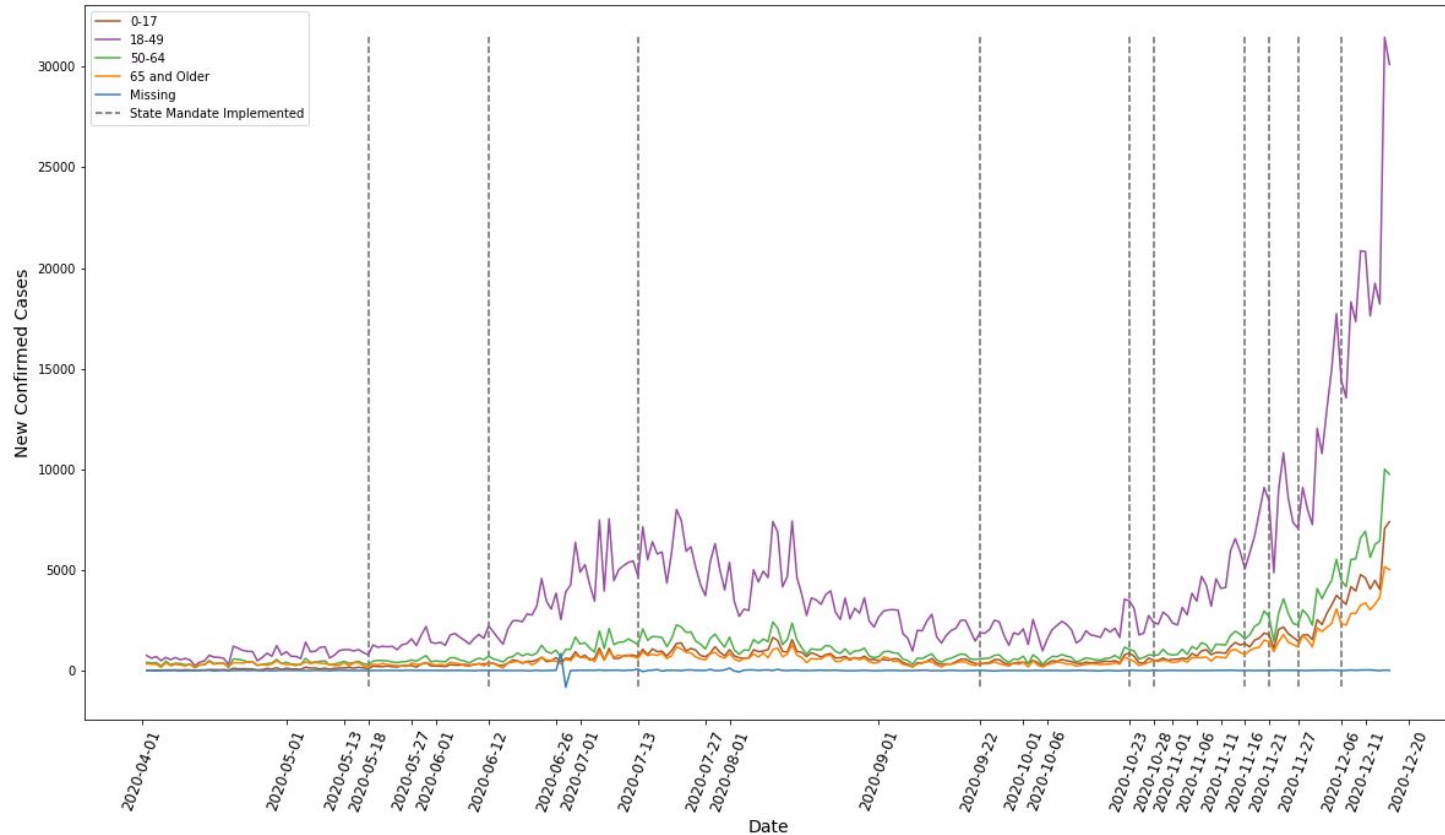
- Covid-19 is a new illness that affects one's respiratory system. It's spread through respiratory droplets and can be deadly, especially for people over the age of 65.
- The United States have had a difficult time handling the pandemic and state governors are told that they are responsible for handling 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

Daily New Confirmed Cases in California

Starting on 2020-04-02 to 2020-12-18

Based on Age Group



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	0.495364
2020-04-02	50-64	0.00040	0.268874
2020-04-02	65 and Older	0.00040	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	0.05999	0.573052
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

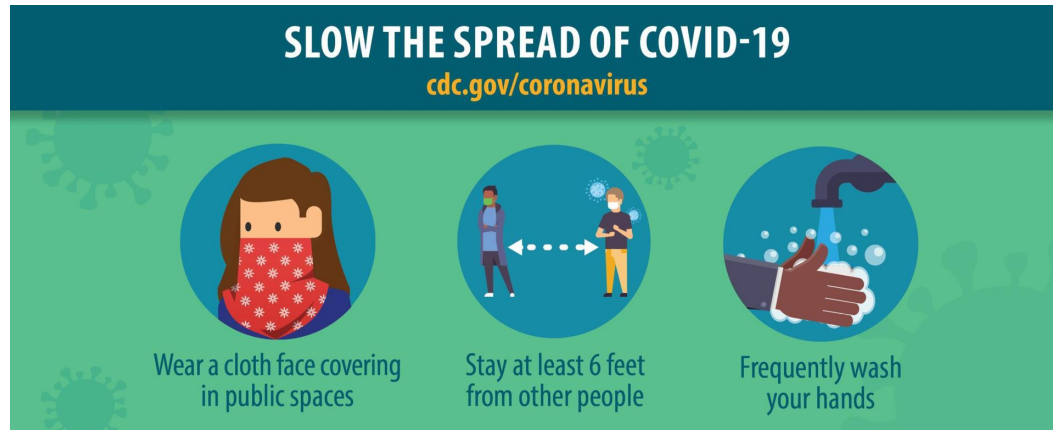
Q: Is the positive cases for each age group in California a sample of the positive cases for each age group in the United States?

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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