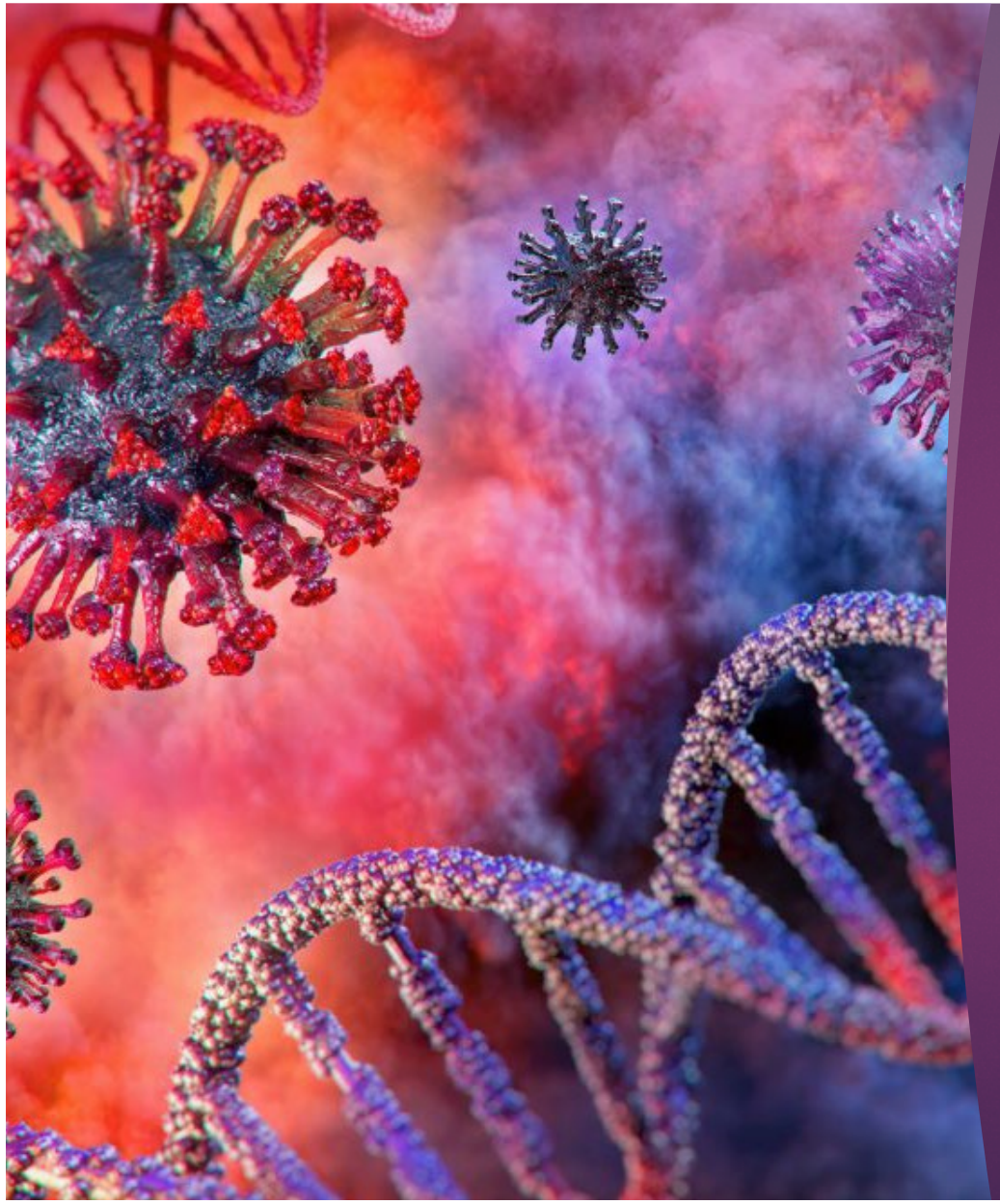


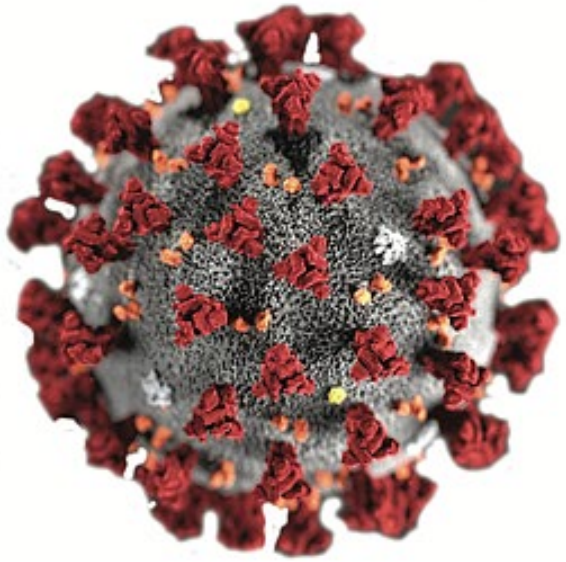
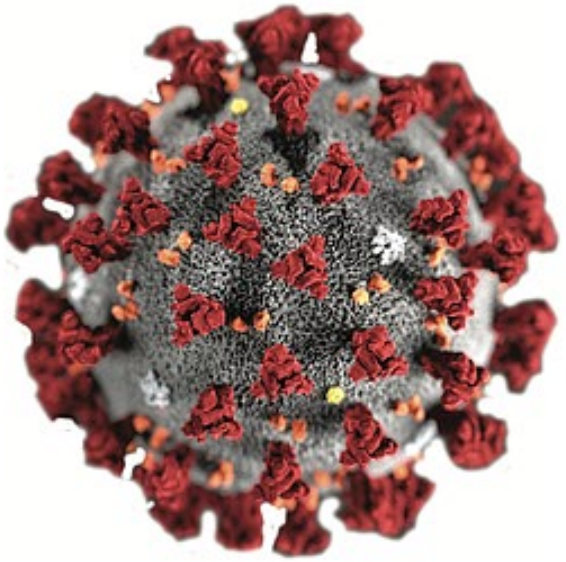
Coronavirus and Turner Syndrome

2/8/21

PATTY WERNER RN, MSN

INFECTIOUS DISEASES NURSE NAVIGATOR

HINDSIGHT IS

2  2 

NAMING COVID 19

CORONA = CROWN

CO = CORONA

VI = VIRUS

D = DISEASE

2/11/20 WHO announced the name for the disease that caused the CV outbreak in Wuhan China

1960 FIRST CORONAVIRUS ISOLATED

FIRST 4 CORONAVIRUSES ACCOUNT FOR 25% OF COMMON COLDS

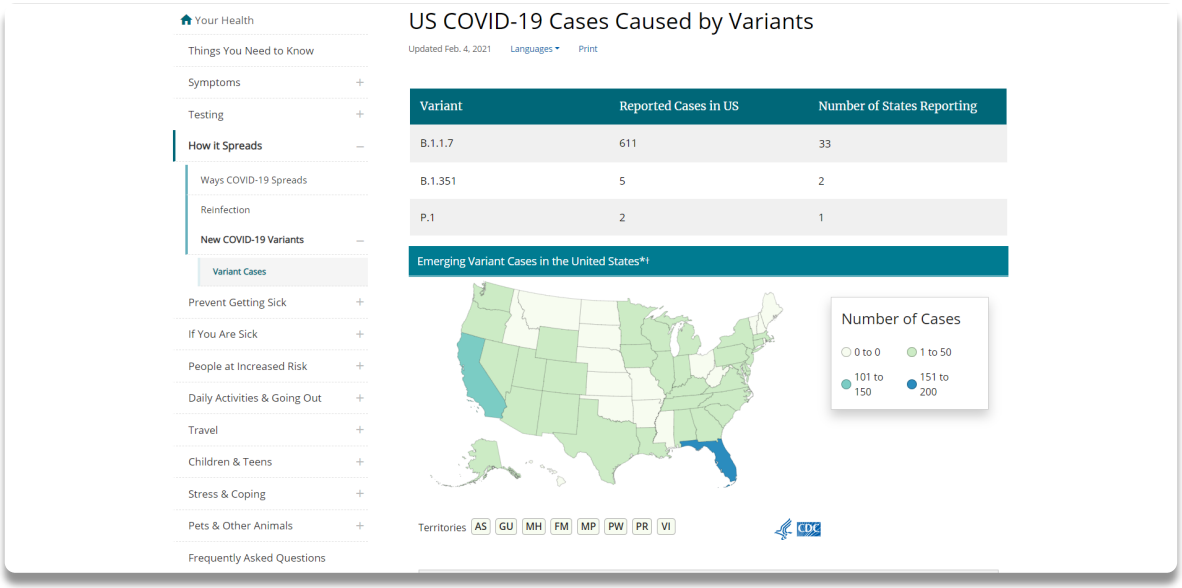
21ST CENTURY VIRUSES CAUSE PEOPLE TO BE SICKER

SARS (2003)
MERS (2012)
SARS-COV2 (2019)

HISTORY

COVID VARIANTS

https://www.cdc.gov/coronavirus/2019-ncov/transmission/variant-cases.html



COVID AT CARDINAL GLENNON

- 419 total cases of COVID as of 2/5/21
- 90% are seen in EMERGENCY DEPARTMENT and discharged to home
- 1.5% are found to be COVID positive with pre surgical screening
- All other cases are inpatient and outpatient
- No data found on TS patients specifically

Symptoms may appear **2-14 days after exposure to the virus.**

- Fever or chills
- Cough
- Shortness of breath or difficulty breathing
- Fatigue
- Muscle or body aches
- Headache
- New loss of taste or smell
- Sore throat
- Congestion or runny nose
- Nausea or vomiting
- Diarrhea

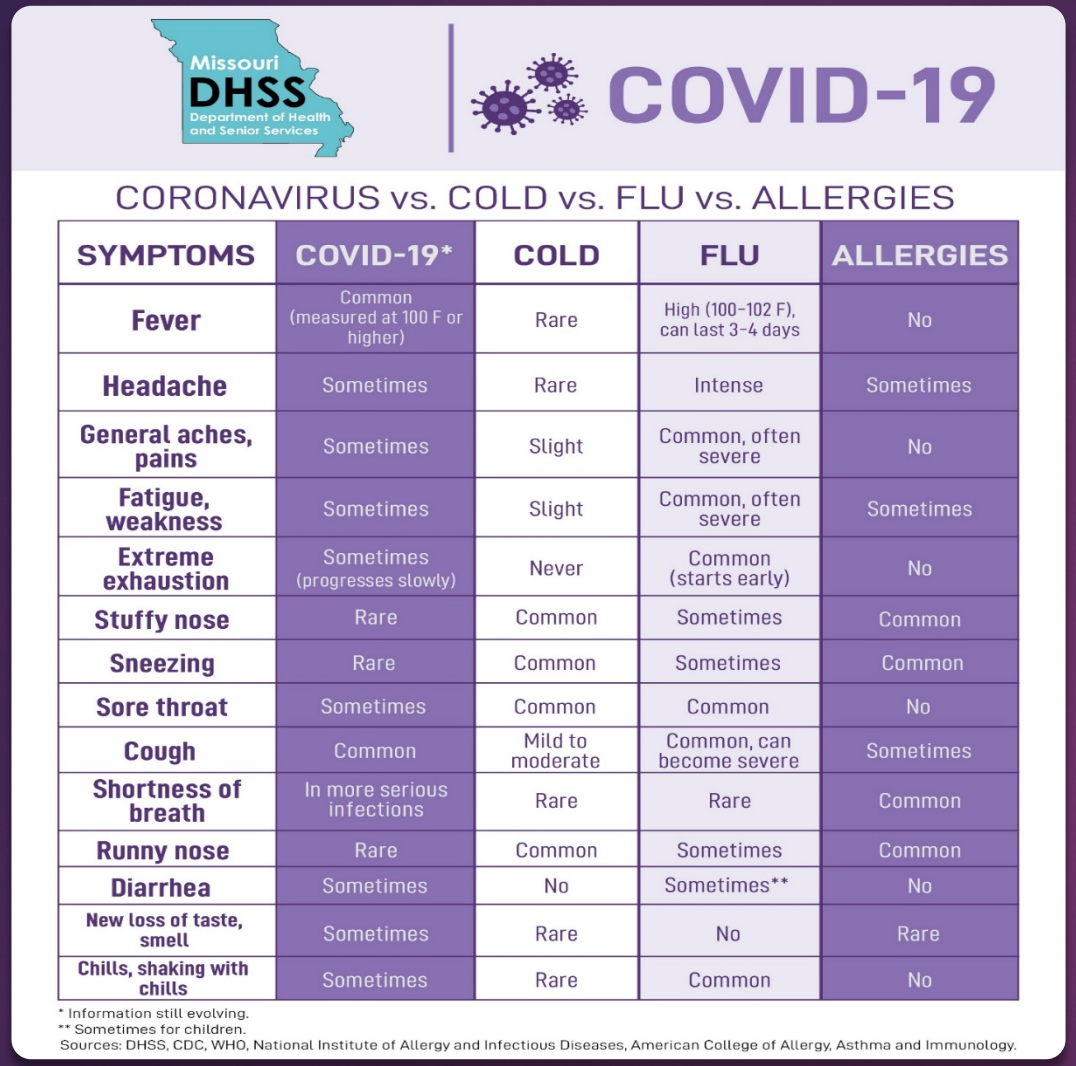
COVID SYMPTOM CHECKER:

https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/coronavirus-self-checker.html

Symptoms Look for **emergency warning signs*** for COVID-19. If someone is showing any of these signs, **seek emergency medical care immediately:**

- Trouble breathing
- Persistent pain or pressure in the chest
- New confusion
- Inability to wake or stay awake
- Bluish lips or face

https://www.cdc.gov/coronavirus/2019-ncov/symptoms-testing/symptoms.html



COVID vs Cold vs Flu vs Allergies

Multi Inflammatory Syndrome – Children (MIS – C)

- May develop days to weeks after getting sick with COVID
- MIS-C tends to occur in older children
- Disproportionally affects African American and Hispanic children
- 19 cases at Cardinal Glennon in 2020
- No Turners patients that are known of with MIS-C at CG
- Unknown who might develop this condition

https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/children/mis-c.html

Symptoms of MIS - C

- FEVER
- ABDOMINAL PAIN
- VOMITING
- DIARRHEA
- NECK PAIN, HEADACHE, CONFUSION
- RASH
- BLOODSHOT EYES
- FEELING EXTRA TIRED
- RESPIRATORY SYMPTOMS
- SWELLING OF HANDS AND FEET

HTTPS://WWW.CDC.GOV/CORONAVIRUS/2019-NCOV/DAILY-LIFE-COPING/CHILDREN/MIS-C.HTML

Who is at risk for serious illness?

Children – limited data on who may be at risk.

- Kids who might be at increased risk for severe illness: obesity, medical complexity, severe genetic disorders, severe neurologic disorders, inherited metabolic disorders, sickle cell disease, congenital (since birth) heart disease, diabetes, chronic kidney disease, asthma and other chronic lung disease, and immunosuppression due to malignancy or immune-weakening medications.

Adults –

- > 65 years old and adults of any age with cancer, heard conditions, asthma/respiratory conditions, obesity, sickle cell disease, downs syndrome, Pregnancy, smoking, Type 1 and 2 diabetes, immunocompromised from solid organ transplant.

TS possible complications:

- Heart problems, Hypertension, Type 1 or 2 Diabetes, Obesity, Kidney or Liver problems.

https://www.utphysicians.com/turner-syndrome-patients-may-be-at-higher-risk-for-severe-illness-from-covid-19/

TS Risk and COVID -19

- Heart disease found in those with Turner syndrome includes a bicuspid aortic valve and coarctation/narrowing of the aorta. A well-functioning bicuspid aortic valve (BAV) will not likely put a patient at increased risk, although heart disease is an underlying medical condition that can result in severe complications from COVID-19.

- Hypertension / High Blood Pressure: Hypertension controlled and uncontrolled is a risk factor in adults with COVID-19.

https://www.utphysicians.com/turner-syndrome-patients-may-be-at-higher-risk-for-severe-illness-from-covid-19/

TS Risk and COVID -19

- The incidence of Type 1 and Type 2 diabetes are four times and ten times greater in people with Turner syndrome. Uncontrolled Diabetes is another risk factor for poor outcomes with COVID -19.
- Severe Obesity: Obesity is common in those with Turner syndrome. If you are severely obese (body mass index [BMI] of 40 or higher), you are at a greater risk of severe illness from COVID-19.

https://www.utphysicians.com/turner-syndrome-patients-may-be-at-higher-risk-for-severe-illness-from-covid-19/

TS Risk and COVID -19

- Liver Disease: cirrhosis of the liver is six times greater for people with Turner syndrome. Fatty liver disease is also common with TS. These can predispose a person to COVID-19.

- Liver Test Abnormalities / Elevated Liver Enzymes: Liver test abnormalities and elevated liver enzymes are common in those with TS. Although the CDC states that those with liver disease may be at an increased risk of severe illness from COVID-19, mild liver enzyme elevations and mild fatty liver infiltration are likely not high-risk factors.

https://www.turnersyndrome.org/covid-19

TS Risk and COVID -19

- Autoimmune diseases – such as thyroid disease, celiac disease, diabetes, juvenile rheumatoid arthritis, eye inflammation, and inflammatory bowel disease. Medications like corticosteroids can suppress the immune system and can cause a person to have poor outcomes with COVID – 19.
- Other immunosuppressants that lower the body's ability to fight some infections (e.g., mycophenolate, sirolimus, cyclosporine, tacrolimus, etanercept, rituximab).

https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/immunocompromised.html#:~:text=People%20with%20weakened%20immune%20systems,about%20this%20new%20virus.

TS Risk and COVID -19

- Lymphedema - rare primary lymphedema that involves lymphatic abnormalities involving the chest and immune deficiency is a risk for poor outcomes with COVID 19.

- Kidney structural anomalies affect 24% to 40% percent of those diagnosed with Turner syndrome. Individuals with chronic kidney conditions, such as reduced kidney function or kidney failure, needing dialysis or having a transplanted kidney are susceptible to severe illness from COVID-19. Having only one kidney without reduced kidney function or chronic kidney conditions does not increase the risk.

https://www.liebertpub.com/doi/10.1089/lrb.2020.29084.cov

Testing

VIRAL TEST FOR COVID-19

- ✓ A viral test only tells you if you are infected now.
- ✓ If you test negative, you can still get infected.
- ✓ If you test negative and you start to feel sick, you may need to get tested again.
- ✓ A viral test cannot tell you if you were infected before. You will need an antibody (blood) test to show that.

ANTIGEN TEST - NASAL OR THROAT SWAB

PCR TEST – NASAL OR THROAT SWAB

ANTIBODY TEST – BLOOD SAMPLE

Prevention

- Stay home if sick
- Wear masks
- Use social distancing (stay at least 6 feet away from others).
- Wash your hands with soap and water for at least 20 seconds when you get home.
- Use hand sanitizer after washing hands.
- Get Vaccinated – but continue prevention practices after vaccination.
- Keep up with your health appointments and regular care.
- Use telemedicine when possible.
- Get your flu shot!

ILLUSTRATED CURRENT NEWS

To Prevent Influenza!

Do not take any person's breath.

Keep the mouth and teeth clean.

Avoid those that cough and sneeze.

Don't visit poorly ventilated places.

Keep warm, get fresh air and sunshine.

Don't use common drinking cups, towels, etc.

Cover your mouth when you cough and sneeze.

Avoid Worry, Fear and Fatigue.

Stay at home if you have a cold.

Walk to your work or office.

In sick rooms wear a gauze mask like in illustration.

MASKS

- SARS-CoV-2 infection is transmitted predominately by respiratory droplets generated when people cough, sneeze, sing, talk, or breathe.
- >2 years old should wear masks
- non-valved
- multi-layer
- cloth masks
- asymptomatic or pre symptomatic infected are estimated to account for more than 50% of transmissions

https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html

VACCINES

- It is unknown if any of these vaccines prevent asymptomatic infection .
- It is unknown if vaccinated people can transmit the virus if they do become infected but don't show symptoms.
- Being vaccinated should not stop us from all preventative measures.

- Vaccines in Phase 3 Clinical Trials

As of December 28, 2020, large-scale (Phase 3) clinical trials are in progress or being planned for three COVID-19 vaccines in the United States:

- AstraZeneca's COVID-19 vaccine
- Janssen's COVID-19 vaccine
- Novavax's COVID-19 vaccine

	MODERNA	PFIZER	Johnson & Johnson (Janssen)
Age group	16 and up Trials for12-17 now	18 and up	18 and up
Efficacy for preventing COVID	94.1%	95%	***studied differently in trials
# of shots	2 shots 28 days apart	2 shots 21 days apart	1 dose Another trial is going on now for a 2 dose shot
Work for variants?	Unknown (made prior to variants)	Unknown (made prior to variants)	Unknown – some of the data taken in South Africa was from people who had B.1.531

***66% protective for moderate to severe covid 28 days after injection. 72% protective US, 66% South America & 57% in South Africa. 85% protective against severe disease, with no differences across countries (eight) or regions (three) in the study, nor across age groups among trial participants. And there were no hospitalizations or deaths in the vaccine arm of the trial after the 28-day period in which immunity developed.
https://www.jnj.com/johnson-johnson-announces-single-shot-janssen-covid-19-vaccine-candidate-met-primary-endpoints-in-interim-analysis-of-its-phase-3-ensemble-trial

VACCINE SIDE EFFECTS

- Pfizer & Moderna Clinical Trials - fatigue, headache, muscle pain, joint pain, fever, injection site swelling, pain or redness, nausea, malaise, chills, and lymphadenopathy.

- **More people experienced side effects after the second dose than after the first dose.**

VACCINE ENROLLMENT MO

- STL COUNTY: https://stlcorona.com/covid19-vaccines/
- STL CITY: https://www.stlouis-mo.gov/government/departments/health/communicable-disease/covid-19/vaccine/index.cfm
- ST. CHARLES COUNTY: https://www.sccmo.org/2162/COVID-19-Vaccine-Information
- JEFFERSON COUNTY: https://hipaa.jotform.com/210126757688060
- ST. FRANCOIS COUNTY: http://sfchc.org/covid-19-updates/covid-19-vaccine/
- ST. CLAIR COUNTY: https://www.co.st-clair.il.us/departments/health-department/covid-19-information/vaccine-notification
- MONROE COUNTY: https://monroecountyhealth.org/home/emergency-preparedness/covid-19/covid-19-vaccine-information/

VACCINE ENROLLMENT IL

- Bond County: https://form.jotform.com/210188191521046
- Calhoun County: https://www.facebook.com/CalhounCountyHealthDepartment
- Clay County: https://www.healthdept.org/
- Clinton County: https://form.jotform.com/210177925846059
- Fayette County: http://www.fayettehealthdept.org/COVID-19.html
- Greene County: https://greenecountyhd.org/covid-form/
- Jersey County: https://www.jerseycountyhealth.org/
- Macoupin County: https://mcphd.net/covid-19-information/
- Madison County: https://coronavirus-response-madcoil.hub.arcgis.com/
- Marion County: https://www.facebook.com/marioncountyhealthdept
- Randolph County: https://am.randolphco.org/index.php/welcome
- St. Clair County: https://docs.google.com/forms/d/e/1FAIpQLSfNFN9MInsCDZe1ADI6uuQnYwpd0oINNJZJ9j83gf_U_oU1iA/viewform
- Washington County: https://www.facebook.com/Washington-County-IL-Health-Department-106806041137904

RESOURCES

- CDC - https://www.cdc.gov/coronavirus/2019-ncov/
- Johns Hopkins – Friday 30 minute briefing - https://coronavirus.jhu.edu/live/events/covid-19-briefing-expert-insights
- WHO - https://www.who.int/emergencies/diseases/novel-coronavirus-2019
- JAMA - ttps://jamanetwork.com/journals/jama/pages/coronavirus-alert
- Clinical Trials - https://www.clinicaltrials.gov/
- Slide 7 link: https://oa.mo.gov/sites/default/files/DHSS-staying-healthy-updated-C19-symptoms.pdf

COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU)

Global Cases
100,990,354

Cases by Country/Region/Sovereignty

- 25,600,243 US
- 10,701,193 India
- 8,996,876 Brazil
- 3,752,548 Russia
- 3,725,713 United Kingdom
- 3,165,604 France
- 2,670,102 Spain
- 2,501,147 Italy
- 2,449,839 Turkey
- 2,187,134 Germany
- 2,055,305 Colombia
- 1,896,053 Argentina
- 1,806,849 Mexico
- 1,496,665 Poland
- 1,430,648 South Africa

Admin0 | Admin1 | Admin2

Last Updated at (M/D/YYYY)
1/28/2021, 8:22 AM

Esri, FAO, NOAA

Cumulative Cases | Active Cases | Incidence Rate | Case-Fatality Ratio | Testing Rate

192
countries/regions

Lancet Inf Dis Article: Here. Mobile Version: Here. Data sources: Full list. Downloadable database: GitHub, Feature Layer.
Lead by JHU CSSE. Technical Support: Esri Living Atlas team and JHU APL. Financial Support: JHU, NSF, Bloomberg Philanthropies and Stavros Niarchos Foundation. Resource support: Slack, Github and AWS.

Global Deaths
2,177,677

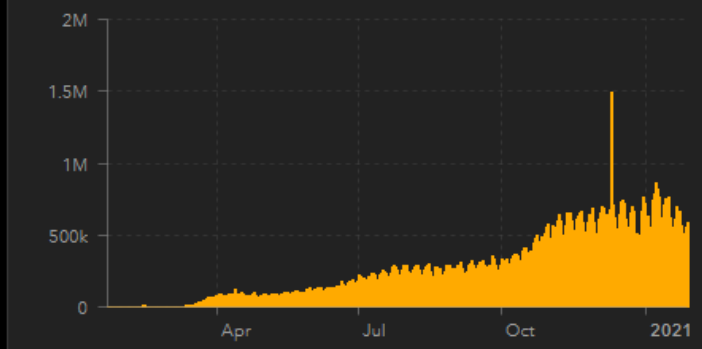
- 429,230 deaths US
- 220,161 deaths Brazil
- 153,847 deaths India
- 153,639 deaths Mexico
- 102,085 deaths United Kingdom
- 86,889 deaths Italy
- 74,600 deaths

Global Deaths

US State Level
Deaths, Recovered

- 42,887 deaths, 124,003 recovered New York US
- 38,828 deaths, recovered California US
- 35,877 deaths, 1,867,289 recovered Texas US
- 25,833 deaths, recovered Florida US
- 21,220 deaths, 66,173 recovered New Jersey US
- 21,032 deaths, 654,695

US Deaths, Recovered



Daily Cases