<table>
<thead>
<tr>
<th>Country, Other</th>
<th>Total Cases</th>
<th>New Cases</th>
<th>Total Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>World</strong></td>
<td>124,302,948</td>
<td>+407,503</td>
<td>2,735,175</td>
</tr>
<tr>
<td><strong>Brazil</strong></td>
<td>12,051,619</td>
<td>+53,386</td>
<td>295,685</td>
</tr>
<tr>
<td><strong>USA</strong></td>
<td>30,576,962</td>
<td>+45,748</td>
<td>555,945</td>
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<tr>
<td><strong>India</strong></td>
<td>11,686,330</td>
<td>+40,611</td>
<td>160,200</td>
</tr>
<tr>
<td><strong>Turkey</strong></td>
<td>3,035,338</td>
<td>+22,216</td>
<td>30,178</td>
</tr>
<tr>
<td><strong>France</strong></td>
<td>4,298,395</td>
<td>+15,792</td>
<td>92,621</td>
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<tr>
<td><strong>Poland</strong></td>
<td>2,073,128</td>
<td>+14,577</td>
<td>49,365</td>
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<tr>
<td><strong>Italy</strong></td>
<td>3,400,851</td>
<td>+13,820</td>
<td>105,328</td>
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<tr>
<td><strong>Russia</strong></td>
<td>4,466,153</td>
<td>+9,284</td>
<td>95,391</td>
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<tr>
<td><strong>Jordan</strong></td>
<td>544,724</td>
<td>+9,269</td>
<td>5,985</td>
</tr>
<tr>
<td><strong>Hungary</strong></td>
<td>580,642</td>
<td>+9,046</td>
<td>18,451</td>
</tr>
<tr>
<td><strong>Germany</strong></td>
<td>2,678,262</td>
<td>+8,262</td>
<td>75,418</td>
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<tr>
<td><strong>Philippines</strong></td>
<td>671,786</td>
<td>+8,013</td>
<td>12,972</td>
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</tbody>
</table>

New reported cases by day across the world

Reported deaths by day across the world

March 23, 2021
<table>
<thead>
<tr>
<th>USA State</th>
<th>Total Cases</th>
<th>New Cases</th>
<th>Total Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA Total</td>
<td>30,636,534</td>
<td>+58,705</td>
<td>556,883</td>
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<tr>
<td>New York</td>
<td>1,849,648</td>
<td>+7,017</td>
<td>49,751</td>
</tr>
<tr>
<td>Florida</td>
<td>2,016,513</td>
<td>+5,302</td>
<td>32,840</td>
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<tr>
<td>New Jersey</td>
<td>873,840</td>
<td>+4,803</td>
<td>24,242</td>
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<tr>
<td>Texas</td>
<td>2,766,067</td>
<td>+4,713</td>
<td>47,753</td>
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<tr>
<td>Michigan</td>
<td>701,378</td>
<td>+4,540</td>
<td>16,932</td>
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<tr>
<td>Pennsylvania</td>
<td>997,245</td>
<td>+3,622</td>
<td>24,940</td>
</tr>
<tr>
<td>California</td>
<td>3,648,333</td>
<td>+2,537</td>
<td>57,565</td>
</tr>
<tr>
<td>Illinois</td>
<td>1,224,915</td>
<td>+1,832</td>
<td>23,391</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>617,695</td>
<td>+1,821</td>
<td>16,915</td>
</tr>
<tr>
<td>Georgia</td>
<td>1,048,173</td>
<td>+1,791</td>
<td>18,588</td>
</tr>
<tr>
<td>Ohio</td>
<td>1,002,822</td>
<td>+1,628</td>
<td>18,382</td>
</tr>
<tr>
<td>Tennessee</td>
<td>803,104</td>
<td>+1,459</td>
<td>11,747</td>
</tr>
</tbody>
</table>

New reported cases by day

New reported deaths by day
COVID-19 Vaccine Comparison

- Three vaccines currently authorized in the United States
- All three highly efficacious against severe disease, hospitalization, and death
- Also in the pipeline for U.S.:
  - Novavax - protein-based, 89% efficacy in UK study
  - Astra-Zeneca – adenovirus-based, ~70% effective
New reported doses administered by day

Source: Centers for Disease Control and Prevention | Note: Line shows a seven-day average. Data not updated on some weekends and holidays. Includes the Johnson & Johnson vaccine as of March 5.
SARS-CoV-2 Variants

• More easily transmitted variants to be expected
• Some decreased protection from prior immunity, antibody treatment, and vaccines for some variants
• These three present in U.S.
• Next generation vaccines being developed

COVID-19 Projections from Institute for Health Metrics and Evaluation, United States – March 24, 2021

- **596,201 COVID-19 deaths** by July 1, 2021 (an additional ~53,000)
- Decreasing rates driven by seasonality of COVID-19, social distancing, mask use, immunity from infection and vaccination

https://covid19.healthdata.org/united-states-of-america

**Daily deaths – August 2020 to July 2021**

Current ~1,060

July 1 ~114
When You’ve Been Fully Vaccinated . . .

• What’s Changed:
  ▪ You can gather indoors with fully vaccinated people without wearing a mask
  ▪ You can gather indoors with unvaccinated people from one other household without masks, unless any of those people or anyone they live with has an increased risk for severe illness from COVID-19
  ▪ If exposed to COVID-19, you do not need to stay away from others or get tested unless you have symptoms or live in a group setting

• What Hasn’t Changed:
  ▪ Take protective steps like wearing a mask, staying 6+ feet apart, and avoiding crowds and poorly ventilated spaces. Avoid medium or large-sized gatherings. Still need to follow guidance at your workplace.
  ▪ Delay unnecessary domestic and international travel

The Swiss Cheese Respiratory Virus Pandemic Defence

Recognising that no single intervention is perfect at preventing spread

Personal responsibilities

Hand hygiene & cohort etiquette
Avoid touching your face
If crowded, limit your time
Fast & sensitive testing & tracing
Ventilation, outdoors, air filtration
Govt messaging & financial support
Quarantine & isolation

Shared responsibilities

Physical distance
Stay home if sick

Each intervention (layer) has imperfections (holes).
Multiple layers improve success.

With thanks to Jody Lanard, Katherine Arden & The Uni of Qld
Based on the Swiss cheese model of accident causation, by James T Reason, 1990
Version 3.0
Update: 24 Oct 2020

Ian M Mackay
ViroligyDownunder.com
Considerations for Communities of Faith

- COVID-19 cases, hospitalizations, and deaths are extremely high across the U.S.
- To decrease chance of getting and spreading COVID-19, CDC recommends against gathering with people who do not live with you at this time
- Attending events and gatherings increases risk of getting and spreading COVID-19
- Scaling Up Operations:
  - Communicate with authorities to determine current mitigation levels
  - Provide protections for those at higher risk for severe illness from COVID-19. Offer options that limit exposure risk.
  - Encourage any organizations that share or use facilities to also follow these considerations
  - If your community provides social services in the facility as part of its mission, consult CDC’s information for schools and businesses and workplaces, as relevant

Stay informed, beware misinformation

• “We’re not just fighting an epidemic; we’re fighting an ‘infodemic.’ Fake news spreads faster and more easily than this virus and is just as dangerous.”

WHO Director General, Dr. Tedros Ghebreyesus – 15 February 2020

IF YOU SEE COVID-19 MISINFORMATION

1 DON'T ENGAGE
If you reply, share, or quote misinformation, you help to spread it.

2 BLOCK THEM
If someone you don't know is sharing misinformation, block them.

3 MESSAGE PRIVATELY
If someone you know is sharing misinformation, message them privately and ask them not to.

4 REPORT
Report misinformation to platforms or group admins asking them to remove that content.

5 INSTEAD, SPREAD OFFICIAL ADVICE
Drown out fake news by sharing official scientific advice, as well as posts promoting good causes in tough times.

www.counterhate.co.uk Twitter @ccdhate | Insta @counterhate | FB @ccdhate
Things you can do to support yourself

Physical distancing and social cohesion

- Take breaks from watching, reading, or listening to news stories, including social media. Hearing about the pandemic repeatedly can be upsetting.
- Take care of your body. Take deep breaths, stretch, or meditate. Try to eat healthy, well-balanced meals, exercise regularly, get plenty of sleep, and avoid alcohol and drugs.
- Make time to unwind. Do some activities you enjoy.
- Connect with others. Talk with people you trust about concerns and how you are feeling.
- Sharing the facts about COVID-19 and understanding the actual risk to yourself and people you care about can make an outbreak less stressful.
- **Call your healthcare provider if stress gets in way of daily activities for several days in a row.** Disaster Distress Helpline 1-800-985-5990 or text TalkWithUs to 66746.

Summary

• COVID-19 infections trending up again globally, plateaued in U.S.
• U.S. deaths declined to ~1,000 per day, projected nearly 600,000 by July
• Highly effective vaccination scaling up nationwide
• With infections rates still high and threat of variants, need to continue prevention measures
• Be smart!
• Take care!
• Thanks for your attention!!

@PeterKilmarx

“If you have not yet been vaccinated, your time will come soon. Be patient. Be vigilant. Stay strong. We are far from perfect, but we are heading in a good direction”

EXTRA SLIDES
• HR 133 “Consolidated Appropriations Act, 2021”
• Passed by Congress Dec 21, 2020; signed into law Dec 27, 2020
• **Department of Health and Human Services:** $73 billion to support public health including research, development, manufacturing, procurement, and distribution of vaccines and therapeutics; diagnostic testing and contact tracing
Goal One: Restore trust with the American people

Goal Two: Mount a safe, effective, equitable vaccination campaign

Goal Three: Mitigate spread through expanding masking, testing, data, treatment, workforce, and clear public health standards

Goal Four: Immediately expand emergency relief and exercise the Defense Production Act

Goal Five: Safely reopen schools, businesses, and travel while protecting workers

Goal Six: Protect those most at risk and advance equity, including across racial, ethnic and rural/urban lines

Goal Seven: Restore U.S. leadership globally, advance health security, and build better preparedness for future threats
Community Use of Cloth Masks to Control the Spread of SARS-CoV-2

- ~Half of new infections are transmitted by persons with no symptoms
- Cloth face masks beneficial for source control (to protect others) and, to a lesser extent, to protect wearer; 80%+ blockage of respiratory droplets
- CDC recommends non-valved, multilayer cloth masks or nonmedical disposable masks for community use; N95 masks reserved for health care workers; KN95 (China) and others authorized by FDA
- Mask use most important in indoor spaces and outdoors when physical distance of ≥6 feet cannot be maintained
- *Effective Feb 2, masks required on planes, buses, trains, etc. and in transportation hubs in the U.S.*

Community Use of Cloth Masks to Control the Spread of SARS-CoV-2

- 2 hair stylists with COVID-19 interacted ~15 minutes with clients, all wearing masks; none of 67 clients tested developed infection
- In study of 124 households, mask use by index patient and family contacts reduced secondary transmission by 79%
- In 7 studies, following directives for universal masking, new infections fell significantly; 3 studies demonstrated reductions in mortality
- Kansas executive order requiring masks subject to county authority: COVID-19 decreased 6% in 24 counties with mandates, increased 100% in 81 counties without mandates
- Increasing masking by 15% could prevent the need for lockdowns and reduce losses of $1 trillion, 5% of GDP

COVID-19 Hospitalization and Death by Race/Ethnicity – United States

<table>
<thead>
<tr>
<th>Rate ratios compared to White, Non-Hispanic persons</th>
<th>American Indian or Alaska Native, Non-Hispanic persons</th>
<th>Asian, Non-Hispanic persons</th>
<th>Black or African American, Non-Hispanic persons</th>
<th>Hispanic or Latino persons</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cases</strong>°1</td>
<td>1.7x</td>
<td>0.7x</td>
<td>1.1x</td>
<td>1.3x</td>
</tr>
<tr>
<td><strong>Hospitalization</strong>°2</td>
<td>3.7x</td>
<td>1.0x</td>
<td>2.9x</td>
<td>3.1x</td>
</tr>
<tr>
<td><strong>Death</strong>°3</td>
<td>2.4x</td>
<td>1.0x</td>
<td>1.9x</td>
<td>2.3x</td>
</tr>
</tbody>
</table>

Race and ethnicity are risk markers for other underlying conditions that affect health including socioeconomic status, access to health care, and exposure to the virus related to occupation, e.g., frontline, essential, and critical infrastructure workers.