

Covid-19 Task Force Update: Snapshots

Snapshot: What the Corona Virus actually looks like.....

- Electron micrograph of **Covid-19 virus**
- Any vaccine developed has to “attack” or neutralize one of the viruses external or internal elements
- (ugly looking, isn’t it?)

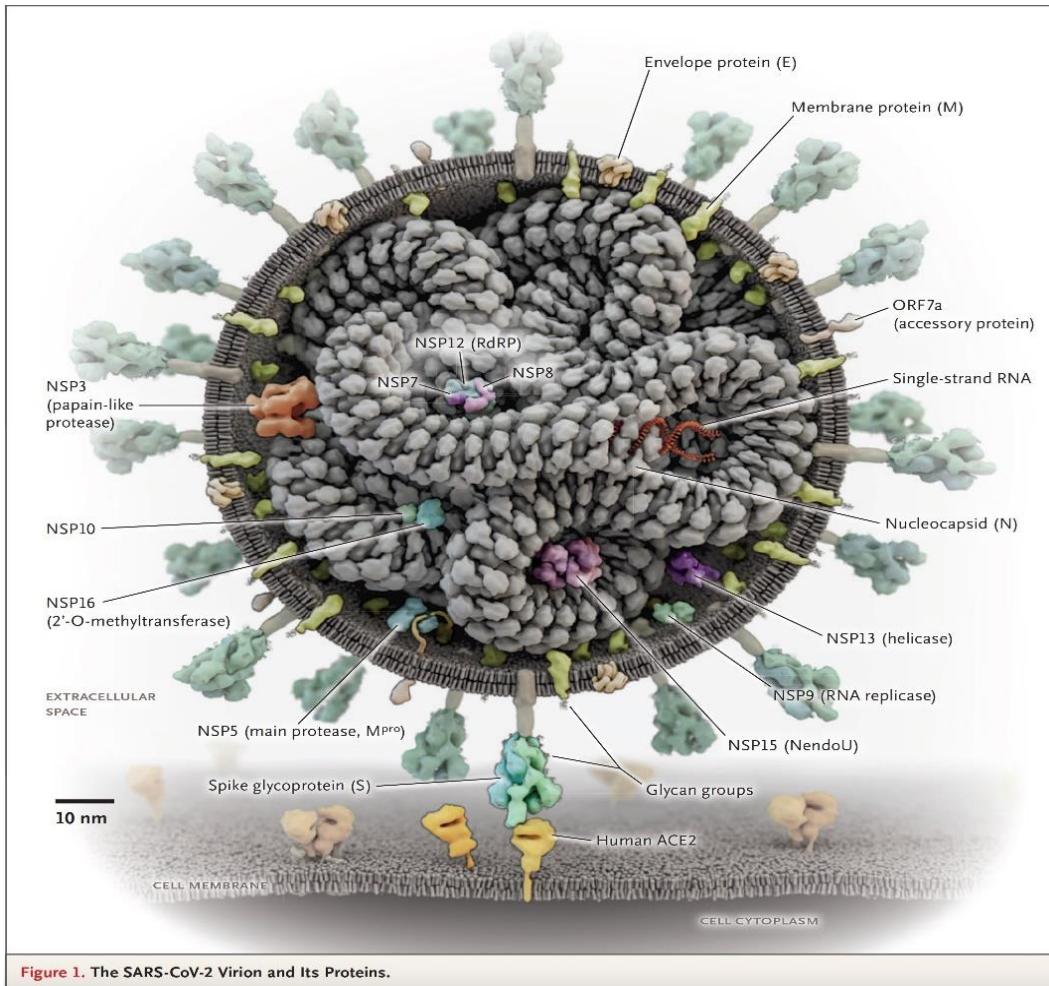


Figure 1. The SARS-CoV-2 Virion and Its Proteins.

Snapshot: Covid-19 Iceberg:

So much more going on, than “just” deaths, hospitalizations, confirmed cases

- uncounted deaths
- Chronic illness post infection
- Asymptomatic people (see last week update)
- Asymptomatic with internal injury
 - Data (radiographic) showing lung injury in asymptomatic people

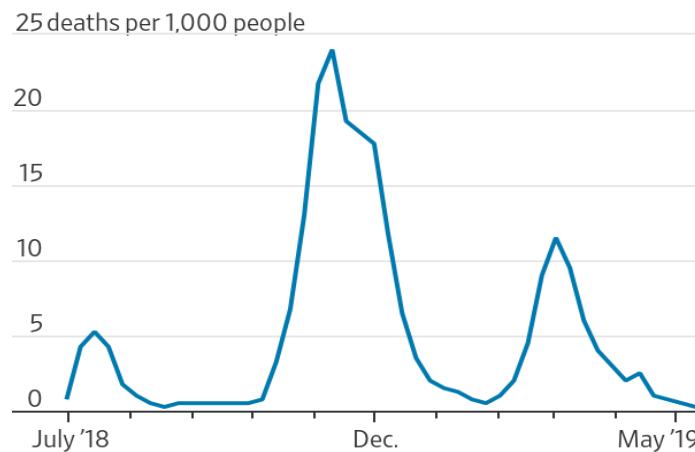


Snapshot: Second wave or not??

This is what a second wave looks like (from 1918 influenza pandemic)

The Second Wave

The weekly mortality rate during the 1918 influenza pandemic in England and Wales



Source: Edwin O. Jordan, Jeffery K. Taubenberger, David M. Morens

Snapshot: United States corona virus cases March-June 2020

- New surge?

More than 25,000 new coronavirus cases a day on average in the US

The daily count of new coronavirus cases in the U.S. is on the rise, fueled by a surge of new cases in the South and West and efforts to restart the economy.

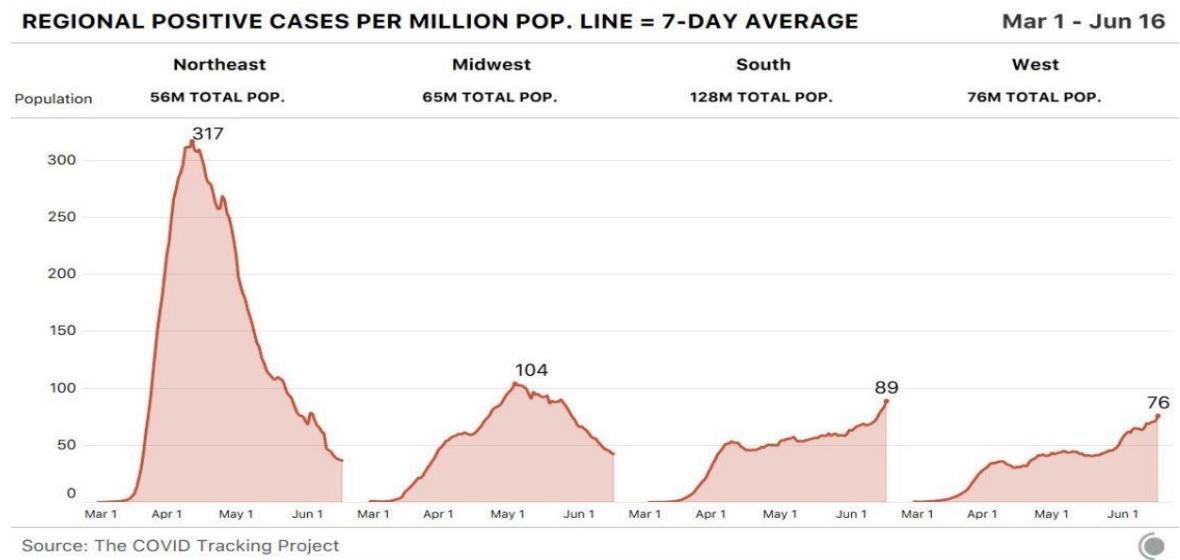
COVID-19 new cases, seven day average



Graphic: Nicky Forster Source: Johns Hopkins Coronavirus Resource Center

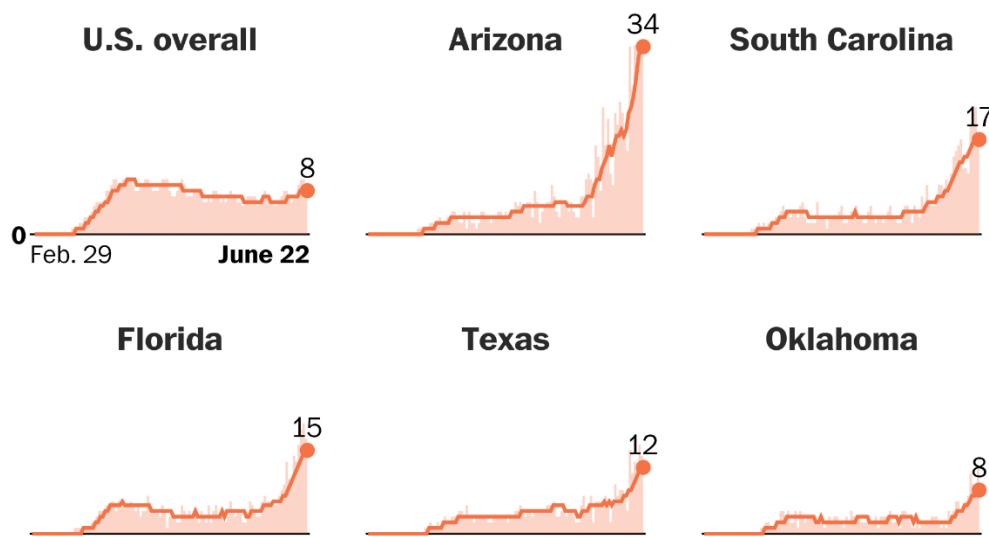
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Snapshot: Regional “Patchwork” of positive cases:



States with largest case increases over last week

(7-day average of daily new reported cases/100,000 residents)



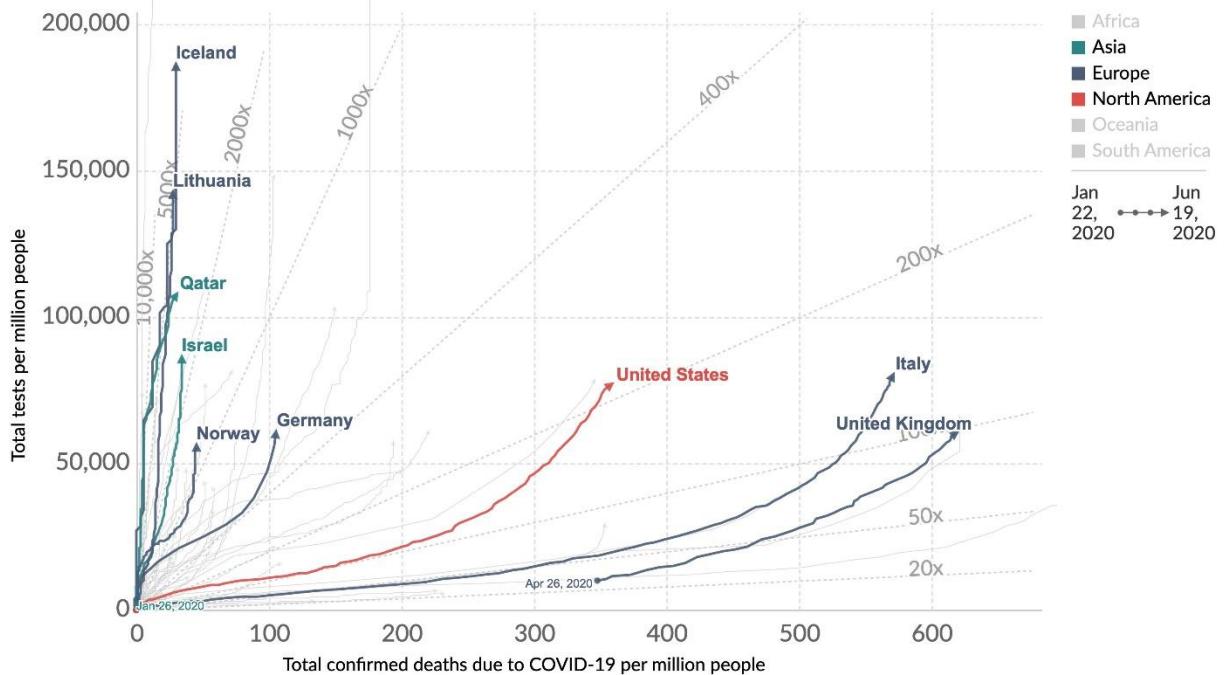
Snapshot: Covid-19 testing and Deaths:

- Increased testing (see Iceland, Israel, etc.) associated with decreased deaths

Per capita: COVID-19 tests vs. Confirmed deaths

Both measures are shown per million people of the country's population.

Our World
in Data



We in Kansas are not immune...

Ten counties with **highest rate** of reported cases

County	Reported cases per 100k	Deaths per 100k
Trousdale County, Tenn.	15,314	52
Lake County, Tenn.	9,155	0
Dakota County, Neb.	8,559	143
Buena Vista County, Iowa	8,189	49
Lincoln County, Ark.	7,565	80
Nobles County, Minn.	7,468	27
Colfax County, Neb.	6,115	37
Lee County, Ark.	6,108	11
Ford County, Kan.	5,487	23
Texas County, Okla.	4,640	28

Washington Post 6/22/20

Snapshot: 2 Mechanisms of Covid-19 disease

- *Lung Dysfunction*
 - Cough, shortness of breath, pneumonia
- *Immune Dysfunction/Disease*
 - Body's immune system goes into "hyper drive" = cytokine storm
 - Kidney failure, sepsis(infection), heart failure, blood pressure, lung failure
 - Most common cause of death
- Abnormalities of the immune system is what makes this disease different (much worse) than influenza

Snapshot: Treatment:

- "We're going be more dependent upon therapeutic innovation here in this country given the fact that we're going to *continue* to have a lot of infection."

Scott Gottlieb, CNC interview, 6/22/20

- New data; Decreased death in critically ill patient when given **steroids**
 - Likely due to effect on the immune system dysfunction