

The COVID Pandemic in North Dakota 2020-2022

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North Dakota Pediatrician 1980 to 2020

North Dakota Department of Health 1985 to 2000



Presentation Overview

What happened?

How it happened?

Why did it happen?

How community heroes (**local public health departments**) turned it around?

What happened?



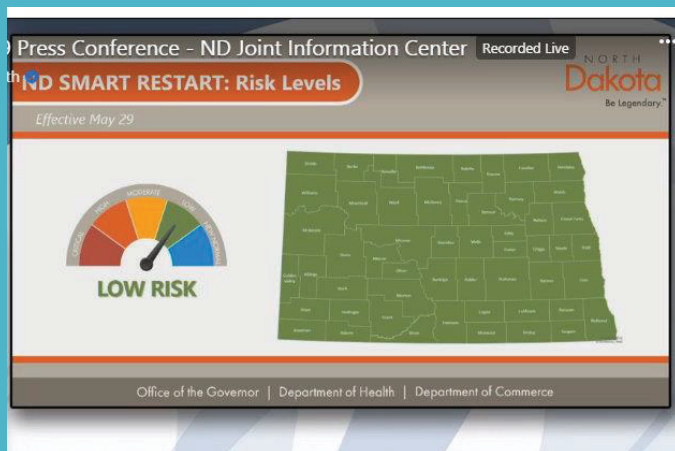
Timothy Earl Overseth

Timothy Earl Overseth was just 58 years old when he died of COVID on July 22, 2020. A lover of animals, he lived in Wishek, McIntosh County, 94 miles southeast of Bismarck-Mandan where the epicenter of the summer COVID outbreak started around the 4th of July weekend. He worked in the restaurant business and had diabetes for over 40 years. He left behind a wife, three children, four step children, two brothers, a sister and his mom. His obituary stated

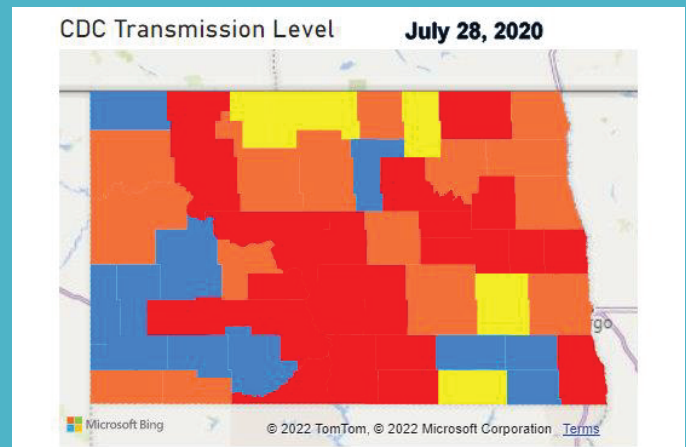
“The family wishes to let people know the Covid-19 virus is not a joke, punchline or political conspiracy and want you to take the precautions seriously.”

Why was this important? A rural COVID death in July 2020 in a 58 year old **should have set off alarm bells!**

What happened? **Burleigh Morton epicenter**

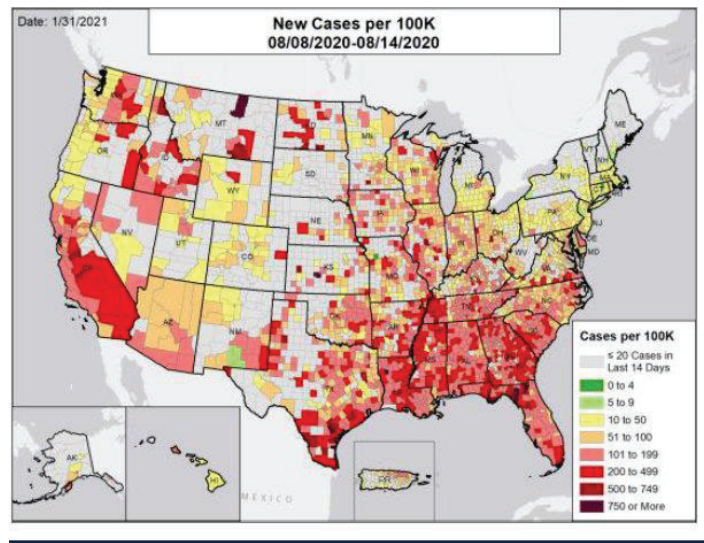
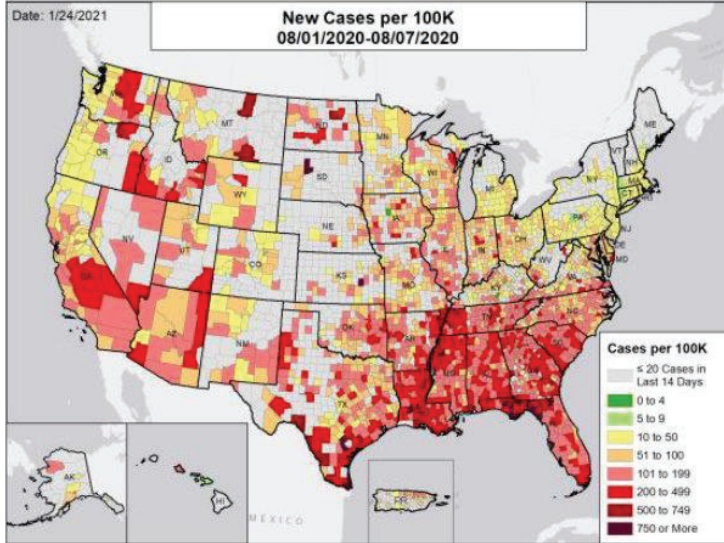


Fiction- North Dakota COVID Risk Metric
May 29, 2020 to September 3, 2020

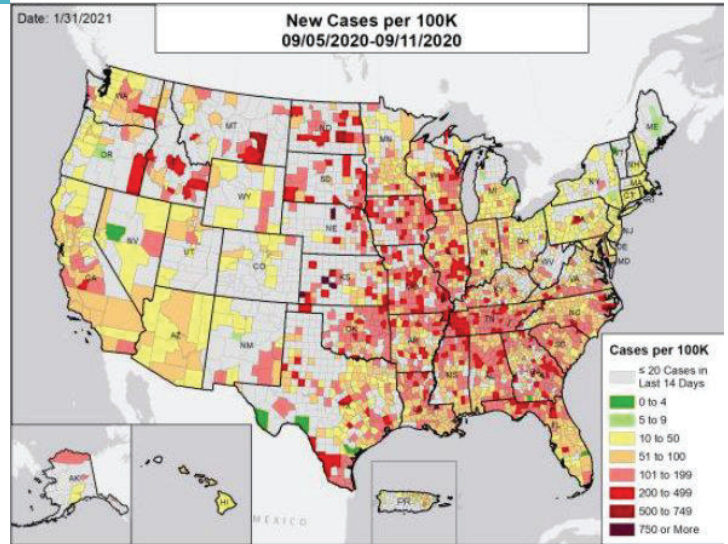
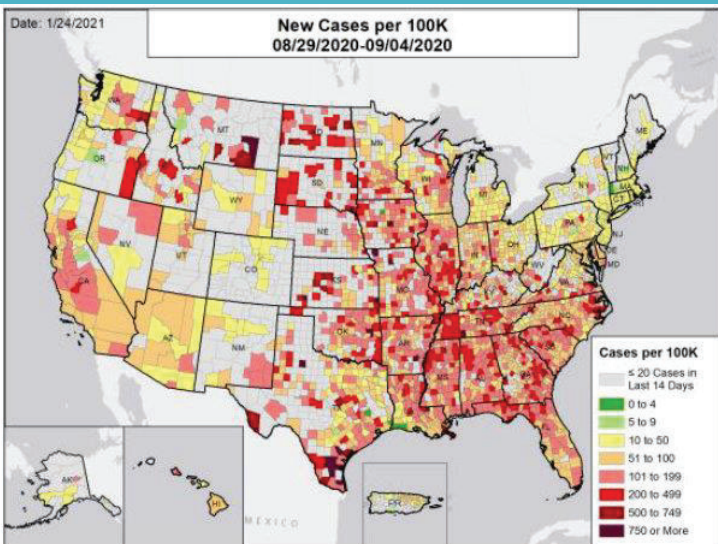


Retrospective Reality- North Dakota Heat Map
July 28, 2020

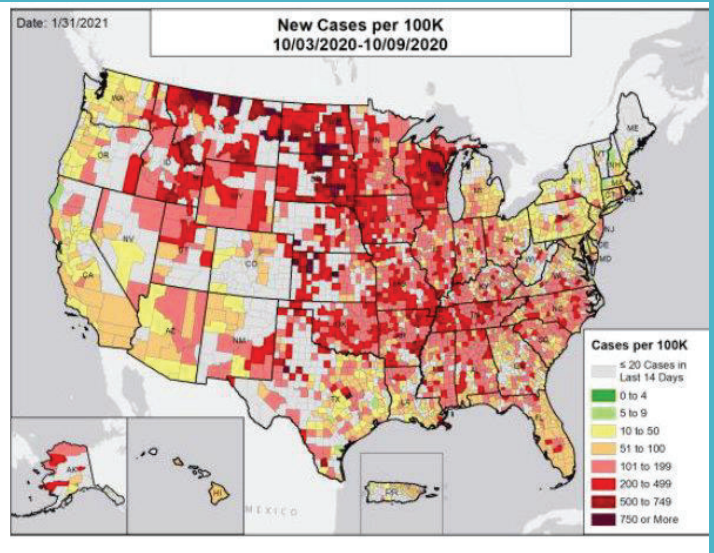
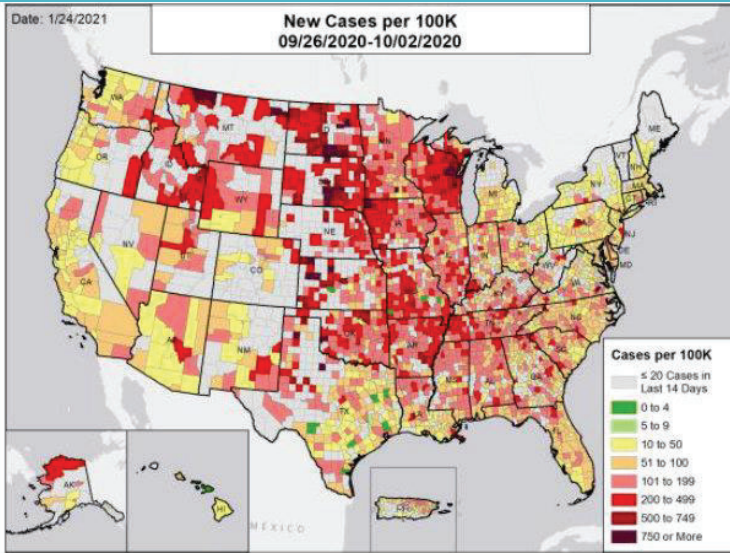
What happened?



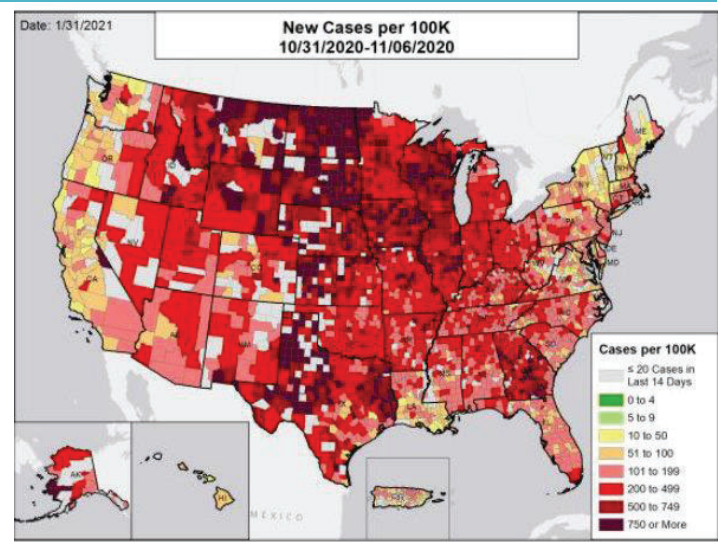
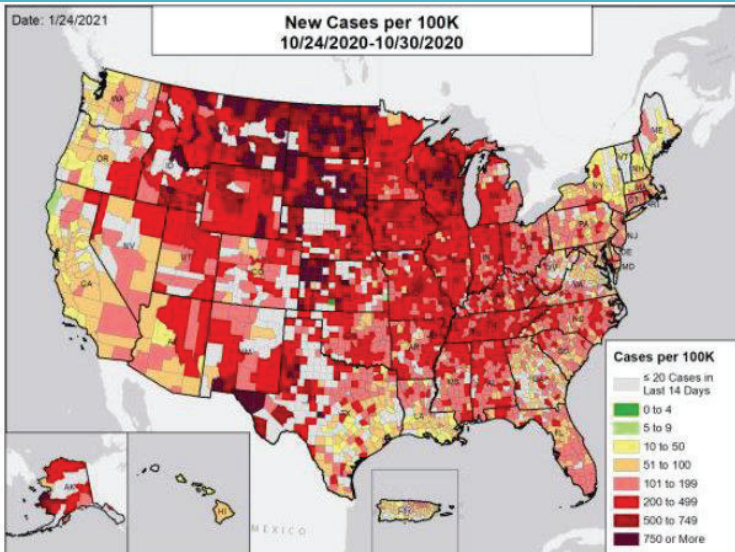
What happened?



What happened?



What happened?



The Dakotas are 'as bad as it gets anywhere in the world' for COVID-19

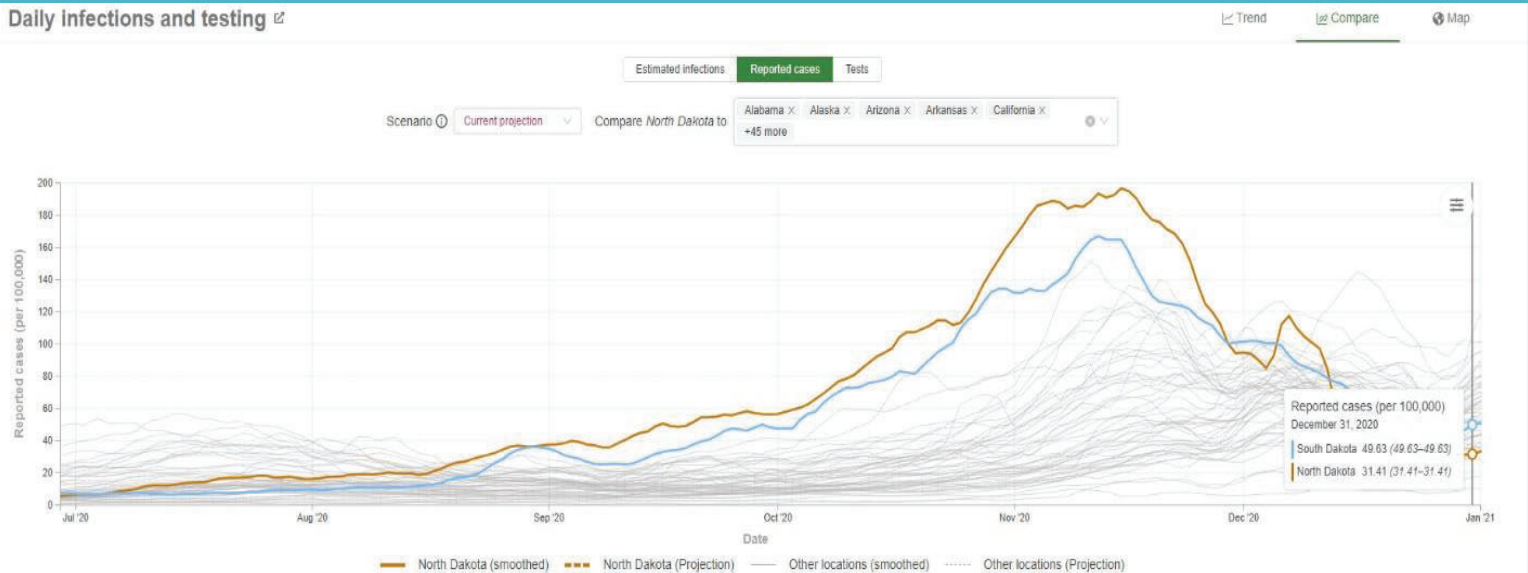
USA Today November 14, 2020

“The rates of infection and deaths per capita in South Dakota and previously restriction-free North Dakota are what Dr. Ali Mokdad would expect to see in a war-torn nation, not here. “How could we allow this in the United States to happen?” asked Mokdad, a professor at the Institute for Health Metrics and Evaluation at the University of Washington in Seattle. “This is unacceptable by any standards.”

It's a situation “as bad as it gets anywhere in the world,” Dr. William Haseltine, president of ACCESS Health International and author of My Lifelong Fight Against Disease.

What happened? ND highest case rate 98 days

Daily infections and testing



North Dakota Highest COVID Case rate in US August 23 to November 28, 2020 or 98 straight days

IHME. (2022, March 19). Daily Infections and Testing. University of Washington. https://covid19.healthdata.org/united-states-of-america/north-dakota?view=infections-testing&tab=compare&test=positive_tests

What happened? ND highest death rate 57 days



North Dakota Highest COVID Death rate in US September 21- November 16, 2020 or 57 straight days

IHME. (2022, March 19). Daily Deaths. University of Washington. <https://covid19.healthdata.org/united-states-of-america/north-dakota?view=daily-deaths&tab=compare>

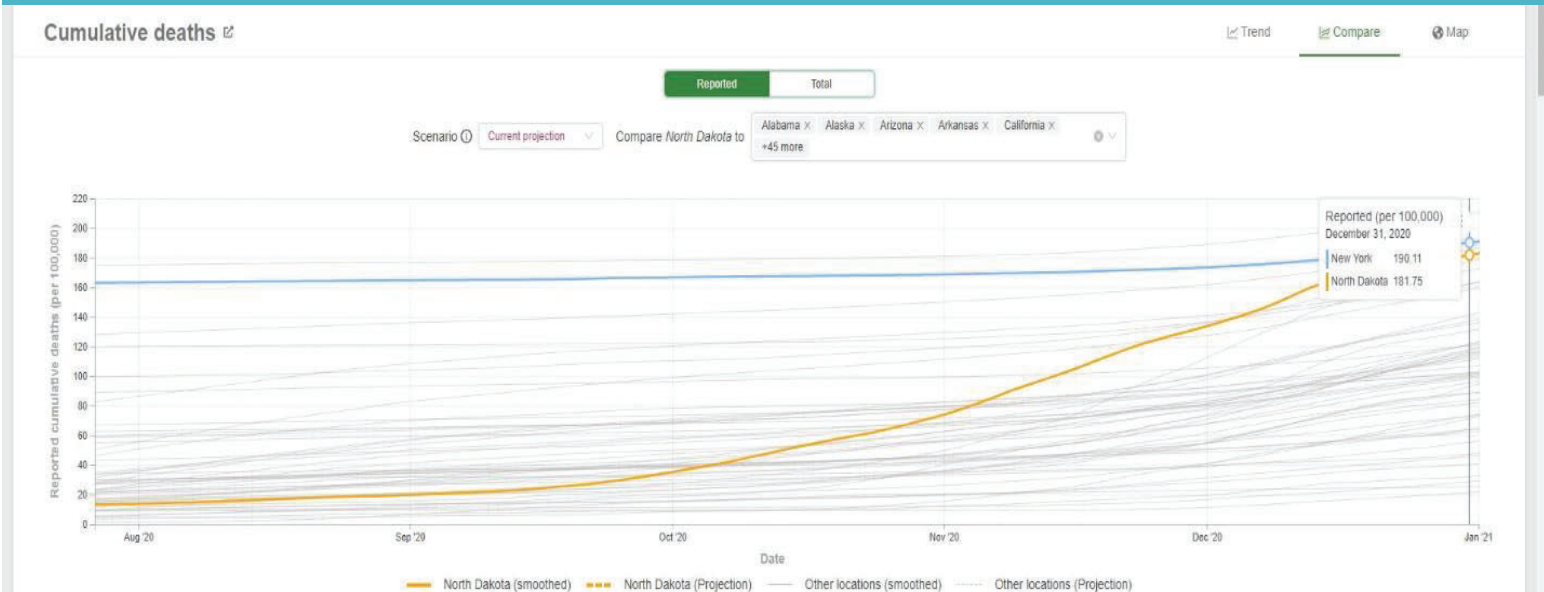
What happened? ND death capital in the World!



North Dakota Highest COVID Death rate in World September 27- November 19, 2020 during 37 of 49 days

IHME. (2022, March 19). Daily Deaths. University of Washington. <https://covid19.healthdata.org/united-states-of-america?view=daily-deaths&tab=compare>

What happened? ND a rise to the worst!



North Dakota Rising Cumulative COVID Death rate in US July to December 2020

IHME. (2022, March 19). Cumulative Deaths. University of Washington. <https://covid19.healthdata.org/united-states-of-america/north-dakota?view=cumulative-deaths&tab=compare>

Even Worse than It Looks!

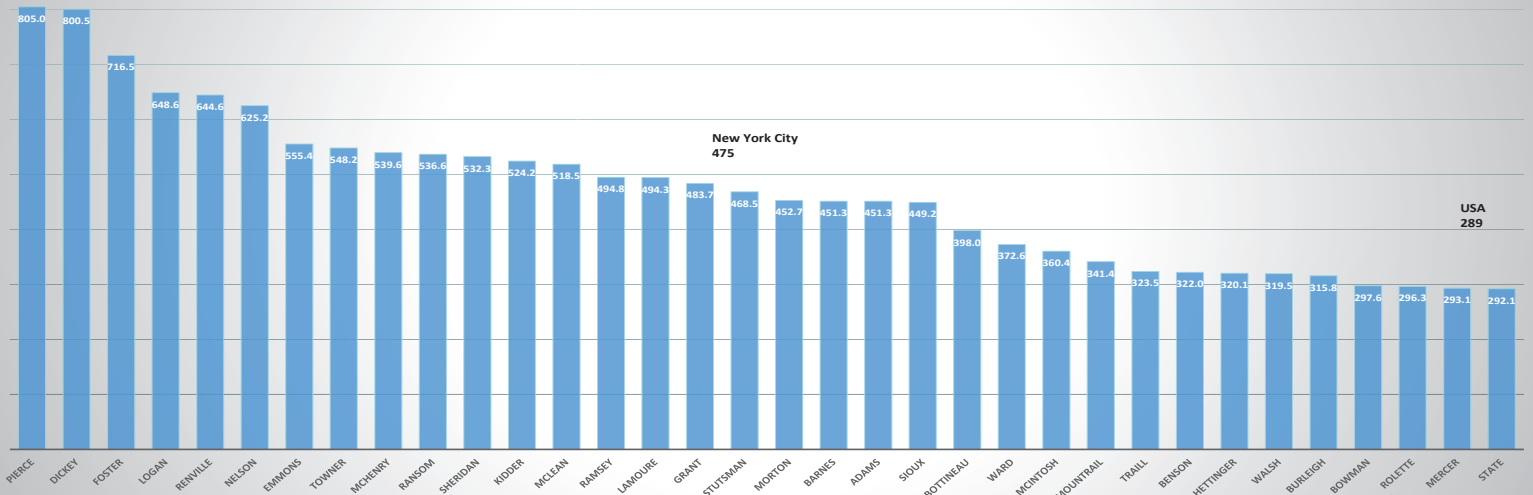
North Dakota recorded the highest number of deaths in the state's history in 2020 with 7938 or 1649 (20.8%) more than expected.

In 2021, there were 7144 deaths from all causes or 855 more than expected giving a **2-year excessive mortality of 2504 deaths compared to 2028 reported COVID deaths from the North Dakota COVID dashboard.**

The 2020 to 2022 COVID pandemic was the worst infectious disease outbreak since the 1918-1920 influenza pandemic when North Dakota reported 1,378 deaths although the true number was likely closer to 3,000.

Even Worse than It Looks!

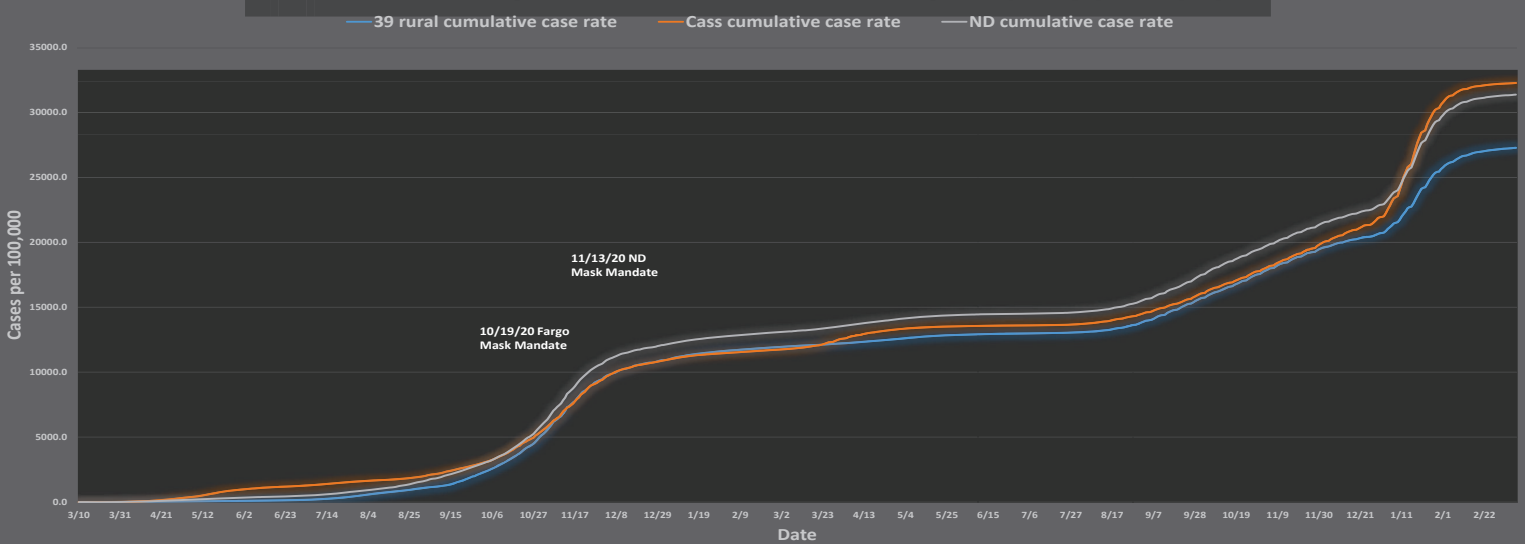
COVID cumulative deaths rate per 100000 North Dakota Counties March 10, 2022



At the end of the 2-year pandemic, **16 North Dakota counties (30.2%)** had cumulative COVID death rates exceeding that of New York City and 33 (62.3%) had cumulative death rates exceeding that of the national rate.

COVID Terrible in Rural North Dakota!

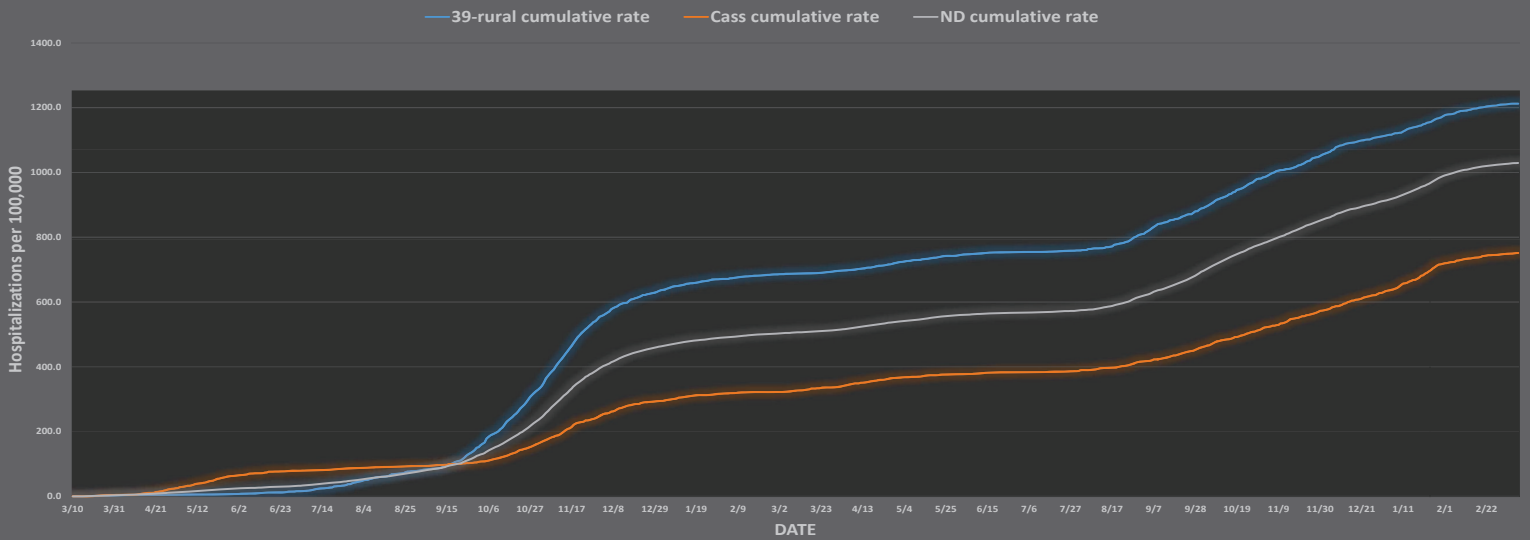
39-rural and Cass County and ND Cumulative COVID Case Rates per 100,000 3/9/20 to 3/10/22



Comparison of the 39 rural North Dakota counties with North Dakota overall and Cass County- the most urban in North Dakota

COVID Terrible in Rural North Dakota!

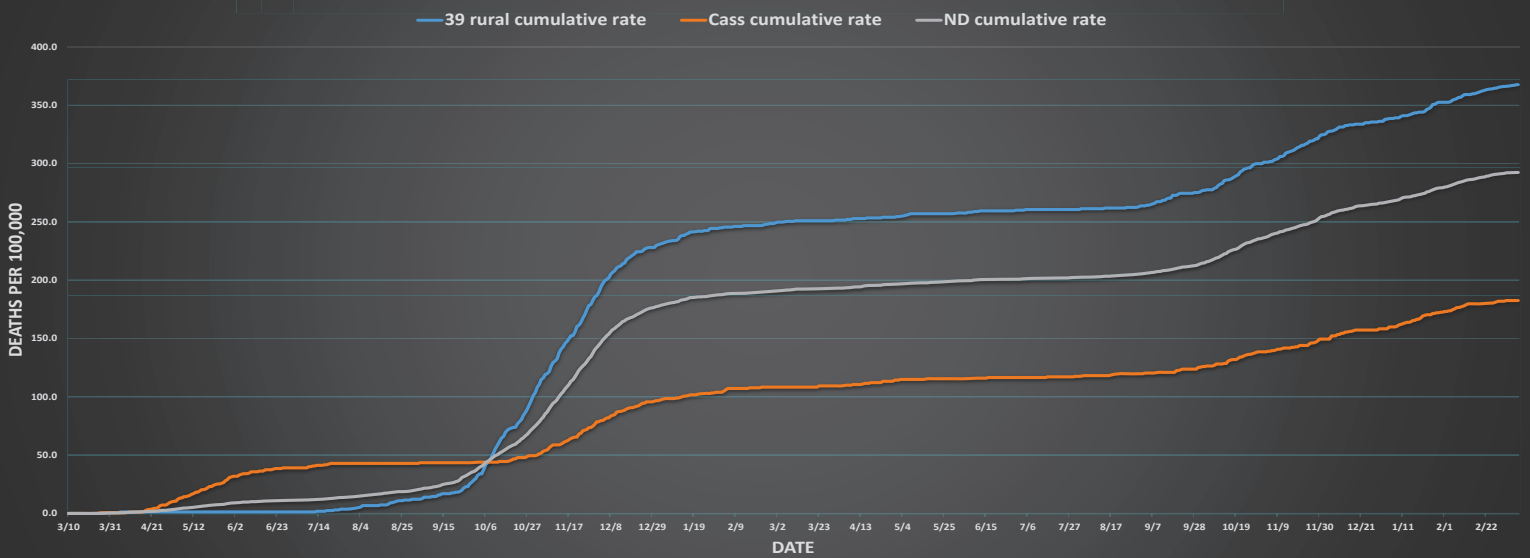
39-rural and Cass County and ND Cumulative COVID Hospitalization Rates per 100,000 3/9/20 to 3/10/22



A rural North Dakota resident was **61.4 percent more likely** to be admitted to a hospital for COVID during the pandemic than a resident of Cass County.

COVID Terrible in Rural North Dakota!

39-rural and Cass County and ND Cumulative COVID Death Rates per 100,000 3/9/20 to 3/10/22



A rural North Dakota resident was **101.5 percent more likely** to have died from COVID during the pandemic than a resident of Cass County.

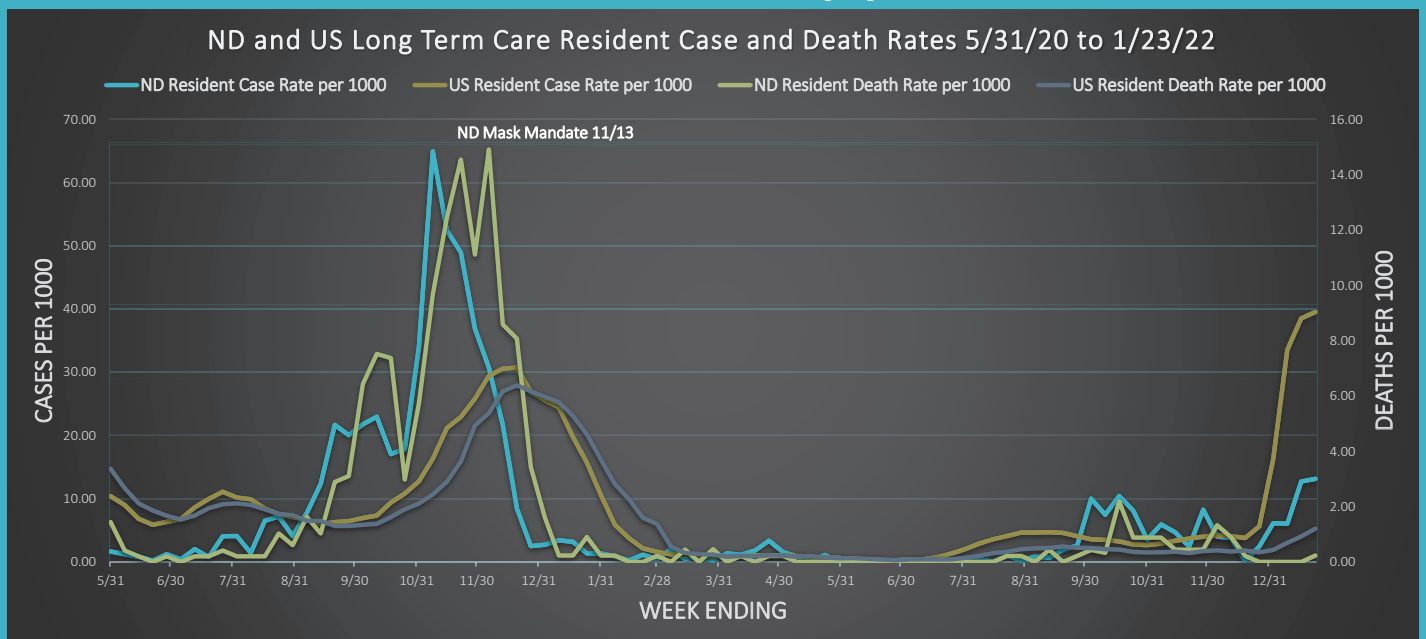
How could this possibly happen in ND?

COVID was deadly in a rural state with **low mask wearing, terrible social distancing, many small indoor places for transmission and large number of vulnerable in nursing homes**

With 422 bars (most per capita in US), 1498 religious congregations (5th most per capita in US), most churches per capita, 173 school districts (3rd most per capita in US), and 473 school buildings there were multiple small venues for COVID to spread in North Dakota.

North Dakota had the highest percentage (17.7%) population age 85 and older and highest percentage (4.8%) age 65 and older in nursing homes of any state in the US, a relatively large number of vulnerable citizens in very full nursing homes.

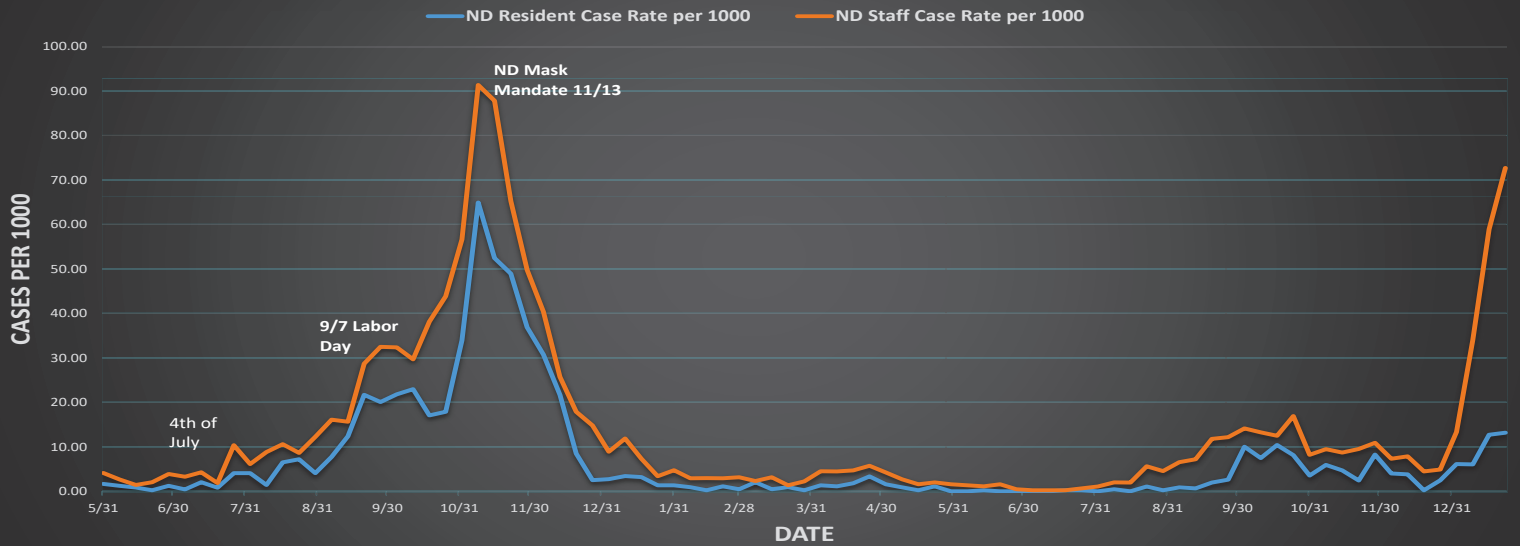
How did it happen?



On November 13, 2020, the American Association of Retired Persons (AARP) reported that **North Dakota had the worst outbreak of COVID in nursing homes in the United States.**

How did it happen?

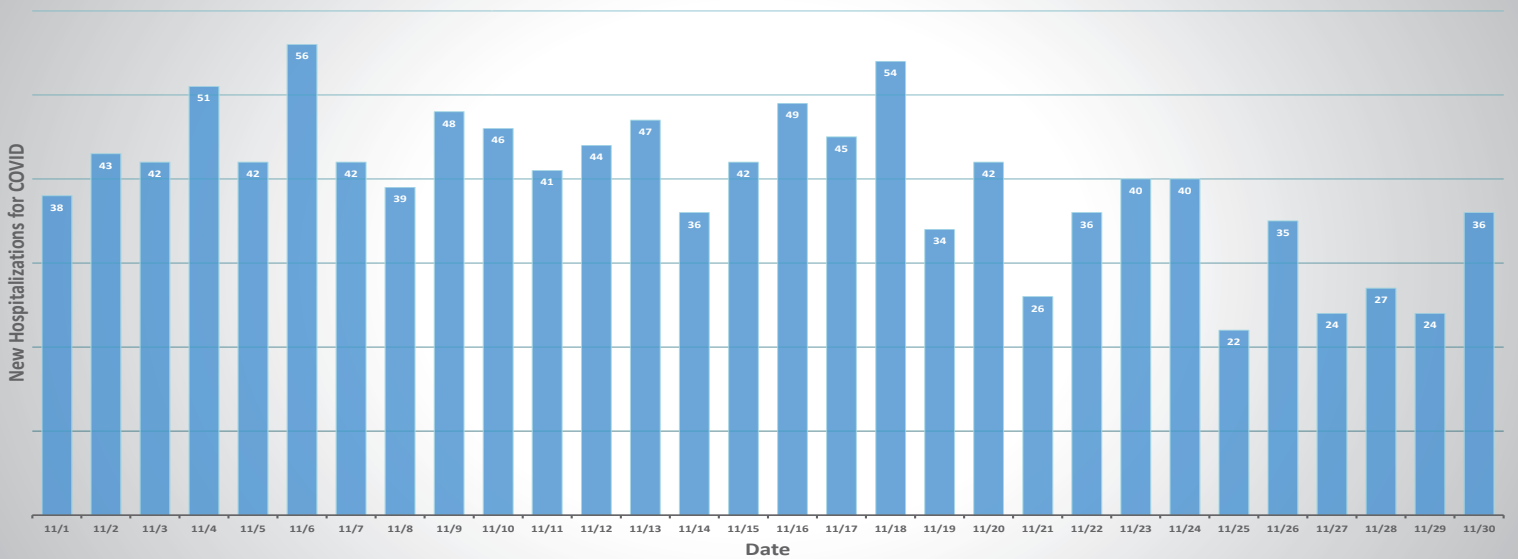
ND Long Term Care Resident and Staff Case Rates 5/31/20 to 1/23/22



Staff infections from community spread preceded resident COVID outbreaks
 Staff infections came from community outbreaks

Horror in North Dakota

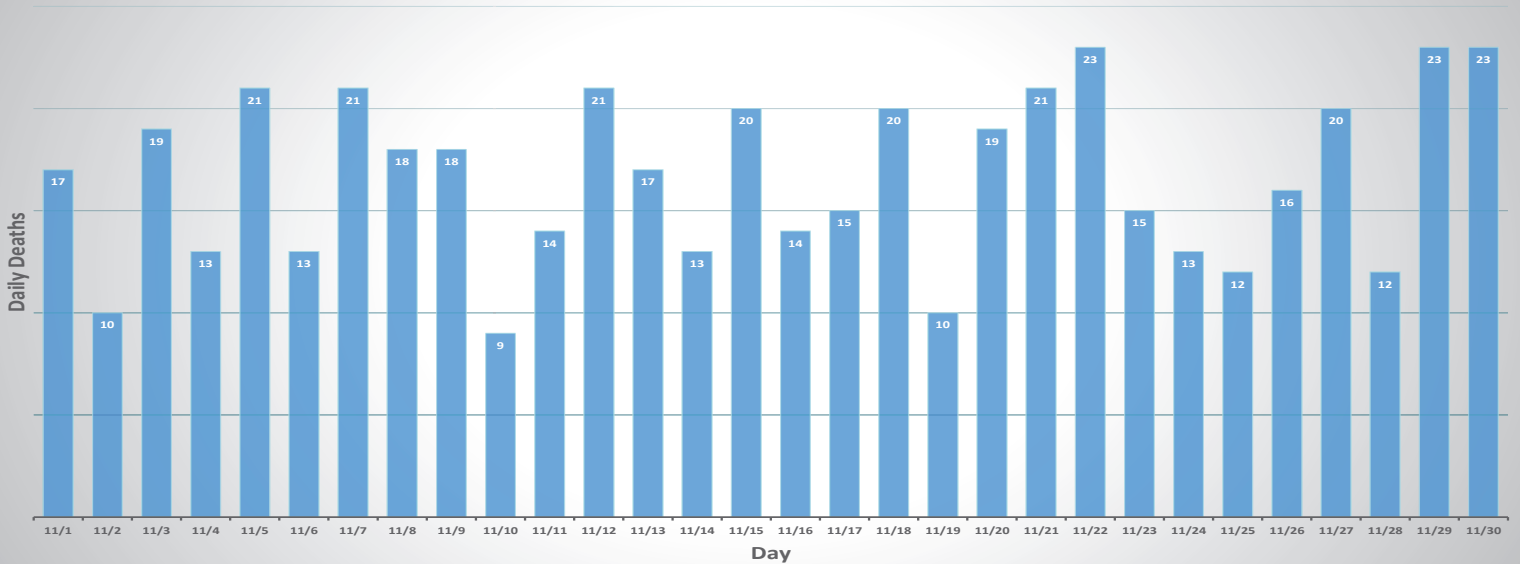
North Dakota Resident COVID Admissions to a Hospital by Day November 2020



1184 North Dakotans were admitted to hospitals in November 2020 for COVID treatment- **an average of 39.5 per day**

Horror in North Dakota

North Dakota Resident COVID Deaths by Day November 2020



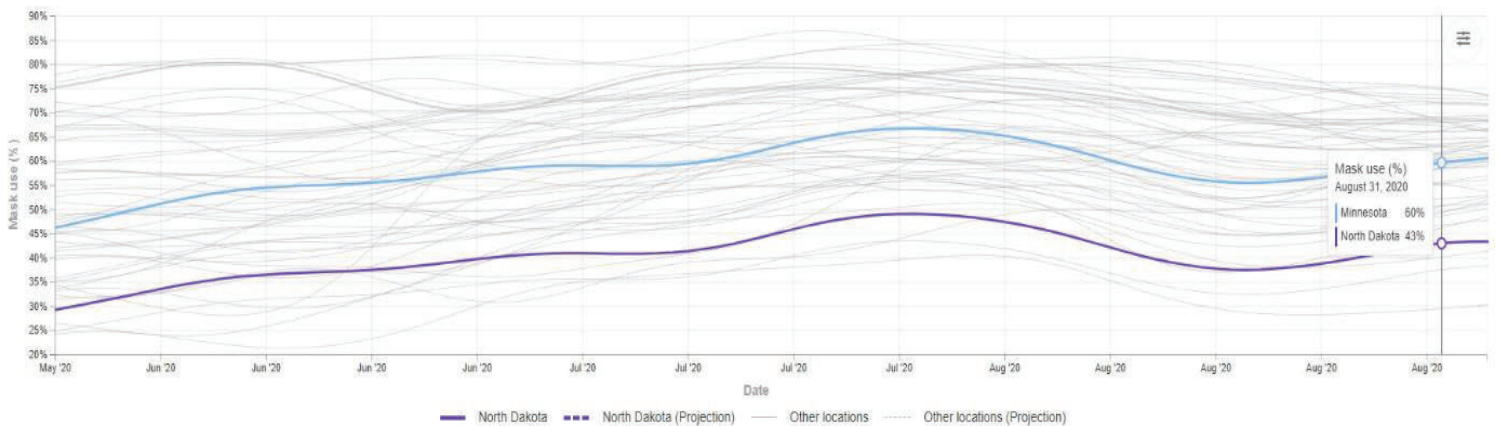
500 North Dakotans died in November 2020 from COVID - an average of 16.7 per day
 320 were nursing home residents- an average of 10.7 per day

How did it happen? Low Mask Use

Mask use

Trend Compare Map

Scenario: Current projection Compare North Dakota to: Alabama X Alaska X Arizona X Arkansas X California X +45 more

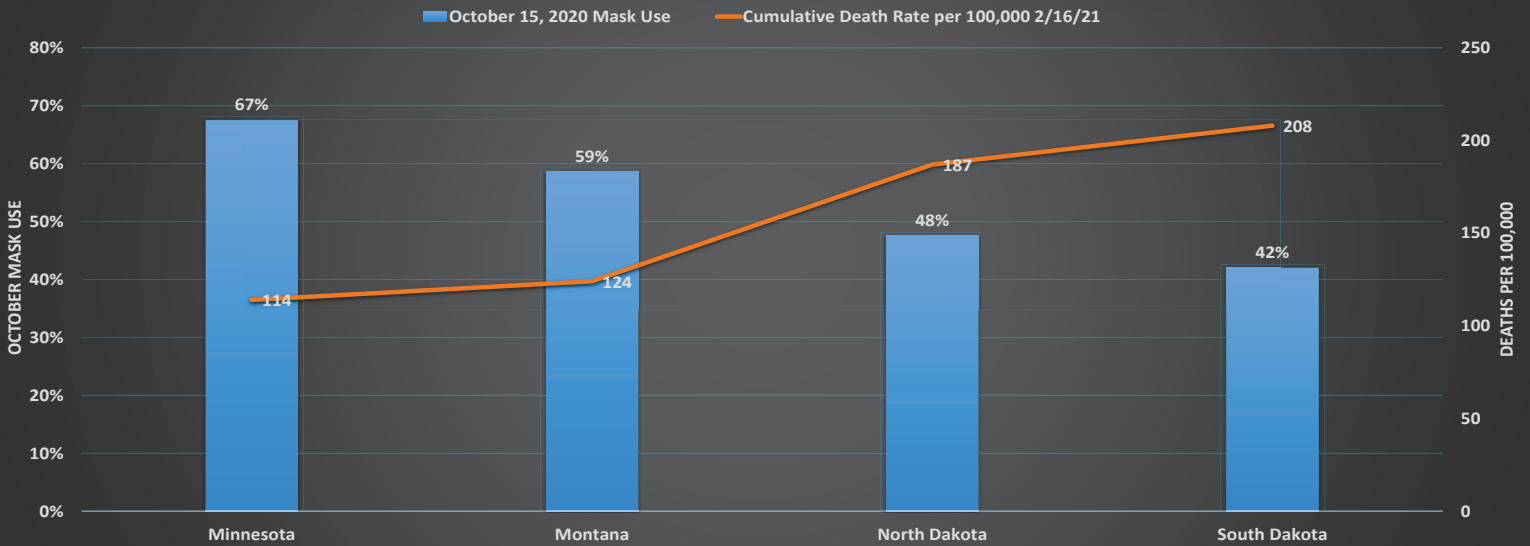


Data sources: Premise (US only); The Delphi Group at Carnegie Mellon University and University of Maryland COVID-19 Trends and Impact Surveys, in partnership with Facebook; Kaiser Family Foundation; YouGov COVID-19 Behaviour Tracker survey

On August 31, 2020, North Dakota had the 47th worst mask use at 43% trailing only Idaho, South Dakota and Wyoming. Minnesota was at 60% while the US average was 65%.

How did it happen? Low Mask Use

Mask Use on October 15, 2020 and Cumulative COVID Death rate February 16, 2021

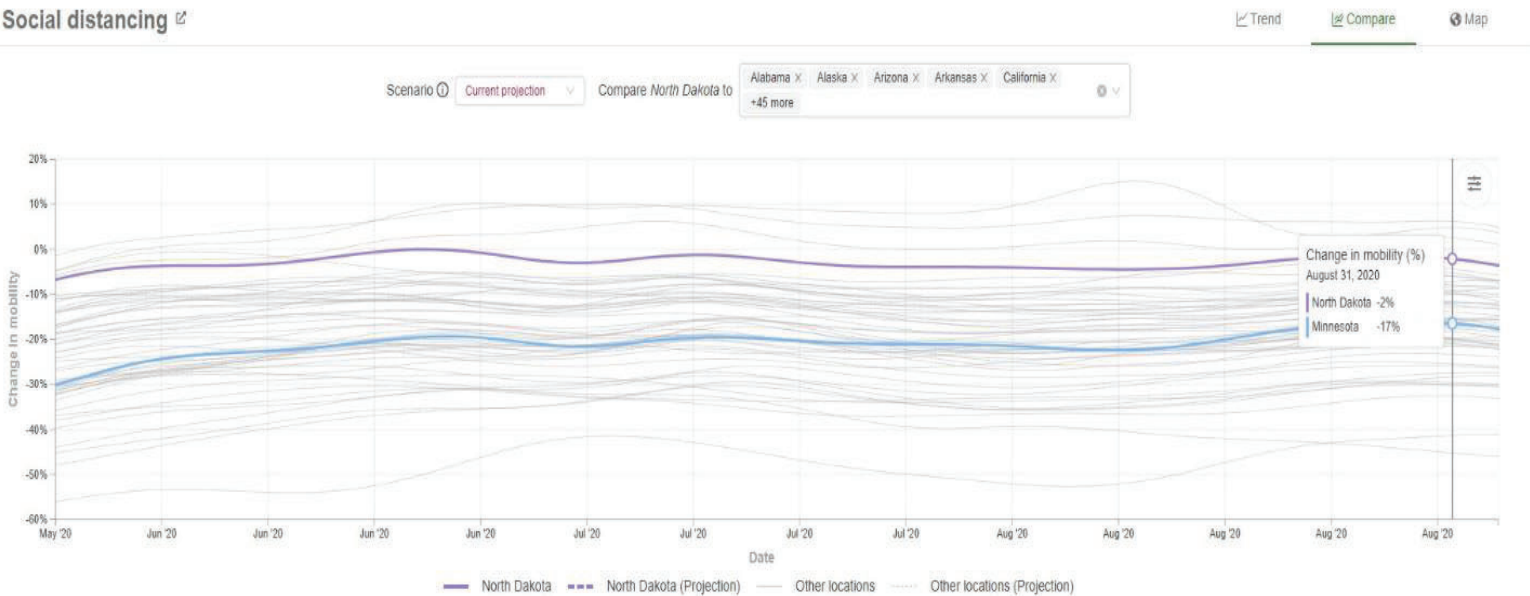


The greater the mask use (Minnesota and Montana) the lower the death rate. The lower the mask use (North and South Dakota) the greater the death rate. The same held for social distancing.

Author's calculations from NDDoH (ND cumulative death rate), COVID Tracking Project (MN, MT, SD cumulative death rates per 100,000 and IHME Mask Data

How did it happen? Terrible Social Distancing

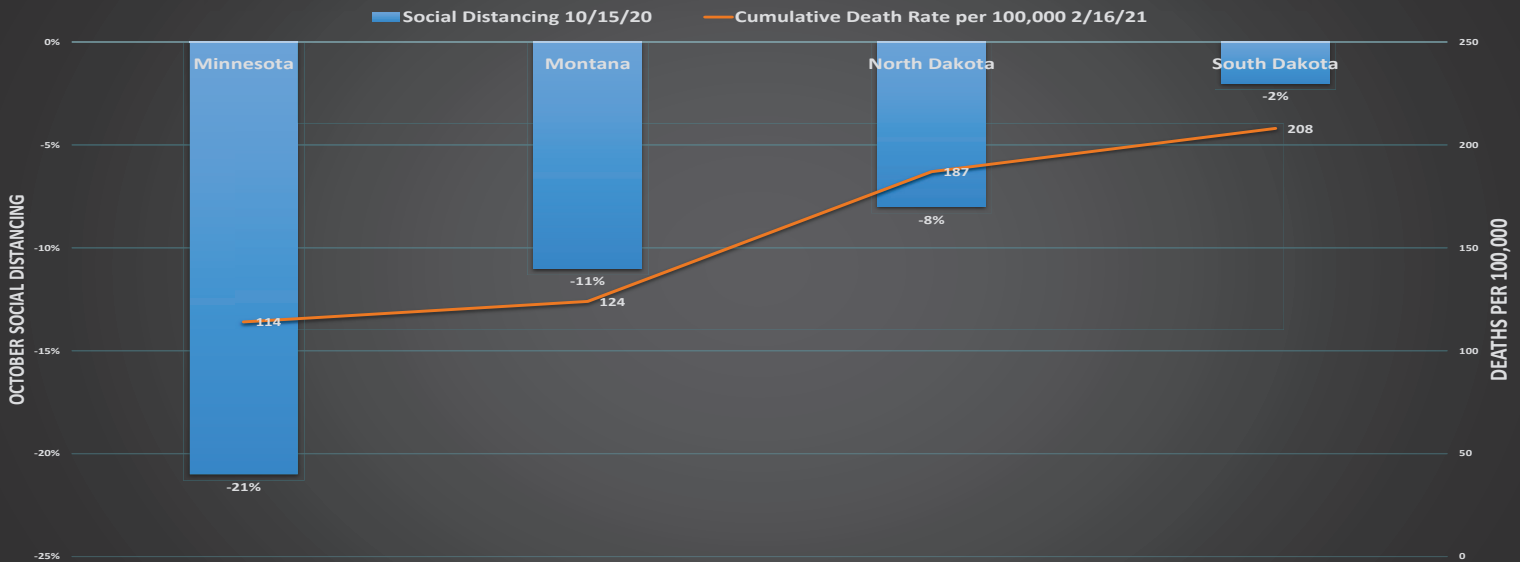
Social distancing



On August 31, 2020, North Dakota had the 47th worst social distancing at 2% below pre-pandemic mobility trailing only Montana, South Dakota and Wyoming. Minnesota was as 17% while the US average was at 21% below pre-pandemic mobility.

How did it happen? Terrible Social Distancing

Social Distancing on October 15, 2020 and Cumulative COVID Death rate February 16, 2021

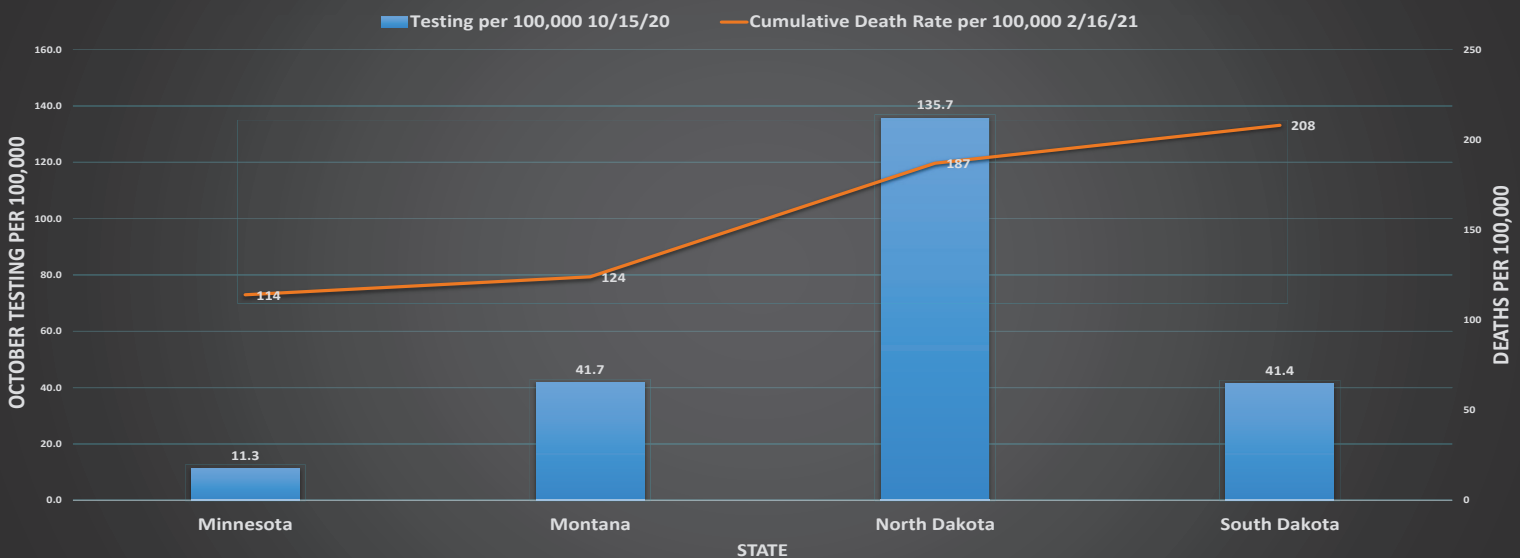


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Author's calculations from NDDoH (ND cumulative death rate), COVID Tracking Project (MN, MT, SD cumulative death rates per 100,000 and IHME Social Distancing Data)

Testing Not Associated with Mortality

Testing per 100,000 on October 15, 2020 and Cumulative COVID Death rate February 16, 2021



MT and SD had virtually identical testing but greatly differing cumulative death rates with SD at 208 and MT much lower at 124. ND was doing 10 times more testing than MN yet had a death rate of 187 compared to Minnesota's of 114.

Author's calculations from NDDoH (ND cumulative death rate), COVID Tracking Project (MN, MT, SD cumulative death rates per 100,000 and IHME Testing Data)

Failure of National and State Leadership

Strategy	45th President	North Dakota
Lack of Honesty	Play Down COVID Severity	North Dakota Health Metric
Lack of Leadership	Burden placed on States	Burden placed on Cities and Counties
Blame Others	State Leaders	Communities
Lack of Courage	Redicule Mask Use	Delay Mandate Don't Role Model Mask Use
Find Sycophants	Neuroradiologist	Revolving Door of State Health Officers
Minimize Good Advice	Marginalize Experts	Eliminate Physician Advisory Committee

What State Leadership? The Revolving Door



Four people have served as North Dakota's state health officer since May 2020, including three health professionals who abruptly resigned from the position. Clockwise from top left: Mylynn Tufte, Dr. Andrew Stahl, Dirk Wilke and Dr. Paul Mariani are pictured next to the state Capitol. Photos via North Dakota Department of Health and Jeremy Turley / Forum News Service

From September 1, 2020 to May 1, 2021 or over 243 days (8 months), a physician headed the NDDoH for only 12 days or 4.9 percent of the time during which time North Dakota became the COVID death capital of the world.

A physician on the NDDoH COVID Physician Advisory Committee recommended a statewide mask mandate on July 23, 2020 but the public information officer for the NDDoH refused to include that in the meeting minutes. On July 30, 2020, the NDDoH COVID Physician Advisory Committee voted unanimously 17-0 requesting that the Governor declare a statewide mask mandate. At their next meeting, on August 6, 2020, the NDDoH informed the committee that the committee had been disbanded.

ND vs Harvard COVID Risk Metrics in 2020

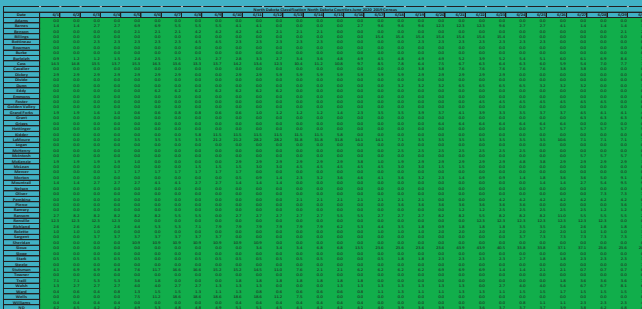
North Dakota Covid Risk Metrics				
Active Cases per 10,000 (14 Day Rolling Average)				
CRITICAL RISK Over 40	HIGH RISK 30 - 39	MODERATE RISK 20 - 29	LOW RISK 10 - 19	New Normal 10 or Less
Tests per 10,000 (14 Day Rolling Average)				
CRITICAL RISK Under 20	HIGH RISK 21 - 30	MODERATE RISK 31 - 40	LOW RISK 41 - 45	New Normal 46 or More
Test Positivity Rate (14 Day Rolling Average)				
CRITICAL RISK Over 15%	HIGH RISK 10 - 14.99%	MODERATE RISK 5 - 9.99%	LOW RISK 2 - 4.99%	New Normal Under 2%

Harvard COVID Risk Metric 7-day Average		
Covid Risk Level	Case Incidence	
Red	>25	daily new cases per 100,000
Orange	10<25	daily new cases per 100,000
Yellow	1<10	daily new cases per 100,000
Green	<1	daily new cases per 100,000

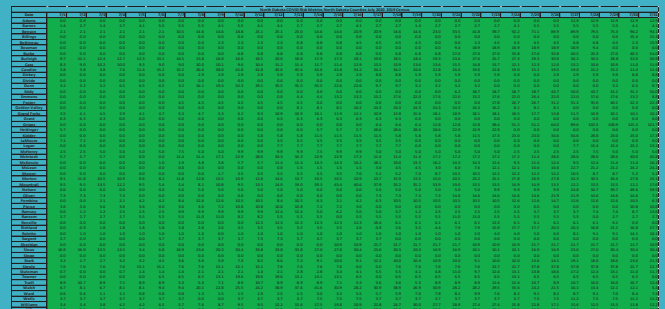
North Dakota's leaders developed their own model-based predictor on May 15, 2020, to determine COVID-19 severity across the state.

On July 1, 2020, the Harvard's Global Health Institute and the Edmond J. Safra Center for Ethics also developed a model determined to detect COVID-19 risk

ND vs Harvard COVID Risk Metrics June July 2020

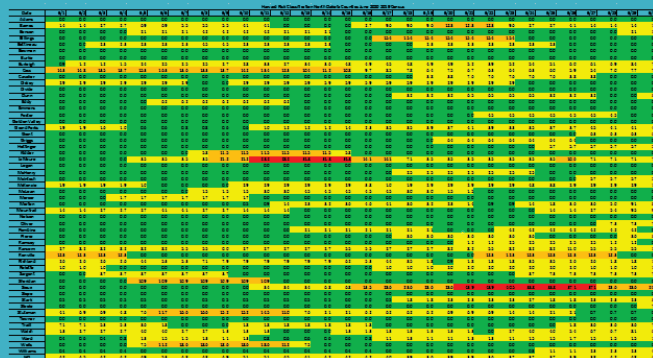


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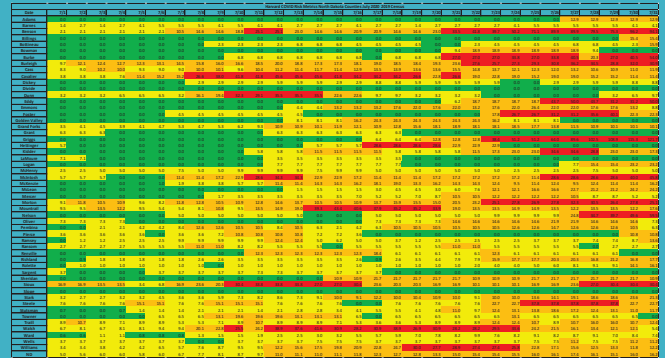


June 2020

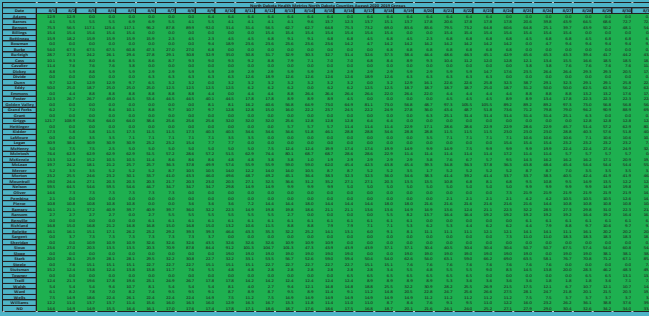
July 2020



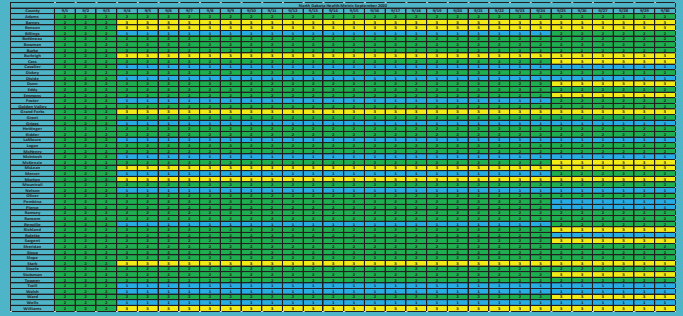
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ND vs Harvard COVID Risk Metrics Aug Sep 2020

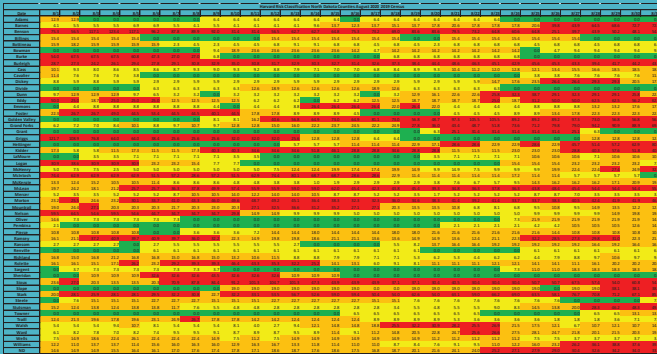


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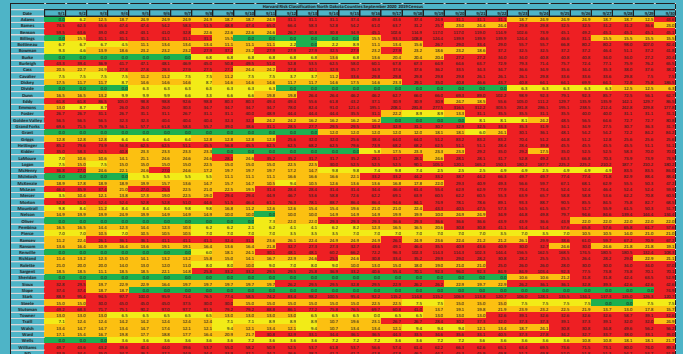


August 2020

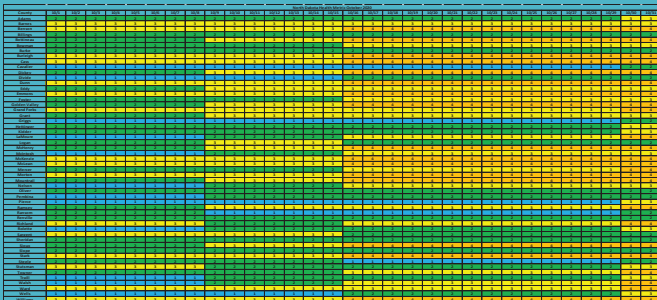
September 2020



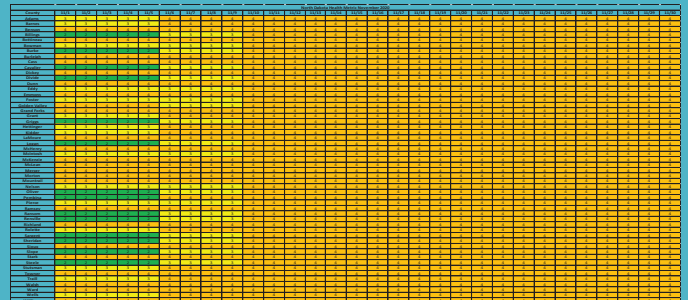
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ND vs Harvard COVID Risk Metrics Oct Nov 2020

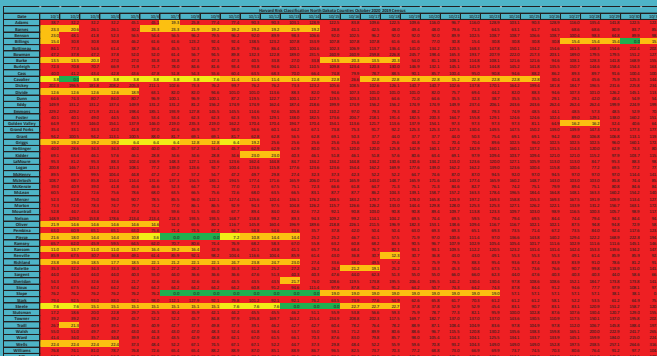


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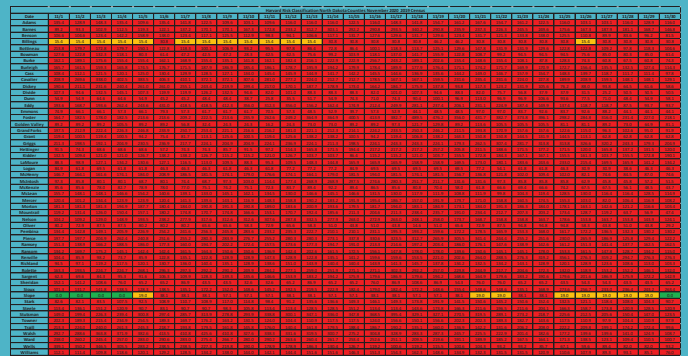


October 2020

November 2020

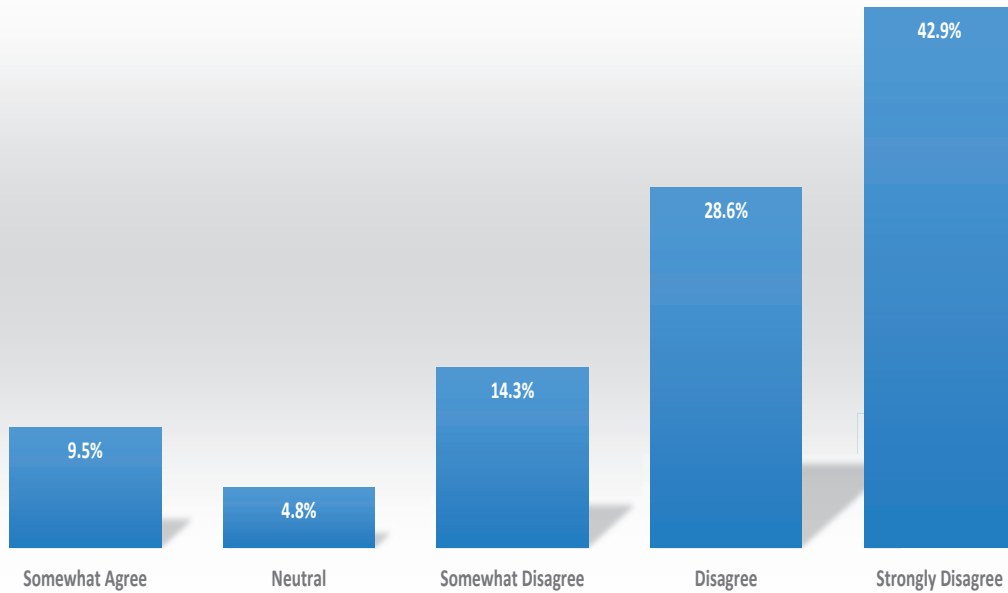


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ND LPH Opinion on ND COVID Risk Metrics

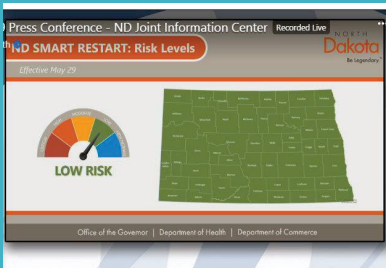
Local Health Departments Percent State COVID Risk Metric Accurate as of April 2021



85.8 percent of Local Health Departments disagreed that the North Dakota COVID Risk Metric was accurate

21 out of 28 Local Health Departments responded to the survey (75%)

Forever in Shame- ND COVID Risk Metric!



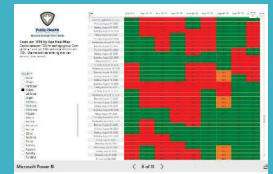
North Dakota COVID Risk Metric
 May 29 to September 3, 2020
 Green Low Risk



Burleigh County
 July 26- Sep 1 2020



Benson County
 July 26- Sep 1 2020



Kidder County
 July 26- Sep 1 2020



McLean County
 July 26- Sep 1 2020



Morton County
 July 17- Aug 23 2020



Sioux County
 July 26- Sep 1 2020



Stark County
 July 26- Sep 1 2020



Ramsey County
 July 26- Sep 1 2020



Williams County
 July 26- Sep 1 2020

Communities filled the leadership void!

COVID 2020-2022 was the worst pandemic in 102 years and unfortunately met with the **worst national public health leadership and state public leadership in North Dakota's 131-year history**

Many public health departments and communities filled the void!

Local public health supported each other, worked extraordinarily long hours, networked and cooperated with health care providers, worked with local elected officials, faced harassment, spoke the truth, showed courage and leadership

Grand Forks County as Example

An **independent COVID Risk Metric** which indicated greater risk than the flawed North Dakota COVID Risk Metric

Action by the **Grand Forks Public Health Officer to declare a countywide mask mandate** on November 13, 2020 and then extend the mask mandate once the state mandate expired in January 2021

Tied COVID mitigation efforts to the Grand Forks COVID Risk Metric

Immunizations levels greater than the state average achieved

Excellent work by **infection control specialists at Grand Forks nursing homes**

Evaluating effectiveness of **business mask mandate** with mask usage and communicating the results to policy makers

County population was more likely to follow recommended **mitigation behaviors** such as mask use, social distancing and immunizations

Some **local businesses were proactive and required masks** by end of July 2020

Community Heroes- Local Mask Mandates

Date	Locality	Issuing Authority	2021 CDC Recommended
July 24, 2020	Spirit Lake Reservation	Tribal Chairman	July 7, 2020
July 31, 2020	Turtle Mountain Reservation	Tribal Council	July 27, 2020
October 19, 2020	Fargo	Fargo Mayor	August 18, 2020
October 19, 2020	Minot	Minot City Council 5-2 vote	July 20, 2020
October 21, 2020	West Fargo	City Commission 4-1 vote	August 18, 2020
October 22, 2020	Three Affiliated Tribes	Tribal Chairman	June 30, 2020
October 23, 2020	Hillsboro	City Commission	July 21, 2020
October 26, 2020	Devils Lake	City Commission unanimous	July 28, 2020
October 26, 2020	Grand Forks	City Council 7-0 vote	August 4, 2020
October 27, 2020	Standing Rock Reservation	Tribal Chairman	July 7, 2020
October 27, 2020	Bismarck	Bismarck City Commission 3-2	June 30, 2020
October 28, 2020	Jamestown	Jamestown Mayor	August 23, 2020
November 2, 2020	Rugby	City Council 5-4 vote	October 10, 2020
November 2, 2020	New Rockford	City Commission	August 18, 2020
November 2, 2020	Edgeley	City Council	August 30, 2020
November 2, 2020	Wahpeton	Wahpeton Mayor	August 26, 2020
November 3, 2020	Steele County	County Commission 4-1 vote	June 30, 2020
November 4, 2020	Nelson County	County Commissioners	August 26, 2020
November 4, 2020	Traill County	County Commission 3-2 vote	July 21, 2020
November 6, 2020	Valley City	Mayor, Commission 4-1 Nov 6	August 14, 2020
November 7, 2020	Cando	City Council 4-1 vote	September 19, 2020
November 9, 2020	Williston	Williston Mayor	August 22, 2020
November 10, 2020	Carrington	City Council	August 24, 2020
November 10, 2020	Mandan	City Commission 3-2 vote	June 30, 2020
November 12, 2020	Jamestown	Jamestown City Council 4-0 vote	August 23, 2020
November 13, 2020	North Dakota	Governor Burgum	July 8, 2020
January 18, 2021	Grand Forks County	Dr. Joel Walz Health Officer	August 4, 2020
January 21, 2021	Pembina County	County Commission	September 15, 2020
January 21, 2021	Walsh County	County Commission 4-1 vote	August 28, 2020
January 22, 2021	Steele County	County Commission	June 30, 2020

Local public health units were **outstanding!**

They **Did the Right Thing!**- advocated and role modeled mask use and social distancing

They **Fought the Good Fight!**- advocated for mask mandates

When the next pandemic comes they will need to do it again but need to do it **sooner!**

Community Heroes- Local Public Health



Local public health units were **outstanding!**

They **Always Looked after the Most Vulnerable!**- elderly, nursing home residents, those with chronic disease

Thank you!