COVID-19

Lindsay Weaver MD
Chief Medical Officer

April 15, 2021

Indiana State Department of Health

Sign up for
Indiana Health Alert Network

https://ihan-in.org/

Indiana State
Department of Health

Where We Started in Indiana

- March 6th – 1st Case
- March 16th -1st Death
- November 30th - 3460 Hospitalizations

What We Were Dealing With

- Unknowns
  - Presentation
  - Treatment
  - Testing
  - PPE
  - Risk to clinicians
  - Risk to our families

Why we shined…

- Part of our job to make decisions with little information
- Always inherent risk with our profession
- Figure it out attitude
- Teamwork
- Communication
- Desire to learn

Impact of the COVID-19 Pandemic on Emergency Department Visits — United States, January 1, 2019–May 30, 2020

- NSSP found that emergency department (ED) visits declined from a mean of 2.1 million per week (March 31–April 27, 2019) to 1.2 million (March 29–April 25, 2020)
- Steepest decreases in persons aged ≤14 years, females, and the Northeast.
- The proportion of infectious disease–related visits was four times higher during the early pandemic period.

Emergency Department Visits for COVID-19 by Race and Ethnicity — 13 States, October–December 2020

- Among ED visits from 13 states during October 1–December 31, 2020, Hispanic persons were more likely to seek ED care for COVID-19 than were White persons overall (crude RR = 1.77) and for each age group examined (RR range = 1.91–2.92)
- AI/AN persons were more likely to seek ED care for COVID-19 than were White persons, both overall (crude RR = 1.71) and among each age group (RR range = 1.22–3.07) (Table 2).
- Overall, Black persons aged ≤74 were more likely to seek ED care for COVID-19 compared with White persons (crude RR = 1.39) (Table 1), (age-stratified RR range = 1.54–2.19) (Table 2), but no differences between Black persons and White persons aged ≥75 years were observed.
- Fewer A/PI persons sought ED care for COVID-19 than did White persons overall (crude RR = 0.70) (Table 1) and among age groups ≤44 years and ≥75 years (RR range = 0.68–0.82).

Smith AR, DeVies J, Caruso E, et al. Emergency Department Visits for COVID-19 by Race and Ethnicity — 13 States, October–December 2020. MMWR Morb Mortal Wkly Rep. ePub: 12 April 2021. DOI: http://dx.doi.org/10.15585/mmwr.mm7015e3external icon.

TABLE 1. Emergency department (ED) visits per 100,000 persons, by race/ethnicity — 13 states,* October 1–December 31, 2020

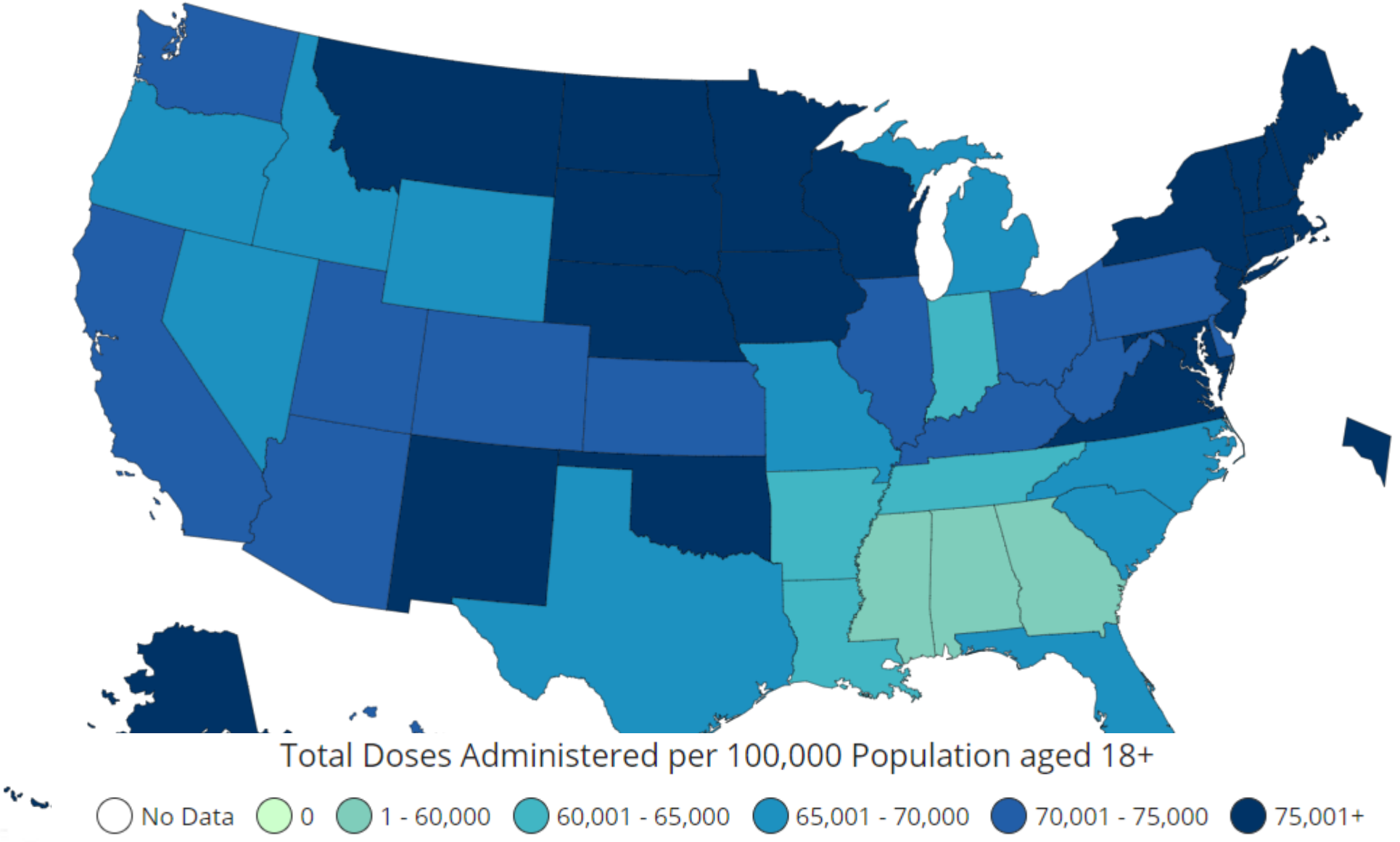
Return

Racial/Ethnic groups	No. of all ED visits	No. (%) of COVID-19 ED visits†	No. of COVID-19 ED visits per 100,000 population§	RR (95% CI)
All	**5,794,050**	**282,220 (4.9)**	**380**	—
Hispanic	759,382	59,204 (7.8)	588	1.77 (1.75–1.78)
AI/AN, non-Hispanic	55,128	3,739 (6.8)	570	1.71 (1.66–1.77)
A/PI, non-Hispanic	125,043	10,788 (8.6)	234	0.70 (0.69–0.72)
Black, non-Hispanic	1,159,086	42,277 (3.6)	463	1.39 (1.38–1.40)
White, non-Hispanic	3,695,411	166,212 (4.5)	333	Referent

WHERE WE ARE

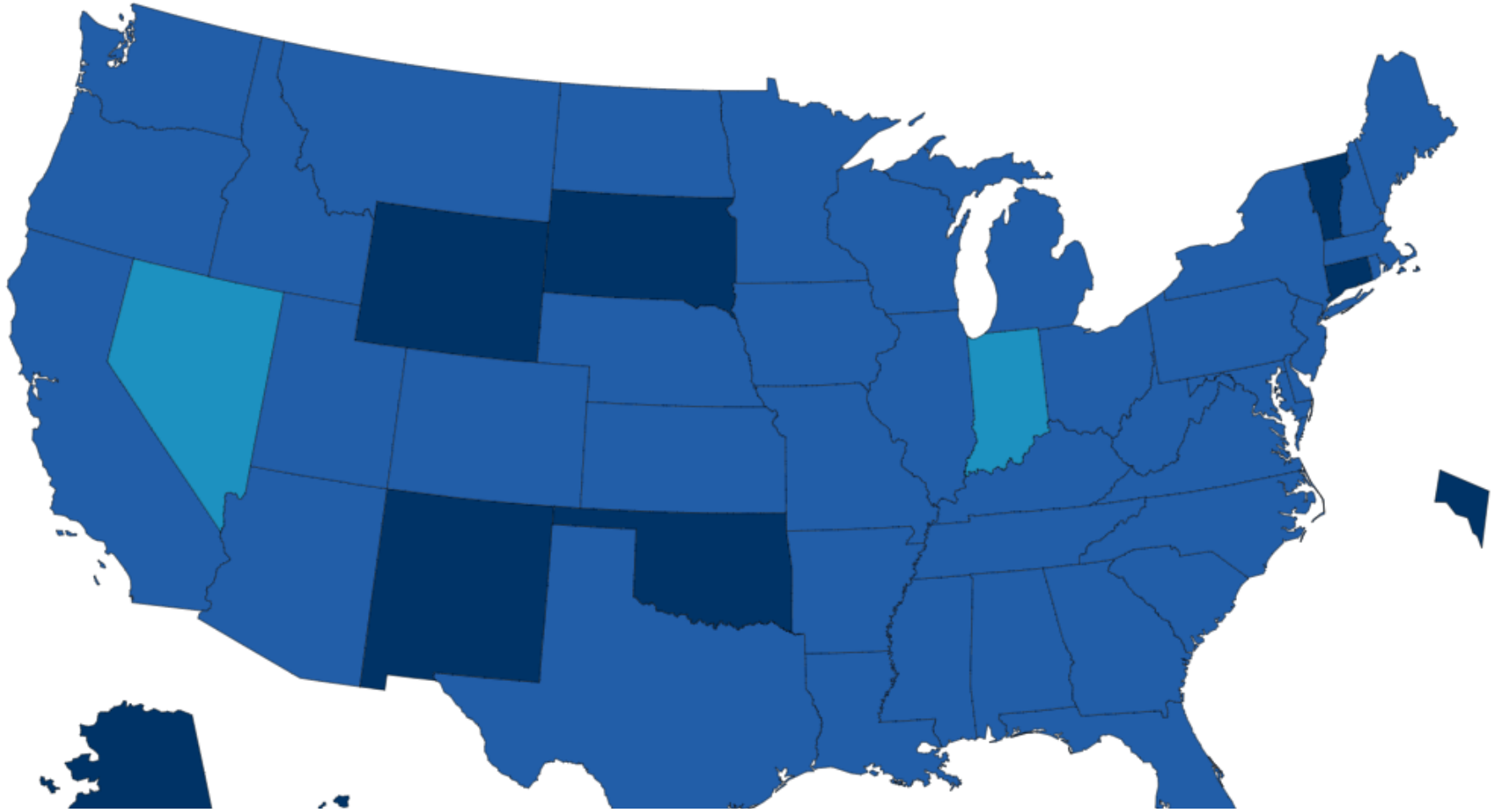
Vaccines and Variants

Total Doses Administered Reported to the CDC by State/Territory and for Select Federal Entities per 100,000 of the Population 18 Years of Age and Older



https://covid.cdc.gov/covid-data-tracker/#vaccinations

Total Doses Delivered Reported to the CDC by State/Territory and for Select Federal Entities per 100,000 of the Population 18 Years of Age and Older



Total Doses Delivered per 100,000 Population aged 18+

No Data | 0 | 1 - 75,000 | 75,001 - 80,000 | 80,001 - 85,000 | 85,001 - 100,000 | 100,001+

https://covid.cdc.gov/covid-data-tracker/#vaccinations

Zip Code Level Data of Percent Fully Vaccinated

- April 12, 2021

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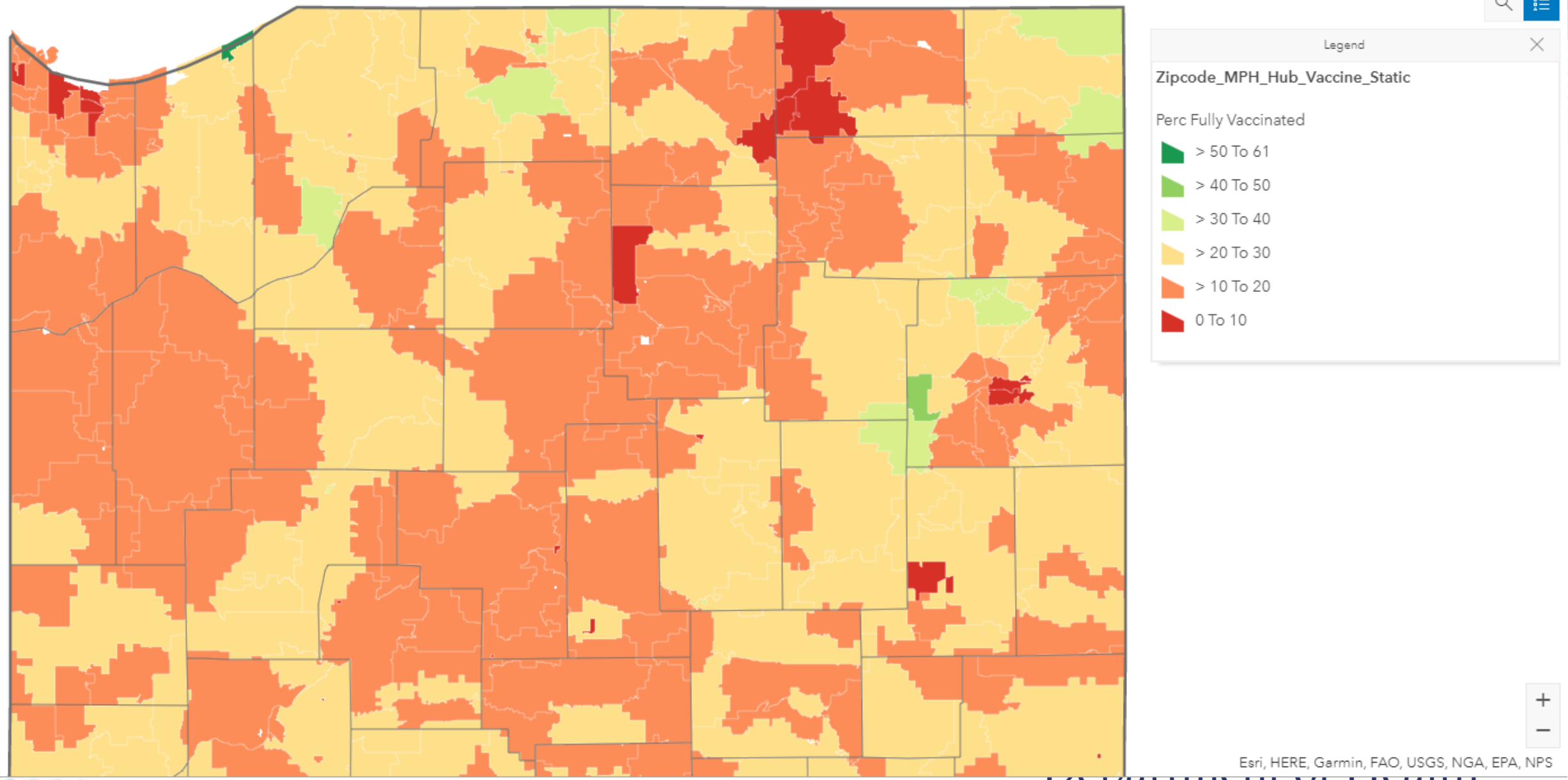

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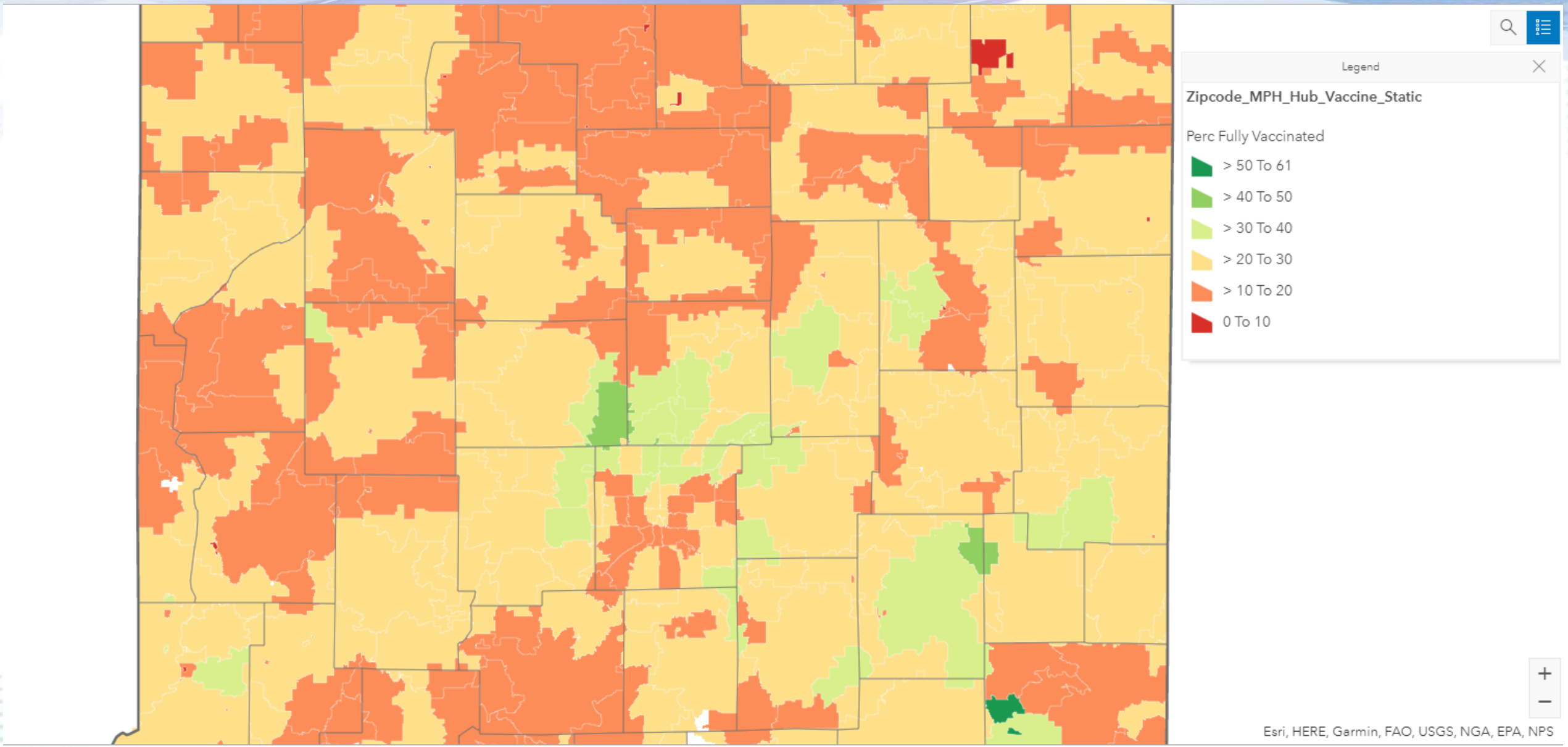
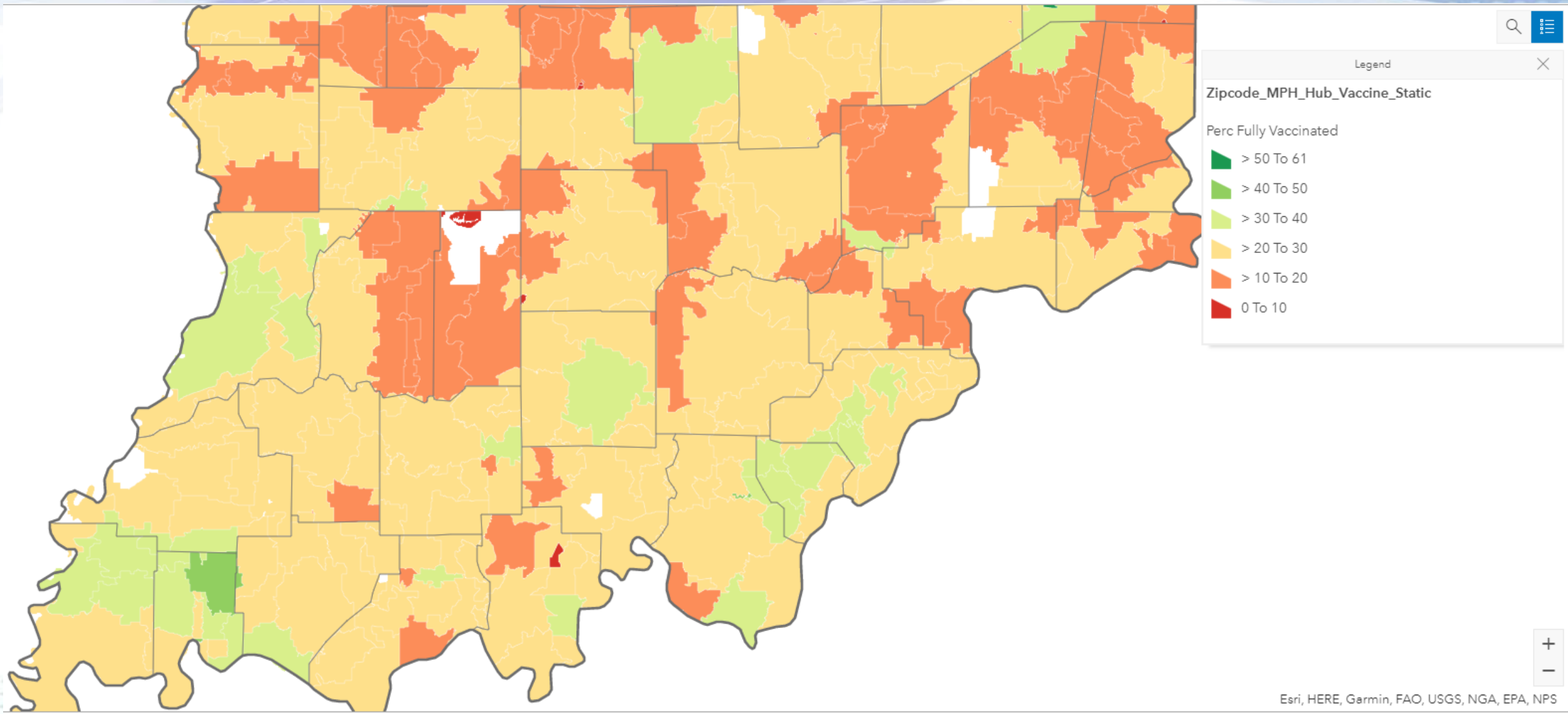

Legend
Zipcode_MPH_Hub_Vaccine_Static
Perc Fully Vaccinated
> 50 To 61
> 40 To 50
> 30 To 40
> 20 To 30
> 10 To 20
0 To 10
Esri, HERE, Garmin, FAO, USGS, NGA, EPA, NPS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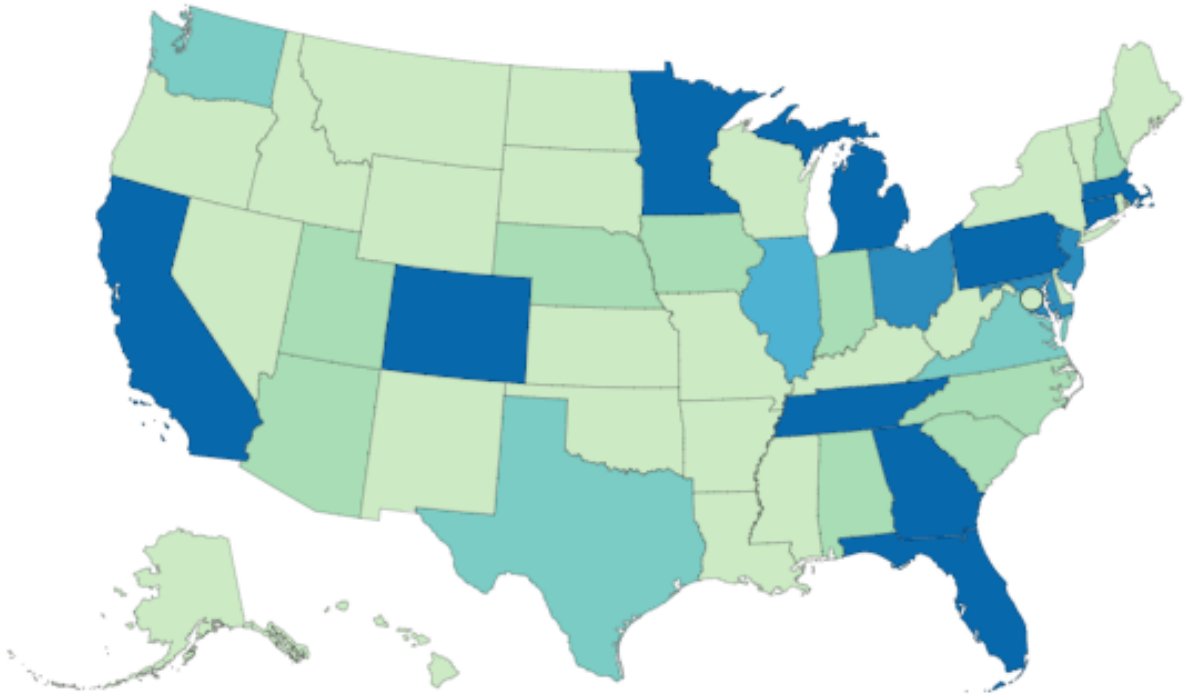
Cases of Variants of Concern in the United States*†



Territories AS GU MH FM MP PW PR VI

Number of Cases

- 0 to 0
- 1 to 150
- 151 to 300
- 301 to 450
- 451 to 600
- 601 to 750
- 751+

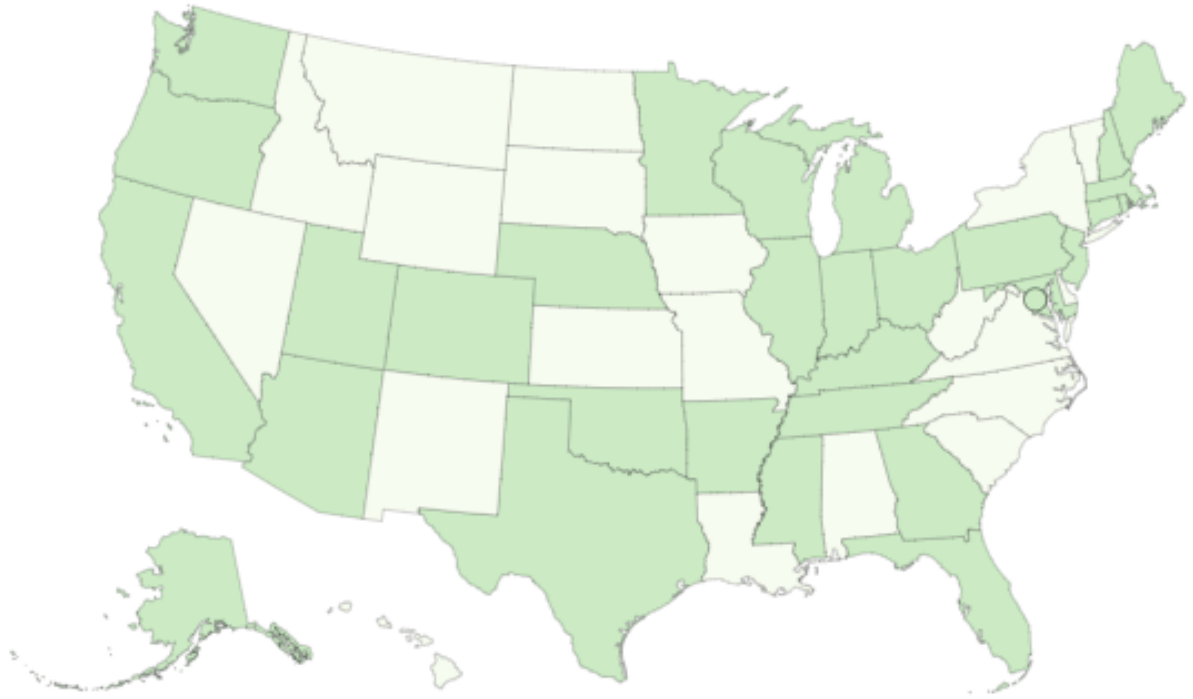
Filters

Variant B.1.1.7

B 117

- This variant has a mutation in the receptor binding domain (RBD) of the spike protein at position 501, where the amino acid asparagine (N) has been replaced with tyrosine (Y). This variant is estimated to have first emerged in the UK during September 2020.
- Since December 20, 2020, several countries have reported cases of the B.1.1.7 lineage, including the United States.
- This variant is associated with increased transmissibility (i.e., more efficient and rapid transmission).
- In January 2021, scientists from UK reported evidence[1] that suggests the B.1.1.7 variant may be associated with an increased risk of death compared with other variants.
- Early reports found no evidence to suggest that the variant has any impact on the severity of disease or vaccine efficacy.[2],[3],[4]

Cases of Variants of Concern in the United States*†



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Filters

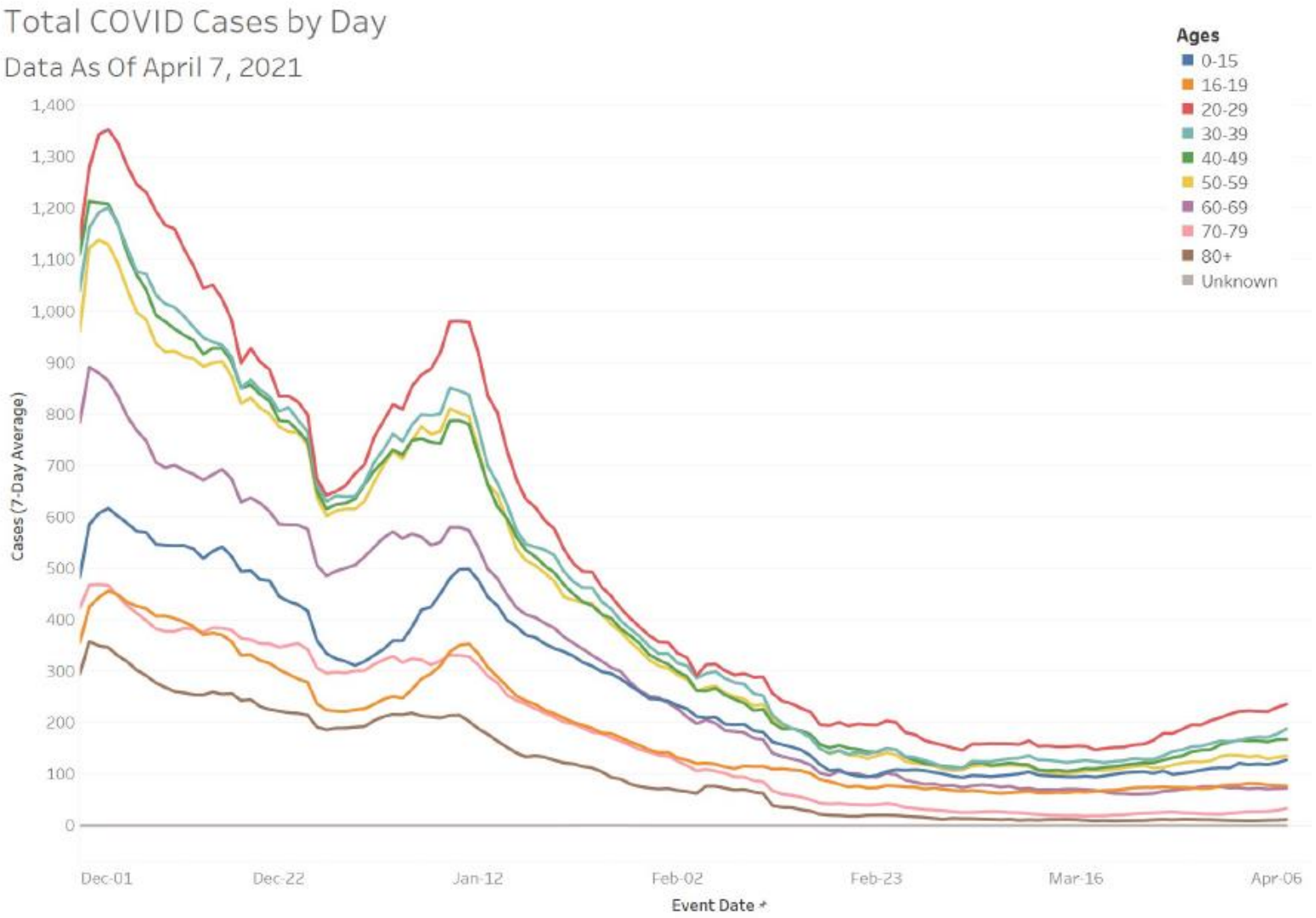
Variant P.1

P.1

- The P.1 variant is a branch off the B.1.1.28 lineage that was first reported by the National Institute of Infectious Diseases (NIID) in Japan in four travelers from Brazil, sampled during routine screening at Haneda airport outside Tokyo.
- The P.1 lineage contains three mutations in the spike protein receptor binding domain: K417T, E484K, and N501Y.
- There is evidence to suggest that some of the mutations in the P.1 variant may affect its transmissibility and antigenic profile, which may affect the ability of antibodies generated through a previous natural infection or through vaccination to recognize and neutralize the virus.
- A recent study reported on a cluster of cases in Manaus, the largest city in the Amazon region, in which the P.1 variant was identified in 42% of the specimens sequenced from late December.[5]
  - In this region, it is estimated that approximately 75% of the population had been infected with SARS-CoV2 as of October 2020. However, since mid-December the region has observed a surge in cases.
  - The emergence of this variant raises concerns of a potential increase in transmissibility or propensity for SARS-CoV-2 re-infection of individuals.
- This variant was identified in the United States at the end of January 2021

Statewide Cases by Age Group

- Largest uptick in cases seen in ages 20-29
- 0-15, 30-39, 40-49 also seeing uptick
- 60-69, 70-79, and 80+ continuing to plateau with no uptick



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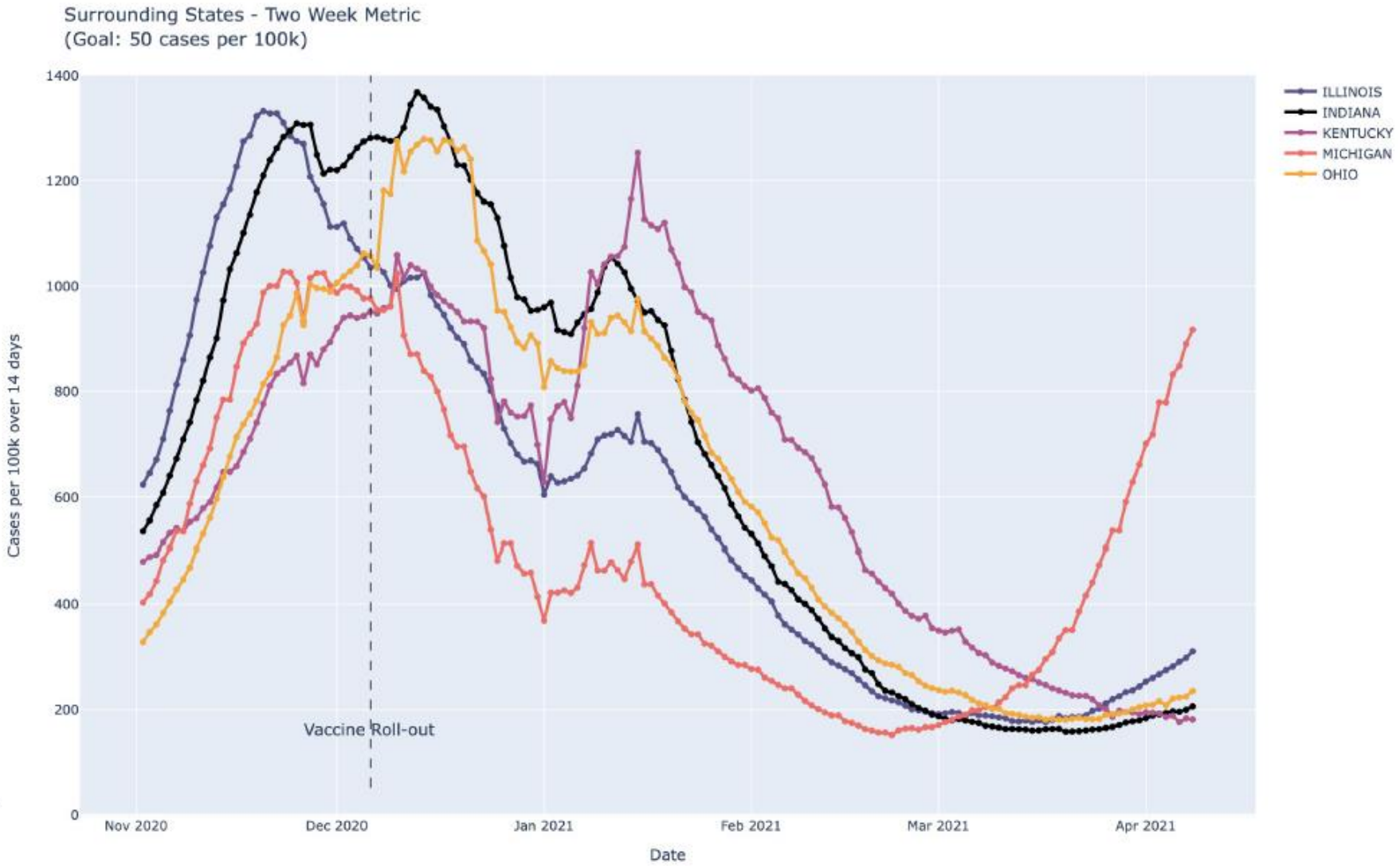
Cases in Surrounding States



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Where Are We Headed

- What we are worried about

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Johnson and Johnson Update

- 6 U.S. cases of Cerebral Venous Sinus Thrombosis associated with thrombocytopenia after receiving the J&J COVID-19 vaccine that were reported to VAERS
  - https://vaers.hhs.gov/reportevent.html
- All six cases occurred among women aged 18–48 years
- Interval from vaccine receipt to symptom onset ranged from 6–13 days (9).
  - One patient died.
- Maintain a high index of suspension for symptoms that might represent serious thrombotic events or thrombocytopenia in patients who have recently received the J&J COVID-19 vaccine.
- Based on studies of patients diagnosed with immune thrombotic thrombocytopenia after the AstraZeneca COVID-19 vaccine in Europe, the pathogenesis may be associated with platelet-activating antibodies against platelet factor-4 (PF4), a type of protein.
- Heparin may be harmful, and alternative treatments need to be given.

Case Review

- Initial presenting symptoms were notable for headache in 5/6 patients, and back pain in the sixth who subsequently developed a headache.
- One patient also had abdominal pain, nausea, and vomiting.
- Four developed focal neurological symptoms (focal weakness, aphasia, visual disturbance) prompting presentation for emergency care.
- The median days from vaccination to hospital admission was 15 days (range = 10–17 days).
- All were eventually diagnosed with CVST by intracranial imaging; two patients were also diagnosed with splanchnic* and portal vein thrombosis.
- Unusual for patients presenting with thrombotic events, all six patients showed evidence of thrombocytopenia (<150,000 platelets per microliter of blood), consistent with a condition known as thrombotic thrombocytopenia, with platelet nadir counts ranging from 10,000 to 127,000 during their hospitalizations.

- Four patients developed intraparenchymal brain hemorrhage and one subsequently died.
- Anti-PF4, also known as heparin-PF4 antibody, can induce thrombotic thrombocytopenia in a small percentage of persons exposed to heparin.
  - However, none of the cases reported from Europe had recent heparin exposure.
- As with heparin-induced thrombocytopenia, the administration of the anticoagulant heparin should be avoided in patients with potential vaccine-associated immune thrombotic thrombocytopenia (VITT), unless heparin-induced thrombocytopenia (HIT) testing is negative.
- Non-heparin anticoagulants and high-dose intravenous immune globulin should be considered in treatment of patients who present with immune-mediated thrombotic events with thrombocytopenia after J&J COVID-19 vaccination.

What to do

- Maintain a high index of suspicion for symptoms that might represent serious thrombotic events or thrombocytopenia in patients who have recently received the J&J COVID-19 vaccine including:
  - severe headache,
  - backache,
  - new neurologic symptoms,
  - severe abdominal pain,
  - shortness of breath,
  - leg swelling,
  - petechiae (tiny red spots on the skin),
  - or new or easy bruising.

What to do

- Obtain platelet counts and screen for evidence of immune thrombotic thrombocytopenia.
- Evaluate initially with a screening PF4 enzyme-linked immunosorbent (ELISA) assay as would be performed for autoimmune HIT.
- Consultation with a hematologist is strongly recommended.
- Do not treat patients with thrombotic events and thrombocytopenia following receipt of J&J COVID-19 vaccine with heparin, unless HIT testing is negative.
- If HIT testing is positive or unable to be performed in patient, non-heparin anticoagulants and high-dose intravenous immune globulin should be strongly considered.
- Report adverse events to VAERS, including serious and life-threatening adverse events and deaths in patients following receipt of COVID-19 vaccines as required under the Emergency Use Authorizations for COVID-19 vaccines.

Next Steps

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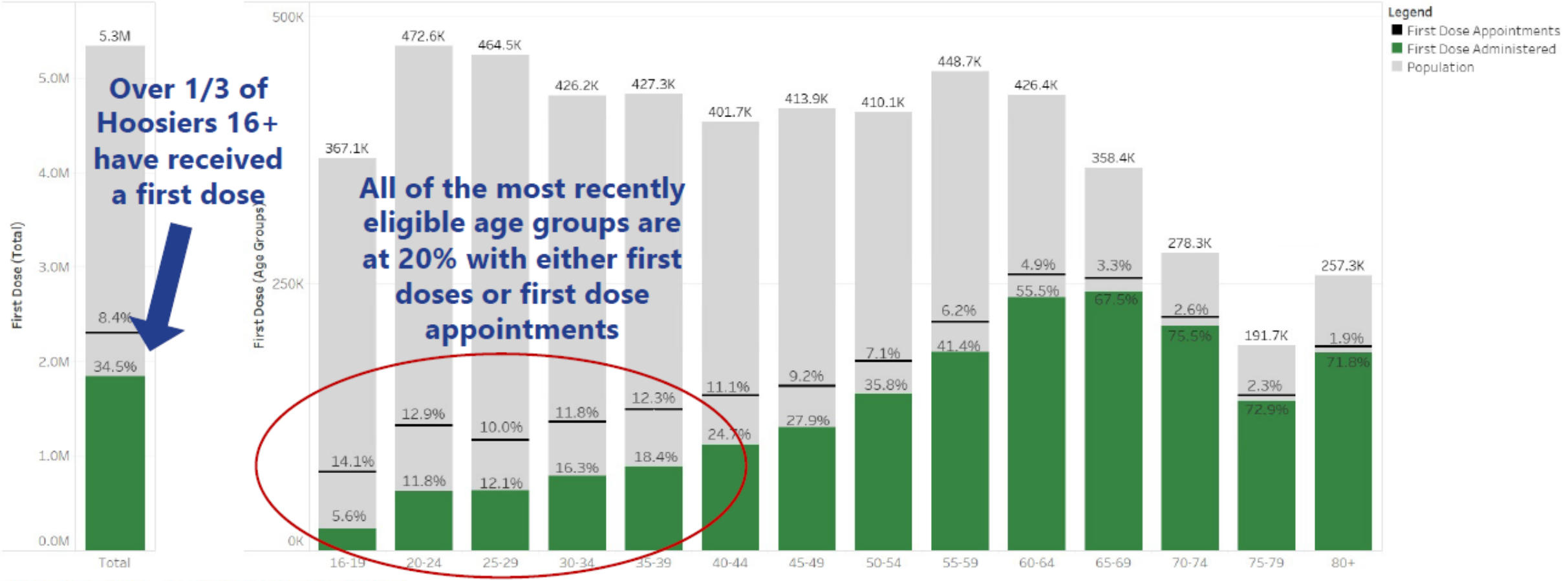
First Dose Vaccinations/Appointments by Age

Vaccinations Compared to State Population by Age Group

Data as of April 8, 2021



*These views excludes ages 0-15 and Indiana Non-Residents.

**If two percentages aren't listed then the percentage listed is the percentage that received the vaccine

Vaccinate Children

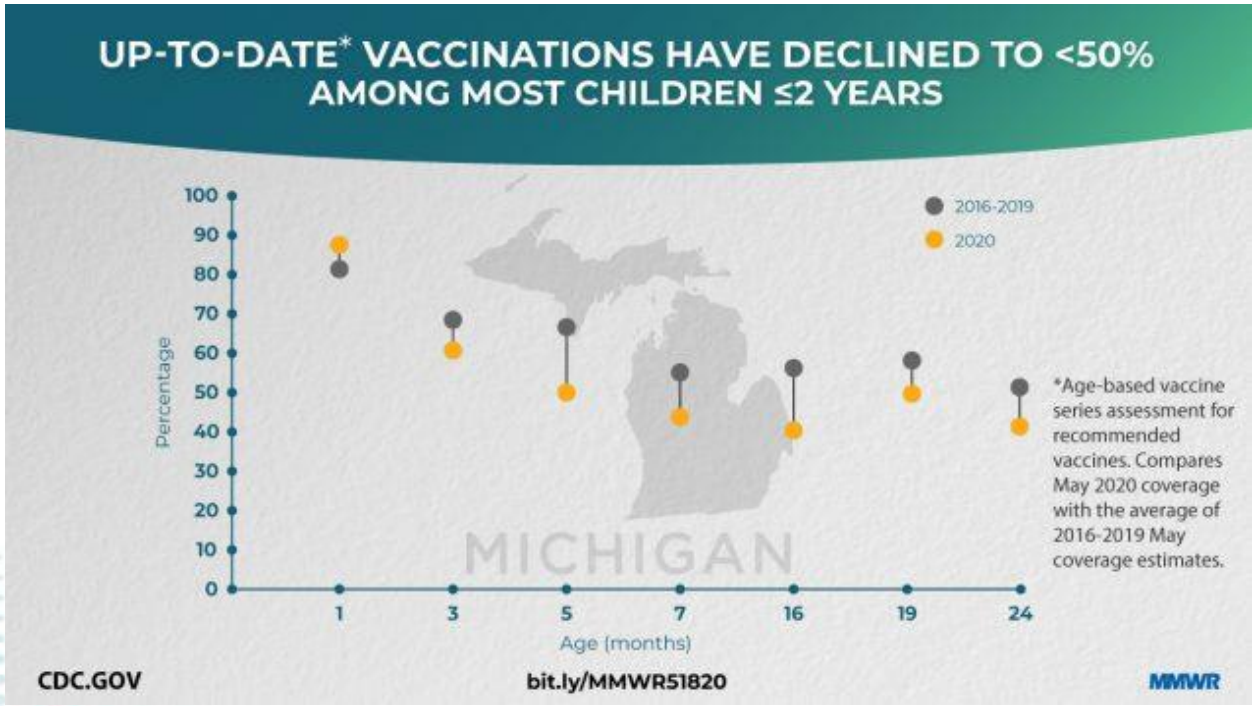
- Pfizer studying vaccine in children ages 6 months to 11 years old.
  - First doses administered in March.
- Covid-19 infections among younger teens and kids are driving outbreaks in some states.
  - In Michigan case rates for children ages 10 to 19 are at an all-time high, according to the Michigan Department of Health and Human Services

- Moderna started its trial of children 12 to 17 years old in December, and announced last week that participants received their first doses in Phases 2 and 3 of its trial in children ages 6 months to 11 years old.

- Johnson & Johnson is planning to study its single-dose vaccine in children ages 12 to 17, and the company also announced that it intends to eventually test its vaccine in infants and even newborns.

- AstraZeneca's Covid-19 vaccine, which is not currently authorized for use in the U.S., is also being tested in children ages 6 to 17 years old

Decline in Child Vaccination Coverage During the COVID-19 Pandemic — Michigan Care Improvement Registry, May 2016–May 2020



- If measles vaccination coverage of 90%–95% (the level needed to establish herd immunity) is not achieved, measles outbreaks can occur.
- Concerted efforts are needed to ensure rapid catch-up for children who are not up-to-date with measles-containing vaccines as well as other ACIP-recommended vaccinations.

Improve Visitation

Possible Unintended Consequences:

- Parents reluctant to bring their children to the hospital for fear that they will be separated either at the emergency department or upon admission
- Individuals with cognitive impairments, when separated from their customary caregivers and routines, becoming traumatized and exhibiting behavioral expressions of distress that impact care staff
- Older adults without their usual orienting practices experiencing delirium and its long-term health impacts
- Hospitalized patients and residents in long-term care communities dying with no family member at their side to comfort them
- Families feeling ill-equipped to support loved ones upon discharge to home
- Traumatized staff left to care for the physical, psychological, spiritual, and emotional needs of patients and residents without family support, including at the end of life
- Staff feeling the burden of longer-term trauma related to unrecognized or immeasurable grief that has little time to be processed or acknowledged.

Strongly encourage you to work on increasing visitation access.

Clinician Wellness

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Recognize the symptoms of stress you may be experiencing.

- Feeling irritation, anger, or denial
- Feeling uncertain, nervous, or anxious
- Feeling helpless or powerless
- Lacking motivation
- Feeling tired, overwhelmed, or burned out
- Feeling sad or depressed
- Having trouble sleeping
- Having trouble concentrating

Know about stress-related disorders, compassion fatigue, and burnout:

Experiencing or witnessing life threatening or traumatic events impacts everyone differently. In some circumstances, the distress can be managed successfully to reduce associated negative health and behavioral outcomes. In other cases, some people may experience clinically significant distress or impairment, such as acute stress disorder, post-traumatic stress disorder (PTSD), or secondary traumatic stress (also known as vicarious traumatization). Compassion fatigue and burnout may also result from chronic workplace stress and exposure to traumatic events during the COVID-19 pandemic.

Tips to cope and enhance your resilience.

- Communicate with your coworkers, supervisors, and employees about job stress.
  - Talk openly about how the pandemic is affecting your work.
  - Identify factors that cause stress and work together to identify solutions.
  - Ask about how to access mental health resources in your workplace.
- Remind yourself that everyone is in an unusual situation with limited resources.
- Identify and accept those things which you do not have control over.
- Recognize that you are performing a crucial role in fighting this pandemic and that you are doing the best you can with the resources available.
- Increase your sense of control by keeping a consistent daily routine when possible — ideally one that is similar to your schedule before the pandemic.
  - Try to get adequate sleep.
  - Make time to eat healthy meals.
  - Take breaks during your shift to rest, stretch, or check in with supportive colleagues, coworkers, friends and family.
- When away from work, get exercise when you can. Spend time outdoors either being physically activity or relaxing. Do things you enjoy during non-work hours.
- Take breaks from watching, reading, or listening to news stories, including social media. Hearing about the pandemic repeatedly can be upsetting and mentally exhausting, especially since you work with people directly affected by the virus.
- If you feel you may be misusing alcohol or other drugs (including prescriptions), ask for help.
- Engage in mindfulness techniques , such as breathing exercises and meditation.
- If you are being treated for a mental health condition, continue with your treatment and talk to your provider if you experience new or worsening symptoms.

Know where to go if you need help.

If you're concerned that you or someone in your household may harm themselves or someone else:

- National Suicide Prevention Lifeline
  - Toll-free number 1-800-273-TALK (1-800-273-8255)
  - The online Lifeline Crisis Chat is free and confidential. You'll be connected to a skilled, trained counselor in your area.
- National Domestic Violence Hotline
  - Call 1-800-799-7233 and TTY 1-800-787-3224

If you feel overwhelmed with emotions like sadness, depression, or anxiety:

- Disaster Distress Helpline
  - Call or text 1-800-985-5990

If you need to find treatment or mental health providers in your area:

- Substance Abuse and Mental Health Services Administration (SAMHSA) Find Treatment

If you want more information on coping with stress and building resilience:

- CDC Coronavirus (COVID-19) Stress and Coping
- NIOSH Safety and Health Information for Healthcare Workers
- Substance Abuse and Mental Health Services Administration (SAMHSA) Disaster Preparedness
- The Joint Commission Quick Safety: Developing resilience to combat nurse burnout

lweaver@isdh.in.gov

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