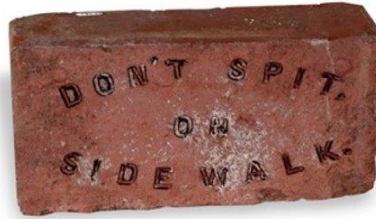




KANSAS HEALTH INSTITUTE

Informing Policy. Improving Health.



When "Don't Spit on the Sidewalk" is Not Enough: Public Health and the COVID-19 Response

D. CHARLES HUNT, SENIOR ANALYST

Kansas Health Institute

Pathways to a Healthy Kansas Learning Session | April 29, 2021

“

One can think of the middle of the twentieth century as the end of one of the most important social revolutions in history, the virtual elimination of the infectious diseases as a significant factor in social life.

-Nobel Laureate Sir Frank Macfarlane Burnet
Natural History of Infectious Disease (1962)



ProMED
INTERNATIONAL SOCIETY
FOR INFECTIOUS DISEASES

Published Date: 2019-12-30 23:59:00

Subject: PRO/AH/EDR> Undiagnosed pneumonia - China (HU): RFI

Archive Number: 20191230.6864153

UNDIAGNOSED PNEUMONIA - CHINA (HUBEI): REQUEST FOR INFORMATION

A ProMED-mail post

<http://www.promedmail.org>

ProMED-mail is a program of the
International Society for Infectious Diseases

<http://www.isid.org>

[1]

Date: 30 Dec 2019

Source: Finance Sina [machine translation]

<https://finance.sina.cn/2019-12-31/detail-lihnzakh1074832.d.html?from=wap>

"On the evening of [30 Dec 2019], an 'urgent notice on the treatment of pneumonia of unknown cause' was issued, which was widely distributed on the Internet by the red-headed document of the Medical Administration and Medical Administration of Wuhan Municipal Health Committee." [Emphasis added.]

Source: International Society for Infectious Diseases, 2019



World Health Organization (WHO)  @WHO · Jan 4, 2020 ...

[#China](#) has reported to WHO a cluster of [#pneumonia](#) cases —with no deaths— in Wuhan, Hubei Province  . Investigations are underway to identify the cause of this illness.

 94

 1.1K

 830



World Health Organization (WHO)  @WHO · Jan 4, 2020 ...

WHO is closely monitoring this event and will share more details as we have them.

WHO is working across the 3 levels (country office, regional office, HQ) to track the situation. [#pneumonia](#) [#China](#)

 12

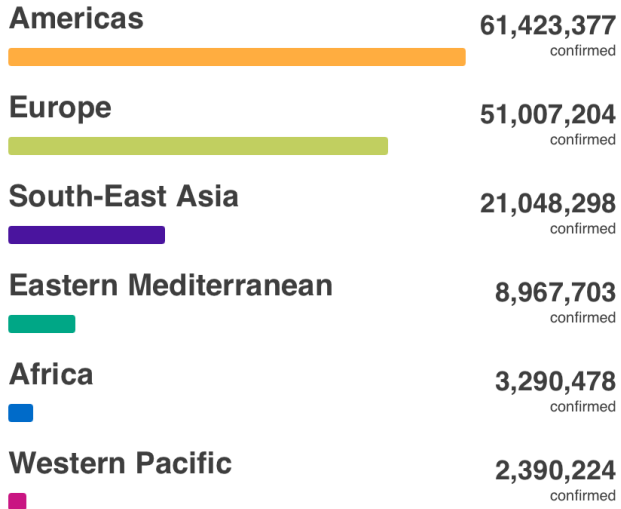
 78

 137



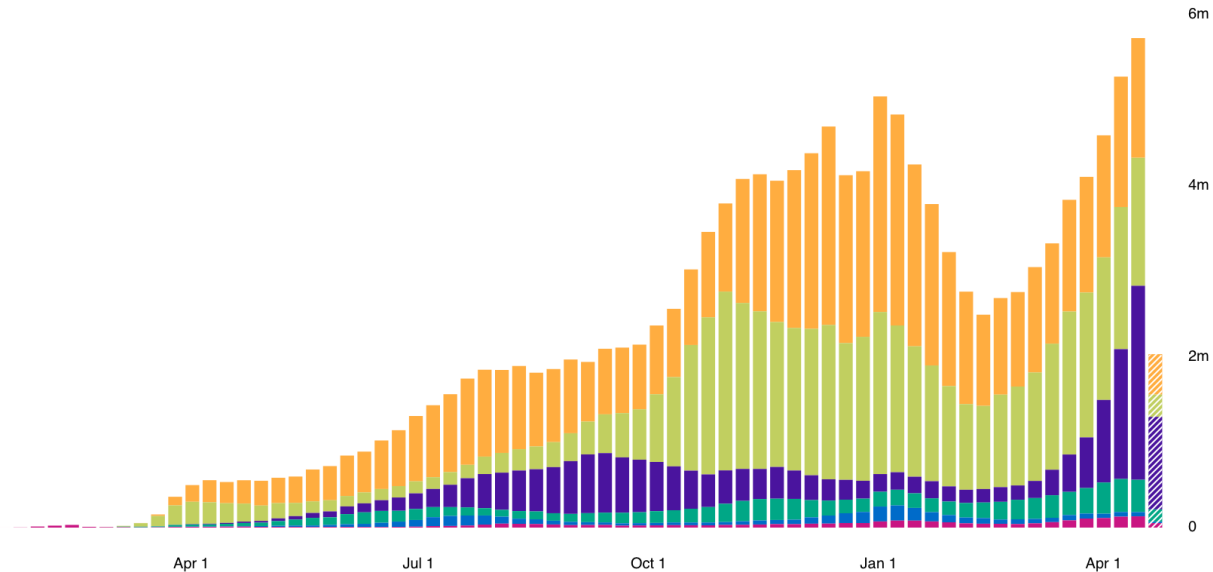
GLOBAL COVID-19 CASES (AS OF 26 APRIL 2021)

Situation by WHO Region



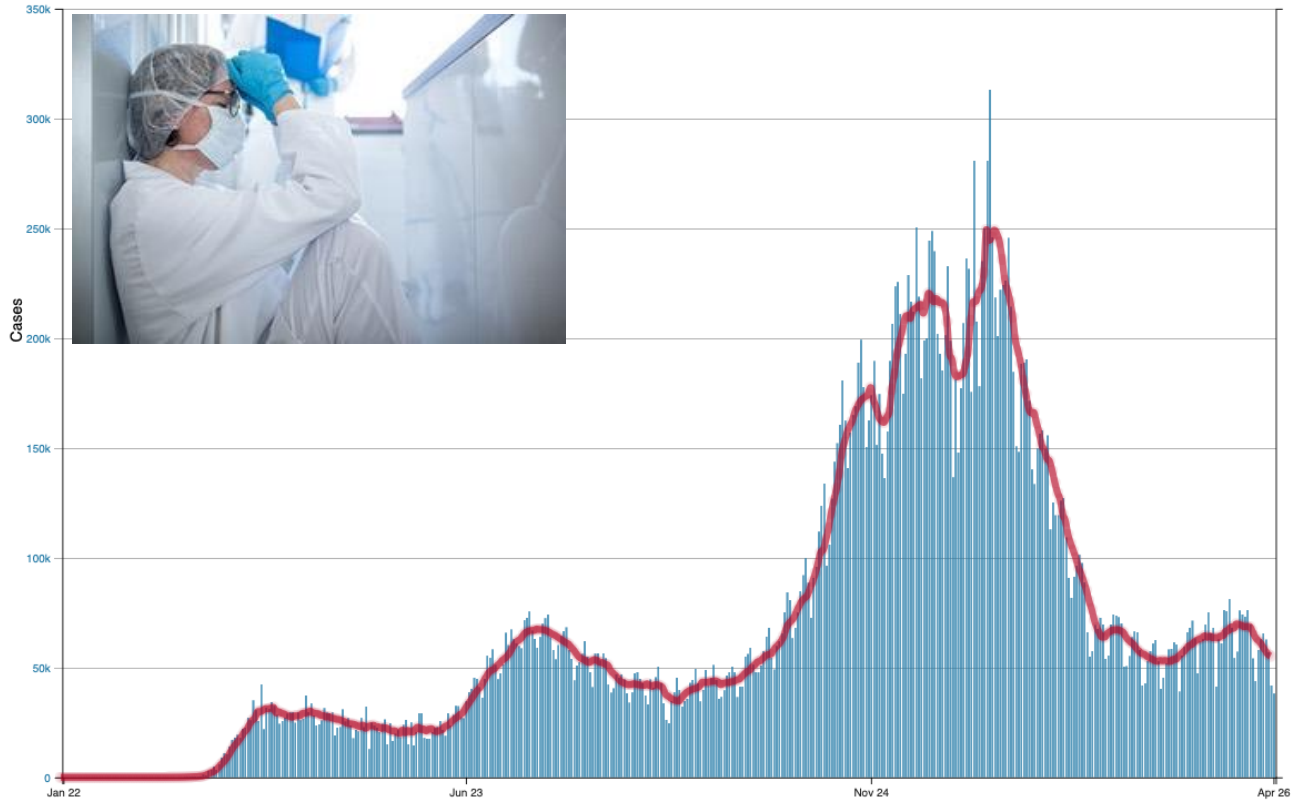
Source: World Health Organization

Data may be incomplete for the current day or week.



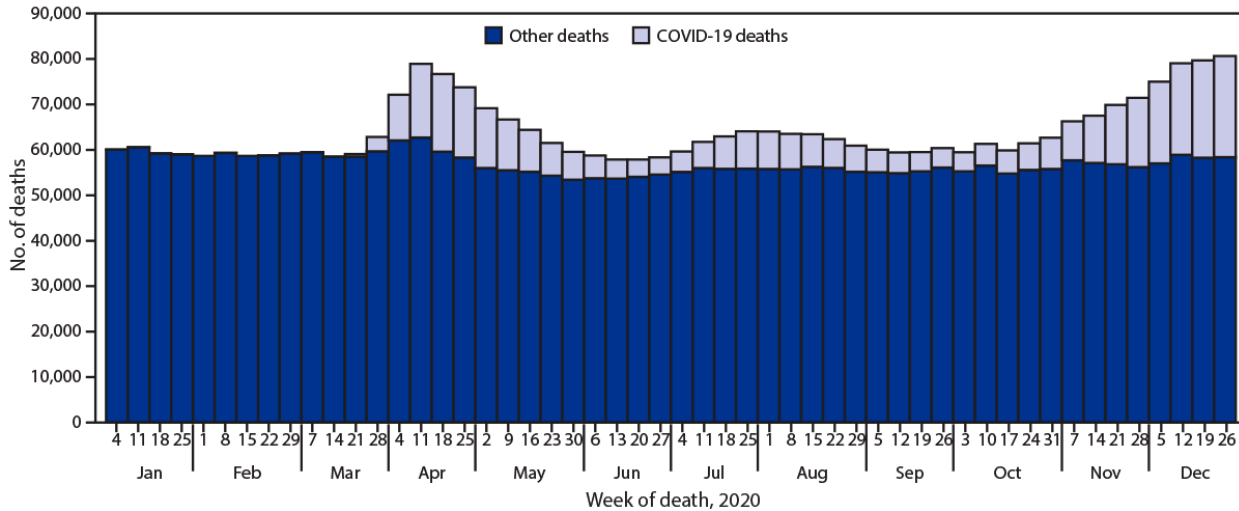
DAILY TRENDS IN NUMBER OF COVID-19 CASES, U.S., 2020-2021

Daily Trends in Number of COVID-19 Cases in the United States Reported to CDC



COVID-19 DEATHS IN US - 2020

FIGURE 1. Provisional* number of COVID-19–related deaths† and other deaths, by week — National Vital Statistics System, United States, 2020



In 2020, COVID-19 was the third leading cause of death in the U.S.*



* National Vital Statistics System provisional data are incomplete. Data from December are less complete due to reporting lags. Deaths that occurred in the United States among residents of U.S. territories and foreign countries were excluded.

† Deaths with confirmed or presumed COVID-19 as an underlying or contributing cause of death, with *International Classification of Diseases, Tenth Revision* code U07.1.

CDC Newsroom

CDC > Newsroom Home > Press Materials > CDC Newsroom Releases



[Newsroom Home](#)

Press Materials

CDC Newsroom Releases

2021 News Releases

2020 News Releases

2019 News Releases

2018 News Releases

Historical News Releases

**First Travel-related Case of
2019 Novel Coronavirus
Detected in United States**

Digital Press Kit

Journal Summaries

Digital Media

CDC Spokesperson

First Travel-related Case of 2019 Novel Coronavirus Detected in United States

Press Release

For Immediate Release: Tuesday, January 21, 2020

Contact: [Media Relations](#)

(404) 639-3286

The Centers for Disease Control and Prevention (CDC) today confirmed the first case of 2019 Novel Coronavirus (2019-nCoV) in the United States in the state of Washington. The patient recently returned from Wuhan, China, where an outbreak of pneumonia caused by this novel coronavirus has been ongoing since December 2019. While originally thought to be spreading from animal-to-person, there are growing indications that limited person-to-person spread is happening. It's unclear how easily this virus is spreading between people.

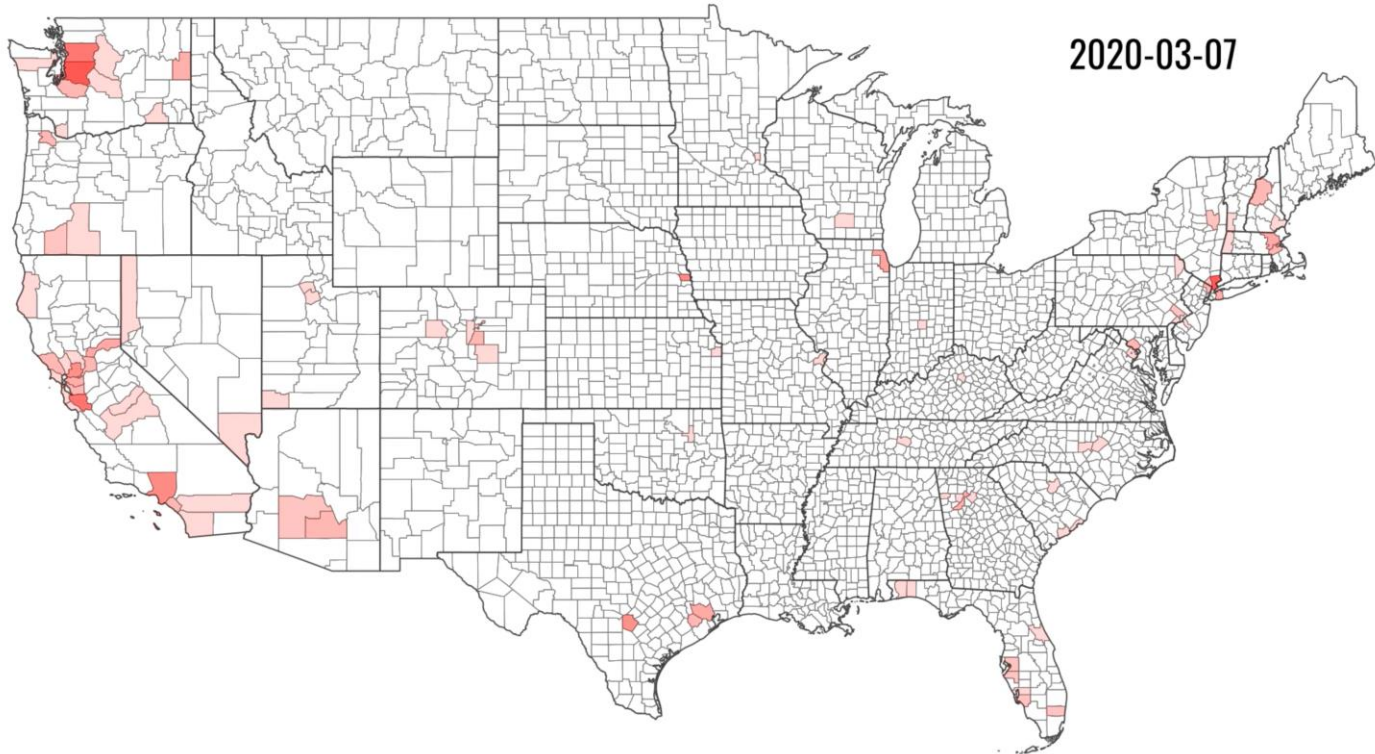
The patient from Washington with confirmed 2019-nCoV infection returned to the United States from Wuhan on January 15, 2020. The patient sought care at a medical facility in the state of Washington, where the patient was treated for the illness. Based on the patient's travel history and symptoms, healthcare professionals suspected this new coronavirus. A clinical specimen was collected and sent to CDC overnight, where laboratory testing yesterday confirmed the diagnosis via CDC's Real time Reverse Transcription-Polymerase Chain Reaction (rRT-PCR) test.

CDC has been proactively preparing for the introduction of 2019-nCoV in the United States for weeks, including:

- First alerting clinicians on January 8, 2020, to be on the look-out for patients with respiratory symptoms and a history of travel to Wuhan, China.

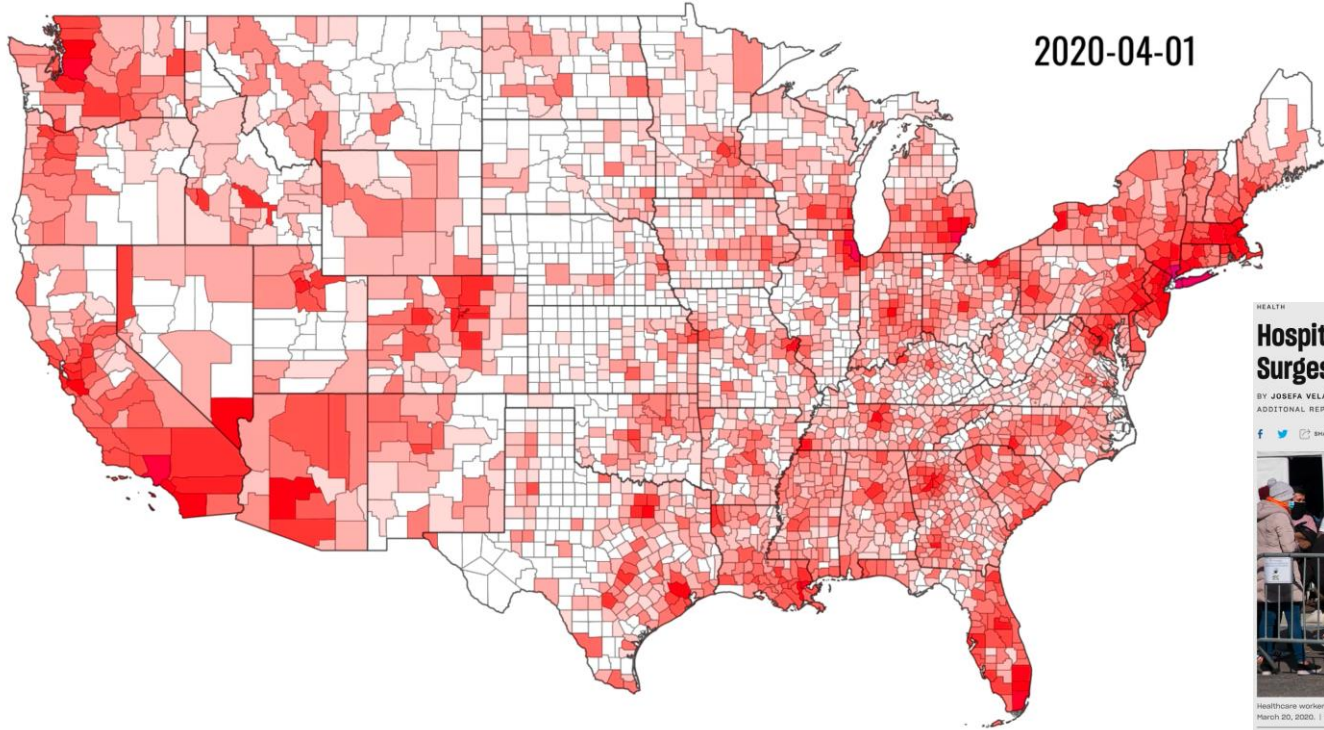
Source: Centers for Disease Control and Prevention, 01/21/2020

Number of COVID-19 cumulative confirmed cases:



Source: SharedGeo.org, 2021

Number of COVID-19 cumulative confirmed cases:




2020-04-01

HEALTH

Hospitals Nearing ICU Bed Limits as COVID-19 Surges in NYC

BY JOSEFA VELASQUEZ, ANN CHOI AND YOAV GONEN | MAR 28, 2020, 3:48PM EDT
ADDITIONAL REPORTING BY RACHEL HOLLIDAY SMITH

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Healthcare workers at Brooklyn Downtown Hospital help pre-screen people coronavirus symptoms, March 20, 2020. | Photo: Ben Fracterberg@THE CITY



Source: SharedGeo.org, 2021

Are Hospitals Near Me Ready for Coronavirus? Here Are Nine Different Scenarios.

by Annie Waldman, Al Shaw, Ash Ngu, and Sean Campbell, March 17, 2020

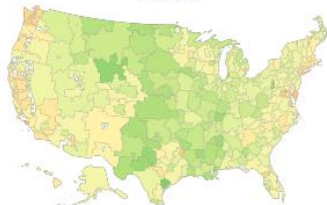
ProPublica is a nonprofit newsroom that investigates abuses of power. Sign up for ProPublica's [Big Story](#) newsletter to receive stories like this one in your inbox as soon as they are published.

Though the U.S. health care system is projected to be overwhelmed by an influx of patients infected with the novel coronavirus, the pressure on hospitals will vary dramatically across the country. That's according to new data released by the Harvard Global Health Institute, which for the first time gives a sense of which regions will be particularly stressed and should be preparing most aggressively right now. The maps we've created based on the data shows why public health officials are so intent on "flattening the curve," or slowing the spread of infections over a longer period of time, like 18 months instead of six.

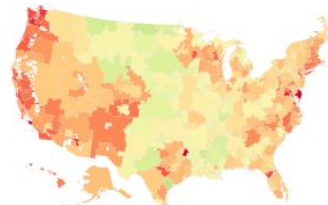
Source: ProPublica, 2020

Hospital regions would fill  of their beds...

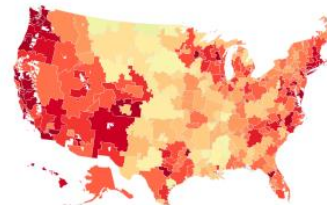
... if 20% of adults are infected over 18 months



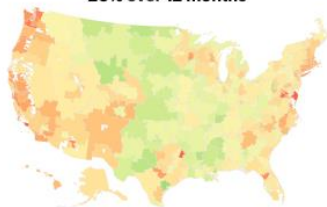
40% over 18 months



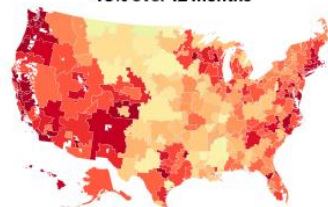
60% over 18 months



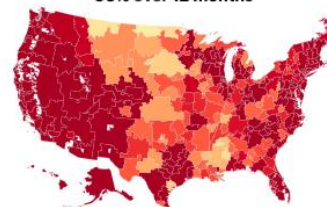
20% over 12 months



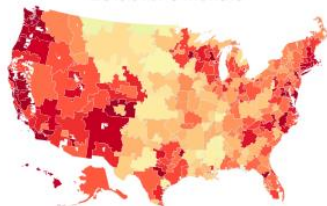
40% over 12 months



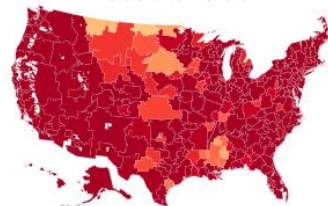
60% over 12 months



20% over 6 months



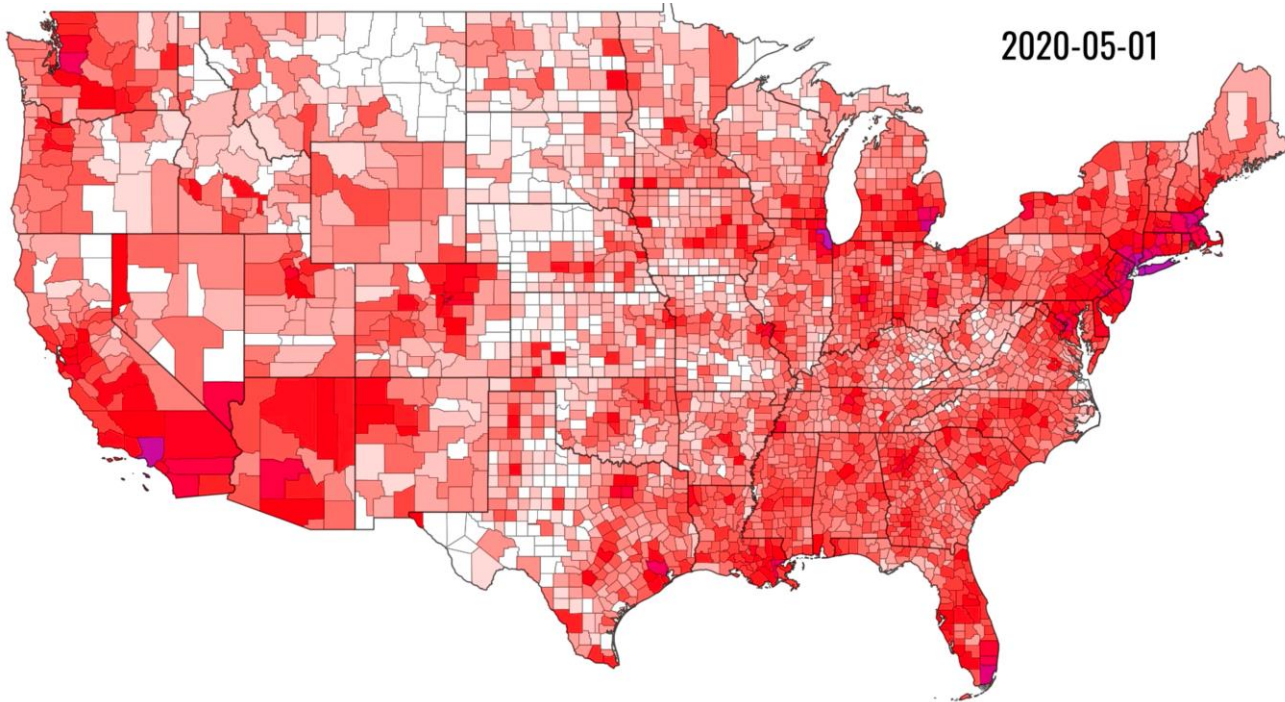
40% over 6 months



60% over 6 months

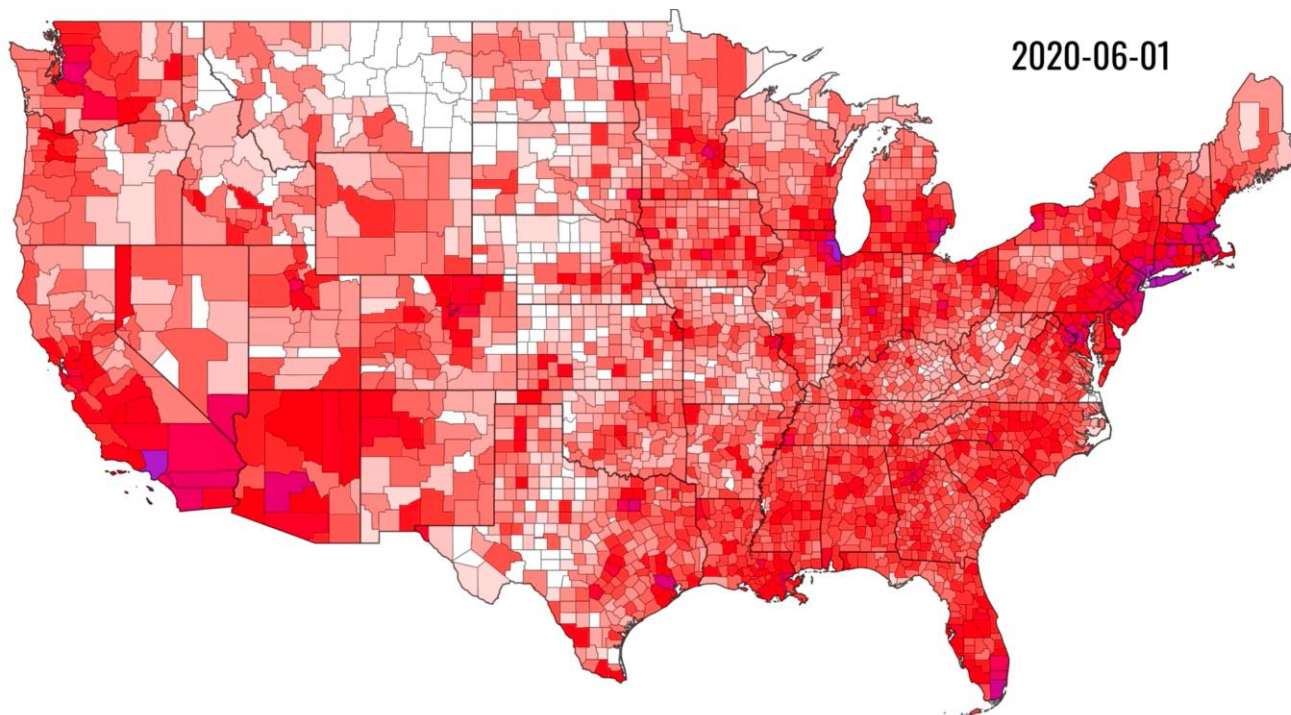


Number of COVID-19 cumulative confirmed cases:



Source: SharedGeo.org, 2021

Number of COVID-19 cumulative confirmed cases:



Source: SharedGeo.org, 2021

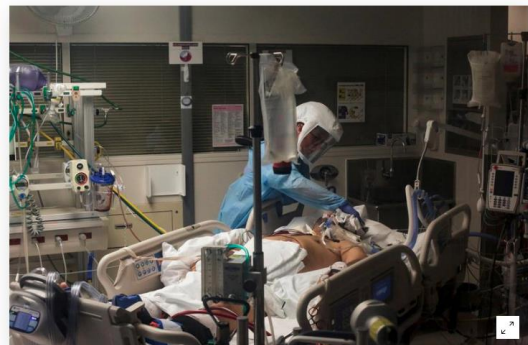
HEALTHCARE & PHARMA JUNE 28, 2020 / 11:55 AM / UPDATED TO MONTHS AGO

Hard-hit U.S. states 'surge' hospital intensive care beds as ICU wards fill up

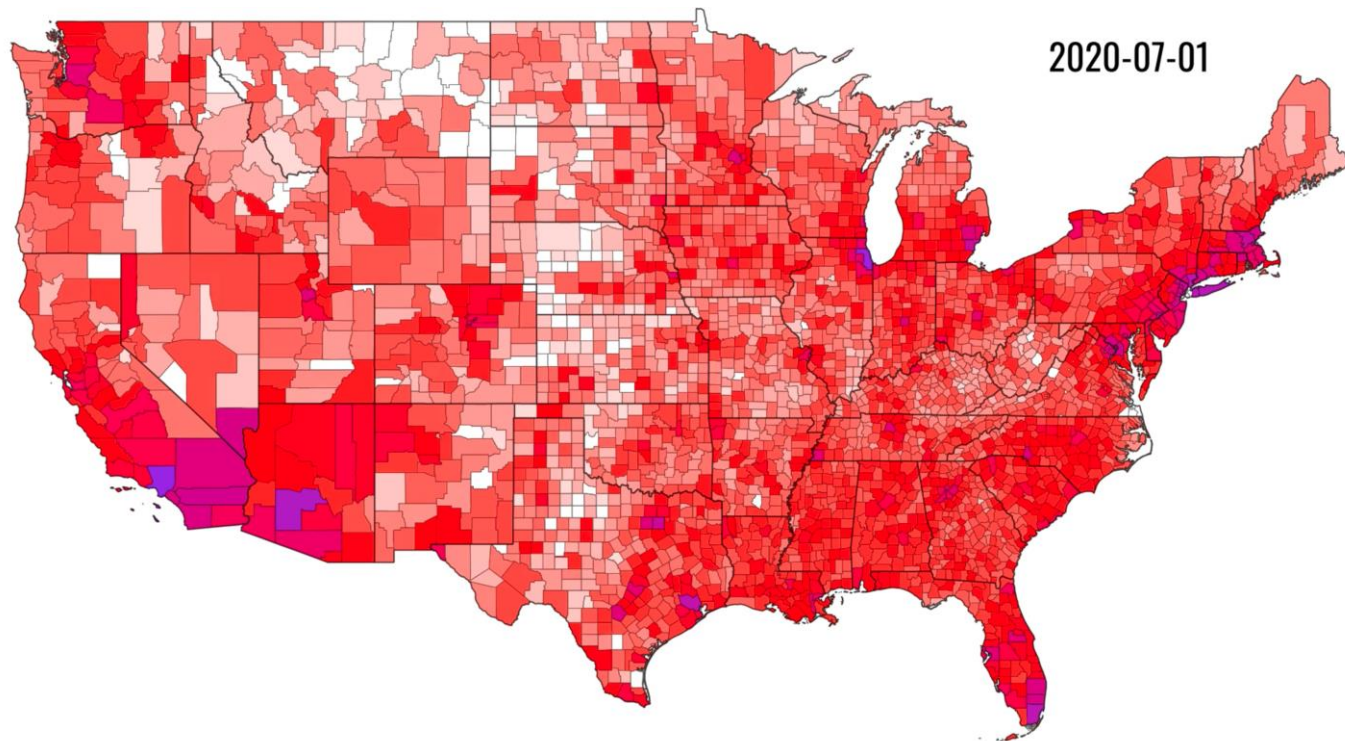
By Michael Erman, Robin Respaat

3 MIN READ  

(Reuters) - Some Texas hospitals are running out of intensive care unit (ICU) beds for COVID-19 patients, turning to surge capacity that they expect will let them handle rising virus cases for another couple of weeks.

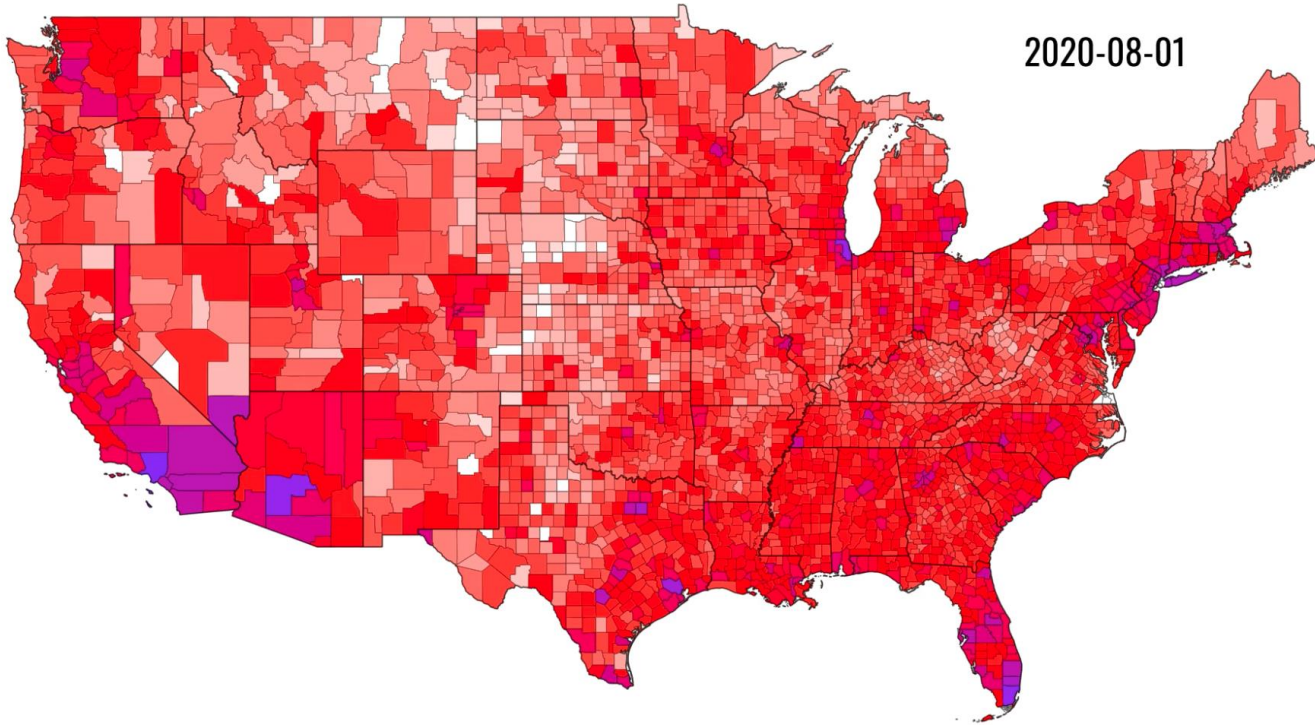


Number of COVID-19 cumulative confirmed cases:



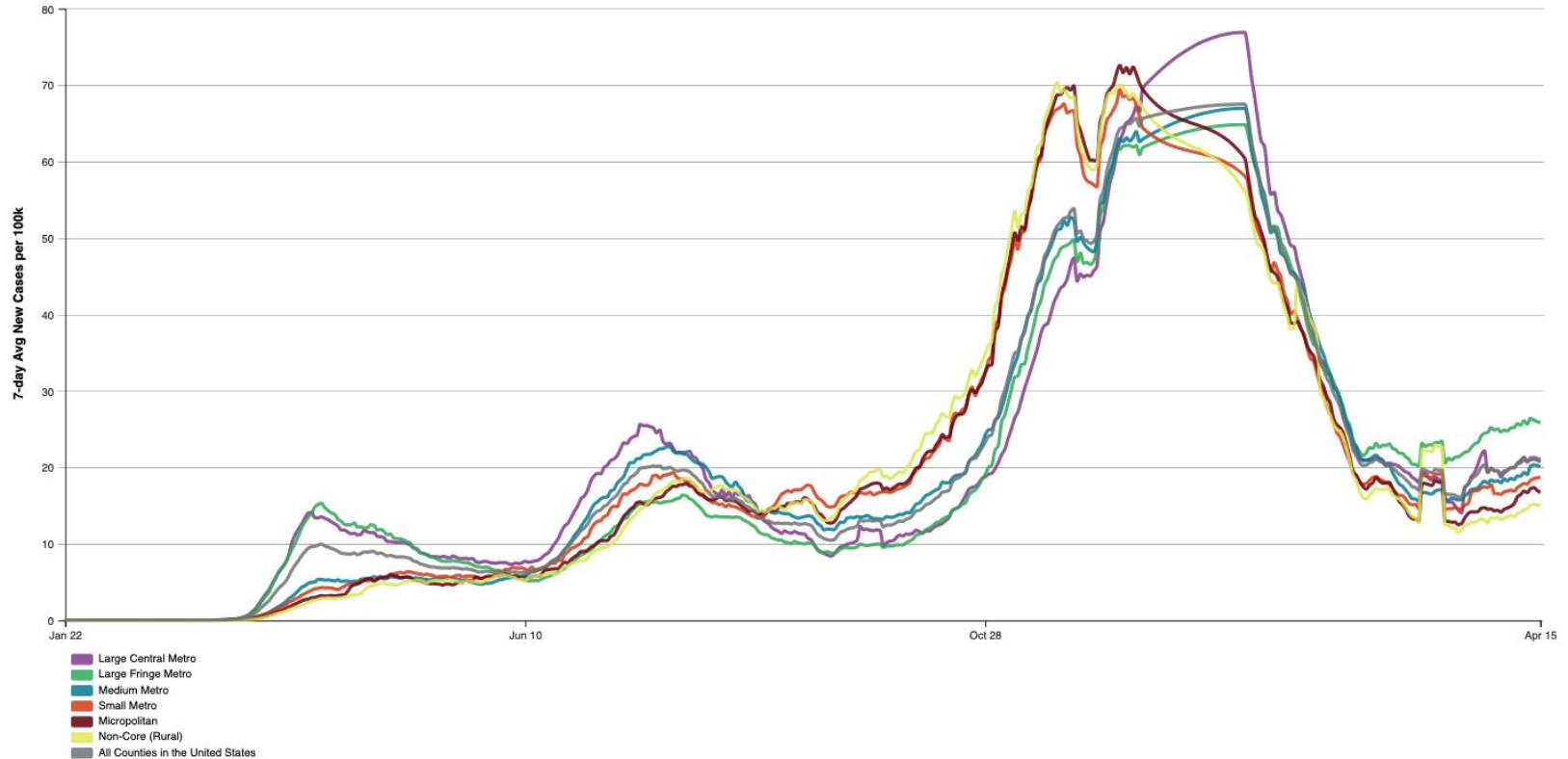
Source: SharedGeo.org, 2021

Number of COVID-19 cumulative confirmed cases:



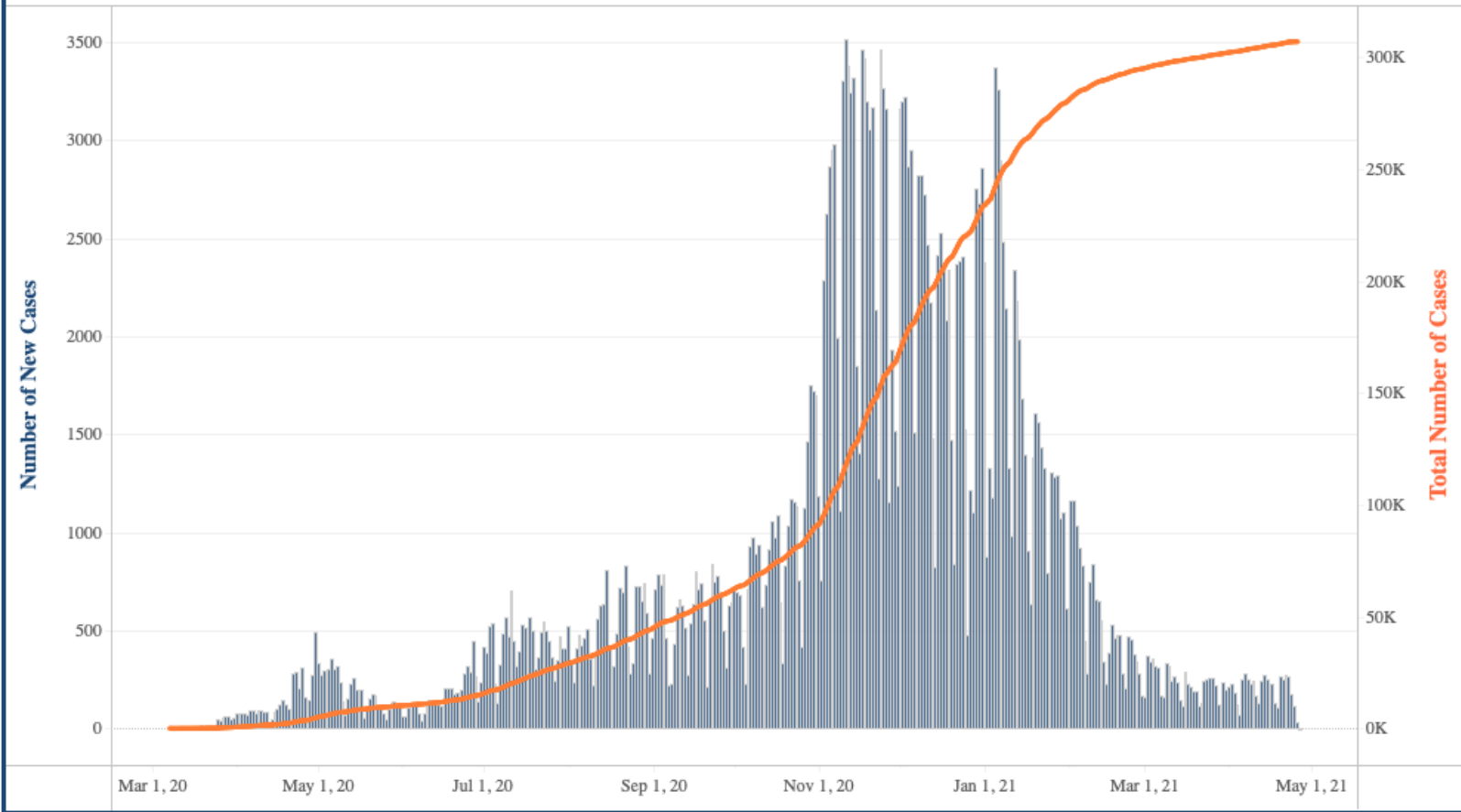
Source: SharedGeo.org, 2021

COVID-19 7-day Case Rate per 100,000 Population in United States, by County Urban/Rural Classification Type

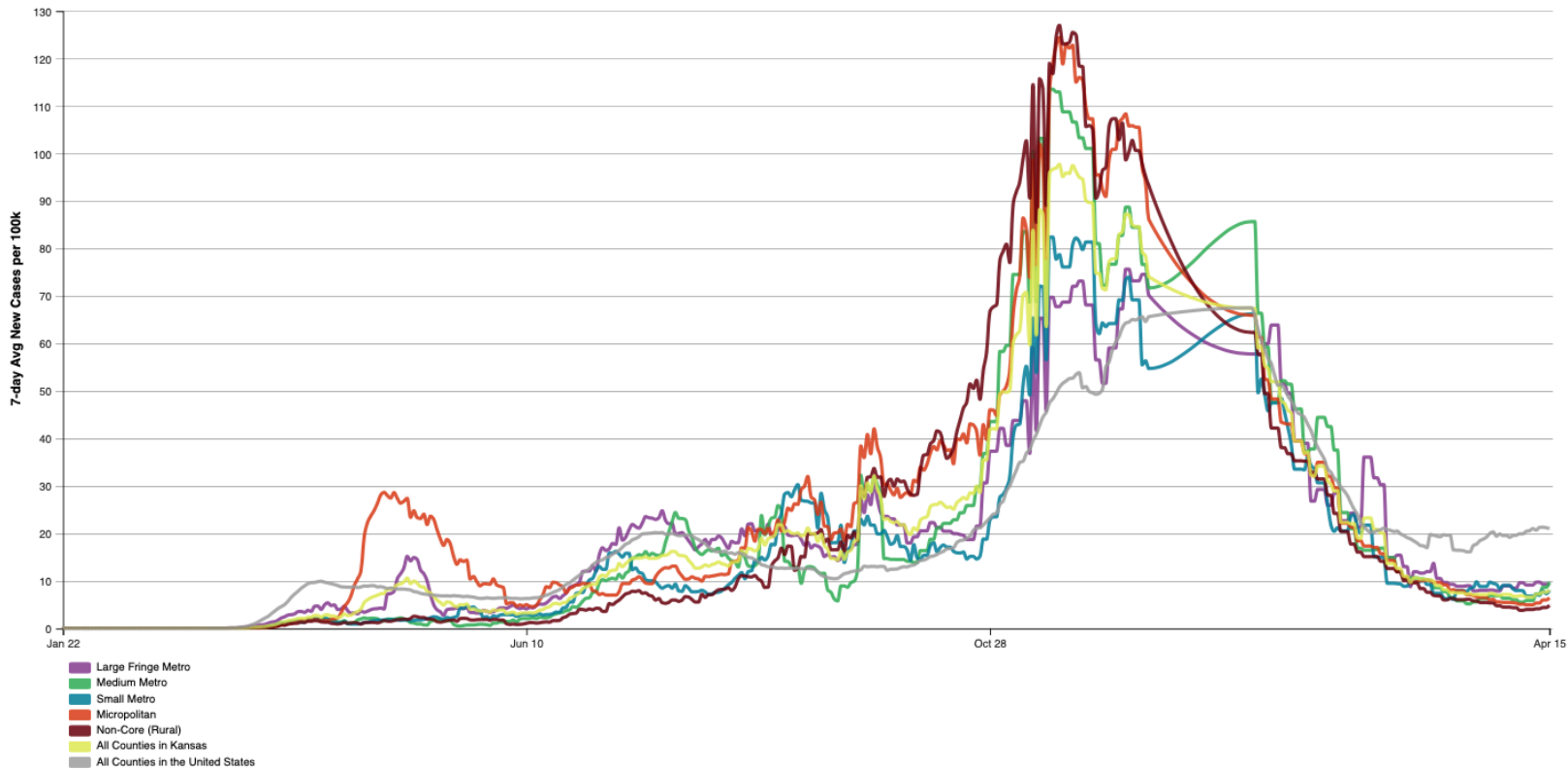


Source: Centers for Disease Control and Prevention, 2021

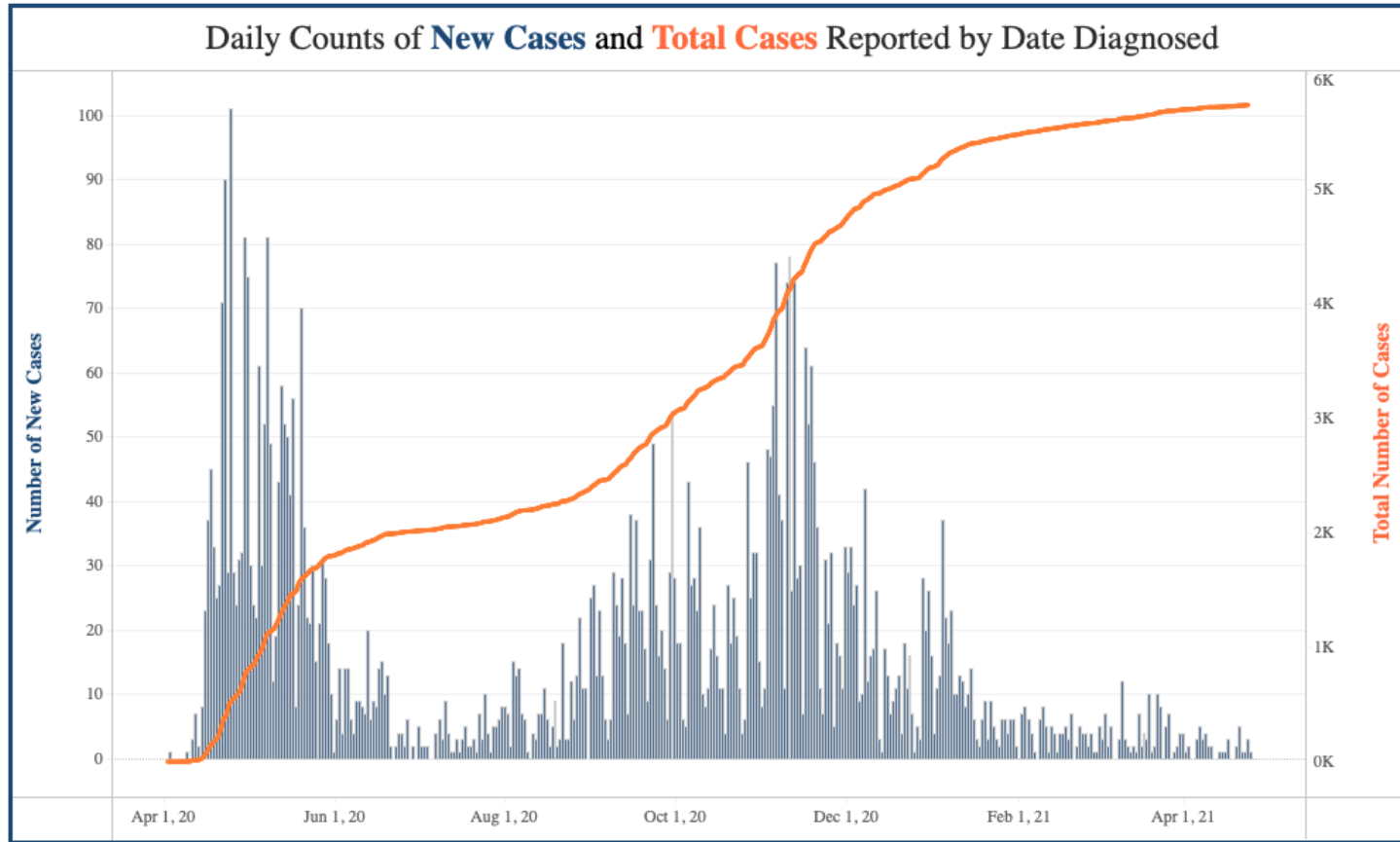
Daily Counts of **New Cases** and **Total Cases** Reported by Date Diagnosed



COVID-19 7-day Case Rate per 100,000 Population in Kansas, by County Urban/Rural Classification Type

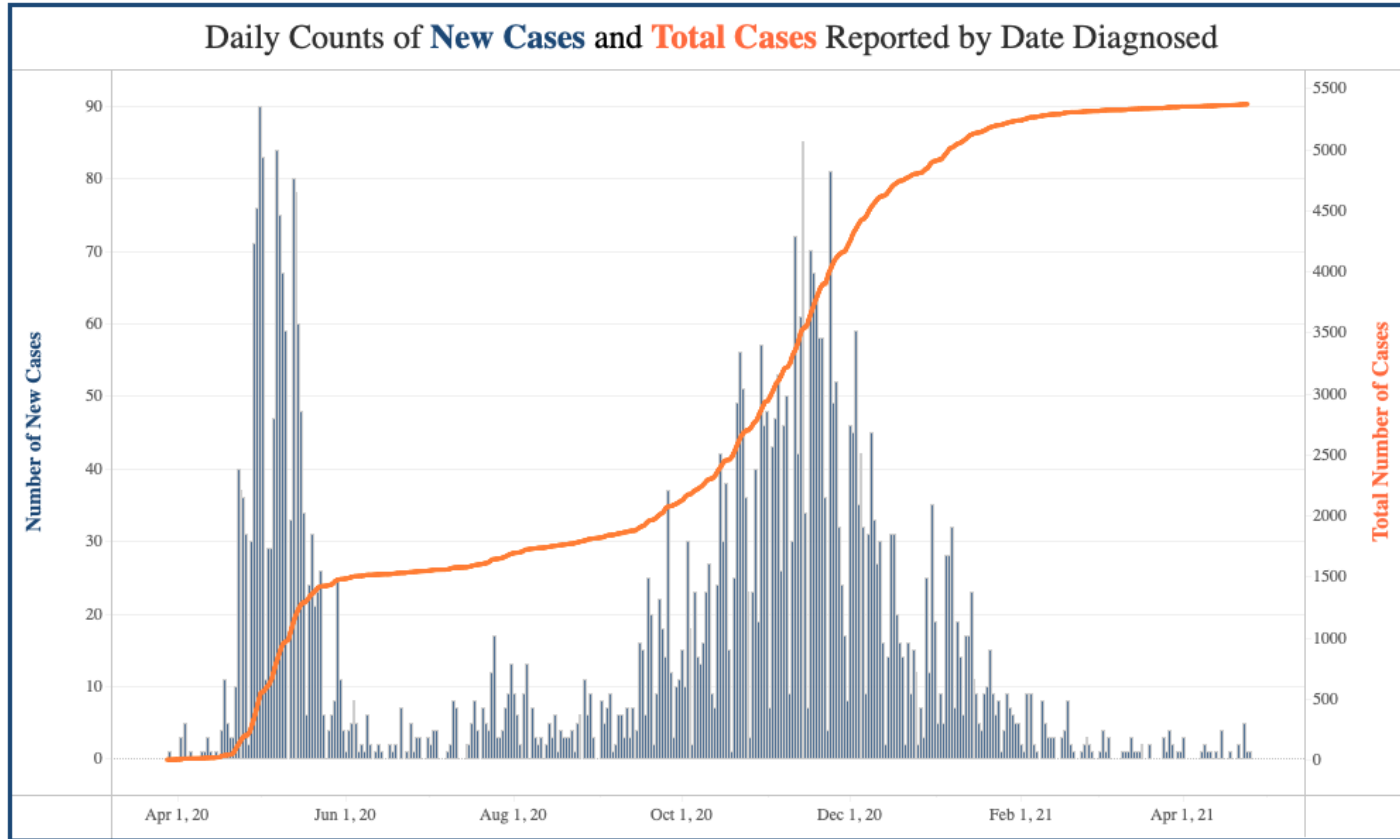


FORD COUNTY, KS



Source: Kansas Department of Health and Environment, 2021

FINNEY COUNTY, KS



Source: Kansas Department of Health and Environment, 2021

Kansas sees coronavirus cases at meat-packing plants: report

CORONAVIRUS · Published May 4



By Madeline Farber | Fox News



Could closure of meat-packing plants due to COVID-19 outbreaks plunge food supply? Insight from North Carolina hog farmer David Herring, immediate past president of National Pork Producers Council



TIP OF THE DAY

protection for planter tires



Successful Farming

NEWS MARKETS WEATHER MACHINERY CROPS TECHNOLOGY FARM MANAGEMENT LIVESTOCK FAMILY



MEAT PLANTS TIED TO 6-8% OF EARLY COVID-19 CASES

AT LEAST 253 MEATPACKING WORKERS HAVE DIED AND MORE THAN 49,000 OF THEIR COWORKERS HAVE TESTED POSITIVE FOR COVID-19.

UNIVERSITY OF MINNESOTA

CIDRAP Center for Infectious Disease Research and Policy

News & Perspective Infectious Disease Topics Antimicrobial Stewardship Ongoing Programs

FEATURED NEWS TOPICS COVID-19 Ebola MERS-CoV Chronic Wasting Disease

US food processing plants become COVID-19 hot spots

Filed Under: COVID-19
Stephanie Souchteray | News Reporter | CIDRAP News | Apr 27, 2020

Over the weekend several meat and cheese processing plants across the country closed in light of COVID-19 infections among employees, prompting the head of Tyson Food to declare that the food supply chain in the United States is breaking.

John Tyson, chairman of the board of Tyson Foods, took out a full-page ad in several newspapers yesterday, explaining that processing plant closures lead to tremendous food waste and a potential shortage of meat products across the country.

"Millions of animals—chickens, pigs and cattle—will be depopulated because of the closure of our processing facilities," Tyson wrote. "The food supply



meat processing plants "may act as infection vectors" for spreading the virus, said researchers who say the plants were associated with 6-8% of COVID-19 cases nationwide during the first few months of the outbreak. The findings are raising concerns about the potential public health impact of the shift toward smaller-scale meat processing, researchers in a new study said. Proceedings of the National Academy of Sciences.



Photo credit: Getty Images

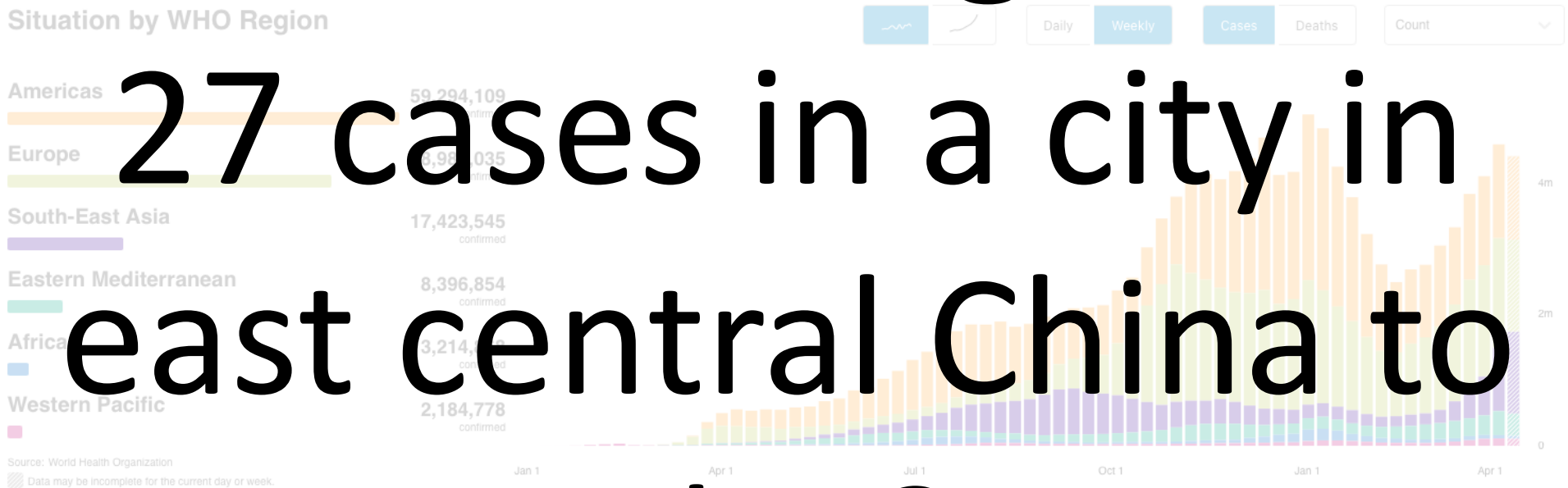
GLOBAL COVID-19 CASES (AS OF 1 APRIL 2021)

How did we go from

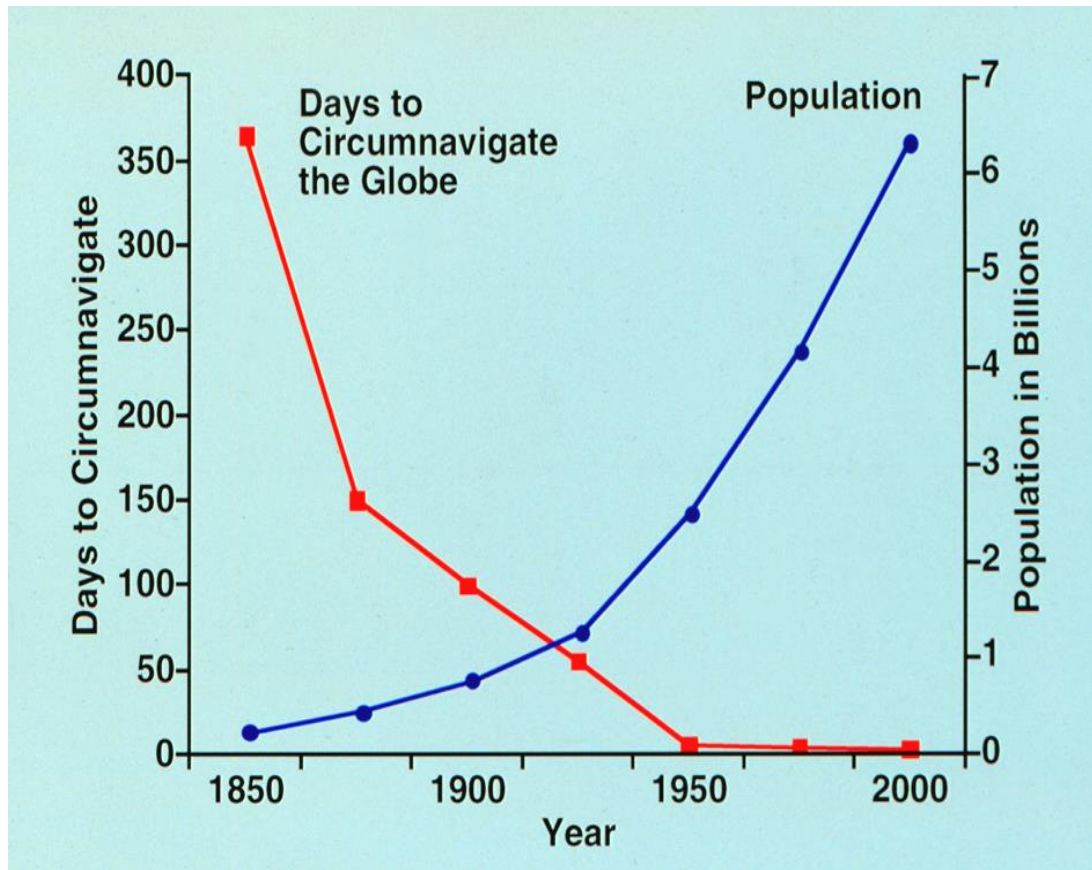
27 cases in a city in

east central China to

this?

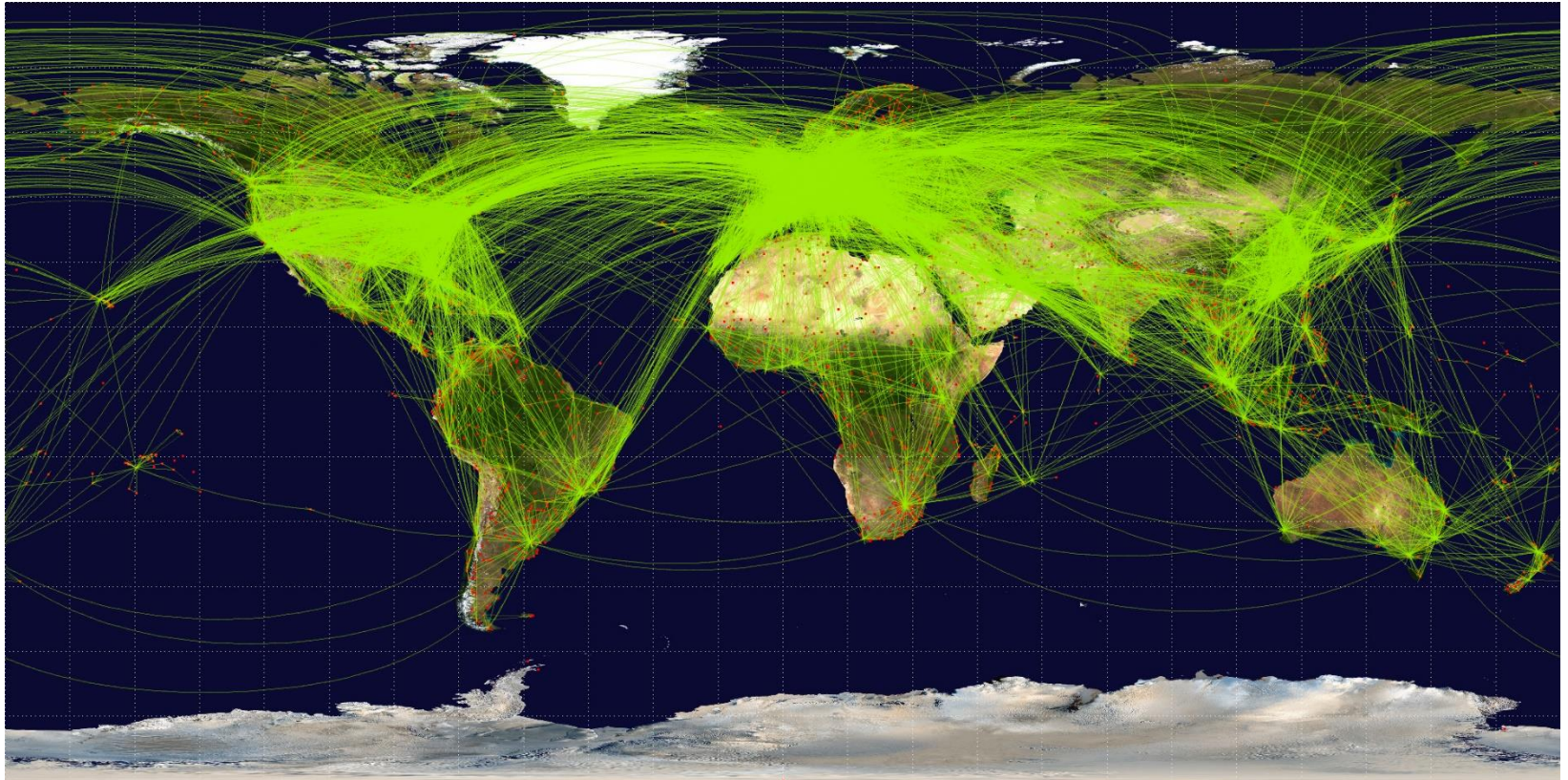


Source: World Health Organization, 2021



Source: Murphy, F. A., & Nathanson, N. (1994). *The emergence of new virus diseases: an overview*. *Sem Vir*, 5, 87-102.

AIRLINE ROUTES, 2014

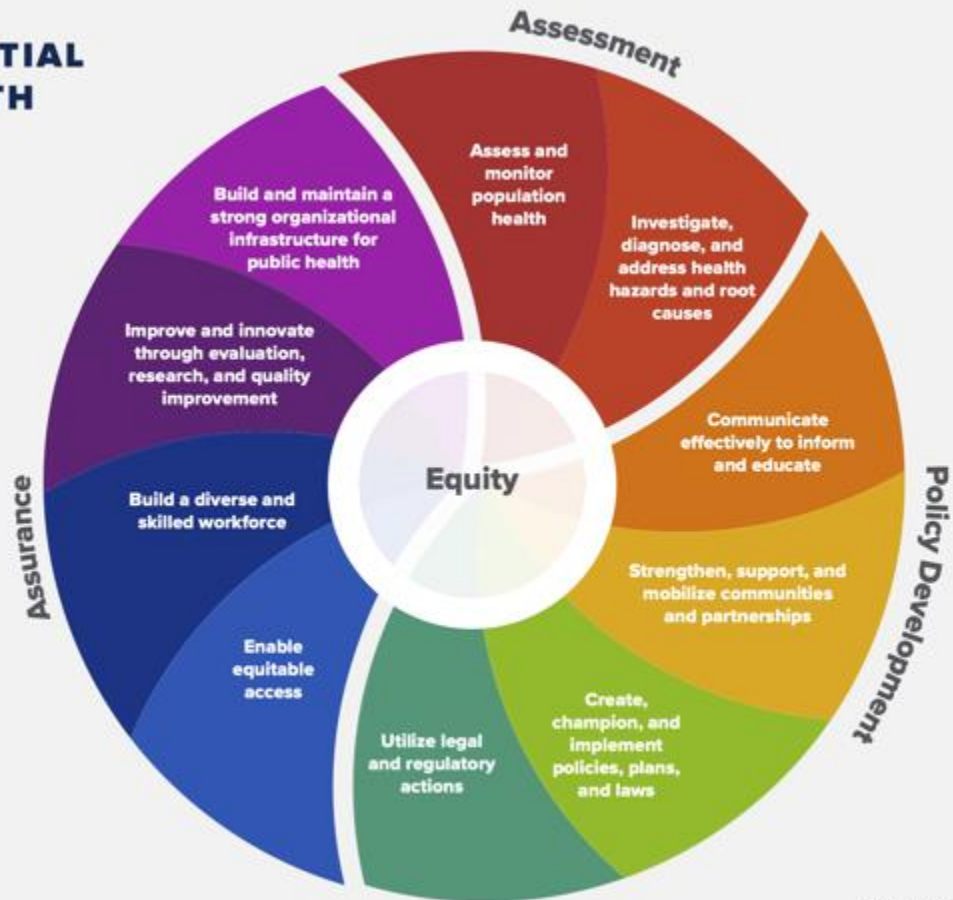


Source: openflights.org

THE 10 ESSENTIAL PUBLIC HEALTH SERVICES

To protect and promote the health of all people in all communities

The 10 Essential Public Health Services provide a framework for public health to protect and promote the health of all people in all communities. To achieve optimal health for all, the Essential Public Health Services actively promote policies, systems, and services that enable good health and seek to remove obstacles and systemic and structural barriers, such as poverty, racism, gender discrimination, and other forms of oppression, that have resulted in health inequities. Everyone should have a fair and just opportunity to achieve good health and well-being.



Created 2020

RESPONSE COMPONENTS



Laboratory
Testing



Case
Investigation
and Contact
Tracing



Policy



Data and
Information



Education

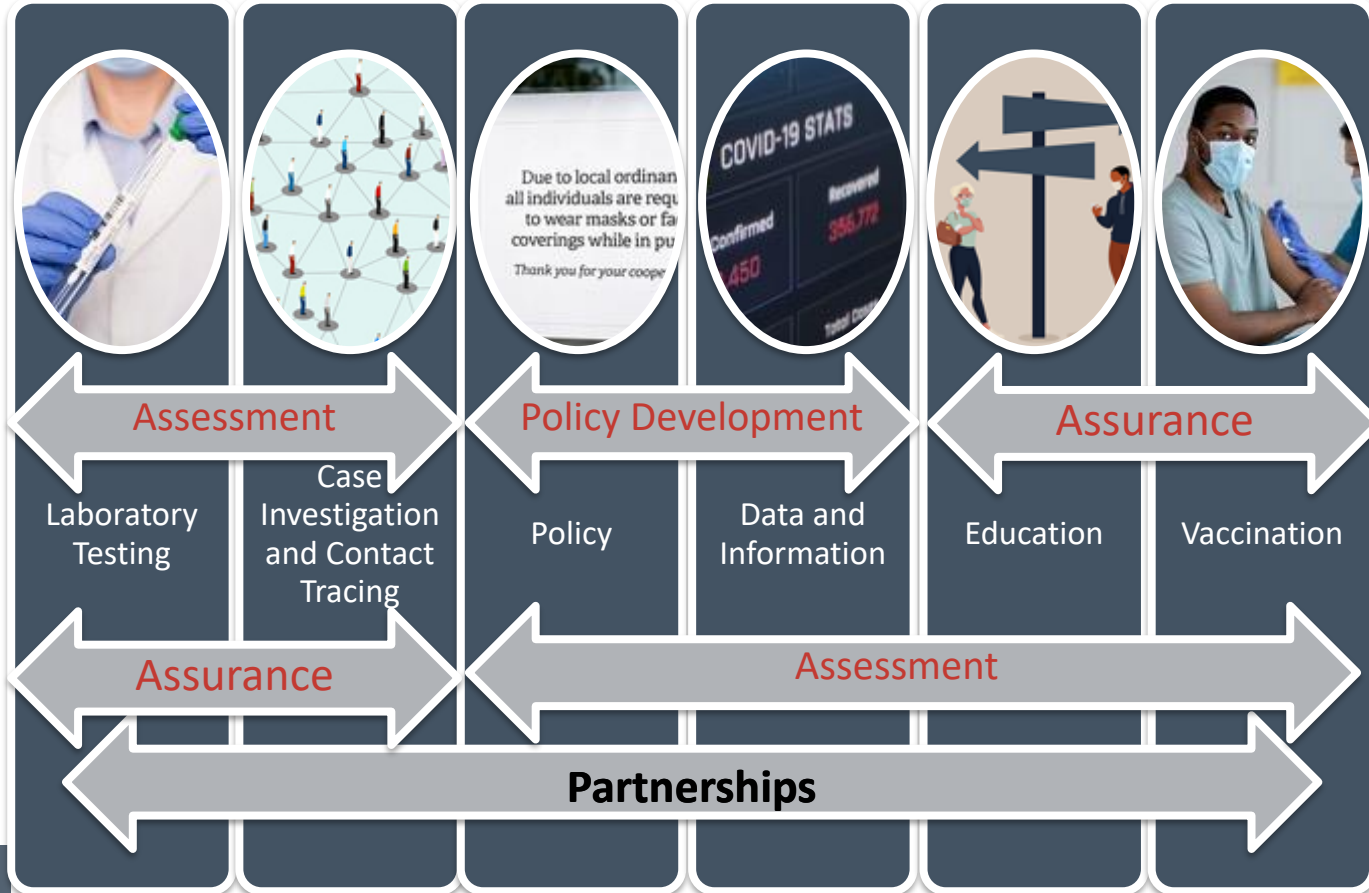


Vaccination



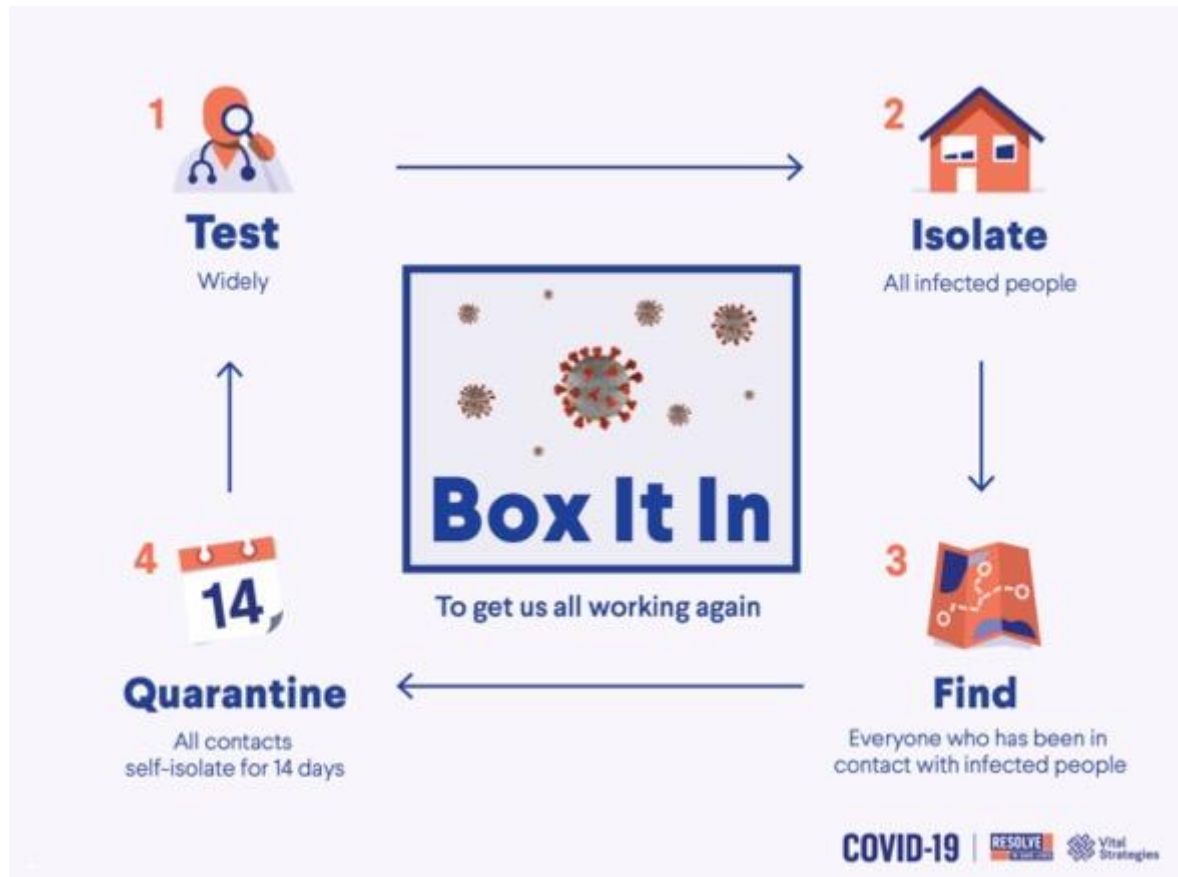
Partnerships

RESPONSE COMPONENTS





LABORATORY TESTING, CASE INVESTIGATION AND CONTACT TRACING



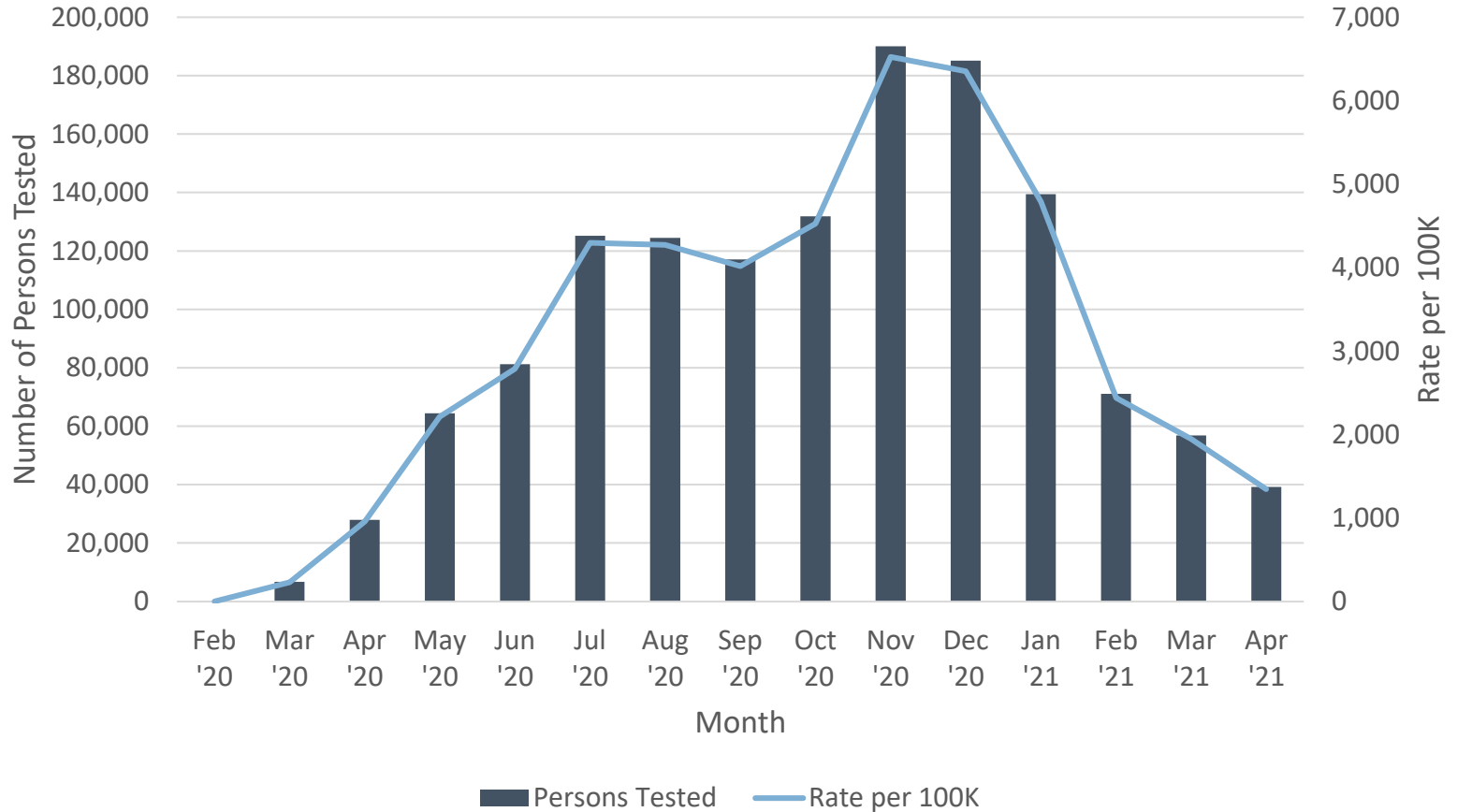
Source: *Resolve to Save Lives* (2020).

PUBLIC HEALTH TESTING STRATEGIES

- Many LHDs provide testing
- Coordination with private providers
- Kansas Unified Testing Strategy
 - gogettested.com



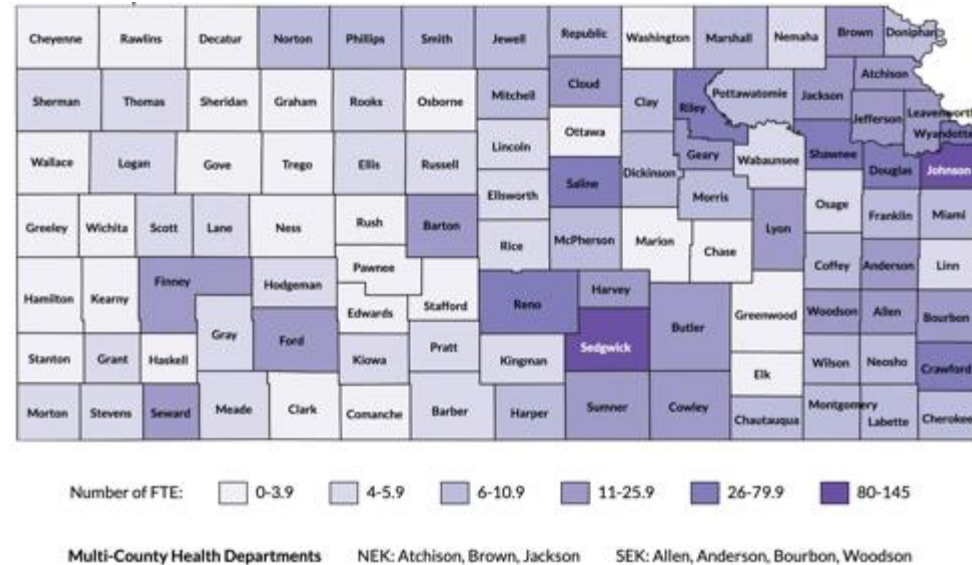
COVID-19 Testing by Month in Kansas, Jan. 2020 to Apr. 2021



CASE INVESTIGATION & CONTACT TRACING

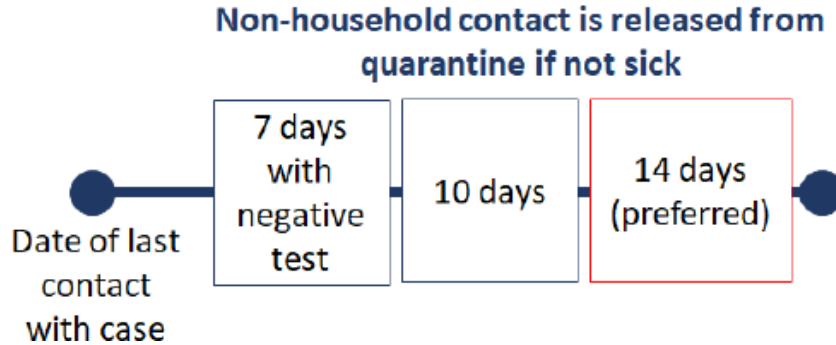
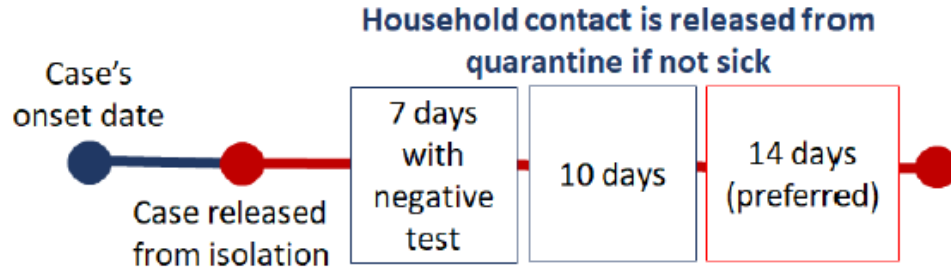
- Consider pre-pandemic infrastructure
- Administrative challenges
- Technical / information systems challenges
- Increased lab testing = more investigations

Kansas Local Public Health Workforce: FTE

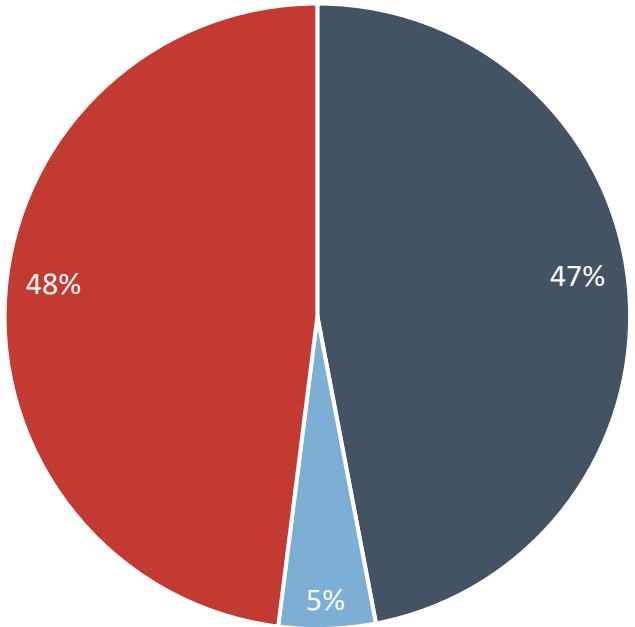


Source: Kansas Public Health Collaborative (Wichita State University) analysis of KDHE Aid-to-Local Survey, FY2021.

BASIC CONCEPTS OF CASE INVESTIGATION & CONTACT TRACING



KS COVID-19 CASES, BY SYMPTOM STATUS



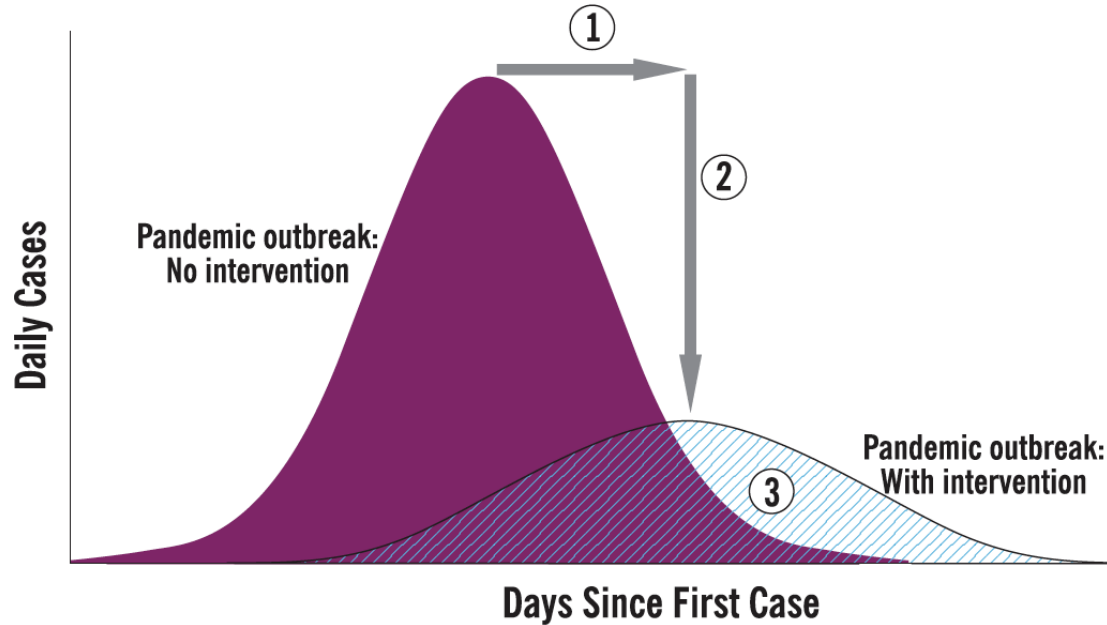
■ Symptomatic ■ Asymptomatic ■ Missing/Unknown



POPULATION-BASED MITIGATION POLICIES

Goals of Community Mitigation

- ① Delay outbreak peak
- ② Decompress peak burden on hospitals / infrastructure
- ③ Diminish overall cases and health impacts



Centers for Disease Control and Prevention, 2007



1. Wear a mask

3. Social distance



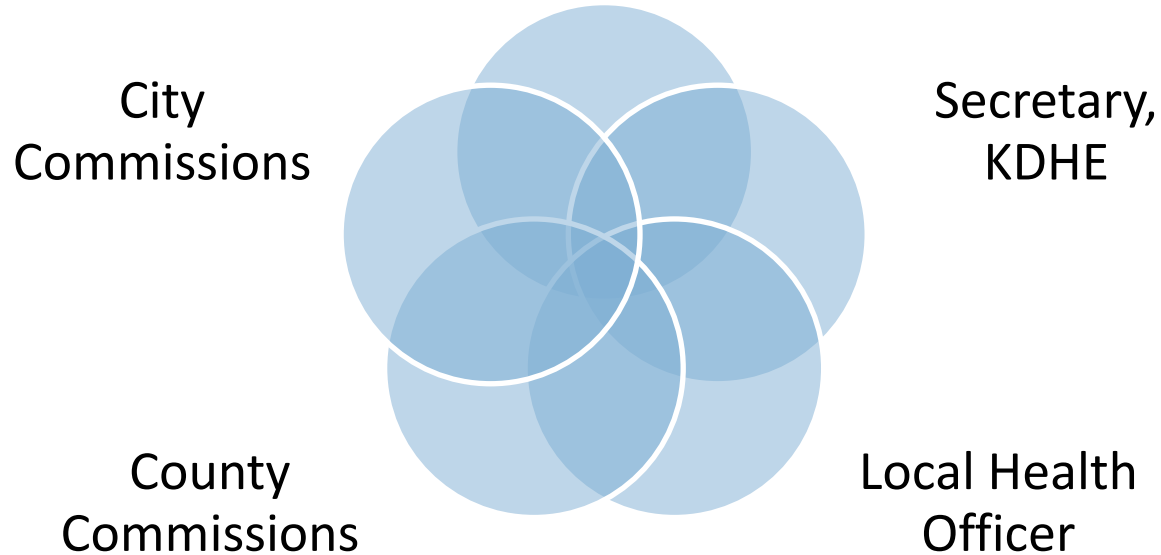
2. Wash your hands

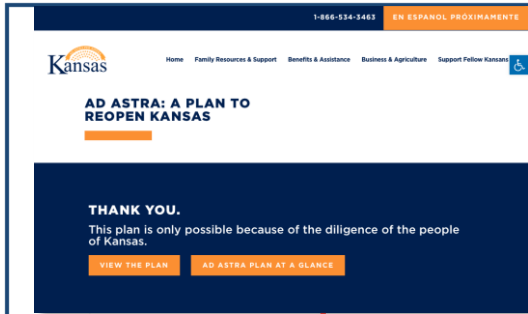
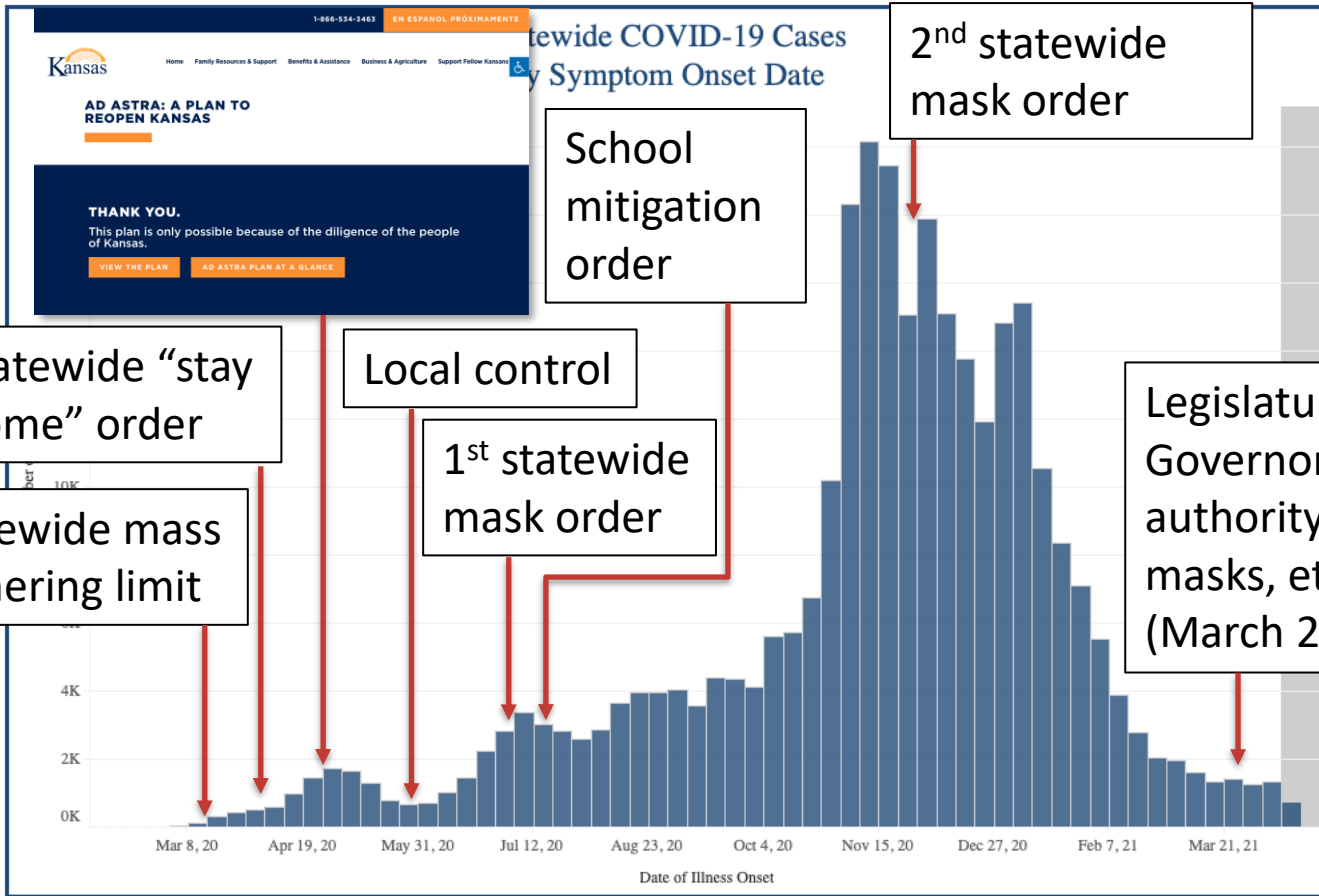
4. Avoid large groups



PUBLIC HEALTH POWERS

Governor





Statewide "stay home" order

Statewide mass gathering limit

Local control

1st statewide mask order

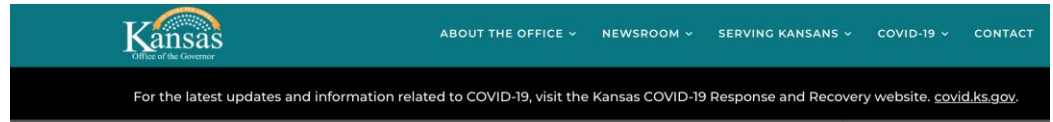
School mitigation order

2nd statewide mask order

Legislature limits Governor and Local authority to mandate masks, etc. with SB 40 (March 24)

SENATE BILL 40

- Kansas Emergency Management Act
- County commissions and local health officers
- Local boards of education
- Governing bodies of community colleges



Governor Laura Kelly Signs Emergency Response Bill, Will Re-Issue Executive Orders to Protect COVID-19 Recovery

Mar 24, 2021

Governor Laura Kelly today signed a bill to ensure Kansas can continue providing communities with resources and support critical to the state's COVID-19 response and recovery efforts.

Among other provisions, Senate Bill 40 modifies the procedure for the declaration and extension of a state disaster emergency under the Kansas Emergency Management Act, and extends the current disaster declaration to May 28, 2021.

"This bipartisan compromise will extend the State of Disaster Emergency that allows us to provide hospitals with PPE, support food banks and pantries, and otherwise respond to the COVID-19 pandemic," **Governor Kelly said.** "The bill includes provisions that I do not support and that could complicate our emergency response efforts. But I will continue to work with legislators and local leaders to keep Kansans safe and healthy during this pandemic."

Several executive orders related to the COVID-19 pandemic were set to expire on March 31 in conjunction with the expiration of the state of disaster emergency. Senate Bill 40 includes a provision that revokes all current executive orders related to the COVID-19 pandemic, but the Governor retains the authority to re-issue orders under the new process imposed by the bill.

On April 1, the Governor will re-issue the following orders, which will remain in effect until rescinded or until the statewide state of disaster emergency expires, whichever is earlier:

ARCHIVES

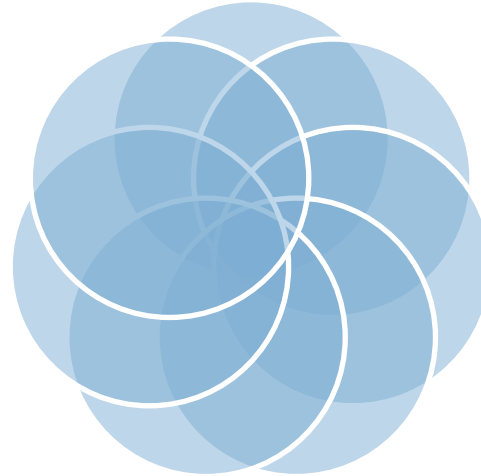
Select Month

PUBLIC HEALTH POWERS

Governor

Governing bodies
of community /
technical colleges

Local school
boards



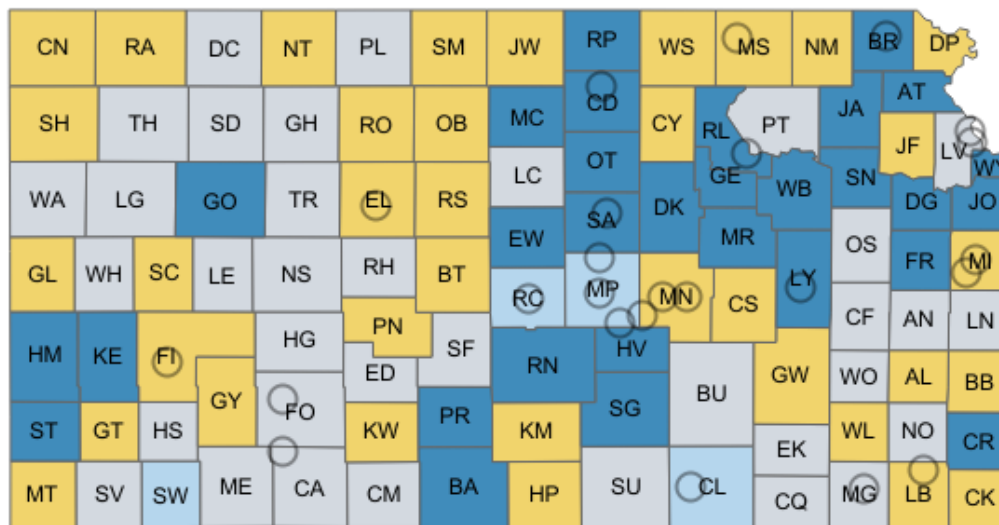
Secretary, KDHE

Local Health
Officer

City Commissions

County
Commissions

County COVID-19 Restrictions and Official Actions as of December 9



County Action - 70 Counties with public health restrictions; 66 with a mask order

- Restrictions Including Mask Order (30)
- Mask Order Only (36)
- Restrictions But No Mask Requirement (4)
- No Restrictions (35)

City Action

- Adopted Mask Order (24)

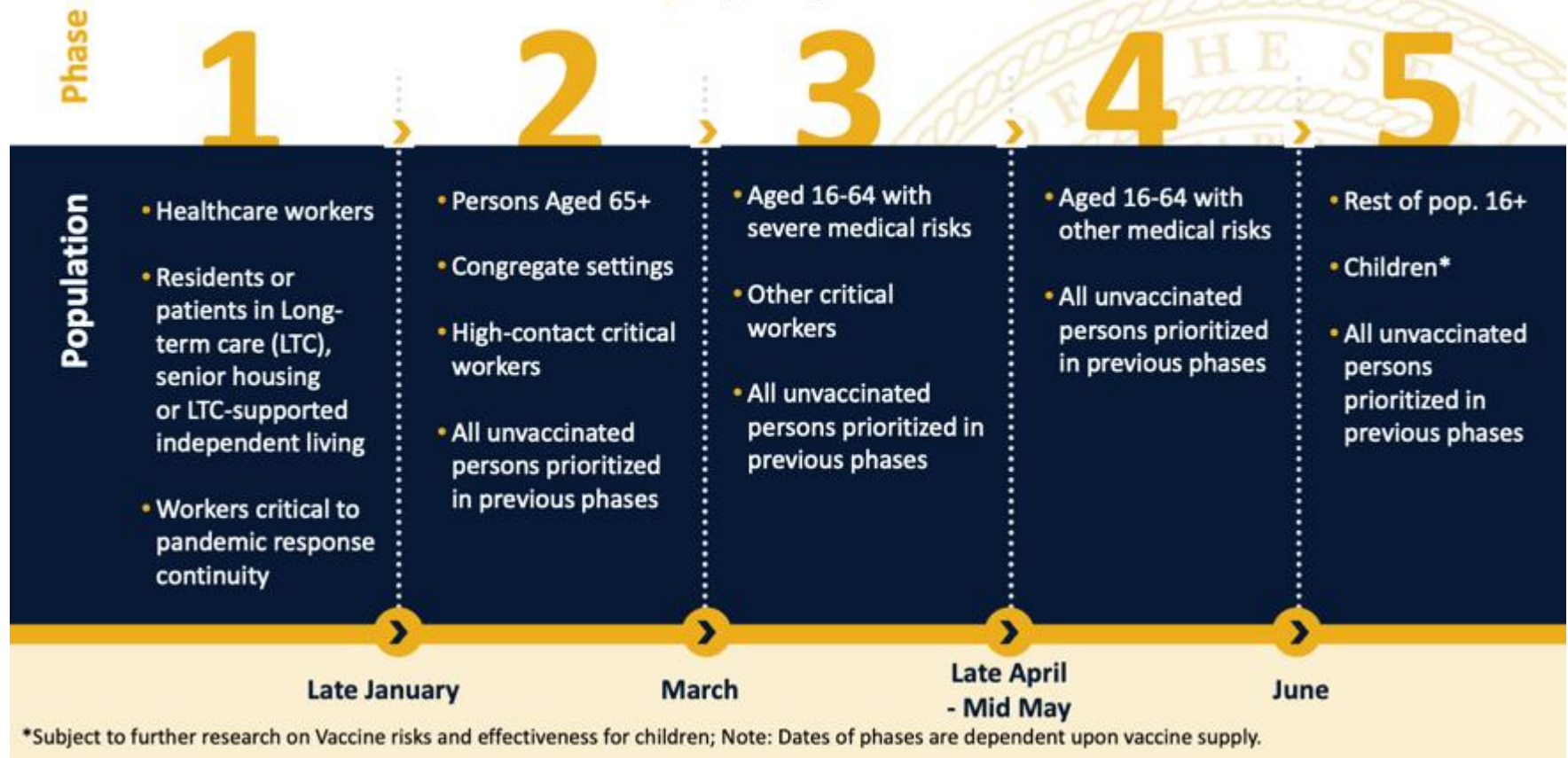
Information was collected through a survey in collaboration with the Kansas Association of Counties and is supplemented with online searches for published orders, announcements on social media and local news sites. Counties that have adopted restrictions are shown in this map, and official actions that use only the language of guidance (e.g., “should,” or “recommend”) are not considered restrictions. For mask orders, counties that either adopted an order by official action or did not take official action to opt out of the state mask order are considered to have a restriction in place. Counties may have policies in place that were not identified by this approach and therefore are not included. Information will be monitored, and the map updated as needed.

Source: KHI analysis of survey conducted in collaboration with the Kansas Association of Counties as well as searches of published orders, or announcements on social media or in a local newspaper. Data as of December 9, 2020.



VACCINATION

Kansas Vaccination Phases | By Population



Kansas COVID-19 Vaccination Overview

Data are preliminary and subject to quality improvement and quality assurance validation.
Last updated: 4/28/2021 at 9:00am



1,110,043

People Vaccinated with One Dose



1,872,482

Total Doses Reported as Administered
First Dose: 1,110,043
Second Dose: 762,439



2,511,820

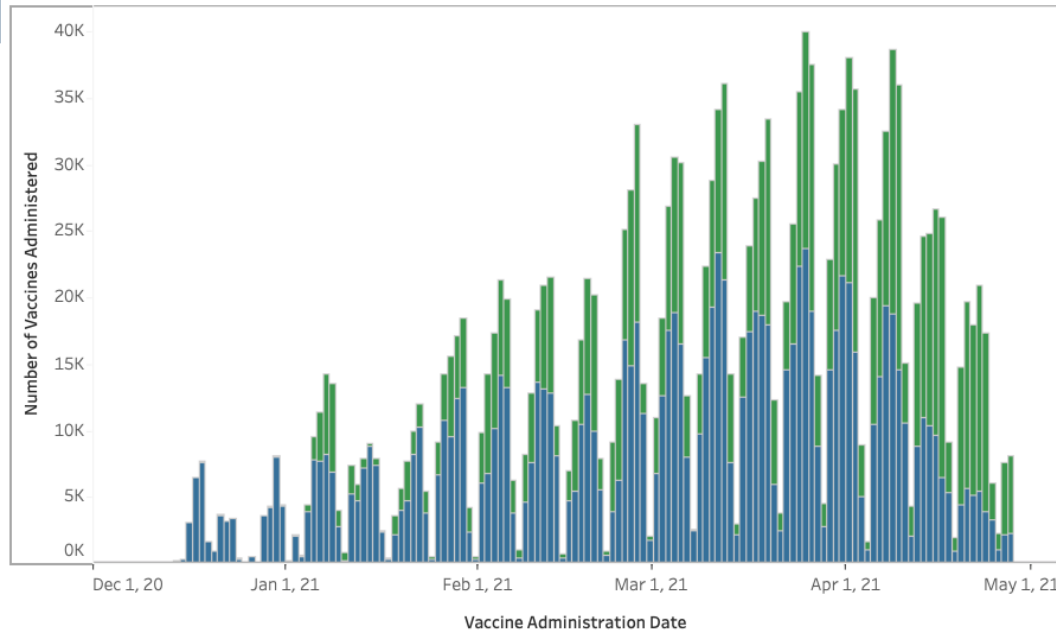
Total Doses Distributed
State Distributed: 1,936,940
Federal Pharmacy Program: 574,880



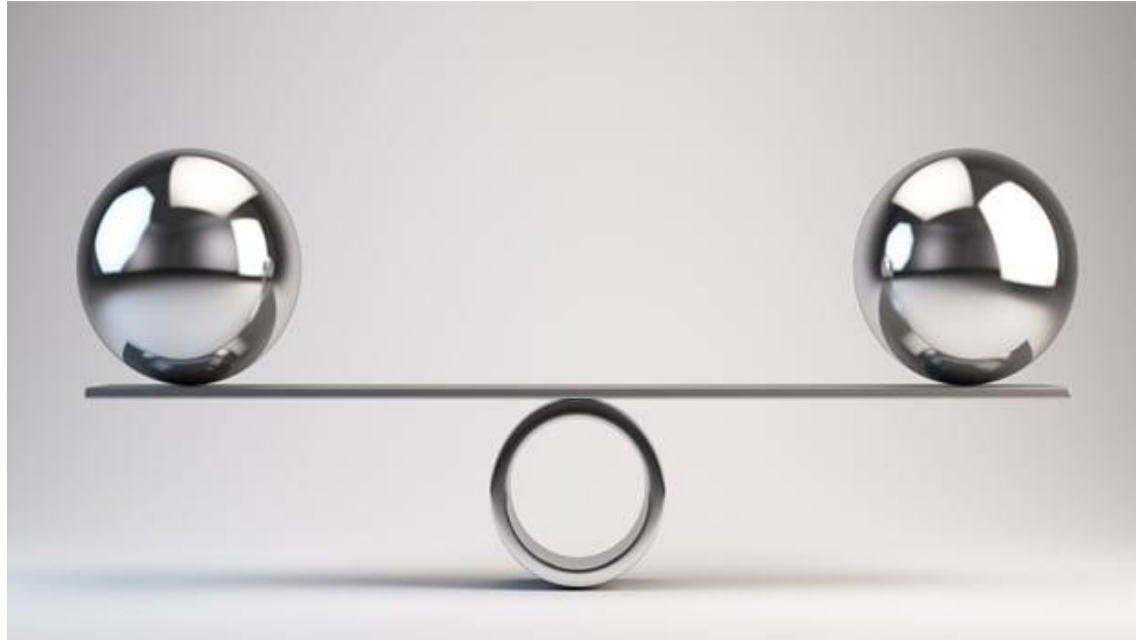
38.1%

Percent of Kansans Vaccinated with One Dose

COVID-19 Vaccines Administered by **First** and **Second** Dose



PUBLIC HEALTH CAPACITY: CASE INVESTIGATIONS / CONTACT TRACING VS. VACCINATION?



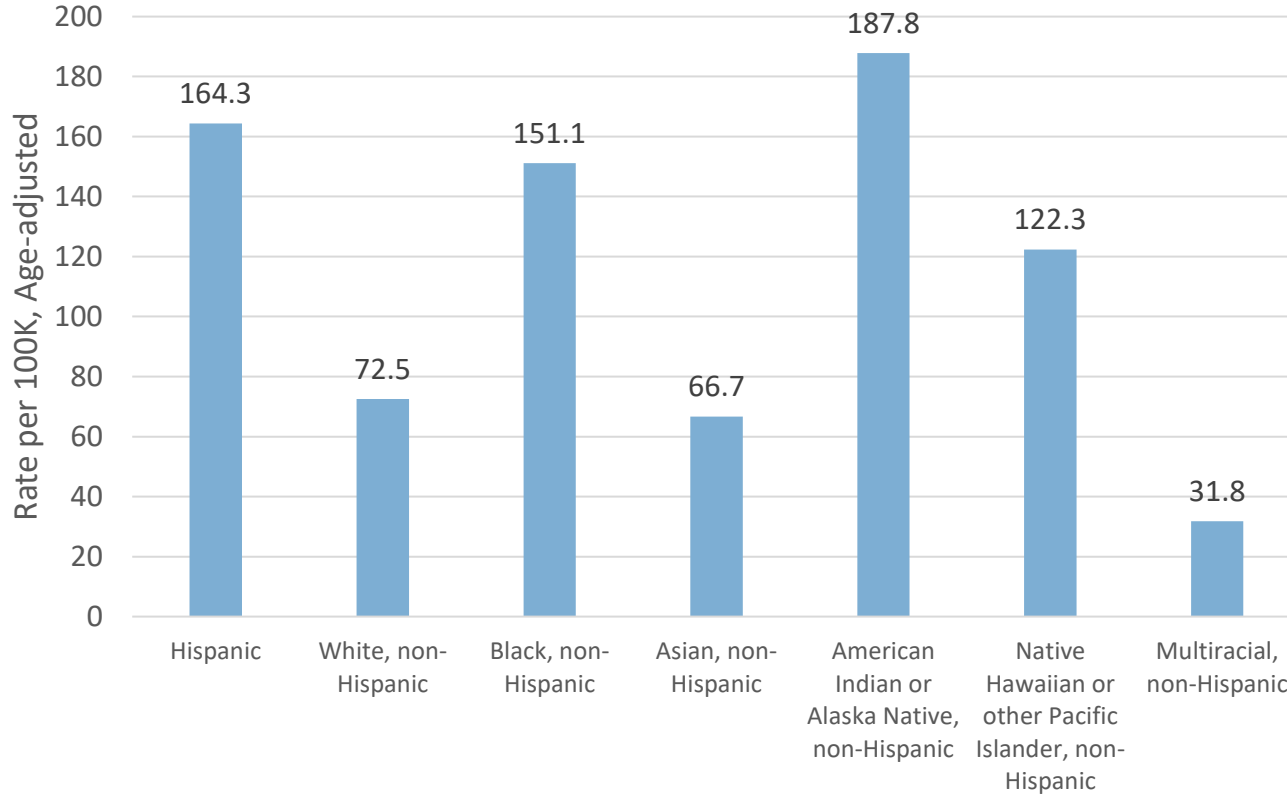


FOCUS ON DISPARITIES AND EQUITY

KANSAS TESTING RATES BY RACE AND ETHNICITY

Race	Persons Tested	Rate per 1,000
White	874,963	343.83
Black or African American	68,290	313.26
Asian	27,453	255.81
Other Race	52,038	565.24
Not Reported/Missing	339,188	
Ethnicity		
Hispanic or Latino	105,185	301.87
Not Hispanic or Latino	771,420	300.98
Unknown or Missing	494,256	

Provisional* rate of COVID-19–related deaths, by demographic characteristics — National Vital Statistics System, United States, 2020



NUMBER AND RATE OF COVID-19 DEATHS BY RACE AND ETHNICITY IN KANSAS (TOTAL DEATHS = 4,978)

Race Death Rates per 100,000

Race	Number of Deaths	Rate per 100,000
White	3,889	152.83
Black or African American	255	116.97
American Indian or Alaska Na..	41	63.27
Asian	69	64.30
Other Race	251	272.64
Not Reported/Missing	473	

Ethnicity Death Rates per 100,000

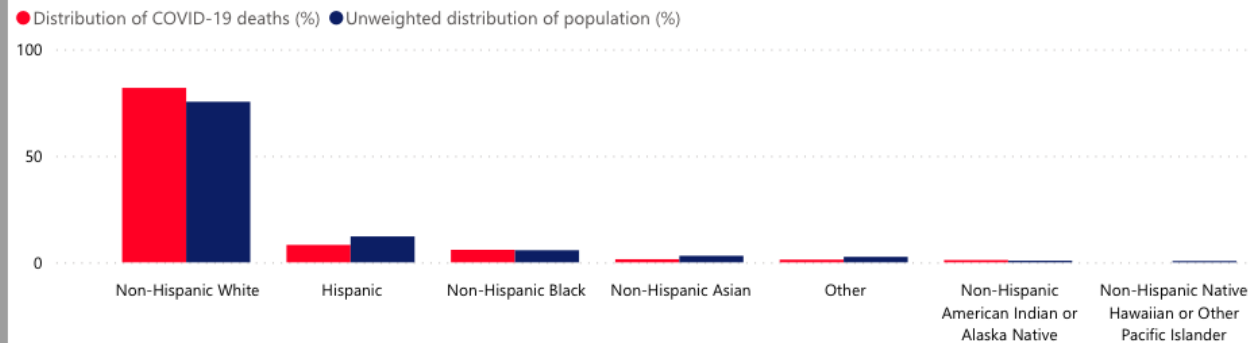
Ethnicity	Number of Deaths	Rate per 100,000
Hispanic or Latino	323	93
Not Hispanic or Latino	3,965	155
Not Reported/Missing	690	

Figure 1. Crude and age-adjusted percents of COVID-19 deaths and unweighted population distributions by race and Hispanic origin

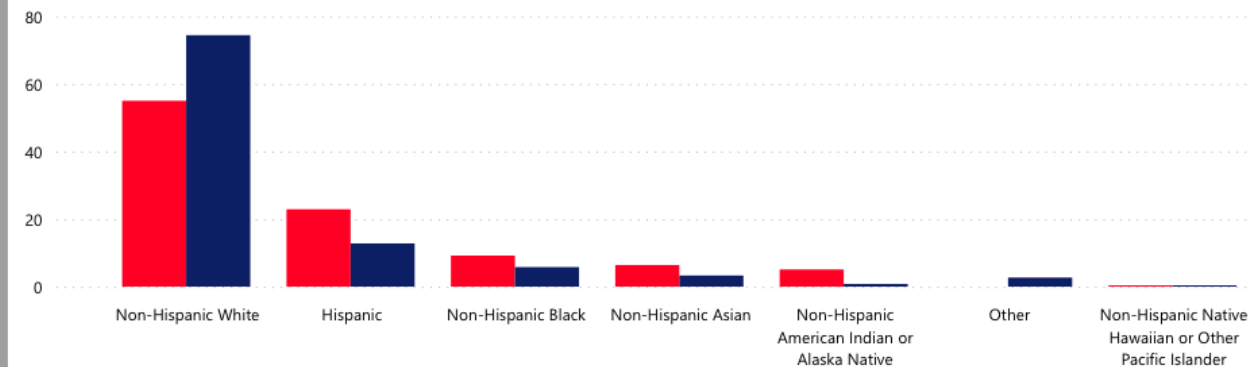
Select a jurisdiction:

Kansas

Unadjusted for age



Age-standardized



Kansas COVID-19: Social Vulnerability Index (SVI) Explorer

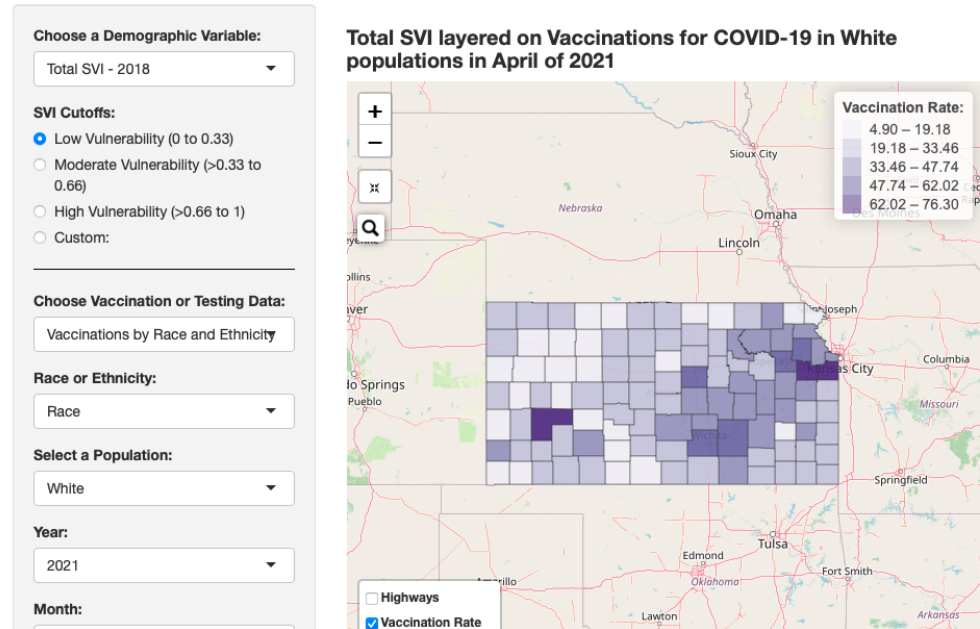
shinythemes/css/journal.min.css

Better Information for Better Health

KANSAS TRACKING

[KDHE Home Page](#) [Disclaimer](#) [Data Selection and Map](#) [Demographic Data Table](#) [COVID-19 Data Table](#)

Social Vulnerability, COVID-19 Testing and COVID-19 Vaccination Rates



Source: Kansas Department of Health and Environment, 2021



KANSAS HEALTH INSTITUTE

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THANK YOU

Any questions?

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