



Update on the Delta Variant: *The War on Covid has Changed*

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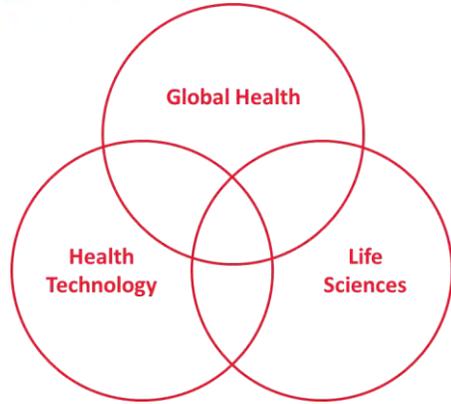
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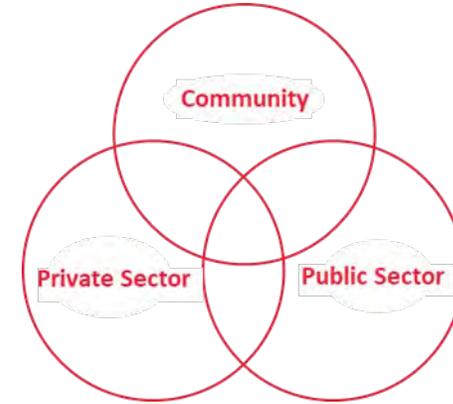
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The Center for Global Health Innovation is uniting leaders in Global Health, Health Technology, and Life Sciences to inspire and accelerate better health outcomes for everyone



CENTER FOR GLOBAL HEALTH INNOVATION

Inspiring and accelerating better health outcomes for everyone



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Harnesses enterprise capabilities, emerging technologies and public health expertise to anticipate, prevent, and solve global health crises arising from natural disasters and pandemics.



Situational Awareness

The national outlook is worsening, with a fourfold increase in new cases per day over the last month. Hospitalizations and deaths are also growing, but at far lower rates than cases.

Every state is reporting significant case growth, but the latest surge has been driven largely by severe outbreaks in a handful of states.

Delta variant has caused dramatic spikes in case in Missouri, Arkansas, Louisiana and Florida.

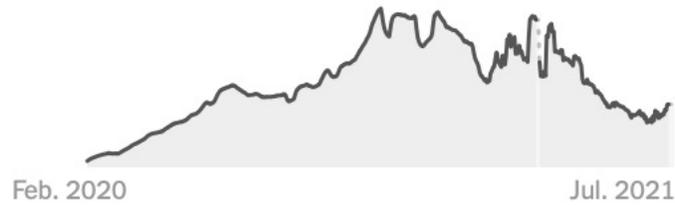
Many states and counties with low [vaccination](#) rates have been hit hard by the latest case surge.

Based on new data regarding the Delta variant, CDC this week changed its guidance regarding masks for the vaccinated.

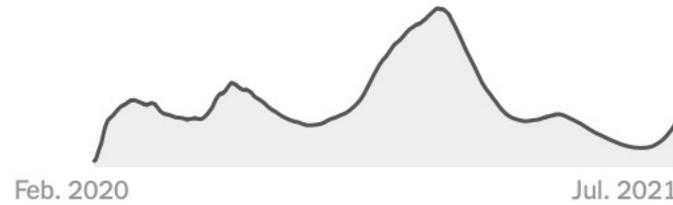


US Snapshot as of July 29

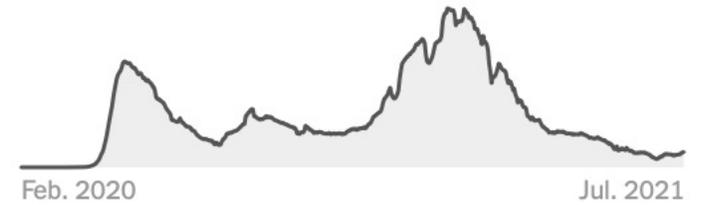
Tests



Hospitalized



Deaths



	AVG. ON JUL. 29	14-DAY CHANGE	TOTAL REPORTED
Cases	71,621	+151%	34,861,501
Tests	735,636	+41%	—
Hospitalized	38,573	+76%	—
Deaths	321	+15%	612,098

► [About this data](#)

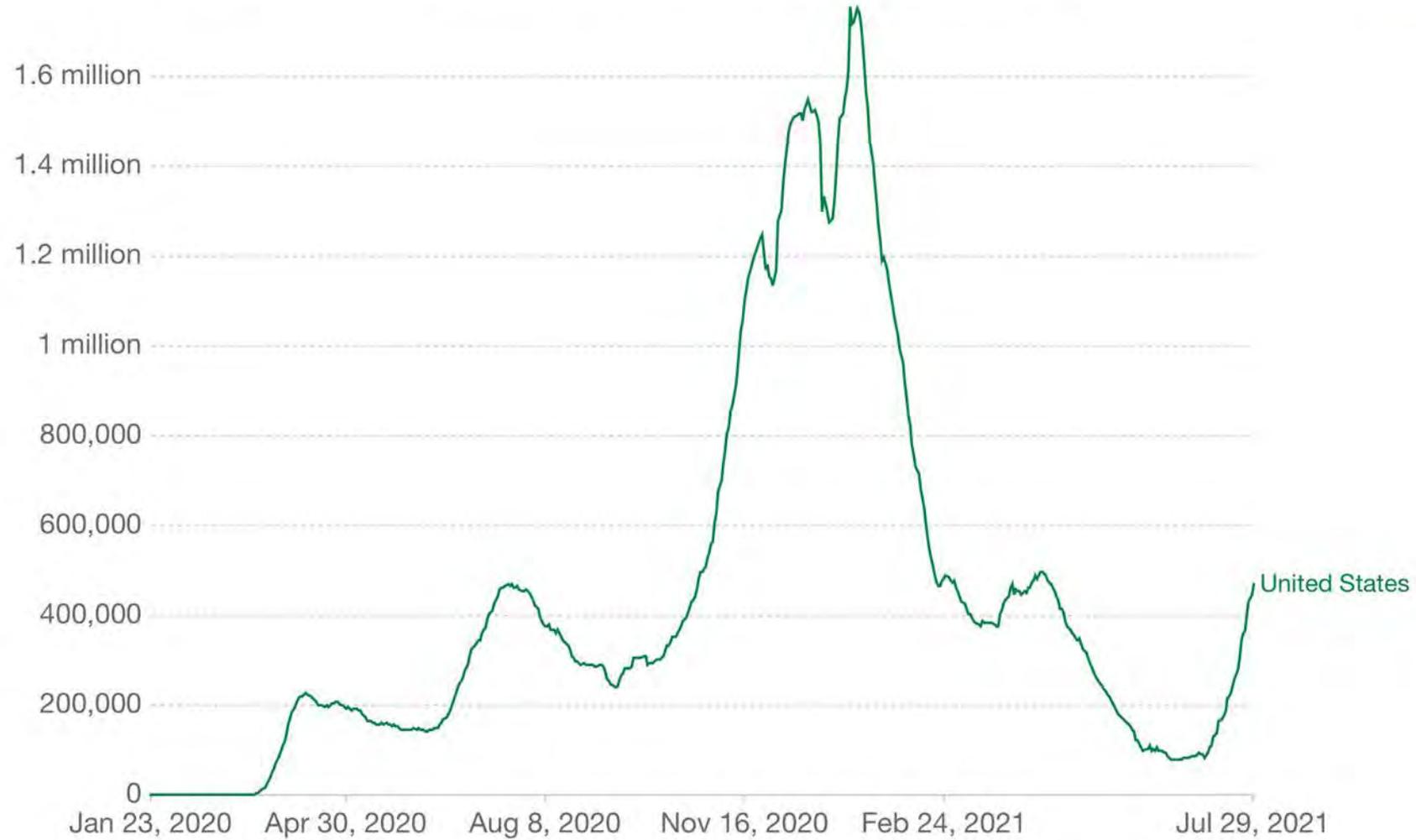
Source: NY Times

Where does Georgia stand?

	CASES DAILY AVG.	PER 100,000	14-DAY CHANGE	HOSPITALIZED DAILY AVG.	PER 100,000	14-DAY CHANGE	DEATHS DAILY AVG.	PER 100,000	FULLY VACCINATED
United States	71,621	22	+151% 	38,573	12	+76%	321.1	0.10	49%
Louisiana ›	3,807	82	+244% 	1,235	27	+186%	11.3	0.24	37%
Florida ›	14,209	66	+153% 	7,763	36	+130%	47.1	0.22	49%
Arkansas ›	1,749	58	+77% 	959	32	+59%	10.7	0.36	36%
Mississippi ›	1,428	48	+280% 	620	21	+88%	5.6	0.19	34%
Alabama ›	2,098	43	+215% 	1,032	21	+169%	6.9	0.14	34%
Missouri ›	2,493	41	+39% 	1,848	30	+38%	16.9	0.27	41%
Nevada ›	1,007	33	+42% 	1,077	35	+45%	14.7	0.48	44%
Oklahoma ›	1,268	32	+138% 	678	17	+87%	4.4	0.11	40%
Alaska ›	218	30	+176% 	95	13	+97%	0.6	0.08	45%
Texas ›	7,777	27	+208% 	4,995	17	+84%	34.1	0.12	44%
Georgia ›	2,843	27	+222% 	1,673	16	+101%	8.3	0.08	39%
Kansas ›	774	27	+207% 	403	14	+68%	6.9	0.24	45%

Weekly confirmed COVID-19 cases

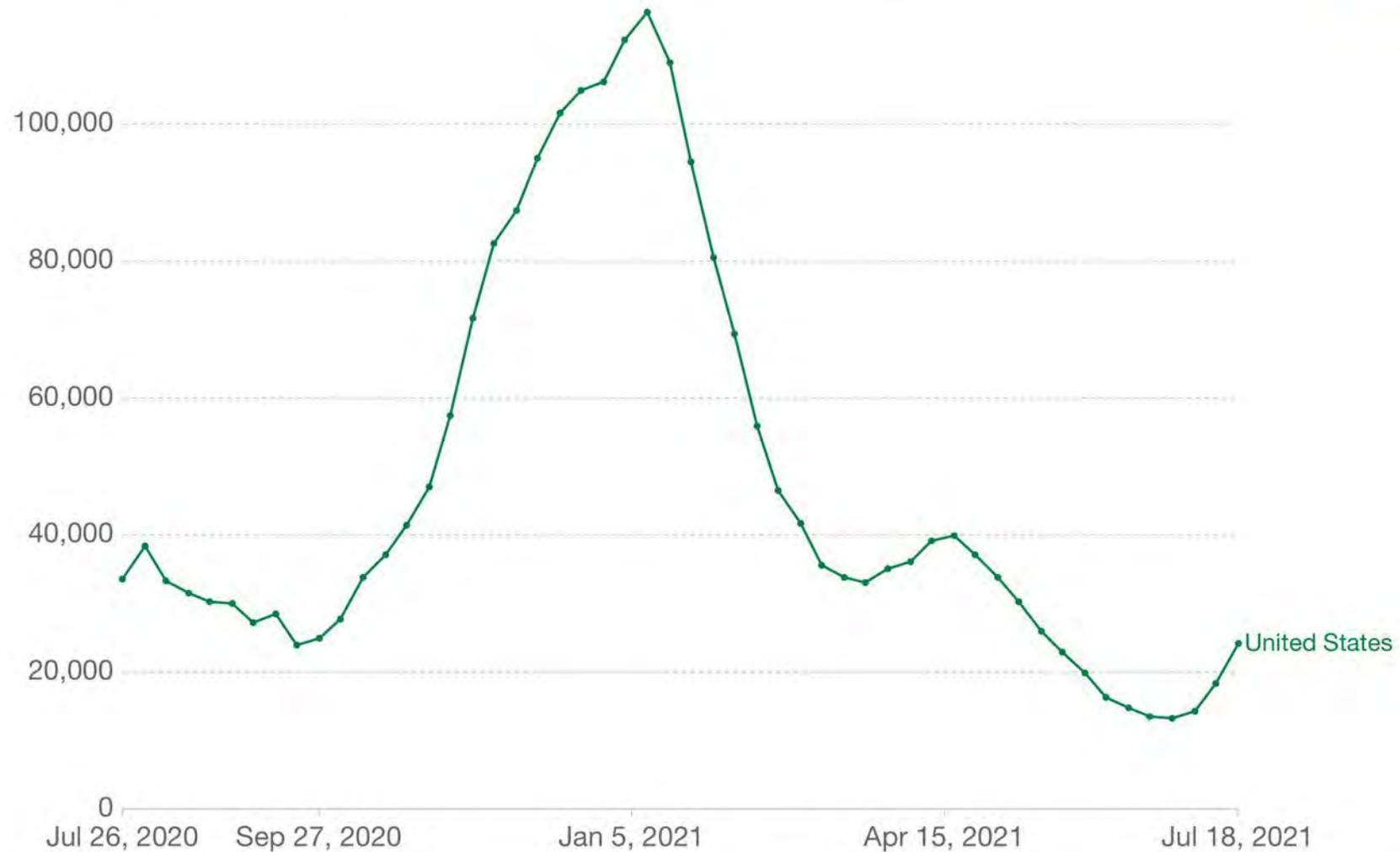
Weekly confirmed cases refer to the cumulative number of confirmed cases over the previous week.



Source: Johns Hopkins University CSSE COVID-19 Data

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Weekly new hospital admissions for COVID-19

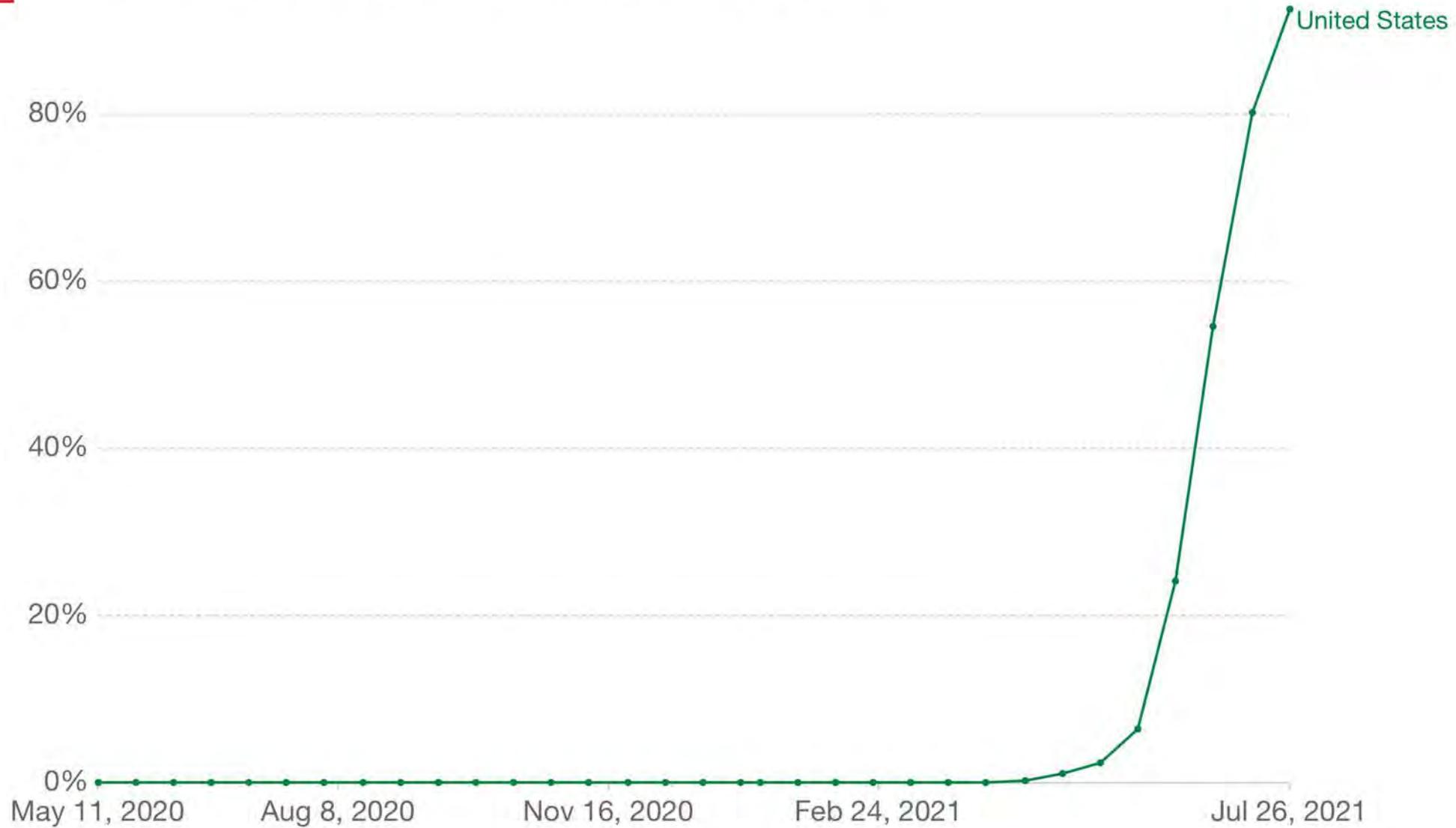


Source: Official data collated by Our World in Data

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Share of SARS-CoV-2 sequences that are the delta variant

Shown is the delta variant's share of total analyzed sequences in the last two weeks. This share may not reflect the complete breakdown of cases, since only a fraction of all cases are sequenced.



Moving-average case fatality rate of COVID-19

The case fatality rate (CFR) is the ratio between confirmed deaths and confirmed cases. Our moving-average CFR is calculated as the ratio between the 7-day-average of the number of deaths and the 7-day-average of the number of cases 10 days earlier.

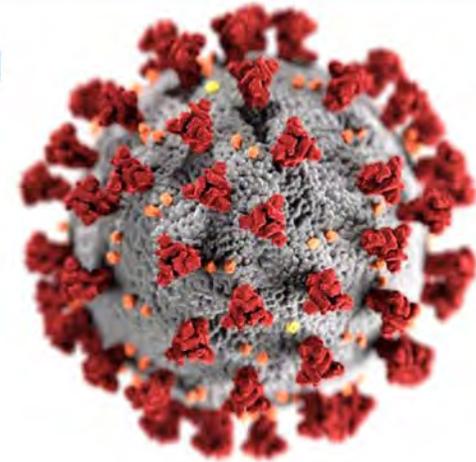


Source: Johns Hopkins University CSSE COVID-19 Data

Delta variant

Improving communications around vaccine breakthrough and vaccine effectiveness

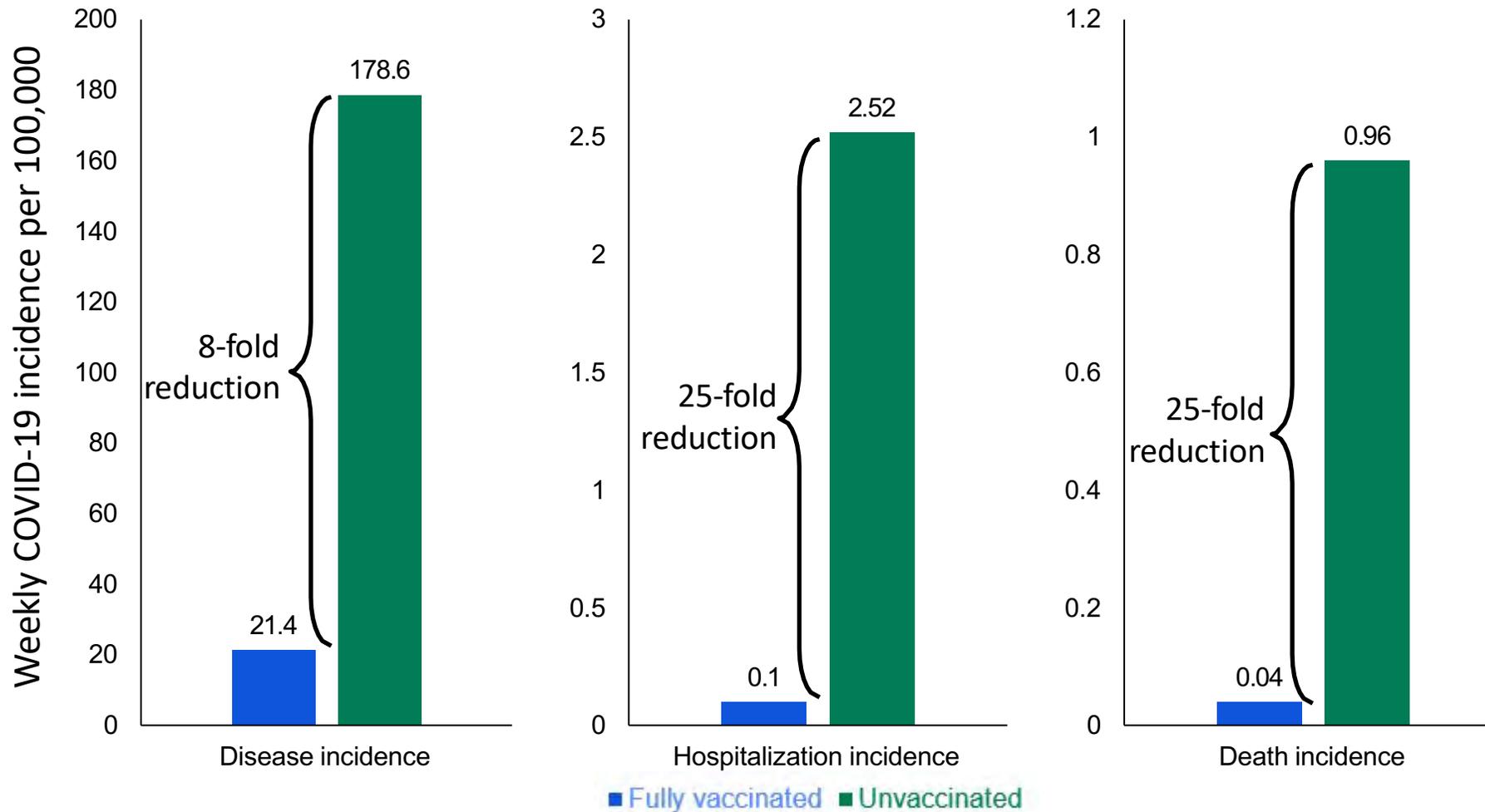
Meredith McMorrow, MD, MPH
Co-lead, Vaccine Effectiveness Team
Representing EPI Task Force
July 29, 2021



cdc.gov/coronavirus



Greater risk of disease, hospitalization and death among unvaccinated vs. vaccinated people: National estimates

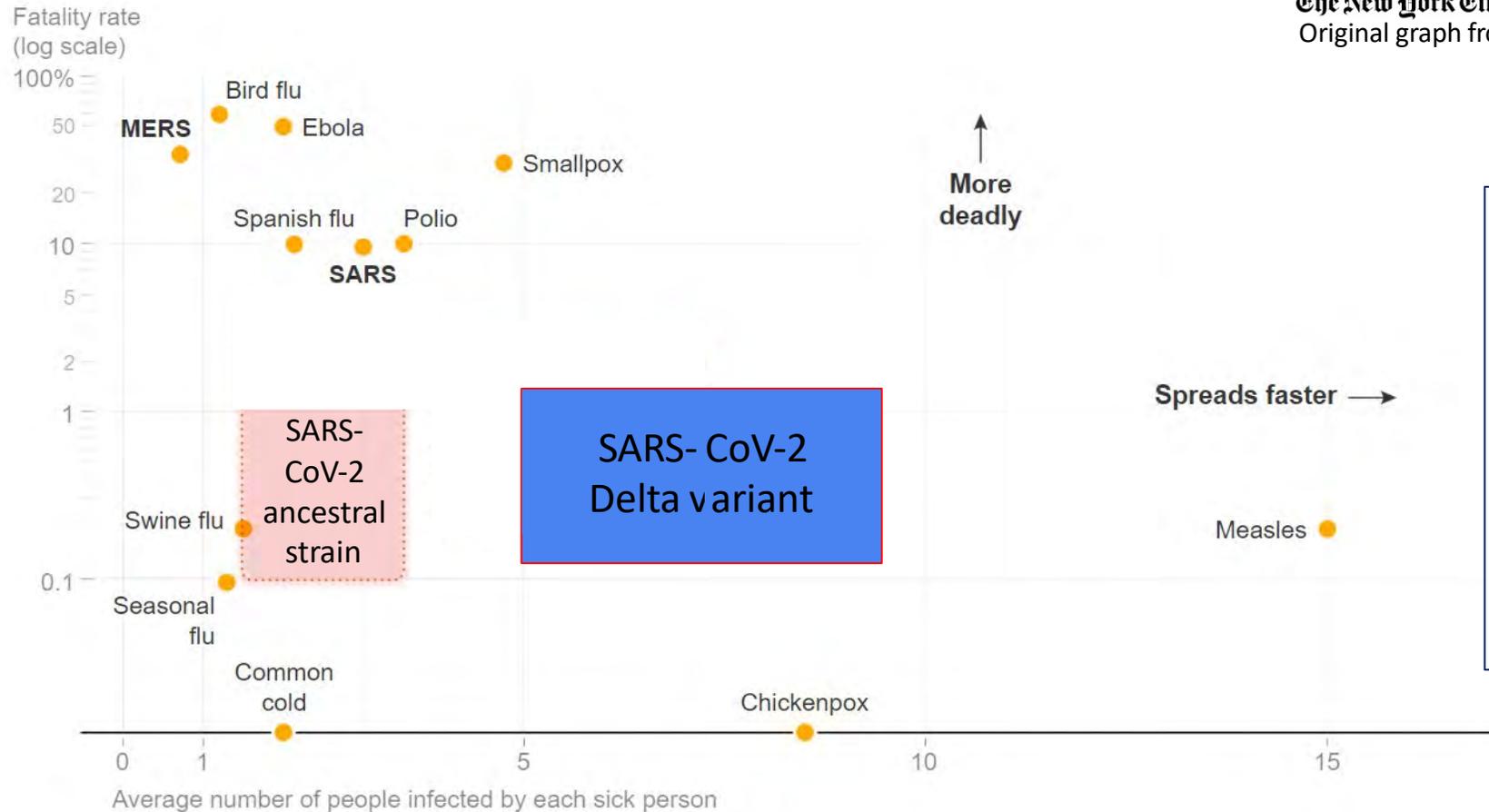


At current incidence, 35,000 symptomatic infections per week among 162 million vaccinated Americans

Data from COVID Tracker as of July 24, 2021. Average incidence 100 cases per 100,000 persons per week. Vaccine effectiveness against symptomatic illness = 88% (Lopez Bernal et al. [NEJM 2021](#)), where risk is $[1 - VE]$ or 12%. Vaccine effectiveness hospitalization (or death) = 96% (Stowe et al. [PHE preprint](#)), where risk is $[1 - VE]$ or 4%. Rate in unvaccinated = Community rate/ $((1 - \text{fully vaccinated coverage}) + (1 - VE) * \text{fully vaccinated coverage})$. Rate in fully vaccinated = $(1 - VE) * \text{Rate in unvaccinated}$. Fully vaccinated coverage proportions were from COVID Data Tracker as of July 24, 2021 (50% for US).

Transmission of Delta variant vs. ancestral strain and other infectious diseases

The New York Times
Original graph from 2/28/2020.



Delta variant is **more** transmissible than:

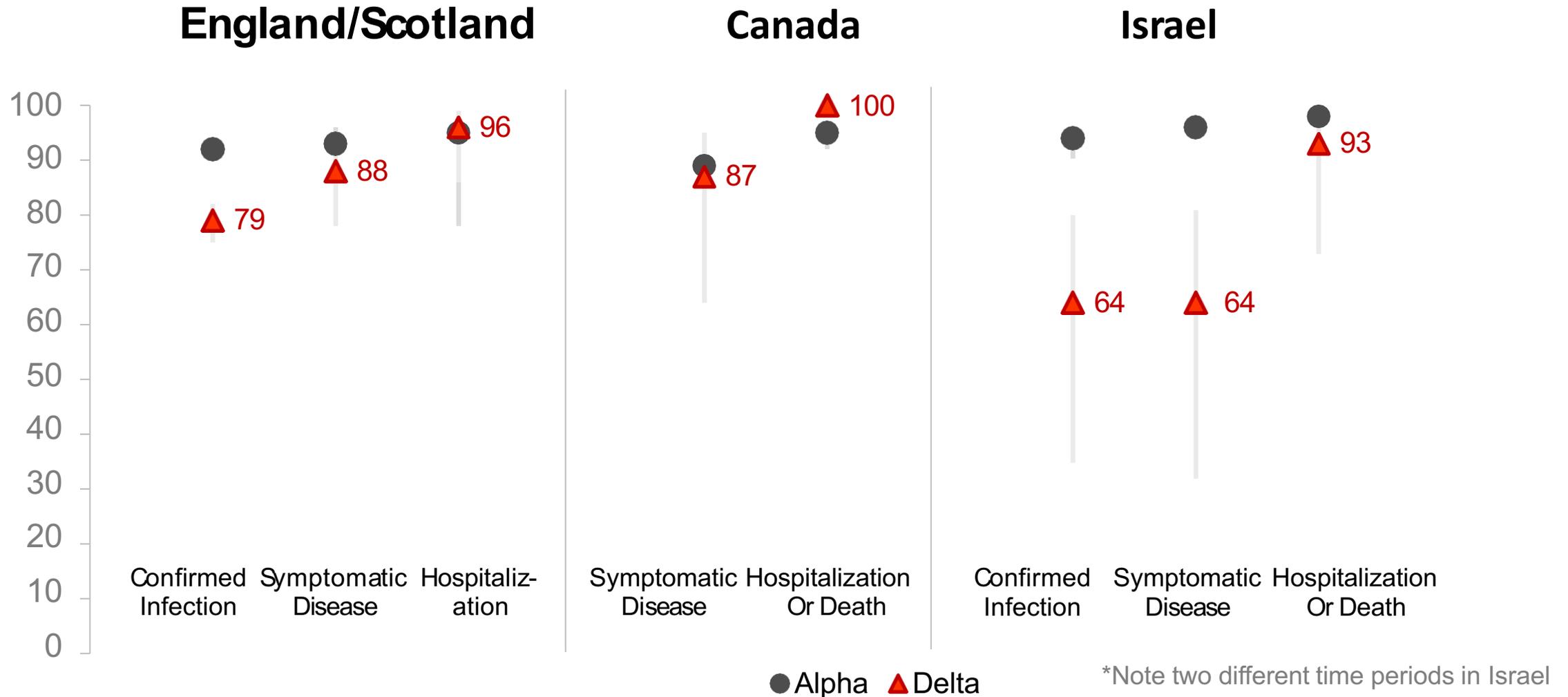
- MERS & SARS
- Ebola
- Common cold
- Seasonal flu & 1918 (“Spanish”) flu
- Smallpox

Delta variant is **as** transmissible as:

- Chicken Pox

Note: Average case-fatality rates and transmission numbers are shown. Estimates of case-fatality rates can vary, and numbers for the new coronavirus are preliminary estimates.

Pfizer 2-Dose Vaccine Effectiveness for Alpha vs. Delta



Sheikh et al. Lancet (2021): [https://doi.org/10.1016/S0140-6736\(21\)01358-1](https://doi.org/10.1016/S0140-6736(21)01358-1); Lopez Bernal et al. medRxiv preprint: <https://doi.org/10.1101/2021.05.22.21257658>; Stowe et al. PHE preprint: https://khub.net/web/phe-national/public-library/-/document_library/v2WsRK3ZIEig/view/479607266; Nasreen et al. medRxiv preprint: <https://doi.org/10.1101/2021.06.28.21259420>; <https://www.gov.il/en/departments/news/06072021-04>

Summary

- The war against Covid has changed
- Delta is different from previous strains
 - Highly contagious – 2-3+X fold more transmissible
 - Potentially more severe
 - **Breakthrough infections in those fully vaccinated may be as transmissible as unvaccinated cases**
- Vaccines prevent >90% of severe disease, **BUT** are less effective at preventing infection or transmission
 - Risk of severe disease or death reduced 10-fold or greater in vaccinated
 - Risk of infection reduced 3-fold in vaccinated
 - Therefore, **more breakthrough and more community spread despite vaccination**
- **Given higher transmissibility and current vaccine coverage, universal masking is essential to reduce transmission of the Delta variant**