

1-14-2021

Covid-19 Clinical Update 1/14/2021

George Washington University

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COVID-19 UPDATE

HANA AKSELROD, MD, MPH

GW DIVISION OF INFECTIOUS DISEASES

01/14/2021

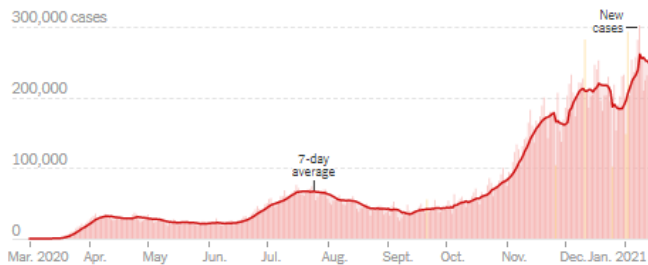
1. EPIDEMIOLOGY

2. VARIANTS & VACCINES

3. GW UPDATES



New reported cases by day



These are days with a reporting anomaly. Read more [here](#).

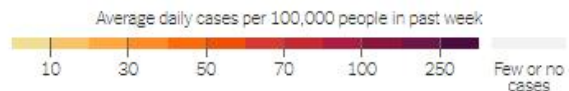
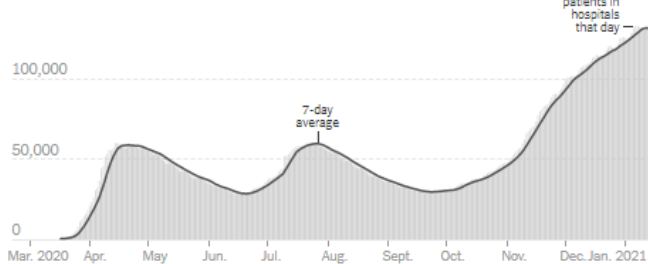
Note: The seven-day average is the average of a day and the previous six days of data.

New reported deaths by day

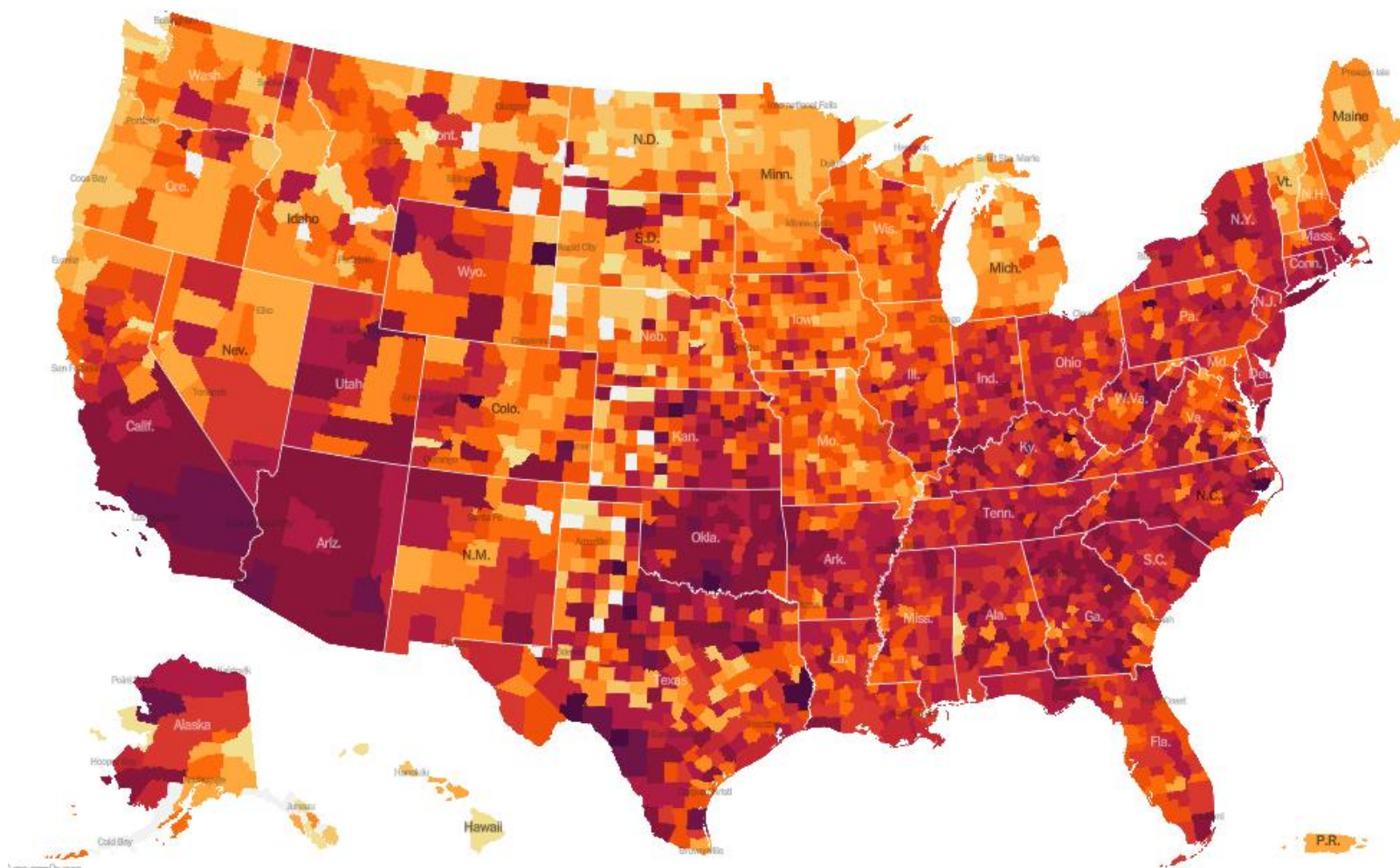


These are days with a reporting anomaly. Read more [here](#).

Hospitalized Covid-19 patients by day

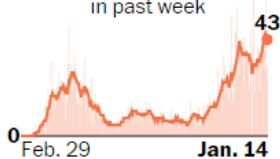


Double-click to zoom into the map.



District of Columbia

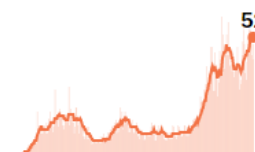
+17%
rise in new cases
in past week



4,795 reported
per 100k

Maryland

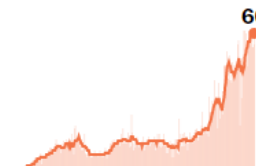
+14%



5,294 reported
per 100k

Virginia

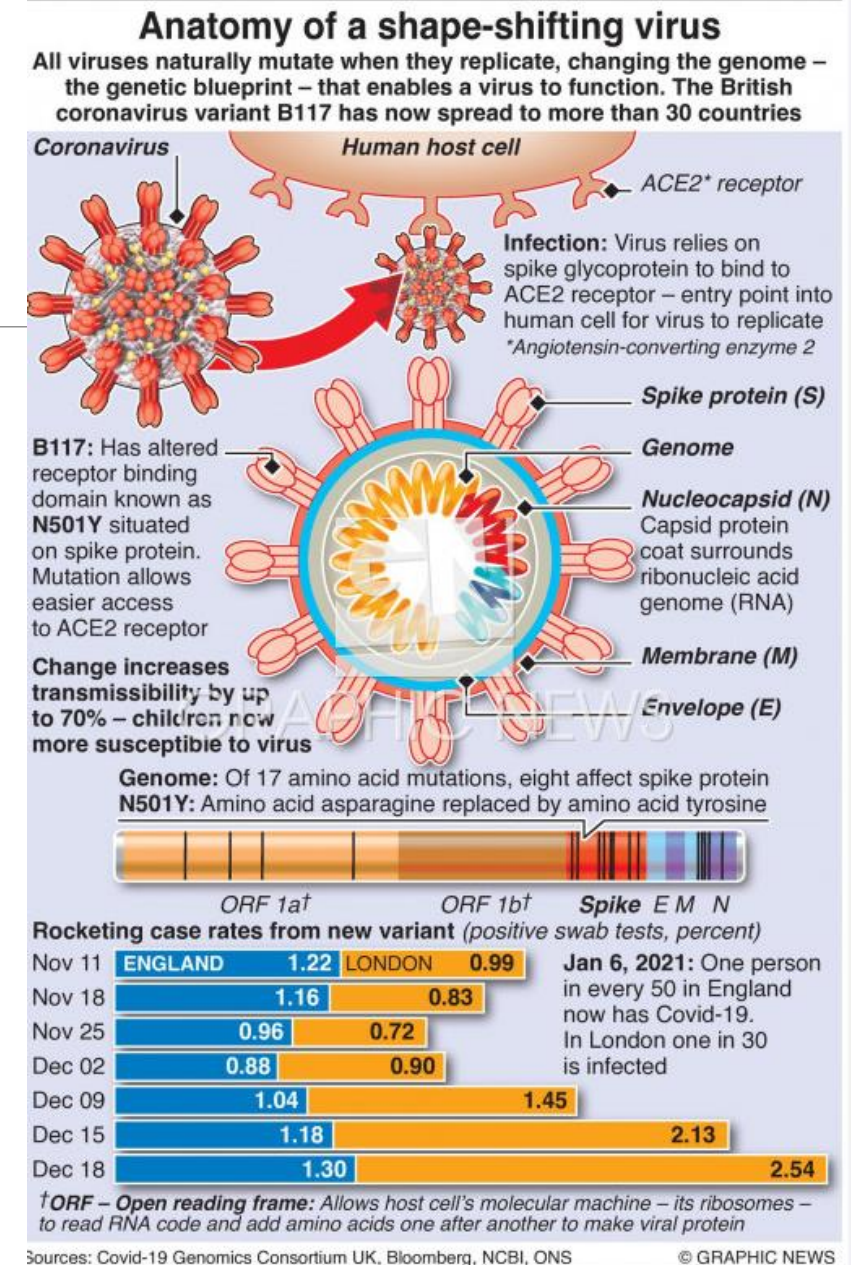
+6%



4,966 reported
per 100k

SARS-CoV-2 Variants

- “UK variant” (B.1.1.7 lineage)
 - Multiple mutations including N501Y substitution in spike RBD
 - 50-75% more transmissible; more transmissible in children
 - $R_0 > 1$ under existing control measures, becomes dominant over time
 - No indication of more severe disease but will overload health systems
 - Likely circulating in US for some time but NOT dominant here... yet
- “South Africa variant” (B.1.351 lineage)
 - Emerged independently of UK, contains N501 and E484 mutations
- “Brazil variant” (B.1.1.28 lineage)
 - E484 mutation in spike protein may play role in escape from post-infection antibodies and licensed mAb therapeutics
- CDC:
 - <https://www.cdc.gov/coronavirus/2019-ncov/more/science-and-research/scientific-brief-emerging-variants.html>
 - <https://www.nytimes.com/2021/01/11/opinion/rochelle-walensky-cdc-director.html>



GW Updates: Treatment



- Remdesivir:
 - Hospitalized patients
 - Requiring O2
 - Not on mechanical ventilation
- Dexamethasone:
 - Hospitalized patients
 - Requiring O2
- Monoclonal antibody (bamlanivimab):
 - Ambulatory patients able to come to ED
 - Age ≥ 65 , or ≥ 55 with comorbidities (HTN, CAD, COPD)
 - Check EUA criteria, contact ED attending/resident
 - <https://www.fda.gov/media/143603/download>

DISEASE SEVERITY

PANEL'S RECOMMENDATIONS

Not Hospitalized,
Mild to Moderate COVID-19

There are insufficient data to recommend either for or against any specific antiviral or antibody therapy. SARS-CoV-2 neutralizing antibodies (**bamlanivimab** or **casirivimab plus imdevimab**) are available through EUAs for outpatients who are at high risk of disease progression.^a These EUAs do not authorize use in hospitalized patients.

Dexamethasone should not be used (**AIII**).

Hospitalized^a But Does Not Require Supplemental Oxygen

Dexamethasone should not be used (**AIIa**).

There are insufficient data to recommend either for or against the routine use of **remdesivir**. For patients at high risk of disease progression, the use of remdesivir may be appropriate.

Hospitalized^a and Requires Supplemental Oxygen
(But Does Not Require Oxygen Delivery Through a High-Flow Device, Noninvasive Ventilation, Invasive Mechanical Ventilation, or ECMO)

Use one of the following options:

- **Remdesivir**^{b,c} (e.g., for patients who require minimal supplemental oxygen) (**BIIa**)
- **Dexamethasone**^d plus **remdesivir**^{b,c} (e.g., for patients who require increasing amounts of supplemental oxygen) (**BIII**)^{e,f}
- **Dexamethasone**^d (e.g., when combination therapy with remdesivir cannot be used or is not available) (**BI**)

Hospitalized^a and Requires Oxygen Delivery Through a High-Flow Device or Noninvasive Ventilation

Use one of the following options:

- **Dexamethasone**^{d,f} (**AI**)
- **Dexamethasone**^d plus **remdesivir**^{b,c} (**BIII**)^{e,f}

Hospitalized^a and Requires Invasive Mechanical Ventilation or ECMO

Dexamethasone^d (**AI**)^g

GW Updates: Treatment



IMAB ANTIBODY INFUSION TRIAL

- Anti-GM-CSF antibody infusion
- Hospitalized patients w/ severe COVID-19
- Bilateral lung involvement by imaging
- Requiring O2 support including HFNC, NIPPV, or mechanical ventilation (only if <120 hours)
- Not on ECMO

ATEA ANTIVIRAL TRIAL

- Inhibitor of RNA-dependent RNA polymerase
- Hospitalized patients w/ moderate COVID-19
- Cannot have lobar consolidation on imaging
- Requiring O2 but not >2 L/min or RR>30
- Not requiring HFNC, NIPPV, mechanical ventilation or ECMO

Contact ID Team/Coordinator