

Date: August 26, 2021

To: Jackson County Legislature

CC: County Executive Frank White

From: Jackson County Health Department

RE: Report Supporting Extension of Order for Mask Wearing in Public Places

This report is submitted to provide the data and research necessary to make an evidence-based decision on ordering wearing of masks in places of public accommodation. By providing this report, the Jackson County Health Department (JACOHD) seeks to inform the officials of Jackson County, Missouri of the impact a mask order extension could have on reducing the spread of the COVID-19 Delta variant in our community.

Background

Note: Background is sourced directly from the Centers for Disease Control and Prevention.

<https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html> Accessed 8/5/2021.

COVID-19 is a dangerous disease caused by a virus discovered in December 2019 in Wuhan, China. It is very contagious and has quickly spread around the world. COVID-19 most often causes respiratory symptoms that can feel much like a cold, a flu, or pneumonia, but COVID-19 can also harm other parts of the body.

- Most people who catch COVID-19 have mild symptoms, but some people become severely ill.
- Older adults and people who have certain underlying medical conditions are at increased risk of severe illness from COVID-19.
- Hundreds of thousands of people have died from COVID-19 in the United States.
- Vaccines against COVID-19 are safe and effective.

Symptoms

People with COVID-19 have had a wide range of symptoms reported – ranging from mild symptoms to severe illness. Symptoms may appear 2-14 days after exposure to the virus. Anyone can have mild to severe symptoms. People with these symptoms may have COVID-19:

- 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

This list is not all-inclusive. Older adults and people who have severe underlying medical conditions like heart or lung disease or diabetes seem to be at higher risk for developing more serious complications from COVID-19 illness.

Transmission

COVID-19 spreads when an infected person breathes out droplets and very small particles that contain the virus. These droplets and particles can be breathed in by other people or land on their eyes, noses, or mouth. In some circumstances, they may contaminate surfaces they touch. People who are closer than 6 feet from the infected person are most likely to get infected.

COVID-19 is spread in three main ways:

- Breathing in air when close to an infected person who is exhaling small droplets and particles that contain the virus.
- Having these small droplets and particles that contain virus land on the eyes, nose, or mouth, especially through splashes and sprays like a cough or sneeze.
- Touching eyes, nose, or mouth with hands that have the virus on the.

Anyone infected with COVID-19 can spread it, even if they do NOT have symptoms.

Variants

Virus constantly change through mutation, and new variants of a virus are expected to occur. While some variants emerge and disappear, others persist. Some variations allow the virus to spread more easily or make it resistant to treatments or vaccines. Currently there are four notable variants in the United States:

B.1.1.7 (Alpha): This variant was first detected in the United States in December 2020. It was initially detected in the United Kingdom.

B.1.351 (Beta): This variant was first detected in the United States at the end of January 2021. It was initially detected in South Africa in December 2020.

P.1 (Gamma): This variant was first detected in the United States in January 2021. P.1. was initially identified in travelers from Brazil, who were tested during routine screening at an airport in Japan, in early January.

B.1.617.2 (Delta): This variants was first detected in the United States in March 2021. It was initially identified in India in December 2020.

These variants seem to spread more easily and quickly than other variants, which may lead to more cases of COVID-19. An increase in the number of cases will put more strain on healthcare resources, lead to more hospitalizations, and potentially more deaths.

In addition to the four primary variants circulating in the United States, there are other variants that have been labeled as "Variants of Interest" by the CDC that could factor in to transmission rates in the future.

B.1.525 (Eta): First identified in the United Kingdom and Nigeria in December, 2020. Attributes include a potential reduction in neutralization by some Emergency Use Authorization monoclonal antibody treatments and potential reduction in neutralization by convalescent and post-vaccination sera.

B.1.526 (Iota): First identified in the United States in New York in November, 2020. Attributes include potential reduction in neutralization by some Emergency Use Authorization monoclonal antibody treatments and potential reduction in neutralization by convalescent and post-vaccination sera.

B.1.617.1 (Kappa): First identified in India in December, 2020. Attributes include potential reduction in neutralization by some Emergency Use Authorization monoclonal antibody treatments and potential reduction in neutralization by convalescent and post-vaccination sera.

B.1.617.3 (No WHO Label): First identified in India in October, 2020. Attributes include potential reduction in neutralization by some Emergency Use Authorization monoclonal antibody treatments and potential reduction in neutralization by convalescent and post-vaccination sera.

Variant information can be found at <https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-info.html> - updated August 25, 2021.

Protecting Yourself & Your Family

The Centers for Disease Control and Prevention (CDC) offers the following mitigation strategies to protect yourself and your family from COVID-19 infection.

Get Vaccinated

- Authorized COVID-19 vaccines can help protect you from COVID-19.
- You should get a COVID-19 vaccine as soon as it is available to you.

Wear a mask

- The CDC recommends that in areas of high and substantial community transmission, both vaccinated and unvaccinated individuals wear masks indoors.
- Per CDC ... "Wearing a mask over your nose and mouth is required on planes, buses, trains, and other forms of public transportation traveling into, within, or out of the United States and while indoors at U.S. transportation hubs such as airports or stations.

Stay 6 feet away from others

- Inside your home: Avoid close contact with people who are sick.
- Outside your home: Put 6 feet of distance between yourself and people who don't live in your household.
 - Remember that some people without symptoms may be able to spread virus.
 - Stay at least 6 feet from other people.
 - Keeping distance from others is especially important for people who are at higher risk of getting very sick.

Avoid crowds and poorly ventilated spaces

- Being in crowds like in restaurants, bars, fitness centers, or movie theaters puts you at higher risk for COVID-19.
- Avoid indoor spaces that do not offer fresh air from the outdoors as much as possible.
- If indoors, bring in fresh air by opening windows and doors, if possible.

Wash your hands often

- Wash your hands often with soap and water for at least 20 seconds especially after you have been in a public place, or after blowing your nose, coughing, or sneezing.
- If soap and water are not readily available, use a hand sanitizer that contains at least 60% alcohol.

Cover coughs and sneezes

- If you are wearing a mask: You can cough or sneeze into your mask. Put on a new, clean mask as soon as possible and wash your hands.
- If you are not wearing a mask: Always cover your mouth and nose with a tissue when you cough or sneeze, or use the inside of your elbow and do not spit.
 - Immediately wash your hands.

Current Conditions in Missouri

COVID-19 Status

- Missouri has continued to experience another wave of new COVID-19 cases, fueled by low rates of full vaccination, the continued spread of the Delta variant, and hot spots in the major urban areas and southeast Missouri, locations frequented by Jackson County residents.
- As of August 25, 2021, the 7 Day New Case Rate in Missouri is 199 per 100,000 people, down slightly from 238 per 100,000 people on August 6, 2021 when the mask order was implemented. Currently, the state of Missouri ranks #39 out of 50 states with 50 representing the highest case rate per capita in the United States.
 - <https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/data/public-health/statewide.php>
- As of August 25, 2021 the 7 Day Positivity Rate for Missouri was 13.1%, a slight decline from 15.2% on August 6, 2021. It is important to note that testing has declined in the state of Missouri during that same time period by 7.8%.
 - <https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/data/public-health/statewide.php>
- The 7 day average of daily new cases in Missouri decreased from 2,972 cases per day on August 4, 2021 to 1,714 cases per day on August 25, 2021.
 - <https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/data/public-health/statewide.php>
- The Centers for Disease Control and Prevention (CDC) designates all of Missouri counties as experiencing “High” levels of community transmission. High Transmission – the highest category is defined as having a “Total New Cases per 100,000 Population in the Last 7 Days” over 100 and a “Percentage of NAATs that are Positive in the Last 7 Days” over 10.0%. (map pulled 8/25/2021 at 10:51AM).

Figure 1: Level of Community Transmission by County – August 3, 2021.

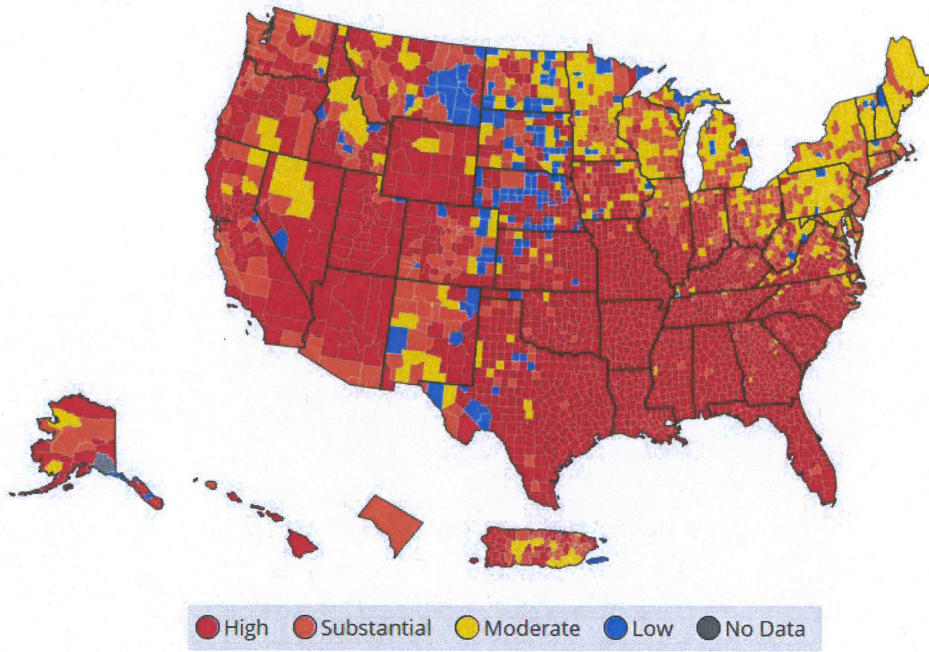
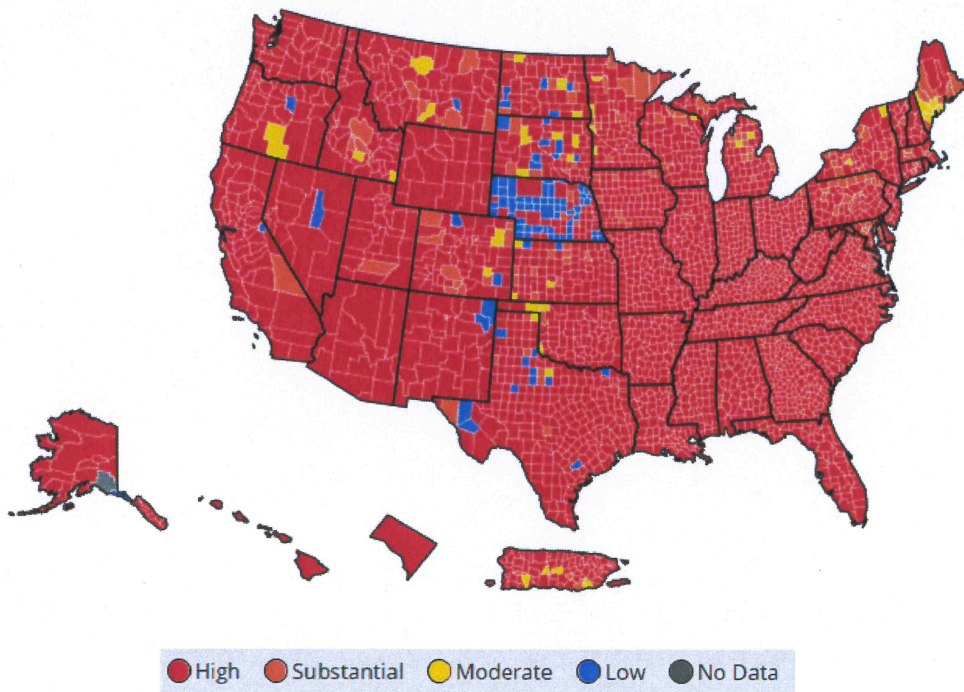


Figure 2: Level of Community Transmission by County – August 25, 2021



Spread of the Delta Variant

- Viral load is roughly 1,000 times higher in people infected with the Delta variant than those infected with the original coronavirus strain. In addition, the Delta variant replicates much faster – being first detectable an average of four days after exposure, compared with an average of six days among people with the original strain.
 - Baisheng, L., Aiping, D., Kuibiao, L., Yao, H., Zhencui, L., & al, e. (2021, July 23). Viral infection and transmission in a large, well-traced outbreak caused by the SARS-CoV-2 Delta variant. Retrieved from MEDRXIV:
<https://www.medrxiv.org/content/10.1101/2021.07.07.21260122v2>
- The estimated R^0 (average number of persons each new case will infect) for the delta variant of COVID-19 is between 4.8 and 6, meaning that each individual infected with COVID-19 Delta will transmit the disease to 4-6 others. Sewer shed data show that 100% of collection sites in Missouri now show Delta variant, with 95% showing Delta variant exclusively.
 - R^0 data source: <https://www.fil.ion.ucl.ac.uk/spm/covid-19/forecasting/>
- Sewershed data source:
<https://storymaps.arcgis.com/stories/f7f5492486114da6b5d6fdc07f81aacf>
- In HHS Region 7, which includes Missouri, Iowa, Nebraska, and Kansas, the CDC estimates that the Delta variants comprises nearly 100% of all cases as of August 21, 2021.
 - <https://covid.cdc.gov/covid-data-tracker/#variant-proportions>

Vaccination Rates for Missouri

- Vaccination rates vary wildly across the state of Missouri. The percentage of Missouri residents statewide who are considered fully vaccinated is 44.3%, up slightly from 41.5% on August 6, 2021. Areas in Missouri that are popular summer destinations have lower vaccination rates. For example: Branson, Missouri (Taney County – 31.0% completed up from 27.7% completed on August 6, 2021), the Harry S. Truman Reservoir (Benton County – 36.3% completed up from 34.3% completed on August 6, 2021), and the Lake of the Ozarks, (Camden and Miller Counties – up to 36.8% and 24.8% completed, respectfully from 34.3% and 22.6% completed, respectively).
 - County Vaccination Data Source:
<https://health.mo.gov/living/healthcondiseases/communicable/novel-coronavirus/data/public-health/county.php> accurate through August 24, 2021

Current Conditions in the Kansas City Metro & Eastern Jackson County

COVID-19 Status for Kansas City Region & Eastern Jackson County

Note: City of Independence data is not reflected in Kansas City Region estimates.

- As of August 25, 2021, the Kansas City Region reported 193,842 total cases, an increase from 179,575 total cases reported on August 6, 2021. On the same day, the Kansas City Region reported 2,608 total deaths from COVID-19, an increase from 2,457 total deaths from COVID-19 reported on August 6, 2021.
- In the Kansas City Region, the 7-day average of daily new cases declined from 815 new cases per day on August 6, 2021 to 548 new cases per day on August 24, 2021.

- KC Region data source: MARC KC Region COVID-19 Data Hub <https://marc2.org/covidhub/> - data accessed August 25, 2021.
- NOTE: Kansas City Regional data does not include the City of Independence in key figures.
- As of August 25, 2021, Eastern Jackson County reported 34,923 total cases and 431 total deaths from COVID-19, up from 31,892 total cases and 388 deaths from COVID-19 on August 6, 2021.
 - JACOHD Data source: MODHSS (EpiTrax) internal report of confirmed and probable cases, data accessed August 25, 2021
- In Eastern Jackson County, 7-day case rate per 100,000 persons was 306.06 per 100,000 on August, 25, 2021. This remains 3 times higher than the upper threshold of “High” classification defined by the Centers for Disease Control and Prevention.
 - JACOHD Data source: MODHSS (EpiTrax) internal report of confirmed and probable cases, data accessed August 25, 2021
- Eastern Jackson County currently meets the definition of the Centers for Disease Control and Prevention’s (CDC) High Transmission designation. High Transmission – the highest category is defined as having a “Total New Cases per 100,000 Population in the Last 7 Days” over 100 and a “Percentage of NAATs that are Positive in the Last 7 Days” over 10.0%. For the week of August 15, 2021, the percent positive in Eastern Jackson County was 14.26% and the 7-day case rate was 306.06 per 100,000 people.
 - JACOHD Data source: MODHSS (EpiTrax) internal report of confirmed and probable cases, data accessed August 25, 2021
- In Eastern Jackson County, the case rate for those aged 15-19 declined from 431.50 per 100,000 people on August 6, 2021 to 302.05 per 100,000 people on August 25, 2021. The case rate for those aged 10-14 declined from 262.47 per 100,000 people on August 6, 2021 to 252.56 per 100,000 people on August 25, 2021. The case rate for those aged 5-9 declined from 234.85 per 100,000 people on August 6, 2021 to 146.43 per 100,000 people on August 25, 2021. Case rates for all age groups remain above the CDC’s designation of “high” community transmission rates at 100 cases per 100,000 people.
 - JACOHD Data source: MODHSS (EpiTrax) internal report of confirmed and probable cases, data accurate through August 3, 2021

Vaccination Rates in Eastern Jackson County

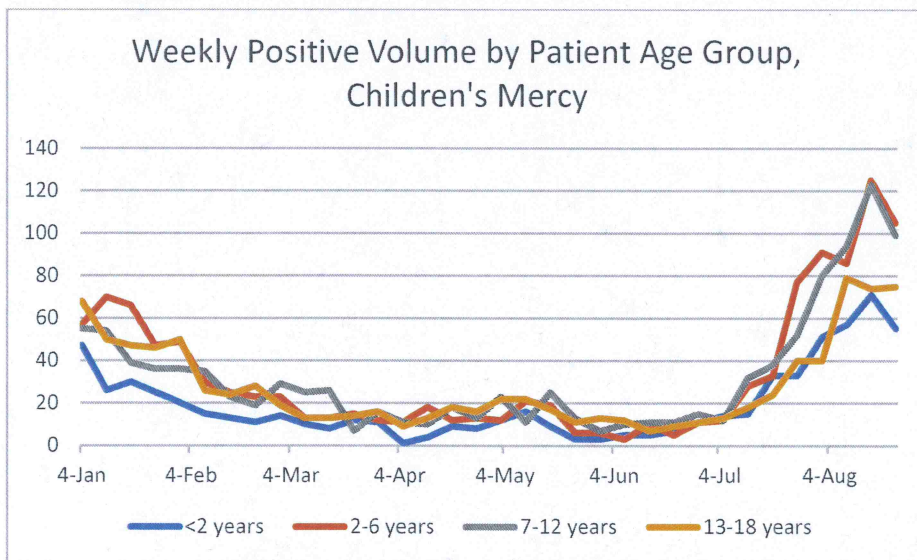
- Of the total population in Eastern Jackson County, 42.6% of residents have completed their series as of August 25, 2021, an increase of 2.1% over August 6, 2021.
 - JACOHD Data source: KDHSS WebIZ and MODHSS ShowMeVax internal report of vaccination data, data accessed August 25, 2021

Stress to the Health Care System

- The Daily Average of New Hospitalizations for the Mid-America Regional Council region declined slightly from 144 daily new hospitalizations on August 6, 2021 to 141 daily new hospitalizations on August 25, 2021.

- <https://marc2.org/covidhub/> - data accessed August 25, 2021. Children’s Mercy data is not included in this dataset.
- On August 25, 2021, Jackson County Health Department received report of six hospitals in Jackson County reporting under 5% capacity to accept new patients.
 - Data provided by Mid-America Regional Emergency Rescue Committee
- On Wednesday, August 18, 2021, regional hospitals exceeded record ICU peak capacity that was initially experienced in November, 2020.
 - <https://marc2.org/covidhub/> - data accessed August 25, 2021. Children’s Mercy data is not included in this dataset.
- In July, 2021, 12% (362) of all hospitalizations from reporting hospitals in the Kansas City Metro Region were in those younger than 18 years of age.
 - <https://marc2.org/covidhub/> - data accessed August 25, 2021. Children’s Mercy data is not included in this dataset.
- Children’s Mercy Hospital, the region’s only children’s hospital, is reporting a general increase in patient volume driven by both a community outbreak of Respiratory Syncytial Virus (RSV) Infection and increases in COVID-19 infections among youth.

Figure 3: Children’s Mercy Weekly Positive Volume by Patient Age Group, January – August, 2021



- <https://www.childrensmercy.org/health-and-safety-resources/information-about-covid-19-novel-coronavirus/covid-19-testing-at-childrens-mercy/> - data accessed on August 25, 2021
- “Data on usage of clinical care resources to manage patients with COVID-19 reflect underlying community disease incidence and can signal when urgent implementation of layered prevention strategies might be necessary to prevent overloading the health care system.”
 - <https://www.cdc.gov/mmwr/volumes/70/wr/mm7030e2.htm>
- During a joint call on July 14, 2021, between local public health directors and the regional chief medical officers (CMOs), the CMOs shared that more hospitals were being designated as “high volume” that at any other time during the pandemic. High volume indicates that a hospital doesn’t have enough staffed beds to admit patients from the Emergency Room (ER), so the ER

must keep those patients until a bed opens up. This in turn impacts the ER's ability to provide beds for new patients.

- Over 15.9% of all hospital beds are currently taken by COVID patients, an increase from 10% on August 6, 2021.
 - <https://marc2.org/covidhub/> - data accessed August 25, 2021. Children's Mercy data is not included in this dataset.
- Hospital CMOs indicated a challenge with staffing, which is contributing to the inability of health care facilities to operationalize all available beds.
- During a joint call on August 6, 2021, chief medical officers (CMOs) from the regional hospitals strongly advocated for the use of universal masking to bend the curve of surging COVID-19 cases and hospitalizations. Hospital CMOs indicated that hospitals were experiencing dangerously high capacity limitations. Since the implementation of the mask order on August 6, 2021, hospital CMOs and other healthcare leaders have reiterated the importance of masking to stem the surge in cases and lessen the strain on the health care system.
 - "Kansas City is in a state of crisis. We, at the bedside of patients, whether they're suffering from coronavirus or any other injury or illness are quite literally running from one fire to the next. What's different now is that again, we are seeing younger patients, sicker patients, patients who were baseline healthy before getting coronavirus."
– Dr. Andrew Schlachter, Pulmonologist, Saint Luke's Health System
accessed 8/25/2021 via KMBC 9 News
<https://www.kmbc.com/article/lees-summit-saint-lukes-east-hospital-icu-at-capacity-mostly-with-covid-19-patients/37390092>
 - "This is the longest stretch we've had with this many children in the hospital. We were at our highest back in the Fall, in November I believe, we were around 13 in-house, and we're between 15 and 20 right now routinely."
–Dr. Jennifer Watts, Chief Emergency Management Medical Officer, Children's Mercy
accessed 8/25/2021 via KSHB 41 News
<https://www.kshb.com/news/coronavirus/childrens-mercy-doctors-respond-to-missouri-attorney-general-lawsuit>
 - "We have tons of data from schools, I don't know how much more data we need to say that masks work, that rock has been looked under, we know that the data is there, we know that masks work, let's put it back down and let's move on."
–Dr. Angela Myers, Division Director of Infectious Disease, Children's Mercy
accessed 8/25/2021 via KSHB 41 News
<https://www.kshb.com/news/coronavirus/childrens-mercy-doctors-respond-to-missouri-attorney-general-lawsuit>
 - "Your hospitals are completely full in Kansas City. We looked at the transfer-center numbers and transfer-center requests. We're going to set a record this month. We're going to hit about 3,000. That is 100 transfer requests a day." [Stites went on to say that the University of Kansas Health System is taking less than one-third of requested transfers at this time due to capacity limitations]
–Dr. Steven Stites, CMO, University of Kansas Medical Center
accessed 8/25/2021 via KSHB 41 News

<https://www.kshb.com/news/coronavirus/believe-the-science-ku-doctors-talks-about-importance-of-covid-19-vaccination-masks>

Stress to Emergency Medical Services (EMS) System

- Increasing volumes in area hospitals are impacting local emergency service agencies. EMS crews are being required to wait a more lengthy amount of time to transfer patients to the care of emergency departments. In addition, EMS crews are being required to transport patients farther away from a given agency's coverage area. As transport distance and time increase, EMS availability in their primary areas of responsibility decrease.
 - Emergency Service crews in the Kansas City region are experiencing increasing "wall time". Wall time is the time an EMS crew waits to transfer care of their patient to emergency department staff. As wall time increases, EMS availability for the next emergency decreases.
 - Eleven ambulances from FEMA ambulance contract deployed to region A on August 7, 2021 to assist EMS in decompressing hospitals to increase capacity to care for COVID patients. As of August 25, 2021, over 200 patients have been transported by these strike teams – with the furthest one being to Oklahoma.
- EMS agencies are finding hospitals that are state designated as stroke, STEMI, or trauma centers are experiencing a higher number of "Time Critical Diagnosis (TCD)" Diversions – where the hospital is unable to accept TCD patients. By state regulation, EMS agencies are required to transport patients suffering a TCD emergency to these specialized hospitals and care centers. EMS crews are being required to travel farther to find an open TCD center. As these emergencies are time critical, spending more time without the specialized treatment of a specialized care center is not ideal for patient outcomes.
- Data provided by Mid-America Regional Emergency Rescue Committee on August 25, 2021

Masking to Decrease Spread

CDC Recommendations on Masking for Vaccinated and Unvaccinated Individuals

- On July 27, 2021, the CDC issued new guidance, recommending all vaccinated individuals (in addition to their previous recommendation for only unvaccinated individuals) in "substantial" or "high" transmission areas, with either more than 50 cases per 100,000 in the area over a seven-day period, or with a percent positivity higher than 5%, wear masks indoors.
- As of August 25, 2021, Jackson County, as well as every county adjacent to Jackson County in Missouri and Kansas, are classified as high transmission areas according to the CDC.

How COVID Spreads and Why Masking Helps Decrease Spread

- CDC Statement on Mask Wearing based on Available Research
 - "SARS-CoV-2 infection is transmitted predominately by inhalation of respiratory droplets generated when people cough, sneeze, sing, talk, or breathe. CDC recommends community use of [masks](#), specifically non-valved multi-layer cloth masks, to prevent transmission of SARS-CoV-2. Masks are primarily intended to reduce the emission of virus-laden droplets ("source control"), which is especially relevant for asymptomatic or

presymptomatic infected wearers who feel well and may be unaware of their infectiousness to others, and who are estimated to account for more than 50% of transmissions. Masks also help reduce inhalation of these droplets by the wearer (“filtration for wearer protection”). The community benefit of masking for SARS-CoV-2 control is due to the combination of these effects; individual prevention benefit increases with increasing numbers of people using **proper** masks **consistently and correctly**. Adopting universal masking policies can help avert future lockdowns, especially if combined with other non-pharmaceutical interventions such as *social distancing, hand hygiene, and adequate ventilation.*”

- “...wearing a face covering decreased the number of projected droplets by >1000-fold. We estimated that a person standing 2m from someone coughing without a mask is exposed to over 1000 times more respiratory droplets than from someone standing 5 cm away wearing a basic single layer mask. Our results indicate that face coverings show consistent efficacy at blocking respiratory droplets.”
 - Bandiera L., Pavar G., Pisetta G., et al. Face coverings and respiratory tract droplet dispersion. medRxiv. 2020;doi:10.1101/2020.08.11.20145086
 - <https://www.medrxiv.org/content/10.1101/2020.08.11.20145086v1.full.pdf>
- “Compelling data now demonstrate that community mask wearing is an effective nonpharmacologic intervention to reduce the spread of this infection, especially as source control to prevent spread from infected persons, but also as protection to reduce wearers’ exposure to infection.”
 - Brooks, J. T., & Butler, J. C. (2021). Effectiveness of Mask Wearing to Control Community Spread of SARS-CoV-2. JAMA, 325(10): 998-999.
- Transmission by Persons Who Don’t Know That They Are Infected is a Factor In Increased Cases
 - The issue of asymptomatic spreaders has been a concern for most of the pandemic:
 - “We found that the majority of incidences may be attributable to silent transmission from a combination of the presymptomatic stage and asymptomatic infections.”
 - As COVID-19 may be transmitted up to 2 days before symptom onset, implementation of masking policies based on symptoms alone would miss not only asymptomatic but also presymptomatic individuals.
 - Moghadas SM, Fitzpatrick MC, Sah P, et al. The implications of silent transmission for the control of COVID-19 outbreaks. Proc Natl Acad Sci U S A. Jul 28 2020;117(30):17513-17515. doi:10.1073/pnas.2008373117
 - <https://www.pnas.org/content/pnas/117/30/17513.full.pdf>
 - “...the identification and isolation of persons with symptomatic COVID-19 alone will not control the ongoing spread of SARS-CoV-2.”
 - Johansson MA, Quandelacy TM, Kada S, et al. SARS-CoV-2 Transmission From People Without COVID-19 Symptoms. JAMA Netw Open. Jan 4 2021;4(1):e2035057. doi:10.1001/jamanetworkopen.2020.35057

Available Evidence Demonstrating Impact of Community Mask Mandates – A Comparison Between Communities With and Without Mask Mandates

- “After implementation of mask mandates in 24 Kansas counties, the increasing trend in COVID-19 incidence reversed. Although rates were considerably higher in mandated counties than in nonmandated counties by the executive order, rates in mandated counties declined markedly after July 3, compared with those in nonmandated counties. Kansas counties that had mask mandates in place appear to have mitigated the transmission of COVID-19, whereas counties that did not have mask mandates continued to experience increases in cases.”
 - <https://www.cdc.gov/mmwr/volumes/69/wr/mm6947e2.htm>
- “Mask requirements were also implemented as part of a multicomponent approach in Arizona, where COVID-19 incidence stabilized and then decreased after implementation of a combination of voluntary and enforceable community-level mitigation strategies, including mask requirements, limitations on public events, enhanced sanitation practices, and closure of certain services and businesses.”
 - <https://www.cdc.gov/mmwr/volumes/69/wr/mm6947e2.htm>
- “Counties that adopted the July mask mandate in Kansas experienced significantly lower rates of COVID-19 cases, hospitalizations, and deaths compared with those that did not. These findings corroborate previous studies that found that mask mandates slowed the growth of COVID-19 cases in Kansas counties and reduced the spread in states. Results of this study suggest that mask mandates may provide an effective way to reduce cases of COVID-19, hospitalizations, and deaths.”
 - jamanetwork.com/journals/jamanetworkopen/fullarticle/2781283
- “Leffler et al. used a multiple regression approach, including a range of policy interventions and country and population characteristics, to infer the relationship between mask use and SARS-CoV-2 transmission. They found that transmission was 7.5 times higher in countries that did not have a mask mandate or universal mask use, a result similar to that found in an analogous study of fewer countries. Another study looked at the differences between US states with mask mandates and those without, and found that the daily growth rate was 2.0 percentage points lower in states with mask mandates, estimating that the mandates had prevented 230,000 to 450,000 COVID-19 cases by May 22, 2020.”
 - <https://www.pnas.org/content/118/4/e2014564118#sec-2>
- During March 22 – October 17, 2020, 10 sites participating in the COVID-19-Associated Hospitalization Surveillance Network in states with statewide mask mandates reported a decline in weekly COVID-19-associated hospitalization growth rates by up to 5.6 percentage points for adults aged 18-64 after mandate implementation, compared with growth rates during the 4 weeks preceding implementation of the mandate.
 - https://www.cdc.gov/mmwr/volumes/70/wr/mm7006e2.htm#T1_down

Additional Studies on Effectiveness and Proper Wearing of Masks

- Moghadas SM, Fitzpatrick MC, Sah P, et al. The implications of silent transmission for the control of COVID-19 outbreaks. *Proc Natl Acad Sci U S A*. Jul 28 2020;117(30):17513-17515. doi:10.1073/pnas.2008373117

- Lindsley WG, Blachere FM, Law BF, Beezhold DH, Noti JD. Efficacy of face masks, neck gaiters and face shields for reducing the expulsion of simulated cough-generated aerosols. *Aerosol Sci Technol.* 2020; in press
- Leung NHL, Chu DKW, Shiu EYC, et al. Respiratory virus shedding in exhaled breath and efficacy of face masks. *Nature medicine.* Apr 03 2020;26(5):676-680. doi:<https://dx.doi.org/10.1038/s41591-020-0843-2>
- Ueki H, Furusawa Y, Iwatsuki-Horimoto K, et al. Effectiveness of Face Masks in Preventing Airborne Transmission of SARS-CoV-2. *mSphere.* Oct 21 2020;5(5)doi:10.1128/mSphere.00637-20
- Brooks JT, Beezhold DH, Noti JD, et al. Maximizing Fit for Cloth and Medical Procedure Masks to Improve Performance and Reduce SARS-CoV-2 Transmission and Exposure. *MMWR Morb Mortal Wkly Rep.* 2021
- Hendrix MJ, Walde C, Findley K, Trotman R. Absence of Apparent Transmission of SARS-CoV-2 from Two Stylists After Exposure at a Hair Salon with a Universal Face Covering Policy – Springfield, Missouri, May 2020. *MMWR Morb Mortal Wkly Rep.* Jul 17 2020;69(28):930-932. doi:10.15585/mmwr.mm6928e2
- Van Dyke ME, Rogers TM, Pevzner E, et al. Trends in County-Level COVID-19 Incidence in Counties With and Without a Mask Mandate – Kansas, June 1-August 23, 2020. *MMWR Morb Mortal Wkly Rep.* Nov 27 2020;69(47):1777-1781. doi:10.15585/mmwr.mm6947e2

Children and Masking

Transmission and Infection in Children

- Children and adolescents can be infected with SARS-CoV-2, can get sick with COVID-19, and can spread the virus to others. In the United States through March 2021, the estimated cumulative rates of SARS-CoV-2 infection and COVID-19 symptomatic illness in children ages 5-17 years were comparable to infection and symptomatic illness rates in adults ages 18-49 and higher than rates in adults ages 50 and older. Estimated cumulative rates of infection and symptomatic illness in children ages 0-4 are roughly half of those in children ages 5-17, but are comparable to those in adults ages 65 years or older. More data is being collected on the impact of the delta variant on these estimates.
 - <https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/transmission-k-12-schools.html#COVID-19-children-adolescents>
 - Szablewski CM, Chang KT, Brown MM, et al. SARS-CoV-2 Transmission and Infection Among Attendees of an Overnight Camp – Georgia, June 2020. *MMWR Morb Mortal Wkly Rep* 2020;69(31):1023-1025. doi:10.15585/mmwr.mm6931e1
 - Atherstone C, Siegel M, Schmitt-Matzen E, et al. SARS-CoV-2 Transmission Associated with High School Wrestling Tournaments – Florida, December 2020-January 2021. *MMWR Morb Mortal Wkly Rep* 2021;70(4):141-143. doi:10.15585/mmwr.mm7004e4
- National surveillance data from the United Kingdom (UK) showed an association between regional COVID-19 incidence and incidence in schools. For every five additional cases per 100,000 population in regional incidence, the risk of a school outbreak increased by 72%.

- https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/transmission_k_12_schools.html#COVID-19-children-adolescents
- Reducing transmission of SARS-CoV-2 in the community to alleviate burden on the health care system is dependent upon limiting transmission among youth in the school setting. Studies suggest that the proportion of index cases increased with age. For example, 12% of 89,191 households in a JAMA study had an index case aged 0 to 3 and 38% had an index case aged 14 to 17 years.
 - <https://jamanetwork.com/journals/jamapediatrics/fullarticle/2783022>
- Nationally, the number of COVID-19 cases in children has steadily increased since the beginning of July. After declining in early summer, child cases have seen a fourfold increase from July 22, 2021 through August 15, 2021, rising from about 38,000 cases per week to 180,000 cases per week.
 - <https://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/children-and-covid-19-state-level-data-report/#:~:text=Over%20180%2C000%20cases%20were%20added,to%20180%2C000%20the%20past%20week>
- “If you want to keep kids safe and you want to keep kids in school, then you better have masks on. You saw the stats – Children’s Mercy has a lot of COVID kids now. This is different; the delta variant is different.”

-Dr. Steven Stites, Chief Medical Officer, The University of Kansas Health System
accessed 8/25/2021 – Fox 4 News, Kansas City
<https://fox4kc.com/tracking-coronavirus/the-delta-variant-is-different-why-doctors-say-this-school-year-is-even-more-dangerous/>
- “We have learned a lot in the last 18 months of this pandemic and what we have really seen from our schools is that masks have really stopped in school transmission of COVID-19.”

-Dr. Jennifer Schuster, Pediatric Infectious Disease Specialist, Children’s Mercy
accessed August 25, 2021 – The University of Kansas Medical Center – COVID 19 Update: What happens in schools without masking (August 17, 2021)
<https://www.facebook.com/208729133103/videos/124064183198310>
- “IF we open schools up without social distancing, without vaccination, without masks, we are going to see problems. We’re going to see children land in the hospital and that’s the last thing that we want to do. This is now a vaccine-preventable disease.”

-Dr. Barbara Pahud, Children’s Mercy
accessed August 25, 2021 – KSNT News, Topeka
<https://www.ksnt.com/health/coronavirus/childrens-mercy-hospital-at-full-capacity-as-covid-19-other-illnesses-bring-more-kids-in/>

Illness in Children

- The extent to which children suffer from long-term consequences of COVID-19 is still unknown.
 - https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/transmission_k_12_schools.html#COVID-19-children-adolescents
- Although rates of severe outcomes (e.g. hospitalization, mortality) from COVID-19 among individual children and adolescents are low, youth who belong to some racial and ethnic minority groups are disproportionately affected similar to adults.

- <https://www.cdc.gov/coronavirus/2019-ncov/science/science-briefs/transmission-k-12-schools.html#COVID-19-children-adolescents>

Lack of Vaccine Eligibility in Children Under 12

- Children under 12 currently lack the ability to access a vaccine. Although Emergency Use Authorization for children 5-12 is expected within the coming months, the clinical trials for the Pfizer and Moderna vaccine may begin expanding the number of children in this age range who can participate.

Need for Mitigation Strategies in Schools

- The goal of the Jackson County Health Department, American Academy of Pediatrics, Centers for Disease Control and Prevention, and Children’s Mercy is for students to be in person for school during the 2021/2022 school year. In order to do so safely and to avoid disruptions to the learning environment, schools must employ a multi-layered approach of mitigation strategies including universal mask wearing for all teachers, staff, students, and visitors to K-12 schools, regardless of vaccination status. This is consistent with similar guidance offered by the American Academy of Pediatrics, Centers for Disease Control and Prevention, Children’s Mercy, and the Jackson County Health Department.
 - Centers for Disease Control and Prevention . (Accessed August 25, 2021). *Schools and Child Care Programs*. Retrieved from Centers for Disease Control and Prevention: <https://www.cdc.gov/coronavirus/2019-ncov/community/schools-childcare/index.html>
 - Children's Mercy. (Accessed August 25, 2021). *Guidance for Keeping Schools Safe for Students and Staff*. Retrieved from Returning to School and the Community Safely: <https://www.childrensmercy.org/siteassets/media/covid-19/guidance-for-school-re-opening-during-the-covid-19-pandemic.pdf>
 - American Academy of Pediatrics. (Accessed August 25, 2021). *COVID-19 Guidance for Safe Schools*. Retrieved from American Academy of Pediatrics: <https://services.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>

Regional Mitigation Communication

Regional News Release for Public Health Advisory

- Ten Kansas City area health departments (including Cass, Clay, Jackson and Platte Counties as well as Kansas City Health Department in Missouri) issued a Public Health Advisory through a Regional News Release on July 16, 2021. This recommended mask-wearing while indoors for all unvaccinated persons and vaccinated individuals with underlying health conditions, in line with the CDC guidance. This advisory was a result of discussions during a joint meeting with the Chief Medical Officers from several metropolitan area hospitals. The Chief Medical Officers found that due to the rapidly increasing COVID-19 cases and hospitalizations in the Kansas City Area due to emergence of the delta variant, unvaccinated residents of all ages who have resumed normal activities without adequate protection (masking and vaccinations) are most at risk, particularly immune-compromised individuals.

- This Advisory was prior to the CDC's Morbidity and Mortality Weekly Report from July 27, 2021 that stated: "Based on emerging evidence on the Delta variant (2), CDC also recommends that fully vaccinated persons wear masks in public indoor settings in areas of substantial or high transmission."

Updated CDC Guidance

Summary of Latest CDC Guidance

- Updated information for fully vaccinated people given new evidence on the B.1.617.2 (Delta) variant currently circulating in the United States.
- Added a recommendation for fully vaccinated people to wear a mask in public indoor settings in areas of [substantial or high transmission](#).
- Added information that fully vaccinated people might choose to wear a mask regardless of the level of transmission, particularly if they are immunocompromised or at [increased risk for severe disease](#) from COVID-19, or if they have someone in their household who is immunocompromised, at increased risk of severe disease or not fully vaccinated.
- Added a recommendation for fully vaccinated people who have a known exposure to someone with suspected or confirmed COVID-19 to be tested 3-5 days after exposure, and to wear a mask in public indoor settings for 14 days or until they receive a negative test result.
- CDC recommends universal indoor masking for all teachers, staff, students, and visitors to schools, regardless of vaccination status.
- Infections happen in only a small proportion of fully vaccinated people, even with the Delta variant. However, preliminary evidence suggests that fully vaccinated people who do become infected with the Delta variant can spread the virus to others. To reduce their risk of becoming infected with the Delta variant and potentially spreading it to others, CDC recommends that fully vaccinated people:
- Fully vaccinated people might choose to mask regardless of the level of transmission, particularly if they or someone in their household is immunocompromised or at [increased risk for severe disease](#), or if someone in their household is unvaccinated. People who are at increased risk for severe disease include older adults and those who have certain medical conditions, such as diabetes, overweight or obesity, and heart conditions.
- Get tested if experiencing COVID-19 symptoms.
- Get tested 3-5 days following a known exposure to someone with suspected or confirmed COVID-19 and wear a mask in public indoor settings for 14 days after exposure or until a negative test result.
- Isolate if they have tested positive for COVID-19 in the prior 10 days or are experiencing COVID-19 symptoms.
- General prevention of COVID-19: <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html> (for anyone)

- Wear a mask
- Stay 6 feet away from others
- Get vaccinated
- Avoid crowds and poorly ventilated spaces
- Wash your hands often
- Cover coughs and sneezes
- Clean and disinfect
- Monitor your health daily

Exclusions to the Order

Minors Below the Age of 5

- Current CDC recommendations state that face masks can be safely worn by all children 2 years of age and older, including most children with special health conditions, with rare exception. Children should not wear a mask if they are under 2 years old, however, because of suffocation risk. In addition, for children under age five in community settings the World Health Organization recommends against facemasks.
 - <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html#stay6ft>
 - <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated-guidance.html>
 - <https://www.jwatch.org/fw116969/2020/08/24/who-recommends-against-face-masks-kids-community-settings>

Persons with Certain Disabilities

- Persons who have disabilities where face coverings or masks constitute a substantial impairment to their health and well-being based upon medical, behavioral, or legal direction: Employees who can't wear a face mask for medical reasons, should not work in close proximity with other coworkers or the public. For the public who can't wear face masks for medical reasons, they should utilize alternative services such as online shopping, and/or curbside pickup and delivery.

Persons in a Restaurant, Bar, or Similar Establishment

- While consuming food, exposure can be minimized by seating households and close contact groups together, maintaining proper social distance, and remaining seated while consuming food or drink. The CDC recommends that restaurant and bar settings consider spacing tables at least 6 feet apart to mitigate risk while customers are eating and drinking.
 - <https://www.cdc.gov/coronavirus/2019-ncov/community/organizations/business-employers/bars-restaurants.html>
 - Guy GP Jr., Lee FC, Sunshine G, et al. Association of State-Issued Mask Mandates and Allowing On-Premises Restaurant Dining with County-Level COVID-19 Case and Death

Growth Rates — United States, March 1–December 31, 2020. MMWR Morb Mortal Wkly Rep 2021;70:350–354. DOI: <http://dx.doi.org/10.15585/mmwr.mm7010e3>

- Mask mandates and restricting any on-premises dining at restaurants can help limit community transmission of COVID-19 and reduce case and death growth rates. These findings can inform public policies to reduce community spread of COVID-19.
 - <https://www.cdc.gov/mmwr/volumes/70/wr/mm7010e3.htm>

Persons Obtaining a Service Involving the Nose or Face

- This exclusion is only for those who are receiving the service. Person's rendering the services must still wear a facemask at all times.

Persons Alone in a Separate Room or Office

- In a completely enclosed separate room or office, it is permissible to forgo masking due to minimal risk.

Face Shields or Goggles as a Substitute for Masks

- The CDC does not recommend using face shields or goggles as a suitable substitute for masks. Goggles or other eye protection may be used in addition to a mask. Do NOT put a plastic face shield (or mask) on newborns or infants.
- Face shields and goggles are primarily used to protect the eyes of the person wearing it. Goggles do not cover the nose and mouth. Face shields are not as effective at protecting you or the people around you from respiratory droplets. Face shields have large gaps below and alongside the face, where your respiratory droplets may escape and reach others around you and will not protect you from respiratory droplets from others. However, wearing a mask may not be feasible in every situation for some people.
 - <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cloth-face-cover-guidance.html>

Conclusion

The Jackson County Health Department strongly supports the extension of an Order requiring masks in all indoor places within Eastern Jackson County until the County is no longer experiencing "High" or "Substantial" levels of community transmission as indicated by the CDC. Additionally, such an order is necessary to provide relief to local hospitals and to alter the curve of the Kansas City Metropolitan's latest COVID-19 surge.