The COVID-19 Crisis

Update June 3, 2020
CAVEAT!
I am not THAT kind of doctor.
I study rocks.
The Situation on April 1

COVID-19 Cases by US States/Territories, normalized by population

http://91-divoc.com/pages/covid-visualization/
The Situation on June 2

Confirmed COVID-19 Cases by US States/Territories, normalized by population

Data: Johns Hopkins CSSE; Updated: 06/03/2020
Interactive Visualization: https://91-divoc.com/
The Situation on June 2

Deaths from COVID-19 by US States/Territories, normalized by population

http://91-divoc.com/pages/covid-visualization/
The Situation on June 2

New COVID-19 Tests Performed per Day by US States/Territories

http://91-divoc.com/pages/covid-visualization/
The Situation on June 2

New Deaths from COVID-19 per Day by US States/Territories
Number of Intensive Care Unit (ICU) Beds Available and In Use at Arizona Hospitals
Share of hospital beds occupied by COVID-19 hospitalizations

Select states shown from first date with reported data, from March 17 to June 2, 2020

**Decreased in the past two weeks**

<table>
<thead>
<tr>
<th>State</th>
<th>Decrease</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.J.</td>
<td>15.6%</td>
</tr>
<tr>
<td>N.Y.</td>
<td>15.6%</td>
</tr>
<tr>
<td>Mass.</td>
<td>12.0%</td>
</tr>
<tr>
<td>Conn.</td>
<td>12.0%</td>
</tr>
<tr>
<td>D.C.</td>
<td>12.3%</td>
</tr>
<tr>
<td>Del.</td>
<td>12.3%</td>
</tr>
<tr>
<td>Ill.</td>
<td>10.8%</td>
</tr>
<tr>
<td>R.I.</td>
<td>10.6%</td>
</tr>
<tr>
<td>Mich.</td>
<td>9.1%</td>
</tr>
<tr>
<td>La.</td>
<td>4.6%</td>
</tr>
<tr>
<td>Md.</td>
<td>10.2%</td>
</tr>
<tr>
<td>Colo.</td>
<td>4.1%</td>
</tr>
<tr>
<td>Ind.</td>
<td>5.5%</td>
</tr>
<tr>
<td>Pa.</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

**Increased in the past two weeks**

<table>
<thead>
<tr>
<th>State</th>
<th>Increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ariz.</td>
<td>7.8%</td>
</tr>
<tr>
<td>Wash.</td>
<td>2.0%</td>
</tr>
<tr>
<td>N.C.</td>
<td>3.4%</td>
</tr>
<tr>
<td>S.D.</td>
<td>2.1%</td>
</tr>
<tr>
<td>Ark.</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

**Stable or less than 20 hospitalizations in the past two weeks**

<table>
<thead>
<tr>
<th>State</th>
<th>Stabilized</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.M.</td>
<td>5.5%</td>
</tr>
<tr>
<td>N.H.</td>
<td>4.3%</td>
</tr>
<tr>
<td>Ore.</td>
<td>4.7%</td>
</tr>
<tr>
<td>Iowa</td>
<td>4.5%</td>
</tr>
<tr>
<td>Utah</td>
<td>4.4%</td>
</tr>
<tr>
<td>Ga.</td>
<td>4.3%</td>
</tr>
<tr>
<td>Ohio</td>
<td>3.8%</td>
</tr>
<tr>
<td>Okla.</td>
<td>3.6%</td>
</tr>
<tr>
<td>W.Va.</td>
<td>1.7%</td>
</tr>
</tbody>
</table>

Visualization credit: Axios.com

Data: COVID Tracking Project, Harvard Global Health Institute; Note: Alabama, Florida, Hawaii, Idaho, Kansas, Nebraska, Tennessee and Puerto Rico have not reported hospitalizations consistently. Chart: Andrew Witherspoon/Axios
Where are we headed?
Presymptomatic SARS-CoV-2 Infections and Transmission in a Skilled Nursing Facility


CONCLUSIONS
Rapid and widespread transmission of SARS-CoV-2 was demonstrated in this skilled nursing facility. More than half of residents with positive test results were asymptomatic at the time of testing and most likely contributed to transmission. Infection-control strategies focused solely on symptomatic residents were not sufficient to prevent transmission after SARS-CoV-2 introduction into this facility.
AMID THE CORONAVIRUS CRISIS, A REGIMEN FOR REENTRY

Health-care workers have been on the job throughout the pandemic. What can they teach us about the safest way to lift a lockdown?

By Ahid Gokuan

May 15, 2020

Masks reduce airborne transmission

Infectious aerosol particles can be released during breathing and speaking by asymptomatic infected individuals. No masking maximizes exposure, whereas universal masking results in the least exposure.

Particle size (µm)

100 10 1 0.1

Infected, asymptomatic

Healthy

Maximum exposure

Minimum exposure

GRAPHIC: V. ALTOUNIAN/SCIENCE
SESE Community Conversation: 3 June 2020

Panelists:

Mini Wadhwa, Director
Ariel Anbar, Chair Colloquium Committee
Ramon Arrowsmith, Deputy Director
Chris Groppi, AD Undergrad Studies
Hilairy Hartnett, AD Grad Studies and Inclusive Community
Patrick Young, AD Community Outreach and Inclusive Community
News/Communications: Teaching

- We are teaching fully remotely for summer sessions A and C; in SESE, we are continuing fully remote teaching for summer session B

- Plans for Fall 2020: announcement expected soon (likely before June 15, 2021)
  - We can expect some degree of campus presence of undergraduate students
  - All classes are at a minimum expected to be in **ASU Sync mode** (synchronous teaching via Zoom, with some in-class component for limited numbers of students – allowing for easy transition to all remote teaching if that becomes necessary)
  - Classroom will be outfitted centrally through ASU with additional technology/tools to allow the above
    - Different levels being considered (cameras, microphones, video conferencing equipment)
News/Communications: Budget & Finances

- Enrollments are up significantly for this summer
- Enrollments are still increasing for the fall, but significant uncertainties for international and out-of-state students
- No decisions yet on any furloughs or merit raises
Remote work remains a priority for those able to do so

Direction from ASU Knowledge Enterprise on **re-opening of research operations only** (Research Intensification Plan)

- Research PIs create and submit a lab safety plan
- Approval from chair/director and dean (status on KE website)
- Notification to PI about their building being ready for occupancy, and a return to campus date
- Some PPE (2 cloth facemasks each) and cleaning supplies will be provided centrally from ASU (through ASU Procurement)
Summary of 2020 School of Earth and Space Exploration Return-to-Campus Survey

8 question survey to gather information and concerns about return to campus: https://forms.gle/Wng1YEGUaSUfjMPG6
May 27-June 2, 2020
254 responses
Responses by position in SESE:

- 59 – Administrative Staff
- 40 – Research Staff
- 54 – Faculty
- 16 – Postdoctoral Scholars
- 54 – Graduate Students
- 31 – Undergraduate Students
Does your work (study, research, tasks) in SESE allow for the possibility of attending/working remotely?

254 responses

Many Yes, some No responses indicate only needing to be on campus occasionally

Summary of No responses:
• Supporting SESE personnel and functions
• Interacting with laboratory equipment and samples
• Some classes may need to be in person (?
• Cleanroom access and spacecraft payload assembly
• Physically check compute systems
If campus were reopened under CDC guidelines, how comfortable would you feel returning to class/work?
Which of the following items concern you about returning to study/work on campus?

- Exposure to coronavirus on campus: 235 respondents
- Exposure to coronavirus going to or leaving campus: 95 respondents
- Leaving family members at home who need assistance: 30 respondents
- Decreased flexibility or productivity: 50 respondents
- Organizing childcare: 20 respondents
Which of the following would make you feel more comfortable when returning to study/work on campus?

- Hand sanitizer stations
- Closing communal spaces
- Limiting # of employees in certain spaces
- Frequent deep cleans
- Clean desk policy/partitions
- Staggered work/lunch
- Wearing masks in public
- Temperature checks before entering the building
Which of the following would make you feel more comfortable when returning to study/work on campus?

- Hand sanitizer stations
- Closing communal spaces
- Limiting # of employees in certain spaces
- Frequent deep cleans
- Clean desk policy/partitions
- Staggered work/lunch
- Wearing masks in public
- Temperature checks before entering the building
Which of the following would make you feel more comfortable when returning to study/work on campus?

• TESTING and Contact tracing
• Demonstrable decrease in new cases throughout the state of AZ
• Fewer people in the building. The fewer people I see, the safer it feels.
• Coordination with other departments in shared buildings to establish common protocols; ensuring compliance of students with building protocols
• Limiting class sizes with social distancing
• An economical parking option for those who usually take the light rail
• Signage encouraging social distancing
• Mandatory "stay at home" for any and all employees and students with cough, sneezing, congestion, or fever, even if they believe it to be "just allergies"
• Availability of working online to those who can, to minimize staff/student presence on campus
News/Communications: Summer Activities

- Community activities that are ongoing virtually through the summer:
  - SESE Community Conversations (first Wednesday of June, July, & Aug)
  - SESE Summer Colloquium (Wednesdays, 3:30-4:30 PM, weekly)
  - SESE Virtual Tea (Thursdays, 3:00-4:00 PM, weekly)
  - Open listening sessions with SESE leadership (weekly, 9-10 AM Tuesdays)
  - Office hours with the director (biweekly, 8-10 AM alternate Fridays)