

# COVID-19 Situation

## Brookings County

December 22<sup>nd</sup>

- 5,658 cases (4,327 confirmed)
- 249 active cases
- 173 ever hospitalized
- 41 deaths

COVID (ICU) occupied beds of local Hospitals:

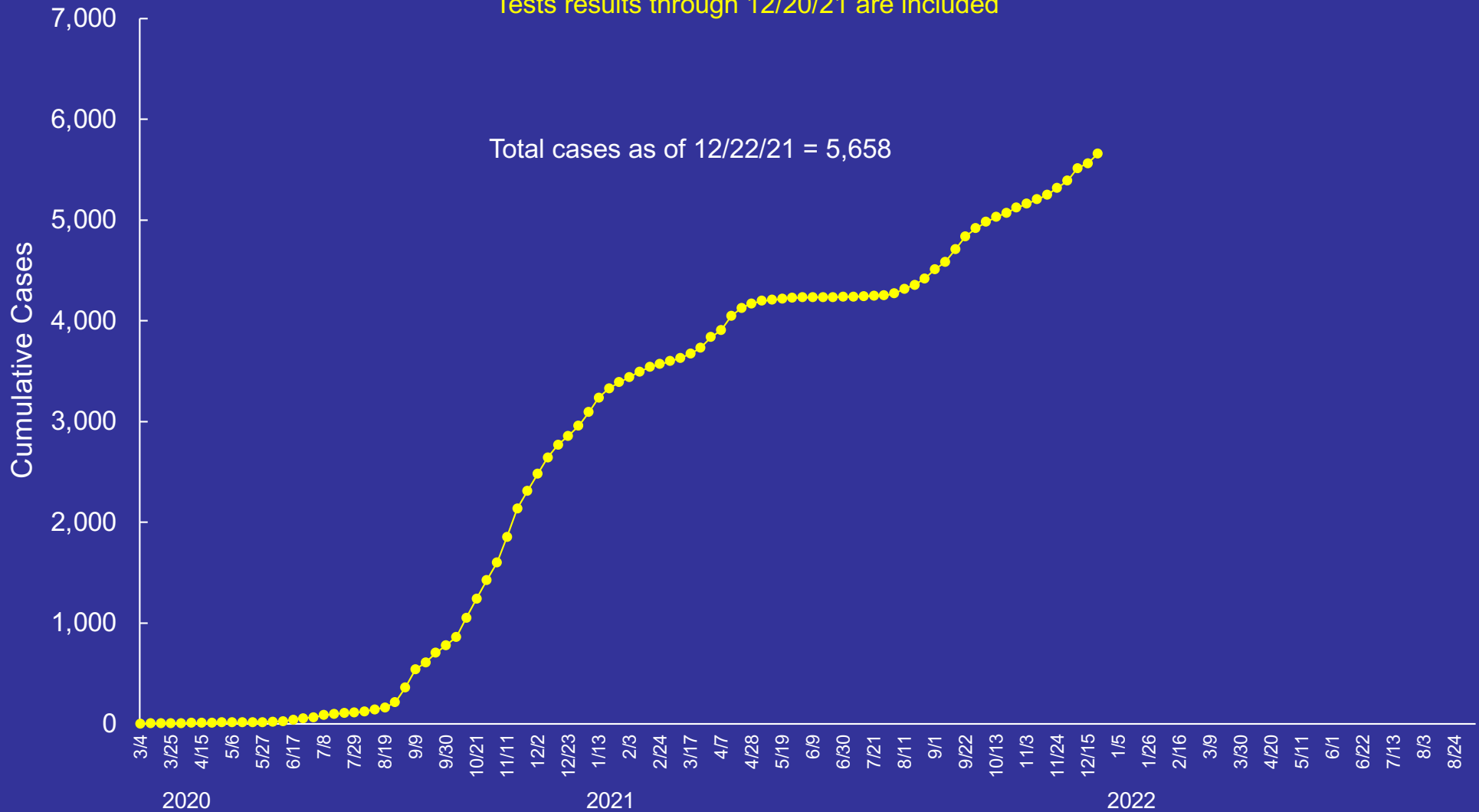
- Brookings - 5 COVID beds (1 ICU)
- Avera SF - 55 COVID beds (25 ICU)
- Sanford SF - 73 COVID beds (20 ICU)

# Brookings COVID-19 Situation

## 2020-2022 Cumulative Number of Confirmed & Probable Cases by Week

Tests results through 12/20/21 are included

Total cases as of 12/22/21 = 5,658



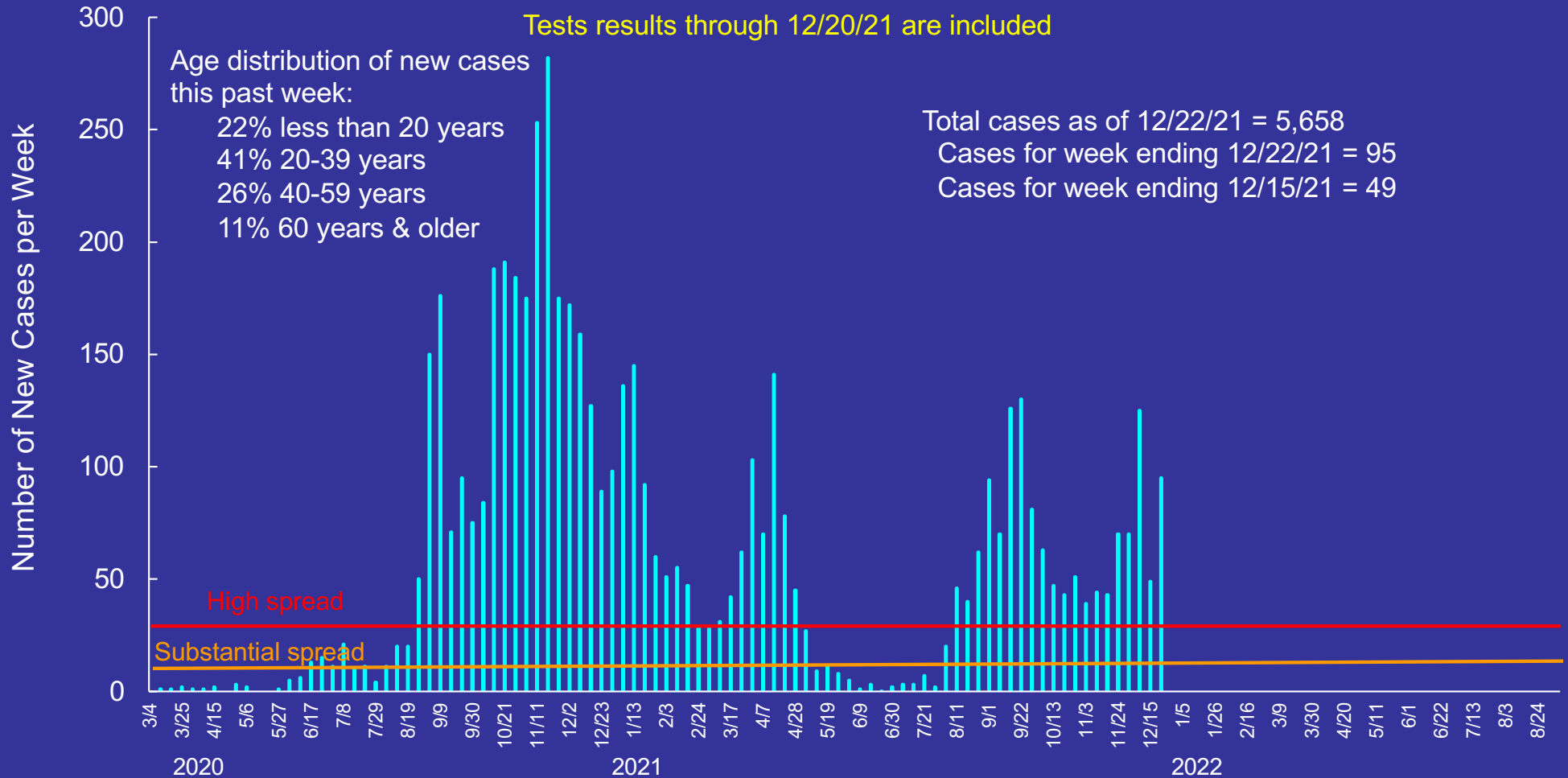
State residents only. Includes confirmed cases by PCR & probable cases by antigen testing.

# Brookings COVID-19 Situation

## 2020-2022 Number of Confirmed & Probable COVID-19 Cases per Week

Current Level of Community Spread<sup>^</sup>: **High**

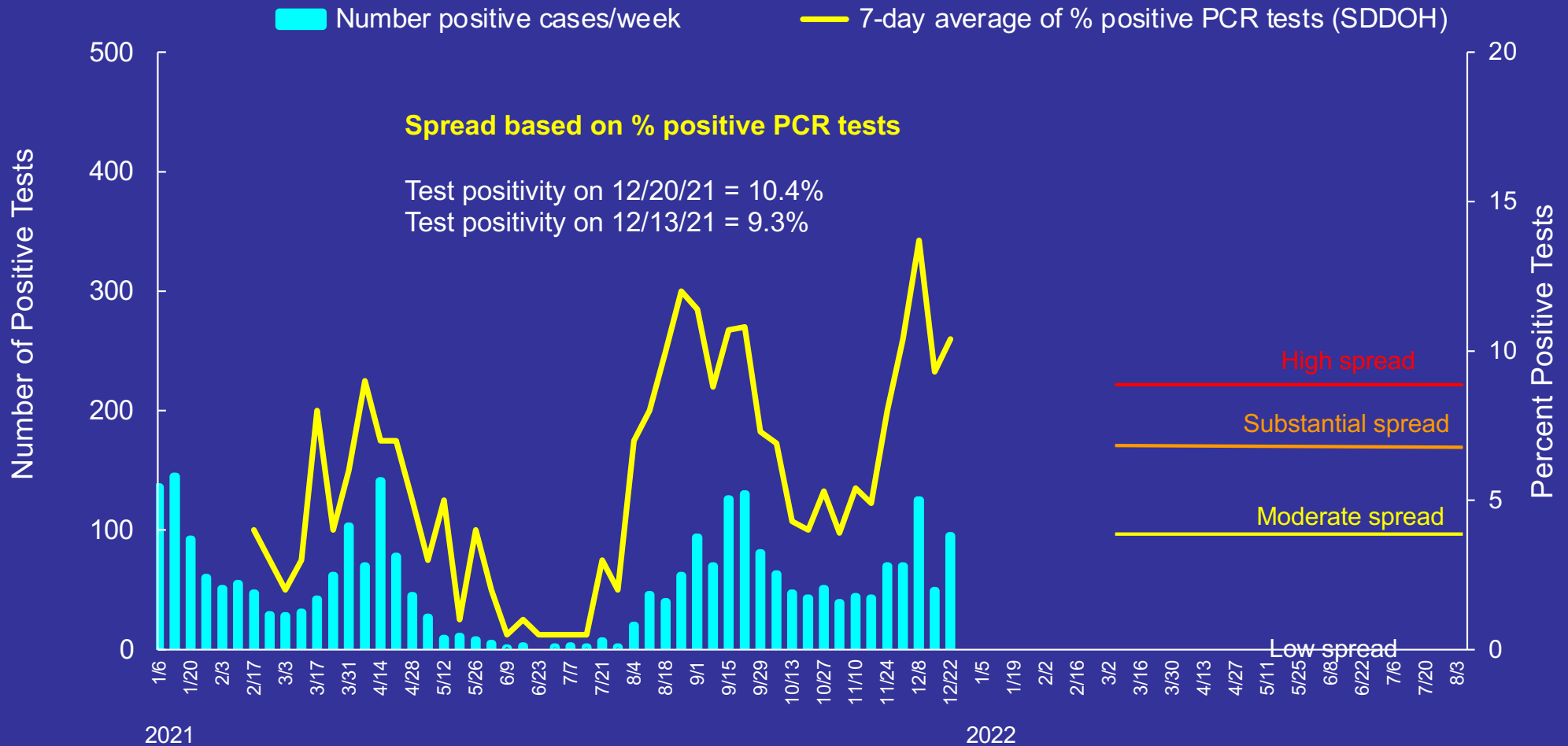
Tests results through 12/20/21 are included



<sup>^</sup> Community spread is updated by SDDOH every Monday and is defined as: *Low*: Less than 10 cases/week/100K (<4) OR a weekly % PCR test positivity rate less than 5%; *Moderate*: 10-49 cases/week/100K (4-17) OR a weekly % PCR test positivity rate of 5-7.9%; *Substantial*: 50-99 cases/week/100K (18-34) OR a weekly % PCR test positivity rate of 8-9.9%; *High*: 100 cases or more/week/100K (35+) OR a weekly % PCR test positivity rate of 10% or more.

# Brookings COVID-19 Situation

## 2021-2022 Weekly Percentage of Test Positivity



PCR % test positivity for previous 7 days (spread determined by SDDOH on Mondays): *Low*: % PCR test positivity rate less than 5%; *Moderate*: % PCR test positivity rate of 5-7.9%; *Substantial*: weekly % PCR test positivity rate of 8-9.9%; *High*: weekly % PCR test positivity rate of 10% or more.

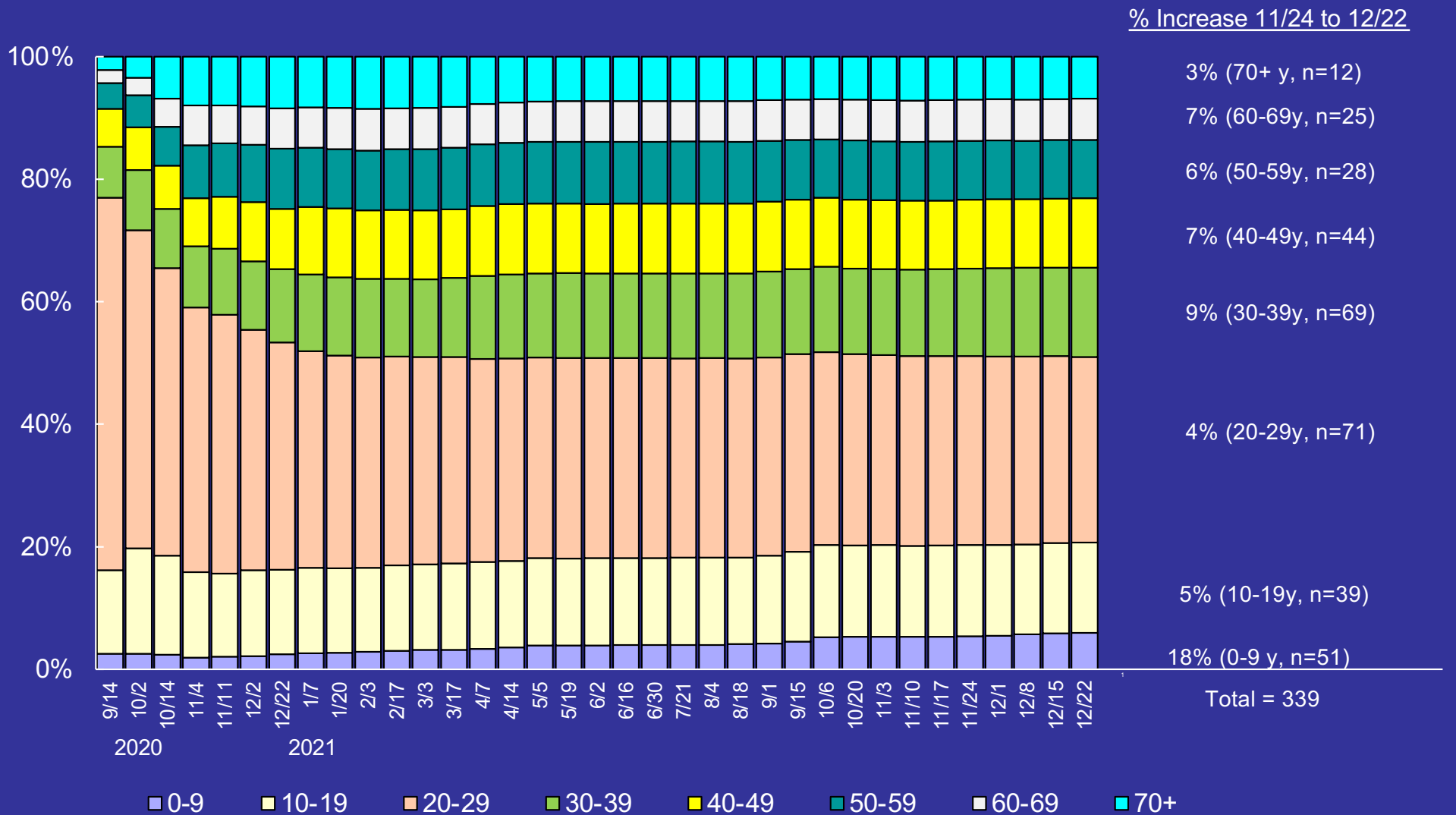
Positive cases include PCR & antigen tests.

As of 8/18/21, SDDOH no longer posts the number of unique individuals tested.

<https://doh.sd.gov/COVID/Dashboard.aspx>

# Brookings COVID-19 Situation

## Age Distribution of Brookings County Cases Who Have Tested Positive Over Time

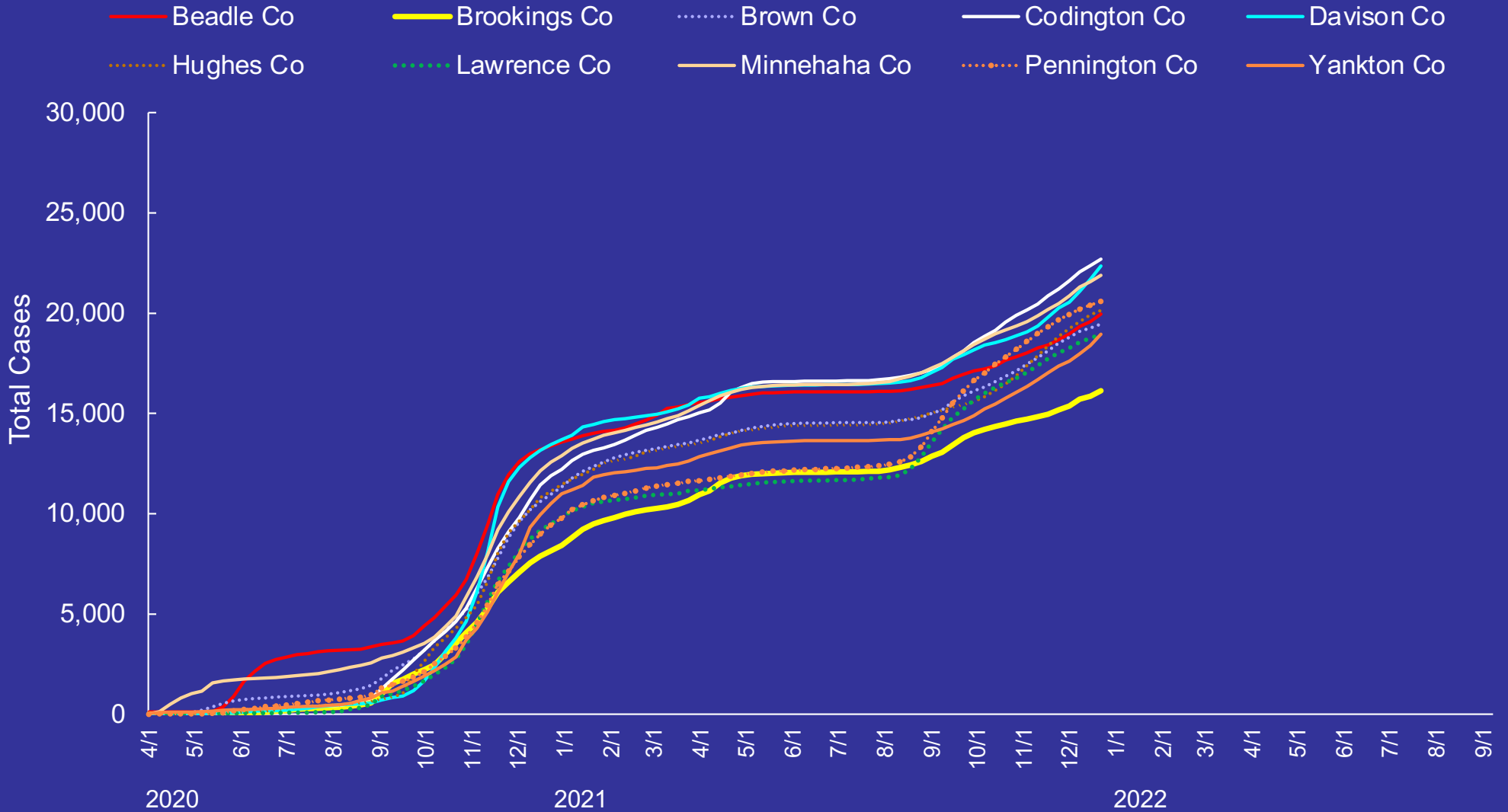


Data prior to 11/1/21 are early & mid-month only; after 11/1/21 it is weekly.

Data Source: South Dakota Department of Health

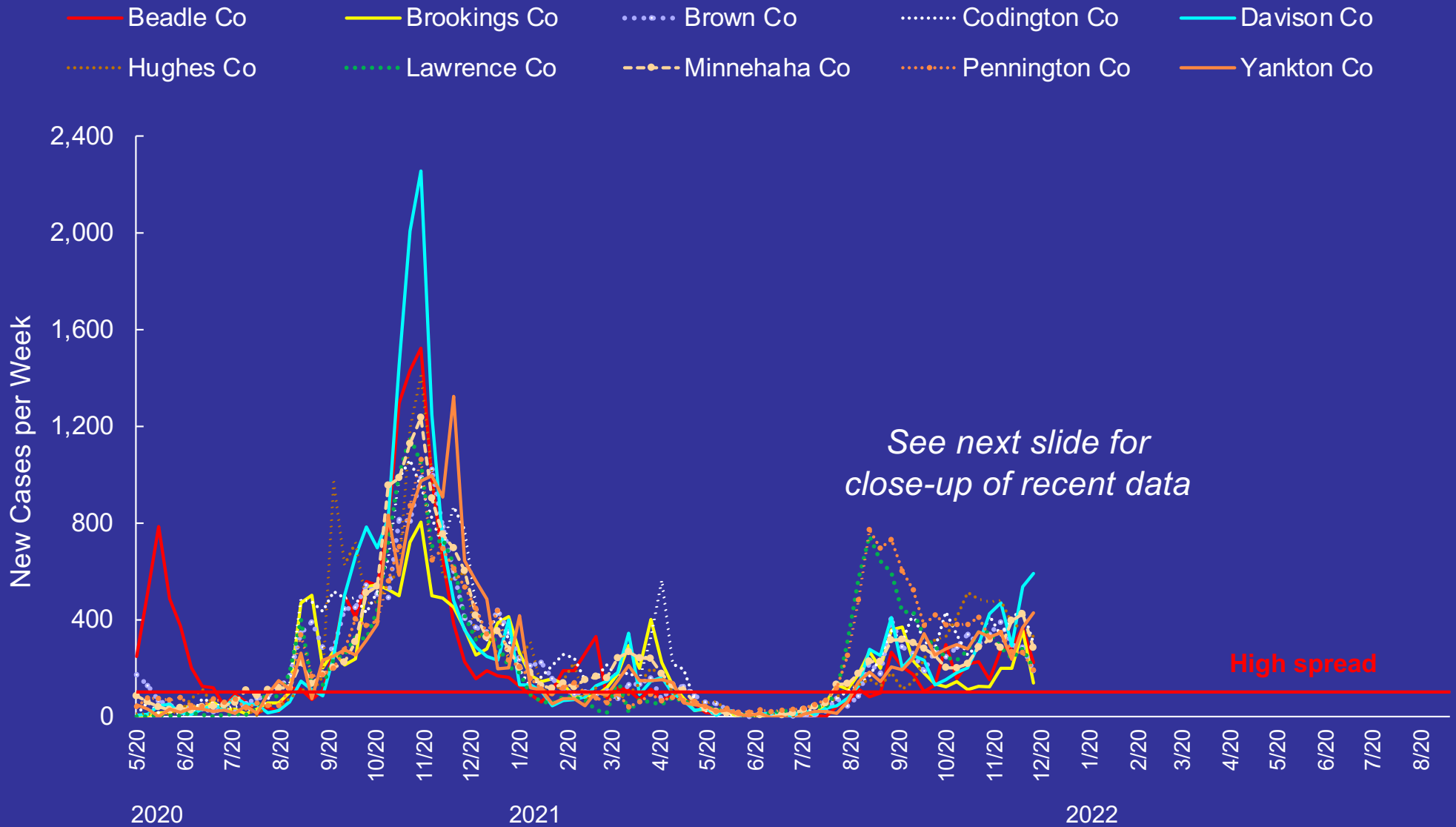
# Counties with Top 10 Most Populated Cities

Cumulative Cases per 100,000 Population by Week



# Counties with Top 10 Most Populated Cities

## New Cases per Week per 100,000 Population

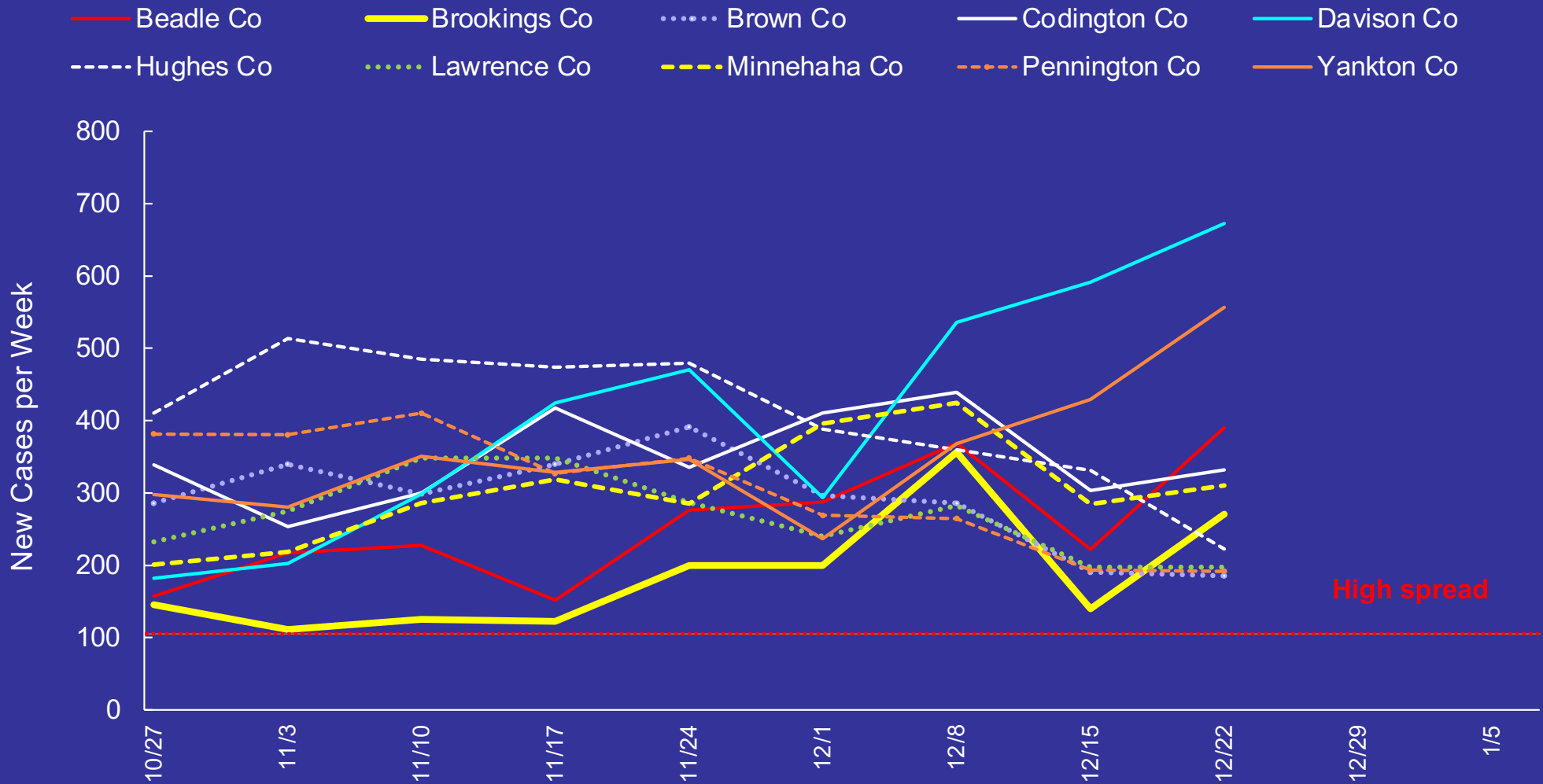


Spread based on new cases/week: high = 100+/100K population. 2019 Census county population estimates used.

Data from <https://doh.sd.gov/COVID/Dashboard.aspx>

# Counties with Top 10 Most Populated Cities

## New Cases per Week per 100,000 Population, 2021



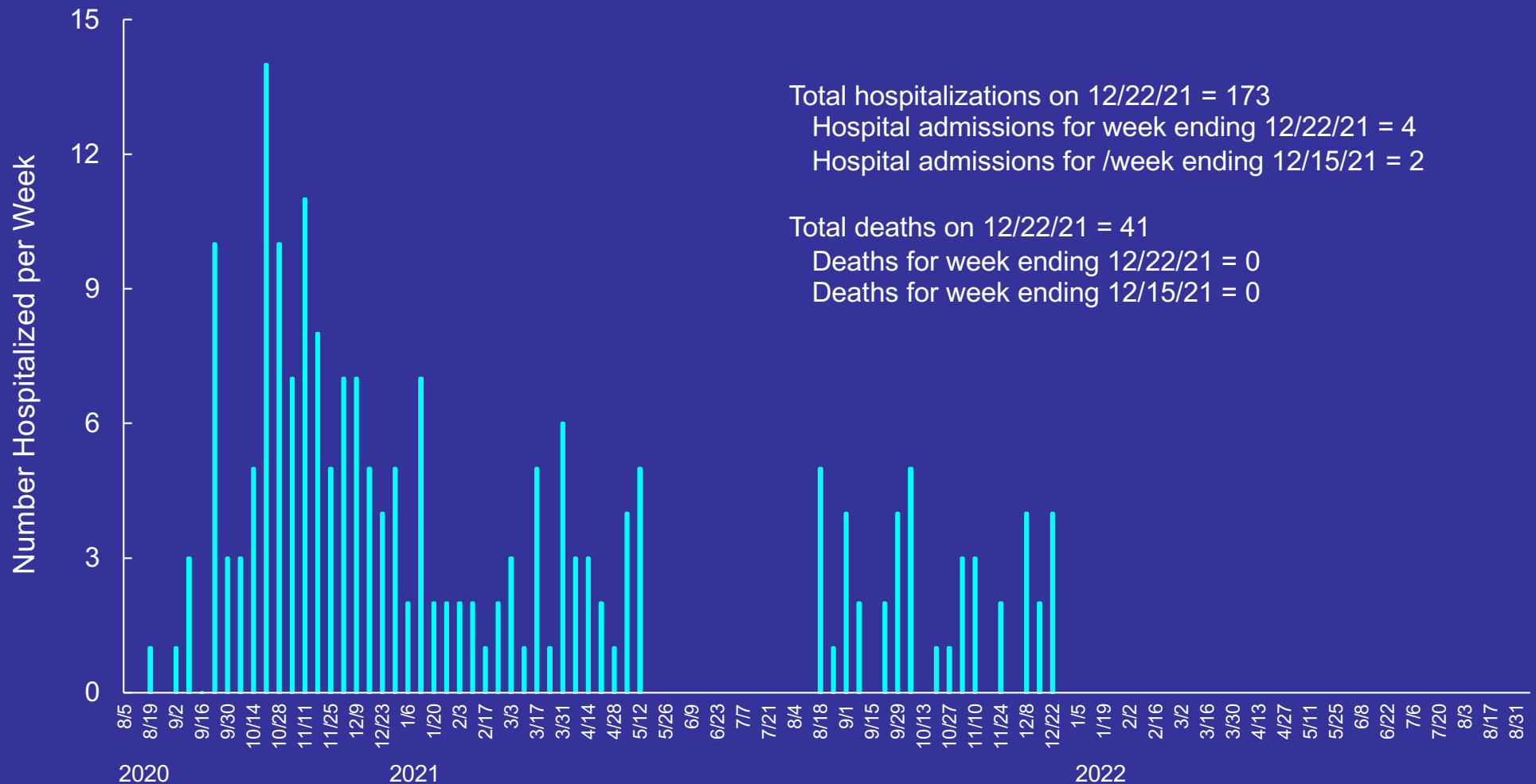
^ Community spread based on new cases is defined as: *Low*: Less than 10 cases/week/100K; *Moderate*: 10-49 cases/week/100K; *Substantial*: 50-99 cases/week/100K; *High*: 100 cases or more/week/100K. 2019 Census county population estimates used.



# Brookings COVID-19 Situation

## 2020-2022 Number of New Hospitalizations per Week

Hospitalization data incomplete after 12/13/21



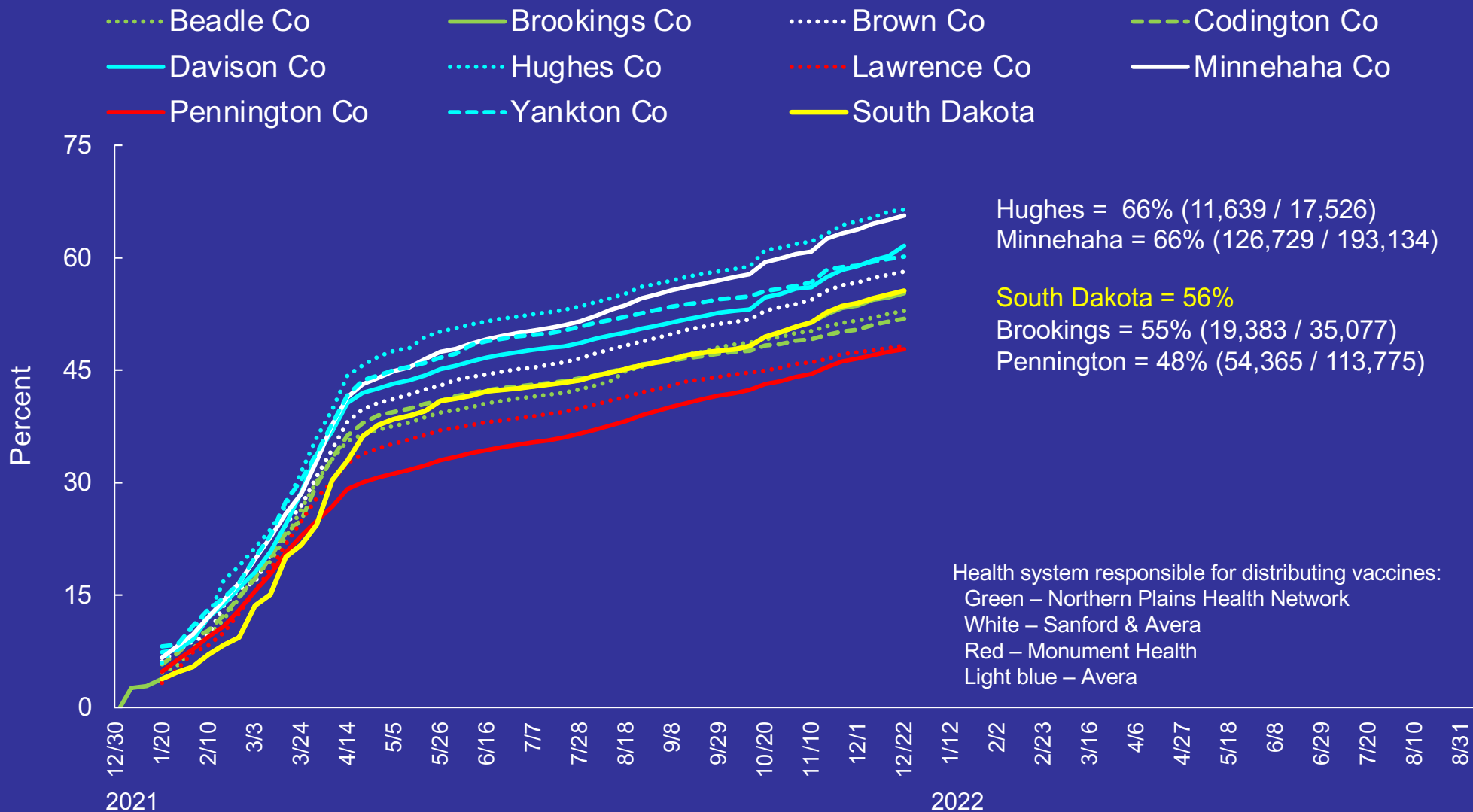
Total hospitalizations on 12/22/21 = 173  
Hospital admissions for week ending 12/22/21 = 4  
Hospital admissions for /week ending 12/15/21 = 2

Total deaths on 12/22/21 = 41  
Deaths for week ending 12/22/21 = 0  
Deaths for week ending 12/15/21 = 0

Includes only Brookings County residents. Between 5/26 & 7/14/21, the SDDOH cleaned the hospitalization database (removing duplicates, out-of-state residents, etc.), leading to a lower total number of hospitalizations. During this period, new admissions were not able to be calculated. As of August 11, 2021 there were a total of 130 hospitalizations.

# Counties with Top 10 Most Populous Cities

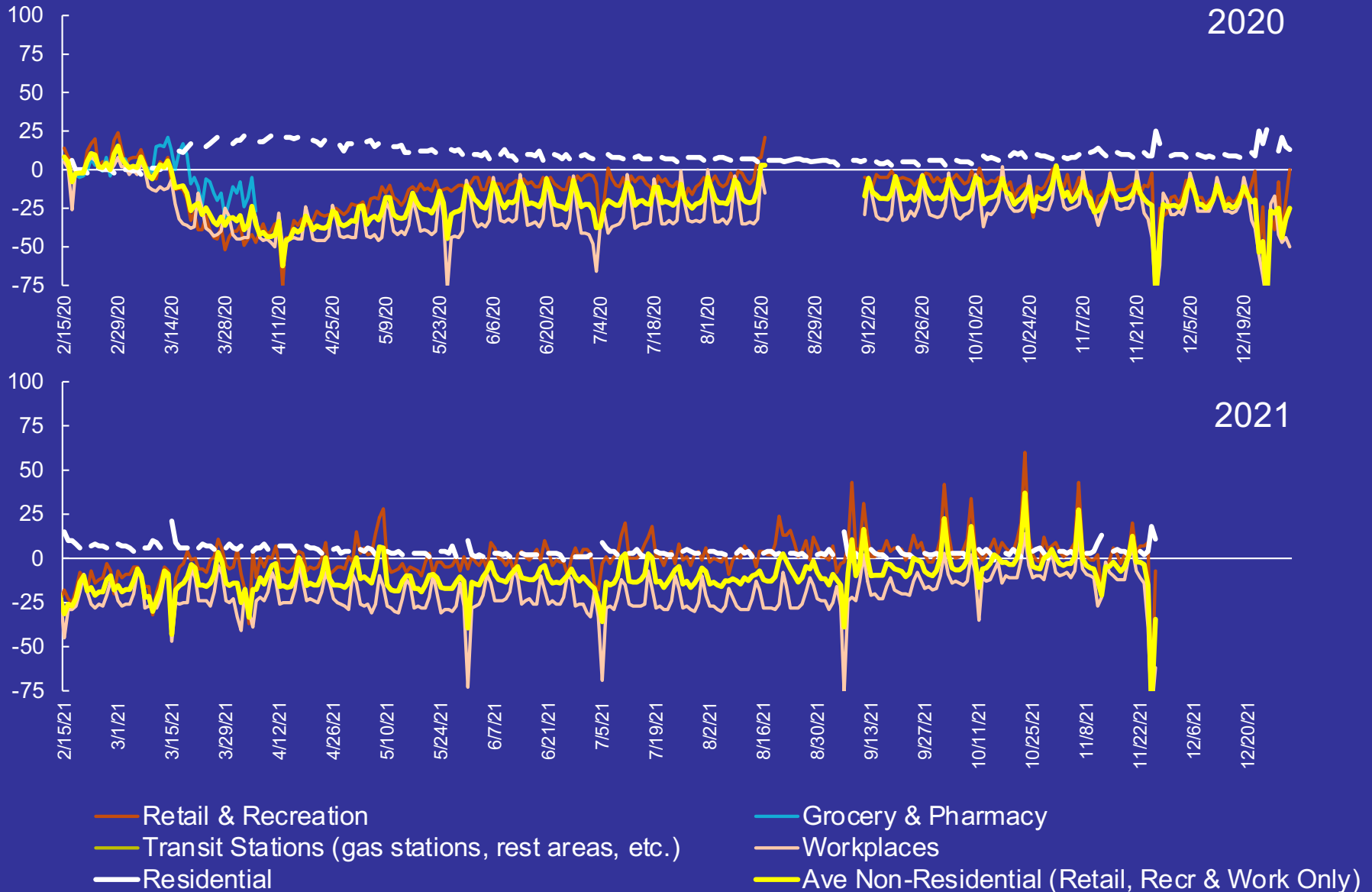
## 2021-2022 Percent of Population Receiving at Least One Vaccine



Based on total population per 2019 US Census.  
 Does not include vaccinations via IHS and VA.  
 Changes noted on dashboard as of 10/14/21 due to data cleaning.

# Brookings County Mobility Data via Google

## Percent Change in Mobility



Baseline: normal value for day of week (1/3-2/6/20). Residential shows a change in duration, other categories are change in total visitors. Parks not shown.  
 Data from Google COVID-19 Community Mobility Reports: <https://www.google.com/covid19/mobility/>

# COVID-19 Situation

## South Dakota

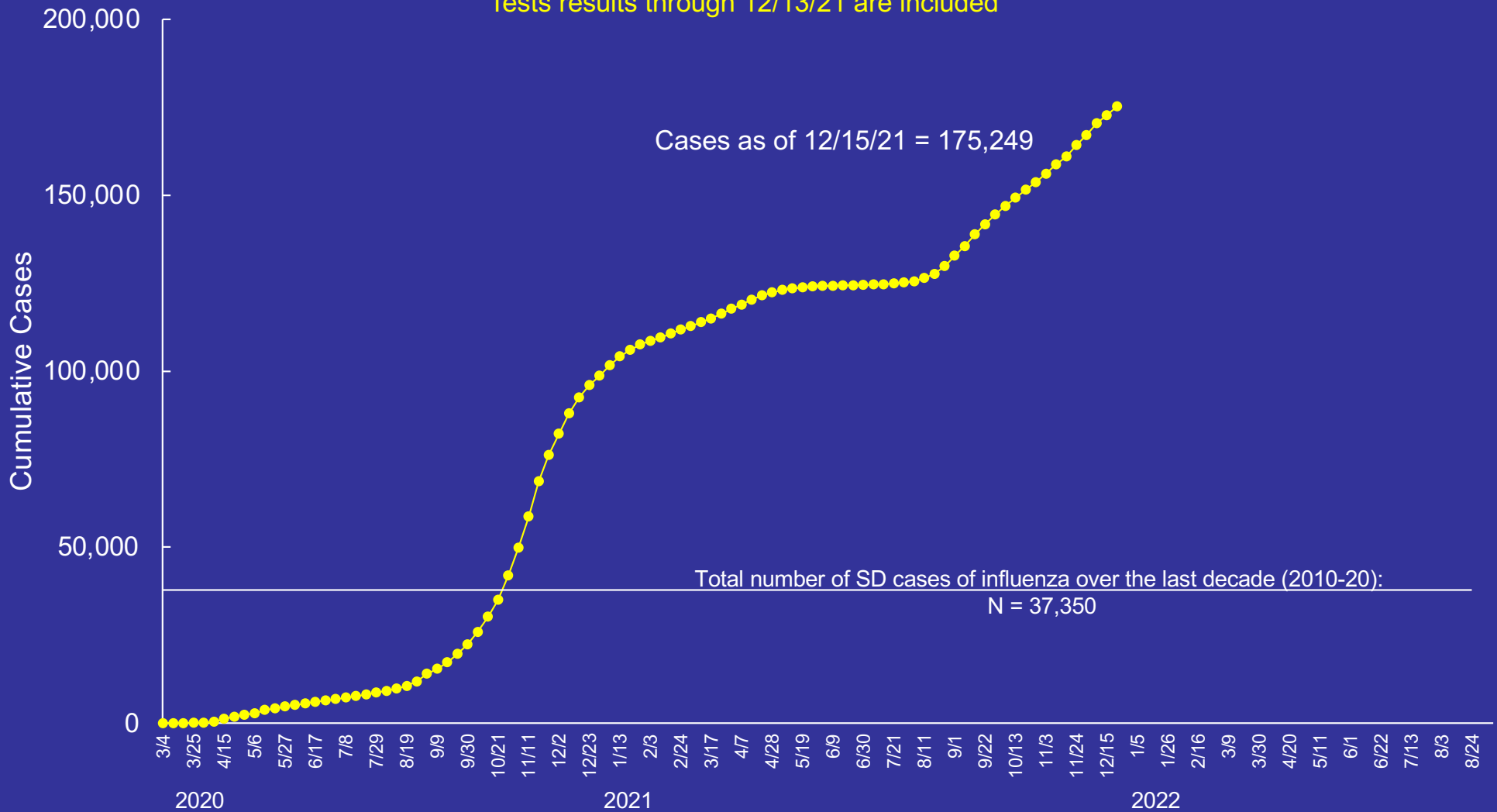
December 22<sup>nd</sup>

- 175,249 positives (149,314 confirmed)
- 7,102 active cases
- 8,950 ever hospitalized
- 239 currently hospitalized (72 in ICU)
- 2,450 deaths

# South Dakota COVID-19 Situation

## 2020-2022 Cumulative Number of Confirmed & Probable Cases by Week

Tests results through 12/13/21 are included



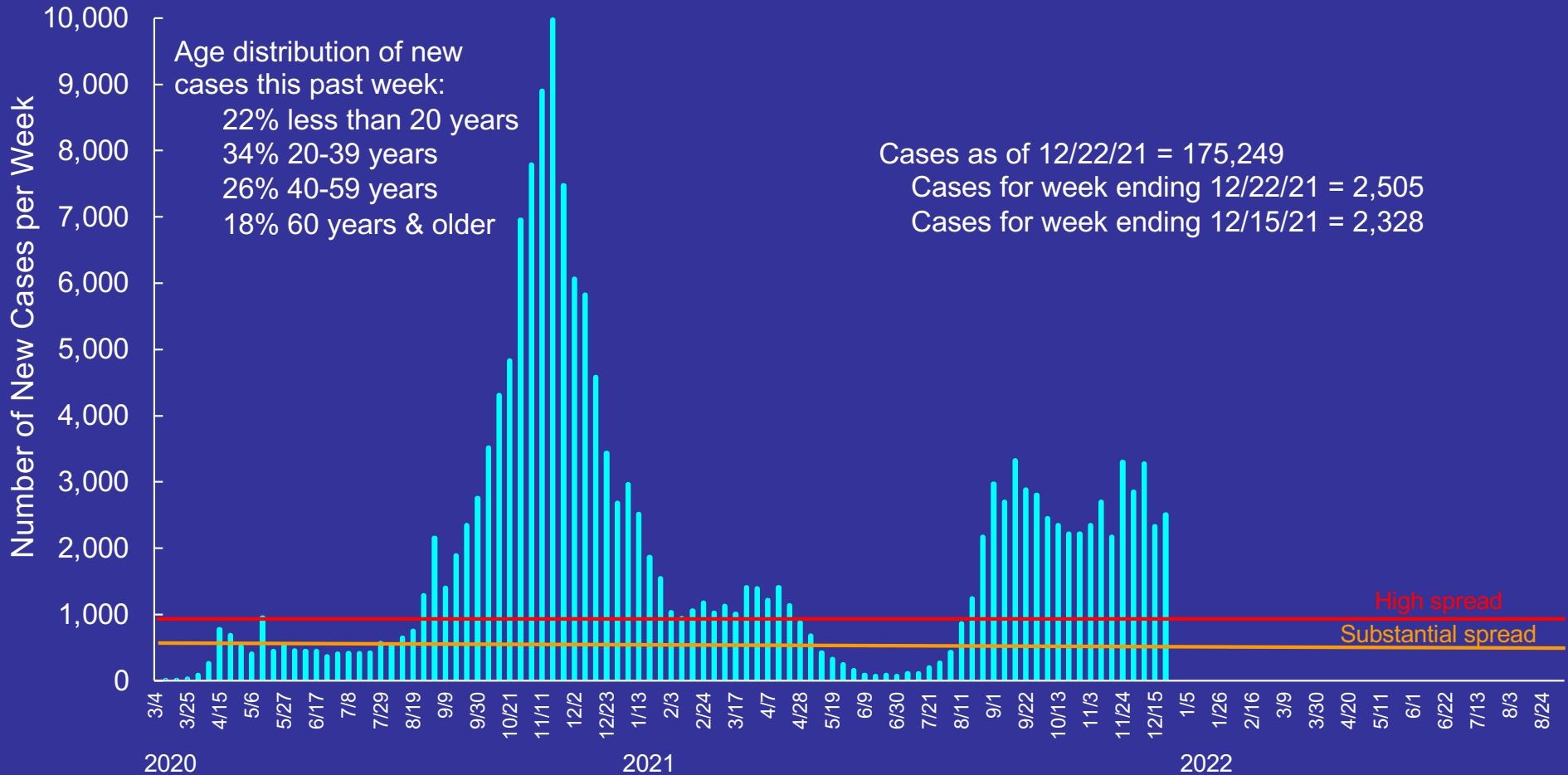
State residents only. Includes confirmed cases by PCR & probable cases by antigen testing.

# South Dakota COVID-19 Situation

## 2020-2022 Confirmed & Probable Cases per Week

Current Level of Community Spread<sup>^</sup>: **High**

Tests results through 12/20/21 are included



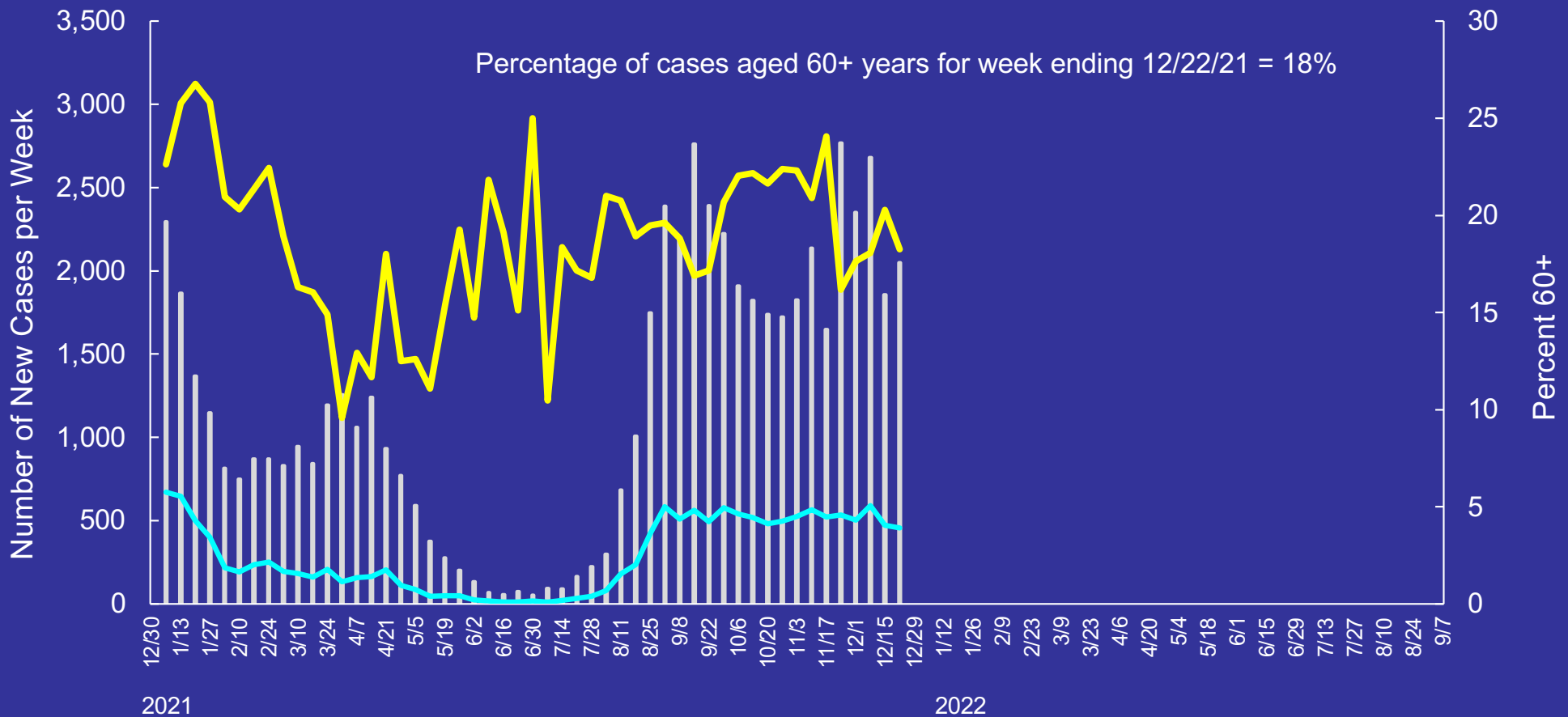
<sup>^</sup> Community spread is updated by SDDOH every Monday and is defined as: *Low*: Less than 10 cases/week/100K (<88) OR a weekly % PCR test positivity rate less than 5%; *Moderate*: 10-49 cases/week/100K (89-433) OR a weekly % PCR test positivity rate of 5-7.9%; *Substantial*: 50-99 cases/week/100K (434-883) OR a weekly % PCR test positivity rate of 8-9.9%; *High*: 100 cases or more/week/100K (884+) OR a weekly % PCR test positivity rate of 10% or more.

# South Dakota COVID-19 Situation

## Age Distribution

2021-2022 Number of Confirmed & Probable Cases by Age per Week

< 60 Years
  60+ Years
  Percent 60+ Years

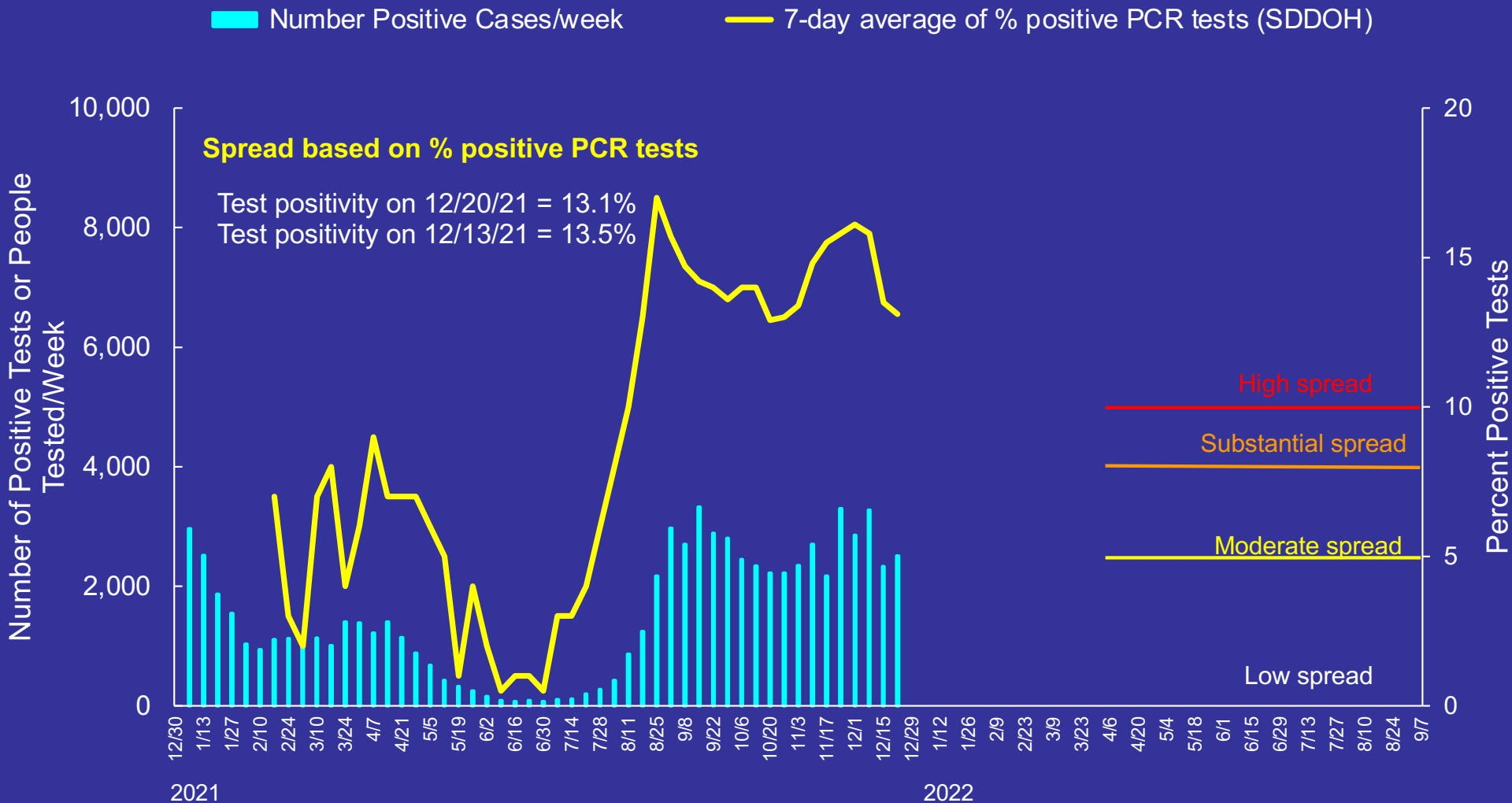


20% of SD population is aged 60+ years.

<https://doh.sd.gov/COVID/Dashboard.aspx>

# South Dakota COVID-19 Situation

## 2021-2022 Weekly Percentage Test Positivity



PCR % test positivity for previous 7 days (level of spread determined by SDDOH on Mondays): *Low*: % PCR test positivity rate less than 5%; *Moderate*: % PCR test positivity rate of 5-7.9%; *Substantial*: % PCR test positivity rate of 8-9.9%; *High*: % PCR test positivity rate of 10% or more.

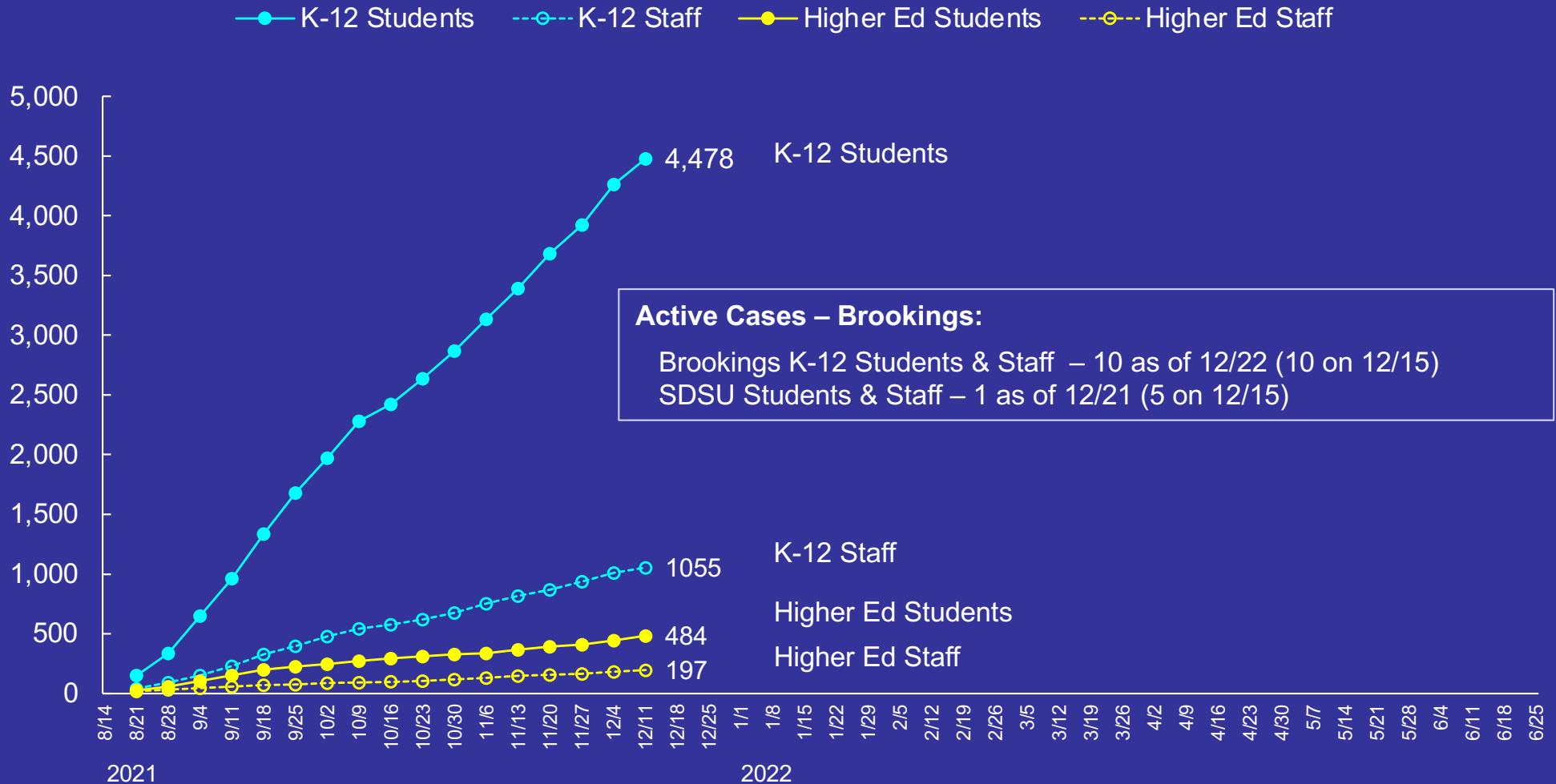
Positive cases include PCR & antigen tests.

<https://doh.sd.gov/COVID/Dashboard.aspx>



# South Dakota COVID-19 Situation

## Cumulative Number of COVID-19 Cases by Week 2021-2022 School Year



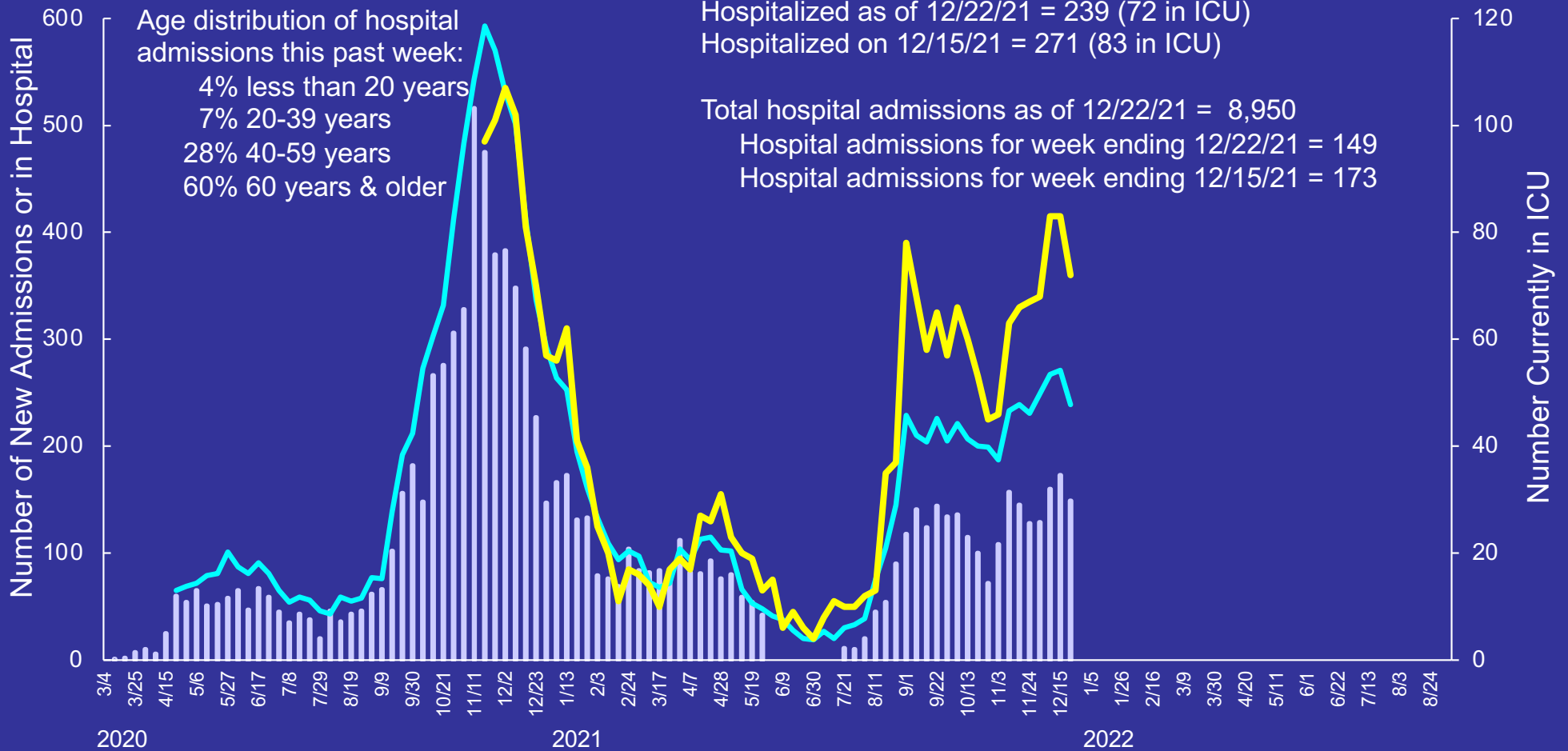
Brookings data sources: SDSU data is self-reported (<https://www.sdstate.edu/covid-19/covid-19-dashboard>), local school system is given data via DOE (<https://www.brookings.k12.sd.us/domain/510>).  
 State data are from: [https://doh.sd.gov/documents/COVID19/School-College\\_COVID\\_cases.pdf](https://doh.sd.gov/documents/COVID19/School-College_COVID_cases.pdf)

# South Dakota COVID-19 Situation

## 2020-2022 Weekly Hospitalization Data

■ New Admissions/week    
 — Currently Hospitalized in SD    
 — Number in ICU

Hospitalization data after 12/13/21 are incomplete



Currently hospitalized includes state and out-of-state residents and transfers in from other states, but not residents transferred out-of-state. New admissions include only state residents; does not include patients on home health care.

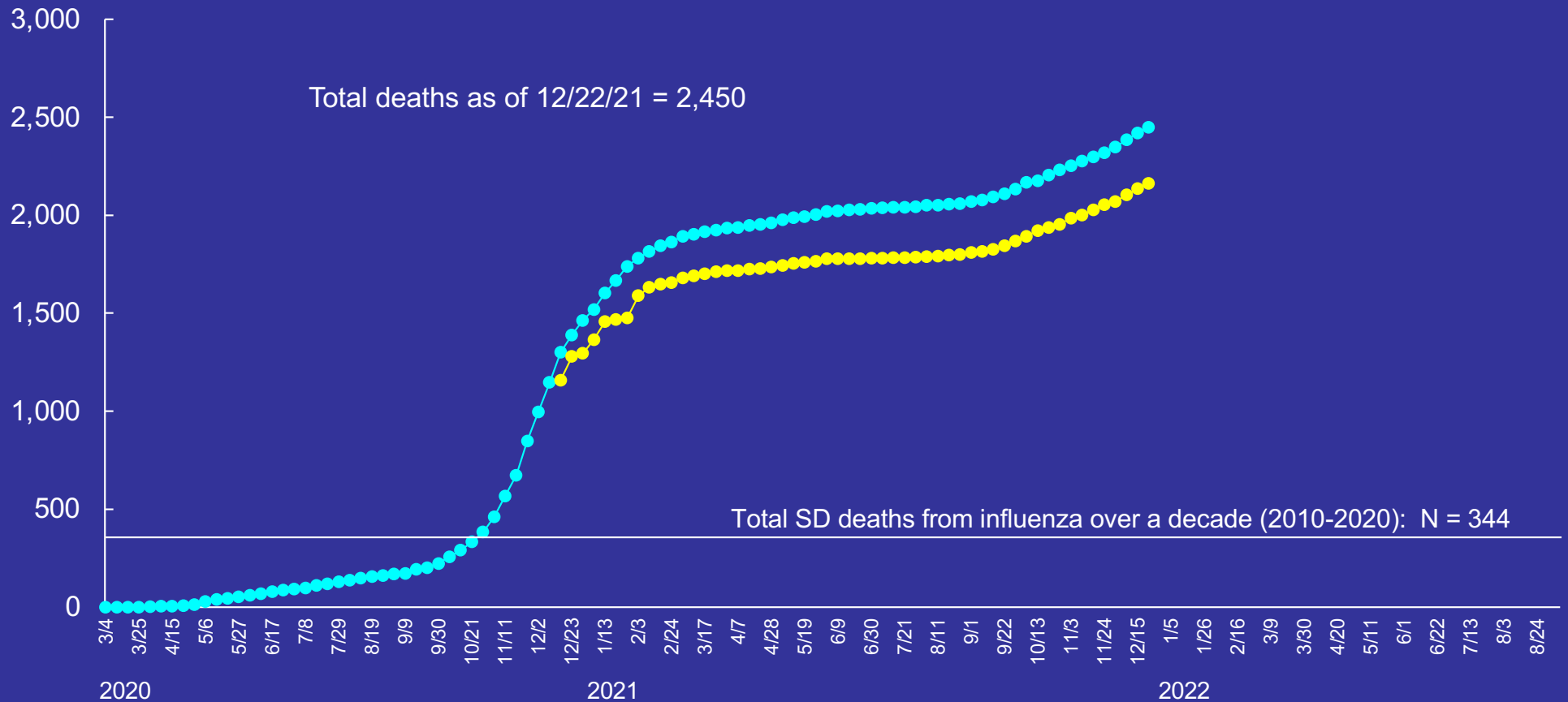
Between 5/26 and 7/14/21, the SDDOH cleaned the hospitalization database (removing duplicates, out-of-state residents, etc.), leading to a lower total number if hospitalizations. During this period, new admissions were not able to be calculated.

# South Dakota COVID-19 Situation

## 2020-2022 Cumulative Number of Deaths by Week

—●— Deaths among people with COVID      —●— Deaths caused by COVID

Death data incomplete after 12/13/21

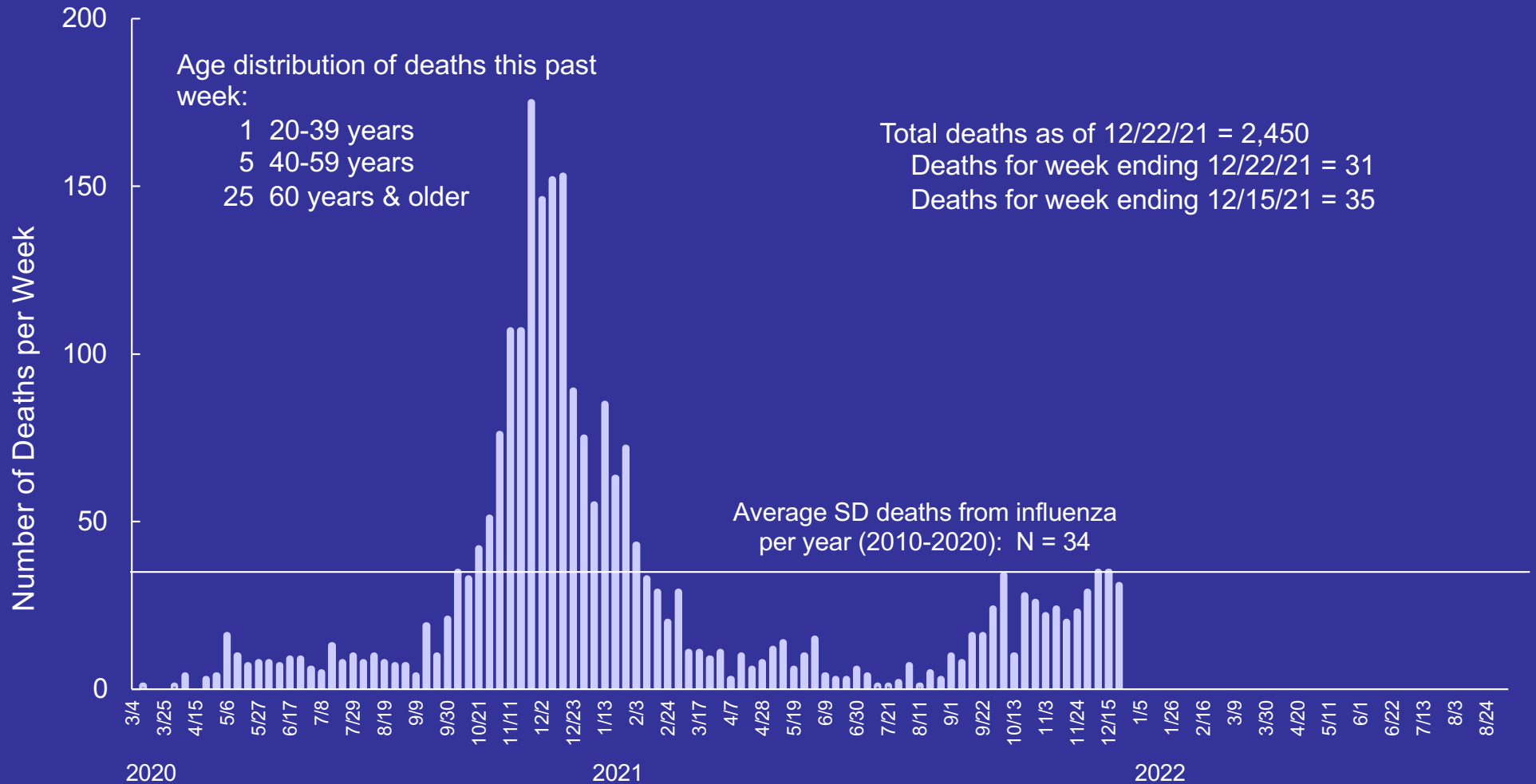


Dept of Health does not report deaths until a certified death record is filed. By law, a death record must be filed within 5 days of the date of death. Deaths caused by COVID based on death certificates where COVID is cause of death or contributing cause. Deaths among people with COVID include death certificates stating COVID as well as data from national surveillance system that identifies COVID cases and deaths within 20 days of infection that do not include COVID on death certificate. See DOH dashboard, death tab for detailed definitions.

# South Dakota COVID-19 Situation

## 2020-2022 Number of Deaths per Week among People with COVID-19

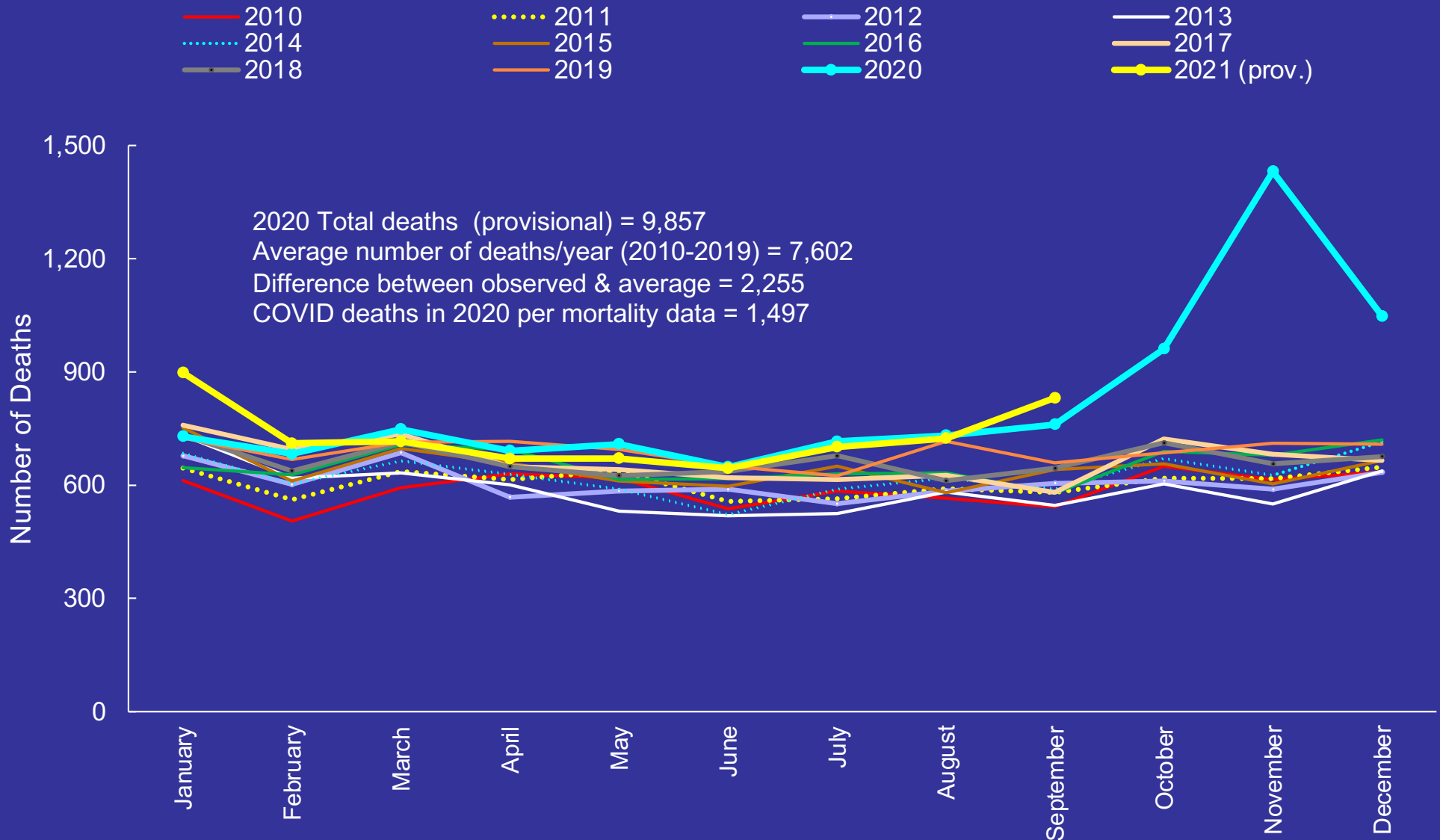
Death data incomplete after 12/13/21



Data are date death is posted to DOH dashboard.  
 See DOH dashboard, death tab for detailed definitions.

# South Dakota Deaths

## Number of Deaths by Year and Month



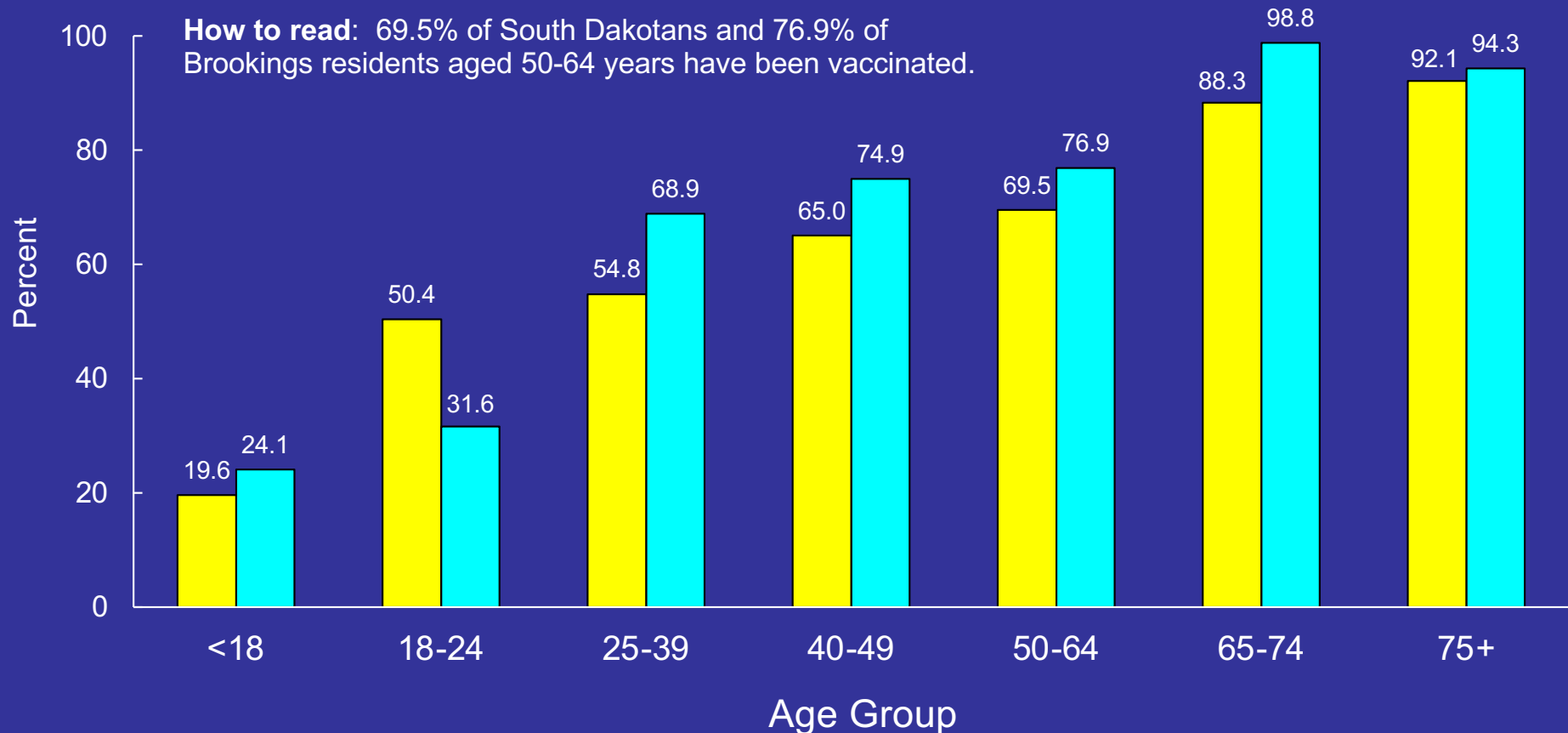
2021 deaths are provisional.  
 Data as of 11/18/21

<https://doh.sd.gov/statistics/>  
<https://doh.sd.gov/documents/statistics/Mortality-Report-2021-Provisional.pdf>

# South Dakota COVID-19 Situation

## Percent of Population Receiving at Least One Vaccine by Age as of December 22, 2021

■ South Dakota ■ Brookings Co

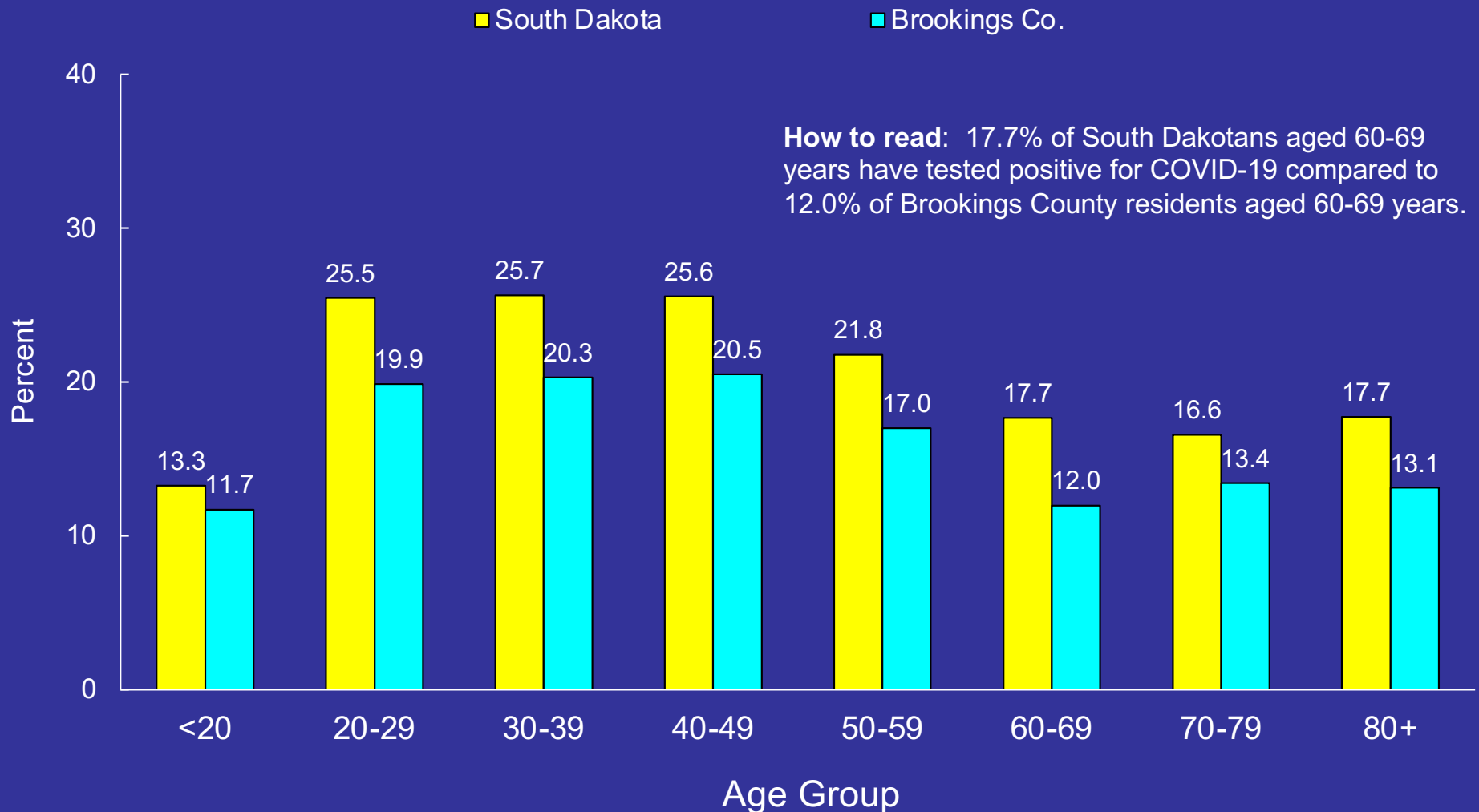


Does not include data from Veterans Affairs (VA) and Indian Health Services (IHS).  
2019 US Census data used for denominators.

67% of state population aged 5 years and older has received at least one dose, including VA & IHS.

# South Dakota COVID-19 Situation

Percent of South Dakota & Brookings Population Ever Testing Positive by Age as of December 22, 2021

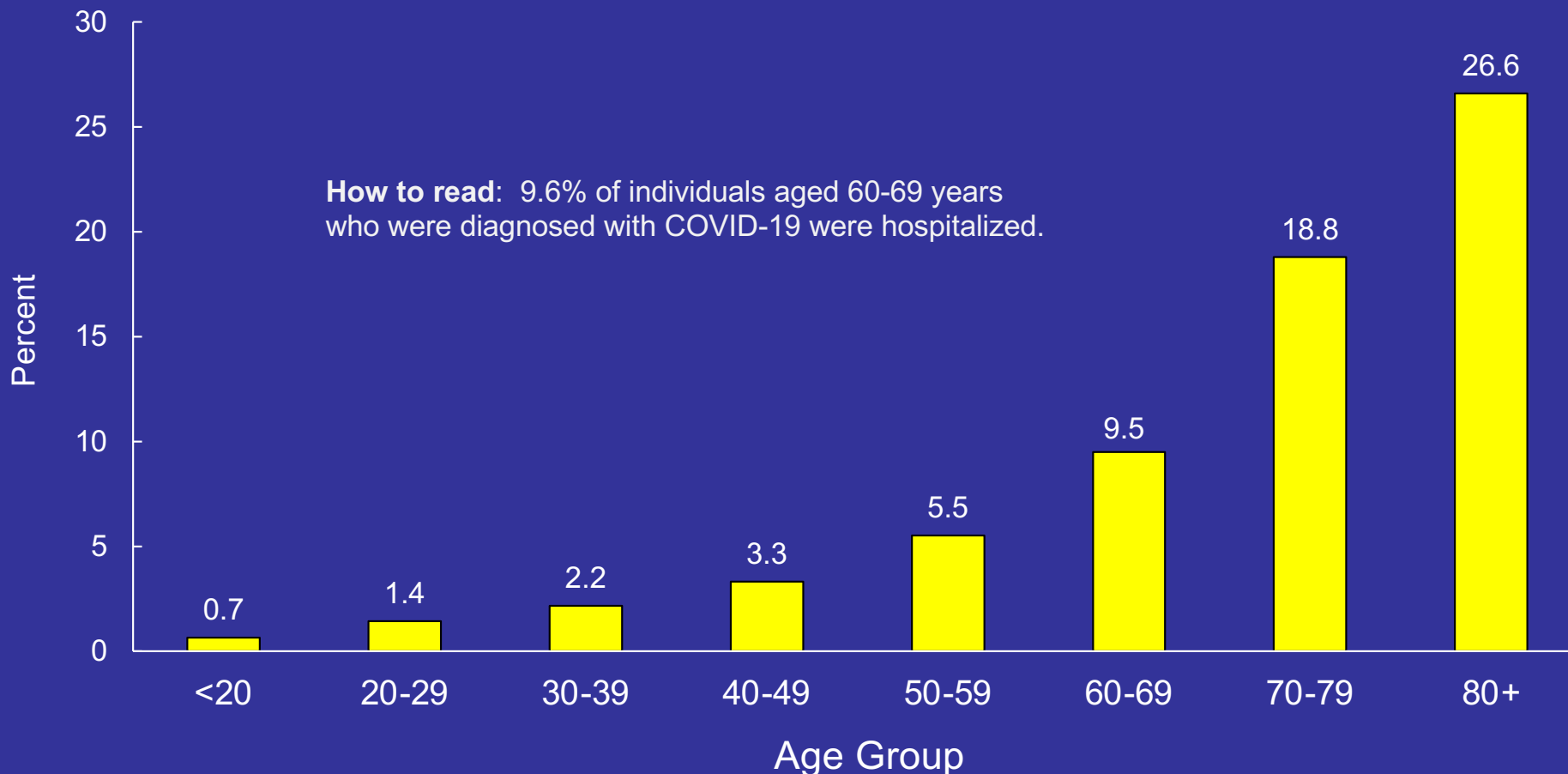


Overall, the percent of population testing positive is:  
20% for South Dakota  
16% for Brookings County

2019 SD Pop (US Census)  
<https://doh.sd.gov/COVID/Dashboard.aspx>  
Brookings data from SD Department of Health

# South Dakota COVID-19 Situation

Percent of Cases Ever Hospitalized by Age  
as of December 22, 2021

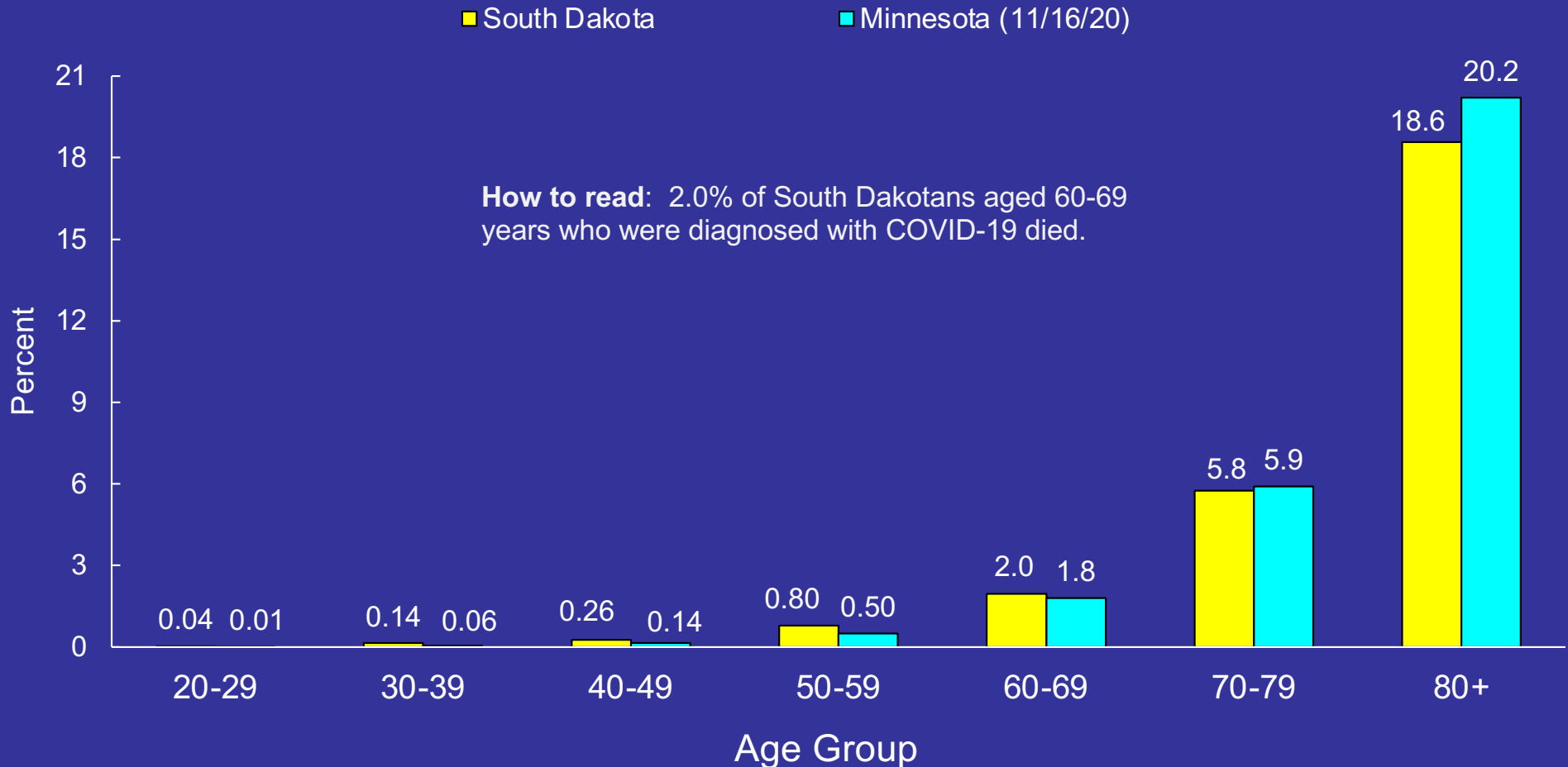


Overall, 5.1% of South Dakotans who tested positive have been hospitalized.  
Calculated as (ever hospitalized/tested positive)\*100 using South Dakota data.  
Numbers ever hospitalized on SDDOH dashboard decreased between 5/26/21 and 7/7/21.



# South Dakota COVID-19 Situation

## Case Fatality Rates by Age as of December 22, 2021



Overall case fatality rate for South Dakota is 1.47%.

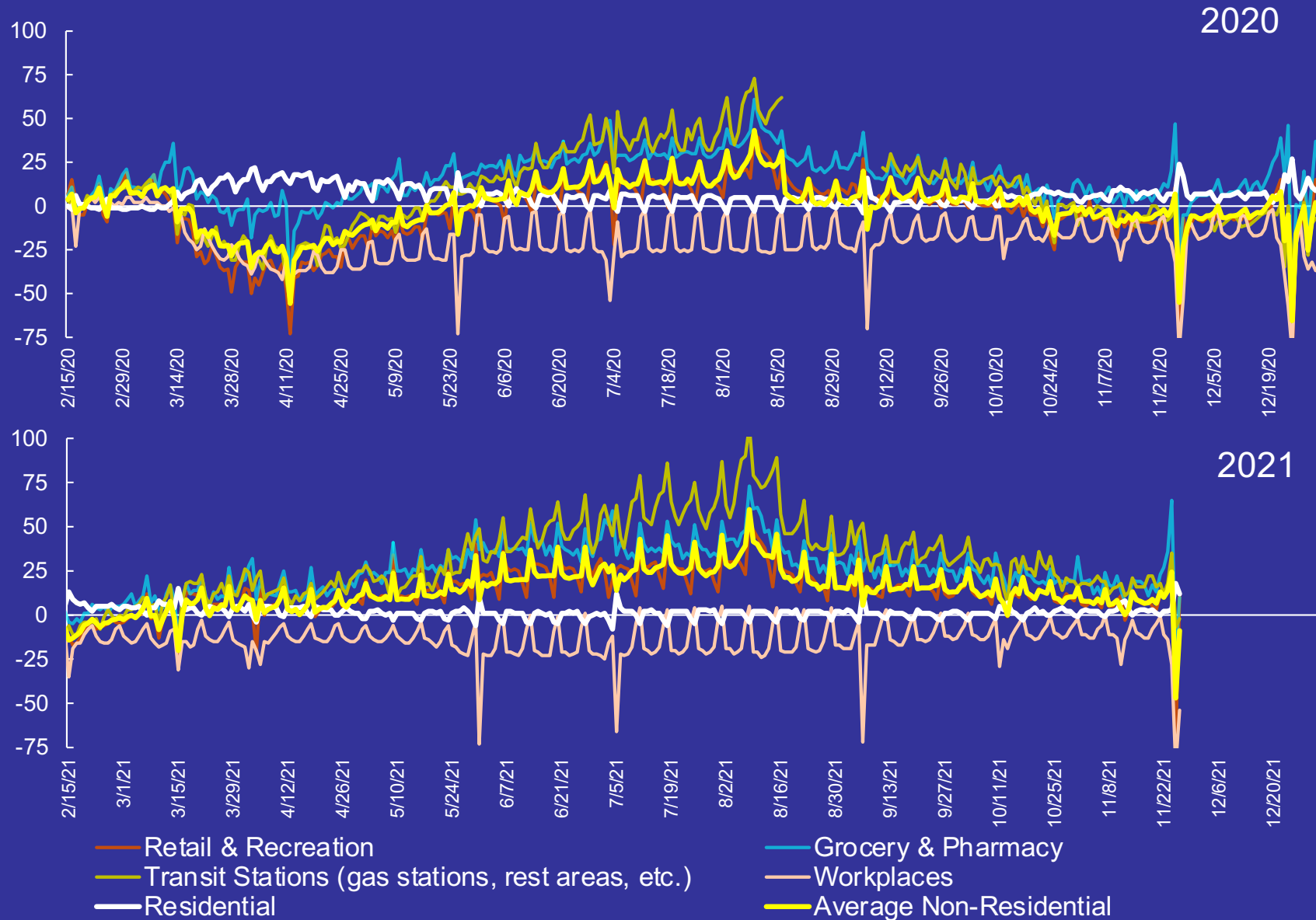
Case fatality rate calculated as  $\text{COVID deaths} / (\text{COVID deaths} + \text{recovered}) * 100$  (<https://doh.sd.gov/COVID/Dashboard.aspx>)

Minnesota data:  $\text{CFR} = (\text{deaths}/\text{cases}) * 100$  (<https://www.health.state.mn.us/diseases/coronavirus/stats/covidweekly46.pdf>)

Data not given for ages <20 years.

# South Dakota Mobility Data via Google

## Percent Change in Mobility



Baseline: normal value for day of week (1/3-2/6/20). Residential shows a change in duration, other categories are change in total visitors. Parks not shown. Data from Google COVID-19 Community Mobility Reports: <https://www.google.com/covid19/mobility/>

# COVID-19 Situation

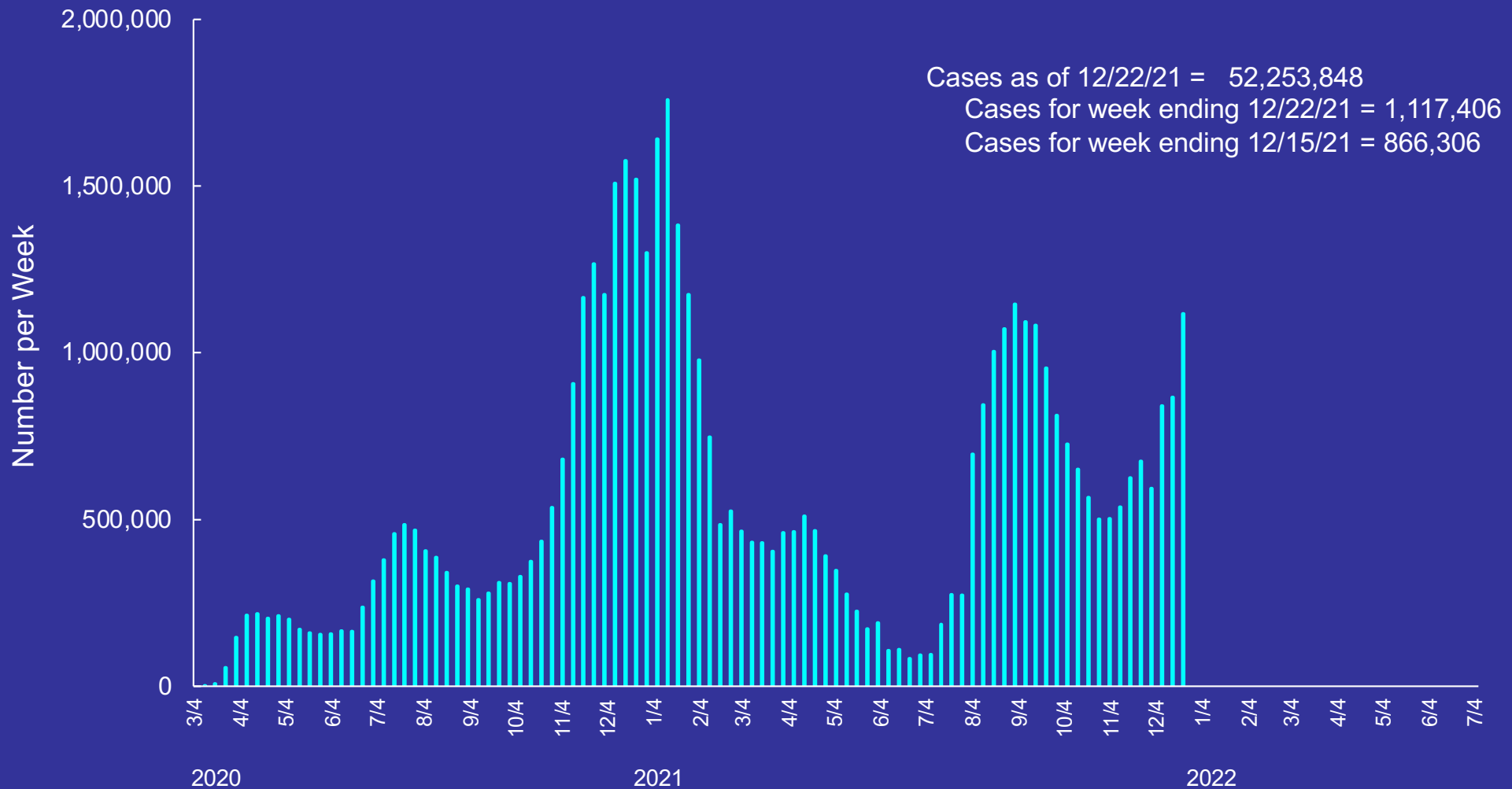
## U.S. & World

Numbers of American deaths to keep in mind:

- 7,054 in Iraq & Afghanistan
- 41,000 average annual U.S. deaths from influenza (2014-2019)
- 116,516 in World War I
- 405,399 in World War II
- 521,915 in World Wars I & II combined
- 580,135 in World Wars I & II and Vietnam War combined
- 600,135 in World Wars I & II, Vietnam & Korean Wars combined
- 675,000 in 1918 Influenza Pandemic
- 750,000 in Civil War
- **830,990 reported in current COVID-19 Pandemic (2019 – present)**

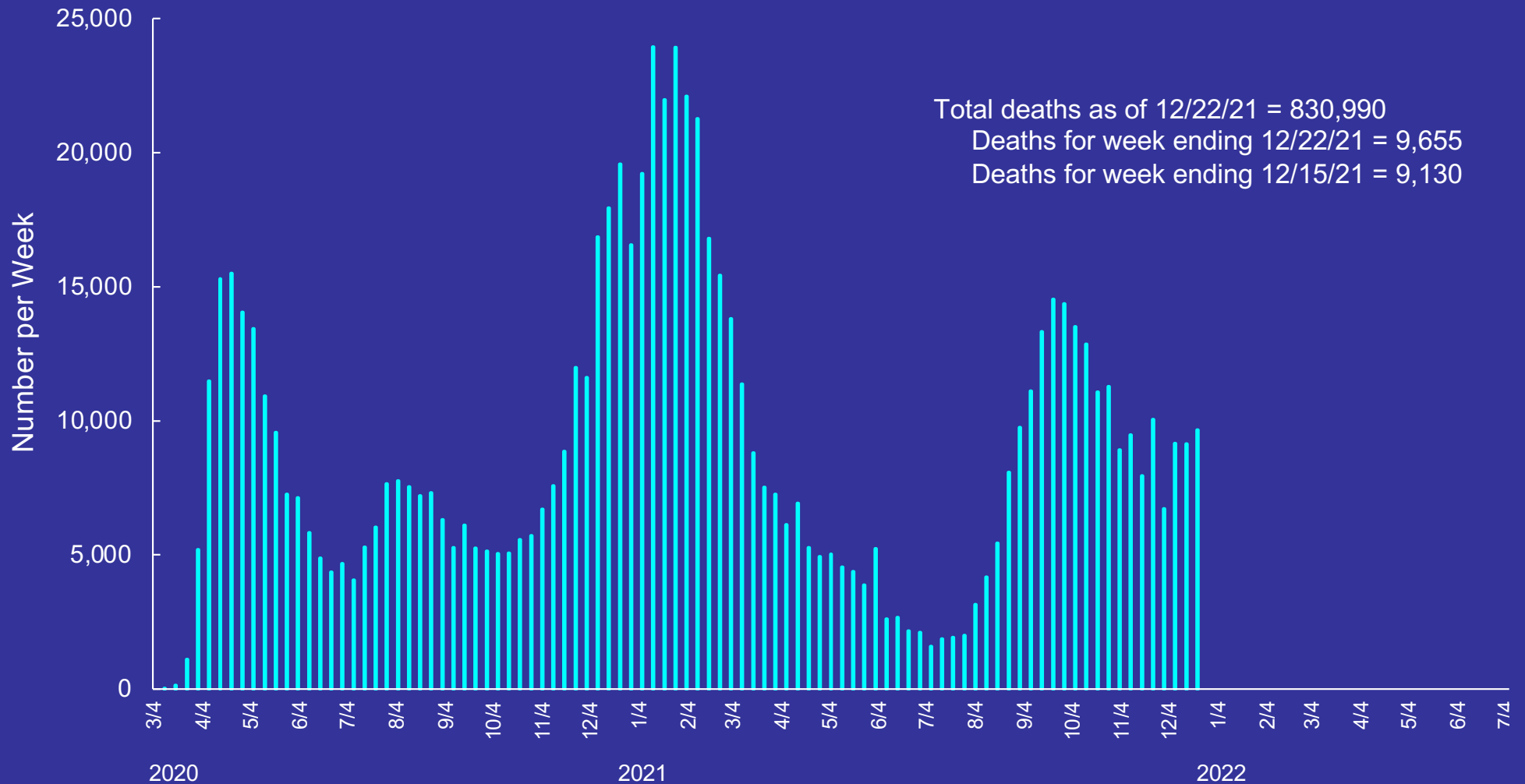
# U.S. COVID-19 Situation

## Number of Newly Diagnosed Cases per Week



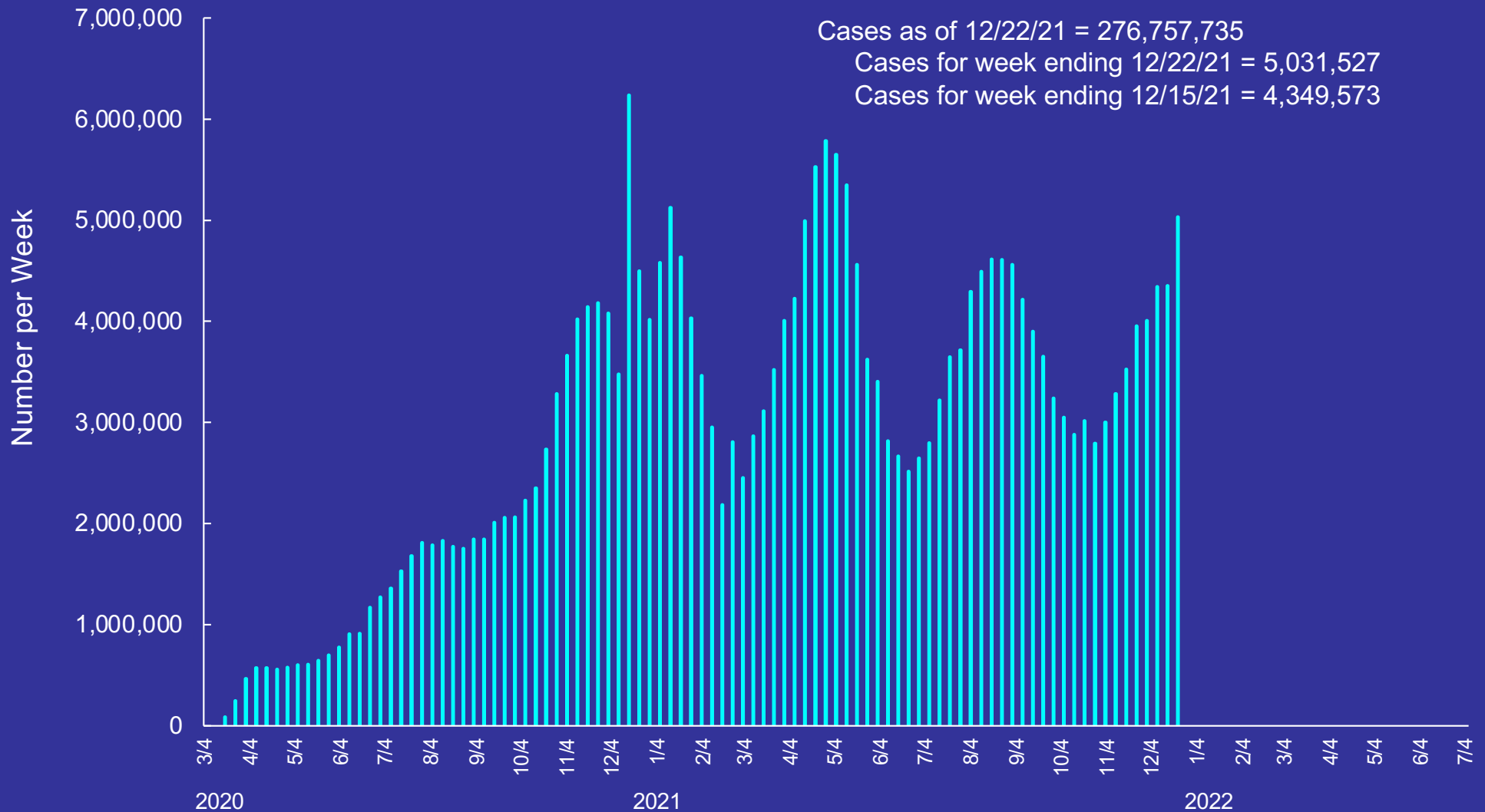
# U.S. COVID-19 Situation

## Number of Deaths per Week from COVID-19



# World COVID-19 Situation

## Number of Newly Confirmed Cases per Week



# World COVID-19 Situation

## Number of Deaths from COVID per Week

