

It is Time to Reopen Alabama to Cautiously Normal Life

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Core Argument

AL shut down on fears of major plague hurricane

- Projected doubling every 5-6 days with >2% death rate
- Visions of (tens of) thousands waiting for ICU beds in AL

Evidence suggests Category 2 not Category 4-5

- Roughly comparable to one extra season of flu
- Local hospitals operating greatly under capacity

Massive economic and health costs of shutdown

- Few benefits other than conciliating panic
- Worsens AL's ability to contend with possible resurgence later

A Hurricane Scale of Plagues

Cat 5

- Civilization destroying
- Example: smallpox for Aztecs and Incas
- Estimated 80% of native Americans died of European diseases before they met a European

Cat 4

- Average life expectancy reduced by 5+ years
- Example: tuberculosis in 19th century US
- 0.5%-0.2% annual death rates, equivalent to 100-250 thousand deaths per decade in modern AL

Cat 3

- Average life expectancy reduced by a few months
- Example: Spanish flu in 1918
- 0.5% death rate in US, equivalent to 1.7 million Americans today or 25,000 in AL

A Hurricane Scale of Plagues

Cat 2

- Average life expectancy reduced by a few weeks
- Example: seasonal flu
- 0.1% average annual death rate in US w 12-60 thousand deaths; higher in Italy with equivalent of 100 thousand deaths

Cat 1

- Impact on average life expectancy hard to measure
- Example: common cold
- 0.5%-0.2% annual death rates, equivalent to 100-250 thousand deaths per decade in modern AL

Cat 0

- A host of viruses and bacteria that are much rarer than seasonal flu but can be fatal.

Early Perceptions of COVID-19

January
2020

Largely dismissed
by WHO, others

Chinese govt
obfuscated
evidence

Little apparent
impact outside
China

February
2020

Mounting
concerns

Severe clusters
appear in Italy,
Iran, elsewhere

Contagious
before symptoms
evident

March
2020

Panic

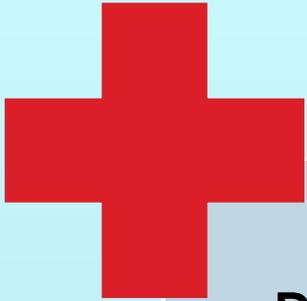
Worldwide surge
in reported cases

Front-line
doctors
overwhelmed

Dr. Saag, UAB, March 13: “If we do nothing”

- ▶ “Based on current estimates, up to 70 to 120 million people in the US will contract the infection.”
- ▶ “With a doubling rate of infection of 5 – 6 days, we [in Alabama] can go from 50 cases to 25,000 cases in 10 weeks.”
- ▶ “If 20% (5,000) of these patients are significantly ill, at least half of them will need to be in the hospital (2,500). Of those, at least half will need to be cared for in the ICU (1,250) [and] could remain there for weeks.”
- ▶ “At 20 weeks from now, there could be up to 500,000 total cases or more in Alabama (you can do the ICU math).”  25,000 waiting for ICUs

Shutdown Offered Refuge



- Buys time
- Reduces peak demand on ICUs
- Lets public officials show they care
- Extremely costly
- How much can it really help?
- How long can people bear it?

Cost-Benefit Ratio Dubious from Start

For most people, costs significantly outweigh benefits

- COVID mortality rates miniscule for young children, unlike ordinary flu
- Mortality rates similar to ordinary flu for people 15-50
- Speeding “herd immunity” would benefit them far more

Limited benefits even for very old and very sick

- Most expected to die within 5-10 years even without COVID
- ICU treatment not expected to save the infected subgroup
- Stay-in-place put many old/sick in more contact with young family members, unless already in nursing homes.
- Self-segregation with community help would suit them better

Unprecedented Medical Experiment

Costliest Ever

- Unimaginable pre-internet
- Biggest one-month contraction in modern history
- New investment in total upheaval

No Control Group

- How do we measure success?
- How do we measure unwanted side effects?

No Exit Plan

- What are the criteria for reopening the US?
- How much COVID resurgence will we accept?

Who Bears the Costs of Shutdown?

- ▶ Private sector suffers more than public sector
- ▶ Small business suffers more than big business
- ▶ Debtors suffer more than creditors
- ▶ Workers suffer more than retirees or welfare recipients
- ▶ Our prized medical sector suffers more than non-medical
- ▶ The unhealthy suffer more than the healthy
- ▶ Single parents suffer more than dual parents
- ▶ Poor students suffer more than good students
- ▶ Young people suffer more than old people
- ▶ Highly social people suffer more than loners
- ▶ The active suffer more than the sedentary

What Does Recent Evidence Suggest?

Infections spread sooner than we thought

- We weren't testing widely or well enough before
- Most infected have few if any symptoms

Death rates slowing sooner than expected

- Beyond peak in Iran, Italy, Spain, and other crisis areas
- Leveling off in the US Northeast

Projected mortality lower than expected

- Tests from cruise ships and German cities suggests mortality from infection on the order of 0.5%
- Mortality as % of population much less than 0.1%

Less severe in warm regions than expected

- Remarkably few deaths in countries with warm weather
- Remarkably few deaths in Florida, Texas and California despite high travel from Northeast and abroad

Encouraging News in Alabama

Testing largely in tandem with infection

- Early start thanks to test kits and local initiatives
- Excellent support from UAB and public health dept

Few signs of sustained geometric growth

- New cases in AL have risen gradually to roughly 300 per day
- New cases in Jefferson Co have stabilized for three weeks at roughly 25 per day

Much fewer deaths than feared

- 73 died from COVID-19 and another 37 died with COVID
- Covid19.healthdata.org from U of Washington projects 351 deaths by Aug 4, over 85% less than it did 10 days ago

ICU beds not constrained overall

- Covid19.healthdata.org projects peak AL needs of only 89 ICU beds, less than 20% of capacity
- Jefferson Co might be national leader in excess ICU capacity

Can Social Distancing Explain This?

- ▶ Scant evidence that social distancing significantly reduces mortality
 - ▶ US states' grades at social distancing (AL is rated D) are negatively correlated ($\rho = -0.4$) with projections of net deaths
 - ▶ Most likely explanation is that high mortality encourages social distancing
 - ▶ Makes it extremely difficult to prove that social distancing is more effective than sunlight, fresh air, antimalarial drugs, etc.
- ▶ Asian experience
 - ▶ Chinese-style social distancing imposes totalitarian controls (questioned or monitored via smart phones for locations throughout day)
 - ▶ Japan has low mortality but relies on high hygiene and face masks
 - ▶ India has low mortality despite social crowding and substandard hygiene
- ▶ European experience
 - ▶ Sweden, Netherlands, Switzerland and several other European countries have imposed very little social distancing but mortality rates are low

Hypotheses about Reopening Alabama



▶ Hypothesis I

- ▶ The core danger has passed
- ▶ In that case, reopen now!

▶ Hypothesis II

- ▶ We'll be ok for now
- ▶ Expect a harsh resurgence this winter akin to severe flu

▶ Hypothesis III

- ▶ Exponential growth immediately resumes
- ▶ We'll undo everything achieved

If Hypothesis II is Correct

- ▶ Evidence for hypothesis II (seasonality)
 - ▶ According to Chinese scientists, COVID highly sensitive temperature with favored range Fahrenheit 45-50
 - ▶ Nearly all the main outbreaks occurred in areas with temperatures near that range
 - ▶ Most US COVID deaths have occurred in states with temperatures near that range
- ▶ If hypothesis II is correct, then
 - ▶ Northern states are currently building up resistance and will reduce peak demands next winter
 - ▶ Florida, California and most of Texas ok since it is relatively warm year round
 - ▶ Alabama facing public health disaster this winter unless it resumes work immediately and greatly raises rates of mild infection

If Hypothesis III is Correct

- ▶ **Dr. Saag's revised view (April 11) supports Hypothesis III**
 - ▶ Rejects Hypothesis I: "I don't see how anything has changed from March 1. It's just that we've had a period where we were able to control transmission."
 - ▶ Rejects Hypothesis II: "But why would the virus suddenly be different, and why would people's susceptibility be any different on July 1 than it is on March 1."
 - ▶ No mention of evidence from countries without social distancing.
- ▶ **If so, crucial to quintuple COVID-19 infections in AL**
 - ▶ Take advantage of idle ICU beds now and ease peak loads later

Reopening With Caution



Protect the Most Vulnerable

- Self-segregate as needed
- Tap community networks

Wear face masks in public

- Respect for others
- Reminder to ourselves

Test widely

- Test for contagion
- Test for antibodies

In Conclusion

