NORTH DAKOTA UNIVERSITY SYSTEM

ACCESS. INNOVATION. EXCELLENCE.

State Board of Higher Education Meeting

September 30, 2021

Joshua Wynne, MD, MBA, MPH

Vice President for Health Affairs, UND

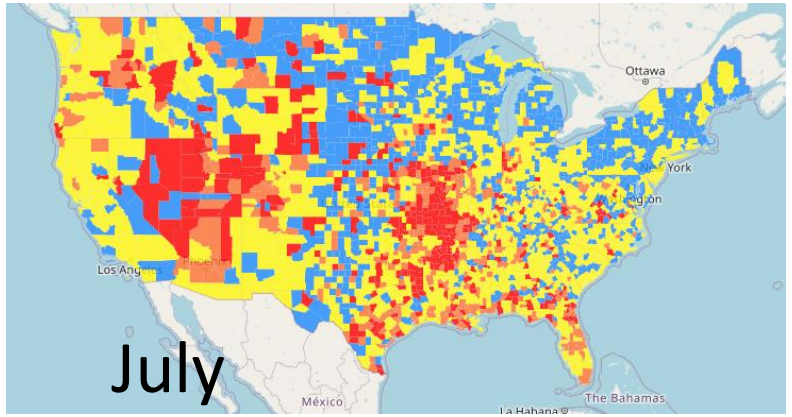
Dean, UND School of Medicine and Health Sciences

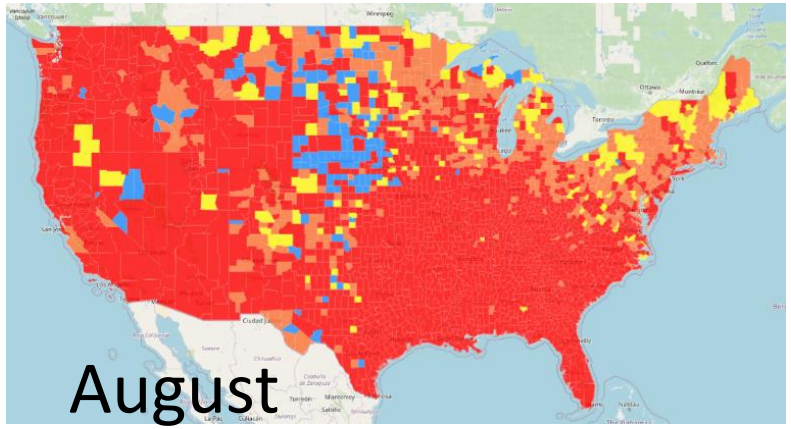
Chair, NDUS Smart Restart Task Force

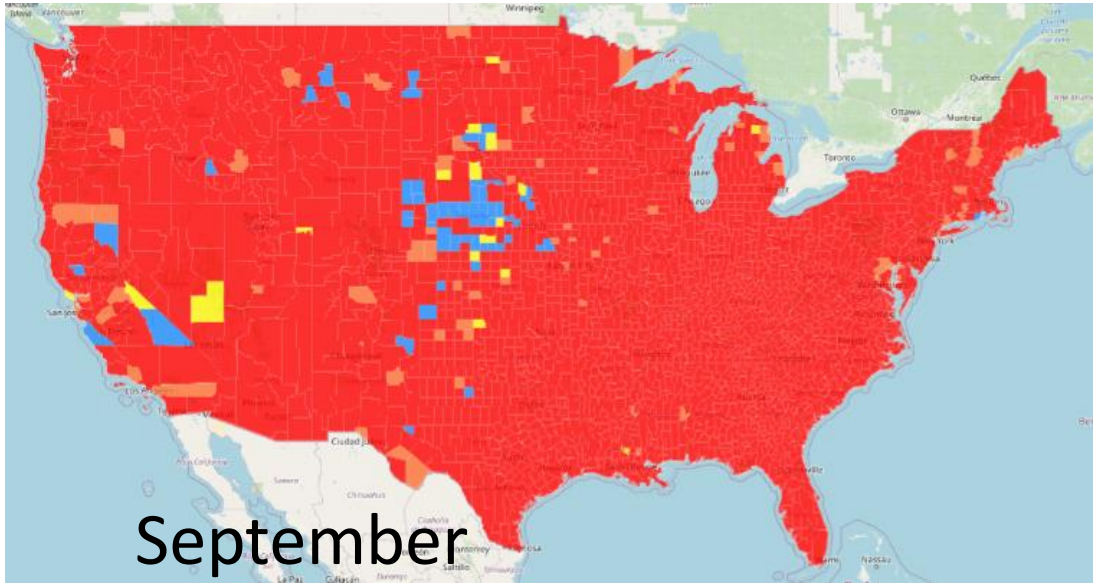
Agenda

- Overall impact and status of pandemic
  - Illness
  - Hospitalization
  - Death
- Situation in North Dakota
  - NDUS
- Mitigation efforts
  - Masking, etc.
  - Testing
- Vaccination
  - Impact of initial series
  - Booster issue
  - Influenza shot
  - Executive Order re: vaccine mandates
- Future course of the pandemic
- Questions?

CDC Transmissibility by County
July 1 – August 7 – September 9







CDC Transmissibility Rate by County
September 28, 2021

https://covid.cdc.gov/covid-data-tracker/#county-view

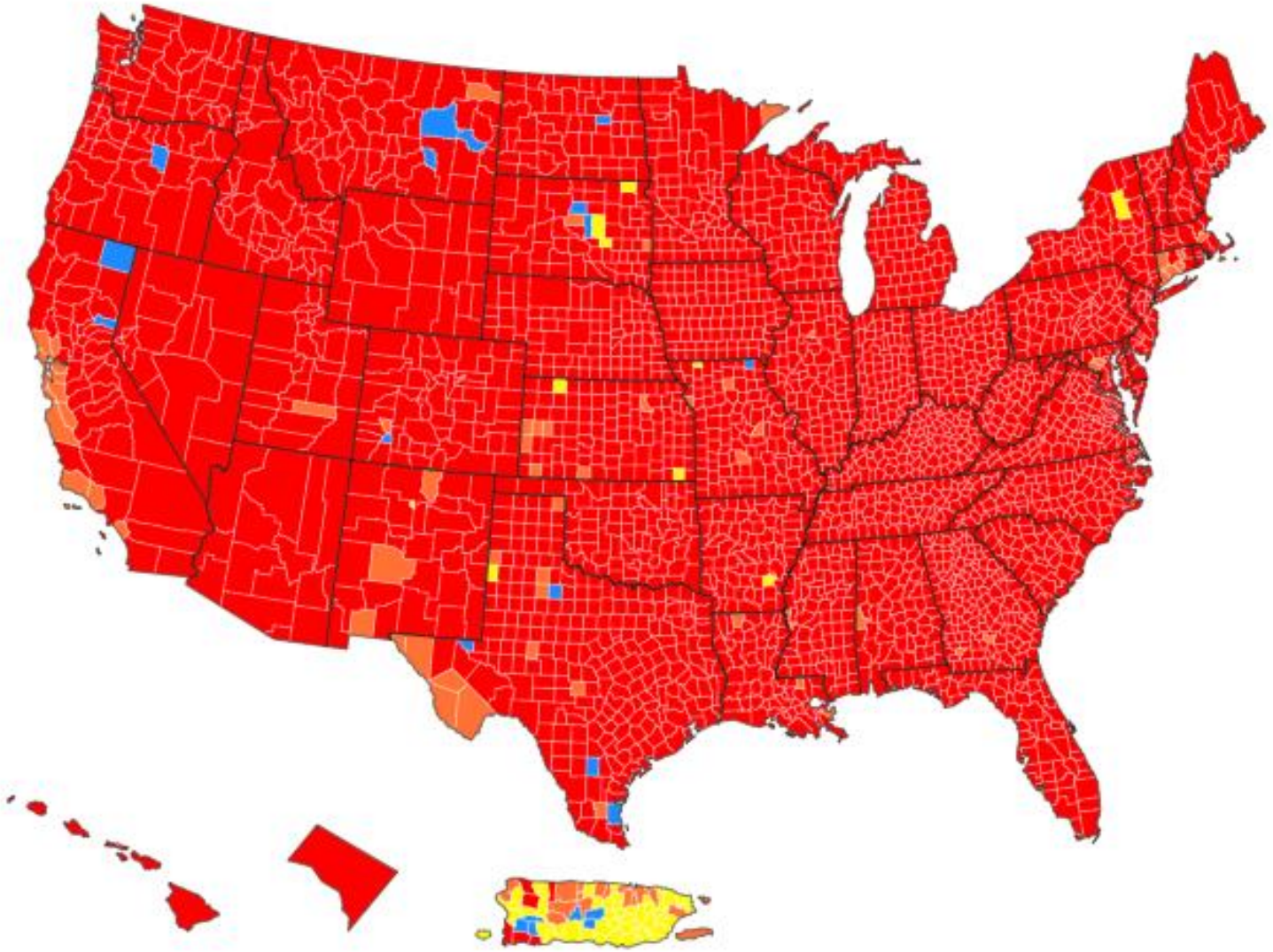
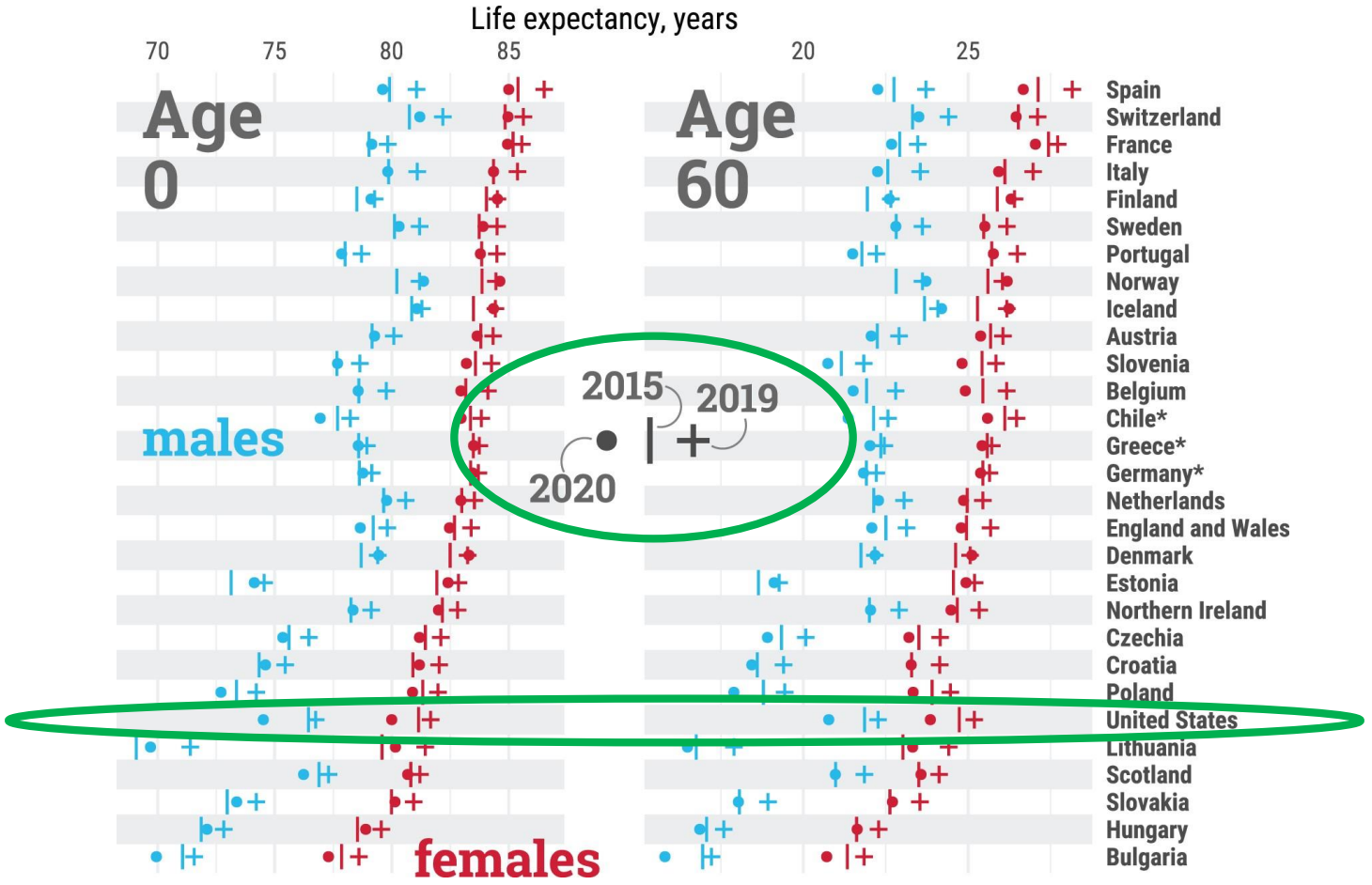


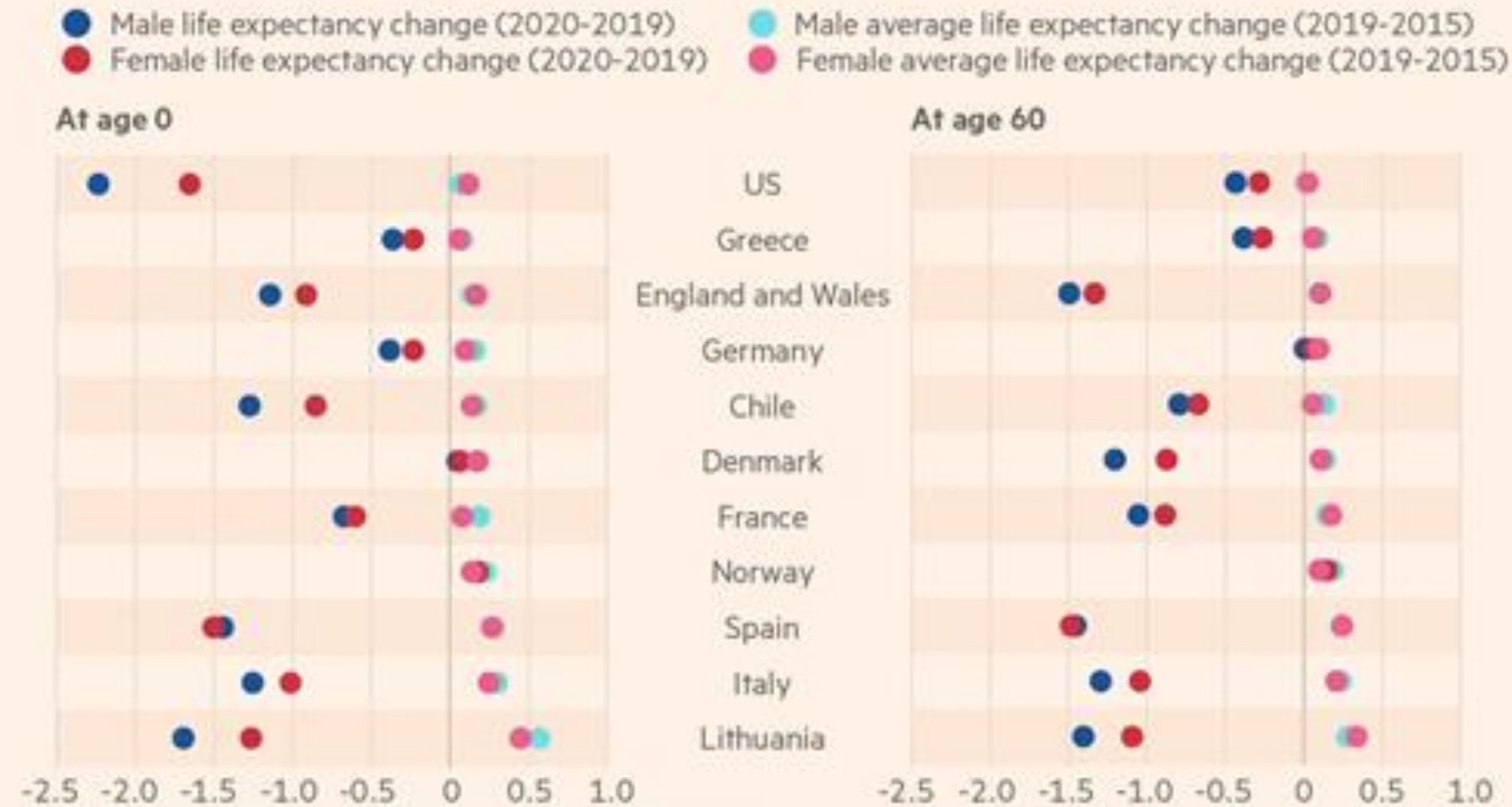
Figure 1 Life expectancy at birth (age 0, left panel) and at age 60 years (right panel) by country and sex, in 2015, ...



Int J Epidemiol, dyab207, https://doi.org/10.1093/ije/dyab207

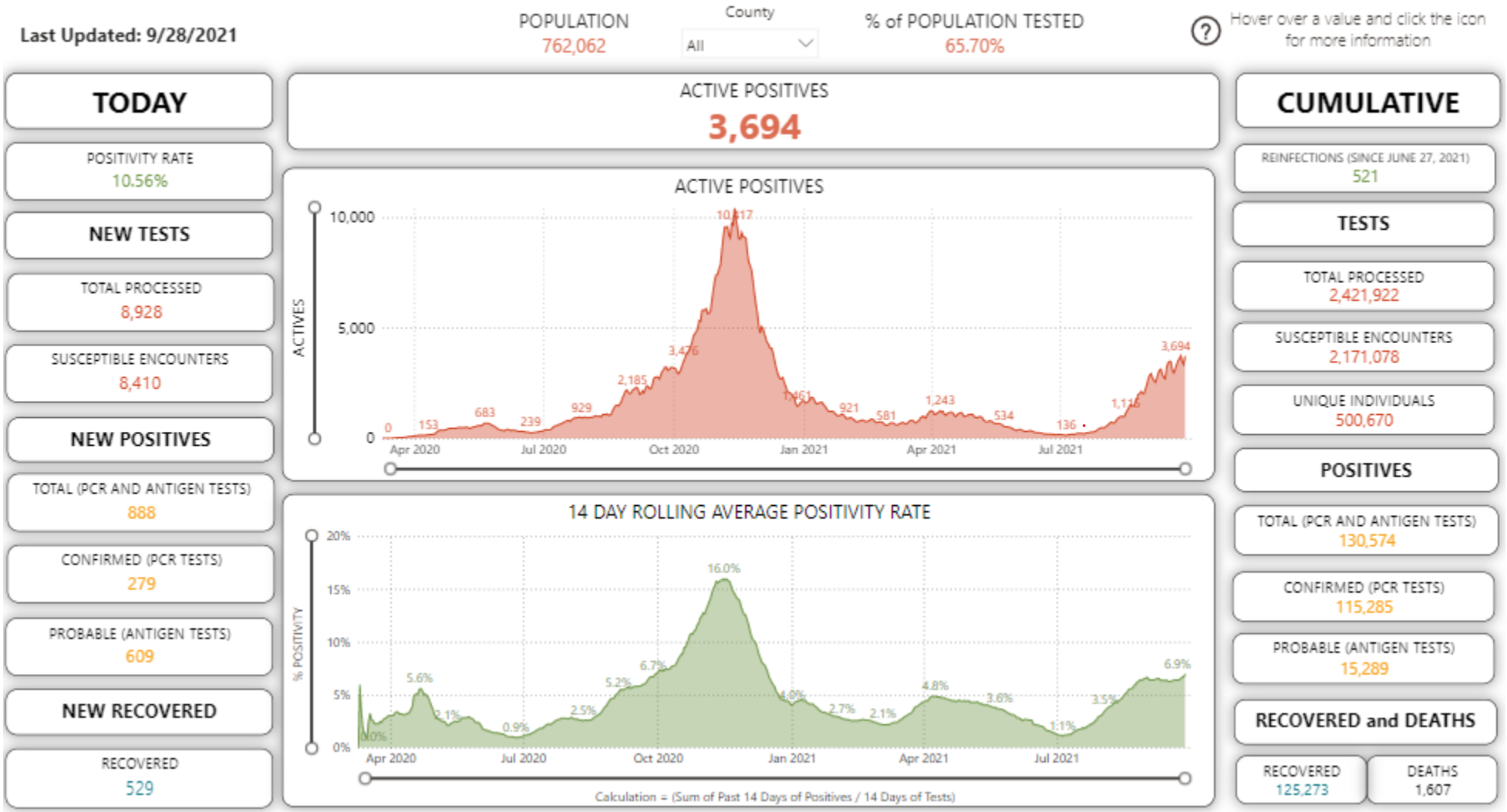
Covid deals a blow to longevity

Difference in life expectancy (years)



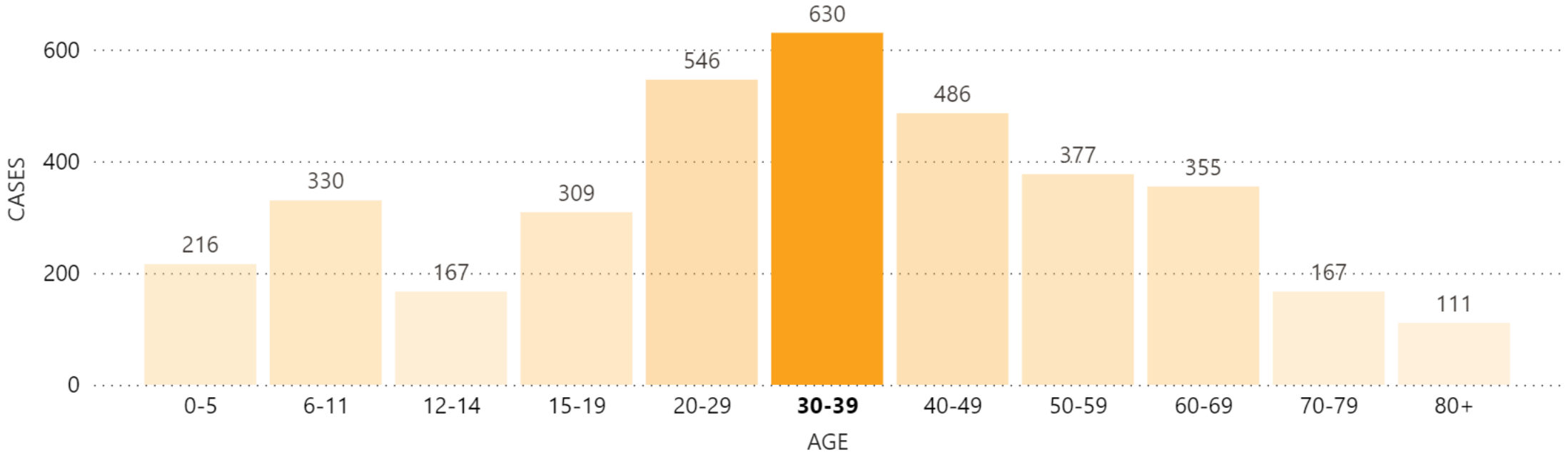
Estimates for Chile, Germany and Greece were available from 2016
Source: University of Oxford

ND Department of Health Covid Dashboard



https://www.health.nd.gov/diseases-conditions/coronavirus/north-dakota-coronavirus-cases

Age Distribution of North Dakota Active Cases



Source: NDDoH 9/28/21

Hospitalizations in North Dakota

- Currently hospitalized patients are somewhat younger on average than before
  - 63% vs 58% cumulatively are less than 70 years of age
- More than a third (39%) of hospitalized patients are less than 60 years of age
  - 11% are less than 40 years of age

NDDoH as of 9/28/21

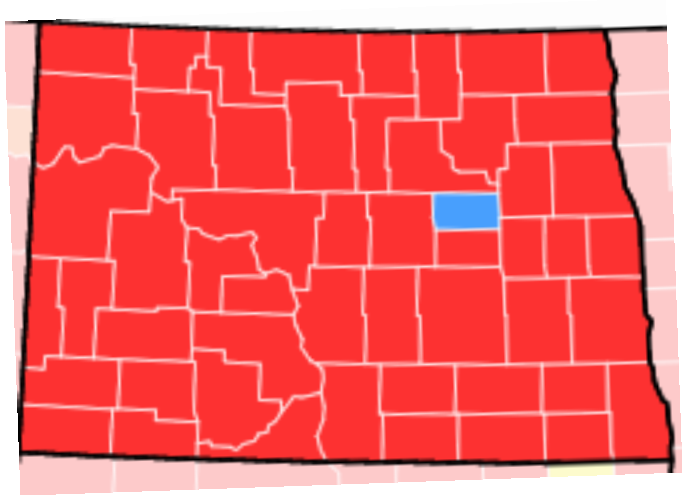
Risk of Death in North Dakota

(Risk per 100,000 population)

- Greatest risk of death cumulatively is in the not fully vaccinated elderly (70 years or older)
- Fully vaccinated individuals less than 70 years of age have a very small risk of death

NDDoH as of 9/28/21

CDC Transmissibility by County
North Dakota NDUS Counties

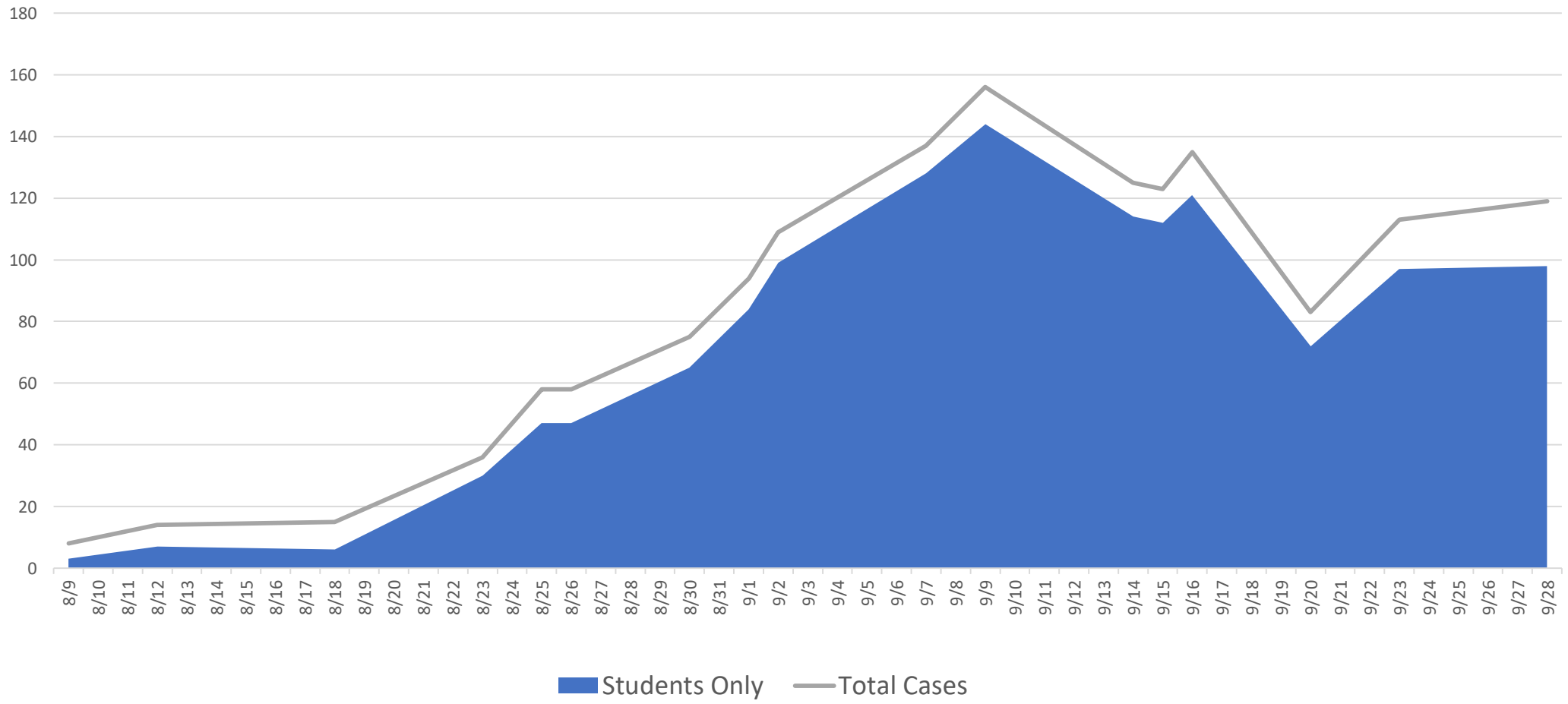


Current ND County
Transmissibility per CDC
September 30, 2021

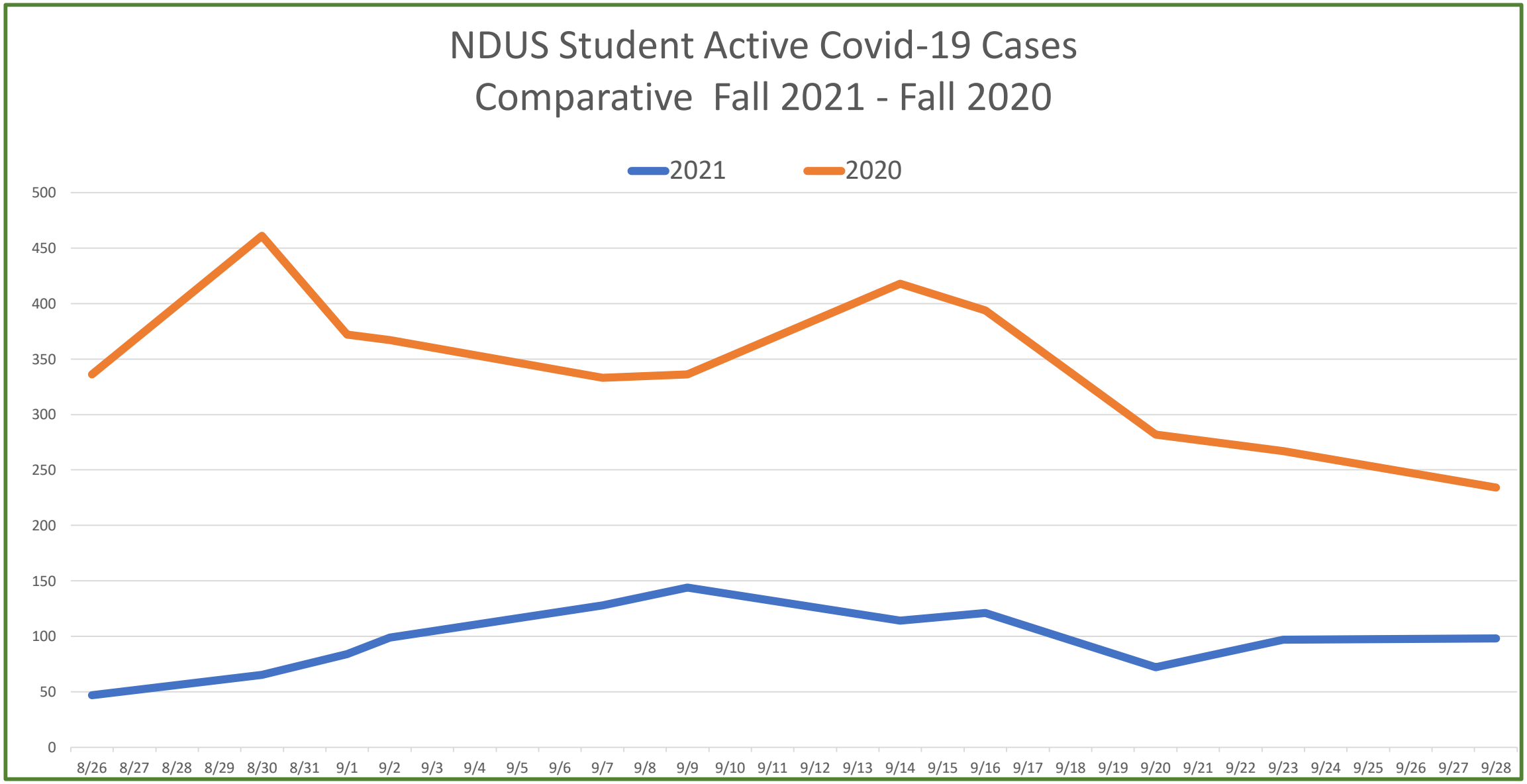
CDC COUNTY DESIGNATION - COMMUNITY TRANSMISSION

County	NDUS	8/2	8/9	8/12	8/13	8/18	8/20	8/23	8/25	8/30	9/2	9/7	9/9	9/13	9/16	9/20	9/23	9/28
Burleigh	BSC																	
Bottineau	DCB																	
Stark	DSU																	
Ramsey	LRSC																	
Traill	MaSU																	
Ward	MiSU																	
Richland	NDSCS																	
Cass	NDSU																	
Grand Forks	UND																	
Barnes	VCSU																	
Williams	WSC																	

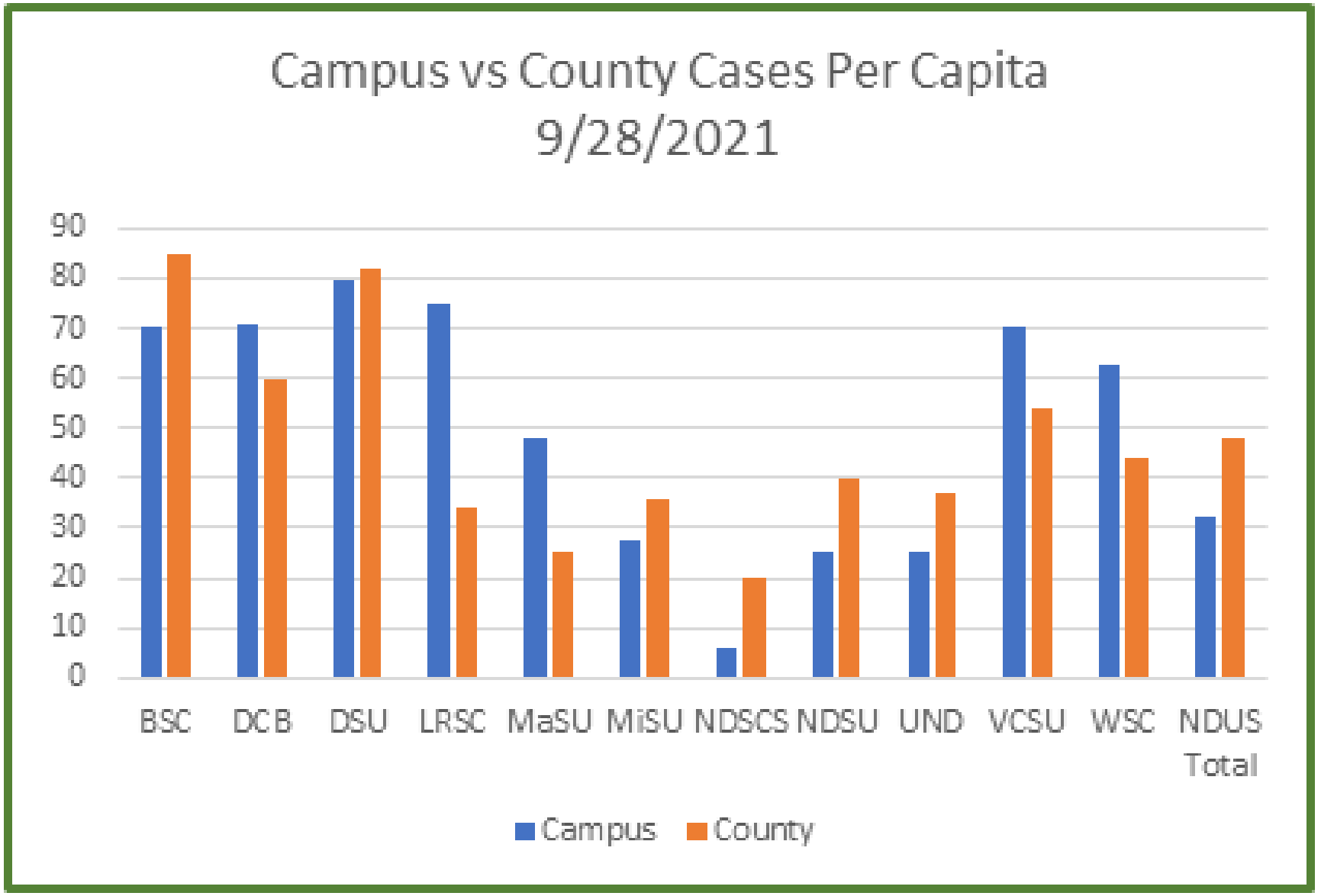
NDUS TOTAL ACTIVE CASES
Fall 2021



KR 9/28/2021


NDUS Student Active Covid-19 Cases
Comparative Fall 2021 - Fall 2020
2021
2020
500
450
400
350
300
250
200
150
100
50
0
8/26 8/27 8/28 8/29 8/30 8/31 9/1 9/2 9/3 9/4 9/5 9/6 9/7 9/8 9/9 9/10 9/11 9/12 9/13 9/14 9/15 9/16 9/17 9/18 9/19 9/20 9/21 9/22 9/23 9/24 9/25 9/26 9/27 9/28

KR 9/28/2021


Campus vs County Cases Per Capita
9/28/2021
90
80
70
60
50
40
30
20
10
0
BSC
DCB
DSU
LRSC
MaSU
MiSU
NDSCS
NDSU
UND
VCSU
WSC
NDUS Total
Campus
County

NDUS Institutions
Current Vaccine Incentives, Mask Requirements/Protocols

Institution	Vaccine incentives			Mask Requirements	Faculty/Staff may require masks in classroom/office	
	Amount	Eligible			Faculty	Staff
Bismarck State College	NA	NA			ADA Accom only	ADA Accom only
Dakota College - Bottineau	$100	Students			X	X
Dickinson State University	NA	NA			X	X
Lake Region State College (Devils Lake)	$100	Students Employees		Dining Services Nursing Center	X	X
Mayville State University	NA	NA			X	X
Minot State University	$100	Students			X	X
ND State College of Science (Wahpeton)	$100	Students		Indoors	X	X
ND State University (Fargo)	$100	Students		Classrooms	X	X
University of ND (Grand Forks)	$100	Students		Public indoor spaces All indoor spaces (UND SMHS)	X	X
Valley City State University	NA	NA			X	X
Williston State College	$100	Students			X	

KR 9/28/2021

Mask requirements in K-12 schools limited COVID-19 outbreaks

Schools without mask requirements were...

more likely to have COVID-19 outbreaks...

Compared with schools that started the year with mask requirements

*K–12 public noncharter schools in Maricopa and Pima Counties, AZ— July–August, 2021

CDC

bit.ly/MMWR92421

MMWR

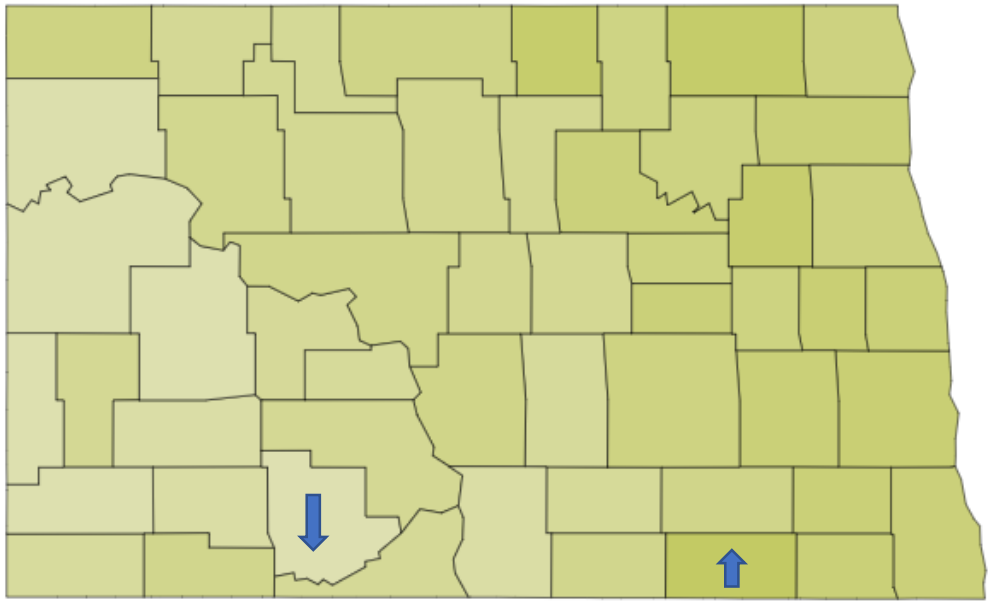
Testing

- PCR still is the “gold standard” but may be positive after the person is not longer infectious and may take 1-2 days to get results (depending on the lab and the method used)
- Antigen tests (like BinaxNOW) seem to be quite good at identifying people capable of transmitting the virus, especially early in the course of the disease
  - Doing serial antigen testing (that is, daily for a few days) is even more valuable in identifying potential carriers
  - The results typically are available in 15 minutes and thus allow rapid identification and isolation of infectious individuals
- Antibody testing not of important clinical value (in general)

Vaccination

- Excellent protection especially against hospitalization and death with mRNA vaccines (Pfizer and Moderna) and less with J&J (single dose)
- Recent recommendation from CDC regarding benefit of booster shots in elderly, those at increased risk (especially immunocompromised), and those working in risky settings (especially health care workers)
- Influenza toll very low last year presumably due to COVID-19 mitigation practices but could be a “double whammy” if flu and COVID-19 flare simultaneously this fall/winter
  - Safe to get both flu and COVID-19 immunizations at the same time
- Implications of Executive Order regarding mandatory vaccination for NDUS institutions with federal contracts (not grants) unclear

North Dakota Covid-19 Vaccine Doses



Percent of County Population receiving at least one dose of Covid-19 Vaccine

Ranges from Grant 34% to Dickey 72%

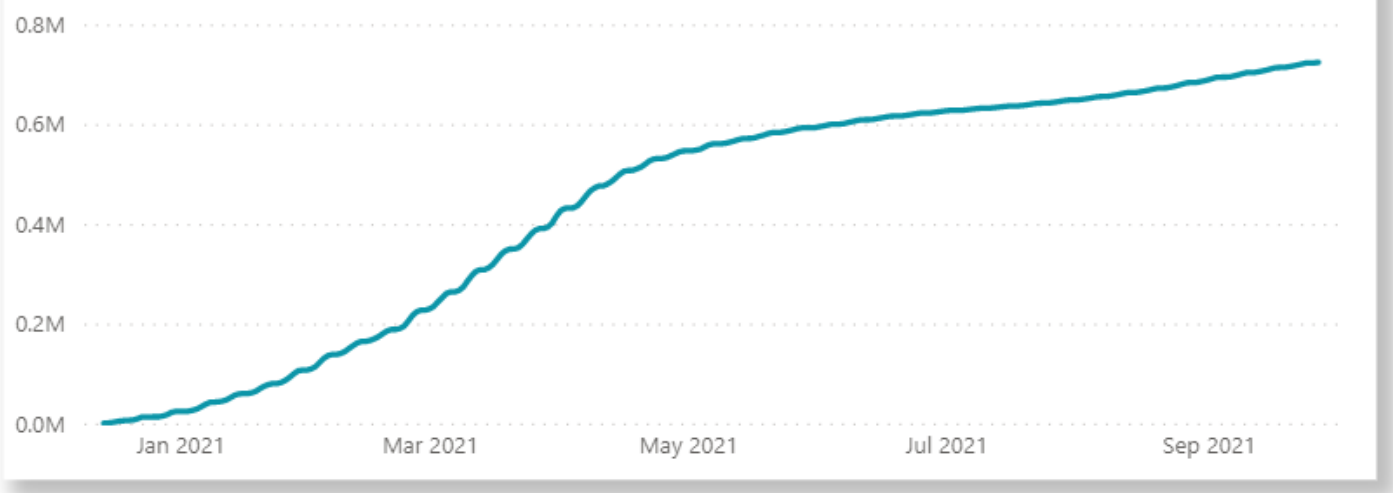
Dashboard Last Updated Tuesday, 9/28/2021

Data as of Monday, 9/27/2021

COVID-19 Vaccine Doses Administered

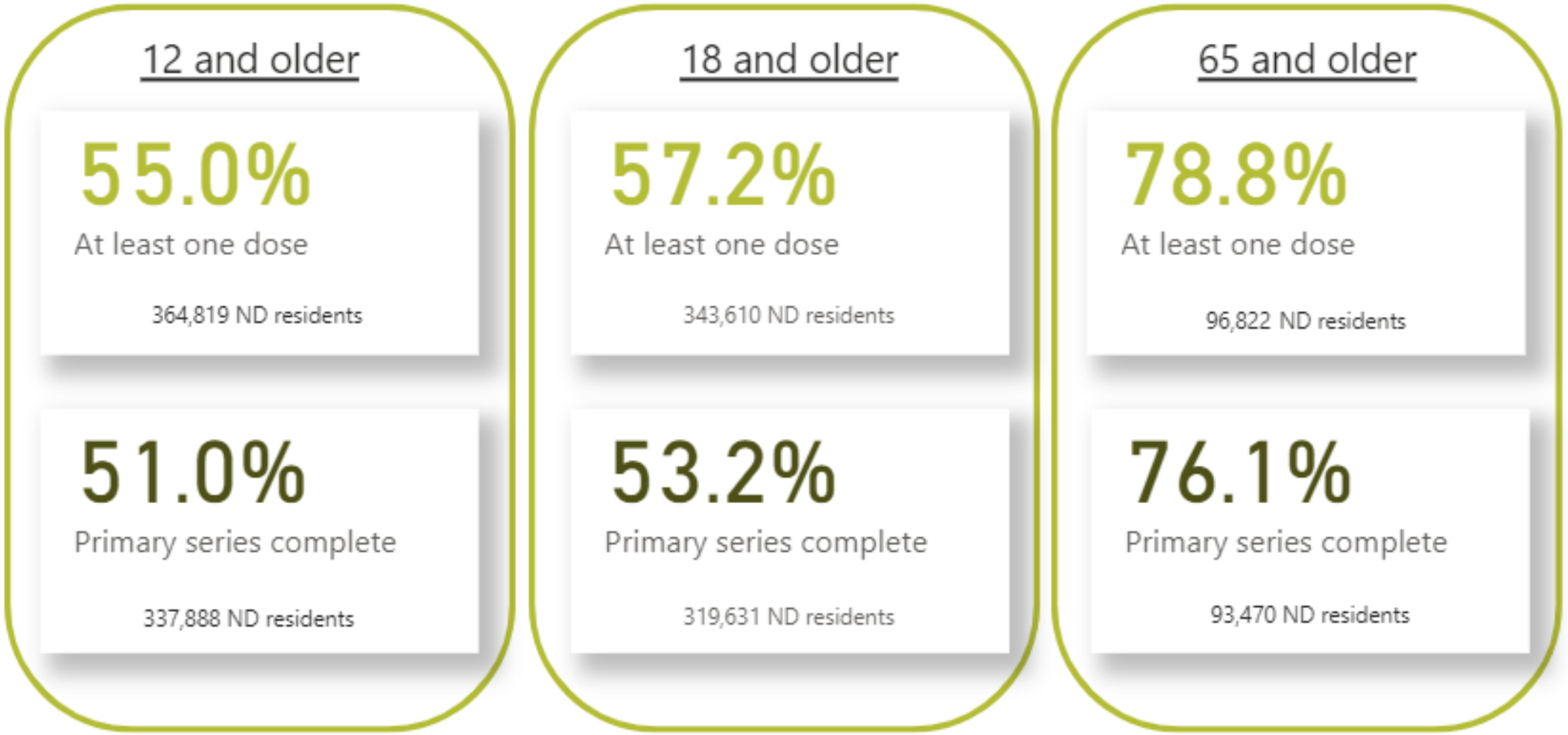
723,949	422,949	269,286	31,714
Total Doses Administered	Pfizer Doses	Moderna Doses	Janssen Doses

Cumulative Total COVID-19 Vaccine Doses Administered



https://www.health.nd.gov/covid19vaccine/dashboard 9/28/2021

North Dakota Covid-19 Vaccine Coverage Rates



https://www.health.nd.gov/covid19vaccine/dashboard 9/28/2021

Issues with Metrics Used to Assess Vaccine Effectiveness/Breakthrough

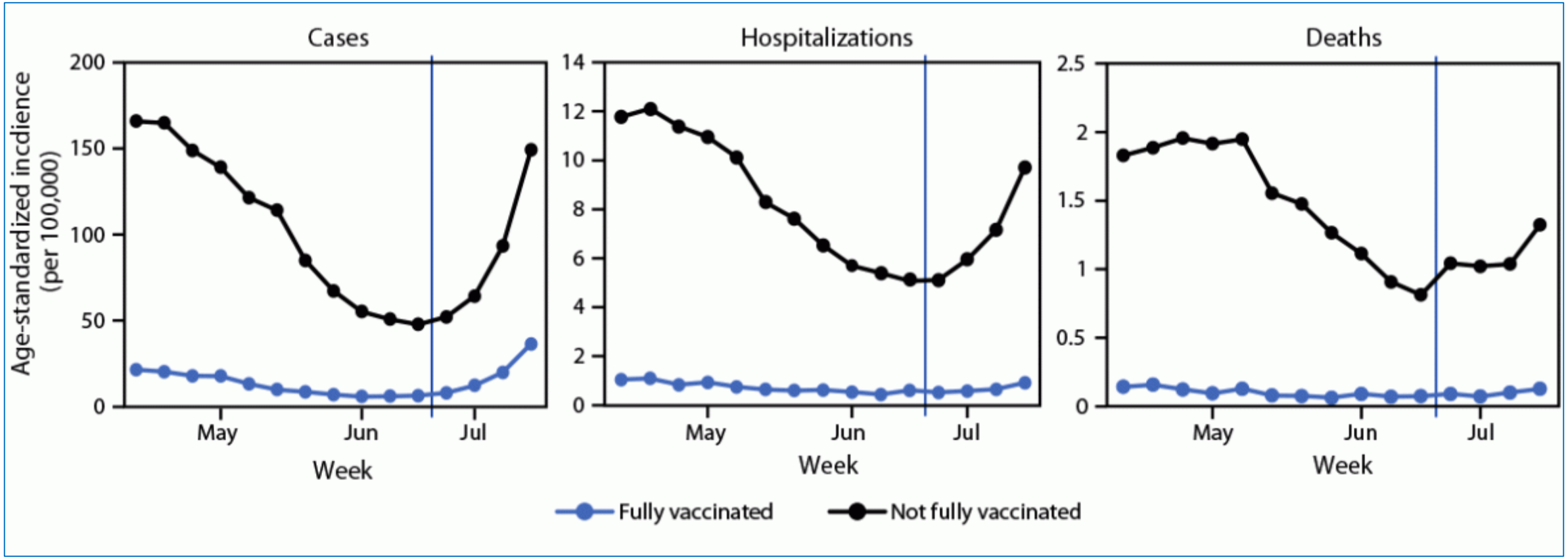
- The percentage of vaccinated people among cases goes UP in either of two settings that have very different implications:
  - Increasing vaccination coverage
  - Decreasing vaccine effectiveness
- Therefore, need to look at incidence rate ratios (IRRs) when comparing not fully vaccinated with fully vaccinated individuals
  - That is, what is the incidence of disease in the not fully vaccinated compared with the incidence in the fully vaccinated
    - IRRs (the ratio of those two rates) more directly measure vaccine effectiveness than just the percentage of breakthrough cases in a region

Source: CDC MMWR September 10, 2021

Meaning of “Incidence”

- Number of new cases or events (i.e., hospitalizations or deaths) that occur over a specific time period
- For the CDC study that follows that was just reported in the *Morbidity and Mortality Weekly Report* (MMWR), the time period is one week

Weekly trends in age-standardized incidence* of COVID-19 cases, hospitalizations,† and deaths,§ by vaccination status¶ — 13 U.S. jurisdictions, April 4–July 17, 2021**



Source: CDC MMWR September 10, 2021

After Delta became the most common variant,* fully vaccinated people had reduced risk† of...

INFECTION	HOSPITALIZATION	DEATH
5X	>10X	>10X

Vaccination offers strong protection against COVID-19

bit.ly/MMWR91021

* June 20-July 17, 2021
† Compared with people not fully vaccinated

MMWR

Future Course of the Pandemic

- “Prediction is very hard, especially about the future” – Yogi Berra
- Much of the predictive pandemic modelling has been wrong
- Nevertheless, as vaccination coverage slowly increases and the very contagious delta variant infects many others, the combination of natural and induced (vaccine-mediated) immunity likely will dampen the pandemic over the ensuing months
  - One of the major unknowns is how much protection (natural immunity) is produced by a prior SARS-CoV-2 infection
    - Immunity is a complex combination of cellular and humoral protection, and we don’t routinely measure the cellular component
- A report published on-line on Sept. 22, 2021 by the *COVID-19 Scenario Modeling Hub* (which is coordinated by researchers at Penn State) projects that COVID-19 cases will decrease substantially across the United States over the next six months, barring the emergence of any new variants or major changes in behavior.


Questions?