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**Mask studies that people have pointed in defending mask mandates**

## Arizona

Many people point to a study in Arizona that showed a decrease in daily COVID-19 cases about 2 weeks after masks were mandated in June. However, if you go back and look at the chart you can see that cases initially fell after the mandate (like most states) they soared in Dec / Jan despite the mandate.
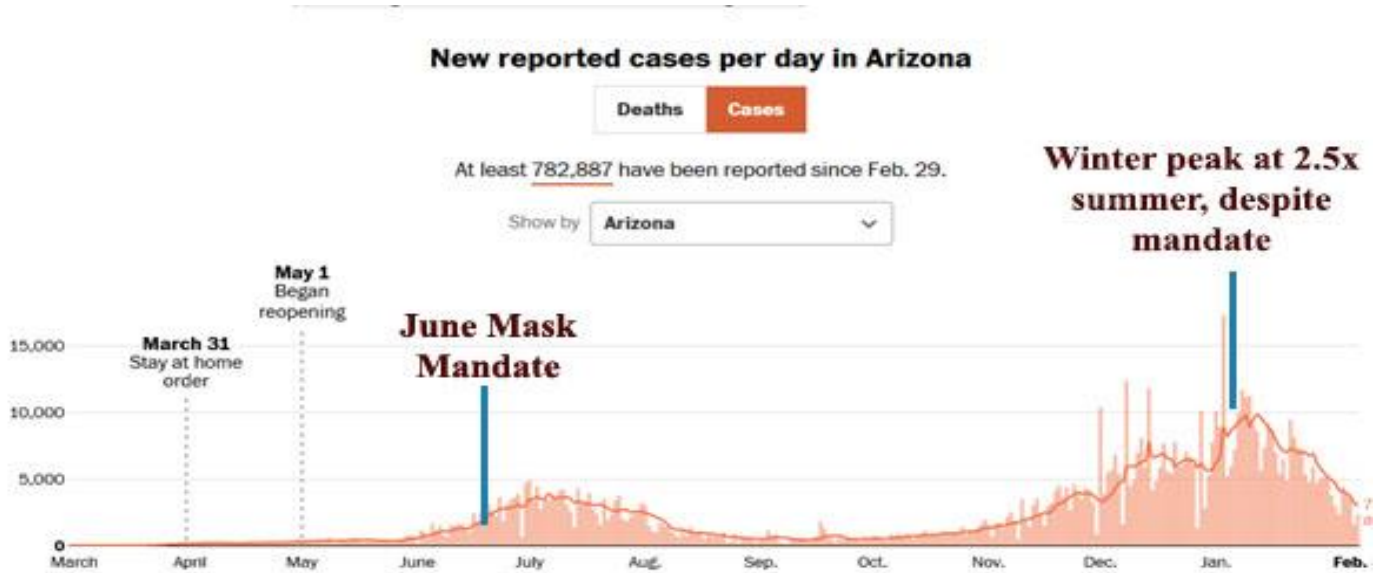


## North Dakota

North Dakota imposed a bunch of occupancy restrictions to "stop the spread" with people pointing to the decline as proof that masking works. However, South Dakota didn't imposed restrictions or a mask mandate and they had the same decline.
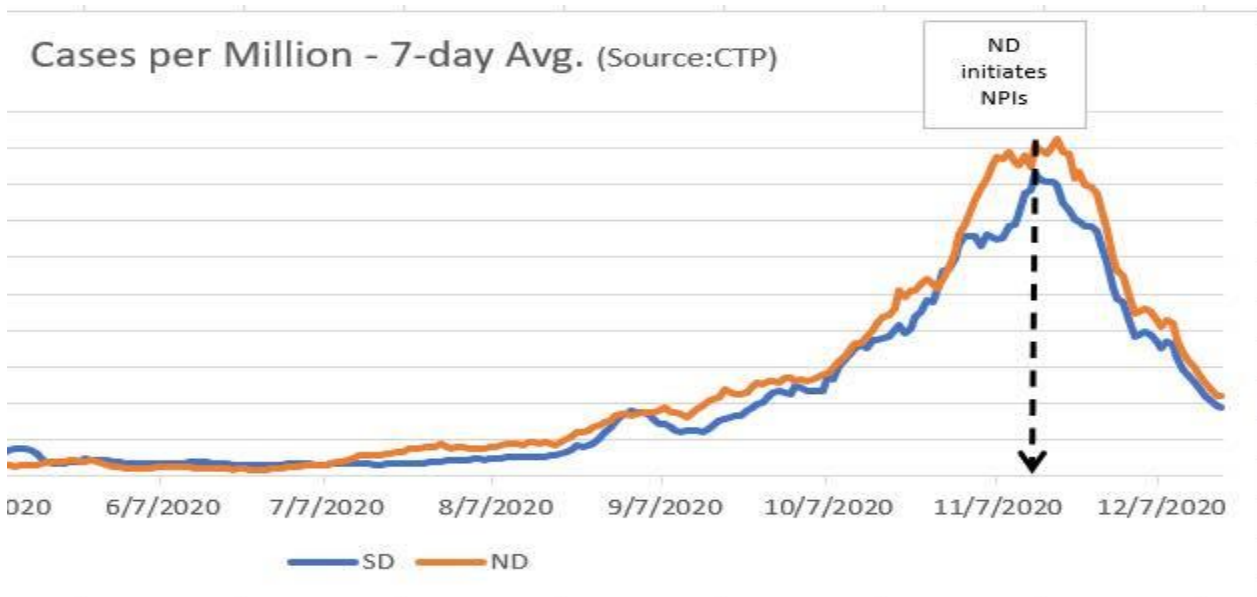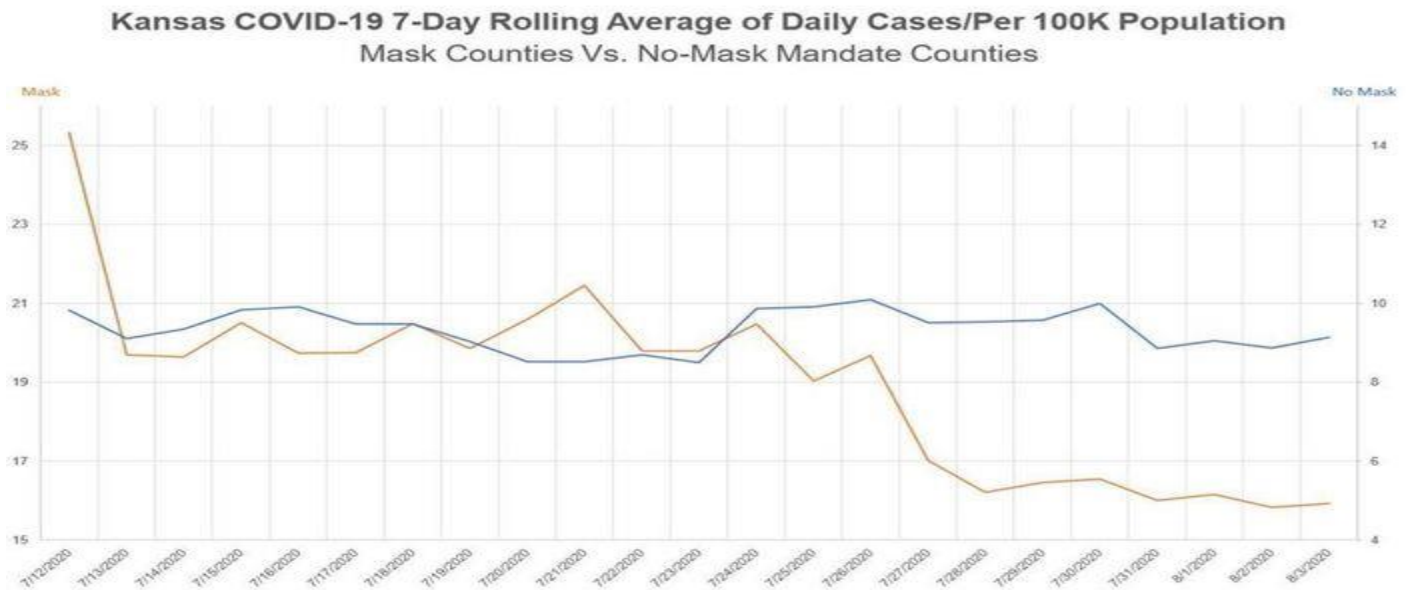
**Mask studies that people have pointed in defending mask mandates**
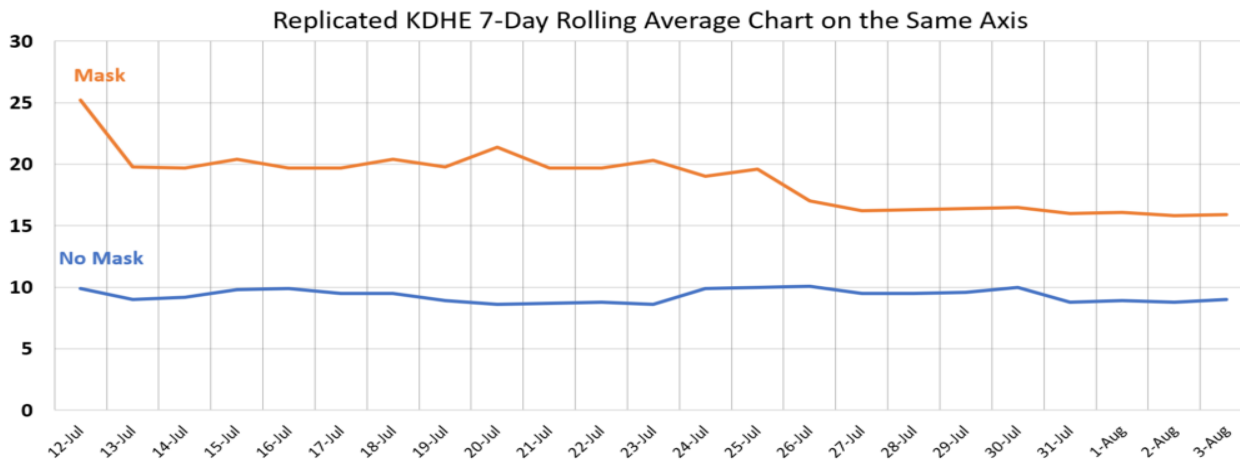
<mark>Kansas</mark>

The states health secretary goes on TV and states that their mask mandate has dramatically reduced cases in those counties.  However,

1.  He fudged the data by using a chart with 2 different axis.  One goes from 15 to 25 and the other goes from 4 to 14.

**Unaltered chart**



**Kansas COVID-19 7-Day Rolling Average of Daily Cases/Per 100K Population**
Mask Counties Vs. No-Mask Mandate Counties

**Here is the chart using the same axis**



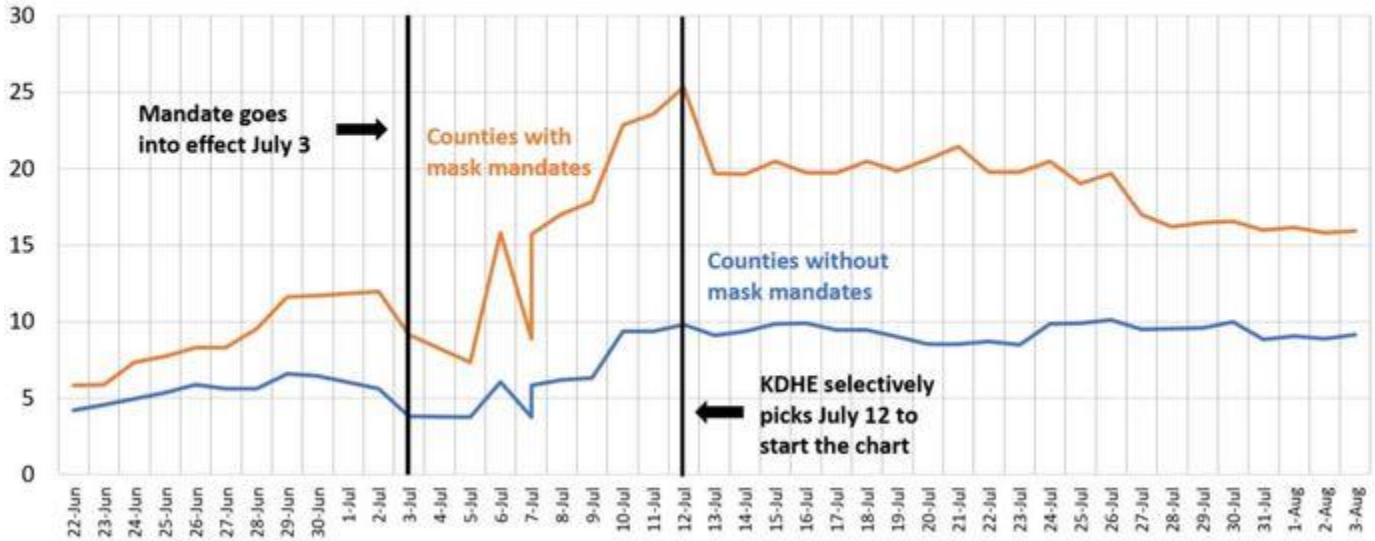Replicated KDHE 7-Day Rolling Average Chart on the Same Axis

In addition, even *this conclusion is incorrect* because the authors used data available from USAFacts.org that was later updated. In other words, the updated version of the data do *not* show that the COVID-19 incidence trend reversed in the counties with mask mandates.The CDC is aware of this data issue, and they have acknowledged that the original study used data from an earlier release date.
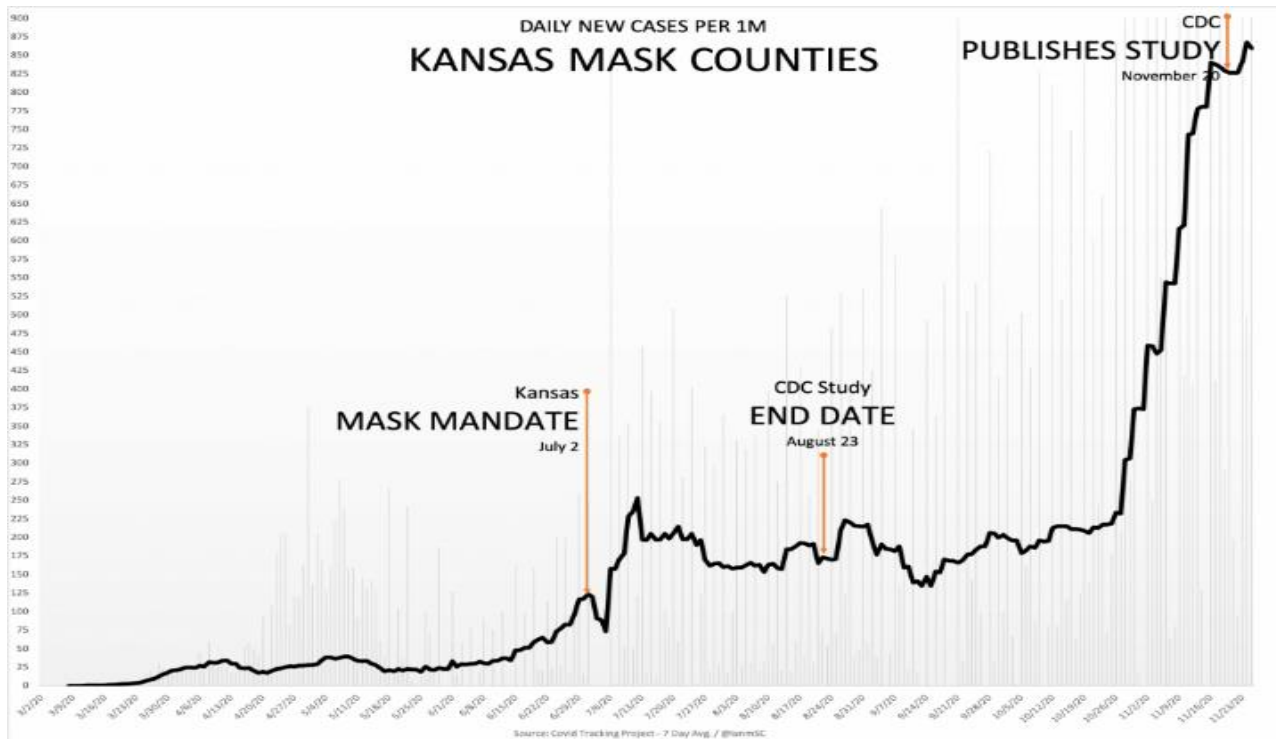
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2. He cherry picked the start date as the highest for mask mandates

## Kansas COVID-19 7-Day Rolling Average of Daily Cases Per 100,000 Population
### Data obtained in Open Records Request from Kansas Dept. of Health & Environment



Mandate goes into effect July 3

Counties with mask mandates

Counties without mask mandates

KDHE selectively picks July 12 to start the chart

3. The CDC does a similar studey but stops the data at August 23. CDC publishes study on Novemner 20 despite knowning there has been a huge spike which invalidates there study.
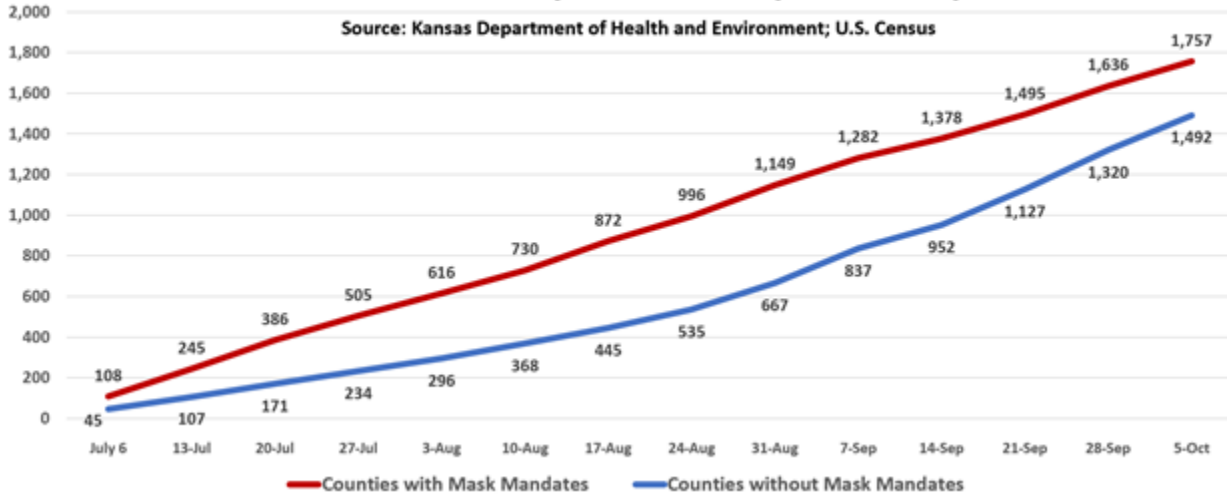


DAILY NEW CASES PER 1M
**KANSAS MASK COUNTIES**

CDC **PUBLISHES STUDY** November 20

Kansas **MASK MANDATE** July 2

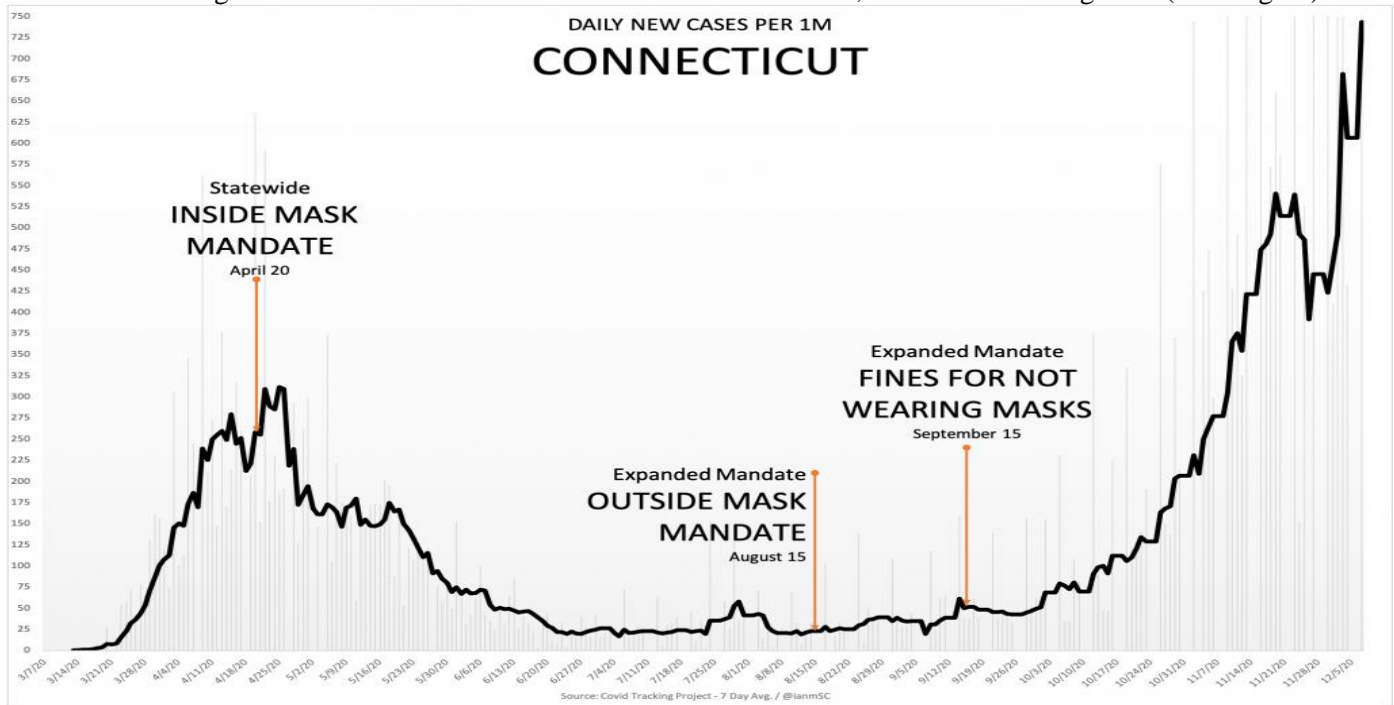CDC Study **END DATE** August 23

Source: Covid Tracking Project - 7 Day Avg / @IamMSC

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## Cumulative New Weekly COVID Cases per 100k Population

Source: Kansas Department of Health and Environment; U.S. Census



Counties with Mask Mandates · Counties without Mask Mandates

Good timing at the start of the mandate as cases decline. However, cases come roaring back (2-3x higher)



DAILY NEW CASES PER 1M
## CONNECTICUT

Statewide **INSIDE MASK MANDATE** April 20

Expanded Mandate **OUTSIDE MASK MANDATE** August 15

Expanded Mandate **FINES FOR NOT WEARING MASKS** September 15

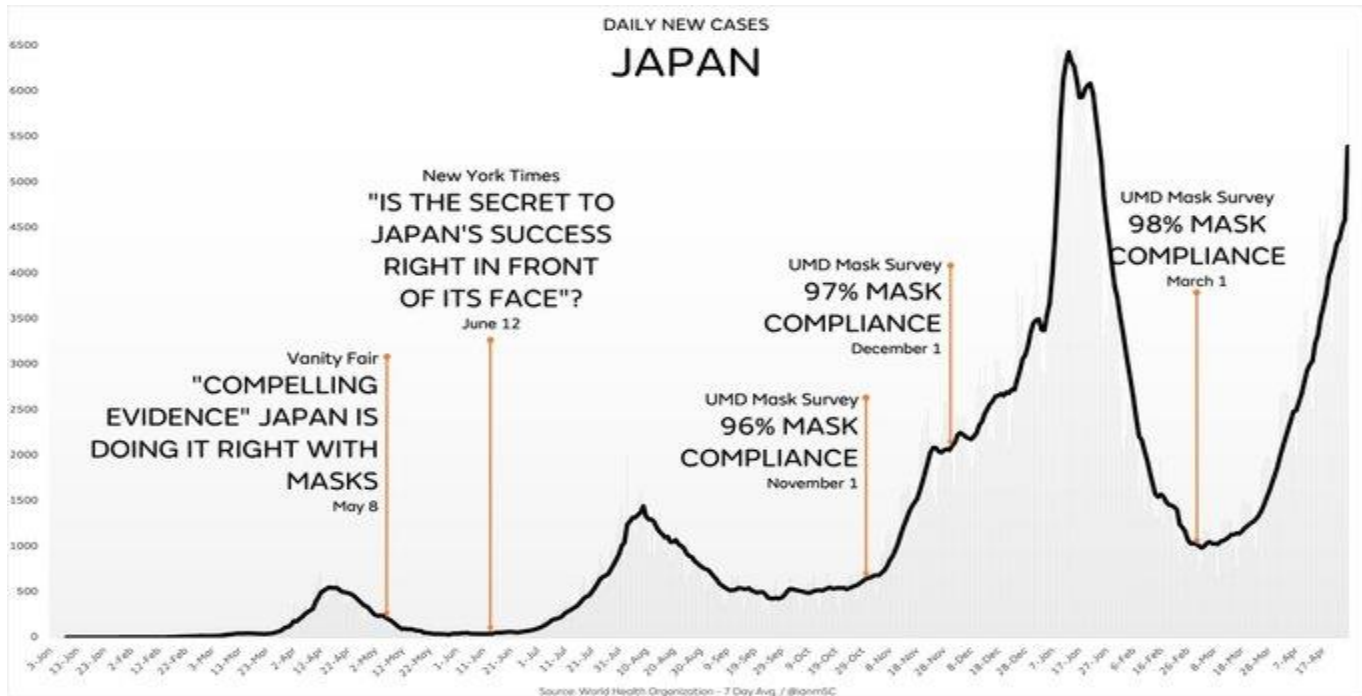Source: Covid Tracking Project - 7 Day Avg. / @ianmSC

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**Japan**

"Doing it right" we are told in the beginning. However mask show no correlation as cases spike at 96%, 97% and 98%



**Georgia Study**

- According to a large study conducted by the CDC, rates of COVID transmission are no higher in schools without a mask mandate than in schools with a requirement to wear a mask.
- Showed only that school transmission was below community transmission.
- The study, which analyzed some 90,000 elementary students in 169 Georgia schools from November 16 to December 11, found that there was **no statistically significant difference in schools that required students to wear masks compared to schools where masks were optional.**

**Duke Study (https://pediatrics.aappublications.org/content/pediatrics/early/2021/01/06/peds.2020-048090.full.pdf )**

- Showed only that school transmission was below community transmission. Could not show mask vs no mask mandate as all school had mandate
- Authors stated
  - We don't have data from within North Carolina as to whether or not, in school in K-12, what happens when children are not masked
  - There were no instances of child-to-adult transmission of SARS-CoV-2 were reported within schools.
  - The risk of death from acquiring COVID and dying from it in North Carolina this past year was less than the risk of riding to school in your parent's automobile.

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<mark>CDC study shows counties w/ school mask requirements</mark> had a smaller increase in pediatric #COVID19 case rates than counties w/o school mask requirements
(https://www.cdc.gov/mmwr/volumes/70/wr/mm7039e3.htm?s_cid=mm7039e3_w )

- Notice it doesn't actually say schools with mask mandates show a smaller increase in pediatric COVID-19 case rates. Rather, it says "counties," – Why?  See below – the kids weren't in school.
- Real story is that the CDC cherry-picked a time period from July 1st-September 4th, meaning that children weren't even in school for the vast majority of the study. (some kids were only in school for a week)
- The study also cherry-picked counties (south vs north) that already had rising infection rates prior to school beginning
    - If you don't believe that geography is an issue then run the study as counties in Southern states with mask mandates vs countries in Northern states w/o mandates.  The Mask mandates would get crushed because the South is having a wave (normal summer event – everyone goes inside to avoid the heat)
- Here is the disclaimer from the CDC
    - this was an ecologic study, and causation cannot be inferred.
    - pediatric COVID-19 case counts and rates included all cases in children and adolescents aged <18 years;
    - county-level teacher vaccination rate and school testing data were not controlled for in the analyses;
    - Finally, because of the small sample size of counties selected for the analysis, the findings might not be generalizable.

<mark>Arizona Study 2</mark> (**https://www.cdc.gov/mmwr/volumes/70/wr/mm7039e1.htm**) a CDC study with the headline "Mask mandates in schools curb infections",

- The data showed there were 191 school-associated COVID-19 "outbreaks" about a week after schools opened.
- About 60% of those "outbreaks" happened in schools with no mask requirement

**Now to the good stuff**
- The study included a significant number of schools that were not open for the full time frame (July 15–August 31, 2021)
- To be considered an outbreak there only needed to be two confirmed positive cases among staff or students in a two-week period.
    - So 1 student a week in any of the Lakewood schools would  count as an outbreak.  That is a red flag as to why are they using such a strange definition of an outbreak – I mean really 2 cases over 2 weeks in a Lakewood population of 4300 students and 1500 staff / support is head scratching.
    - So here is the chart explaining why (you have to click through to the study and then pull up the tables:

| No. of students | Average enrollment | No Mandate* | Early Mandate* |
|---|---|---|---|
| <850 | 700 | 60 (13%) | 109 (52%) |
| 850–1,199 | 1025 | 108 (23%) | 32 (15%) |
| 1,200–1,649 | 1225 | 156 (33%) | 32 (15%) |
| ≥1,650 | 1900 | 156 (33%) | 37 (18%) |

- Notice that
    - over 50% of the mask schools have less than 850 students compared to only 13% of the no mask schools

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- 33% of the no mask schools a have over 1650 students compare to only 18% of mask schools

  o Now who is more likely to have 2 students test positive for covid over a 2 week period? A school with 500 kids or a school with 2,000?

  o The good news is that only 191 schools had a 2 kid outbreak – showing that kids are not getting it.

This is not a serious study, it was created so that the CDC could point to studies in support of their narrative and to muddy the water (oh there are studies that show both sides)