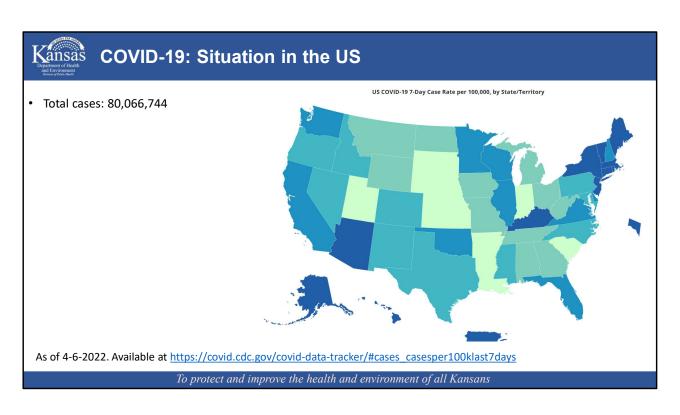


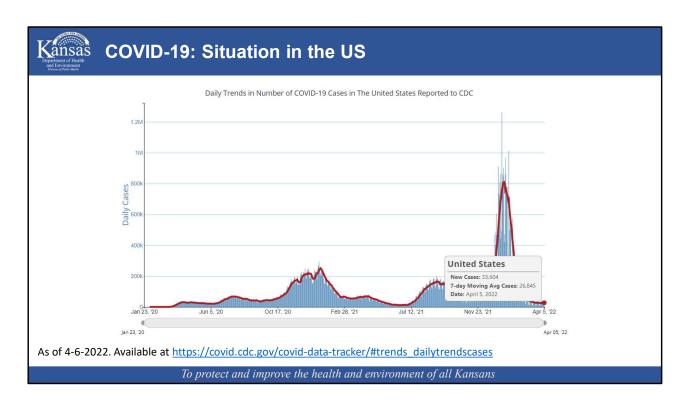
Global Map: <a href="https://covid.cdc.gov/covid-data-tracker/#global-counts-rates">https://covid.cdc.gov/covid-data-tracker/#global-counts-rates</a>.

This week, there are over 494 million cases and there are 6,165,377 deaths around the world.

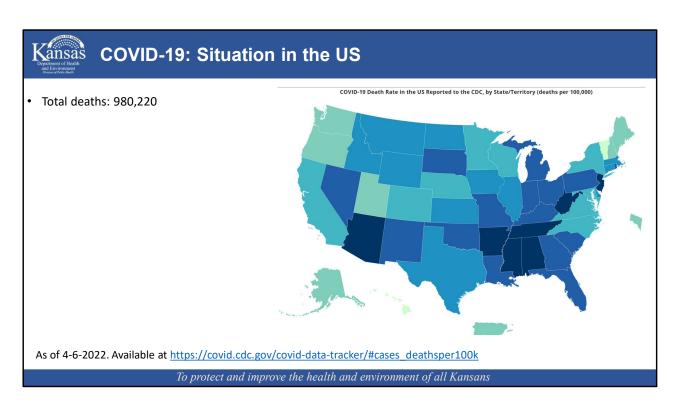


As of yesterday:

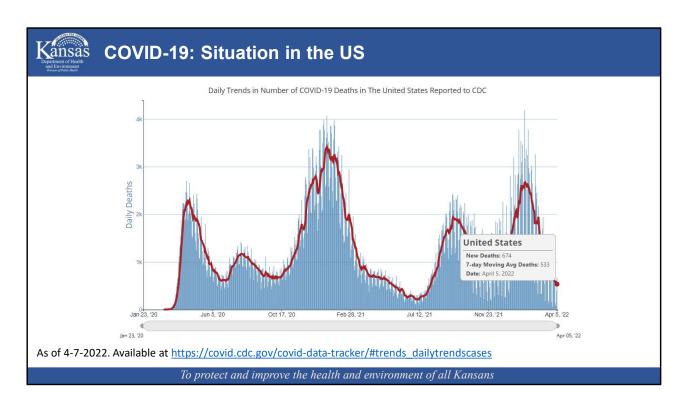
Total cases: 80,066,744



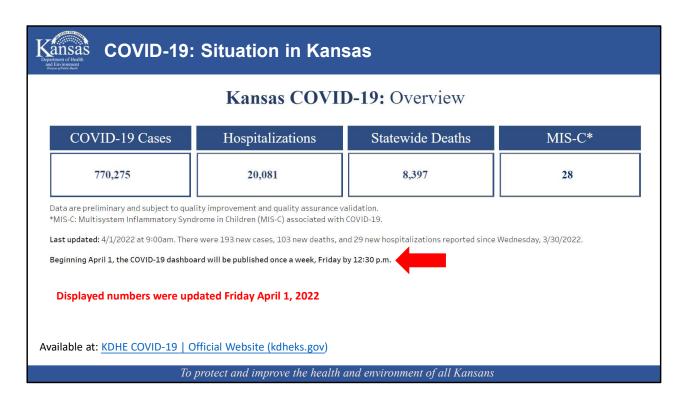
The 7 day average number of cases in the US is 26,845 cases per day. That is down slightly from about 28,657 cases per day two weeks ago.



As of yesterday: 980,220

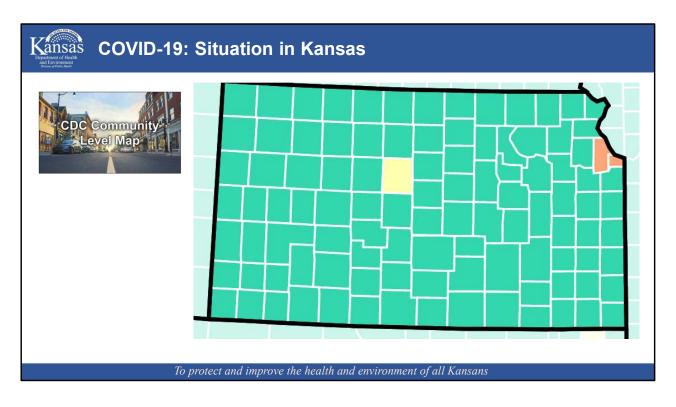


The 7 day average number of deaths in the US is 533 deaths per day which is down from two weeks ago at 861.



A note here, these numbers were last updated on Friday April 1<sup>st</sup>. Beginning on that date, data will be updated on this dashboard once a week so the next update won't be until tomorrow.

As of April 1st, in Kansas, we had 770,275 cases and 8,397 deaths statewide.



Looking at CDC's COVID-19 Community Levels: most of the state is green (low). Wyandotte and Leavenworth are red (high) and Russell is at medium (yellow).

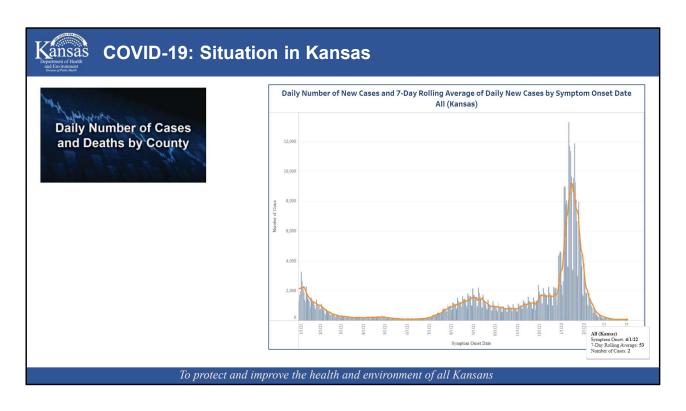
### High:

Wear a mask indoors in public

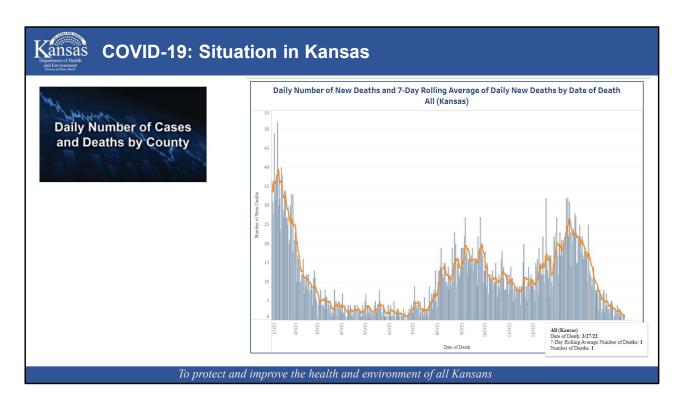
Stay up to date with COVID-19 vaccines

Get tested if you have symptoms

Additional precautions may be needed for people at high risk for severe illness



The 7 day rolling average number of cases on April 1st was 53 cases per day.



The day average number of deaths on April 1st was 1 death per day.



# How to Report Novel Coronavirus Testing, Infections, & Deaths in Kansas

Updated 4/4/2022: COVID-19 testing facilities that test under a CLIA certificate of waiver are no longer required to report NEGATIVE results for tests authorized for use under a CLIA certificate of waiver. This includes rapid PCR and antigen tests performed for a variety of purposes including, but not limited to, screening and diagnostic testing at schools, correctional facilities, employee testing programs, long-term care facilities, and rapid testing performed in pharmacies, medical provider offices, and drive-through and pop-up testing sites.

The updated guidance still requires laboratories certified under CLIA to perform moderate-or high-complexity tests to report both POSITIVE AND NEGATIVE results for laboratory-based <u>nucleic acid amplification tests</u> (NAATs).

#### KDHE requires mandated reporters to report:

Positive COVID-19 test results

• Report positive antigen or PCR point of care results directly to KDHE via the Kansas Reportable Disease Portal <a href="https://diseasereporting.kdhe.ks.gov/">https://diseasereporting.kdhe.ks.gov/</a> within 24 hours.

Available at: https://www.kdhe.ks.gov/1500/How-to-Report-Novel-Coronavirus-Testing-

To protect and improve the health and environment of all Kansans

The KDHE website that explains what is reportable as far as COVID-19 goes was updated to reflect the updates to lab reporting we discussed 2 weeks ago; essentially that only positive results for rapid PCR and rapid antigen tests that are authorized for use under a CLIA Certificate of Waiver are reportable to KDHE now. Myron will go into more detail during his presentation.



Cardiac Complications After SARS-CoV-2 Infection and mRNA COVID-19 Vaccination — PCORnet, United States, January 2021–January 2022

Early Release / April 1, 2022 / 71

Jason P. Block, MD¹; Tegan K. Boehmer, PhD²; Christopher B. Forrest, MD, PhD³; Thomas W. Carton, PhD⁴; Grace M. Lee, MD⁵; Umed A. Ajani, MBBS²; Dimitri A. Christakis, MD⁶; Lindsay G. Cowell, PhD¹; Christine Draper¹; Nidhi Ghildayal, PhD¹; Aaron M. Harris, MD²; Michael D. Kappelman, MD⁶; Jean Y. Ko, PhD²; Kenneth H. Mayer, MD⁶; Kshema Nagavedu, MPH¹; Matthew E. Oster, MD²¹⁰; Anuradha Paranjape, MD¹¹; Jon Puro, MPA¹²; Matthew D. Ritchey²; David K. Shay, MD²; Deepika Thacker, MD¹³; Adi V. Gundlapalli, MD, PhD² (View author affiliations)

View suggested citation

### **Summary**

What is already known about this topic?

Studies have found an increased risk for cardiac complications after SARS-CoV-2 infection and mRNA



#### Available at:

https://www.cdc.gov/mmwr/volumes/71/wr/mm7114e1.htm?s\_cid=mm7114e1\_e&ACSTrackingID=USCDC\_921-DM79035&ACSTrackingLabel=MMWR%20Early%20Release%20-%20Vol.%2071%2C%20April%201%2C%202022&deliveryName=USCDC\_921-DM79035

To protect and improve the health and environment of all Kansans

Cardiac complications, particularly myocarditis and pericarditis, have been associated with SARS-CoV-2 infection and mRNA COVID-19 vaccination. This study aimed to compare the risk of cardiac complications after infection versus after vaccination.

The incidence of cardiac outcomes after mRNA COVID-19 vaccination was highest for males aged 12–17 years after the second vaccine dose; however, within this demographic group, the risk for cardiac outcomes was 1.8–5.6 times as high after SARS-CoV-2 infection than after the second vaccine dose. The risk for cardiac outcomes was likewise significantly higher after SARS-CoV-2 infection than after first, second, or unspecified dose of mRNA COVID-19 vaccination for all other groups by sex and age (RR 2.2–115.2).



### Kansas COVID-19: New Literature

Effectiveness of Homologous and Heterologous COVID-19
Booster Doses Following 1 Ad.26.COV2.S (Janssen [Johnson & Johnson]) Vaccine Dose Against COVID-19—Associated
Emergency Department and Urgent Care Encounters and
Hospitalizations Among Adults — VISION Network, 10 States,
December 2021—March 2022

Weekly / April 1, 2022 / 71(13);495-502

On March 29, 2022, this report was posted online as an MMWR Early Release.

Karthik Natarajan, PhD¹².2\*; Namrata Prasad, PhD³⁴.\*; Kristin Dascomb, MD⁵; Stephanie A. Irving, MHS⁶; Duck-Hye Yang, PhD²; Manjusha Gaglani, MBBS⁶; Nicola P. Klein, MD¹⁰; Malini B. DeSilva, MD¹¹; Toan C. Ong, PhD¹²; Shaun J. Grannis, MD¹³.¹; Edward Stenehjem, MD⁵; Ruth Link-Gelles, PhD³; Elizabeth A. Rowley, DrPh¹; Allison L. Naleway, PhD⁰; Jungmi Han¹; Chandni Raiyani, MPH⁵; Gabriela Vazquez Benitez, PhD¹¹; Suchitra Rao, MBBS¹²; Ned Lewis, MPH¹⁰; William F. Fadel, PhD¹³.¹5; Nancy Grisel, MPP⁵; Eric P. Griggs, MPH³; Margaret M. Dunne, MSc²; Melissa S. Stockwell, MD²⁴.6¹?† Mufaddal Mamawala, MBBS⁶; Charlene McEvoy, MD¹¹; Michelle A. Barron, MD¹²; Kristin Goddard, MPH¹⁰

#### Available at:

https://www.cdc.gov/mmwr/volumes/71/wr/mm7113e2.htm?s\_cid=mm7113e2\_e&ACSTrackingID=USCDC\_921-DM78711&ACSTrackingLabel=MMWR%20Early%20Release%20-%20Vol.%2071%2C%20March%2029%2C%202022&deliveryName=USCDC\_921-DM78711

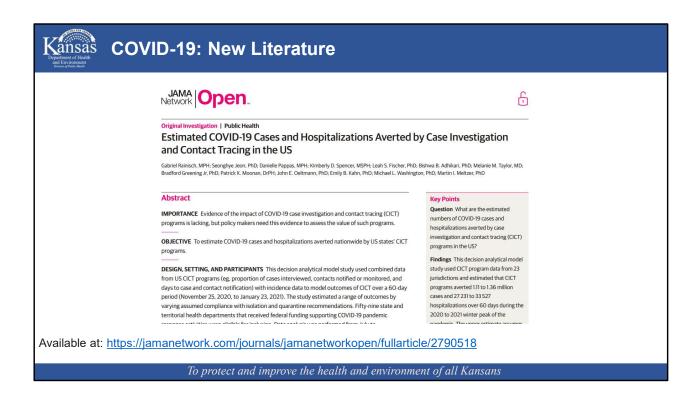
To protect and improve the health and environment of all Kansans

CDC recommends that all persons aged ≥18 years receive a single COVID-19 vaccine booster dose ≥2 months after receipt of an Ad.26.COV2.S (Janssen [Johnson & Johnson]).

The recommendation is to get the booster dose with an mRNA vaccine over a second Johnson and Johnson.

Data on real-world vaccine effectiveness (VE) of different booster strategies following a primary Janssen vaccine dose are limited, particularly during the period of Omicron variant predominance. The VISION Network§ determined real-world VE of 1 Janssen vaccine dose and 2 alternative booster dose strategies: 1) a homologous booster (i.e., 2 Janssen doses) and 2) a heterologous mRNA booster (i.e., 1 Janssen dose/1 mRNA dose). In addition, VE of these booster strategies was compared with VE of a homologous booster following mRNA primary series vaccination (i.e., 3 mRNA doses).

VE against laboratory-confirmed COVID-19—associated ED/UC encounters was 24% after 1 Janssen dose, 54% after 2 Janssen doses, 79% after 1 Janssen/1 mRNA dose, and 83% after 3 mRNA doses. VE for the same vaccination strategies against laboratory-confirmed COVID-19—associated hospitalizations were 31%, 67%, 78%, and 90%, respectively. All booster strategies provided higher protection than a single Janssen dose against ED/UC visits and hospitalizations during Omicron variant predominance.



This is an interesting food for thought article. As we are in, what I hope will be a long breathing period from the COVID-19 pandemic, it's important to reflect on what we did right and where we can improve in the response to the spread of similar diseases. Think back to how little we knew at the beginning of the pandemic; was the virus airborne, can it live on surfaces for days on end, is it only spread by people who show symptoms (no, in fact it can be spread several days before a person starts showing symptoms and, even more unusual, by people who never have symptoms), speaking of symptoms, is there almost always a fever, no turns out fever became a less and less common symptom and more and more symptoms were added to the list, are reinfections rare (no, in fact they didn't end up being as rare as we thought and people could be reinfected with the same strain or multiple strains of the virus as the virus kept evolving), etc, etc. We have learned a lot in almost 2.5 years.

As this group is well aware, but the general public really wasn't aware, reducing exposure to people with communicable diseases through isolation and quarantine are basic tenets of transmission prevention. Public health programs regularly conduct case investigation and contact tracing (CICT) as a means of notifying persons infected with or exposed to communicable diseases and, often, of their need to isolate or quarantine. CICT existed well before COVID-19 and this was a tool that Public Health pulled out of the toolbox when the pandemic hit; don't forget, we didn't have pharmaceutical interventions. No vaccines, no

therapies, we had to rely on non pharmaceutical interventions of which isolation and quarantine are some of the basic tools.

But as the pandemic went on, many people started to look at whether universal CICT was still effective given that vaccines and therapies were becoming widely available and given the public's decreasing willingness to participate in case investigations, to tell Public Health who their close contacts were, the decreasing willingness of close contacts to quarantine for the full incubation period, and given the difficulty in actually investigating all cases and notifying close contacts in a timely manner when we were in surges.

So, this paper used a mathematical modelling tool in combination with data from CICT programs to estimate cases and hospitalizations averted by CICT activities among states and territories funded by CDC's ELC (Epidemiology and Laboratory Capacity for Prevention and Control of Emerging Infectious Diseases) program (that is the main program through which infectious disease epidemiology and laboratory work are supported in states). They focused on the 60-day period from November 25, 2020, to January 23, 2021.

The study estimated that CICT averted 1.11 to 1.36 million cases and 27,231 to 33,527 hospitalizations from November 25, 2020, to January 23, 2021, across all 23 jurisdictions analyzed. CICT may have reduced the COVID-19 burden by 17% to 21% during this time period. The lower estimates assume fractions of interviewed cases and contacts complied with isolation and quarantine guidelines, whereas the upper estimates assume all interviewed cases and monitored contacts did so.

The study estimated that jurisdictions in the Midwest US averted the most cases on a per population basis because of CICT, averting between 1444 cases per 100,000 population (in our low-impact scenario) and 1600 cases per 100,000 (in our high-impact scenario).

So, an interesting study and valuable to reflect on the effectiveness of all of our control measures.

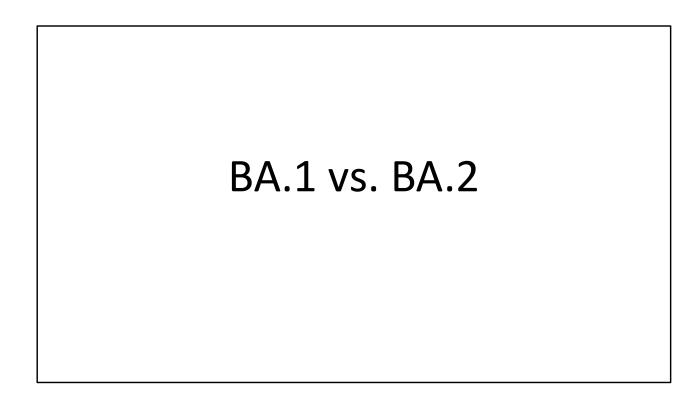


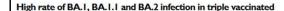
Focused on papers that studied BA.1 vs. BA.2 including papers previously reviewed. Here is a brief summary:

- •Symptom duration was significantly longer in BA.2 infected compared to BA.1 (median duration of symptoms 8 vs 6 days), p<0.01
- •The odds of being admitted to hospital did not differ between individuals with BA.2 infection compared to BA.1 infection
- •Individuals who were reinfected with BA.2 after having BA.1 reported reduced symptoms overall with a BA.2 reinfection, but some individuals reported an increase in sore throat, coughing, shortness of breath, and chest pain.
- •Since mid-February, the growth rate for BA.2 has settled at approximately 75% greater relative growth for BA.2 compared to BA.1 in the UK.
- •Individuals who received 2 or 3 doses of the SARS-CoV-2 Pfizer vaccine and had breakthrough Omicron infections had substantially augmented immunity against all SARS-CoV-2 variants that is mediated by the B memory cells that were created after vaccination.
- •On the campus of UC San Diego, researchers and public health teams were able to detect emerging variants of concern in wastewater up to 14 days earlier than clinical samples using a novel bioinformatic analyses that has been tested over 295 days and thousands of samples.

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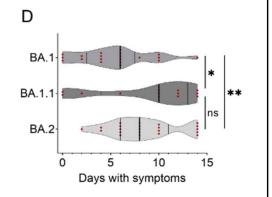
A couple of weeks ago, there were several questions about BA1 versus BA2 so here is some literature for you to take a look at when you can. A few key points, a study showing symptom duration being significantly longer with BA2 infection compared to BA1. Another study showing the risk of hospitalization not being significantly different between the two. A study about reinfection with BA2 after BA1. And an interesting study about wastewater surveillance out of UC San Diego. Please take a look if you are interested.





Ulrika Marking, Sebastian Havervall, Nina Greilert Norin, Wanda Christ, Max Gordon, Henry Ng, Kim Blom, Mia Phillipson, Sara Mangsbo, Anna Smed Sörensen, Peter Nilsson, Sophia Hober, Mikael Åberg, Jonas Klingström, <sup>3</sup> Charlotte Thålin

doi: https://doi.org/10.1101/2022.04.02.22273333



### Major findings:

- Out of 375 healthcare workers who received an mRNA SARS-CoV-2 mRNA vaccine booster, 82 were infected with Omicron.
- · No significant differences were identified between viral load and time to clearance between BA.1, BA.1.1, and BA.2
- Symptom duration was significantly longer in BA.2 infected compared to BA.1 (median duration of symptoms 8 vs 6 days), p<0.01</li>

Limitations: None

URL: https://www.medrxiv.org/content/10.1101/2022.04.02.22273333v1

Summary: The authors performed twice-weekly testing on 375 healthcare workers over 4 weeks after their SARS-CoV-2 booster (Pfizer or ChAdOx1). During the study period, 82 participants and most had symptoms of the common cold and 6 had no symptoms. All participants with BA.2 had symptoms. Additionally, symptom duration was significantly longer in BA.2 infected compared to BA.1 (median duration of symptoms 8 vs 6 days), p<0.01.

# Clinical severity of Omicron sub-lineage BA.2 compared to BA.1 in South Africa

Nicole Wolter, Waasila Jassat, DATCOV-Gen author group, Anne von Gottberg, O Cheryl Cohen doi: https://doi.org/10.1101/2022.02.17.22271030

\*Note: this paper was also reviewed in February but is also shown here to provide clarity on the differences between BA.1 and BA.2 Major findings:

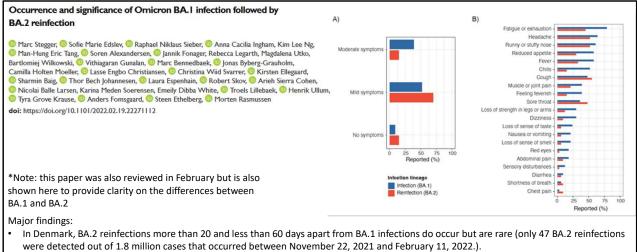
- · The odds of being admitted to hospital did not differ between individuals with BA.2 infection compared to BA.1 infection
- Among hospitalized individuals, after controlling for factors associated with severe disease, the odds of severe disease did not differ for
  individuals with BA.2 compared to BA.1 infection.

Limitations: BA.1 vs. BA.2 were identified using S-gene target failure.

URL: https://www.medrxiv.org/content/10.1101/2022.02.17.22271030v1

Summary: The authors studied South African SARS-CoV-2 cases from December 1, 2021 through January 29, 2022, during which time 680,555 SARS-CoV-2 infections were reported. From week 49 (starting December 5, 2021) through week 4 (ending January 29, 2022), the proportion of S-gene positive infections (BA.2 proxy) increased from 3% (931/31,271) to 80% (2,425/3,031). Among 95,470 samples tested using the TagPath™ COVID-19 PCR assay, 3.6% of individuals with S-gene positive infection (BA.2 proxy) were hospitalized compared to 3.4% with S-gene target failure (SGTF) (BA.1 proxy) infection. The severity analysis was restricted to admissions that had already accumulated outcomes and all patients still in hospital were excluded. Severe disease was defined as a hospitalized patient meeting at least one of the following criteria: admitted to the intensive care unit (ICU), received any level of oxygen treatment, ventilated, received extracorporeal membrane oxygenation (ECMO), experienced acute respiratory distress syndrome and/or died. Among hospitalised individuals diagnosed from 1 December 2021 to 20 January 2022, after controlling for factors associated with severe disease, the odds of severe disease did not differ for individuals with S-gene positive infection (BA.2) compared to SGTF (BA.1) infection (aOR 0.91, 95%CI 0.68-1.22). The odds of severe disease was higher among individuals with a comorbidity (aOR 1.52, 95%CI 1.25-1.84) and among individuals aged 40-59 years (aOR 2.09, 95%CI 1.33-3.31) and ≥60 years (aOR 4.36, 95% CI 2.77-6.85), compared to individuals aged 19-24 years. Children aged 5-12 years (compared to 19-24 years), females, and individuals that had received ≥1 SARS-CoV-2 vaccine dose had a lower

odds of severe disease.



- BA.2 reinfections occurred in mostly in young unvaccinated individuals with mild disease not resulting in hospitalization or death.
- In general, BA.2 symptoms have been reported to be similar to BA.1 (more sore throat than Delta).
- Individuals who were reinfected with BA.2 after having BA.1 reported reduced symptoms overall with a BA.2 reinfection, but some individuals reported an increase in sore throat, coughing, shortness of breath, and chest pain.
  - It also looks like chills, dizziness, lost of taste/smell, nausea/vomiting, red eyes, and sensory disturbances decreased in the BA.2 reinfection more than other symptoms.

Limitations: None, good study

URL: https://www.medrxiv.org/content/10.1101/2022.02.19.22271112v1

Summary: This study investigates the prevalence and clinical presentation of BA.2 reinfection after a BA.1 infection in Denmark. Between November 22, 2021 and February 11, 2022, 1,848,466 million infected individuals were identified and of those, 1,739 cases that fulfilled the criteria of two positive samples with more than 20 and less than 60 days apart. From a randomly selected group of 263 paired samples that were successfully analyzed by WGS, the authors found 187 (71%) cases of reinfections and 47 (18%) of these were Omicron BA.1-BA.2 reinfections. Reinfections mainly occurred in young (<30 years old ), unvaccinated individuals. Reinfections were characterized by mild clinical symptoms and no hospitalizations or deaths. Overall, there was also a significantly reduced viral load in BA.2 reinfection samples as compared to the initial BA.1 infection. Due to the cocirculation of BA.1 and BA.2 in Denmark, the authors conclude that BA.2 reinfection must be relatively rare.

# SARS-CoV-2 variants of concern and variants under investigation in England

# **Technical briefing 39**

25 March 2022

This report provides an update on previous briefings up to 11 March 2022

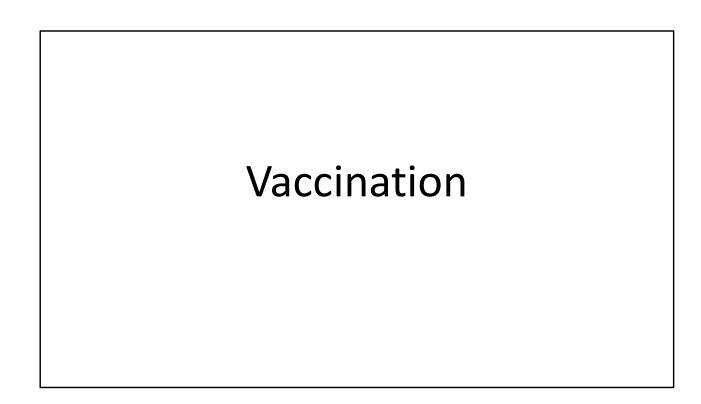
#### Major findings:

- Since mid-February, the growth rate has settled at approximately 75% greater relative growth for BA.2 compared to BA.1.
- Iterated analysis finds no evidence of a greater risk of hospitalization following infection with BA.2 compared to BA.1.

Limitations: None

URL: <a href="https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/1063424/Tech-Briefing-39-25March2022">https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/1063424/Tech-Briefing-39-25March2022</a> FINAL.pdf

Summary: This report is the technical briefing released by the UK around every 2 weeks. While the report goes into many facets of SARS-CoV-2, I've focused on the differences between BA.1 and BA.2. The UK has found no difference in hospitalization between BA.1 and BA.2. Notably, the only difference is that BA.2 has a ~75% greater relative growth rate than BA.1.



# Omicron breakthrough infection drives cross-variant neutralization and memory B cell formation

Jasmin Quandt, 
Alexander Muik, Nadine Salisch, Bonny Gaby Lui, Sebastian Lutz, Kimberly Krüger, Ann-Kathrin Wallisch, Petra Adams-Quack, Maren Bacher, Andrew Finlayson, Orkun Ozhelvaci, Isabel Yogler, Katharina Grikscheit, Sebastian Hoehl, Udo Goetsch, Sandra Ciesek, Özlem Türeci, Ugur Sahin 
doi: https://doi.org/10.1101/2022.04.01.486695

#### Major findings:

Individuals who received 2 or 3 doses of the SARS-CoV-2 Pfizer vaccine and had breakthrough Omicron infections had substantially
augmented immunity against all SARS-CoV-2 variants that is mediated by the B memory cells that were created after vaccination.

Limitations: The study only tracked patients for a few weeks after Omicron infection. Later time points might reveal formation of memory responses against novel epitopes that are not yet visible. Additionally, there was a small sample size (8 double vaccinated convalescent and 11 triple-vaccinated convalescent).

URL: https://www.biorxiv.org/content/10.1101/2022.04.01.486695v1

Summary: The authors extracted blood samples from 19 convalescent patients who had been infected with Omicron and received 2 (8 patients) or 3 (11 patients) doses of the SARS-CoV-2 Pfizer vaccine to measure virus neutralization and B cell memory. As compared to vaccinated, but Omicron naïve patients, the Omicron convalescent patients had significantly greater virus neutralization against all SARS-CoV-2 variants. The authors concluding that breakthrough infections with Omicron resulted in a broader immune response against SARS-CoV-2 due to the many mutations present in the Omicron variant.



#### Wastewater sequencing uncovers early, cryptic SARS-CoV-2 variant transmission

Smruthi Karthikeyan, 🧿 Joshua I Levy, Peter De Hoff, Greg Humphrey, Amanda Birmingham, Kristen Jepsen, awyer Farmer, Helena M. Tubb, Tommy Valles, Caitlin E Tribelhorn, Rebecca Tsai, Stefan Aigner, hashank Sathe, Niema Moshiri, Benjamin Henson, Adam M. Mark, Abbas Hakim, Nathan A Baer, Tom Barber, Pedro Belda-Ferre, Marisol Chacón, Willi Cheung, Evelyn S Cresini, Emily R Eisner, Alma L Lastrella, Elijah S Lawrence, Clarisse A Marotz, Toan T Ngo, Tyler Ostrander, Ashley Plascencia, Rodolfo A Salido oebe Seaver, Elizabeth W Smoot, Daniel McDonald, Robert M Neuhard, Angela L Scioscia Alysson M. Satterlund, Elizabeth H Simmons, Dismas B. Abelman, David Brenner, Judith C. Bruner nne Buckley, Michael Ellison, Jeffrey Gattas, Steven L. Gonias, Matt Hale, Faith Hawkins, Lydia Ikeda Hemlata Jhaveri, Ted Johnson, Vince Kellen, Brendan Kremer, Gary Matthews, Ronald W. McLawhon, Pierre Ouillet, Daniel Park, Allorah Pradenas, Sharon Reed, Lindsay Riggs, Alison Sanders, Bradley Sollenberger, Angela Song, Benjamin White, Terri Winbush, Christine M Aceves, Catelyn Anderson, Karthik Gangavarapu Emory Hufbauer, Ezra Kurzban, Justin Lee, Nathaniel L Matteson, Edyth Parker, Sarah A Perkins, Karthik S Ramesh, Refugio Robles-Sikisaka, Madison A Schwab, Emily Spencer, Shirlee Wohl, Laura Nicholson, an H Mchardy, David P Dimmock, Charlotte A Hobbs, Omid Bakhtar, Aaron Harding, Art Mendoza, Alexandre Bolze, David Becker, Elizabeth T Cirulli, Magnus Isaksson, Kelly M Schiabor Barrett, Nicole L Washington, John D Malone, Ashleigh Murphy Schafer, Nikos Gurfield, Sarah Stou Rebecca Fielding-Miller, Richard S. Garfein, Tommi Gaines, Cheryl Anderson, Natasha K. Martin, Robert Schooley, Brett Austin, Duncan R. MacCannell, Stephen F Kingsmore, William Lee, Seema Shah, Eric McDonald, Alexander T. Yu, Mark Zeller, Kathleen M Fisch, Christopher Longhurst, Patty Maysent, David Pride, Pradeep K. Khosla, Louise C. Laurent, Gene W Yeo, Kristian G Andersen, 🔘 Rob Knight loi: https://doi.org/10.1101/2021.12.21.21268143

#### Major findings:

- On the campus of UC San Diego, researchers and public health teams were able to detect emerging variants of concern in wastewater up to 14 days earlier than clinical samples using a novel bioinformatic analyses that has been tested over 295 days and thousands of samples.
- The authors created an automated wastewater triggered notification system that alerted residents/employees of building that an increase in SARS-CoV-2 had been detected in wastewater and voluntary testing subsequently increased 2-40-fold in the associated buildings.

Limitations: None

URL: https://www.medrxiv.org/content/10.1101/2021.12.21.21268143v2

Summary: The researchers used 24-hour wastewater composites that were collected from 131 samplers every day for the on-campus residence buildings and Monday through Friday for the nonresidential campus buildings, representing 360 campus buildings in total. 19,944 wastewater samples were collected and analyzed for the presence of SARS-CoV-2 RNA via RT-qPCR between November 23rd 2020 and September 20th 2021. During this time, 9700 students lived in campus residences and 25,000 worked on campus on a daily basis. Additionally, Unvaccinated on-campus residents were required to be tested at least weekly. Automated,

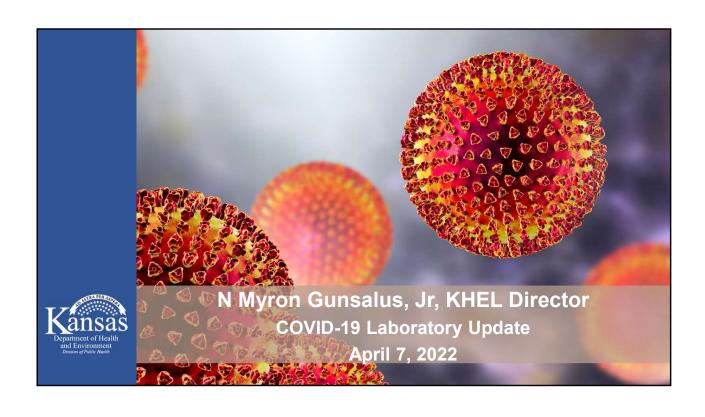
localized wastewater-triggered notifications were sent to the residents/employees of buildings associated with a positive wastewater signal which further led to a surge in testing uptake rates by 2 to 40-fold in the associated buildings.

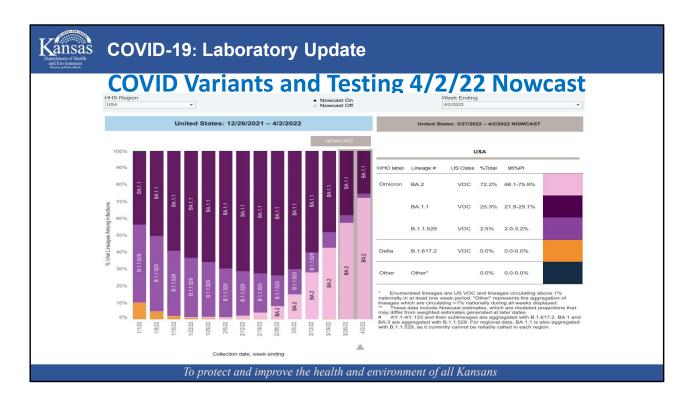
Additionally, 24h flow-weighted composites were collected thrice a week from the main pump station for the Point Loma wastewater treatment plant, the primary treatment plant serving the greater San Diego county with a catchment size of approximately 2.3 million. 132 wastewater samples were collected between February 24th 2021 to February 7th, 2022.

By sequencing both clinical and wastewater samples from the UCSD campus, the authors were able to detect VOCs persistently in wastewater even when their appearance in clinical

samples is intermittent. For a large catchment area, such as San Diego's Point Loma wastewater treatment plant, which covers over 2 million residents, even limited sampling may accurately estimate lineage prevalence in the population and provide an early warning indicator of the rise of new VOCs (as evidenced by the detection of Omicron at just over 1% abundance 11 days ahead of the first local clinical observation).

Furthermore, the authors note: The considerable benefits of wastewater surveillance may stem from biases in clinical testing, including population testing availability and compliance, university quarantine policies, and asymptomatic transmission, which may distort estimates of virus lineage prevalence from clinical samples. Wastewater offers less biased and more consistent viral lineage prevalence estimates, especially in areas with limited access and/or higher testing hesitancy rates, where limited clinical surveillance can delay detection of emerging variants. Since it requires considerably fewer samples, it is also more cost-effective than clinical testing, and could serve as a long-term passive surveillance tool. This is particularly important for developing public health interventions in low-resource and underserved communities, where widespread clinical genomic surveillance for SARS-CoV-2 remains limited.

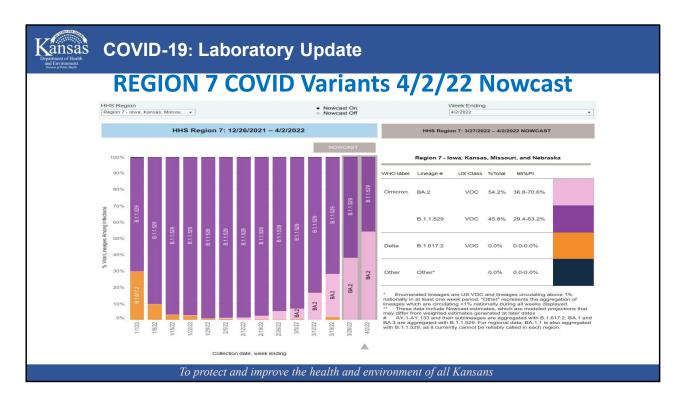




### https://covid.cdc.gov/covid-data-

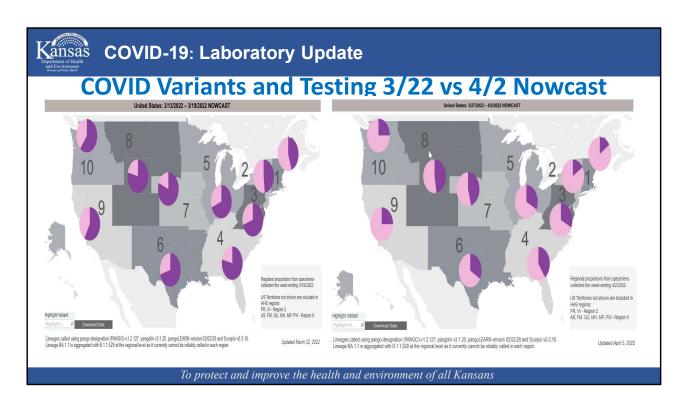
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Ba.2 is now the dominant variant nationally. This will direct the use of certain treatments that have been determined to be less effective



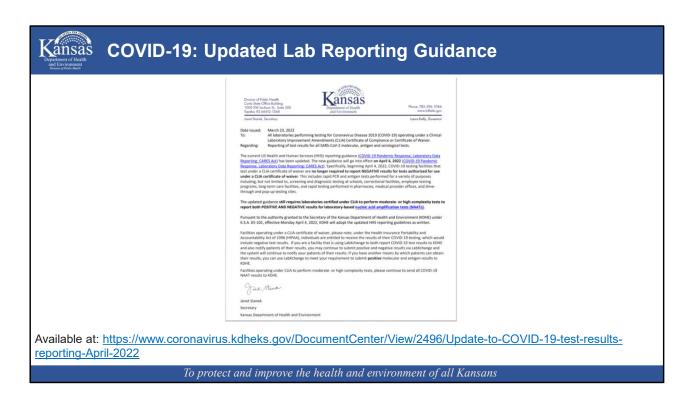
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### https://covid.cdc.gov/covid-data-

tracker/?CDC\_AA\_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fcases-updates%2Fvariant-surveillance%2Fgenomic-surveillance-dashboard.html#variant-proportions



US HHS has updated their requirements for which COVID-19 test results are reportable effective April 4<sup>th</sup>. KDHE issued a memo on March 23<sup>rd</sup> essentially stating that we will adopt these requirements in their entirety and as written.

In short, facilities that are performing COVID testing under a CLIA certificate of waiver no longer have to report negatives to KDHE effective April 4th, they can just submit the positives. The caveat to this is, if they are using LabXchange to not only report results to KDHE but are also using it to let patients know about their results, then they can continue to use LabXchange and submit both positives and negatives so that patients continue to be notified when they are negative. However, if they have another means by which patients can get their negative results, a patient portal through their EHR system for example, then they can just use LabXchange to report positives to KDHE.

CLIA moderate and high complexity labs performing NAAT tests for COVID need to continue reporting positives and negatives so, no changes for those labs.



### **COVID-19: Updated Lab Reporting Guidance**

COVID-19 Pandemic Response, Laboratory Data Reporting: CARES Act

March 8, 2022 Effective date: April 4, 2022

Introductory Information

Public Law 116-136, § 18115(a), the Coronavirus Aid, Relief, and Economic Security (CARES) Act, requires "[e/very laboratory that performs or analyzes a test that is intended to detect SARS-CoV-2 or to diagnose a possible case of COVID-19" to report the results from each such test to the Secretary of the Department of Health and Human Services (HHS). The statute authorizes the Secretary to prescribe the form and manner, and timing and frequency, of such reporting. This updated guidance outlines requirements for data submission to HHS as authorized under this law.

In an effort to receive these data in the most efficient and effective manner, the Secretary is requiring that data demonsts be reported through existing public health data reporting methods, namely through reporting to state, territorial, local, and Tribal (STLT) public health departments as described in the guidance. As a guiding principle, data must be sent to STLT health departments using expending reporting channels to ensure rapid public health response by those departments time conducted STLT beauth processed and the state of the state of

This guidance outlines federal HHS laboratory reporting requirements under Section 18115 of the CARES Act; STLT jurisdictions may have additional laboratory reporting requirements applicable to testing entities usbiget to their jurisdiction. Part A, Section 2 of this guidance requires laboratories and testing entities to comply with applicable STLT test reporting requirements. Nothing in this guidance limits or prohibits STLT the alth departments from requesting or requiring additional SARS-CoV2 result and/or data element reporting.

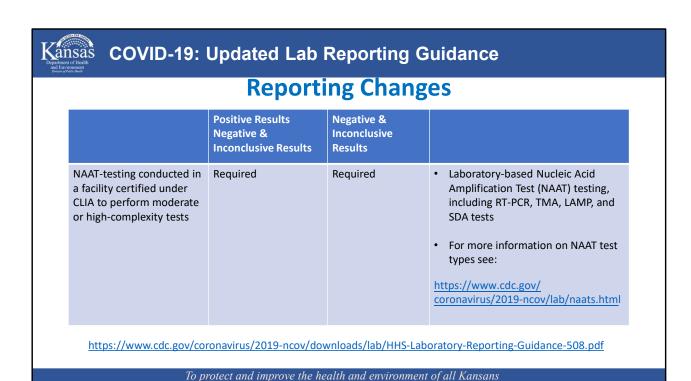
Available at: https://www.cdc.gov/coronavirus/2019-ncov/downloads/lab/HHS-Laboratory-Reporting-Guidance-508.pdf

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US HHS has updated their requirements for which COVID-19 test results are reportable effective April 4<sup>th</sup> . KDHE issued a memo on March 23<sup>rd</sup> essentially stating that we will adopt these requirements in their entirety and as written.

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CLIA moderate and high complexity labs performing NAAT tests for COVID need to continue reporting positives and negatives so, no changes for those labs.



https://www.cdc.gov/coronavirus/2019-ncov/downloads/lab/HHS-Laboratory-Reporting-Guidance-508.pdf

A Nucleic Acid Amplification Test, or NAAT, is a type of viral diagnostic test for SARS-CoV-2, the virus that causes COVID-19. NAATs detect genetic material (nucleic acids). NAATs for SARS-CoV-2 specifically identify the RNA (ribonucleic acid) sequences that comprise the genetic material of the virus.

NAATs can use many different methods to amplify nucleic acids and detect the virus, including but not limited to:

Reverse transcription polymerase chain reaction (RT-PCR) Isothermal amplification including:

Nicking endonuclease amplification reaction (NEAR)

Transcription mediated amplification (TMA)

Loop-mediated isothermal amplification (LAMP)

Helicase-dependent amplification (HDA)

Clustered regularly interspaced short palindromic repeats (CRISPR)

Strand displacement amplification (SDA)

Reporting Changes			
	Positive Results Negative & Inconclusive Results	Negative & Inconclusive Results	
All other testing (except antibody)	Required	Optional	<ul> <li>Testing conducted in a setting operating under a CLIA certificate of waiver such as rapid tests used in many settings (e.g., screening testing at schools, correctional facilities, employee testing programs, long term care facilities, and point-of-care testing performed in pharmacies, medical provider offices, and drive through and pop-up testing sites)</li> <li>Non-NAAT (e.g., high throughput antigen) testing conducted in a facility certified under CLIA to perform moderate or high-complexity tests</li> </ul>
Antibody testing	Optional*	Optional*	Tests used to determine previous infection with SARS-CoV-2 in any setting

 $\frac{https://www.cdc.gov/coronavirus/2019-ncov/downloads/lab/HHS-Laboratory-Reporting-Guidance-508.pdf}{}$ 



# Kansas COVID-19: Laboratory Update

### **Miscellaneous Information**

- State directed/funded mass testing sites closed
- **Supply Chain seems to be open for many test options**
- If you need point of care testing/supplies for your facility,
  - Contact county emergency manager to make request to KDHE
- Statewide Courier can be used for any type of samples coming to KDHE Labs

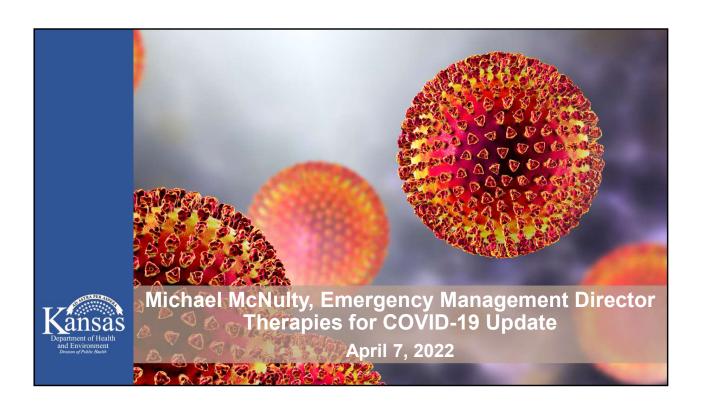
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## Kansas COVID-19: Laboratory Update

### **Helpful Contacts**

- **General Laboratory Information and LABXCHANGE** 
  - KDHE.KHELINFO@ks.gov
- **CLIA Certification Questions:** 
  - KDHE.CLIA2@ks.gov
- Courier Vendor: Haylee Silver, Stallion Ops Manager
  - Email: hsilver@stallion-express.com
  - Number: (603) 724-1221
- **KDHE Contact Regarding Courier Service** 
  - Chad Yamashita (Chad.Yamashita@ks.gov)





### Kansas Sotrovimab Authorization Paused

- Results from in vitro assays used to assess susceptibility of viral variants to particular mAbs suggest that Sotrovimab is not fully active against BA.2 variant
- Centers for Disease Control and Prevention (CDC) estimated the proportion of COVID-19 cases caused by the Omicron BA.2 variant to be above 50% in all U.S. Department of Health and Human Services (HHS) regions
- Due to these data, use of sotrovimab is not authorized in any U.S. state or territory at this time.
- Accordingly and effective immediately, ASPR has paused sotrovimab distribution to all U.S. states and territories



## Kansas Currently Authorized Alternative Treatments

- Paxlovid (an oral antiviral treatment)
- Lagevrio (molnupiravir) (an alternative oral antiviral for patients for which Paxlovid is not appropriate or accessible)
- Bebtelovimab is an alternative monoclonal antibody therapy that is currently authorized and available for distribution
- Based on similar in vitro assay data currently available, these products are likely to retain activity against the BA.2 variant
- All treatment delivery sites can continue ordering Paxlovid, Lagevrio, and bebtelovimab from KDHE
- The FDA recommends that health care providers in all U.S. states and territories use alternative authorized therapy until further notice



#### **UPDATED – Evusheld EUA**

- April 1: Evusheld EUA updated to reflect dosage recommendation update to provide additional guidance for administration to patients who received only an initial dose of 300mg (150mg tixagevimab and 150mg cilgavimab)
- No changes to authorized dose for patient who received initial dose of 600mg (300mg tixagevimab and 300mg cilgavimab)
- · Revised authorized dosage regimen is:
  - Individuals who received only the previously authorized initial dose of 300mg(150mg of tixagevimab and 150mg of cilgavimab) should receive an additional Evusheld dose as soon as possible. If a patient received their initial dose:
    - Less than 3 months ago, that patient should receive a dose of 300 mg (150mg of tixagevimab and 150mg of cilgavimab)
    - More than 3 months ago, that patient should receive a dose of 600mg (300mg tixagevimab and 300mg cilgavimab)



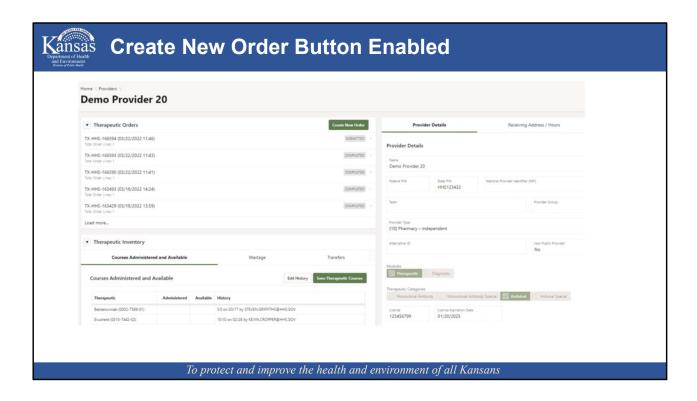
## Kansas Information from HHS

- FDA Shelf Life Extension for Therapeutics
  - Discussions between ASPR and FDA continue
  - Current information is available at <a href="https://www.fda.gov/emergency-preparedness-">https://www.fda.gov/emergency-preparedness-</a> and-response/mcm-legal-regulatory-and-policy-framework/expiration-datingextension#COVIDtherapeutics
- For expiring/expired therapeutics
  - For REGEN-COV call 844-734-6643
  - For BAM/ETE call 800-821-0538

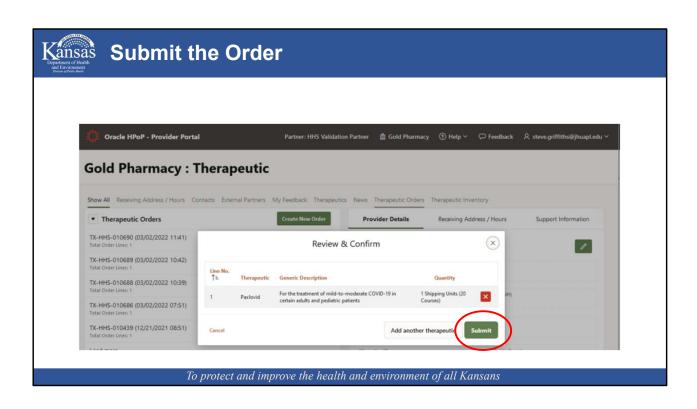


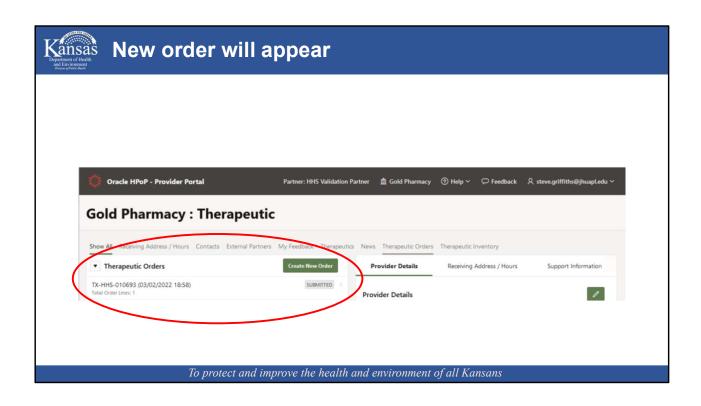
## Kansas HPOP Direct Ordering Requests

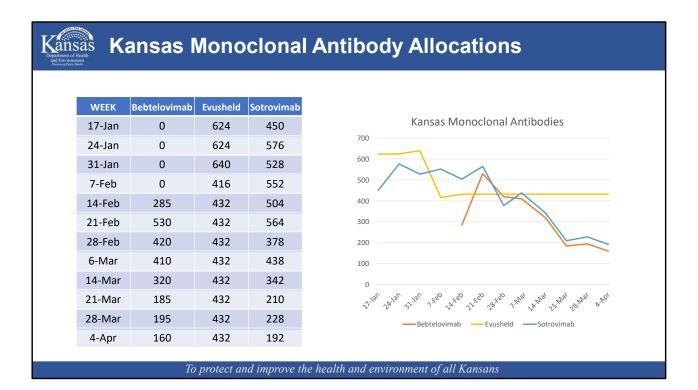
- HHS is moving to allow HPOP to be used for requesting therapeutics in addition to reporting use and inventory
- Direct Ordering Requests will be enabled in HPOP by April 18, 2022, 9:00
- Orders will validated by KDHE staff prior to actioning by HHS for distribution

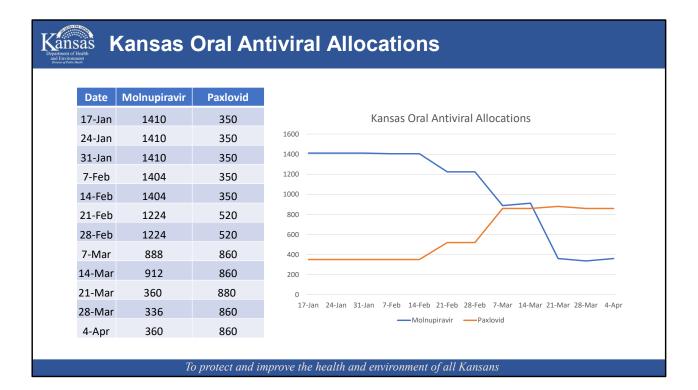


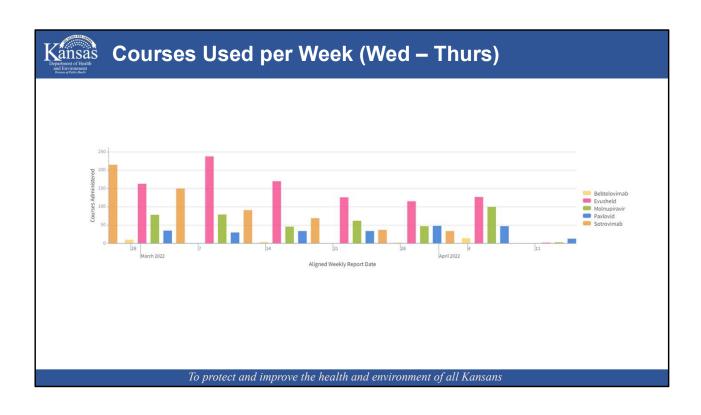


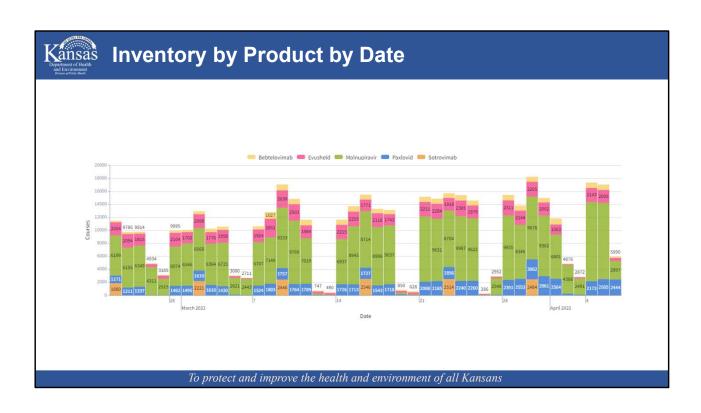


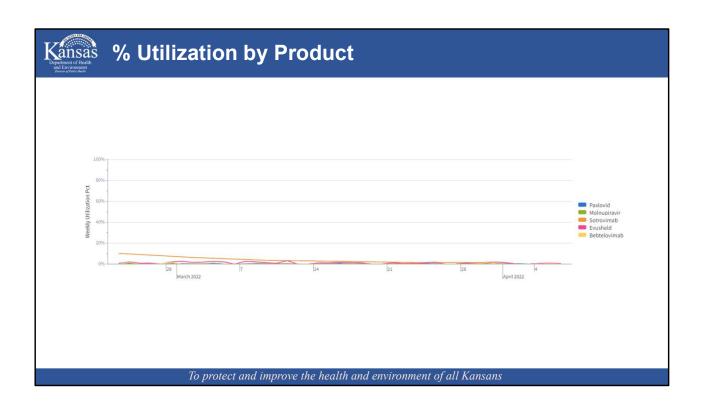


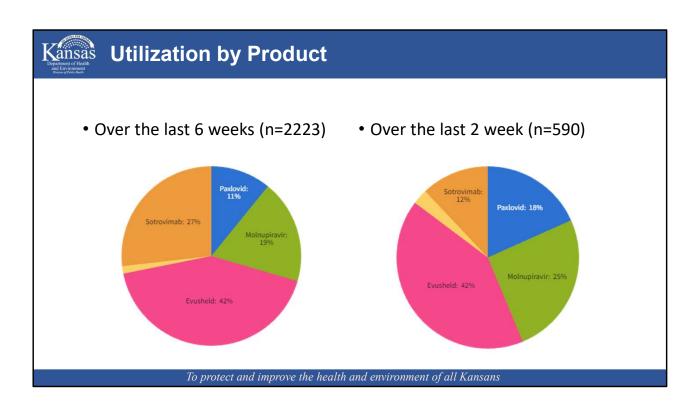


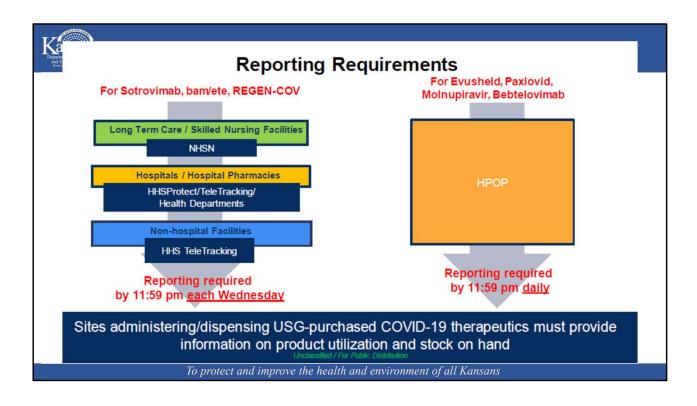












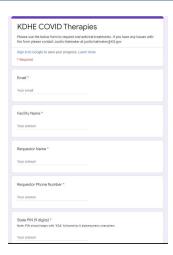


## Kansas HHS Clinical Therapy Sessions

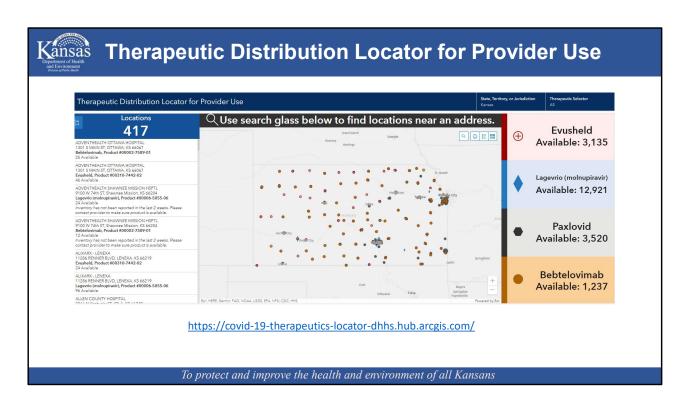
- Federal COVID-19 Response: COVID-19 Therapeutics Clinical Webinar
  - Every other Friday (11:00-12:00PM CT); Next Offering April 15
  - https://hhsasproea.zoomgov.com/j/1617536991?pwd=NjFMcnJOUENuSFhtRFFtaW ItejYzZz09
- Medical Professionals COVID-19 Roundtable
  - Every other Friday (11:00-12:00PM CT); Next Offering April 22
  - Email COVID19Therapeutics@hhs.gov if you'd like to join this session



### **Therapeutics Ordering (Until April 15)**

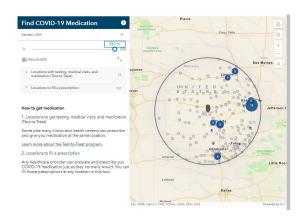


- KDHE is accepting orders for all available therapeutics and will suspend allocating.
- Orders may be throttled based on availability
- Go to <a href="https://forms.gle/y66HCBTqsJNWqxYr6">https://forms.gle/y66HCBTqsJNWqxYr6</a>
- Enter all required information
  - Email
  - Facility Name
  - Requestor Name
  - Requestor Phone Number
  - HPOP State PIN (PIN is assigned to each facility)
  - Select the number of patient courses for the therapy requested
- Select Submit
- If there are any questions, the contact listed will be followed up with by KDHE staff



https://covid-19-therapeutics-locator-dhhs.hub.arcgis.com/





- New Test to Treat locator site launched Wed, 3/30
- <a href="https://covid-19-test-to-treat-locator-dhhs.hub.arcgis.com/">https://covid-19-test-to-treat-locator-dhhs.hub.arcgis.com/</a>
- Identifies all Test to Treat program sites
- Call center also available: 1-800-232-0233 to get help in English, Spanish, and more than 150 other languages – 8am to midnight ET, 7 days a week
- Disability Information and access Line (DIAL) also available to specifically help those with disabilities access services. 1-888-677-1199. Monday-Friday from 9am to 8pm ET or DIAL@usaginganddisability.org



## Kansas Helpful Therapy Resources

- Side-by-Side Overview of Therapeutics Authorized or Approved for the Prevention of COVID-19 Infection or Treatment of Mild-Moderate COVID-
  - https://aspr.hhs.gov/COVID-19/Therapeutics/Documents/side-by-sideoverview.pdf
- Federal Response to COVID-19: Therapeutics Clinical Implementation Guide
  - https://aspr.hhs.gov/COVID-19/Therapeutics/Documents/USG-COVID19-Tx-Playbook.pdf
- COVID Therapeutics Decision Aid
  - https://www.phe.gov/emergency/events/COVID19/therapeutics/Documents/COVI D-Therapeutics-Decision-Aid.pdf



# Kansas Therapies Questions

- If you have any questions related to monoclonal antibody distribution in Kansas, please contact Michael McNulty (mike.mcnulty@ks.gov)
- Issues with Logging into and using HPOP 833-748-1979 or cars helpdesk@cdc.gov



What I will cover today is the current screening and masking guidance for acute & continuing care facility types.



#### Screening and Masking Guidance for Acute & Continuing Care Facility Types

Resources:

QSO-21-08-NLTC Revised 2/4/22

https://www.cms.gov/files/document/qso-21-08-nltc-revised.pdf

Interim Infection Prevention and Control Recommendations for Healthcare Personnel During the Coronavirus Disease 2019 (COVID-19) Pandemic (<a href="https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html">https://www.cdc.gov/coronavirus/2019-ncov/hcp/infection-control-recommendations.html</a>)

Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or Exposure to SARS-CoV-2

Clinical Questions about COVID-19: Questions and Answers.

To protect and improve the health and environment of all Kansans

CMS released QSO-21-08-NLTC on 12/30/2020 titled COVID-19 Focused Infection Control Survey Tool for Acute and Continuing Care and issued a revised document on 2/4/2022. In the summary of the revised document, it states facilities should continue to adhere to basic COVID-19 infection prevention principles consistent with national standards of practice. Since CDC serves as the national health protection agency these are the national standards of practice.

The first slide provides you the references for today's presentation with regards to screening and masking in acute & continuing care facility types under the jurisdiction of the KDHE/Health Facilities Program. I will not be addressing guidance for nursing homes or nonhealth care settings. Please note reference to the QSO memo and within that memo, a reference to CDC guidance for health care personnel updated on 2/4/22. I would like to clarify the reference to the Focused Infection Control Survey Tool for Acute and Continuing Care in the QSO memo revised 2/4/22. The tool was used for survey activity in ACC providers and suppliers (ambulatory surgical centers, hospitals, end-stage renal disease facilities, home health agencies, hospices, etc.). The survey tool was also available to every provider in the country and was often used to perform a voluntary self-assessment of their ability to meet infection control priorities during the crisis. CMS determined there was no longer a need to continue the required use of the FIC survey tool on a national basis because surveyors will continue to assess infection control and prevention through the standard survey process. ACC providers already have requirements to develop and maintain

approved policies and procedures for minimizing transmission of infectious disease based on nationally recognized standards of practice. If facilities wish to continue use of the tool as a template for their own self-assessment, they may do so but we encourage you to carefully review the CDC guidelines as there have been changes to the recommendations since the original tool and update were released.



## Recommended routine infection prevention and control (IPC) practices during the COVID-19 pandemic:

- Encourage everyone to remain <u>up to date</u> with all recommended COVID-19 vaccine doses.
- Establish a Process to Identify and Manage Individuals with Suspected or Confirmed SARS-CoV-2 Infection
- Implement Source Control Measures
- Implement Universal Use of Personal Protective Equipment for HCP
- Encourage Physical Distancing
- Perform SARS-CoV-2 Viral Testing
- Create a Process to Respond to SARS-CoV-2 Exposures Among HCP and Others

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The guidance here addresses the recommended routine infection prevention and control practices during the COVID-19 pandemic. I will address two specific areas here.



# Establish a Process to Identify and Manage Individuals with Suspected or Confirmed SARS-CoV-2 Infection

- Ensure everyone is aware of recommended IPC practices in the facility.
- Establish a process to identify anyone entering the facility, regardless of their vaccination status.

\*Process: A series of actions or steps taken in order to achieve a particular end

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Under establish a process, the recommendation includes posting visual alerts (e.g., signs, posters) at the entrance and in strategic places (e.g. waiting areas, elevators, cafeterias) with instructions about current IPC recommendations (e.g., when to use source control and perform hand hygiene).

Even dating these alerts can help ensure people know they reflect current recommendations.

Recommendations include establishing a process to identify anyone entering the facility, regardless of their vaccination status, who has any of the following three criteria so that they can be properly managed: 1) a positive viral test for SARS-CoV-2; 2) symptoms of COVID-19, or 3) close contact with someone with SARS-CoV-2 infection (for patients and visitors) or a higher-risk exposure (for healthcare personnel (HCP).

Options could include (but are not limited to): individual screening on arrival at the facility; or implementing an electronic monitoring system in which individuals can self-report any of the above before entering the facility.

Healthcare personnel should report any of the 3 above criteria to occupational health or another point of contact designated by the facility, even if they are up to date with all recommended COVID-19 vaccine doses. Further information on this please refer to the Interim Guidance for Managing Healthcare Personnel with SARS-CoV-2 Infection or

#### Exposure to SARS-CoV-2.

Even if you have met <u>community criteria</u> to discontinue isolation or quarantine, visitors **should not visit** if they have a positive viral test for SARS-CoV-2, symptoms of COVID-19 or close contact with someone with SARS-CoV-2 infection. Further information on this is available in <u>Clinical Questions about COVID-19</u>: <u>Questions and Answers</u>.

Healthcare personnel, patients and visitors should be <u>offered resources and counseled</u> about the importance of receiving the COVID-19 vaccine.

Healthcare personnel, patients and visitors should be <u>offered resources and counseled</u> about the importance of receiving the COVID-19 vaccine



#### **Implement Source Control Measures**

Use of respirators or well-fitting facemasks or cloth masks to prevent the spread of respiratory secretions

Source control and physical distancing (when physical distancing is feasible and will not interfere with provision of care) are recommended for **everyone in a healthcare setting.** 

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Source control refers to use of respirators or well-fitting facemasks or cloth masks to cover a person's mouth and nose to prevent spread of respiratory secretions when they are breathing, talking, sneezing, or coughing.

Source control and physical distancing (when physical distancing is feasible and will not interfere with provision of care) are recommended for **everyone in a healthcare setting.**This is particularly important for individuals, regardless of their vaccination status, who live or work in counties with substantial to high community transmission or who:

Are not up to date with all recommended COVID-19 vaccine doses; or

Have suspected or confirmed SARS-CoV-2 infection or other respiratory infection (e.g., those with runny nose, cough, sneeze); or

Had <u>close contact</u> (patients and visitors) or a <u>higher-risk exposure</u> (HCP) with someone with SARS-CoV-2 infection for 10 days after their exposure, including those residing or working in areas of a healthcare facility experiencing SARS-CoV-2 transmission (i.e., outbreak); or Have moderate to severe immunocompromise; or

Have otherwise had source control and physical distancing recommended by public health authorities

While it is generally safest to implement universal use of source control for everyone in a healthcare setting, this document does continue on to offer allowances that could be considered for individuals who are up to date with all recommended COVID-19 vaccine doses in healthcare facilities located in counties with low to moderate community

#### transmission.

There has been a question brought to us about hospitals asking visitors to change from a mask or respirator with a higher level of protection to a paper mask provided by the hospital. We did have a clarification from CMS on 3/24/22, Healthcare facilities may choose to offer well-fitting facemasks as a source control option for visitors, but should allow the use of a mask or respirator with higher level protection by individuals who chose that option based on their individual preference



#### Contacts:

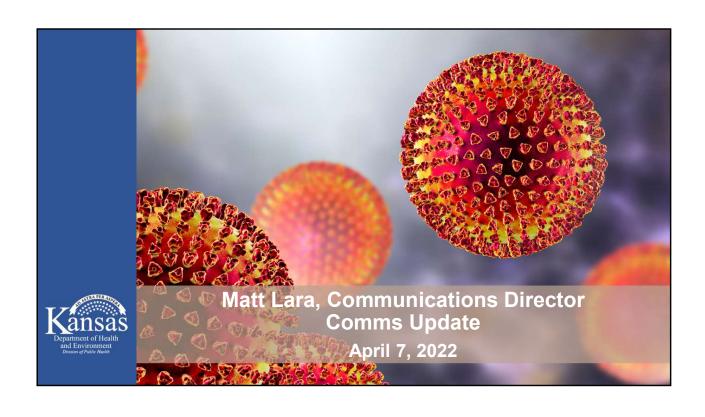
Marilyn St Peter, Director Health Facilities Program, Acute & Continuing Care Marilyn.St.Peter@ks.gov

CMS – Regional Office, Kansas City, Mo
<a href="mailto:ROKCMORA@cms.hhs.gov">ROKCMORA@cms.hhs.gov</a>
Angela Jirik, RN, Program Manager / ACC / Hospital Division
<a href="mailto:Angela.Jirik@ks.gov">Angela.Jirik@ks.gov</a>

Robbin Kuehn, RN, Program Manager / ACC / Non-Hospital Division Robbin.Kuehn@ks.gov

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We understand CDC guidance is often complicated and unclear at times. The KDHE/HFP encourages providers to contact us at any time. We are unable to tell you how to write your policies and procedures, but we can refer you to resources such as regulations and or standards of professional practice. If you are under a survey by the KDHE/HFP, please also contact us at anytime during the survey if you have questions.



Summary | Overview of shifts in objectives from current state to the "new normal" across six response elements

Response element	Current state objective	"New normal" objective
Non-pharmaceutical interventions	Provide <b>comprehensive</b> COVID-19 guidance across all settings and <b>broad</b> interventions for <b>all Kansans</b>	Provide <b>comprehensive</b> COVID-19 guidance and <b>targeted</b> interventions to <b>select settings</b>
Vaccination	Provide <b>direct operational support</b> for vaccine orders and administration to mass vaccinate <b>all Kansans</b>	Oversee supplier-provider connection and support vaccination of vulnerable populations
Treatment	<b>Assure equitable distribution</b> of scarce therapeutic resources (i.e., treatments)	Support ordering via federal system and assure equitable access to authorized treatments
Testing	Provide access to free testing across Kansas to diagnose infection and prevent ongoing transmission	Provide safety net testing and respond to outbreaks
Ongoing monitoring & oversight	Report on <b>key metrics</b> (e.g., cases, tests, vaccinations) for <b>transparency</b>	Track, monitor, and report status of COVID-19 and disease incidence for policy making
Ongoing comms to public & stakeholders	Provide <b>essential COVID info to and from right stakeholders</b> to keep Kansans safe	Provide essential & accessible COVID info to, from, & with stakeholders to keep Kansans safe



# Kansas Cadence of Meetings

#### **April meetings:**

- April 7
- April 21
- Beginning in May these meetings will move to once a month, occurring on the first Thursday of each month.
- Survey

