Symptoms of the Disease: The Epidemiological, Economic, and Public Health Impacts of COVID-19 on the Battle Born State

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For more information on this report, please contact data@dhhs.nv.gov

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Executive Summary

Background and Purpose

On January 20, 2020, the Centers for Disease Control and Prevention (CDC) reported the first U.S. laboratory confirmed case of the 2019 Novel Coronavirus (SARS-CoV-2), popularly known as COVID-19. The case was identified in Washington state, just two states north of Nevada [1]. Soon after, the novel virus spread through the nation, and the world, impacting the lives of hundreds of millions. Nevada was no different, with the first case of COVID-19 identified on March 5, 2020. Over the following months and years, the pandemic significantly influenced the way that Nevadans lived; not only due to illness, but also due to the tertiary effects of mitigation measures that were put into place in an effort to slow transmission of the virus and minimize the magnitude and severity throughout our communities.

On March 12, 2020, just one week after the first confirmed case of COVID-19 was identified in Nevada, then-Governor Steve Sisolak declared a state of emergency in response to the pandemic. At the time, Nevada was observing approximately 20 new cases per day, and the rate of infection (Rt) was believed to be near four, meaning that on average each positive person was thought to be infecting four additional people, resulting in exponential growth and pervasive community-wide spread, making COVID-19 a significant public health threat.

Although it was impossible to accurately predict the trajectory of the virus, the scientific community generally agreed that the virus would spread quickly and that, until a vaccine could be developed, health outcomes would be largely and proportionally dependent on non-pharmaceutical preventative measures such as social distancing and shelter-in-place orders, as well as adherence to these mandates. Even more importantly, health officials and hospital executives were concerned that an influx of sick patients would cause resource shortages and impact the ability to care for patients generally, not only those diagnosed with COVID-19.

By March 20, 2020, non-essential businesses were closed, large events were cancelled, and schools were moved to virtual rather than in-person learning in an attempt to slow the rate of transmission and "flatten the curve." Shortly after, a stay at home order was issued by the Governor. Business closures lasted through June 2020 and by that time, Nevada's unemployment rate had more than doubled, from 7% to 19%, with the rate reaching 31% in April [2]. These emergency orders helped to slow the rate of transmission, but also led to a net loss of establishments in the first two quarters of 2020 for the first time since 2013 [3].

As businesses reopened and people started socially interacting again, the virus continued to spread. From May to late June, the estimated rate of transmission (Rt) increased from below 1 to 1.6. On June 24, 2020, Nevada became the 18th state to issue a statewide mask mandate. After the mask mandate was implemented, the rate of transmission started to decline but meanwhile case rates climbed until July 10, 2020, when Nevada observed 1,631 new cases in a single day, the peak of the initial wave of COVID-19. Thirteen days later Nevada recorded a record 1,160 COVID-19 hospitalizations, followed by 27 COVID-19 deaths on August 5, 2020. These surges overwhelmed the hospital infrastructure, causing Nevada hospitals to adopt crisis standards of care to adapt to the resource shortages [4] and eventually leading to burnout, resignation, and retirement across the medical field [5].

During the pandemic, public health infrastructure also faced unprecedented strain, alongside health care systems. The pandemic thrust public health into the spotlight, though its essential work had been ongoing for decades. Disease investigators, epidemiologists, and other public health professionals worked tirelessly to understand and mitigate COVID-19. They faced overwhelming workloads, often working long hours without compensation and enduring hostility from pandemic skeptics.

Nevada's COVID-19 Mitigation and Management Task Force was assembled in the summer of 2020 in response to growing transmission and severity of COVID-19. The purpose of the Task Force, as stated on the Nevada Health Response website as of April 2023, was –

> "… to support a county-specific approach to the state's emergency response and ensure statewide adoption. The task force is made up of heads of key state agencies, private sector representatives, and local representatives. This group is charged with ensuring accountability for state-level efforts, coordinating essential activities between departments, and providing a sustainable model for receiving and sharing data and vetting proposals and recommendations.
>
> This will ensure the state, in coordination with each county, can assess all available data, evaluate key metrics, and make timely decisions based on the disease burden and transmission risk in each region throughout Nevada. Reviewing this critical data and metrics such as status of hospitalizations, disease investigation reports, allows the State to better understand the capacity of each county to respond and then take targeted actions to help mitigate the spread. The goal of this targeted approach is to address identified risk areas and take action, and to avoid broad-based closures or limitations that could harm businesses who may not be the cause of spread."

Over the next two years, Nevada observed four more statewide outbreaks of COVID-19, following an apparent biannual seasonal pattern with a wave each summer and each winter. Throughout these outbreaks, the virus mutated in various ways, sometimes resulting in new variants with different characteristics which made the virus more efficient in evading immune system responses and increasing its transmissibility. The Task Force tracked each outbreak closely and assisted in the county-level response. Throughout this process, the Office of Analytics provided support to the Task Force – maintaining Nevada's official public-facing COVID-19 data dashboard, presenting key metrics related to disease transmission, advising on topics such as the trajectory of the virus, and providing ad-hoc studies to quantify various impacts as needed throughout the pandemic. The Task Force was ultimately stood down in May 2021 and by 2023 most emergency declarations were expiring as the virus became endemic.

Most of the public health data presented in this report originated to support Task Force activities. However, as the pandemic evolved in real-time, such robust data did not exist to illustrate the impact that decisions would have on broader quality of life indicators, and the data that did exist on these topics was less compelling than the daily lives being lost due to the disease. Retroactively, this report considers a wider array of data in a more robust manner, to determine the longer-term impacts of decisions made in the height of the pandemic, and the impact of those decisions on more comprehensive quality of life indicators. The purpose of this report is to provide an overview of the impacts the pandemic has had on Nevada, considering not only the direct epidemiological impact but also the tertiary effects from an economic, socioeconomic, and behavioral health perspective.

Key Findings

Epidemiology/Health Impacts

- Nevada reported the first COVID-19 case on March 5, 2020, and the first local wave of COVID-19 reached its peak in July 2020.
- The first COVID-19 vaccine became available in December 2020, and by mid-February, cases had decreased significantly, and rates stayed low until the summer of 2021.
- Cases and hospitalizations peaked with the Omicron variant, which was a more infectious although less severe strain, in January 2022 before trends returned to a new "normal" baseline in subsequent months.

Leading Causes of Death

- COVID-19 quickly rose to become the third leading cause of death in Nevada, behind only heart diseases and cancer in 2020, and has remained the third leading cause of death since.
- COVID-19 was responsible for 11% of deaths (3,220) in 2020, 16% of deaths (5,145) in 2021, and 7% of deaths (2,161) in 2022.

Years of Potential Life Lost (YPLL)

- As of December 2022, it was estimated that 94,692 years of life had been lost to COVID-19 in Nevada.
- Disproportionately impacted populations include adults aged 40 to 69, especially those aged 50 to 69, as well as non-Hispanic Asian/Pacific Islanders.

Health Care

- Some non-urgent and/or routine services were postponed, cancelled, or moved to telehealth to accommodate the influx of patients being seen with COVID-19.
- While essential health care services remained available, many health care providers made changes to the delivery of services.
- The modifications put in place to accommodate the needs of the pandemic caused a significant reduction in overall health care utilization in calendar year (CY) 2020.

Telehealth

- In March 2020, Nevada observed the largest increase in telehealth utilization seen over the past four years, with a 425% increase.
- In the years following the pandemic, telehealth has seen a spike in demand for treatments related to major depressive disorder, anxiety, hypertension, opioid abuse, and alcoholism.

Social Services

- Business closures caused an increase in unemployment and significantly more Nevadans meeting the income-based eligibility criteria for enrollment in Nevada Medicaid, the Supplemental Nutrition Assistance Program (SNAP), and other social programs.

- In 2020, the federal government implemented a pause on Medicaid redeterminations which led to a 41% increase in Medicaid enrollment between March 2020 and December 2022. During the same period, Nevada Check Up caseload decreased by 19% due to some children moving from Nevada Check Up onto Medicaid.
- In 2022 alone, $3.6 billion was spent providing health care to Nevadans on Medicaid.
- In any given month of 2021, more than one in four Nevadans, and one in every two Nevada children, relied on Medicaid for their health care coverage. Of those, approximately 31% utilized health care monthly.
- Nevada was among 33 states that implemented Supplemental Nutrition Assistance Program (SNAP) Emergency Allotments (EA) during the pandemic and according to the Household Pulse Survey, states that opted to provide these additional benefits saw significantly fewer families experiencing food insufficiency during the period the Emergency Allotments were available [6]. Additional allotments were provided to SNAP recipients from March 2020 through February 2023. An average of 386,981 recipients received about $1.3 billion as extra payments to purchase food during the pandemic.

Employment

- Between March 2020 and December 2022, Nevada lost 3,938,448 months of employment and $15,049,433,405 in salaries and wages – or approximately $3,821 per employment month [3].
- Over the same period, three out of ten industrial sectors (Trade, Transportation, and Utilities; Financial Activities; and Information) experienced growth in excess of their no-COVID-19 projection, implying the pandemic helped advance them [3].

Teleworking

- Prior to the pandemic, 20% of working adults worked remotely, but this increased drastically after COVID-19 hit, to 71%.
- In the first few months of the pandemic, employment dropped 21% in sectors where telework was unavailable, compared to only 8% when employees had the ability to switch to part or full time telework.
- The benefits of teleworking were especially important in public health, as it provided the ability for public health workers to respond to the pandemic.

Wages, Wage Growth, and Inflation

- While inflation did not outpace wage growth through much of 2020, it rapidly kept pace or outpaced wage growth through 2021 and 2022 [3].
- As of December 2022, the increase to hourly wages during the pandemic had a 33% probability of surpassing inflation and weekly wages had a 60% chance of surpassing inflation.

Education and College Readiness

- Nevada reported the 13th largest reduction in fourth grade assessment results in the nation, with fourth grade composite scores falling by nearly six points between 2019 and 2022.

- However, Nevada reported the smallest reduction in the nation for eighth grade students, resulting in the state's eighth grade National Assessment of Educational Progress (NAEP) ranking rising from 44th to 36th in the nation between 2019 and 2022.
- When compared other states and the District of Columbia, Nevada had the 23rd largest reduction in ACT scores, with the average composite score in the state decreasing by 0.6 points between 2020 and 2022.

Macroeconomic Elements

- Consumer spending shifted dramatically between 2019 and 2022, with the share of spending going towards goods rather than services, increasing 3 percentage points nationally and in Nevada [3].
- In 2022, 34% of national consumer spending was on goods, which was the highest it had been since 2007 and resulted from an increase of approximately $1.4 trillion (32%) in spending from 2019's levels. At the same time, total consumer spending on services increased by $1.6 trillion, or 16%, between 2019 and 2022 [3].
- In addition to shifting consumption habits, economic turmoil had ripple effects upon global supply chains, where stress levels were 7.3 higher than average at some points, and global energy prices, where prices surged 241% between quarter one of 2020 and quarter four of 2022 [2].

Housing Affordability

- Between the first quarter of 2020 and the fourth quarter of 2022, Nevada's home-price-to-income ratio increased by 16%, which represented the 29th fastest reduction in affordability for a state and lower than the 33% increase across the United States.
- Following the COVID-19 health crisis, Nevada became the seventh worst state in terms of home affordability – substantially worse than in 2012, when Nevada was the 26th most affordable state in the nation.
- Additionally, unaffordability concerns arose for the first time in nearly a decade in many of the state's rental markets, as rent as a share of income grew to recent highs for both efficiency and 2-bedroom rental units.

Homelessness

- Homelessness increased in the state for the first time in just under a decade, rising 10% between 2020 and 2022.
- A disproprotionate share of that increase in homelessness was in the Northern Nevada Continuum of Care where the figure grew by 374, representing a 30.4% increase from 2020 and 52.1% of the total statewide increase in homelessness. At the same time, the Southern Nevada Continuum of Care reported an additional 362 individuals, which was an increase of 6.9%, and the Rural Nevada Continuum of Care recorded a 4.7% reduction (18 fewer individuals) in homelessness.
- While overall homelessness decreased, the share of homeless individuals who were unsheltered decreased – largely due to reductions in unsheltered homelessness in Southern Nevada.

Crime Rates

- Violent crimes in Nevada were largely unimpacted by the COVID-19 pandemic and have been consistently decreasing since 2015.
- However, hate crimes increased 36% from 2019 to 2022.
- Property crime rates in Nevada were consistently decreasing from 2015 to 2020 but started to see increases in 2021 and 2022.

Child Welfare

- Reports of maltreatment that were determined to meet the criteria for a response from Child Protective Services (CPS) decreased statewide leading up to and into the first year of the pandemic, from 16,438 in SFY 2018 to 14,761 in SFY 2020.
- The number of substantiated reports statewide rose from 3,393 in SFY 2018 to 4,024 in SFY 2023, and from 2,614 to 3,303 in Clark County.
- Statewide, the average length of stay in foster care rose steadily from 14 months in SFY 2018 to 19 months in SFY 2023.

Alcohol and Substance Use

- Substance use related deaths were at their lowest in 2019 at 4.3 per 100,000 population, and subsequently increased starting in quarter one of 2020 through 2022 with a high of 9.0 in quarter three of 2022.
- The non-Hispanic Black population was the most adversely affected group for substance related deaths during the pandemic.
- In quarter two of 2020, the rate of alcohol-related deaths increased 54% from the previous quarter (from 7.7 to 11.9 per 100K population) and remained higher than pre-pandemic rates through 2022.

Mental Health and Suicide

- Nevada had the 14th highest suicide rate in the nation in 2020, at 18.2 per 100,000 population.
- Over the past six years, the highest rate of mental health-related deaths (15.3 per 100,000 population) occurred in quarter four of 2020 and then again in quarter one of 2022 and was significantly higher than the rate at the start of the pandemic.

Epidemiology/Health Impact

From March 2020 to December 2022, there were over 868,000 identified cases of COVID-19 in Nevada and two primary variants of concern (VOC), B.1.617.2 (Delta) and B.1.1.529 (Omicron), that were responsible for most cases. A VOC is characterized by an increase in transmissibility, more severe symptoms causing increased hospitalizations and deaths, significant reduction in neutralization by antibodies generated during previous infection or vaccination, reduced effectiveness of treatments or vaccines, and diagnostic detection failures [7]. These variants were important to monitor throughout the pandemic in order to implement population scale interventions geared towards minimizing outbreaks based on the specific characteristics of the variant. The morbidity and mortality trends of each outbreak were different, which is attributed to the characteristics of the predominant circulating variants, community mitigation measures in place at the time (e.g., lock down, mask mandate, social distancing, etc.), population immunity levels due to both vaccination and natural infection, availability of testing, testing requirements, and the availability of effective treatment.

The first wave of cases was smaller than subsequent waves because of stricter community mitigation and less availability of testing. Because testing was not easily accessible for everyone, it is believed that many cases likely went undiagnosed. The winter outbreak of 2020 lasted longer and was more severe due to community mitigations loosening, people beginning to travel, and participating in indoor gatherings during those winter holidays.

As businesses continued to reopen and Nevadans were no longer under the stay at home order, cases started to rise again. To combat this without causing further negative economic impacts, a statewide mask mandate was implemented for all public places. This mandate was intermittently required, sometimes statewide and sometimes regionally, depending on COVID-19 trends throughout the next 20 months until it was lifted in February 2022 for a final time. During periods where the mask mandate was implemented regionally, from late 2020 through early 2022, Nevada utilized a specific criteria to identify counties with elevated disease transmission. When a county was flagged as having elevated disease transmission, the Task Force would assist that county by reviewing their county planning documents and suggesting population scale intervention strategies. It is imporant to note that at that time, the Centers for Disease Control and Prevention (CDC) had not released any such guidance at a federal level. Under Nevada's criteria, a county would be flagged for elevated disease transmission if two of the following three criteria were met, and in that instance a mask mandate would go into effect for at least the immediate following two weeks, and would only be lifted once the county fell below the criteria for at least two consecutive weeks.

1. **The average number of tests per day (per 100,000) being less than 100**. This criteria was calculated as the average number of molecular tests conducted in the most recent two week period in a county, divided by the number of people living in the country. This number was then multiplied by 100,000 to control for varying populations across counties. Due to reporting delays, this was reported over a 14-day period with a 7-day lag. Counties that averaged fewer than 100 tests per day met this criteria.
2. **The number of cases per 100,000 being greater than 200**. This criteria was calculated as the total number of cases diagnosed and reported over a 30-day period divided by the number of people living in the county. This number was then multiplied by 100,000 to control for varying

populations across counties. Counties with a case rate greater than 200 per 100,000 population met this criteria.

3. **The number of cases per 100,000 being greater than 50 combined with a test positivity rate of greater than 8%**. This case rate was calculated similarly to that above, but with a threshold of 50, and the criteria for test positivity was calculated as the total number of positive molecular tests divided by the total number of molecular tests conducted. This number was then multiplied by 100 to get to a percentage. Due to reporting delays (which were sometimes different between positive and negative tests), this was reported over a 14-day period with a 7-day lag. Counties with a test positivity rate greater than 8% paired with a case rate greater than 5- per 100,000 met this criteria.

County Criteria Snapshot: December 27th, 2021:

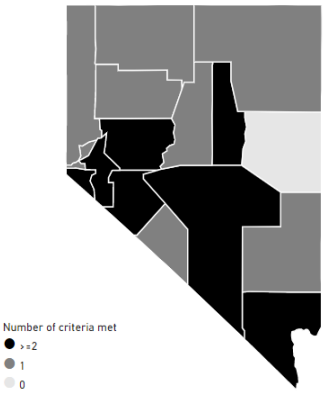
A county is flagged for elevated disease transmission if it meets two of the three criteria:

1. **Average number of tests per day (per 100,000) < 100.** The average number of molecular and antigen tests conducted in the most recent complete two week period in a county, divided by the number of people living in the county. This number is then multiplied by 100,000 to control for varying populations in counties. Due to reporting delay, this is reported over a 14-day period with a 7-day lag. Counties that average fewer than 100 tests per day will meet this criterion.

2. **Case rate (per 100,000) > 200.** The total number of confirmed and probable cases diagnosed and reported over a 30-day period divided by the number of people living in the county. This number is then multiplied by 100,000 to control for varying populations in counties. Counties with a case rate greater than 200 per 100,000 will meet this criterion.

3. **Case rate (per 100,000) > 50 AND testing positivity > 8.0%.** The total number of positive molecular and antigen tests divided by the total number of molecular and antigen tests conducted. This number is then multiplied by 100 to get a percentage. Due to reporting delay (which may be different between positive and negative tests), this is reported over a 14-day period with a 7-day lag. Counties with a test positivity > 8.0% paired with case rate greater than 50 per 100,000 will meet this criterion.

County	Average Number of Tests per Day per 100k (14-day avg. with 7-day lag)	Case Rate per 100k (last 30 days)	Test Positivity (14-day with 7-day lag)
Carson City	372	360	4.4%
Churchill	332	716	8.6%
Clark	320	683	8.8%
Douglas	156	339	9.4%
Elko	349	381	4.8%
Esmeralda	184	309	8.0%
Eureka	42	53	9.1%
Humboldt	182	201	4.9%
Lander	143	267	5.8%
Lincoln	291	464	7.6%
Lyon	190	448	8.4%
Mineral	235	721	15.5%
Nye	274	670	12.6%
Pershing	486	354	5.6%
Storey	34	72	5.0%
Washoe	309	493	6.2%
White Pine	398	114	0.5%

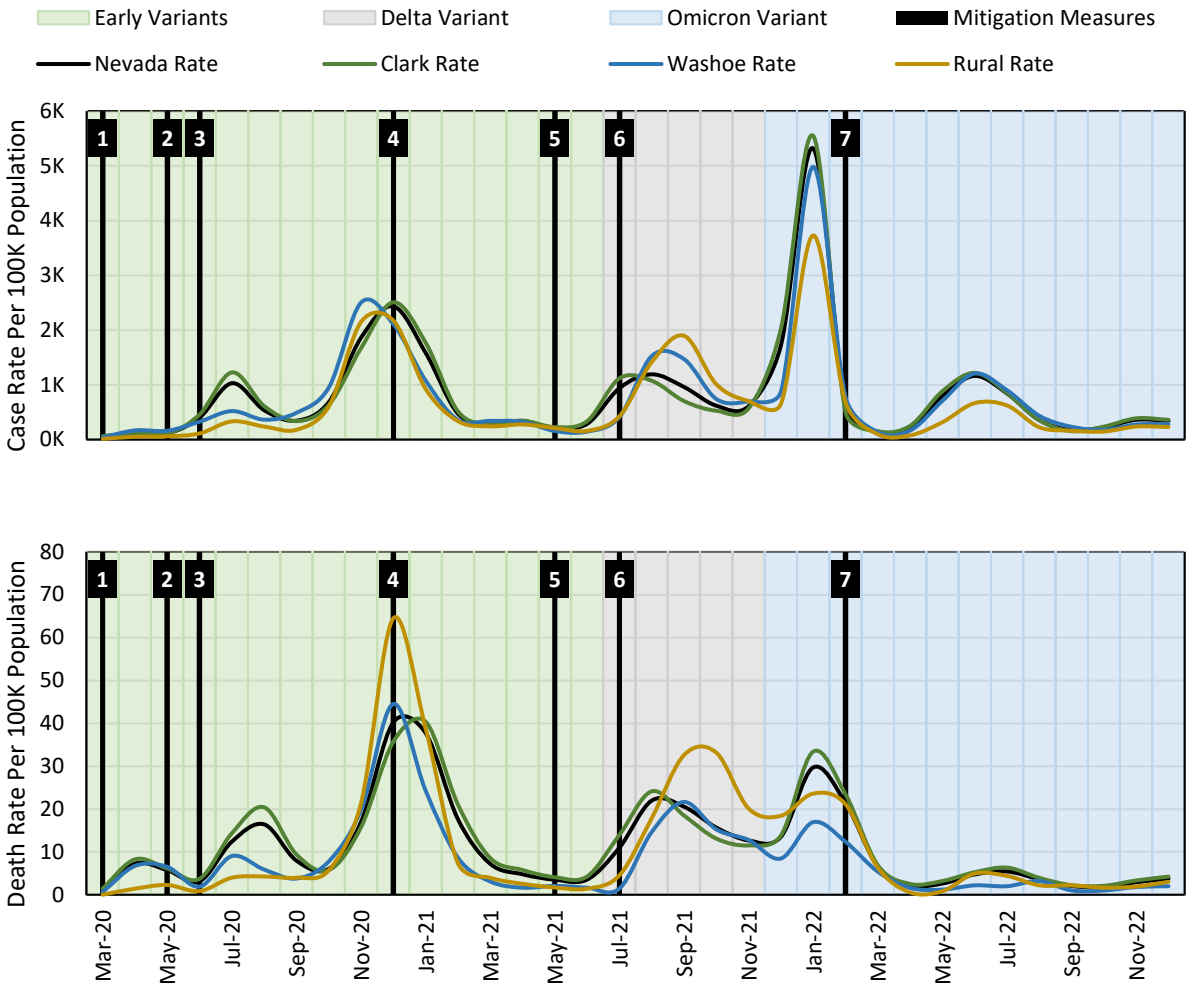


The first COVID-19 vaccine became available in December 2020, and by mid-February, cases had decreased significantly. Rates stayed low until the summer of 2021. The dominant variant of the 2021 summer outbreak was the Delta variant, which was more deadly than the original variant, but resulted in lower case numbers than the 2020 winter outbreak – largely attributed to vaccination and reengagement of community mitigation strategies, like mask mandates. However, the state saw a higher death rate in rural counties in this outbreak, which is likely due to lower vaccination rates and less access to health care in these regions of the state.

Nevada reported the first COVID-19 case infected with the Omicron variant in December 2021 and with a faster transmission rate, the case rate increased rapidly from December 2021 to January 2022 before a sharp decline from January to February of 2022. Although the case rate of the 2021-2022 winter outbreak was more than double the case rate of the 2020 winter outbreak, the death rate was lower during the 2021-2022 winter due to many factors, including the lower severity of the circulating variant and higher levels of immunity in the population.

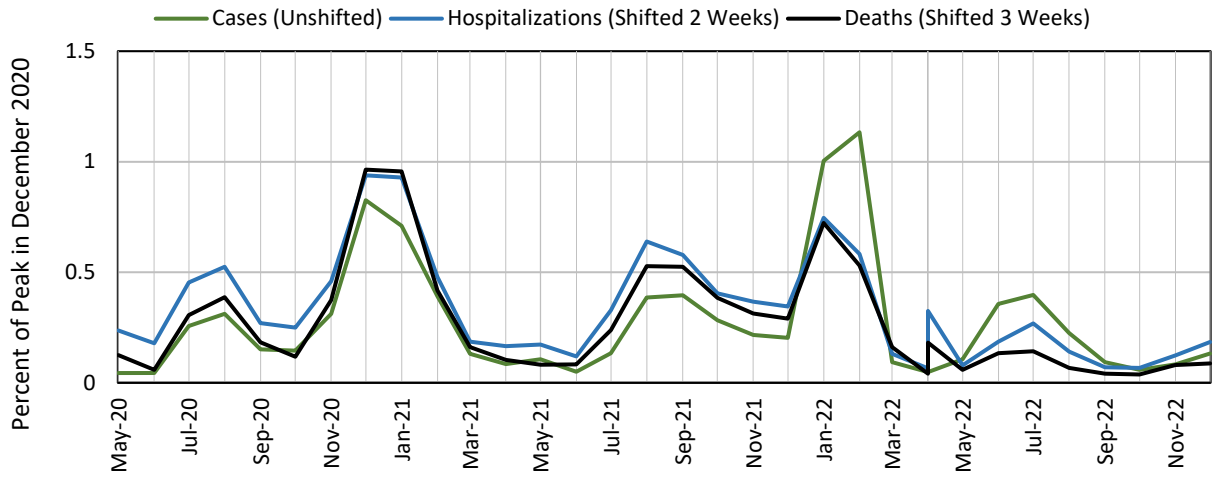
Figure 1 illustrates a timeline of COVID-19 case and death rates overlaid with the dominant variant circulating at the time as well as deployment of mitigation measures. As shown in figure 2, throughout the pandemic, increases in hospitalization rates were seen about two weeks after case increases and death trends followed by approximately three weeks.

Figure 1. Monthly COVID-19 Case Rates and Mitigation Measures



KEY	COVID-19-RELATED MITIGATION EVENT
1	All non-essential businesses are closed for 30 days on March 20, 2020 and the COVID Task Force was created two days later.
2	Reopening phases commence, with phase one on May 9, 2020, and phase two on June 6, 2020.
3	Statewide mask mandate is enacted on June 24, 2020.
4	COVID-19 vaccinations begin on December 14, 2020
5	Masks optional for vaccinated individuals and Nevada shifted to county-level mitigation in May 2021.
6	Statewide mask mandate is re-enacted on July 27, 2021.
7	Statewide mask mandate is lifted on February 20, 2022.

Figure 2. Case, Hospitalization, and Death Rates in Nevada



1.The peak of the 14-day moving average in December 2020 for cases was on 12/11/2020 with 2,772 cases, for hospitalizations was on 12/24/2020 (two weeks later) with 1,952 hospitalizations, for deaths was on 12/31/2020 (three weeks later) with 44 deaths.

2.The percentage of the peak was calculated by dividing the value of the 14-day moving average of the date to be calculated to the peak of 14-day moving average in December 2020 in the above note for each of cases, hospitalizations, and deaths, respectively.

As the United States (U.S.) started to return to normal operations and the public health emergency came to an end, the CDC established federal guidance for measuring the impact of COVID-19, which shifted measurement of community risk levels to focus more on hospitalizations and deaths rather than case rates. The purpose of this change in monitoring was to identify communities experiencing increased hospital admissions resulting in hospital capacity issues, and populations at risk for severe illness and death.

Nevada's neighboring states also reported similar trends throughout the pandemic. Arizona and Nevada experienced hospitalization and death rates above the national trend. Nevada and California saw nearly identical trends in cases and followed very similar mitigation measures to each other, but California saw a much lower rate of deaths due to COVID-19. On the other hand, Oregon had lower hospitalization and death rates than all surrounding states and one of the lowest across the nation due to their stricter and early implementation of mitigation measures [8]. Significant differences between case and death rates in Nevada demonstrate that although the state did a good job mitigating the spread of the disease relative to surrounding states, those that were infected were at a higher risk of extreme infection and death.

Figure 3. COVID-19 Hospitalization Rates for Nevada and Comparable Jurisdictions

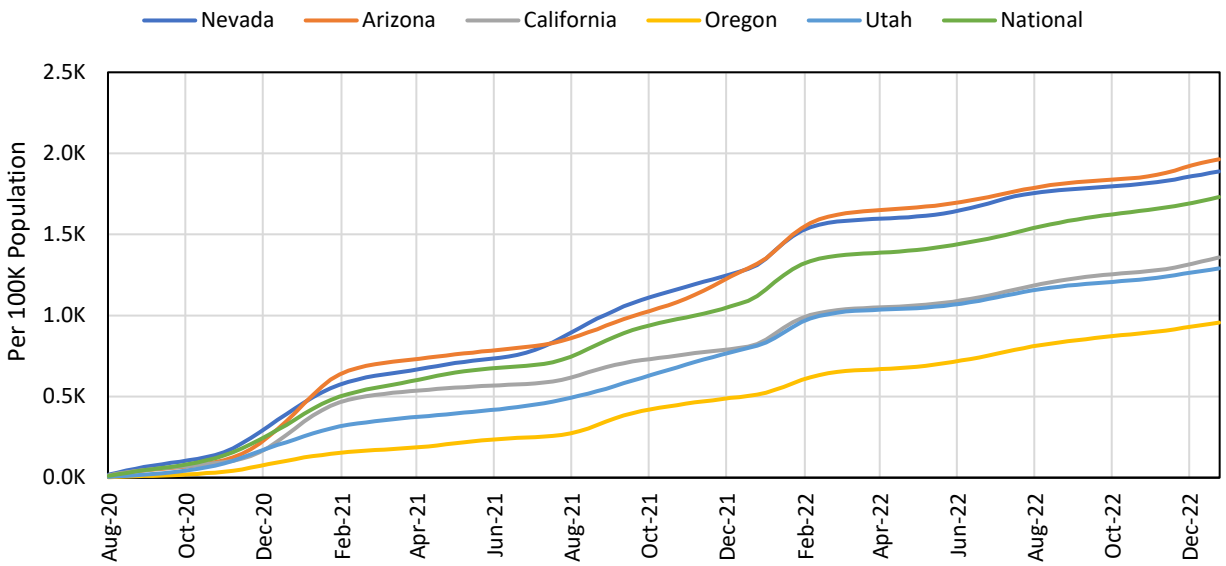
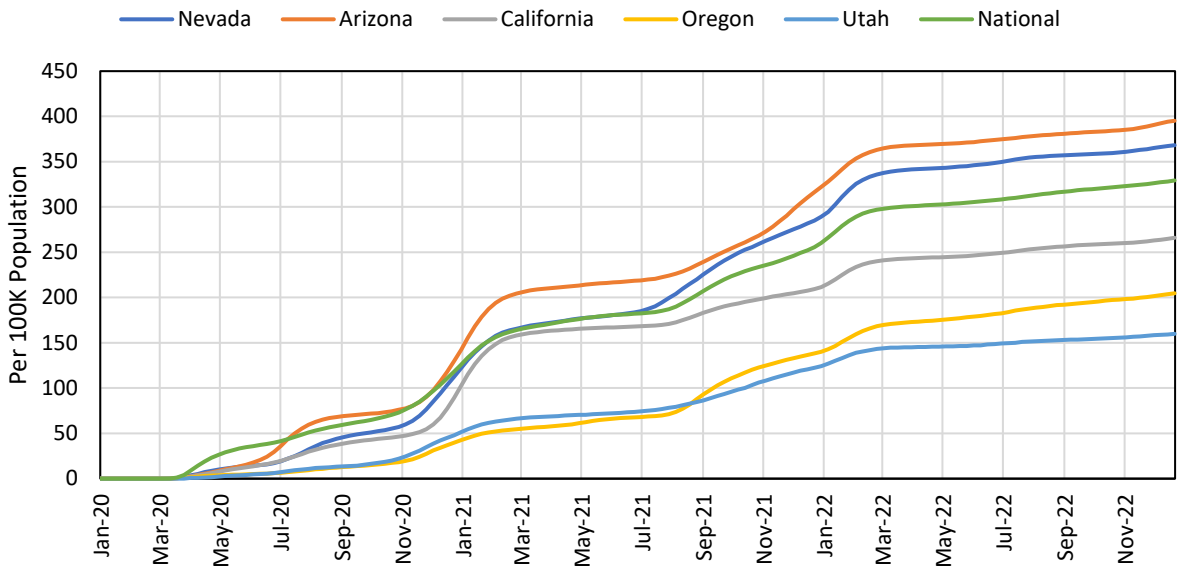
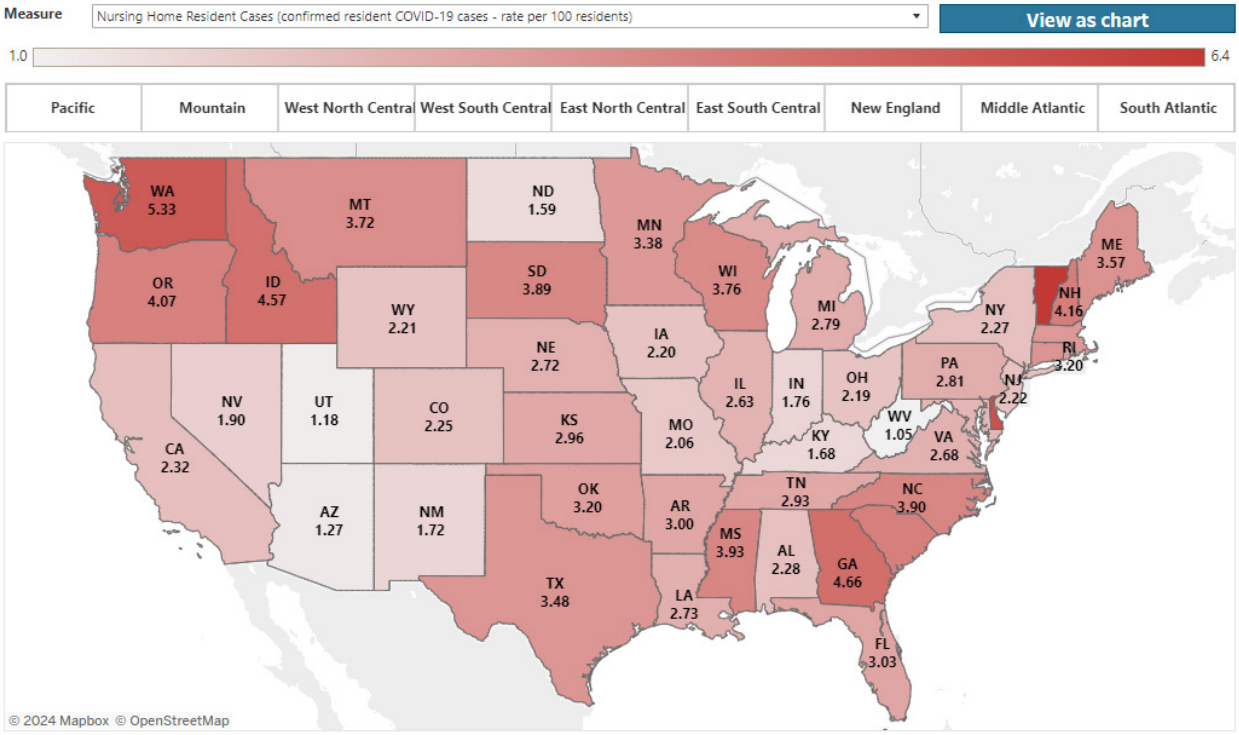


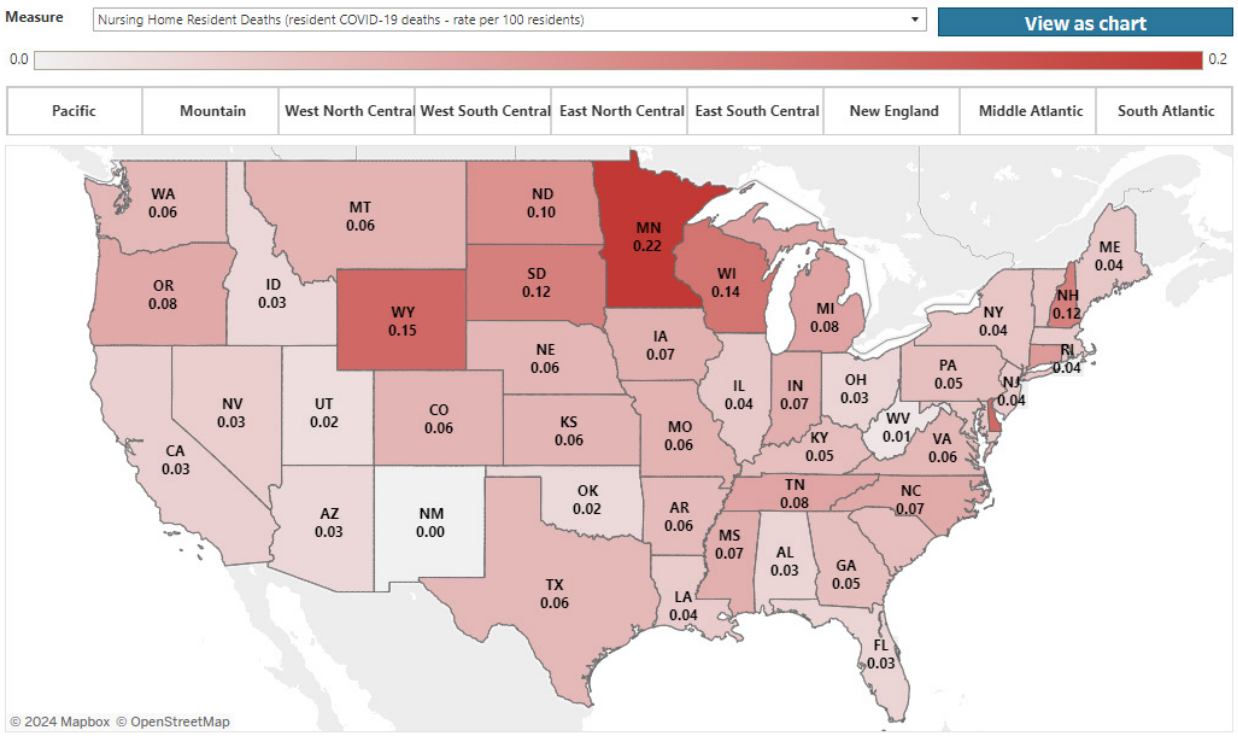
Figure 4. COVID-19 Death Rates for Nevada and Comparable Jurisdictions

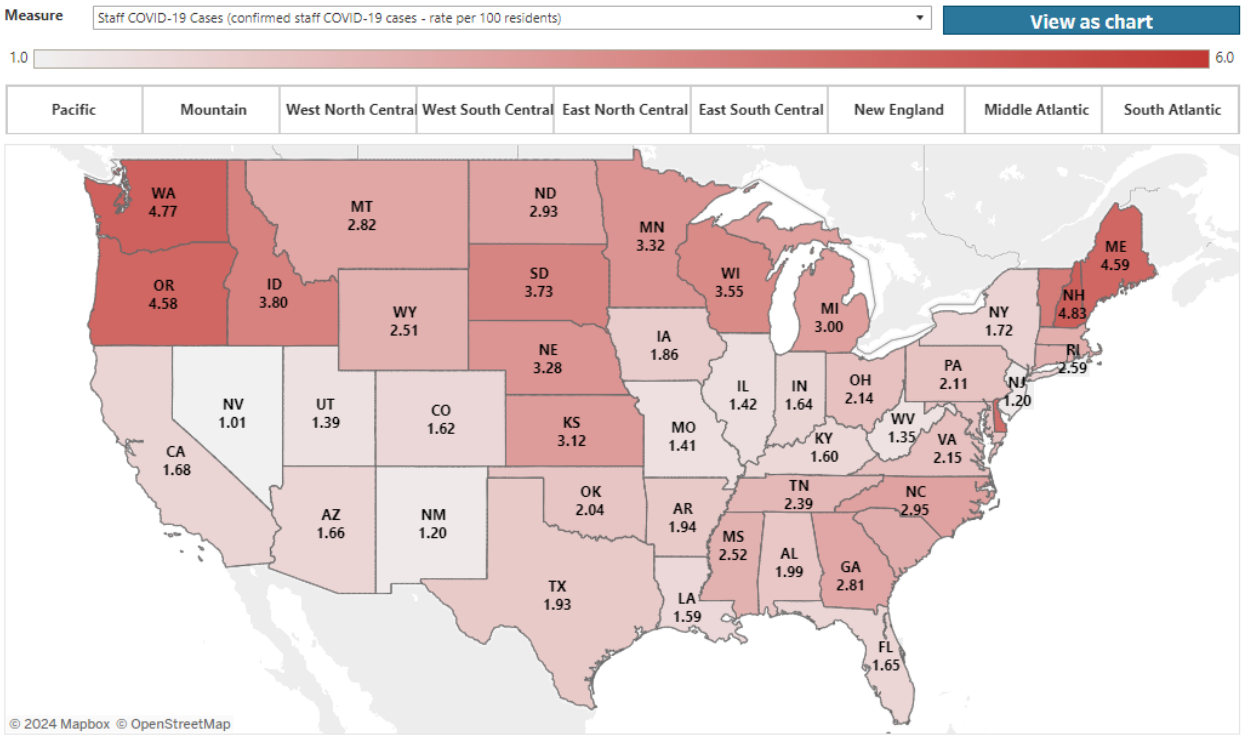


This trend was true statewide, but not when it came to one of the most vulnerable populations – those residing in skilled nursing and other long term care facilities. In fact, Nevada had among the lowest death rates for populations living in skilled nursing and other long term care facilities. According to data released from the American Association of Retired Persons (AARP) Public Policy Institute, Nevada maintained among the lowest rates of nursing home resident cases and deaths from COVID-19, and the lowest rate of staff confirmed cases [9].

AARP Nursing Home COVID-19 Dashboard, Public Policy Institute, Updated March 14, 2024:







Other vulnerable populations did not fair as well in the height of the pandemic, and those incarcerated in county jails and state prisons were highly impacted, largely due to the close-quartered nature of incarceration. Overcrowding and inadequate healthcare infrastructure within correctional facilities exacerbated the spread of the virus, placing inmates at heightened risk. In November 2020, the Nevada Independent, a statewide, reader-supported, digital-only nonprofit newsroom in Nevada, reported that 81% of inmates at Warm Springs Correctional Center in Carson City had tested positive for COVID-19, marking the worst outbreak in the state's prison system. As a response, the correctional center was put on lockdown and meals were delivered to each unit. Stringent lockdown measures such as these, and restricted visitation policies, strained mental health resources, exacerbating feelings of isolation and anxiety among incarcerated individuals. As the pandemic persisted, efforts to mitigate transmission within prisons remained paramount, necessitating comprehensive strategies that prioritized both the physical and mental well-being of the incarcerated population.

Racial and Ethnic Disparities

As cases continued to surge, public health officials identified that some racial and ethnic groups were more adversely affected than others. Specifically, people of color were at higher risk. This could be due to several factors such as health literacy, health care discrimination, underlying health conditions, type of work and potential exposure in the workplace, location of residence, access to health care [10], and other biological and socioeconomic factors. In Nevada, during the first year of the pandemic, Hispanic or Latino Nevadans had the highest case rate, while non-Hispanic White Nevadans had the lowest case rate. Conversely, Hispanics had the lowest death rate as well as one of the lowest vaccination rates in 2020. As the pandemic continued, the highest case rate shifted from Hispanics in 2020, to non-Hispanic Black

Nevadans in 2021, then to non-Hispanic Asian/Pacific Islanders in 2022 – although, Hispanics maintained the lowest death rate each year.

Table 1. Annual Case, Death, and Vaccination Rates (completed primary series) per 100,000 Population by Demographic Group

Demographic Group	2020	2021	2022
▼ **Case Rates**			
Hispanic or Latino	7,943	7,038	7,600
Non-Hispanic American Indian or Alaskan Native	4,586	6,354	7,654
Non-Hispanic Asian or Pacific Islander	5,008	6,480	10,009
Non-Hispanic Black	5,104	9,538	9,941
Non-Hispanic White	4,472	6,333	7,119
Demographic Group	**2020**	**2021**	**2022**
▼ **Death Rates**			
Hispanic or Latino	97	104	38
Non-Hispanic American Indian or Alaskan Native	111	172	82
Non-Hispanic Asian or Pacific Islander	141	187	72
Non-Hispanic Black	131	200	99
Non-Hispanic White	121	198	117
▼ **Vaccination Rates**			
Hispanic or Latino	0	42,148	4,691
Non-Hispanic American Indian or Alaskan Native	8	23,373	3,157
Non-Hispanic Asian or Pacific Islander	1	41,640	3,689
Non-Hispanic Black	0	30,373	4,042
Non-Hispanic White	0	36,020	2,038

Leading Causes of Death

The top ten causes of death in Nevada accounted for 76, 77, and 73% of all deaths in 2020, 2021, and 2022, respectively. The top three leading causes of death remained unchanged across these years, with COVID-19 being the third leading cause of death, behind only heart diseases and cancer. COVID-19 was responsible for 11% of deaths (3,220) in 2020, 16% of deaths (5,145) in 2021, and 7% of deaths (2,161) in 2022.

Table 2. Top Ten Leading Causes of Death for 2020 – 2022

Top 10 Leading Causes of Death	2020		2021		2022	
	Count	Rank	Count	Count	Rank	Count
Diseases of the Heart	7,254	1	7,345	1	7,191	1
Malignant Neoplasms	5,424	2	5,311	2	5,292	2
COVID-19	**3,220**	**3**	**5,145**	**3**	**2,161**	**3**
Chronic Lower Respiratory Diseases	1,628	4	1,426	6	1,592	4
Non-Transport Accidents	1,366	6	1,595	4	1,555	5

Table 2. Top Ten Leading Causes of Death for 2020 – 2022 (continued)

Top 10 Leading Causes of Death	2020		2021		2022	
	Count	Rank	Count	Rank	Count	Rank
Cerebrovascular Diseases (Stroke)	1,433	5	1,442	5	1,411	6
Diabetes Mellitus	898	8	866	7	878	7
Alzheimer's Diseases	940	7	804	8	851	8
Intentional Self-harm (Suicide)	601	9	683	9	667	9
Chronic liver disease and cirrhosis	557	10	632	10	608	10
All Other Deaths	7,287	-	7,639	-	8,068	-
Total	30,608	-	32,888	-	30,274	-

Note: Causes of death are sorted by the 2022 ranking.

Leading causes of mortality differ across different racial and ethnic groups. The table below depicts the variation in the five top causes of death in 2020 among six racial groups. These six groups had the three top causes in common but had varying disease burdens. COVID-19 was the first leading cause of death among Hispanics, the second leading cause among non-Hispanic Asian or Pacific Islanders and American Indian/Alaskan Native communities, and the third leading cause among non-Hispanic White, non-Hispanic Black, and Nevadans with an unknown race and/or ethnicity.

Table 3. Top Five Leading Causes of Death by Race/Ethnicity in 2020

2020 Causes of Death by Race/Ethnicity	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
Hispanic	**COVID-19**	Diseases of the Heart	Malignant Neoplasms	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic American Indian or Alaskan Native	Diseases of the Heart	**COVID-19**	Malignant Neoplasms	Chronic Liver Disease and Cirrhosis	Diabetes Mellitus
Non-Hispanic Asian or Pacific Islander	Diseases of the Heart	**COVID-19**	Malignant Neoplasms	Cerebrovascular Diseases (Stroke)	Diabetes Mellitus
Non-Hispanic Black	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic White	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Chronic Lower Respiratory Diseases	Non transport Accidents
Unknown	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Chronic Lower Respiratory Diseases	Cerebrovascular Diseases (Stroke)

In 2021, there were 5,145 COVID-19 deaths in Nevada. COVID-19 accounted for the largest percentage of race-specific deaths among Hispanics at 27%, followed by non-Hispanic Asian/Pacific Islanders at 24% and non-Hispanic American Indian/Alaska Natives at 20% of all race-specific deaths. That percentage dropped for non-Hispanic Blacks to 15% of deaths and finally COVID-19 made up the lowest% of race-specific deaths for non-Hispanic Whites at 13% of deaths.

Table 4. Top Five Leading Causes of Death by Race/Ethnicity in 2021

2021 Causes of Death by Race/Ethnicity	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
Hispanic	**COVID-19**	Diseases of the Heart	Malignant Neoplasms	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic American Indian or Alaskan Native	**COVID-19**	Diseases of the Heart	Malignant Neoplasms	Chronic Liver Disease and Cirrhosis	Non transport Accidents
Non-Hispanic Asian or Pacific Islander	**COVID-19**	Diseases of the Heart	Malignant Neoplasms	Cerebrovascular Diseases (Stroke)	Diabetes Mellitus
Non-Hispanic Black	Diseases of the Heart	**COVID-19**	Malignant Neoplasms	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic White	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Chronic Lower Respiratory Diseases	Non transport Accidents
Unknown	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Cerebrovascular Diseases (Stroke)	Chronic Lower Respiratory Diseases

In 2022, there were 2,161 COVID-19 deaths in Nevada which made up a significantly smaller proportion of total deaths for each race/ethnicity when compared to 2021. COVID-19 accounted for the largest percentage of race-specific deaths among non-Hispanic American Indian/Alaska Natives at 11%. Hispanics and non-Hispanic Asian/Pacific Islanders followed closely at 9% each, and lastly, non-Hispanic Blacks and non-Hispanic Whites had the lowest percent of COVID-19 deaths out of their race-specific totals at 7% each.

Table 5. Top Five Leading Causes of Death by Race/Ethnicity in 2022

2022 Causes of Death by Race/Ethnicity	#1 Cause of Death	#2 Cause of Death	#3 Cause of Death	#4 Cause of Death	#5 Cause of Death
Hispanic	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic American Indian or Alaskan Native	Diseases of the Heart	**COVID-19**	Malignant Neoplasms	Non transport Accidents	Diabetes Mellitus
Non-Hispanic Asian or Pacific Islander	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Cerebrovascular Diseases (Stroke)	Diabetes Mellitus
Non-Hispanic Black	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Non transport Accidents	Cerebrovascular Diseases (Stroke)
Non-Hispanic White	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Chronic Lower Respiratory Diseases	Non transport Accidents
Unknown	Diseases of the Heart	Malignant Neoplasms	**COVID-19**	Diabetes Mellitus	Cerebrovascular Diseases (Stroke)

Years of Potential Life Lost (YPLL)

Understanding the effects of COVID-19 on mortality involves more than just counting the number of deaths – it also requires an examination of the number of potential years of life lost due to premature

deaths. For the purposes of this report, a death is deemed premature if it occurs before reaching full life expectancy. Years of potential life lost (YPLL) in Nevada related to COVID-19 are calculated below.

To determine the YPLL in Nevada, gender and race-specific life expectancies were utilized as benchmarks. These life expectancies were 86 for non-Hispanic Asian females, 81 for Hispanic females, 81 for non-Hispanic Asian males, 80 for non-Hispanic White females, 75 for non-Hispanic Black females, 75 for non-Hispanic White males, 75 for Hispanic males, 71 for non-Hispanic American Indian or Alaska Native females, 68 for non-Hispanic Black males, and 64 for non-Hispanic American Indian or Alaska Native males [11]. This means that the population at risk of premature death was considered as Nevada residents below those ages' dependent on their race/ethnicity and sex. YPLL was determined by analyzing data from death certificates. The age of each individual who died from COVID-19 was subtracted from their life expectancy, and this result was considered the number of years of potential life lost. The individual YPLL values were added together to determine the total YPLL for all Nevada residents since the beginning of the pandemic. The YPLL index is expressed per 100,000 population for comparison among different demographic groups.

Between March 2020 and December 2022, there were 94,692 years of life lost in Nevada due to COVID-19. The highest YPLL index of 7,420 years per 100,000 population was found among the age group 60-69 years. Among all racial/ethnic groups, non-Hispanic Asian or Pacific Islanders had the highest YPLL index at 4,932 years per 100,000 population, followed by Hispanics with an index of 3,128 years per 100,000 population. These findings emphasize the importance of raising awareness and creating policies to safeguard vulnerable groups that are susceptible to losing the most years of life.

Table 6. Years of Potential Life Lost Due to COVID-19 by Demographic Group

Demographic Group	Years of Potential Life Lost ("YPLL")	Population	YPLL Index (YPLL/Population)
▼ **Age Groups**	-	-	-
<10 Years Old	596	369,357	161
10-19 Years Old	477	433,680	110
20-29 Years Old	3,402	441,789	770
30-39 Years Old	8,638	444,252	1,944
40-49 Years Old	19,208	420,158	4,572
50-59 Years Old	25,505	406,436	6,275
60-69 Years Old	26,547	357,771	7,420
70+ Years Old	10,320	330,663	3,121
▼ **Race/Ethnicity**	-	-	-
Hispanic	30,704	981,700	3,128
Non-Hispanic American Indian or Alaskan Native	845	35,354	2,389
Non-Hispanic Asian or Pacific Islander	15,818	320,719	4,932
Non-Hispanic Black	8,671	292,121	2,968
Non-Hispanic White	38,654	1,574,210	2,455
Total	94,692	3,204,105	2,955

The years of life lost due to COVID-19 had an impact on the overall life expectancy, specifically in 2021 when the country experienced the largest number of deaths due to the virus. In Nevada, all racial groups

except non-Hispanic American Indian/Alaska Natives experienced a lower life expectancy in both 2020 and 2021 with gradual increases in 2022, but still below pre-pandemic values. Non-Hispanic American Indian/Alaska Natives had a slight increase in life expectancy in 2020, with a large drop in 2021, and back up in 2022. Nationally, trends were very similar, however, non-Hispanic American Indian/Alaska Natives more closely aligned with other racial groups.

Figure 5. Life Expectancy in Nevada by Race, 2019-2022

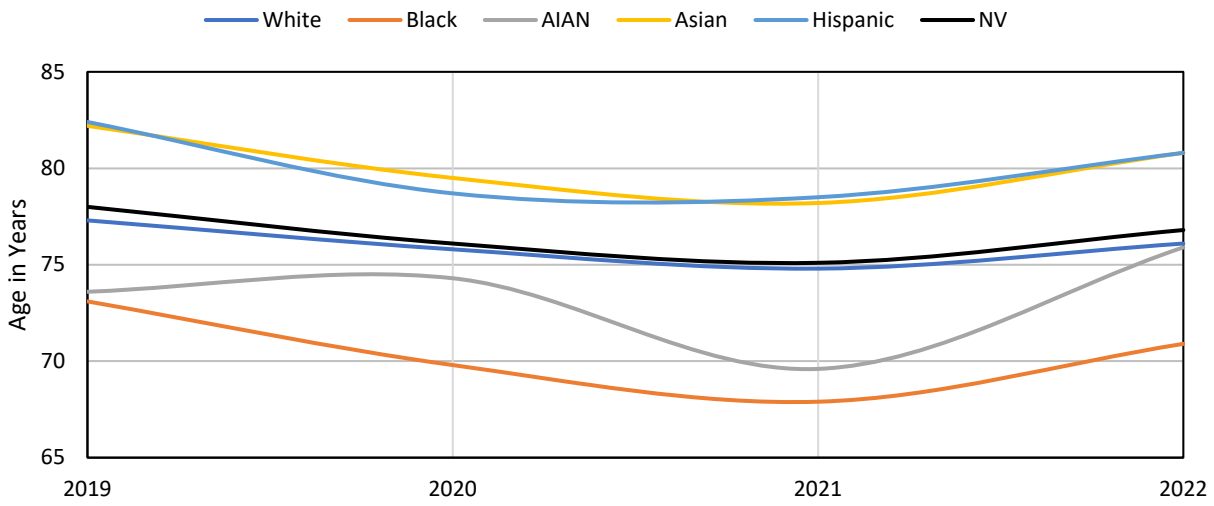
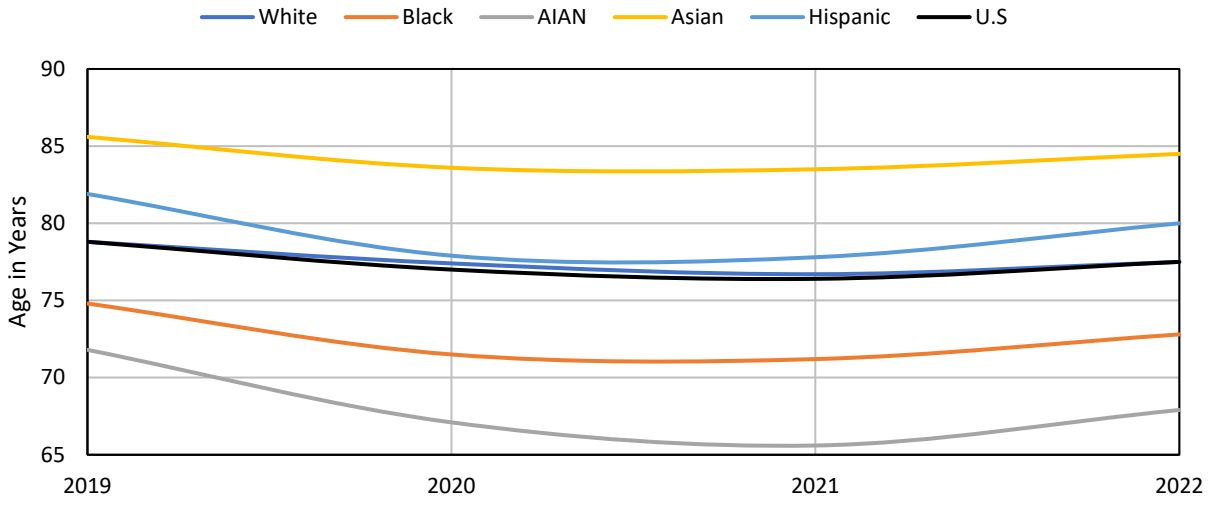


Figure 6. Life Expectancy in the United States by Race, 2019-2022



Health Care

Due to the influx of COVID-19 cases and the severity of illness, a huge burden was placed on hospitals across the county and the health care system, forcing health care providers to temporarily change how they were operating. In July 2020, hospitals in Nevada adopted crisis standards of care which is a guide for the levels of care provided when facing shortages that no longer allow for standard operations in the health care setting [4]. Crisis standards of care are used with the goal of "extending the availability of key resources and minimizing the impact of shortages on clinical care [12]." When emergency standards are implemented, resources such as oxygen and ventilation are only utilized for patients when absolutely medically necessary, non-patient care areas are used for patient care, and elective surgeries are postponed [13].

The shortages that hospitals faced were not only that of equipment and supplies, but many hospitals experienced staffing shortages, making it even harder to keep up with the demand of new patients. Several factors contributed to the staffing shortages – mainly pandemic fatigue due to the increased demand on staff when crisis standards of care are implemented, staff resigning to leave the medical field, and a greater likelihood to retire for those that were eligible [5]. Additionally, many nurses at hospitals moved to traveling nurse positions due to the higher compensation rates available, which hospitals could not compete with.

To help alleviate some of the strain from staffing shortages, the Nevada Division of Public and Behavioral Health (DPBH) created the Battle Born Medical Corps, a volunteer group of medical professions who provided vital health care services to Nevadans during the time of crisis across several different facility types, including hospitals, skilled nursing facilities, long-term care, and community health clinics [14]. By April 2020, over 800 volunteers in Nevada had applied to participate in the Battle Born Medical Corps consisting of primarily nurses, but also made up of physicians, other medical professionals (including but not limited to microbiologists, phlebotomists, certified medical assistants, etc.), and non-medical professionals such as health facilitators and educators, emergency medical, dental, and behavioral health providers.

Another major change put into action in Nevada, in accordance with the implementation of crisis standards of care, was a pause on elective surgeries. When hospitals could not keep up with the influx of COVID-19 patients, they had the option to postpone any non-medically necessary procedures to accommodate for the shortage of resources available and prioritize high risk patients. By the end of 2020, several hospitals throughout the state had chosen to implement these pauses due to the overwhelming need in response to the pandemic while still accommodating critical procedures.

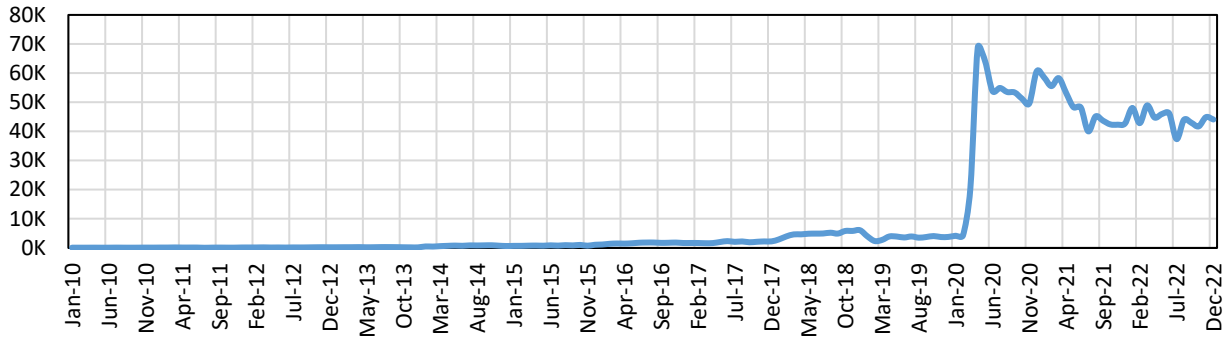
Telehealth Utilization

After crisis standards of care and mitigation measures such as the stay-at-home orders and social distancing were put into place, telehealth became a highly utilized option for providers and patients seeking care. Telehealth, also called telemedicine, is an option offered by most providers allowing patients to connect with their health care provider via phone call or video chat [15].

Considering Nevada Medicaid specifically, there was a small but steady increase in telehealth claims prior to the pandemic but from February to April 2020, utilization skyrocketed by 1,490% compared to the

previous month. This aligned with national trends, where one study found that telehealth usage went from less than 1% of visits to 80% where COVID-19 prevalence was high [16].

Figure 7. Medicaid Telehealth Claims in Nevada

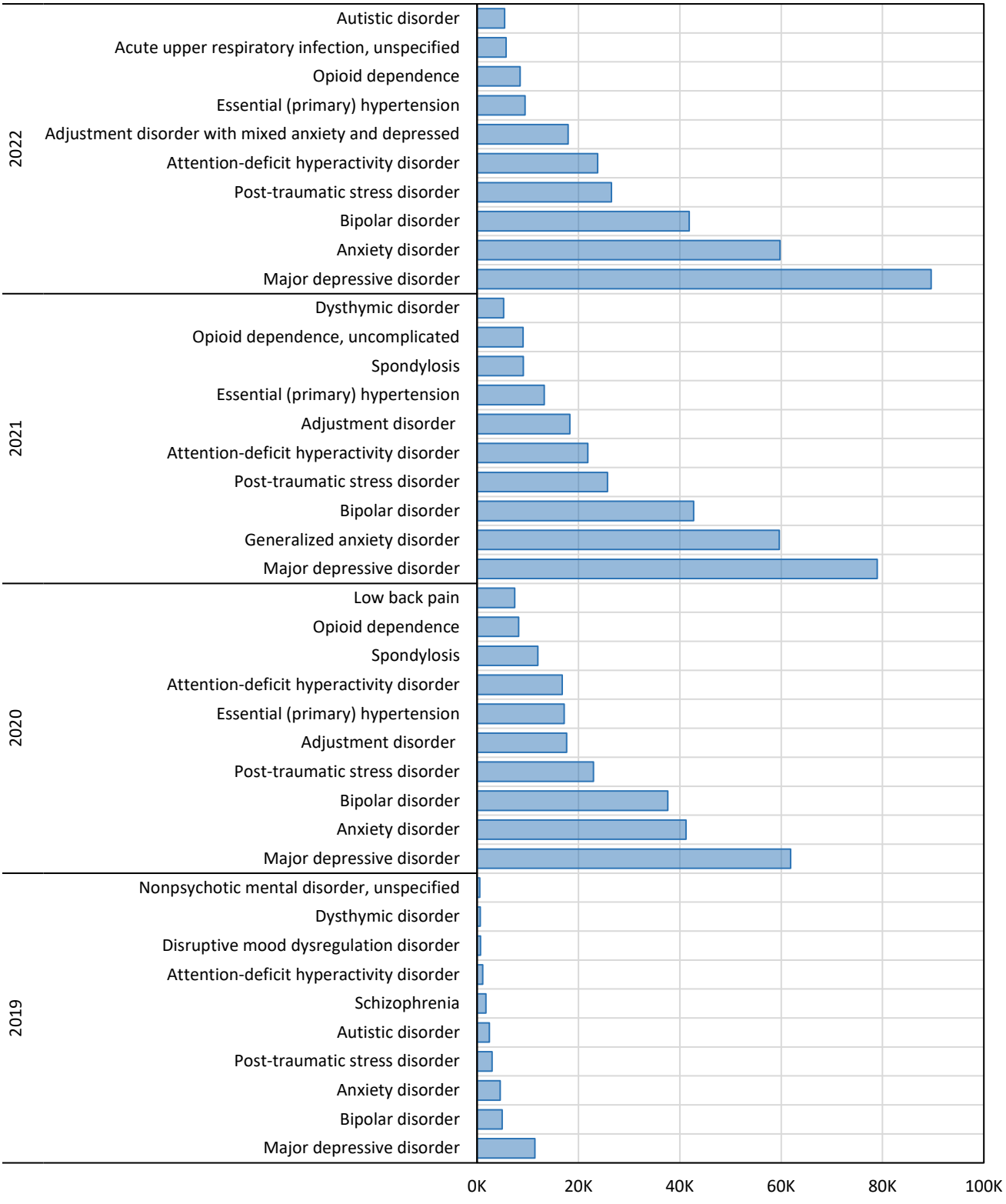


The figure below shows the top ten telehealth service types utilized by Nevada Medicaid members from 2019 to 2022. Major depressive disorder was the most common diagnosis among people utilized telehealth consistently each year, including prior to the pandemic. Increases in depression and anxiety symptoms were experienced across the country during the pandemic and Nevada saw similar trends [17]. There was an increase in the number of telehealth claims filed for anxiety each year from 2019 to 2022.

Although the service types remained relatively stable each year, telehealth appointments related to opioid dependence became common in 2020 and 2022, which was not in the top ten services utilized by telehealth prior to the pandemic. In 2022, major depressive disorder had the largest increase in claim diagnosis from the previous year which could be because of the emotional response people were experiencing due to the long-term impacts of the pandemic.

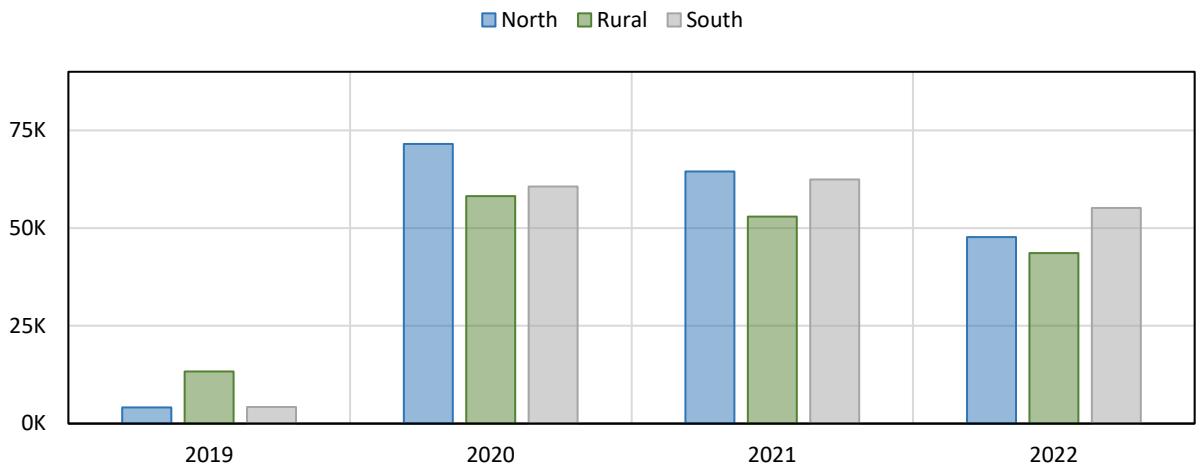
It should be noted that between 2020-2022 the most common diagnoses on telehealth claims were related to behavioral and emotional health. In 2021, 50% of encounters for anxiety, depression and bipolar disorder were provided via telehealth [18] and 90% of patients who self-reported receiving a medical diagnosis of anxiety or depression between March 2019 and March 2020 were more likely to receive services via telehealth [19].

Figure 8. Top 10 Medicaid Telehealth Claims by Diagnosis by Year



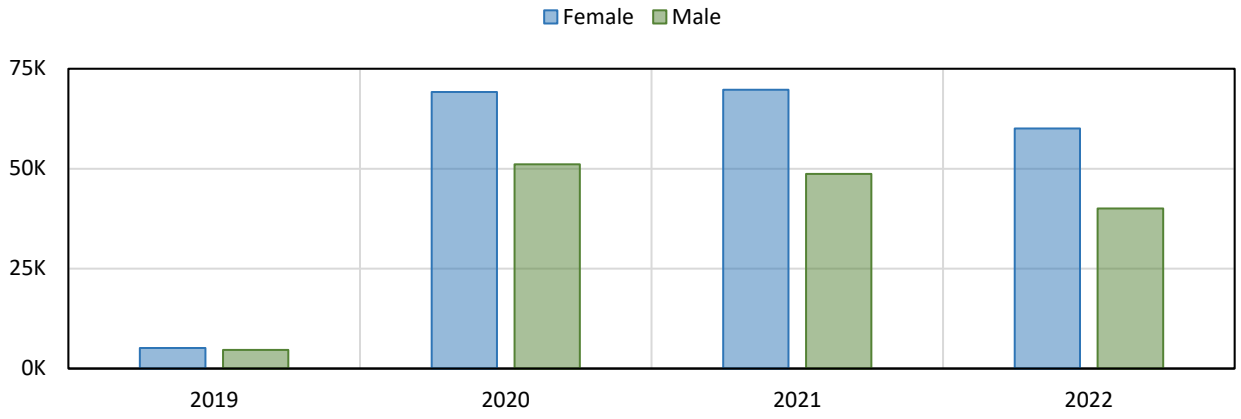
Prior to the public health emergency, rural Nevada counties had the largest rate of telehealth utilization, but in 2020, the northern region of Nevada, which is comprised of Carson City and Washoe County, had a higher telehealth utilization rate compared to other regions in the state. Then, in 2021 and 2022, utilization rates steadily decreased in both the north and rural regions and by 2022, the rural region had the lowest rate compared to the other regions in the state. On the other hand, telehealth utilization continued to increase in 2021 in the southern region and it wasn't until 2022 that the use of telehealth services started to slow. Although rates have continued to drop since the start of the pandemic, they are still significantly higher than they were in 2019.

Figure 9. Medicaid Telehealth Utilization Rate by Region



These findings coincide with what has been reported in recent studies, which have shown those living in urban areas are more likely to use telehealth than those living in rural areas; one study confirmed that telemedicine use rose in urban areas, with 40% of adults in central counties of large metropolitan areas compared to only 28% of adults in most rural counties [20]. Studies have also found that older people, persons living in rural areas, and persons living in lower income zip codes were less likely to utilize telehealth services. Also, persons living in areas with limited social resources were less likely to use telehealth, hence the low usage of telehealth in the rural areas of Nevada [20].

Figure 10. Medicaid Telehealth Utilization Rate by Gender



Prior to the onset of COVID-19, the rate of telehealth utilization was identical for males and females. However, once Nevada Medicaid started offering telehealth more widely in 2020, females started utilizing telehealth services more than males, which parallels other health care utilization trends. A study conducted by the Centers for Disease Control and Prevention (CDC) National Center for Health Statistics supports that women were much more likely to use telemedicine compared to men, at 42% and 32%, respectively [21].

Table 7. Medicaid Telehealth Utilization Rate by Race/Ethnicity and Year

RACE/ETHNICITY	2019	2020	2021	2022
Hispanic	4,840	45,072	43,520	37,058
Non-Hispanic American Indian or Alaskan Native	4,825	58,395	54,110	48,878
Non-Hispanic Asian/Pacific Islander	1,650	48,472	46,552	39,576
Non-Hispanic Black	4,385	59,638	62,586	56,386
Non-Hispanic White	6,284	83,324	82,040	68,500
Non-Hispanic Other	1,695	33,076	33,132	29,393

The table above summarizes telehealth utilization by race and ethnicity in Nevada. Both prior and during the pandemic, non-Hispanic White Nevadans had the highest utilization rate for Medicaid telehealth services compared to all other racial groups. In 2019, this was followed by Hispanics, but during the pandemic when telehealth became a widely used method of receiving services, Black non-Hispanics continuously had the second highest rate. Several studies showed before the pandemic that non-Hispanic Black and Hispanic patients were less likely to use telehealth than non-Hispanic Whites which was consistent with Nevada, as they both had much lower utilization rates than White non-Hispanics [22]. The increase could be attributed to the availability of telehealth services in the state, as some studies have concluded that racial and ethnic minorities are just as likely to utilize telehealth patient portals once accessible [23].

Public Health

Health care infrastructure was not the only sector that was overwhelmed by the pandemic; among others, public health infrastructure was extremely overburdened by a demand for support that was previously unparalleled. In fact, a large majority of the public was unfamiliar with public health as an entire sector before the pandemic, and although COVID-19 was the disease investigator's rise to fame in early 2020, these activities had been occurring behind the scenes for decades.

Throughout the pandemic, disease investigators, epidemiologists, biostatisticians, health officials, and other public health researchers worked around the clock to understand the characteristics of SARS-CoV-2 – to understand its presence and transition in our communities, to identify, isolate, and remediate outbreaks, and otherwise educate and protect the public. Because of the drastic increase in workload, public health officials and staff worked excessive amounts of overtime, often uncompensated, and went upwards of six months working extended daily hours without a single day off. In addition to long hours, public health workers faced other external pressures, including hostility from community members who were sceptics and/or naysayers of the pandemic.

Such a strain was put on the public health workforce, that a recent study from the University of Minnesota School of Public Health (SPH), the de Beaumont Foundation, the Association of State and Territorial Health Officials, and the Harvard School of Public Health found that nearly half of all employees in state and local government public health agencies across the U.S. left their jobs between 2017 and 2021, and that if this rate continues, more than half of the nation's entire public health workforce could leave their jobs by 2025 [24]. Nevada is quite unique in that there was less public health turnover compared to other states, especially in leadership positions, despite these challenges.

Overall, the pandemic revealed weaknesses in public health infrastructure and highlighted the need for investment and reform to better prepare for future health crises.

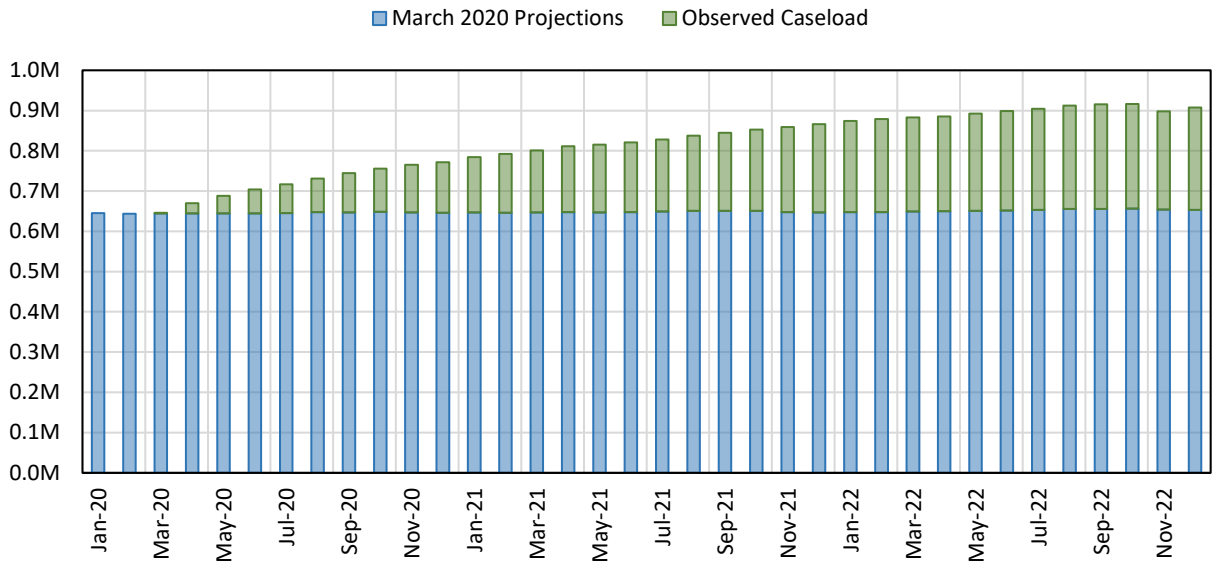
Social Services

Medicaid Services

When non-essential businesses were closed, it caused an increase in unemployment and significantly more Nevadans meeting the eligibility criteria for enrollment in Nevada Medicaid. As outlined on the Nevada Department of Health and Human Services (DHHS) medical assistance webpage, Nevada Medicaid is a health insurance system that provides health care coverage for many people including low-income families with children whose family income is at or below 133% of poverty, Supplemental Security Income (SSI) recipients, certain Medicare beneficiaries, and recipients of adoption assistance, foster care and some children aging out of foster care [25]. In any given month of 2022, more than one in four Nevadans relied on Medicaid for their health care coverage, and of those approximately 37% utilized health care monthly. Medicaid accounted for 30% of state expenditures in state fiscal year 2022, with a year-over-year (YOY) caseload growth of 264,072 Nevadans, or 40%.

The sustained increase in enrollment carrying over to 2022 was largely due to continuous enrollment requirements set forth by the Families First Coronavirus Response Act (FFCRA) in response to the COVID-19 pandemic. The continuous coverage requirement of FFCRA allowed the Division of Welfare and Supportive Services (DWSS) to discontinue the termination of eligibility, except under very limited circumstances. All members deemed eligible since the start of the pandemic maintained Medicaid coverage, and individuals who became employed while on Medicaid were not required to undergo annual redetermination, creating a population of Medicaid enrolled members who may also have access to health care coverage through other payers. Because of these factors, per capita claims cost for 2020 through 2022 are distributed across a larger pool of enrolled Medicaid members resulting in a low per member per month (PMPM) cost and YOY cost growth trend.

Figure 11. Monthly Medicaid Enrollment, Pre- and Post-COVID



The chart above displays the Medicaid caseload (excluding Nevada Check Up) that was projected in March 2020 in blue and the green bars are observed Medicaid caseload counts, illustrating the significant increase that is thought to be due to the impacts of the pandemic. The increase Nevada Medicaid saw in enrollment corresponds with what has been reported nationally, that Medicaid enrollment grew to 92 million by December 2022, an increase of over 21 million recipients in less than two years [26].

In 2022, $3.6 billion was spent providing health care to Nevadans on Medicaid. This represents the direct cost of coverage, or what was paid for health care claims, not capitation or other non-claims-based payments. From 2016 to 2022, as total cost increased by a total of 33%, at an annual rate of 3.5% each year, utilization declined but enrollment also increased. Increases to per member per month (PMPM) claims cost for Nevada Medicaid members from 2016 to 2022 is driven by increases in the average cost per claim. The average monthly cost per claim increased 55% overall from 2016 to 2022, with an average annual increase of 8.5%. Simultaneously, the average number of claims per 1,000 member months declined by 38.7% overall, or at an average annual rate of -10.0%.

Figure 12: Total Claims Cost, Nevada Medicaid (FFS/MCO), CY 2016-2022

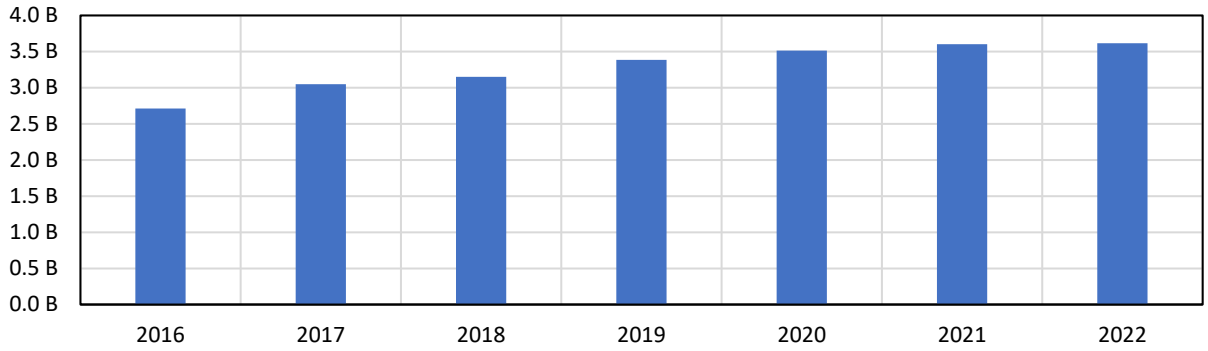
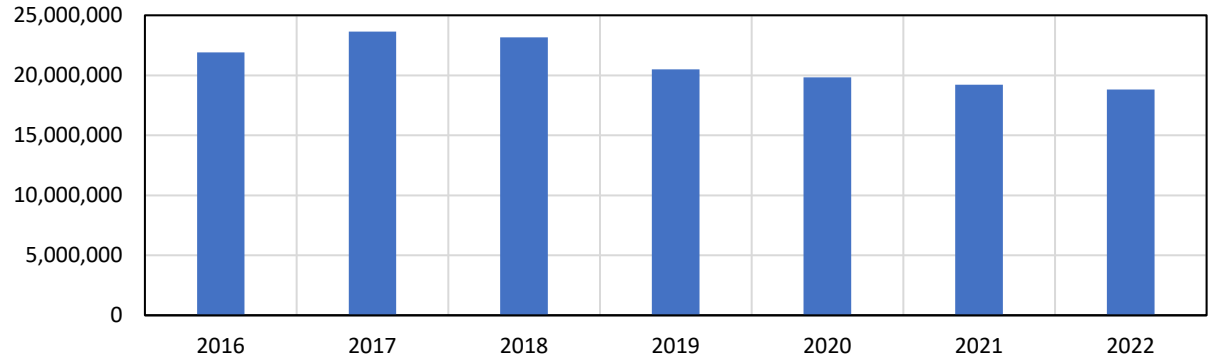


Figure 13: Total Claim Counts, Nevada Medicaid (FFS/MCO), CY 2016-2022



Nevada Medicaid has two plan types, Fee for Service (FFS) and Managed Care Organizations (MCO) with FFS having a higher utilization rate and cost per claim than MCOs. FFS members include residents of rural and frontier counties and the portion of the population who are aged (65 years and older), blind, and/or disabled (ABD), regardless of geographic location. Growth in PMPM claims cost in the FFS population was consistently increasing from 2016 to 2020 where it reached a high of $827 and subsequently decreased in following years to $675 in 2022. Similarly, MCO PMPM peaked at $262 in 2019 and saw continuous decreases in the following years during the pandemic. All provider types experienced similar trends with PMPM claims costs increasing until 2019 and then decreasing in succeeding years, but professional and long-term care had the largest decreases in PMPM costs from 2019 to 2022 at 26% and 24%, respectively. For a more detailed analysis on the impacts to Medicaid, visit the 2023 Nevada Cost Driver Analysis.

Supplemental Nutrition Assistance Program (SNAP)

The Families First Coronavirus Response Act (FFCRA) that was put into place in 2020 not only paused redeterminations, but it also provided additional funding, or Emergency Allotments, for increased Supplemental Nutrition Assistance Program (SNAP) payments to families in need across the country [27]. However, in 2021, some states had rejected the option to provide the additional Emergency Allotments and a few more followed in 2022, resulting in 17 states that were not providing the additional benefits. The Household Pulse Survey, which is a survey conducted by the U.S. Census specifically to measure the impacts of the pandemic, reported that in states that opted to provide these additional benefits, significantly more families experienced less food insufficiency during the period the Emergency Allotments were available [6].

Nevada was among the 33 states that elected to provide the Supplemental Emergency Allotment (SEA). As a result, the State of Nevada, Division of Welfare and Supportive Services (DWSS) issued SEA payments to SNAP households from March 2020, through February 2023, with the final SEA payment being received in March 2023. The monthly SEA payment was equal to the difference between the benefit amount a household qualifies for based on the eligibility determination, and the maximum SNAP allotment for the household size. From March of 2020 through January 2023, DWSS issued over $1.2 billion in SEA payments, to over 230,000 Nevada SNAP households, which equates to an average of 450,000 individuals.

The SEA payments that supported Nevada families during the pandemic also benefited Nevada retailers. The chart below shows the economic increase based on county.

Table 8. SNAP Supplemental Emergency Allotment Amounts by County

County	Total SNAP Households	Estimated Monthly Increased Revenue Due to SEA
Churchill	2,047	$417,556
Clark	202,877	$41,712,374
Douglas	1,301	$264,791
Elko	2,471	$499.030
Esmeralda	41	$8,147
Eureka	72	$14,767
Humboldt	840	$168,040
Lander	232	$46,847
Lincoln	251	$50,921
Lyon	3,345	$661,979
Mineral	506	$101,843
Nye	6,035	$1,222,116
Pershing	297	$61,106
Story	67	$13,748
Washoe	26,131	$5,295,837
White Pine	571	$117,119
Carson	3,860	$763,822
Totals	**250,944**	**$50,921,512**

In addition to the SEA payments children who were enrolled and eligible for free or reduced-price meals received a food benefit via an electronic benefit transfer card (EBT) for the summer months. This was known as P-EBT. The chart below shows the increase in SNAP benefits issued during the public health emergency.

Table 9. Increase in SNAP Benefits Issued During the Public Health Emergency

Year	Regular SNAP	SEA	P-EPBT	Total
2020	$644,983,139	$276,903,027	$96,312,021	**$1,018,198,187**
2021	$759,955,069	$455,454,533	$492,070,003	**$1,707,479,605**
2022	$834,074,305	$511,344,280	$193,926,613	**$1,539,345,197**
2023	$1,006,069,767	$146,565,911	$58,108,718	**$1,210,744,396**

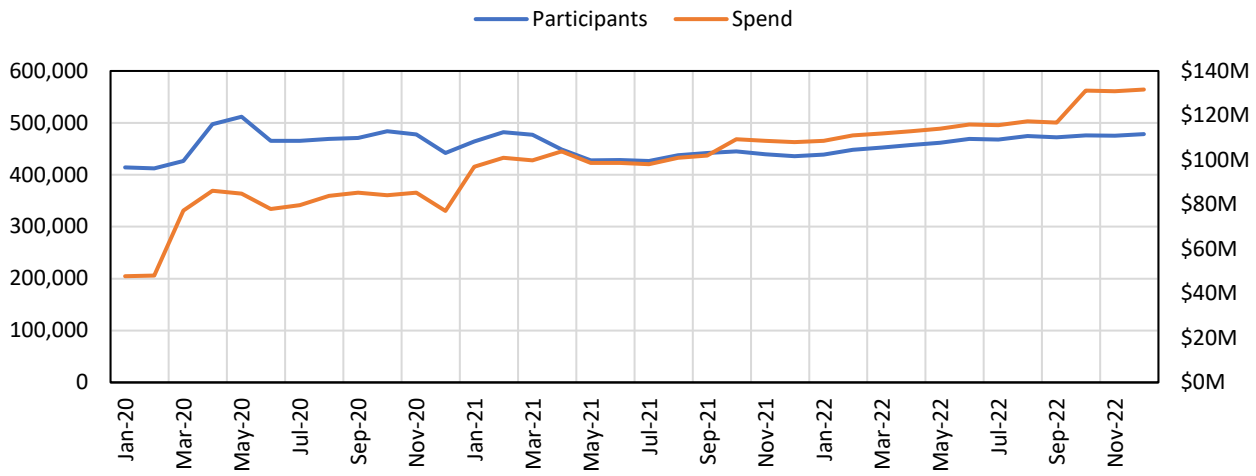
The Center on Budget and Policy Priorities explains how SNAP Boosts Retailers and Local Economies because most households redeem their monthly SNAP benefits quickly and because the program helps struggling households purchase food, SNAP is one of the most effective forms of economic stimulus during a downturn. Every dollar spent on SNAP benefits when the economy is weak and unemployment is high would increase the gross domestic product by $1.54. DWSS issued over 2.2 billion dollars in SNAP dollars between the SEA payments and PEBT.

The food purchased puts money directly into the pockets of farmers and distributors, who in turn can then afford goods, services, and food for themselves. Since SNAP benefits can only be used to buy food, it also frees up money in family budgets to purchase other essential items like diapers, medicine, or clothing for growing children. Other stimulus programs put money into people's pockets, which tends to be saved or held onto for a later date instead of being used to stimulate the economy. SNAP recipients typically spend their benefits prior to the month end, essentially stimulating the economy immediately.

The U.S. Department of Agriculture Food and Nutrition Services Retailer Management Year End Summary for Fiscal Year 2023, shows SNAP redemptions decreased to approximately $124 billion, a 10% decrease from the prior year, and states a significant factor for that decrease was the reduction of SEA and P-EBT benefits.

The suspension on SNAP redeterminations along with the additional benefits led to an increase in both caseload and overall spend. Nevada's SNAP caseload increased by over 64,000 individuals from January 2020 to December 2022 and the spend amount per participant more than doubled from $115 to $275.

Figure 14. Nevada Supplemental Nutrition Assistance Program Participants and Spend Amount



In March 2023, the emergency allotments ended, and SNAP benefits returned to what they would have been had the pandemic policies never been put into place. This resulted in a $600 decrease in benefits per household per month for roughly 32 million people across the country [6]. In April 2023, the first month without the emergency allotment, states that were participating reported an identical percentage of SNAP households that reported food insufficiency compared to states not participating in the additional benefits where as previously, the states participating consistently saw lower food insufficiency each month.

Unemployment Benefits

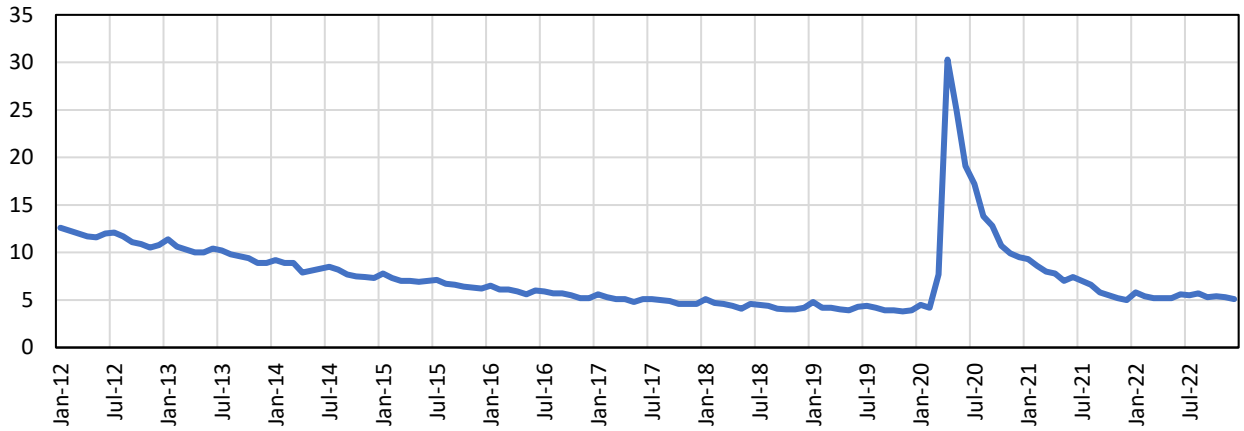
The non-pharmaceutical interventions (NPI) that were deployed as mitigation measures early in the pandemic also had lasting and significant impacts on employment and unemployment. Emergency orders that effectually closed non-essential businesses helped to slow the rate of infection, but also led to a net loss of establishments in the first two quarters of 2020 for the first time since 2013 [3]. This contributed

to significant job loss and an increased dependance on unemployment benefits available through the Nevada Department of Employment, Training, and Rehabilitation (DETR). However, after three months of closures, businesses started reopening in phases beginning in May with several restrictions in place and Nevada saw the largest net increase in establishments in quarter 3 of 2020 since 1997.

The Coronavirus Aid, Relief, and Economic Security (CARES) Act was also signed into law in March 2020 to provide additional assistance to individuals struggling with the economic impacts of the public health emergency. A part of the CARES Act focused on unemployment and providing additional benefits to workers who lost their jobs due to the pandemic. These benefits include, but are not limited to, the ability to extend unemployment benefits by up to 39 weeks, increased flexibility in consideration of "actively seeking work" if that is directly impacted by COVID-19, and an additional $600 per week to recipients [29].

Because of the increased unemployment benefits and workers having an increasingly difficult time finding employment during the pandemic from fewer jobs available, long-term unemployment rose significantly and four in ten workers in the United States had been unemployed for more than six months in February 2021 [30]. In Nevada, the unemployment rate had been on a consistent decline from 2010 until January 2020 when it started to creep up. In March 2020, the unemployment rate increased to 7.7% and in April it jumped to 30.3%, a record high. However, these increases did not last for long, and immediately started dropping in May and although rates had not returned to pre-pandemic levels by the end of 2022, they had dropped back down to 5.1%.

Figure 15. Nevada Unemployment Rate (Not Seasonally Adjusted)

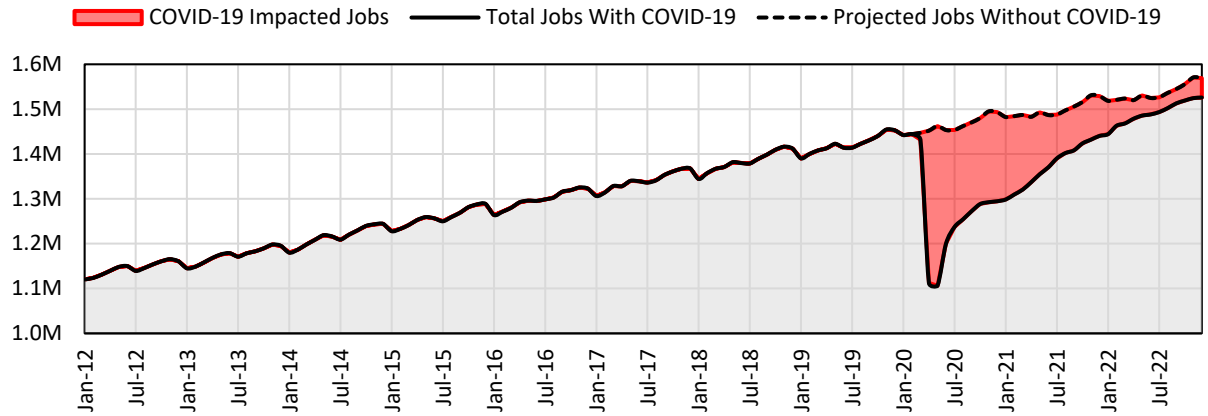


The following section provides a deeper dive into the landscape of employment, including changes to wages and salaries that were observed as a result of the pandemic and pandemic response.

Employment, Wages, Salaries

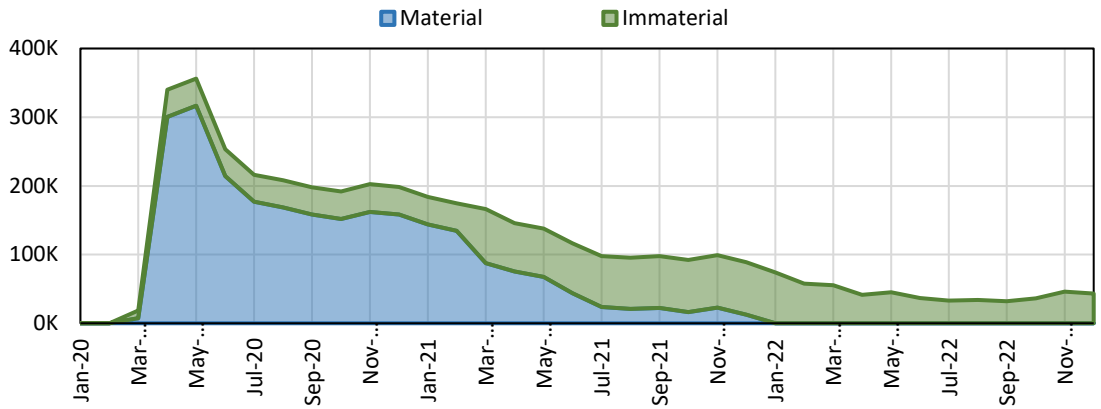
At the start of the public health crisis, widespread business closures and a slowdown in economic activity negatively affected the state's labor markets, resulting in the widespread destruction of jobs across industrial sectors as well as a ceasation of a decade-long growth trend in employment. To quantify the impact on the economy, a framework emphasizing the distinction between job destruction and a slowdown in growth – later referred to as material and immaterial – was utilized and explained below.

Figure 16. Nevada Employment with Total Impacted Jobs During the COVID-19 Period



For this analysis, material impacts represented jobs that were lost due to the COVID-19 health crisis and public health response; these figures were calculated as the difference between the monthly employment counts for each industrial sector post-COVID-19 and their respective counts for the same month before the COVID-19 pandemic (March 2019 through February 2020). Immaterial impacts reflected jobs that were either never created or were delayed in creation due to the pandemic – these figures were calculated by subtracting monthly employment counts in the COVID-19 affected world and previously defined material impacts from a projection of how many workers should have been employed in each industry if COVID-19 had not occurred.

Figure 17. COVID-19 Impacted Jobs by Month

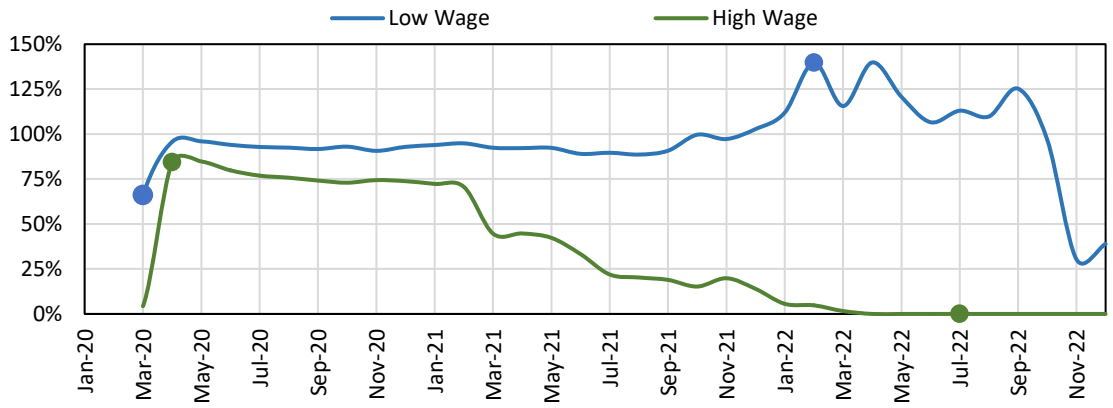


At its pandemic-era worst, in May 2020, total employment in Nevada was 356,166 jobs (24%) below where it should have been. Of that amount, 316,600 were materially impacted jobs, and 39,566 were immaterially impacted, representing a split of 89% material to 11% immaterial. The total employment deficit fell over each consecutive month, ultimately reaching a post-COVID-19 low of 31,929 lost jobs in September 2022 before slightly increasing in the last quarter of 2022.

During this period, the employment impact was not uniformly distributed across the Nevada economy, as some industries suffered more material impacts and others reported more immaterial. To investigate this, industrial sectors were grouped into low wage and high wage categories. Low wage was an aggregation

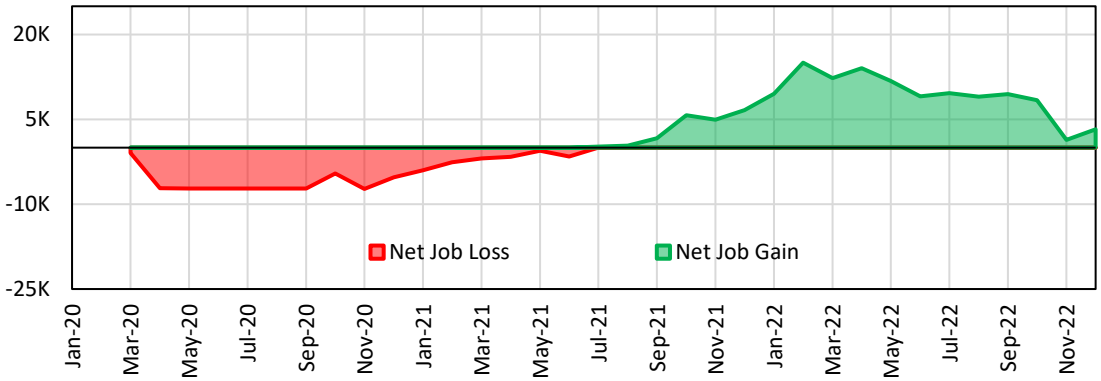
of sectors where average wages were below the average for all Nevadan workers (leisure and hospitality; other services; and trade, transportation, and utilities), while high wage referred to sectors with greater than average wages (education and human services; financial activities; government; information; manufacturing; mining, logging, and construction; and professional and business services).

Figure 18. Material Share of Employment Impact



For high wage industries, employment impacts were initially more material (84% in April 2020) than immaterial (16%) – meaning the impact predominately manifested as lost jobs rather than delayed or never created ones. However, by March 2021, the distribution had reversed, as the material share of the impact on employment became the smaller of the two, dropping to 45% in March 2021 and to 0% by April 2022. At the same time, the material share of the employment impact continued an upward trend until October 2022 for low wage industries, rising from 66% in March 2020 to a high of 140% in February and April 2022, which was greater than 100% due to unique COVID-19-related developments affecting the trade, transportation, and utilities sector.

Figure 19. COVID-19 Employment Impact on Trade, Transportation, and Utilities



Employment in trade, transportation, and utilities was higher than the projected no-COVID-19 scenario from July 2021 onward – implying the pandemic boosted growth in the industrial sector and causing the low wage material share to exceed 100% – although the two other low wage industries (other services and hospitality and leisure) were materially and immaterially impacted by COVID-19 for the entirety of the post-COVID-19 period. In addition to trade, transportation, and utilities, just two other high wage industrial sectors, information and financial activities, reported months with more jobs than in the no-

COVID-19 projection. However, neither industry's increase in employment was nearly as substantial or consistent as the increase in trade, transportation, and utilities.

As such, those three industries (trade, transportation, and utilities; information; and financial activities) were the only industries to have largely recovered from their COVID-19-related employment impacts by December 2022. At that time, trade, transportation, and utilities had regained 108% of the 42,049 positions that were either destroyed or delayed by the COVID-19 pandemic in April 2020. The two other low wage industries (leisure and hospitality as well as other services) remained impacted at 95% and 82% recovered, respectively. As a group, the low wage industries were 97% recovered from their pandemic-related worst job deficits – at the same time, the high wage industries were 76% recovered, largely due to dampened recoveries in the government (37%) and mining, logging, and construction (44%) sectors. Importantly, while most sectors reported incomplete recoveries, all but two (leisure and hospitality and other services) had entirely recovered from their material impacts – recall, those are the existent jobs that were lost due to the pandemic – and were suffering solely from immaterial impacts by December 2022.

Below is a table depicting the progress toward recovery completed by each of the industrial sectors as well as the low wage and high wage industrial groupings. Importantly, there is no month indicating the "most impacted month" for the groups, as they reflect a blended timeframe rather than a single month.

Table 10. Job Deficit and Percent Recovered by Industrial Sector

Industrial Sector	Most Impacted Month	Greatest Job Deficit	Job Deficit in December 2022*	Percent Recovered
▼ **Low Wage Industries**	-	**263,517**	**8,983**	**97%**
Leisure and Hospitality	May 2020	208,218	9,860	95%
Trade, Transportation, and Utilities	Apr 2020	42,049	- 3,247	108%
Other Services	Apr 2020	13,250	2,370	82%
▼ **High Wage Industries**	-	**109,577**	**26,179**	**76%**
Profession and Business Services	Apr 2020	39,471	11,845	70%
Education and Health Services	Apr 2020	20,838	465	98%
Mining, Logging, and Construction	Oct 2021	15,011	8,460	44%
Government	Aug 2021	14,315	9,063	37%
Manufacturing	Apr 2020	9,466	393	96%
Financial Activities	May 2020	6,570	- 800	112%
Information	Apr 2020	3,906	- 3,247	183%
Total	-	373,094	35,162	91%

**Negative values imply a job surplus due to the sector exceeding its employment count in the no-COVID-19 projection.*

Despite the progress toward recovery, the state's economy and workforce lost months of employment and the associated salaries and wages. To quantify the impact, a salary and wage impact was calculated by multiplying the previously discussed material and immaterial impacts by the salaries and wages that would have been earned by those positions. As with the employment impacts, the salaries and wages were calculated using a no-COVID-19 scenario projection.

Wage impacts were predominantly immaterial for four sectors: mining, logging, and construction (82% immaterial); education and health services (74%); manufacturing (63%); and financial activities (51%). Impacts were predominantly material for leisure and hospitality (95% material), other services (81%), and government (54%). Finally, information and trade, transportation, and utilities recorded 100% of their

impacts as material, but their impacts decreased over time as employment in those sectors outperformed the no-COVID-19 projection.

Table 11. Total Months of Employment and Total Salaries and Wages Lost by Industrial Sector

Industrial Sector	Total Lost Months of Employment	Total Lost Salaries and Wages	Average Wages Lost per Month
▼ **Low Wage Industries**	**2,380,457**	**$6,406,747,542**	**$2,691**
Leisure and Hospitality	2,172,763	$5,877,748,238	$2,705
Trade, Transportation, and Utilities	83,399	$125,479,237	$1,505
Other Services	124,296	$403,520,067	$3,246
▼ **High Wage Industries**	**1,557,991**	**$8,642,685,863**	**$5,547**
Profession and Business Services	574,582	$3,008,955,381	$5,237
Education and Health Services	187,080	$828,129,840	$4,427
Mining, Logging, and Construction	321,807	$2,044,779,870	$6,354
Government	305,621	$2,060,426,385	$6,742
Manufacturing	99,480	$473,784,065	$4,763
Financial Activities	56,760	$259,234,710	$4,567
Information	12,661	-$32,624,387	-$2,577
Total	3,938,448	$15,049,433,405	$3,821

Teleworking During the Pandemic

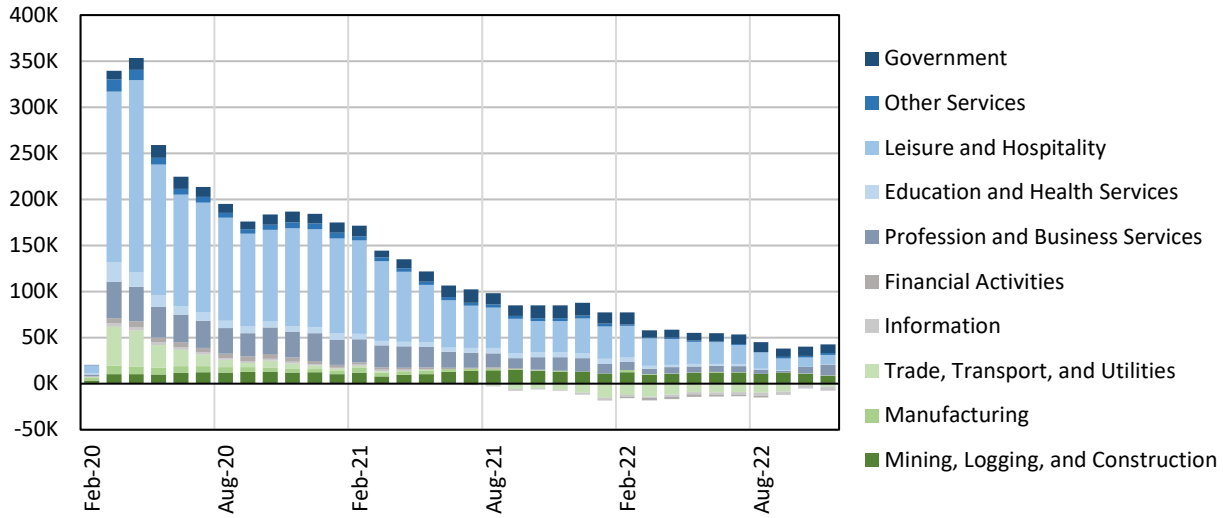
Teleworking, which is the ability to work remotely in locations other than the primary workplace, grew in popularity during the COVID-19 pandemic, as it represented a flexible and safe alternative to working in person [31]. Prior to the pandemic, 20% of working adults worked remotely; however, after COVID-19 hit, that figure rose to nearly 71% [32]. Despite the explosive growth in teleworking, only 54% of adults reported they would like to continue working remotely after the pandemic. The potential advantages and disadvantages of teleworking at the society, employer, and worker levels are summarized below [33].

Table 12. Benefits and Challenges to Telecommuting at the Society, Employer, and Worker Levels

Level	Potential Benefits or Advantages	Potential Challenges or Disadvantages
Society	Environmentally Friendly	Isolation from Social Institutions
Society	Better for Individuals with Disabilities	-
Employer	Lower Turnover	Increased IT Demands
Employer	Wider and More Varied Job Offer	Security Issues
Employer	Less Absenteeism	Not Fit for Every Task
Employer	Reduced Overheads	The Challenge to the Possibility of Control and Motivation of Teleworkers
Employer	Greater Productivity	Loss of Teamwork
Worker	Reduced Commuting Time or Expenses	Added Family-Work Conflict
Worker	Higher Autonomy	Working on Holidays
Worker	Higher Job Satisfaction	Social and Professional Isolation
Worker	Lower Stress	Missed Opportunities
Worker	Better Work-Life Balance	-

Even though there are a variety of advantages and disadvantages of teleworking for both the employer and the employee, one of the biggest benefits during the COVID-19 pandemic was lower job loss when teleworking was an option. When Nevada's non-essential businesses first closed in 2020, many smaller companies went out of business and workers lost their jobs. Job sectors where employees had the ability to telework experienced significantly lower losses. In the first few months of the pandemic, employment dropped 21% in sectors where telework was unavailable, compared to only 8% when employees had the ability to switch to part- or full-time telework [34]. As a result, some sectors were impacted more than others depending on the flexibility employers were able to offer to their employees.

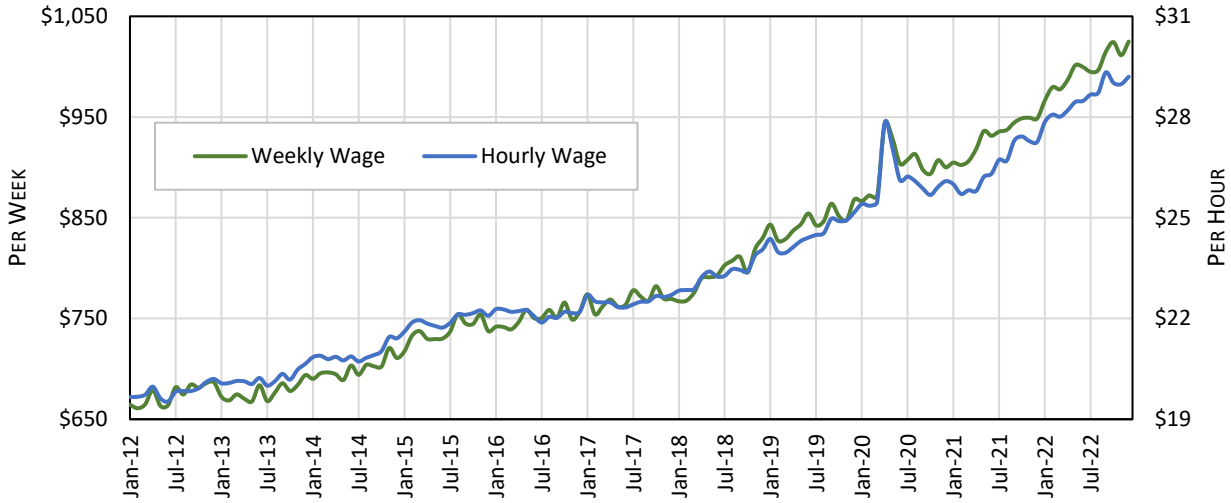
Figure 20. COVID-19 Employment Impact by Month and Industry



Wages, Wage Growth, and Inflation

Moving forward, the analysis will focus upon the present context rather than what *would have* happened if COVID-19 had not occurred – bringing the discussion to wage growth and inflation in the COVID-19 era.

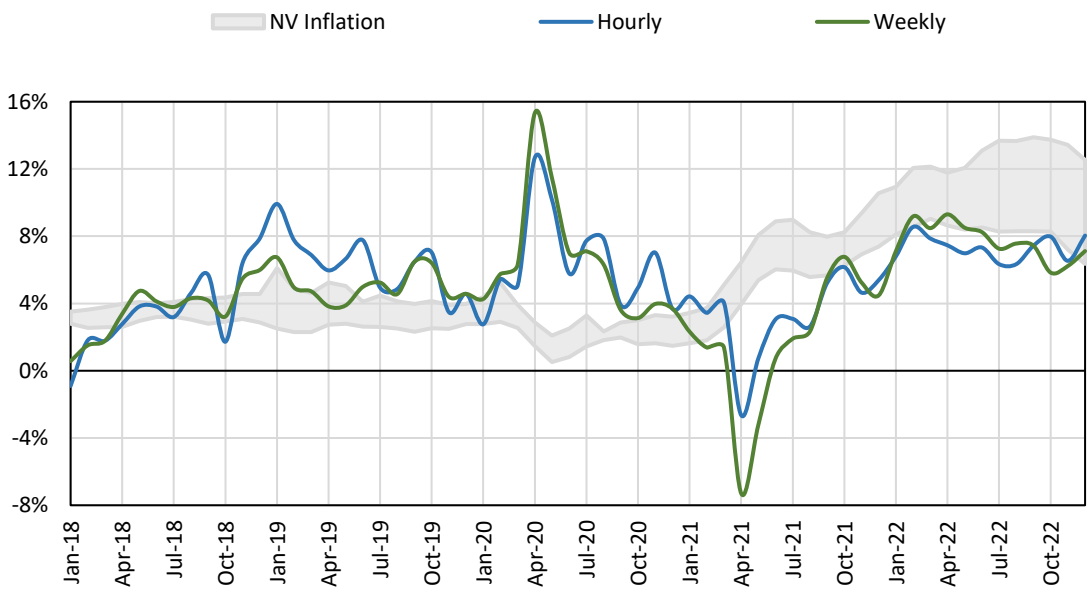
Figure 21. Average Weekly Wage and Hourly Wage



During the COVID-19 period, or the months spanning March 2020 to December 2022, annual wage growth was 5% for weekly wages or 5% for hourly wages for any given month when compared to the same month a year before. Those rates were modestly faster in the 28 months spanning November 2017 to February 2020, where hourly and weekly wages rose by 4% for both. While wage growth in the COVID-19 period appeared substantial, the growth rates were impacted by two important factors not affecting previous timeframes: (1) wage growth rates in 2020 were artificially high due to pandemic-related layoffs that disproportionately affected lower-wage workers, and (2) the true effect of wage growth rates in 2021 and 2022 was eroded by greater-than-average inflation rates.

The Bureau of Labor Statistics does not produce a measurement of inflation for Nevada specifically, but it does produce them for 58 jurisdictions across the country. Out of those 58 jurisdictions, nine are geographically and economically related enough to Nevada to provide clarity regarding the state's inflationary picture – six are metropolitan areas (Denver, Los Angeles, Phoenix, Riverside, San Diego, and Seattle), two are geographically-defined groups of states (West and Mountain), and one is a collection of cities in the western United States with less than 2.5 million residents (West, Class B/C). With the assumption that Nevada is not the best or worst situated jurisdiction regarding inflation, inflationary measurements for each of the comparable jurisdictions were used to create a range of probable Nevada inflation rates with the highest and lowest comparable inflation rates setting the upper and lower bounds.

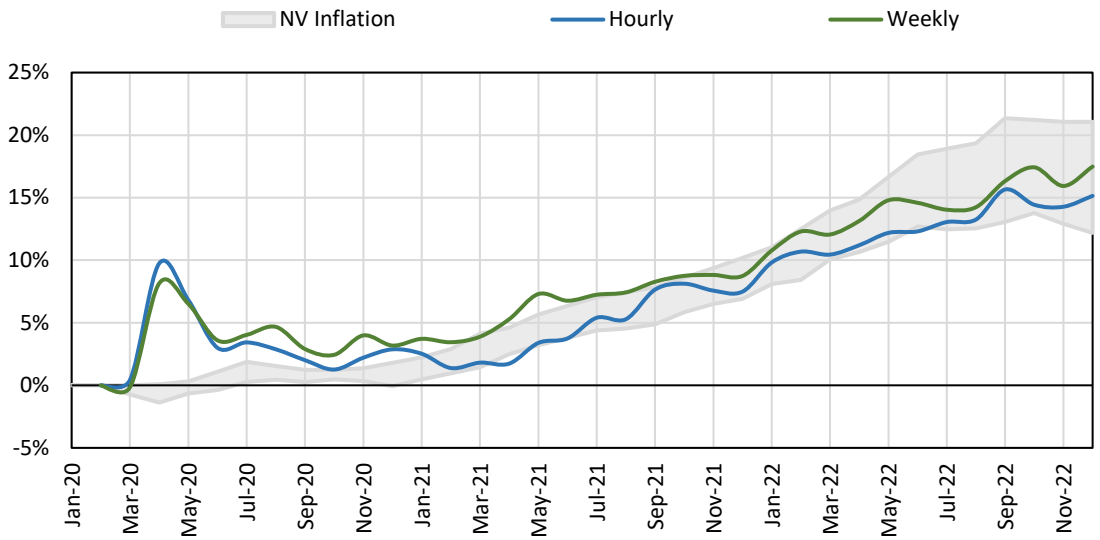
Figure 22. Annual Wage Growth and Inflation



In Nevada, cumulative wage growth – or wage growth that gradually accrued over the entirety of the post-COVID-19 period – surpassed cumulative inflation during much of 2020, primarily due to the illusory increase in wages caused by disproportionate impacts upon lower-income workers. By 2021, much of that wage-related mirage had dispersed, resulting in wage growth rates to reflect genuine trends in the labor market rather than the impact of the COVID-19 pandemic and related health response. At the same time, cumulative inflation was low during 2020, reporting disinflation during the first few months and remained static for the latter three fourths of the year. At the start of 2021, inflationary pressures began to coalesce

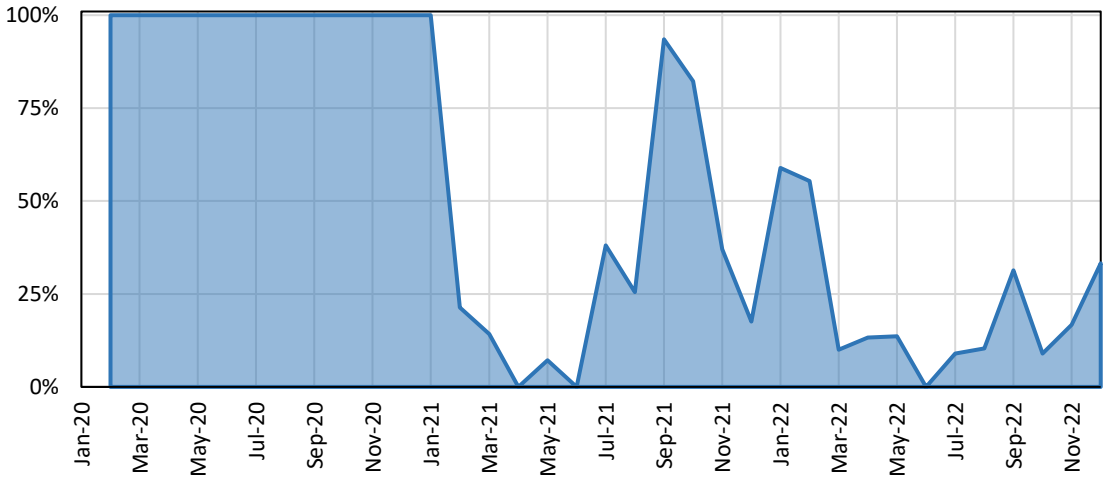
and forced cumulative inflation to rise through 2022. The cumulative regional inflation band, within which the Nevada inflation rate lies, would range from 11 to 21% by December 2022. Cumulative wage growth for the latest available month reported increases of 15% for hourly wages and 18% for weekly wages by December 2022.

Figure 23. Cumulative Wage Growth and Inflation



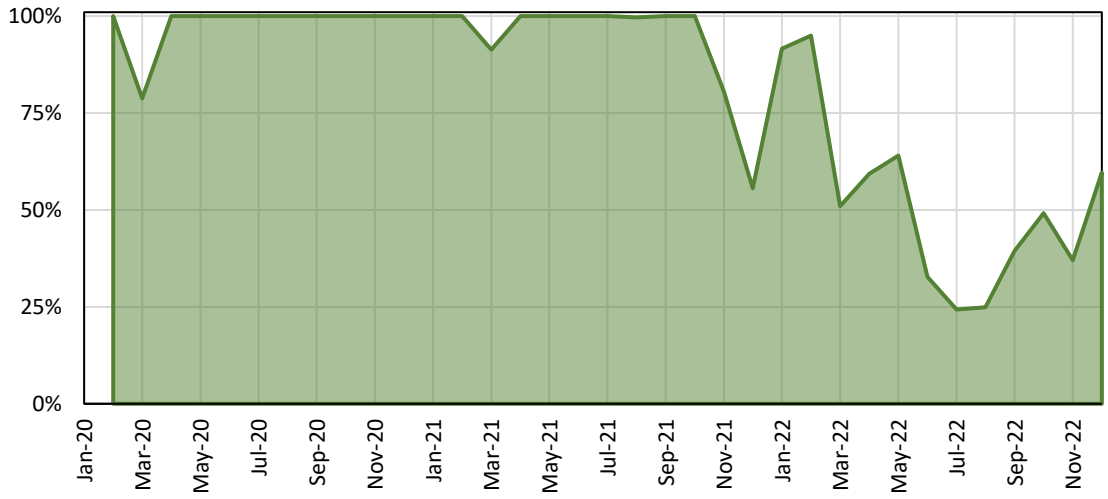
For either metric, cumulative wage growth rested within the probable inflation band for much of the period – meaning that the cumulative gains in average wages for workers in Nevada were neither *certainly* greater than inflation nor *certainly* lesser than inflation. Rather, there was a discrete probability that wage growth had surpassed or undershot Nevada's probable inflation rate. With the assumption that all values within the cumulative inflation band were equally probable, that probability was calculated by determining what share of values were lower or greater than the Nevada wage growth rates.

Figure 24. Probability of Cumulative Hourly Wage Growth Surpassing Inflation



For much of the early COVID-19 period, cumulative wage growth rates were definitively greater than cumulative inflation, resulting in a 100% probability of wage growth surpassing inflation. At the start of 2021, the probability for hourly wage growth was the first to depart from that certainty, as the probability dropped to 21% in February, 14% in March, and 0% in April. This dramatic swing occurred due to the previously referenced artificial rise in hourly wages that followed early COVID-19-related layoffs. By May 2021, trends in the labor market began to normalize and wages increase, resulting in the probability of wage growth surpassing inflation to rise to 94% in September 2021 before tumbling down to 33% in December 2022.

Figure 25. Probability of Cumulative Weekly Wage Growth Surpassing Inflation



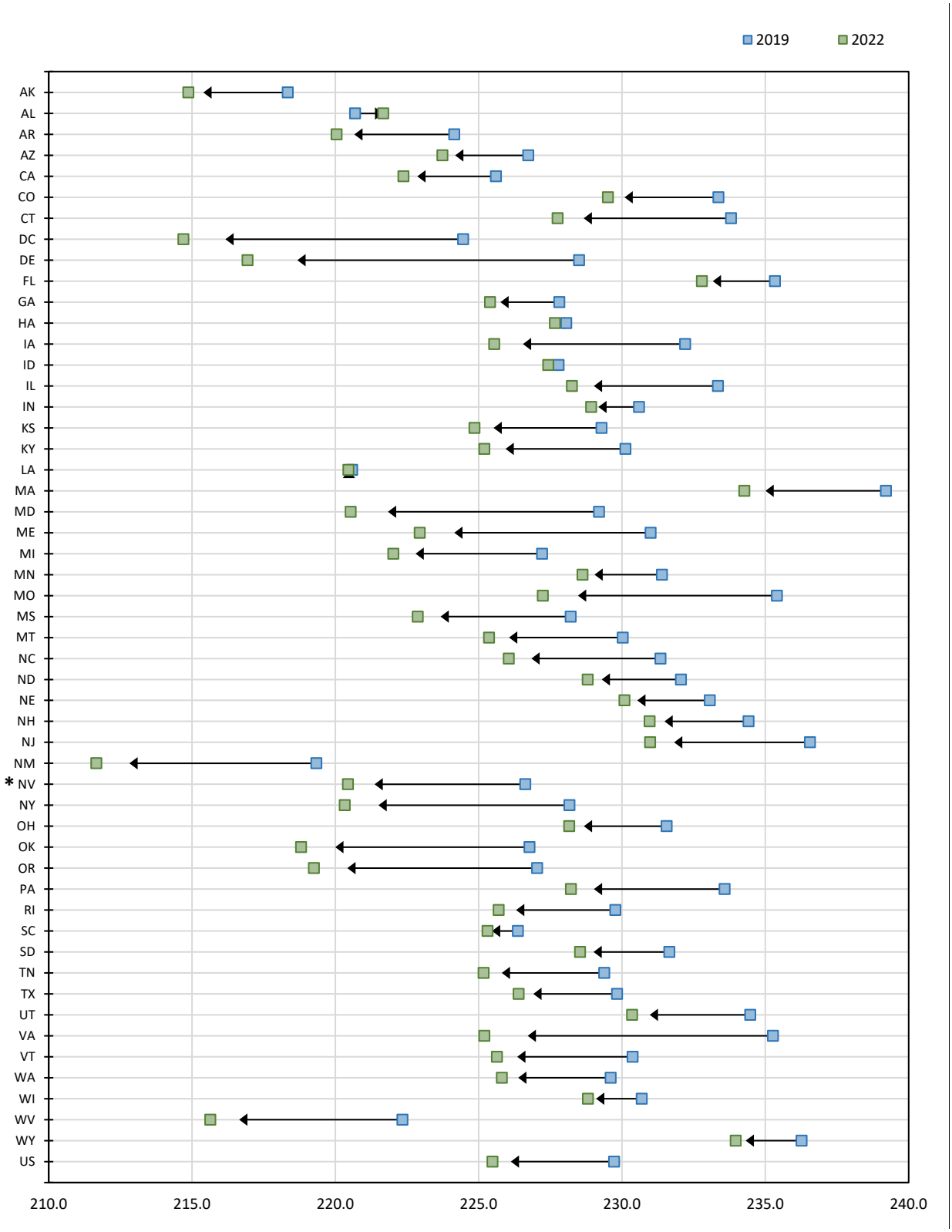
For weekly wages, growth trends have been less mixed, as Nevadans are working more hours on average, acting as a counterbalance to inflation. As a result, the probability of (weekly) wage growth surpassing inflation remained near 100% for much of 2020 and 2021. Between the end of 2021 and the start of 2022, the probability began to diminish, trending downward from 100% in October 2021 to just 60% in December 2022.

Education and College Readiness

Every two years, The United States Department of Education administers the NAEP, which is an examination of K-12 students across the country in a variety of subject areas. To assess the impacts of the health crisis on educational outcomes, results from the NAEP 2019 and 2022 mathematics and reading assessments were analyzed to compare educational outcomes for fourth and eighth grade students in Nevada against their national counterparts. For ease of discussion, composite scores were calculated by averaging the results of the reading and mathematics for each grade.

NAEP Score Impact, Elementary School

Figure 26. Composite NAEP Score (4th Grade)



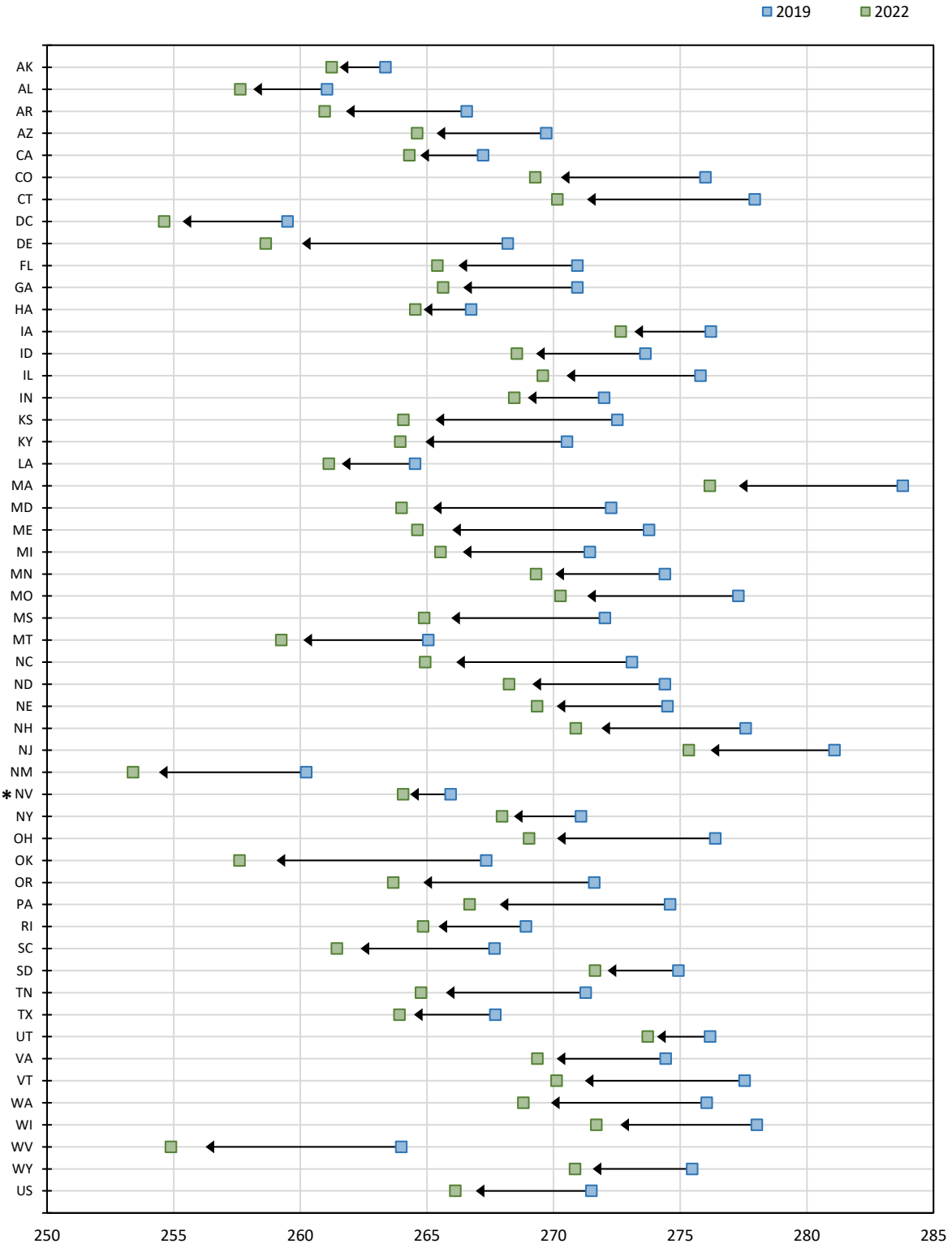
Between 2019 and 2022, composite NAEP scores decreased from 229.7 out of 500 available points to 225.5 for fourth grade students across the United States, ultimately representing a decrease of 4.2 points. 26 of the 51 jurisdictions surveyed (50 states and the District of Columbia) reported reductions greater than the national average. Delaware reported the largest reduction, with the fourth-grade composite scores falling 11.6 points (228.5 in 2019 to 216.9 in 2022) over the period. Alabama was the only state to report an increase during the period, as fourth grade NAEP scores in the state increased from 220.7 in 2019 to 221.7 in 2022 for an increase of 1.0 points.

Nevada reported the 13th largest reduction in the nation, with fourth grade composite NAEP scores falling 6.2 points between 2019 and 2022. Despite the reduction in scores, Nevada's overall ranking remained unchanged over the period. On average, fourth graders in Nevada scored 226.6 out of 500 in 2019 and 220.4 out of 500 in 2022, which were the 10th lowest composite fourth grade NAEP scores in the nation for their respective years.

For specific subjects, fourth graders in Nevada had the 12th largest reduction in reading scores in the nation, with scores falling 6.1 points (217.6 to 211.5) between 2019 and 2022. At the same time, math scores for Nevadan fourth graders fell from 235.6 in 2019 to 229.4 in 2022, which was the 16th largest reduction at 6.3 points. As a result of those score reductions, Nevada's subject-specific rankings changed modestly over the period. In 2019, Nevada ranked 38th out of 51 jurisdictions in reading and 43rd in mathematics. In 2022, Nevada dropped to 44th in the nation for reading but rose to 41st in mathematics.

NAEP Score Impact, Middle School

Figure 27. Composite NAEP Score (8th Grade)



The COVID-19 impact on composite NAEP scores was moderately more substantial for eighth graders than fourth graders, as composite NAEP scores fell by 5.4 points (271.5 in 2019 to 266.1 in 2022) for the nation's eighth graders. While all 51 jurisdictions reported lower scores in 2022 than 2019, 30 states had greater reductions than the national average, with Oklahoma recording the largest reduction at 9.7 points. However, Delaware followed closely behind with a reduction of 9.6 points over the period.

Nevada reported the smallest reduction across the nation. In 2019, eighth graders in Nevada scored 265.9 out of 500 on the composite NAEP score, which fell by 1.8 points to 264.1 out of 500 in 2022. As a result of the relatively minimal COVID-19 impact, Nevada's ranking improved substantially over the period. In 2019, Nevada ranked 44th in the nation, but the state rose to 36th by 2022.

Much of that shift resulted from changes in reading scores, where Nevada was one of three states that reported higher reading scores in 2022 than 2019 – the 48 other jurisdictions reported reductions in reading scores. Reading scores for Nevadan eighth graders increased by 0.8 points over the period, essentially tying with Hawaii (+0.8 points) and outpacing Alaska (+0.2 points) and the broader United States (-2.9 points). Nevada ranked 43rd in reading with a score of 258.1 in 2019. However, with Nevada's eighth grade reading score rising to 258.9 at a time of country-wide reductions, the state's rank improved to 28th in the nation.

For eighth grade mathematics, there were no jurisdictions recording score improvements. Nationally, scores fell by 7.9 points (281.0 to 273.1), with the smallest reduction being 2.7 points in Utah and the largest being 12.6 points in Oklahoma. Nevada had the sixth smallest reduction at 4.6 points (273.8 to 269.2), resulting in Nevada's ranking rising from 45th in the nation to 40th for eighth grade mathematics.

ACT Score Impact, College Readiness

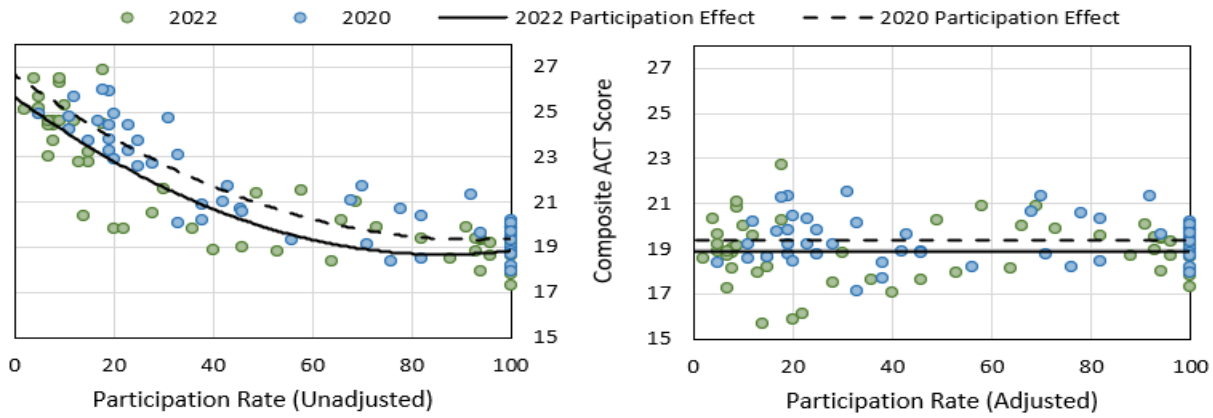
Impacts of the COVID-19 pandemic have not been isolated solely to elementary school and middle school students, American high school students were impacted during the COVID-19 health crisis as well, which is most evident in slipping college-readiness metrics across the United States. In Nevada, the ACT is mandatory for all students to take during their junior year of high school and is the college-readiness exam of choice – and thus the focus for this portion of the report. The analysis will review the change in ACT scores between the class of 2020 – the last cohort of students whose scores were largely unimpacted by the COVID-19 health crisis – and the class of 2022.

Importantly, participation rates for the ACT vary dramatically across the nation, with some states requiring students to take the exam (resulting in near 100% participation rates) while others do not emphasize the exam (resulting in near 0% participation rates in some circumstances). In a vacuum, this disparity in participation is unimpactful; however, in context, when comparing scores across states the disparity becomes quite impactful, as there is a strong negative correlation between participation rates and composite ACT scores – put simply, as participation rates increase, composite ACT scores decrease. The ACT acknowledges this trend, reporting composite ACT scores typically drop 1.2 points for each 25-percentage point increase in participation [35].

As a result, ACT scores in Nevada (where the participation rate is 100%) are not readily comparable to ACT scores in Maine (where the participation rate is routinely less than 10%). To control for the participation rate effect, each state's composite ACT score was regressed on its relative participation rate. Out of the possible options, a quadratic regression had the most appropriate fit, accounting for 82% and 78% of the

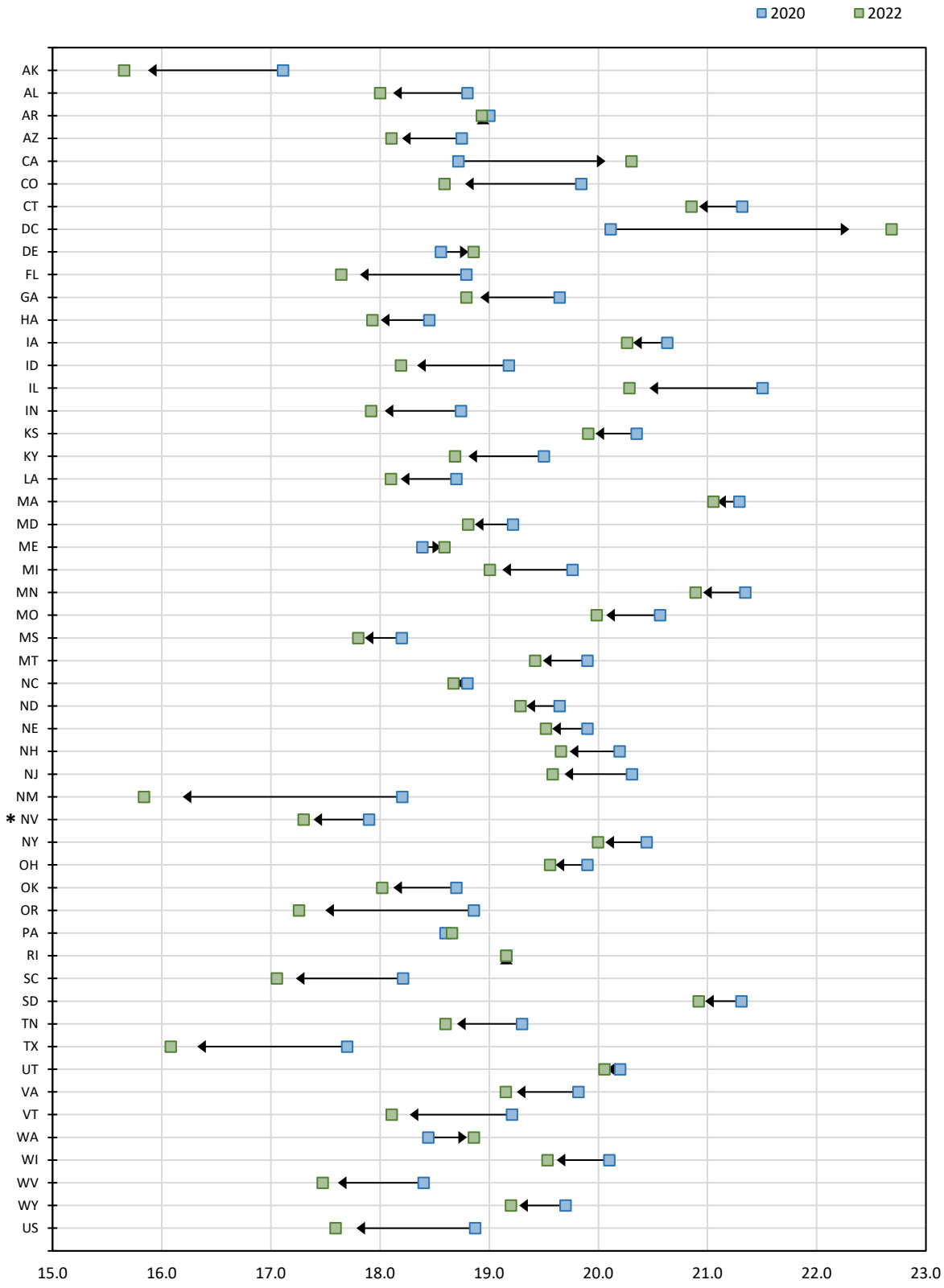
variance for the classes of 2020 and 2022, respectively. The quadratic regressions were used to adjust the composite ACT score for each state to what their score should have been if they had 100% participation. The unadjusted and adjusted data are depicted below.

Figure 28. Composite ACT Scores – Unadjusted and Adjusted



The adjusted composite ACT scores are represented in the plot below. To illustrate the influence of the adjustment calculations, the x-axis values remain unchanged for charting purposes, while the y-axis values reflect what each state's composite ACT score should have been with 100% participation. A trendline is included to show that the participation rate effect is no longer a factor – as indicated by the curved lines becoming flat lines.

Figure 29. Composite ACT Scores (Adjusted)



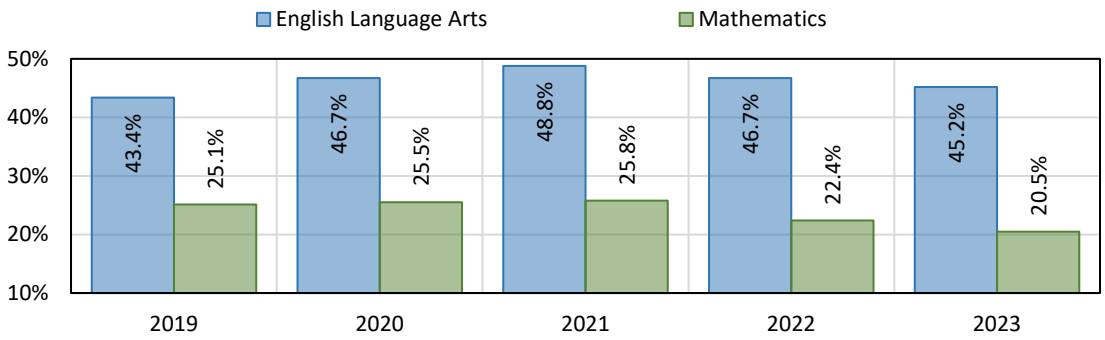
After adjusting the ACT scores for differences in participation rates, 44 states had lower ACT scores for the class of 2020 than the class of 2022, Rhode Island reported no change in scores, and six jurisdictions (five states and the District of Columbia) had higher ACT scores. New Mexico had the largest reduction (-2.4 points), as scores fell from 18.2 to 15.8 out of 36 possible over the period. In Arkansas, scores fell from 19.0 to 18.9 – the smallest reduction in the nation. At the same time, ACT scores rose in Pennsylvania (+0.1), Maine (+0.2), Delaware (+0.3), Washington (+0.4), California (+1.6), and the District of Columbia (+2.6).

Overall, Nevada had the 23rd largest reduction in ACT scores, with the average composite score in the state decreasing by 0.6 points. For the class of 2020, composite ACT scores in Nevada rose to 17.9 points, which tied with the class of 2019 as the highest composite ACT score since the state made taking the ACT mandatory in 2016. However, for the class of 2022, ACT scores in Nevada fell to their lowest level in 30 years, as the state's ACT score fell to 17.3 [36]. Despite the reduction in ACT scores, Nevada's overall ranking improved over the COVID-19 period, with Nevada's ACT score moving from 49th in the nation for the class of 2020 to 46th for the class of 2022.

Importantly, composite ACT scores are calculated as the average of scores from the four subject areas that compose the ACT exam, which covers English, mathematics, reading, and science. In Nevada, subject-specific ACT scores decreased for all four subject areas, with the largest reduction occurring in mathematics. Math scores fell from 18.0 for the class of 2020 to 17.1 for the class of 2022, which was the 11th largest reduction in the United States. Science recorded the smallest reduction over the period, moving from 18.1 to 17.6 over the same period – the 26th largest reduction for the subject. Nevada's reading-specific ACT score decreased from 18.3 for the class of 2020 to 17.8 for the class of 2022, while the state's English score fell from 16.7 to 16.1 between the classes. Compared to the rest of the nation in those categories, Nevada had the 25th and 22nd largest reductions, respectively.

For the class of 2020, Nevada ranked 49th out of the 51 jurisdictions (50 states and the District of Columbia) for English, 43rd for math, 49th for reading, and 50th for science. However, for the class of 2022, Nevada's scores improved to 46th in the nation for English, 47th for reading, and 46th for science, but fell to 44th for math. While nation-level data for the class of 2023 was not available, data is available from the Nevada Department of Education for the state's class of 2023. The Nevada Department of Education provides ACT score data not as a specific number but rather as a proficiency rate. The rate is determined by calculating what percentage of high school juniors who take the ACT scored higher than a subject-specific benchmark score, with the benchmarks being selected because they indicate a 50% chance of obtaining a B – or a 75% chance of obtaining a C – in a college-level course related to the subject. For mathematics, the benchmark score was determined to be 22, and the benchmark was 20 for English language arts. While the Nevada Department of Education provides this data for each school year, this report will refer to the cohorts of students by their class year to align with the previous section.

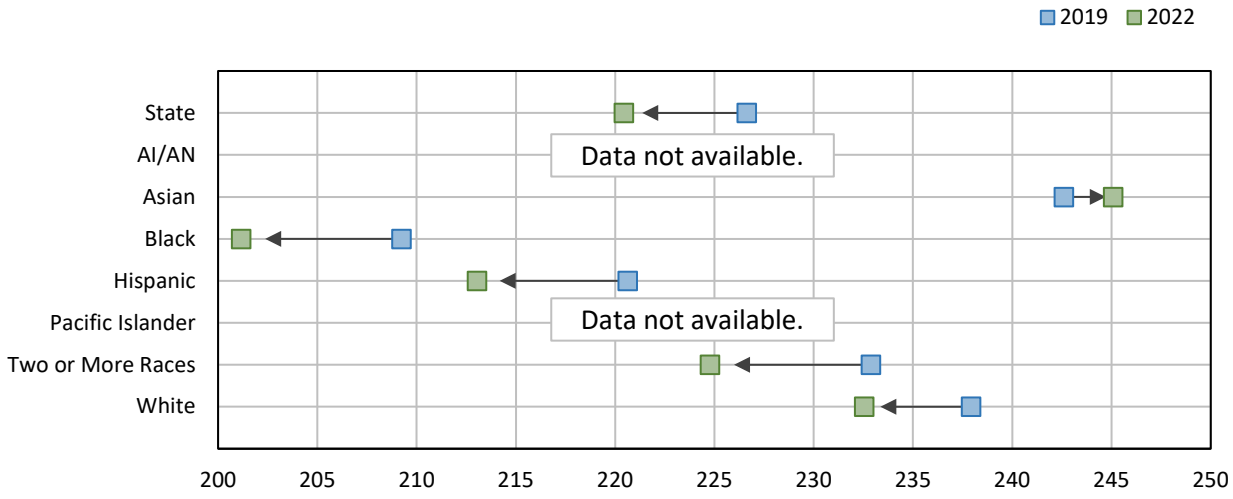
Figure 30. Nevada Student Subject Proficiency Rates by Class Year



Subject proficiency rates in Nevada had reported year-over-year improvements for each cohort of students until the class of 2022, who – because the exams are taken during the junior year of high schools – were the first cohort whose results could be impacted by the COVID-19 health crisis. For the class of 2022, 47% of students were proficient in English language arts, while 22% of students were proficient in mathematics. Those rates were lower than for the previous cohort, dropping by 2 percentage points in English languages arts and 3 percentages points in mathematics. For the class of 2023, proficiency rate continued their downward trek, falling an additional 2 percentage points for both English language arts and mathematics. In total, the share of students proficient in English language arts decreased 4 percentage points between the class of 2021 and the class of 2023, while the share of students proficient in mathematics fell 5 percentage points between the cohorts.

Educational Impact by Grade and Ethnicity/Racial Group

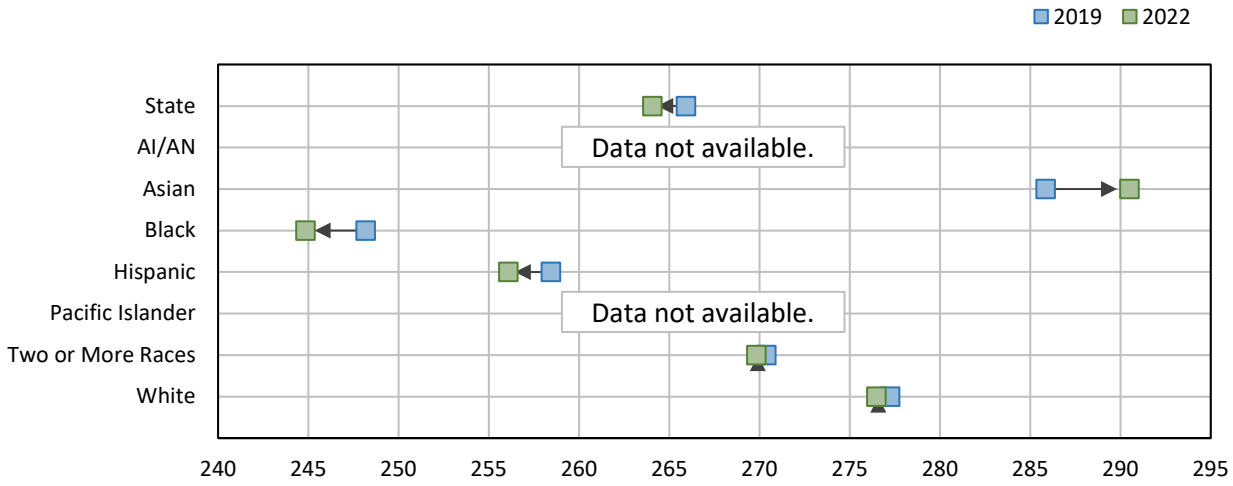
Figure 31. Change in Composite NAEP Scores for Fourth Graders in Nevada



The impacts of the COVID-19 pandemic on educational outcomes differed, with impacts varying dramatically from one demographic to another. Overall, fourth graders in Nevada recorded a reduction of 6.2 points on their NAEP assessments between 2019 and 2022. However, the impact was substantially

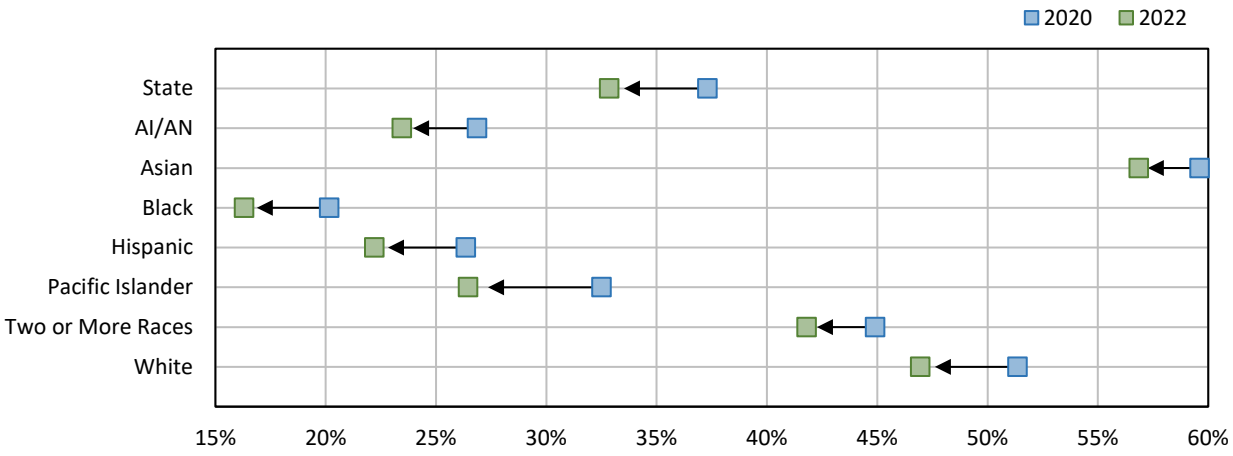
larger for Hispanic Nevadans (-7.6 points), non-Hispanic Black Nevadans (-8.1 points), and non-Hispanic Nevadans who identified as two or more races (-8.1 points). At the same time, the educational impact was lower for non-Hispanic White Nevadans (-5.4 points), and non-Hispanic Asians reported an increase of 2.5 points over the period. Data for the non-Hispanic American Indian/Alaskan Native and non-Hispanic Pacific Islander students was not available.

Figure 32. Change in Composite NAEP Scores for Eighth Graders in Nevada



For eighth graders in Nevada, the state recorded an average decrease of 1.8 points. Non-Hispanic Black Nevadans recorded the largest reduction of any group, with composite NAEP scores falling 3.3 points for the group, while Hispanic Nevadans reported the second highest reduction (-2.4 points). Non-Hispanic White eighth graders were slightly less negatively impacted, as scores for the group decreased by 0.7 points, and scores non-Hispanic Nevadans who identified as two or more races fell by 0.6 points, which was the smallest reduction of any group. At the same time, however, composite NAEP scores increased by 4.7 points for non-Hispanic Asian eighth graders between 2019 and 2022. As before, data remained unavailable for non-Hispanic American Indian/Alaskan Native and non-Hispanic Pacific Islander students.

Figure 33. Change in Proficiency Rates for High School Juniors in Nevada



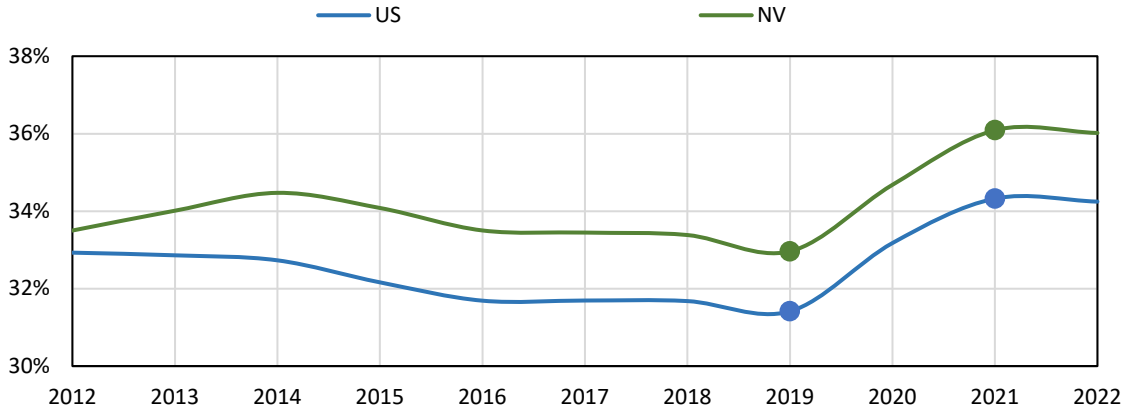
For high school juniors in Nevada, an average shift in proficiency rates was calculated from the Nevada Department of Education data to allow for ease of comparison with elementary and middle school students. According to that calculation, proficiency rates fell by 4.5 percentages points between 2020 and 2022. Out of the seven demographic groups considered, non-Hispanic Pacific Islander Nevadans reported the highest reduction (-6.1 percentage points) and was the only one to record a larger impact than statewide average reduction. Non-Hispanic White students were the closest to the statewide average, with a reduction of 4.4 percentage points. Hispanic students experienced a reduction of 4.2 percentage points, which was the next closest to the statewide average. Next, non-Hispanic Black students had a reduction of 3.9 percentage points, while proficiency rates fell by 3.4 and 3.1 percentage points for non-Hispanic American Indian/Alaskan Native and non-Hispanic Pacific Islander students, respectively. Finally, non-Hispanic Asians had the smallest reduction at 2.8 percentage points.

Inflation, Affordability, Homelessness

Macroeconomic Elements

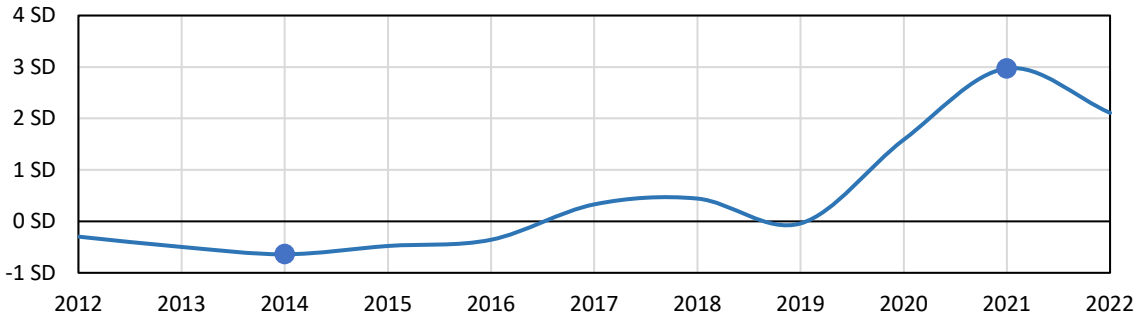
In response to the pandemic, consumers altered their spending habits, shifting their discretionary spending from services toward goods as consumers spent more time at home. Between 2019 and 2022, the national share of consumer spending on goods rose 3 percentage points, increasing from 31% to 34%. In Nevada, the share of consumer spending on goods grew to 36% in 2022, increasing by 3 percentage points from 33% in 2019.

Figure 34. Share of Spending on Goods



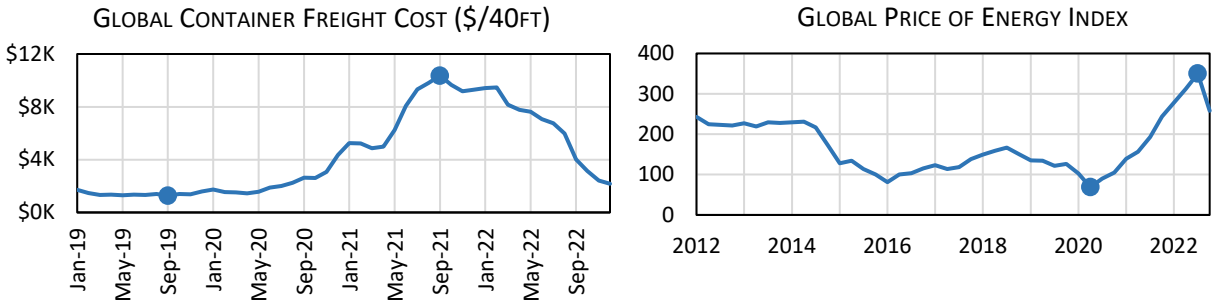
The reallocation of consumer spending from services to goods compounded upon COVID-19-related supply chain disruptions and increased strain on global supply chains. According to the Federal Reserve Bank of New York's Global Supply Chain Pressure Index – which measures the stress on global supply chains in standard deviations (referred to as "SD") – supply chains were more stressed in the COVID-19 period than at any point in the preceding two decades. Between 1998 and 2019, the average year deviated by 0.4 SD in absolute terms. In the post-COVID era, global supply chain pressures were higher, with deviations reported as 1.5 SD in 2020, 3.0 SD in 2021, and 2.2 SD in 2022 – those deviations were 3.7 times, 7.3 times, and 5.3 times higher than the average between 1998 and 2019, respectively.

Figure 35. Global Supply Chain Pressure Index



As a result, the global cost of ocean shipping increased considerably – financially impacting nearly 90% of the global trade [37]. During the COVID-19 period, the average cost of shipping a 40-foot container climbed 573% from $1,540 in February 2020 to $10,361 in September 2021. Since that peak, prices have trended downward but remain roughly 1.5 times higher than pre-pandemic rates.

Figure 36. Global Container Freight Cost and Price of Energy Index



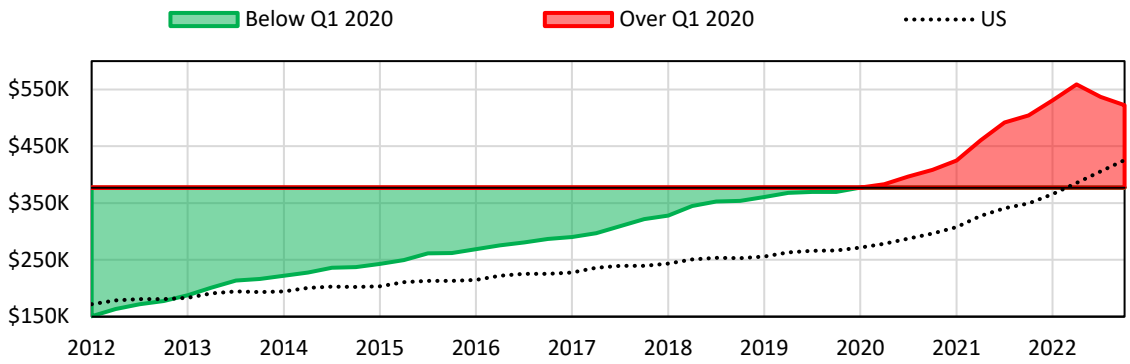
Finally, global energy prices surged due to a series of supply-side shocks and a stronger-than-expected resurgence in demand for energy after demand collapsed in early 2020. As a result, energy prices rose 241% between quarter one 2020 and quarter three 2022, before finally abating in quarter four of 2022.

Ultimately, the effects of the COVID-19 pandemic and related response created a macroeconomic environment that was prone to inflationary pressure, regardless of the occurrences within the confines of Nevada. However, while inflationary pressures are fundamentally the product of global and national trends, there are localized elements that can affect regional inflation rates. Specifically, the cost of housing is typically a more localized concern and is the most substantial individual component of the Consumer Price Index, as it composes nearly one third of the hypothetical basket that drives the index.

Single Family Home Prices and Affordability

Since reaching a bottom after the Great Recession, home prices gradually increased. Nationally, home prices grew from $171,900 in quarter one of 2012 to $425,672 in quarter four of 2022, representing an increase of $253,772 over the decade. Nevada home prices increased by nearly 1.5 times as much ($371,719) and rose from $150,700 to $522,419. Nearly half of the Nevada and United States home price increases occurred during the COVID-19 era.

Figure 37. Price of Single-Family Home



Home prices in Nevada grew at 12% per year between quarter one of 2012 and quarter four of 2022, which was the fastest rate in the nation and 1.5 times higher the national average. Over the same period, personal income grew at dramatically slower rates. Per capita personal income – or the total amount of personal income earned by workers in a state divided by the number of people living in the state – rose from $39,367 in quarter one of 2012 to $62,989 in quarter four of 2022 in Nevada, and from $43,756 to $66,609 for the United States. Per capita income growth increased in the COVID-19 era to 6% per year nationally and 6% per year in Nevada. Nevada reported the nineth fastest growth in per capita income between quarter one of 2012 and quarter two of 2022 but the 15th fastest growth during the COVID-19 era.

Importantly, home price appreciation outpaced per capita personal income and has challenged home affordability for many. In quarter one of 2012, the price of a single family home in Nevada was nearly 4 times the state's per capita income, making Nevada the 26th most affordable state in the nation at the time. By quarter four of 2022, the home-price-to-income ratio had swelled to 8.3 (down from a high of 9.0 in quarter 2 of 2022) and Nevada's rank fell to the 44th most affordable, or seventh *least* affordable, in the United States. Over the last decade, Nevada had the most rapid decrease in home price affordability in the nation, as the state's home-price-to-income ratio increased by 117% over the period at the same time that the national ratio increased by just 63%. However, during the COVID-19 era, Nevada's home-price-to-income ratio increased by 16%, which represented the 29th fastest reduction in affordability for a state and lower than the 33% increase across the United States.

Figure 38. Home Price-to-Income Ratio

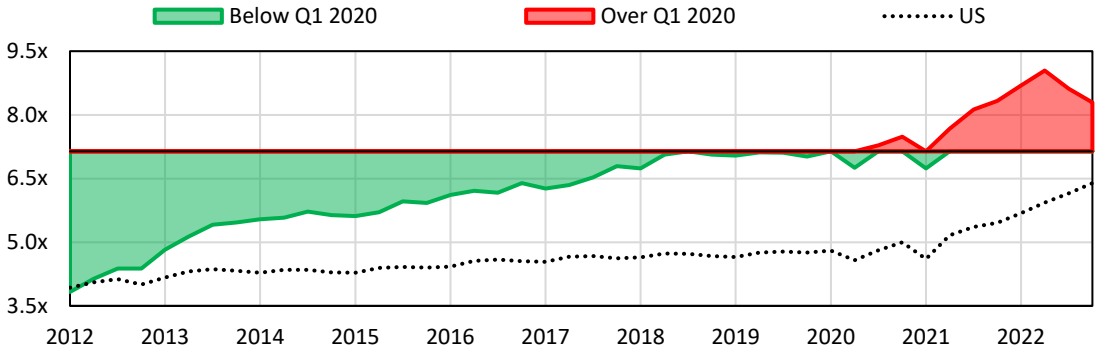
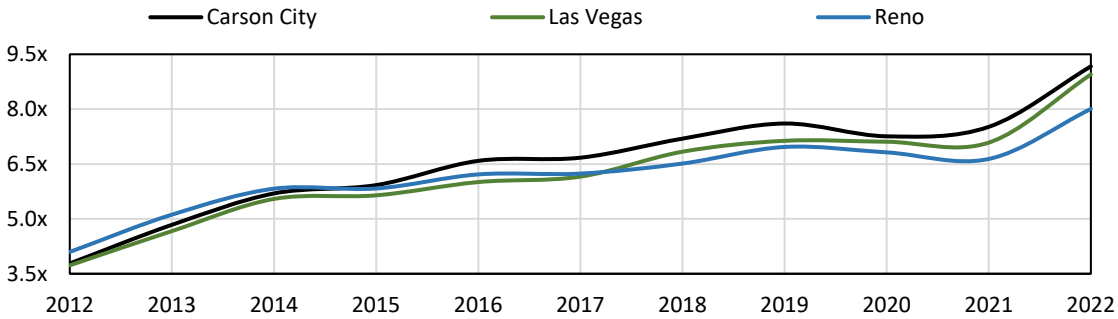


Figure 39. Home Price-to-Income Ratio by Region

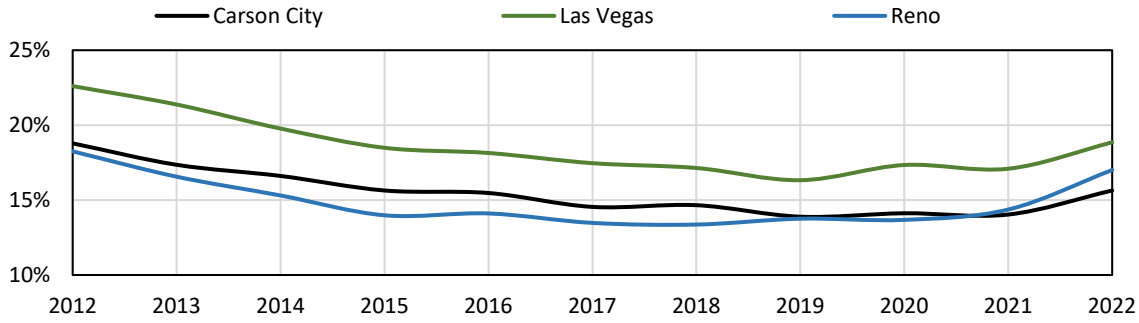


Metropolitan Areas and Effects on Rental Units

As affordability conditions have tightened in the Nevada single-family market, there were spillover effects into the residential rental market, particularly in the state's metropolitan areas. After a years-long trend toward improving affordability, the residential rental market in Nevada's metropolitan areas – Carson City, Las Vegas, and Reno – became notably less affordable for the first time in nearly a decade.

Between 2020 and 2022, homes became approximately 26% less affordable in Carson City and Las Vegas and 17% in Reno, as metro-specific home-price-to-income ratios began to rise in tandem with the rest of the state. The home-price-to-income ratio pressed northward from 7.3x to 9.2x in Carson City, 7.1x to 8.9x in Las Vegas, and 6.8x to 8.0x in Reno, with nearly the entirety of the movement occurring between 2021 and 2022.

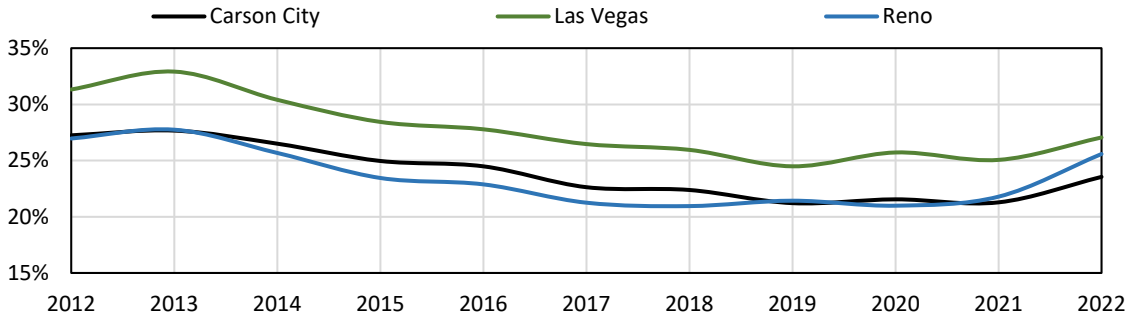
Figure 40. Efficiency Apartment Rent as Share of Per Capita Income



An efficiency apartment is a single room dwelling, like a studio apartment, but with open space to sleep, cook, and lounge within it. Studio apartments, for comparison, do not necessarily have a kitchen, while efficiency apartments do. Between 2020 and 2022, median rental rates for efficiencies in Carson City, Las Vegas, and Reno respectively climbed 10% ($650 in 2020 to $707 in 2021 to $783 in 2022), 8% ($774 to $830 to $910), and 16% ($749 to $856 to $1,007) per year. Per capita income growth was slower with annual growth rates around four% for the jurisdictions. As a result, rent as a share of income for efficiencies grew to 16%, 19%, and 17% in Carson City, Las Vegas, and Reno – levels not seen since 2015, 2014, and 2012, respectively.

Similar trends existed for two-bedroom rental units, as rental rates increased 9% annually in Carson City, 7% annually in Las Vegas, and 15% annually in Reno between 2020 and 2022 – causing rents to rise from $992 to $1,179 in Carson City, $1,148 to $1,306 in Las Vegas, and $1,149 to $1,515 in Reno. Again, per capita income grew by just four% per year for each jurisdiction, resulting in rent as a share of income to rise from 22% to 24% in Carson City, 26% to 27% in Las Vegas, and 21% to 26% in Reno between 2020 and 2022. Reno reported the largest reduction in affordability in both nominal and relative terms.

Figure 41. Two Bedroom Rent as Share of Per Capita Income

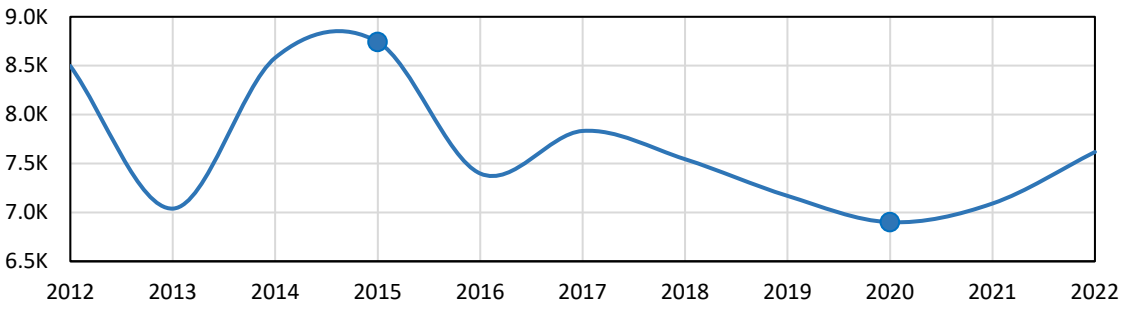


While the shifts in rental affordability appear less dramatic than the shifts in homeownership affordability, shifts in rental affordability are likely to have an outsized impact on renters and at-risk populations than shifts in home affordability for homeowners or prospective homeowners. The United States Government Accountability Office determined that an increase of $100 in monthly rent payments resulted in a 9% increase in homelessness [38]. In separate analyses, the Federal Reserve Bank found that homeowners had a 40 times larger net worth than renters, while Pew Research Center found renters were substantially younger, more likely to be unmarried, and earned less income than homeowners [39][40].

Shifting Homelessness in Nevada by Region

Each year, continuums of care – which are local homeless assistance programs that provide services within their communities – conduct annual "point-in-time" surveys, where sheltered and unsheltered homeless individuals are counted on a single night typically at the end of January. These counts are conducted in compliance with requirements from the United States Department of Housing and Urban Development. As such, the point-in-time counts make up the baseline metric for homelessness in America.

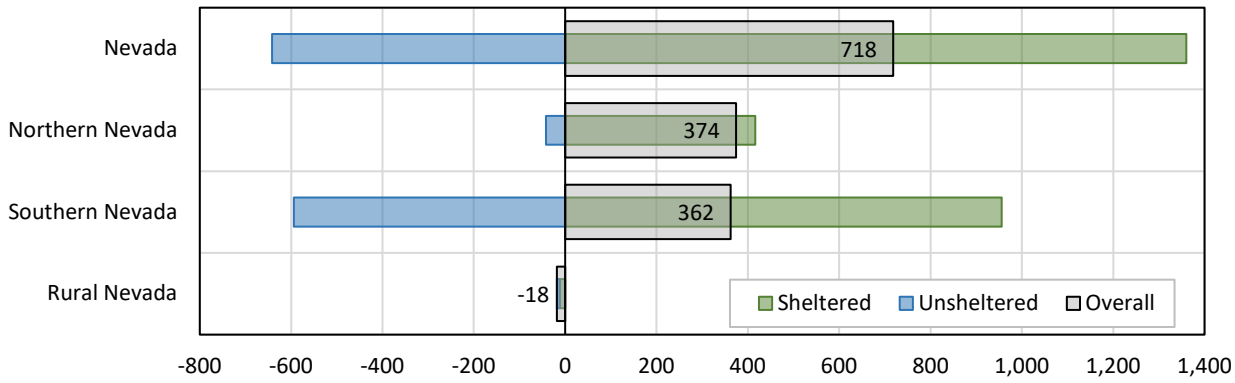
Figure 42. Total Homelessness in Nevada



Since reaching a decadal high of 8,743 homeless individuals in 2015, homelessness in Nevada fell steadily for a cumulative 21% reduction until 2020, when the years-long downward trend experienced a reversal. Between 2020 and 2022, homelessness in Nevada increased by over 10%, rising from 6,900 homeless individuals to 7,618.

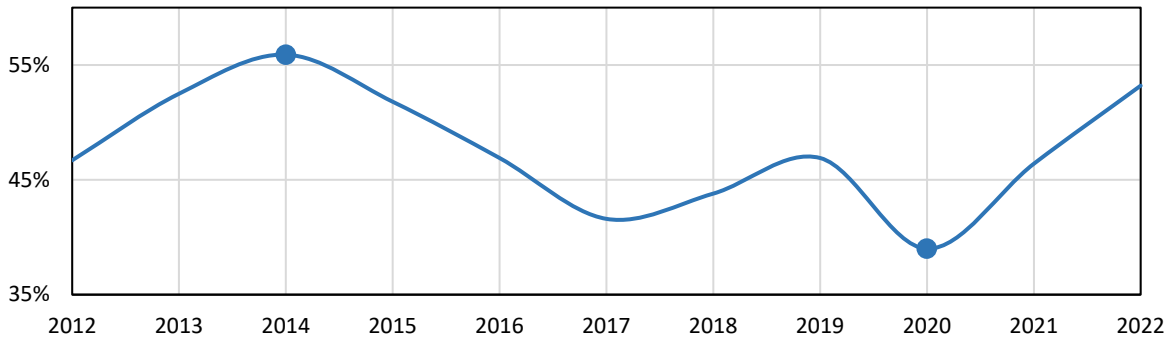
Just over half of the increase in homelessness occurred in Northern Nevada, coinciding with the disproportionate reduction in shelter affordability. Between 2020 and 2022, homelessness in the Northern Nevada Continuum of Care grew by 374 individuals, representing a 30% increase and 52% of the total statewide increase in homelessness. At the same time, the Southern Nevada Continuum of Care reported an additional 362 individuals, which was an increase of 7%, and the Rural Nevada Continuum of Care recorded a 5% reduction (18 individuals) in homelessness.

Figure 43. Changes in Homelessness by Region and Shelter Status Between 2020 and 2022



However, while the number of homeless did increase over the time period, the share of homeless individuals without access to continuum of care-provided shelter fell in all regions. Overall, 55% of homeless individuals had access to shelter in 2014. In 2020, just 39% of individuals had access to continuum of care-provided shelter. In 2022, The share grew to 53%, largely as a result of reductions in unsheltered homelessness in Southern Nevada. Between 2020 and 2022, unsheltered homelessness decreased by 642 individuals across the state, and 594 of that reduction was in Southern Nevada alone.

Figure 44. Sheltered Share of Homeless Individuals

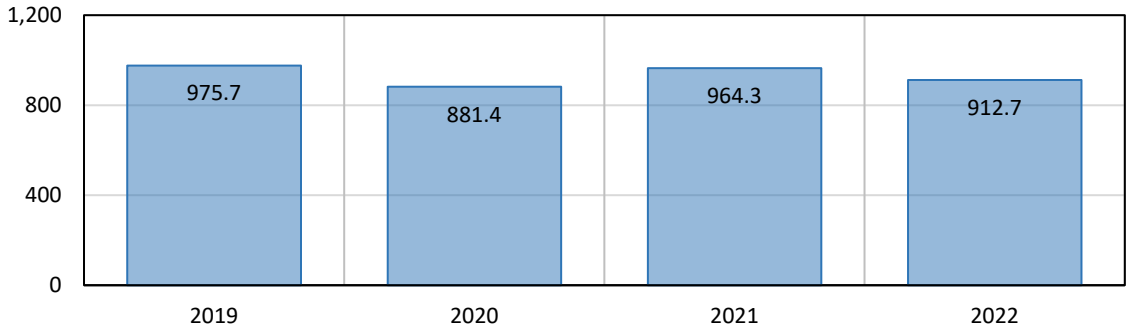


Crime

During the COVID-19 pandemic, and specifically during the lockdowns, many of the larger cities in the United States saw shifts in the frequency and types of crime committed. However, according to Nevada Crime Statistics, not all of these trends were observed in Nevada during the COVID-19 pandemic [41].

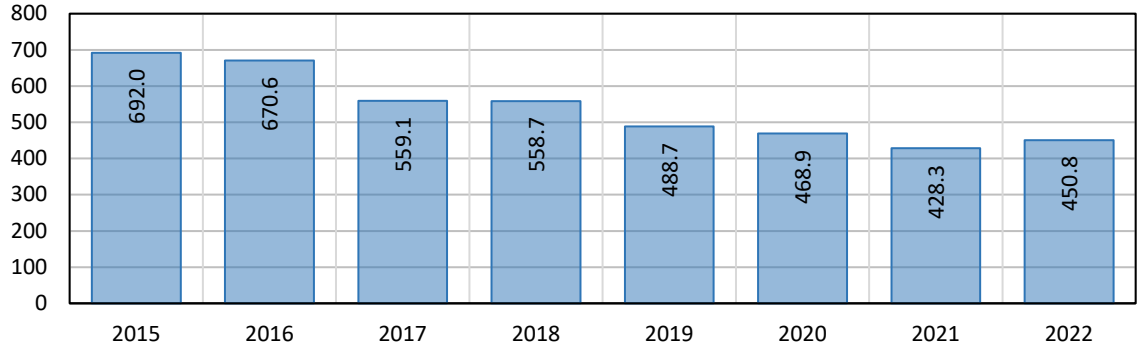
In an analysis on crime in major cities in the United States conducted by the Council on Criminal Justice, the data showed that domestic violence increased just over eight% when lockdown orders went into effect at the beginning of the pandemic [42]. However, in Nevada, domestic violence against a current or former spouse, parent, or guardian has stayed stable since 2019.

Figure 45. Rate of Domestic Violence in Nevada



Violent crime across the nation also saw slight increases at the beginning of the pandemic but has been consistently decreasing in Nevada since 2015. The Nevada Crime Statistics composes violent crime of four different offenses: murder and nonnegligent manslaughter, rape, robbery, and aggravated assault. Of these four subcategories, aggravated assault, robbery, and rape all experienced a continued downward or stable trend. In contrast, after reaching a high of 9.0 murders per 100,000 Nevada population in 2017, murder rates began to decrease until they reached a low of 4.6 per 100,000 population in 2019 but then returned to an increasing trend from 2020 through 2022, although still remaining lower than pre-pandemic highs.

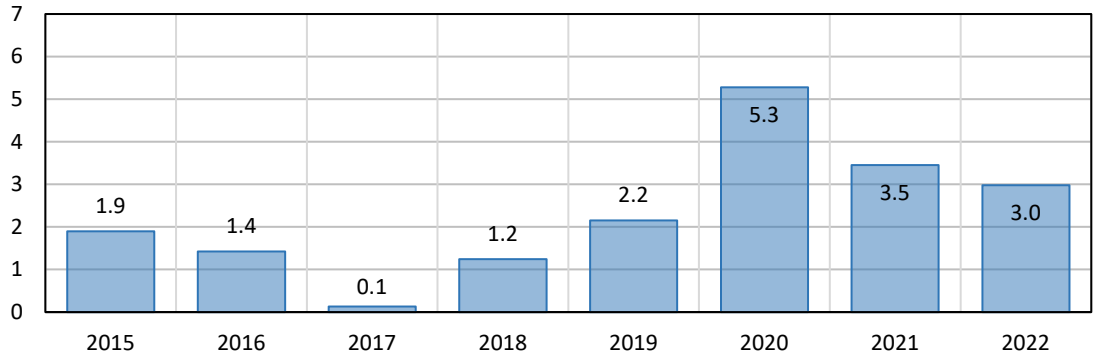
Figure 46. Rate of Violent Crimes in Nevada



Hate crimes increased slightly from 2.2 per 100,000 population in 2019 to 3.0 per 100,000 population in 2022, but there was a notable jump between 2019 to 2020 up to 5.3 per 100,000 population. The Nevada

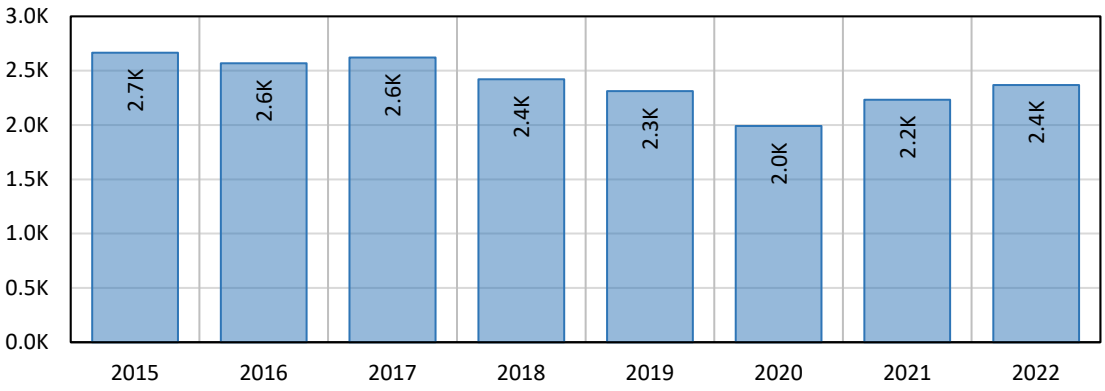
Crime Statistics defines a hate crime as a criminal offense against a person or property motivated in whole or in part by an offender's bias against a race, religion, disability, sexual orientation, ethnicity, gender, or gender identity. Of the hate crimes committed in Nevada over the past three years, on average, 75% are motivated by race/ethnicity/ancestry bias. Between 30 and 40% of hate crimes are simple assault and about one third are committed in a residence or home.

Figure 47. Rate of Hate Crimes in Nevada



Nevada also observed an increase in property crime during the pandemic, which consists of burglary, motor vehicle theft, larceny, and arson. The rate of property crime was steadily decreasing from 2017 to 2020 but started increasing again in 2021 and 2022. The vast majority of property crime committed in Nevada is larceny and burglary, and motor vehicle theft is the next highest with rates comparable to each other. Of the property that is stolen and recovered, the largest share is locally stolen motor vehicles. The trend of motor vehicle theft increased starting in 2020 for all types of vehicles. Larceny, or theft of personal property, was the only subcategory that did not see obvious increases during the years of the pandemic. Lastly, there was a significant increase in the rate of arson per 100,000 population from 2019 to 2021 (9.4 to 16.8 per 100,000 population, respectively) with a slight decrease to 14.1 in 2022.

Figure 48. Rate of Property Crime in Nevada



Child Welfare

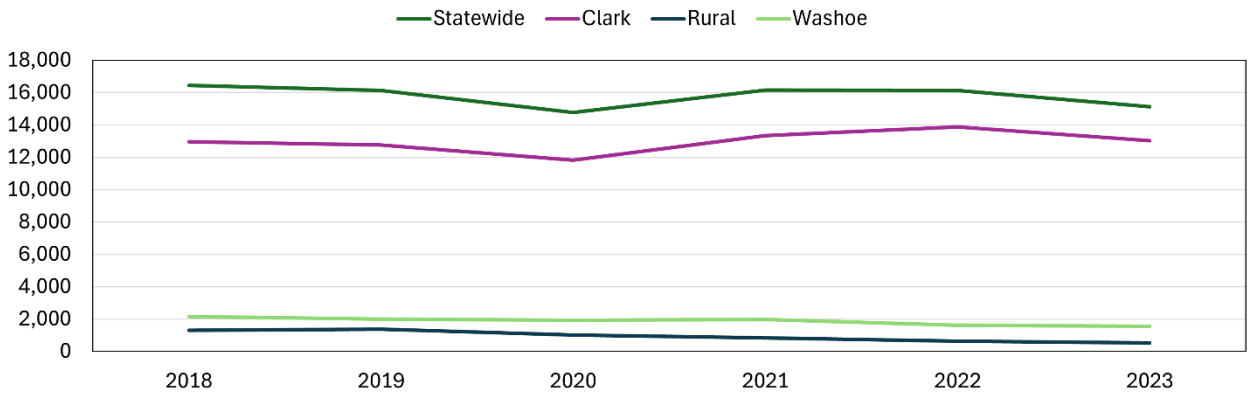
The COVID-19 pandemic had significant impacts on child welfare, including an increased risk of abuse and neglect with families facing heightened stress due to factors such as job loss, financial strain, housing insecurity, social isolation, and fear of illness and death from the virus. School closures and the shift to remote learning posed challenges for children in foster care, who often lacked access to necessary technology and resources, and generally limited the ability of teachers and other mandated reporters to identify signs of abuse and neglect. Additionally, like other essential services, court closures and restrictions on in-person visits further complicated the child welfare process, leading to delays in permanency for children in foster care, including reunification with birth families or adoption. Because of the restrictions on social interactions and visits with family members, children in foster care may have experienced increased feelings of isolation and loneliness. The pandemic also exacerbated mental health issues for children and caregivers alike.

Child Protective Services (CPS)

Nevada's Child Protective Services (CPS) are administered by three agencies: Clark County Department of Family Services (covering Clark County), Washoe County Human Services Agency (covering Washoe County), and the Nevada Department of Child and Family Services (covering all rural counties). These agencies receive reports of maltreatment from community members. The information provided in these allegations of maltreatment are assessed and determined to either meet criteria for a CPS response (screened in) or not meet those criteria (screened out).

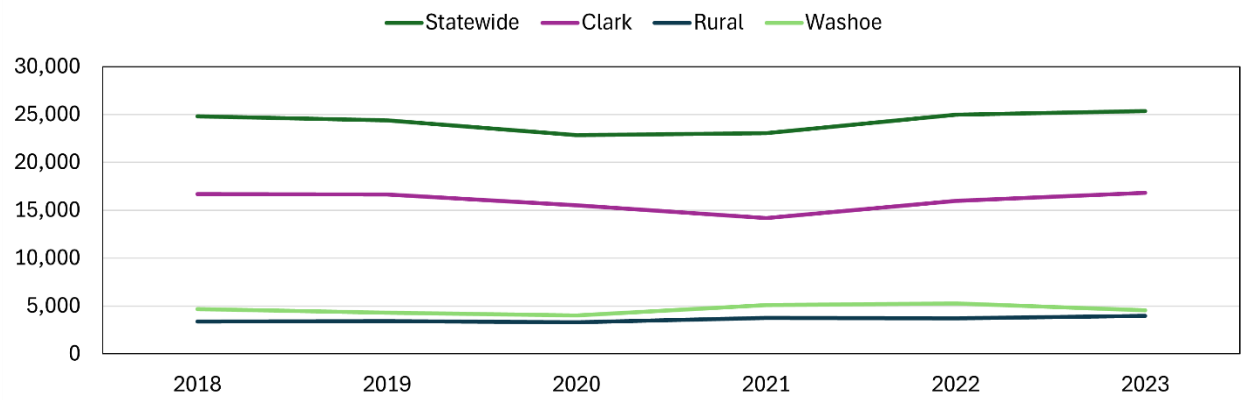
The number of screened in reports decreased statewide leading up to and into the first year of the pandemic, from 16,438 in SFY 2018 to 14,761 in SFY 2020. That count increased again in SFY 2021 and SFY 2022. Clark County followed a similar trend. Both Washoe and Rural Region had a steady decrease in screened in reports from SFY 2018 to SFY 2023.

Figure 49. Screened-In Reports Received by Child Welfare Jurisdiction



The number of screened out reports decreased statewide in SFY 2020 before increasing again from SFY 2021 to SFY 2022. This trend was echoed in Washoe and Rural Region, while Clark continued to decline until SFY 2021 before increasing again in SFY 2022. Each of the jurisdictions had a low point of screened-out reports during the pandemic.

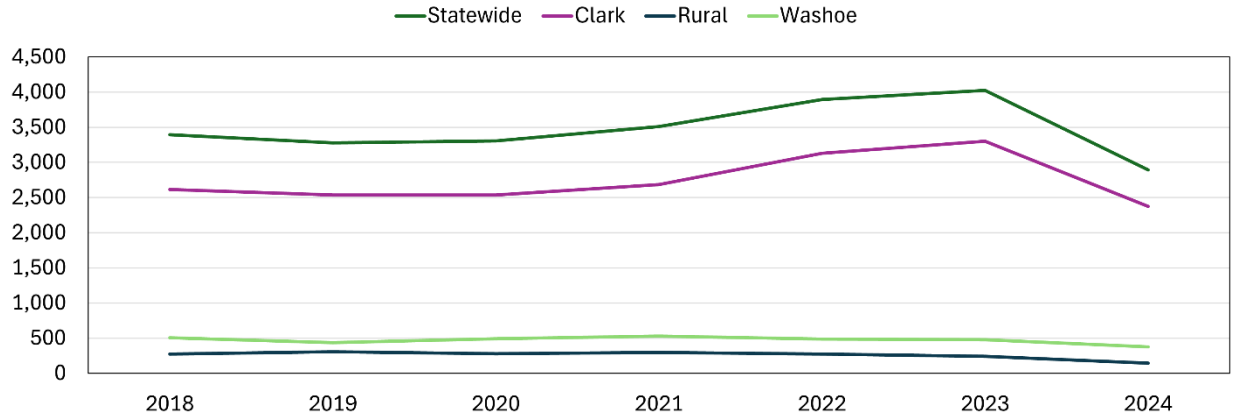
Figure 50. Screened-Out Reports Received by Child Welfare Jurisdiction



During a child welfare investigation, CPS workers investigate allegations of maltreatment and assign each allegation a disposition (finding) level. Figure 51 shows investigation closures for reports with a disposition of "substantiated" by Child Welfare Jurisdiction.

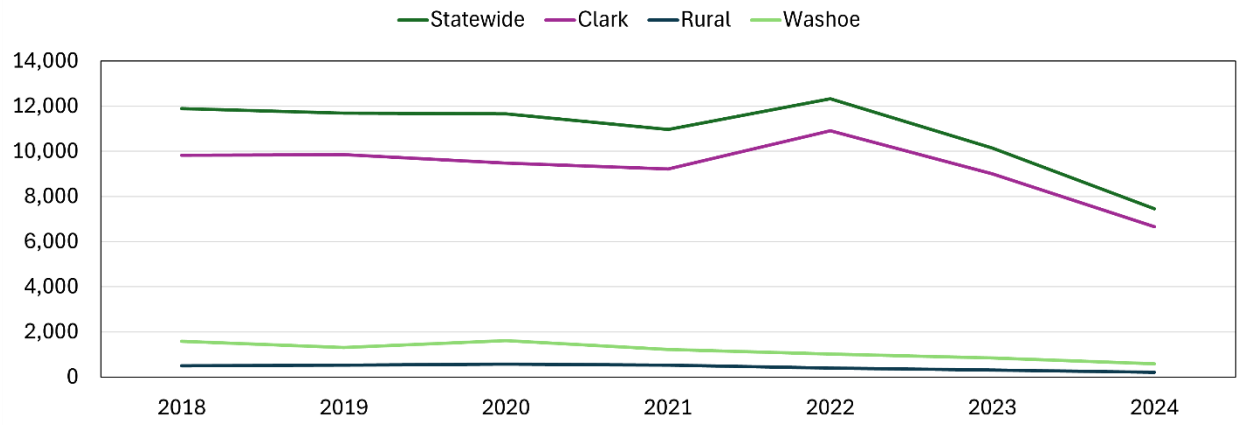
The number of substantiated reports statewide rose from 3,393 in SFY 2018 to 4,024 in SFY 2023, and from 2,614 to 3,303 in Clark County. The number of substantiated reports stayed relatively stable in Washoe (504 in SFY 2018 to 380 in SFY 2023) and Rural Counties (275 in SFY 2018 to 241 in SFY 2023) during this period.

Figure 51. Closed Investigations by Child Welfare Jurisdiction with a Disposition "Substantiated"



A report is assigned a disposition of "unsubstantiated" if all allegations of maltreatment were found to be unsupported. Statewide, unsubstantiated investigations have declined steadily from 11,895 reports in SFY 2018, to 10,148 in SFY 2023. During SFY 2022, there was an increase in reports from the previous SFY 2021 from 10,974 to 12,323. In SFY 2021 Washoe and Rural jurisdictions showed a slight decrease in unsubstantiated reports, while Clark had a strong increase in reports unsubstantiated.

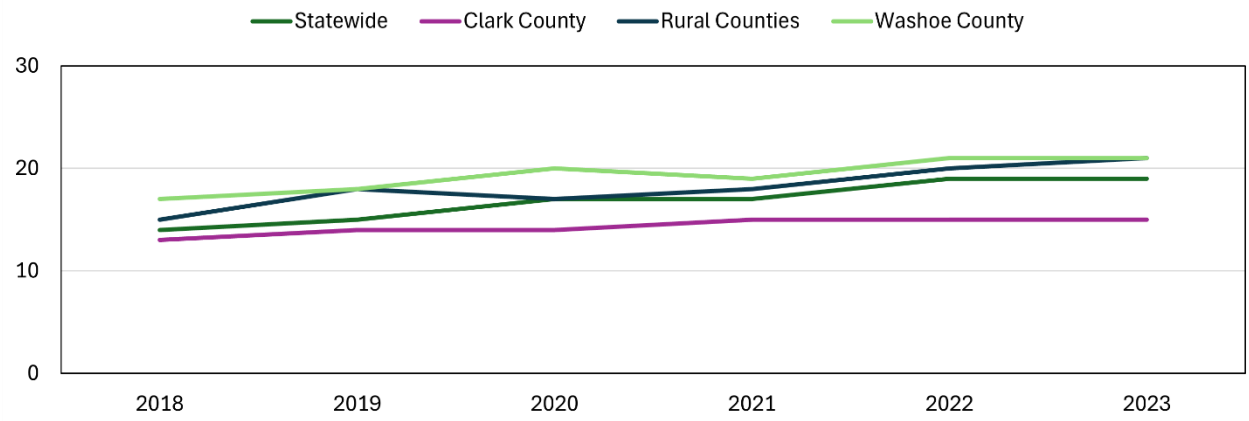
Figure 52. Closed Investigations by Child Welfare Jurisdiction with a Disposition of "Unsubstantiated"



When referrals are screened in, CPS workers conduct an Initial Safety Assessment to determine whether safety concerns and/or risk to the child are present. Depending on the concerns identified during that safety assessment and throughout subsequent CPS involvement, the child may be removed from their home and placed into foster care. Due to difficulty with resources and staff availability we have seen a steady increase in the length of stay in foster care since the pandemic.

Statewide, the average length of stay in foster care rose steadily from 14 months in SFY 2018 to 19 months in SFY 2023. The length of stay in foster care stayed relatively steady in Clark County, rising slightly from 13 months to 15 months from SFY 2021-SFY2023. It increased in both Washoe County (17 months to 21 months) and rural counties (15 months to 21 months) from SFY 2018-SFY 2023. Due to Clark County's large population, average length of stay is less susceptible to change over time, while Washoe and rural counties are more vulnerable to shifts due to very long or very short foster care stays. All three jurisdictions have shown elevated average length of stay in foster care compared to pre-pandemic levels.

Figure 53. Average Length of Stay in Foster Care by Child Welfare Jurisdiction



Substance Use

The COVID-19 pandemic is thought to have had significant impacts on substance use due to increased stress and anxiety, disruptions in treatment, and changes in harm reduction activities. In Nevada, data suggest that there have been significant increases in substance-related deaths, but not in the volume of individuals seeking treatment in a hospital setting.

Drug Use

The impacts of the COVID-19 pandemic on drug related inpatient admissions were minimal; the number of drug-related inpatient admissions was similar during COVID-19 and before COVID-19. It is worth noting that for youths, marijuana-related inpatient admissions increased from quarter one of 2019 to quarter two of 2021 with dips in quarter two of 2020 and quarter one of 2021. There were also increasing trends for adults' marijuana and methamphetamines-related inpatient admissions from 2016 to 2019, but the numbers were stable after 2019.

Figure 54. Youth Drug-Related Hospital Inpatient Admission Rate

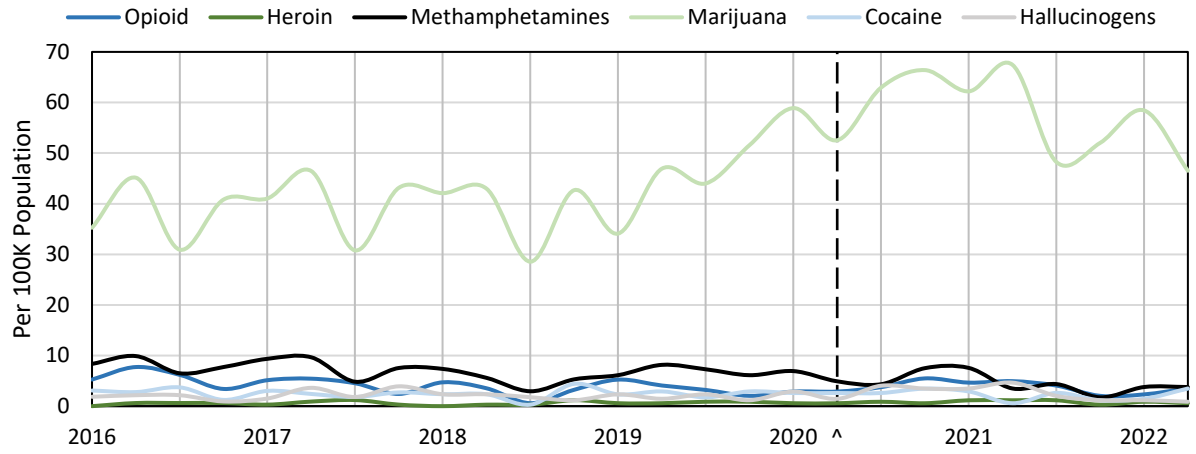
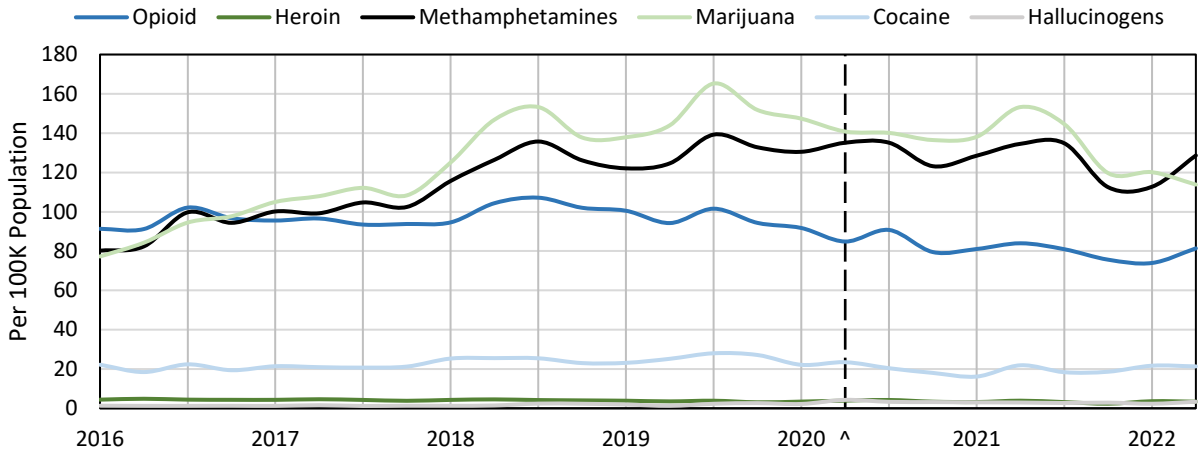


Figure 55. Adult Drug-Related Hospital Inpatient Admission Rate



Similarly, the impacts of the COVID-19 pandemic on drug-related emergency department encounters were minimal. The number of drug related emergency department encounters was similar during COVID-19 and before COVID-19. It is worth noting that the marijuana related emergency department encounters for youths increased in 2019. The methamphetamines related emergency department encounters for adults also increased in 2019.

Figure 56. Youth Drug-Related Hospital Emergency Department Encounter Rate

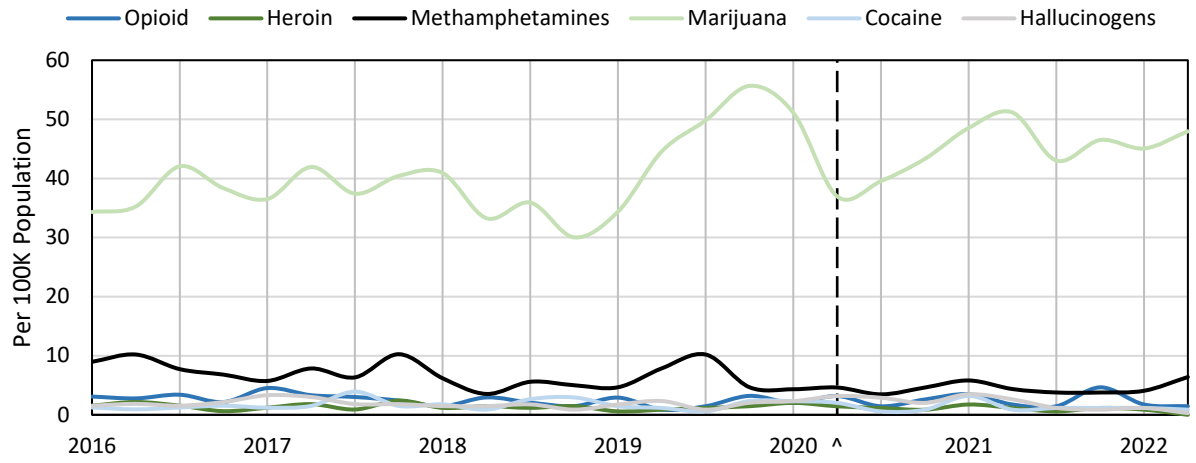
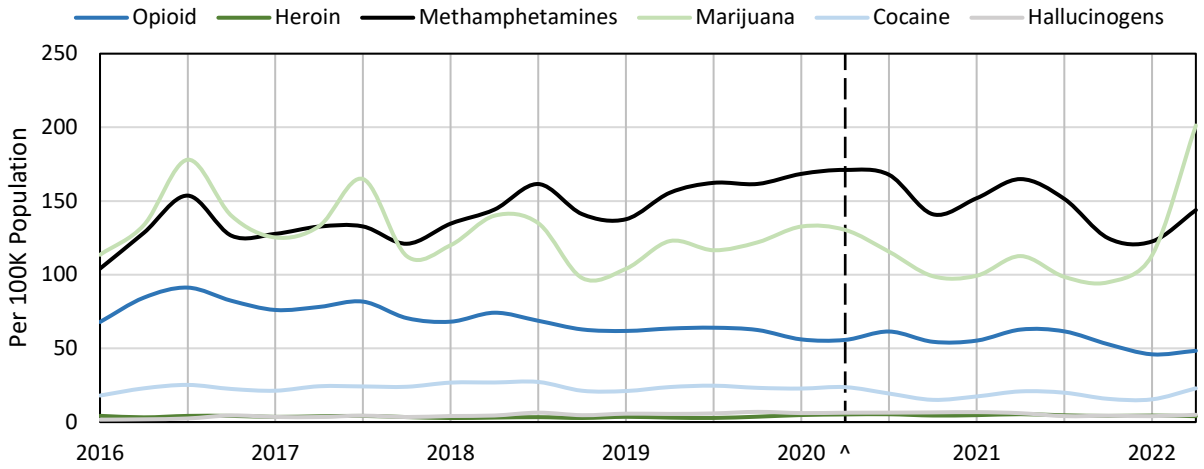


Figure 57. Adult Drug-Related Hospital Emergency Department Encounter Rate



Unlike hospitalization trends, drug-related deaths in Nevada had a significant increase during the pandemic. Rates were at their lowest in six years at the end of 2019. By 2020, rates had a nearly 50% increase compared to the previous year's average, reaching their highest level in six years in quarter three of 2021. Importantly, drug-related inpatient and emergency department encounters did not have significant changes in the years during the pandemic. This difference in trends suggests the pandemic reduced opportunities for medical intervention in substance use-related crises.

Figure 58. Drug-Related Deaths for Nevada Residents

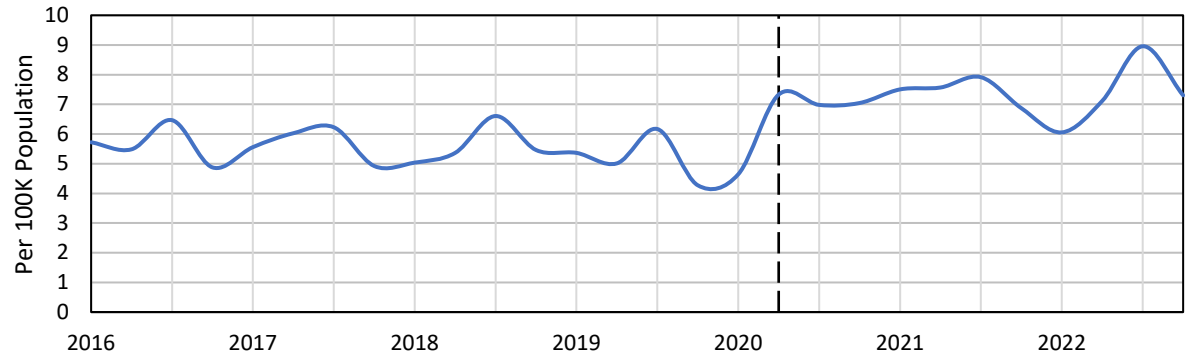
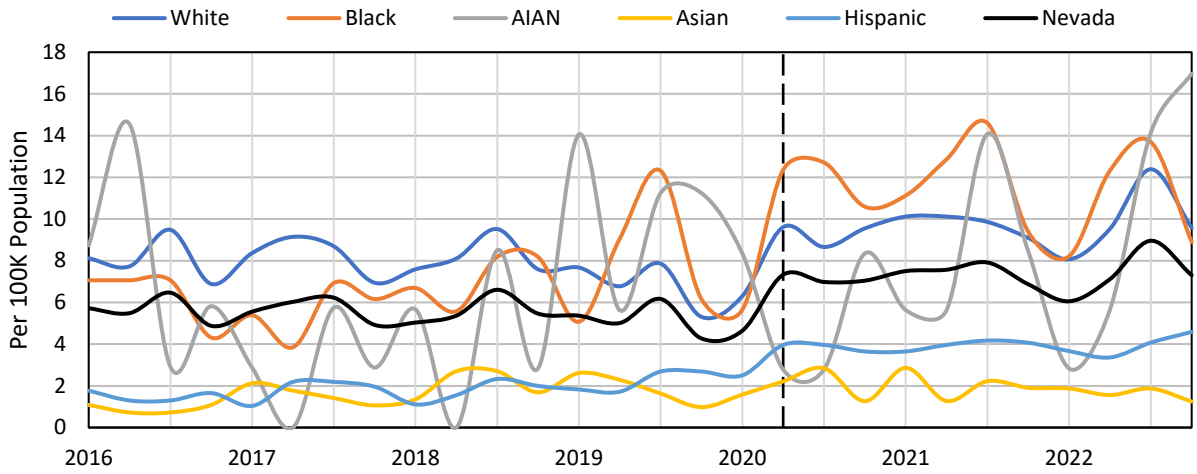


Figure 59. Drug-Related Deaths for Nevada Residents by Race/Ethnicity



The non-Hispanic Black population in Nevada was the most adversely affected group by drug-related deaths. While that population has always had disproportionately higher rates, the gap grew substantially in the years since the COVID-19 pandemic. The non-Hispanic White population has historically been above the state rate and this trend continued during the pandemic. Hispanics had a slight increase during the pandemic and Non-Hispanic Asians had minimal changes. The age group with the highest mortality is 55–64-year-olds, although the distribution is more evenly spread amongst adult age groups compared to alcohol mortality.

Alcohol Use

The impacts of COVID-19 on alcohol-related emergency department encounters and inpatient admissions were different for youths and adults. For adults, alcohol-related emergency department encounters increased modestly during the COVID-19 period. At the same time, inpatient admissions remained stable. For youths, alcohol-related emergency department encounters decreased slightly during the COVID-19 period. At the same time, youth inpatient admissions increased slightly, which was a departure from the trends in the adult population.

Figure 60. Youth Alcohol-Related Hospital Encounter Rates

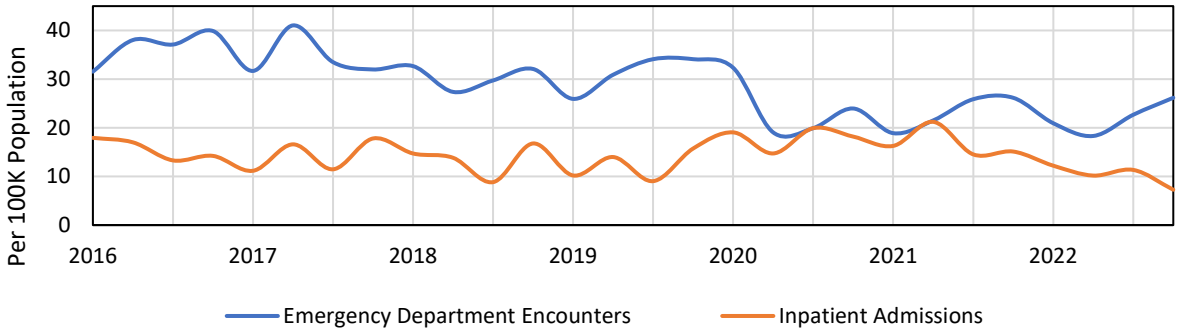
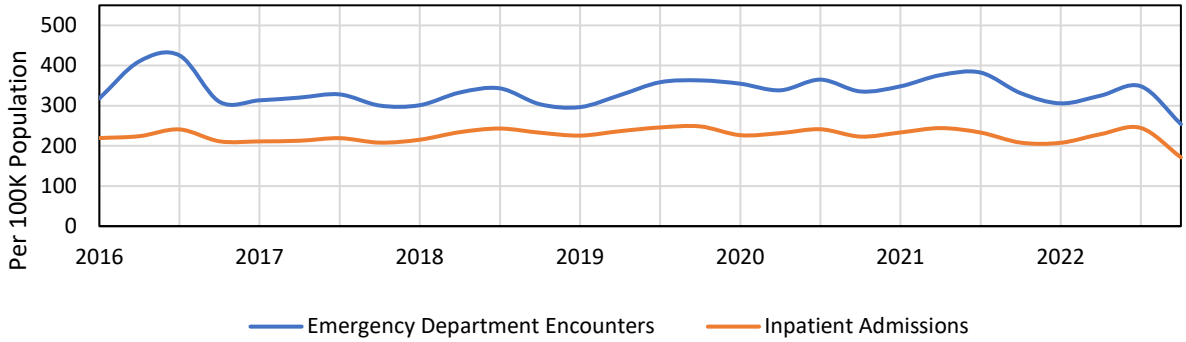
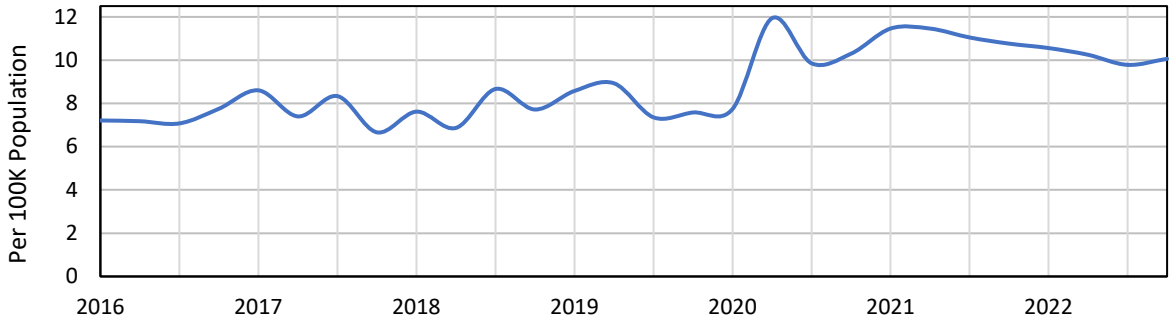


Figure 61. Adult Alcohol-Related Hospital Encounter Rates



Alcohol-related deaths increased significantly in the years following COVID-19. The rate of deaths per 100,000 population was 7.7 in quarter one of 2020. By the next quarter of 2020, the rate was at 11.9 deaths. This large increase in alcohol related deaths has been documented at the national level as well. According to the CDC, alcohol-related deaths "jumped 26% between 2019 and 2020 – making nearly the same climb in one year as over the decade before [43]."

Figure 62. Alcohol-Related Death Rate for Nevada Residents

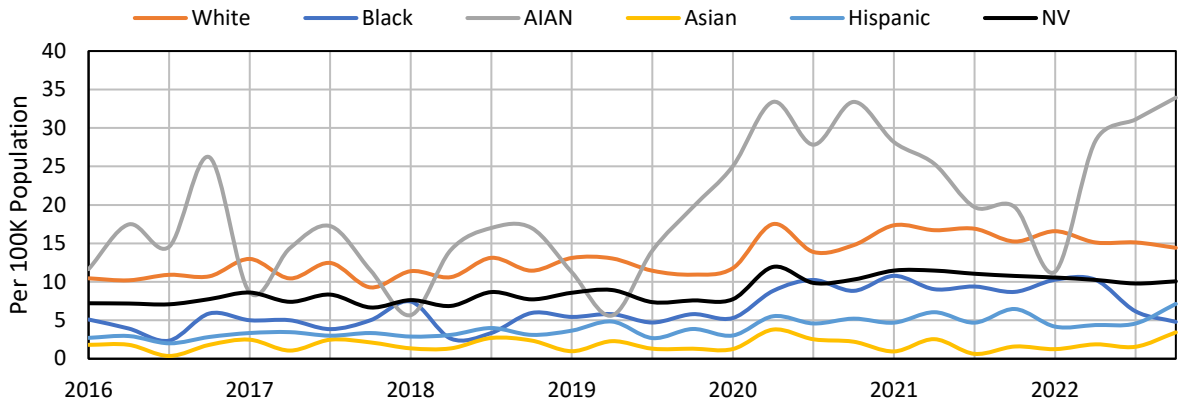


All racial groups saw an increase in alcohol related deaths during the pandemic. Non-Hispanic American Indian and Alaska Natives had the largest increase, although when considering confidence intervals, the increase is likely less pronounced. Still, this group was among the most affected. Prior to COVID-19, the

Non-Hispanic Black population had fewer alcohol related death rates than other populations comparatively. Since 2020, that group has been near or above the statewide rate.

Alcohol consumption rates differ across age groups and as such, deaths vary as well. Most years the youngest age group that begins to suffer from alcohol related deaths are 18–25-year-olds. Alcohol related deaths more than doubled for this age group between 2019 and 2021, compared to the previous three years. The age group with the highest mortality due to alcohol each year has consistently been 55–64-year-olds. Most age groups had increases in mortality in the years during the pandemic.

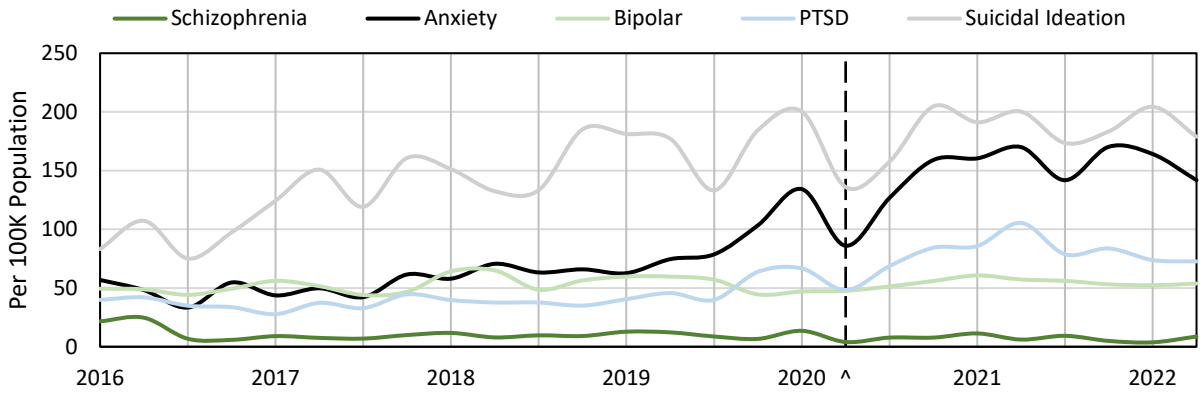
Figure 63. Alcohol-Related Death Rate for Nevada Residents by Race/Ethnicity



Mental Health

Hospital inpatient billing data includes data for patients of all ages discharged from Nevada hospitals. Since an individual can have more than one diagnosis during a single inpatient admission, the following numbers reflect the number of times a diagnosis was given, and therefore are not mutually exclusive and do not represent unique visits. Overall, the impacts of the COVID-19 on mental health related inpatient admissions were substantial and different between youths, ages 10-17, and adults, 18 years and older.

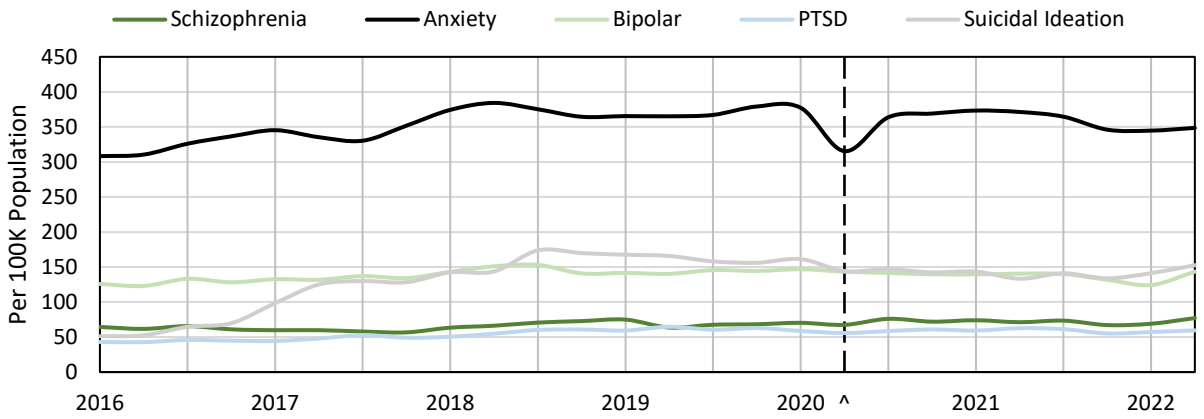
Figure 64. Youth Mental Health-Related Hospital Inpatient Admission Rate



The number of inpatient admissions of both youth and adults decreased in quarter two of 2020 due to the stay-at-home order and residents not seeking non-emergent medical help as frequently. The number

of diagnoses for suicidal ideation, anxiety, and PTSD in the inpatient setting for youths from quarter three of 2020 to quarter two of 2022 increased and were higher than the years prior to the COVID-19 pandemic. It is worth noting that anxiety related inpatient admissions for youth had seasonal changes potentially related to school schedule, and there were more anxiety related inpatient admissions during school semesters.

Figure 65. Adult Mental Health-Related Hospital Inpatient Admission Rate



Although there is no sign of an increase of mental health related inpatient admissions for adults compared to pre-COVID-19 years, there were some patterns worth noting. The anxiety related admissions for adults steadily increased from quarter three of 2017 to quarter two of 2018 and has stayed about the same level since then. Suicidal ideation for adults increased from quarter one of 2016 to quarter three of 2018 and stayed consistent, and then slightly dipped between quarter two of 2020 and quarter four of 2021.

The hospital emergency department billing data includes data for emergency room patients of all ages for Nevada's non-federal hospitals. Since an individual can have more than one diagnosis during a single emergency department encounter, the following numbers reflect the number of times a diagnosis was given, and therefore the following numbers are not mutually exclusive and do not represent unique visits.

Overall, the impacts of COVID-19 on mental health related emergency department encounters were substantial and differed between youths ages 10-17, and adults 18 years and older. Like inpatient admissions, the number of emergency department encounters for both youth and adults decreased in quarter two of 2020, likely due in large part to stay at home orders. The number of emergency department encounters related to suicidal ideation for youths from quarter three of 2020 to quarter two of 2022 increased and were higher than the years prior to the pandemic. It is worth to note that depression and anxiety related emergency department encounters for youths also had seasonal changes related to school schedule; there were more anxiety related inpatient admissions during school semesters. Suicidal ideation related emergency department encounters for youths had an overall increasing trend, doubling from 2016 to 2022.

Figure 66. Youth Mental Health-Related Hospital Emergency Department Encounter Rate

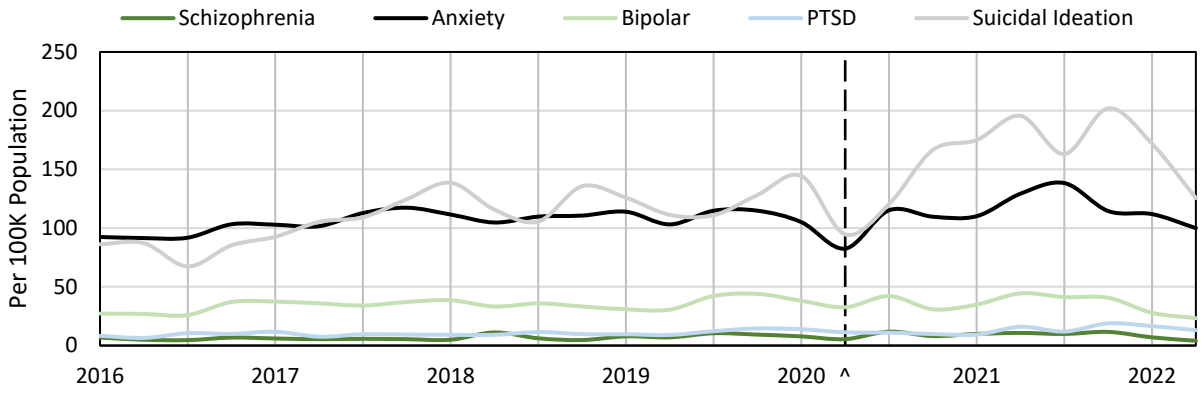
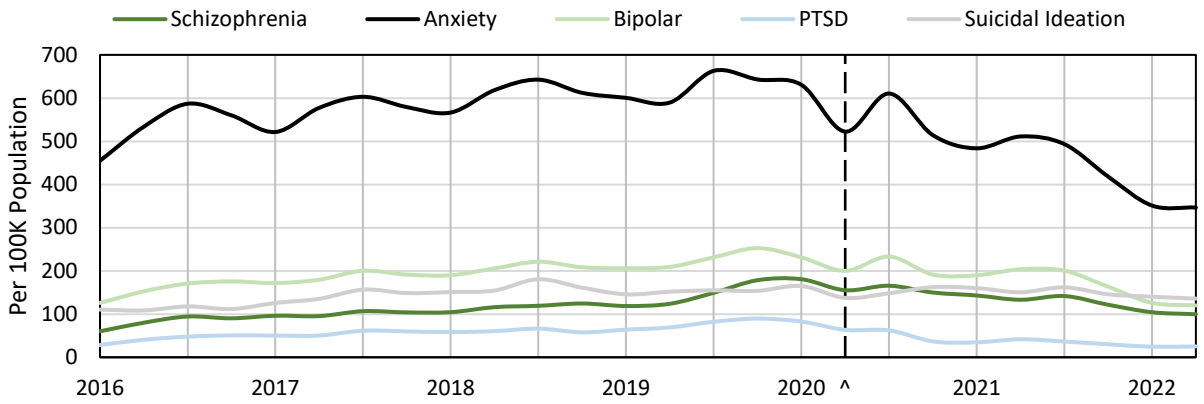
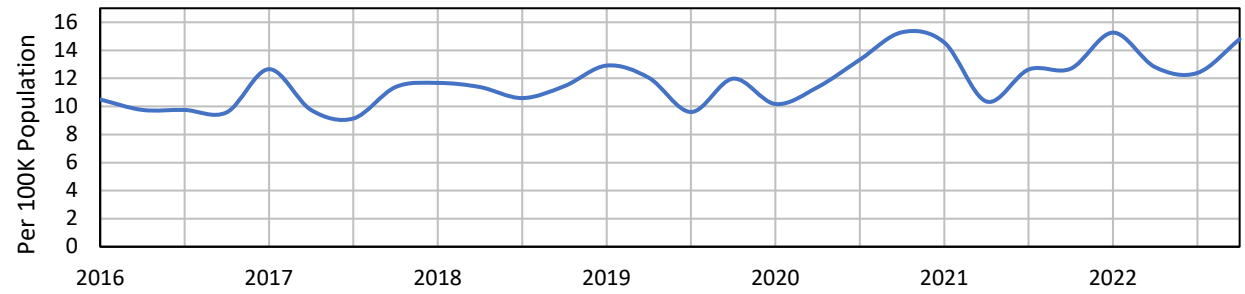


Figure 67. Adult Mental Health-Related Hospital Emergency Department Encounter Rate



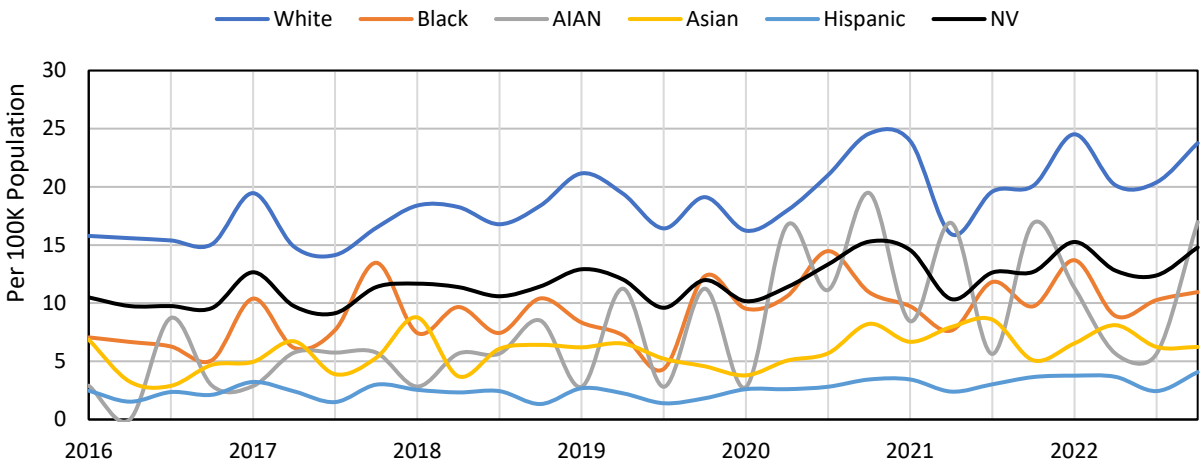
Although there is no apparent increase in mental health related emergency department encounters for adults comparing to pre COVID-19 years and some of the mental health related emergency department encounters even decreased during COVID-19, there were some patterns worth noting. The anxiety related emergency department encounters for adults increased from 2016 to 2019 but decreased since then. Bipolar diagnoses in the emergency department for adults also increased from 2016 to 2019 but decreased since then.

Figure 68. Mental Health-Related Death Rate for Nevada Residents



Between 2016 and 2019, the rate of Nevadans who died with a mental health diagnosis had been steady around 11-to-13 deaths per 100,000 population, per quarter. During the COVID-19 pandemic, mental health related deaths rose significantly, reaching a high of 16.1 deaths per 100,000 population at the end of 2020. This is the largest rate per quarter over the last six years. Like the hospital trend, the rate of deaths decreased in the first half of 2021. As mentioned previously, mental health related incidences can be associated with seasonal changes and drops tend to occur each year in the first through third quarters. While the drop between quarter four of 2020 (16.1) and quarter two of 2021 (10.3) is significant, it is unclear whether the change is pandemic related.

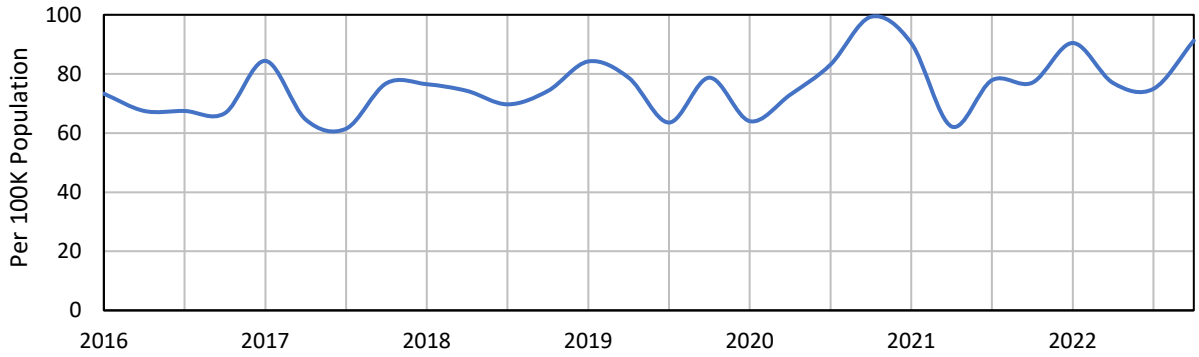
Figure 69. Mental Health-Related Death Rate for Nevada Residents by Race/Ethnicity



Most races followed a similar trend to the Nevada total; however, there are relationships worth noting. Non-Hispanic Black and non-Hispanic White Nevadans were the only two races to stay above the Nevada rate on average across the last six years. Non-Hispanic Black Nevadans had the highest rates with some periods dipping below the state average, though these dips have become less frequent since COVID. Non-Hispanic White Nevadans follow the trend more tightly, as expected since they make up a large portion of the population. However, they rarely dip below the state rate and the gap between the two has risen since 2018. Non-Hispanic Asian and Hispanic Nevadans have historically stayed well below the state rate. These races often have low rates regarding mental health and suicide, often attributed to their resilience factors such as strong community support [44].

Mental health related deaths for Nevadans ages 65 and older follow a trend almost identical to the rate for all ages because this age group makes up 95% of total mental health related deaths between 2016 and 2022. This is to be expected as the elderly population are more likely to have a mental health diagnosis. There were only four mental health-related deaths for ages 10-17 and 14 for ages 18-25 between 2016 and 2022. The years before and during the pandemic showed no effect on mental health related deaths for these age groups.

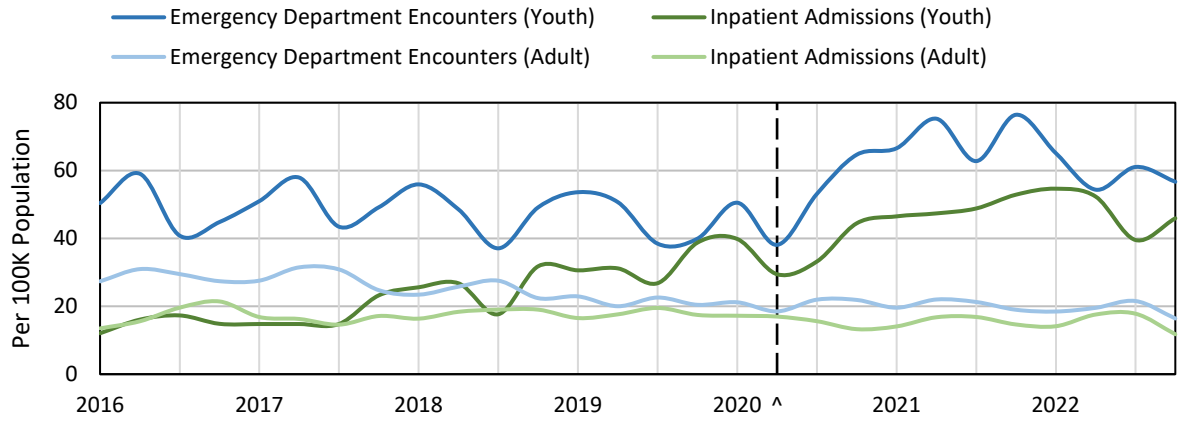
Figure 70. Mental Health-Related Death Rate for Nevada Residents 65 Years and Older



Suicide

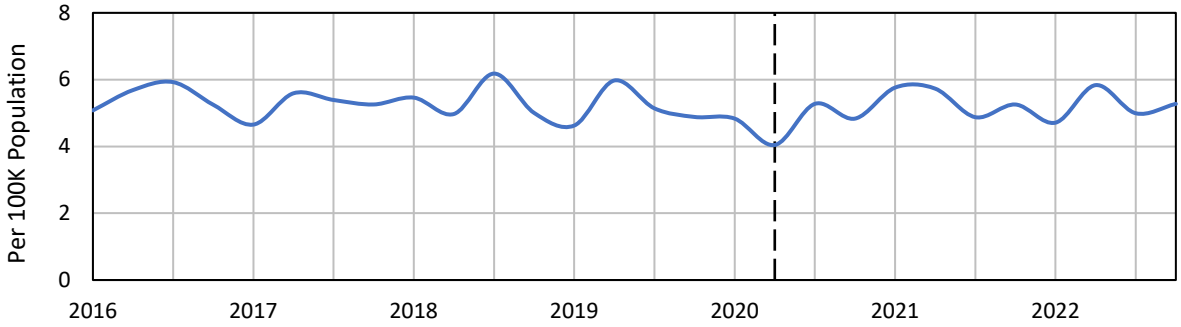
The impacts of the public health crisis on suicide attempts treated in the emergency department and inpatient settings were substantial for youths. Suicide attempts treated in both settings increased after quarter two of 2020. Suicide attempts that resulted in inpatient admissions for youths had an increasing trend since 2016 and continued through 2022. In contrast, there was less of an impact on suicide attempts for adults in both hospital care settings. There was a slight decreasing trend for emergency department encounters from 2016 to 2019, but the rates have since stabilized.

Figure 71. Suicide Attempt Rate by Hospitalization Type and Age Group



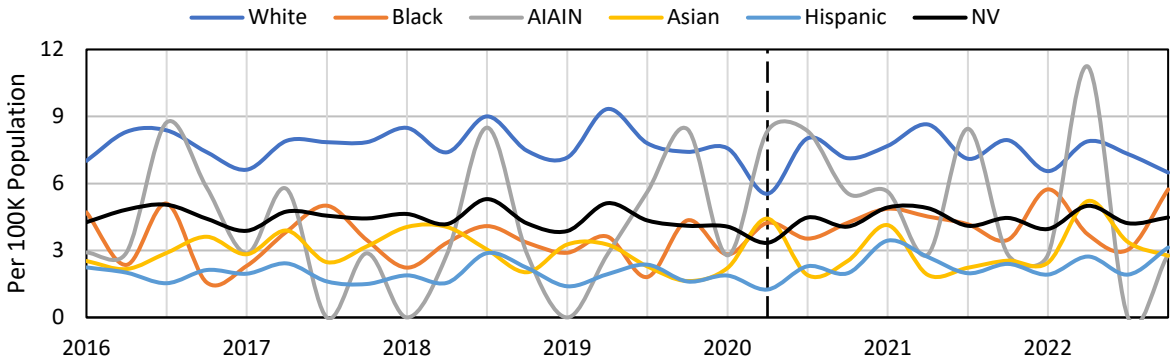
Suicide has historically been a challenge for Nevada and according to the CDC, Nevada had the 14th highest suicide rate in the nation at 18.2 deaths per 100,000 population in 2020 [45]. The CDC also stated that “existing data suggest that suicide rates might be stable or decline during a disaster, only to rise afterwards as the longer-term sequelae unfold in persons, families, and communities, as was the case in New Orleans two years after Hurricane Katrina [46].” However, Nevada still had not seen significant increases by 2022.

Figure 72. Suicide Rate in Nevada



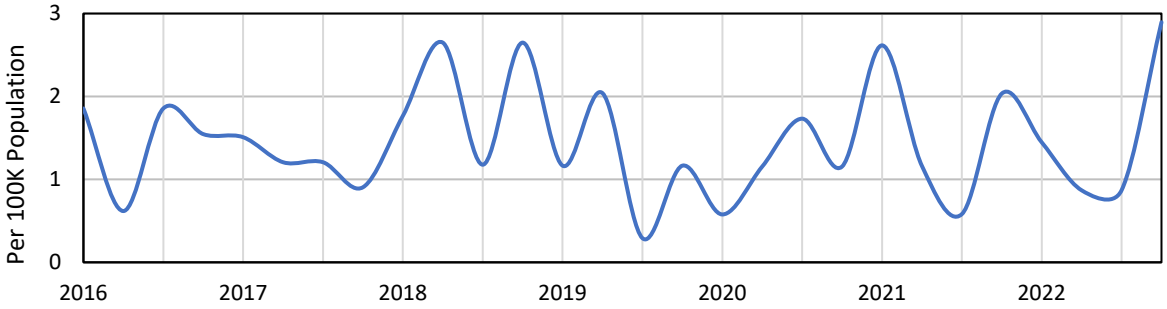
Non-Hispanic White Nevadans have historically had higher suicide rates. This is not unique to Nevada; this population has one of the highest suicide rates in the country. The group with the highest national suicide rate is non-Hispanic American Indian and Alaska Natives. In Nevada, this group has had periods of high and low suicide rates but were not significantly higher than the Nevada rate based on 95% confidence intervals, likely due to small populations and significant random fluctuation causing instability in the data.

Figure 73. Suicide Rate in Nevada by Race/Ethnicity



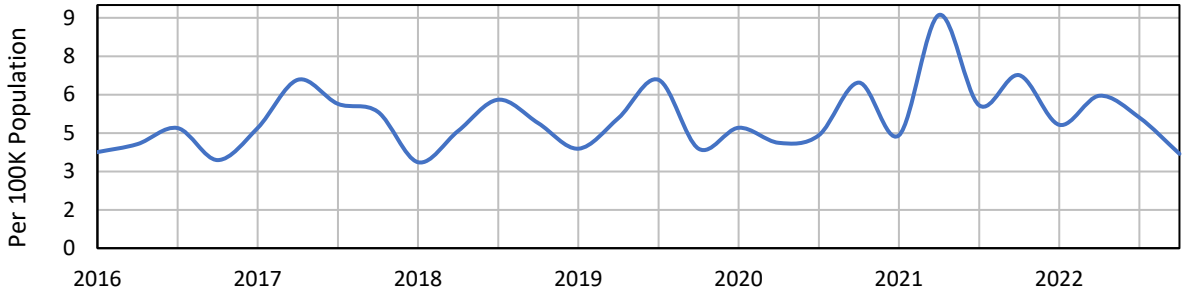
The age adjusted suicide rate for Hispanics and non-Hispanic Asians have stayed well below the state rate over the past six years. The suicide rate for the non-Hispanic Black population has historically been below the state rate, however, since the COVID-19 pandemic began, these two rates have been closer with the non-Hispanic Black suicide rate increasing above the statewide rate in parts of 2020 and 2022.

Figure 74. Suicide Rate in Nevada for Residents Ages 10-to-17 Years Old



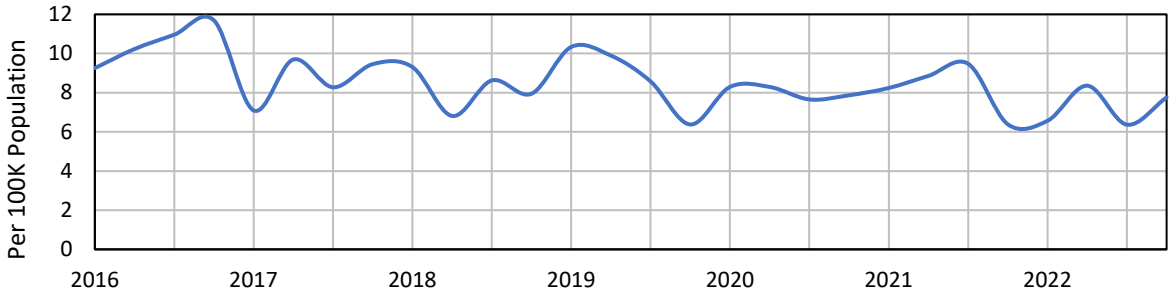
As mentioned previously, the pandemic has had a huge impact on our youth, and suicide rates have unfortunately been no different. At the end of 2019, youth suicide rates dropped to historic lows at 0.3 deaths per 100,000 population. However, by the beginning of 2021 the rate jumped to 2.6 deaths and by the end of 2022, rates were higher than they had been in the previous six years (2.9 per 100K population). Between 2015 and 2017 there were 66 suicides by Nevadans aged 17 or younger, and between 2019 and 2021, that number increased to 84.

Figure 75. Suicide Rate in Nevada for Residents Ages 18-to-25 Years Old



Nevadans ages 18-25 were another group that had increases in suicide rates post COVID-19. Quarter two of 2021 had the highest rate in the past six years at 9.1 deaths per 100,000 population, however this increase is not statistically significant and may be due to natural fluctuation in the data.

Figure 76. Suicide Rate in Nevada for Residents Ages 65 Years and Older



The Nevada elderly population has high suicide rates compared to other age groups but unlike other groups, has trended downwards over the last several years. It's important to note that 2016 had a historically high suicide rate for this age group and rates over the past few years are higher than they were in the early 2010's.

Conclusion

The impacts Nevada experienced from the COVID-19 public health emergency were very similar to surrounding states and the nation. Although the epidemiological impact the state experienced was devastating, with over 900,000 cases, over 12,000 Nevada resident deaths, and nearly 95,000 potential years of life lost, the economic, educational, and behavioral health impacts were also significant and may take the state longer to recover from.

The health care delivery system was among the most impacted sectors. During the height of the pandemic, many Nevada hospitals canceled elective surgeries and implemented crisis standards of care. Emergency rooms and intensive care units were also at full capacity, so people were not utilizing other non-COVID-19 related health care services at the same rate as they were prior to the pandemic. Due to increased demands and changes in the workforce, many hospitals and facilities also faced severe staffing shortages, making it even more difficult to keep up with demands. Telehealth became a huge resource for individuals seeking health care and made access to providers more available. As a result, health care was a primary focus in the allocation of the COVID-19 relief funding received, with $63,900,030 spent on health care and an additional $260,909,241 spent on direct pandemic response [47].

Over the course of the pandemic, telework rose in popularity, but labor markets in Nevada were still dramatically impacted, with the state losing 3,938,448 months of employment, nearly 60% of that employment impact in low-wage industries. As a result, workers in the state lost $15,049,433,405 in salaries and wages – averaging to $2,691 per month per impact job for low-wage industries and $5,547 per month per impacted job for high-wage industries – between March 2020 and December 2022. At its monthly worst, in May 2020, the economy was 356,166 jobs below what was expected if COVID-19 had not occurred. Prior to May 2020, Nevada had shut down all non-essential businesses and was reopening in phases starting the beginning of May. Although these closures helped mitigate the spread of COVID-19 in our community, most industrial sectors were negatively impacted by the number of jobs and wages that were lost due to these closures – except for trade, transportation, and utilities, which were likely bolstered by the pandemic as they experienced stronger growth in the COVID-19 world than was projected prior to the pandemic.

The economic impacts of the pandemic were not isolated to the destruction of jobs or delaying of new job positions. The pandemic likely resulted in a compression of real wages for workers, as cumulative wage growth had a 60% (weekly) and 33% chance (hourly) of surpassing cumulative inflation between March 2020 and December 2022. Housing affordability grew increasingly more stressed, as the Nevada home-price-to-income ratio increased 16% (7.1x per capita income to 8.3x per capita income). Simultaneously, homelessness reversed a nearly decade-long downward trend, climbing 10.4% (6,900 to 7,618) between 2020 and 2022. In response to the difficulties in the Nevada economy, the State of Nevada spent $913,596,842 in assistance toward housing affordability, which was the second highest spending category of COVID-19 relief funds received from the federal government. The State also spent an additional $580,897,449 towards economic development to support assistance and recovery for Nevada's workforce [47]. Although these were some of the most devastating tertiary impacts following the closure of non-essential businesses, Nevada's government did use available resources to alleviate as much of that strain as possible.

Nevada's school-age children were also significantly impacted by the public health emergency. When the pandemic hit, schools throughout the state moved to remote learning to mitigate the spread of COVID-

19. Although this helped reduce transmission among students and their families, it also created a significant barrier for many students and made it hard to complete schoolwork and get a well-rounded education. The impact of remote learning can be seen through student's assessment results on the NAEP and the ACT. Elementary aged students took the biggest hit, with NAEP scores dropping by 6.2 points for fourth graders (the 13th largest reduction in the nation). Middle school and high school students' performance were also impacted by the remote learning, but not to the same extent. These are impacts that will likely take substantial effort and time for Nevada students to recover from, but efforts may be bolstered by the $1,382,862,184 paid by the State of Nevada to support the school systems [47].

The mental health of Nevadans also suffered due to the COVID-19 pandemic, which is thought to be due to the health impacts of the virus as well as secondary effects of the economic stresses and social isolation. During the early stages of the pandemic, emergency department visits and inpatient admissions went down across the board, because hospitals were overwhelmed and urging people not to seek treatment in a hospital setting unless absolutely necessary. However, after hospital capacity opened again, mental-health, suicide, and substance use related visits increased, especially for the youth population. Drug-related deaths trended upwards for the state starting in 2020 and these trends continued through 2022.

Table 13. Nevada's American Rescue Plan Act (ARPA) Fund Allocation as of January 31, 2023, by Program

PROGRAM	AMOUNT ALLOCATED
PreK-12 Education and Learning	$1,382,862,184
Housing	$913,596,842
Direct Payments to Counties and Cities	$890,225,155
Health Care	$630,900,030
Economic Development	$580,897,449
State Budget	$574,813,969
Child Care	$446,104,888
Transportation	$346,191,001
Healthcare Direct COVID Response	$260,909,241
State Systems	$253,932,970
Higher Education	$224,493,448
Food Insecurity	$150,485,087
Treasury Payments Pass-Through to Cities	$142,118,368
Remaining State Fiscal Recovery Funds	$37,662,126
Community Recovery Grant	$30,000,000
Family Assistance	$22,693,685
Victims Assistance	$19,240,980

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Appendices

Data Sources

ACT Scores
The ACT is one of the most prolific college-readiness examinations in the United States. As such, students across the nation take the exam during high school in preparation for college and, in some jurisdictions, as a requirement for high school graduation. For this report, ACT score and ACT participation rate data was collected on the state-level from the ACT and the United States Department of Education to determine the impact COVID-19 had on ACT outcomes across the nation.

American Community Survey
Each year, the United States Census Bureau conducts a survey of American households to quantify economic conditions affecting households across the United States. One of the metrics tracked by the ACS is the value of respondents' homes. For this report, the 2012 home price values were used in conjunction with the FHFA home price index to track housing affordability overtime.

BEA Consumer Spending
The Bureau of Economic Analysis tracks consumer spending trends across the United States. Data is available on an annual basis for the United States and its underlying states. For this report, data was used to determine what share of spending goes towards goods and services.

BEA Per Capita Income
The Bureau of Economic Analysis from the United States Department of Commerce calculates personal income figures on an aggregated as well as per capita basis for state-level and MSA-level entities. These data were used to calculate housing affordability in Nevada, Northern Nevada, Southern Nevada, and Rural Nevada.

BLS Consumer Price Index
Each month, the Bureau of Labor Statistics from the United States Department of Labor surveys prices for various products across the United States and creates the Consumer Price Index, which tracks the cost of a metaphoric basket of goods over time. Data is available for the United States, census-defined subregions, and some metropolitan areas.

BLS Current Employment Statistics
The Bureau of Labor Statistics from the United State Department of Labor estimates monthly employment in the United States and associated jurisdictions monthly. Data is available in an aggregated (total nonfarm) basis as well as industrial sector specific format. While data is available for employment counts for all major industrial sectors, hourly/weekly wage data is available for all private workers and some industrial sectors.

Division of Health Care Financing and Policy (DHCFP) Data Warehouse
The Division of Health Care Financing and Policy (DHCFP) data warehouse is comprised of claims data submitted by over 28,000 Medicaid providers from within Nevada and across the country. While DHCFP

staff conscientiously make every effort to validate these data through continuous provider education and the use of highly experienced audit staff, the Division relies heavily on providers to submit accurate and complete information on Medicaid patients. It should therefore be understood by the users of DHCFP reports on disease morbidity and patient health that the data source for these reports is based solely on patient claims data and may not be a complete and comprehensive health record.

Drewry Global Container Freight Cost

Drewry tracks the cost of global shipping via the World Container Index, which reflects the real-time cost of shipping a 40ft container within a given week. For this report, data from the Drewry World Container Index was collected from Statista, which transformed the weekly data into a monthly cost figure by averaging the five business days of the last full week in each month.

Electronic Death Registry System (EDRS)

The Office of Vital Records within the Division of Public and Behavioral Health collects information through the cause of death listed on the death certificate. Causes of death are based on a system of medical codes known as the ICD-10 codes which aligns with national data and data from other states. The ICD-10 codes used for the select causes of death are listed below.

Mental health-related deaths are deaths with the following ICD-10 codes groups listed as a contributing cause of death (F00-F99 excluding F10-F19).

Substance-related deaths are deaths with the following ICD-10 codes groups listed as a contributing cause of death (X40-X44, X60-X64, X85, Y10-Y14).

Alcohol-related deaths are deaths with the following ICD-10 codes groups listed as a contributing cause of death (F10, K70, Y90, Y91, X45, X65, Y15, T51).

Electronic Laboratory Reporting (ELR)

COVID-19 case data are collected through laboratory data reported to the Department of Health and Human Services by laboratories throughout Nevada. These data include antigen and PCR tests and are used to calculate the total number of COVID-19 cases reported statewide.

FDNY Global Supply Chain Pressure Index

The Federal Reserve Bank of New York created the Global Supply Chain Pressure Index was created in the aftermath of the COVID-19 health crisis to assess the relative stress felt by global supply chains within any specific month. Measurements are provided in standard deviations, which reflects how far above/below "normal" a specific month was.

FHFA Home Price Index

The Federal Housing Finance Agency tracks the changes in home prices for various regions across the United States on a quarterly as well as annual basis. For this report, quarterly data from the purchase-only index was utilized to calculate home price increases from 2012.

Hospital Emergency Department Billing (HEDB)

The Hospital Emergency Department Billing data provides health billing data for emergency room patients for Nevada's non-federal hospitals. NRS 449.485 mandates all hospitals in Nevada to report all patients discharged in a form prescribed by the director of the Department of Health and Human Services. The data are collected using a standard universal billing form. The data in this report are for patients who used emergency room and inpatient services. The data includes demographics such as age, gender, race/ethnicity and uses International Classification of Diseases-9-Clinical Modification (ICD-9-CM)

diagnoses codes and International Classification of Diseases-10-Clinical Modification (ICD-10-CM) diagnoses (up to 33 diagnoses respectively). ICD-10-CM diagnoses codes replaced ICD-9-CM diagnoses codes in the last quarter of 2015. Therefore, data prior to the last quarter in 2015 may not be directly comparable to data thereafter. In addition, the data includes billed hospital charges, procedure codes, length of hospital stay, discharge status, and external cause of injury codes. The billing data information is for billed charges and not the actual payment received by the hospital.

Hospital Inpatient Billing (HIB)

The Hospital Inpatient Billing data provides health billing data for patients discharged from Nevada's non-federal hospitals. NRS 449.485 mandates all hospitals in Nevada to report information as prescribed by the director of the Department of Health and Human Services. The data are collected using a standard universal billing form. The data is for patients who spent at least 24 hours as an inpatient, but does not include patients who were discharged from the emergency room. The data includes demographics such as age, gender, race/ethnicity and uses International Classification of Diseases-9-Clinical Modification (ICD-9-CM) diagnoses codes and International Classification of Diseases-10-Clinical Modification (ICD-10-CM) diagnoses (up to 33 diagnoses respectively). ICD-10-CM diagnoses codes replaced ICD-9-CM diagnoses codes in the last quarter of 2015. Therefore, data prior to the last quarter of 2015 may not be directly comparable to data thereafter. In addition, the data includes billed hospital charges, procedure codes, length of hospital stay, discharge status, and external cause of injury codes. The billing data information is for billed charges and not the actual payment received by the hospital.

HUD 50th Percentile Rent Estimates

The United States Department of Housing and Urban Development surveys rental markets in the United States each year to anchor their housing subsidization programs to realities of various rental markets. Part of the process involves determining the 50th percentile (median) rental rate for specific jurisdictions. This data was used to quantify the average rental rate for 0BR and 2BR units across Nevada.

IMF Global Price of Energy

An index tracking the price of energy across the globe is curated monthly by the International Monetary Fund. Data for this report was retrieved from the Federal Reserve Economic Data database from the Federal Reserve Bank of St. Louis.

Medicaid Enrollment Caseload

The Division of Welfare and Supportive Services (DWSS) maintains a database that includes the total Medicaid enrollment by month. The Office of Analytics uses this information to find total enrollment as well as conduct monthly projections of expected caseload for the future months.

National Assessment of Educational Progress

The United States Department of Education facilitates the National Assessment of Educational Progress examination on elementary, middle, and high school students on a biennial basis. The assessment is a standardized exam that makes comparing educational outcomes between jurisdictions and over broad timespans possible. For this report, NAEP exam results were used to quantify the COVID-19 impact on education for 4th and 8th grade students.

Nevada Crime Statistics
Nevada Crime Statistics is a webpage with publicly available crime data for Nevada by year, jurisdiction, and theme of crime. The themes with information available are property, domestic and elderly, violent, and hate crimes. For more information: Nevada Crime Statistics

Nevada Report Card
Nevada uses the ACT examination for its college and career readiness metric. As such, students across Nevada take the exam during their junior year of high school. The Nevada Department of Education disaggregates the ACT scores by various demographic characteristics and provides their data with one more year of recency than the ACT or the United States Department of Education. As such, data from the Nevada Report Card were used to determine the ACT score impact by ethnicity/racial group in Nevada.

Point-in-Time Count and Housing Inventory Count
Homelessness in American is quantified via an annual count typically conducted at the start of each calendar year by local Continuums of Care. In Nevada, there are three Continuums of Care: Southern Nevada Homeless Continuum of Care, Northern Nevada Continuum of Care, and Rural Nevada Continuum of Care. Data was collected annual reports associated with these continuums to quantify homelessness in Nevada.

Quarterly Census on Employment and Wages
Each quarter, the Bureau of Labor Statistics from the United States Department of Labor produces quarterly measurements of employment and wages across the United States. For this report, QCEW data was used to categorize industrial sectors into low-wage and high-wage groupings as well as model wage growth for industrial sectors with no wage data available through the CES (defined below).