

Week of February 8, 2021

COVID-19 Behavioral Health Impact Situation Report

This situation report presents the potential behavioral health impacts of the COVID-19 pandemic for Washington to inform planning efforts. The intended audience for this report includes response planners and any organization that is responding to or helping to mitigate the behavioral health impacts of the COVID-19 pandemic.

Purpose

This report summarizes data analyses conducted by the COVID-19 Behavioral Health Group's Impact & Capacity Assessment Task Force. These analyses assess the likely current and future impacts of the COVID-19 pandemic on mental health and potential for substance use issues among Washingtonians.

Please note that this report is based on the most recent available data from various sources. As such, different sections may present information for different reporting periods.

Key Takeaways

- **For the most recent reporting period ([CDC Week 4](#)¹, week of January 24), 5 of 5 syndromic indicators showed increases from the previous reporting period, and all 5 exceeded rates in the corresponding weeks of 2019 and 2020.** It should be noted that people in need of both behavioral and physical healthcare may have changed their care-seeking behaviors due to concerns about COVID-19.
 - A **statistical alert** was issued for **psychological distress** for those who identified as other race, and a **statistical warning** was issued for adults ages 18 – 44.
 - A **statistical alert** was issued for **all-drug related visits** for adults ages 18 – 44, and a **statistical warning** was issued for those who identified as other race.
 - A **statistical warning** was issued for **alcohol-related visits** for adults ages 45 – 64.
- **Federal Bureau of Investigation (FBI) background checks for handgun purchases show a steady year-over-year² increase** beginning in the middle of 2020 and continuing into

¹ <https://wwwn.cdc.gov/nndss/document/2020.pdf>

² Year-over-year: The comparison of two or more years, specifically 2021 to 2019 and 2020.

early 2021. It should be noted that a firearms background check does not necessarily represent a firearms purchase.

Impact Assessment

This section summarizes data analyses that show the likely current and future impacts of the COVID-19 pandemic on mental health and potential for substance use issues among Washingtonians.

Syndromic Surveillance

The Department of Health collects syndromic surveillance data in near real-time from hospitals and clinics across Washington. The data are always subject to updates. Key data elements reported include patient demographic information, chief complaint, and coded diagnoses. This [data collection system](#)³ is the only source of emergency department (ED) data for Washington. Statistical warnings and alerts are raised when a Centers for Disease Control and Prevention (CDC) algorithm detects a weekly count at least three standard deviations⁴ above a 28-day average count, ending three weeks prior to the week with a warning or alert.⁵ These warnings or alerts will be mentioned within each respective syndrome section.

As of the Week of October 12, 2020 Situation Report (Situation Report 13), **visits of interest per 10,000 ED visits replaced visit count graphs**. This new measure can help provide insights into: behavioral health impacts since the implementation of the “Stay Home, Stay Healthy” order from March 23, 2020 (CDC Week 13), seasonal shifts year-over-year, new visit trends due to COVID-19 symptoms and diagnosis, perceptions of disease transmission and risk, as well as the relative frequency of these indicators for 2019 and 2020. An additional feature of these graphs is the “average weekly difference” in the lower right-hand corner. This feature is a measure of the variation in the weekly volume of visits, and allows readers to compare both the year-over-year² averages for a particular week, along with the weekly visit fluctuations, to better assess demand for care and care-seeking behaviors. In scenarios where a statistical warning or alert is issued, such events will be mentioned within the syndrome description text.

Because the volume of visits across care settings varied widely during 2020 and to date in 2021, rates presented in this report may not reflect the true magnitude and direction of trends for behavioral health conditions and should be interpreted cautiously.

³ <https://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/PublicHealthMeaningfulUse/RHINO>

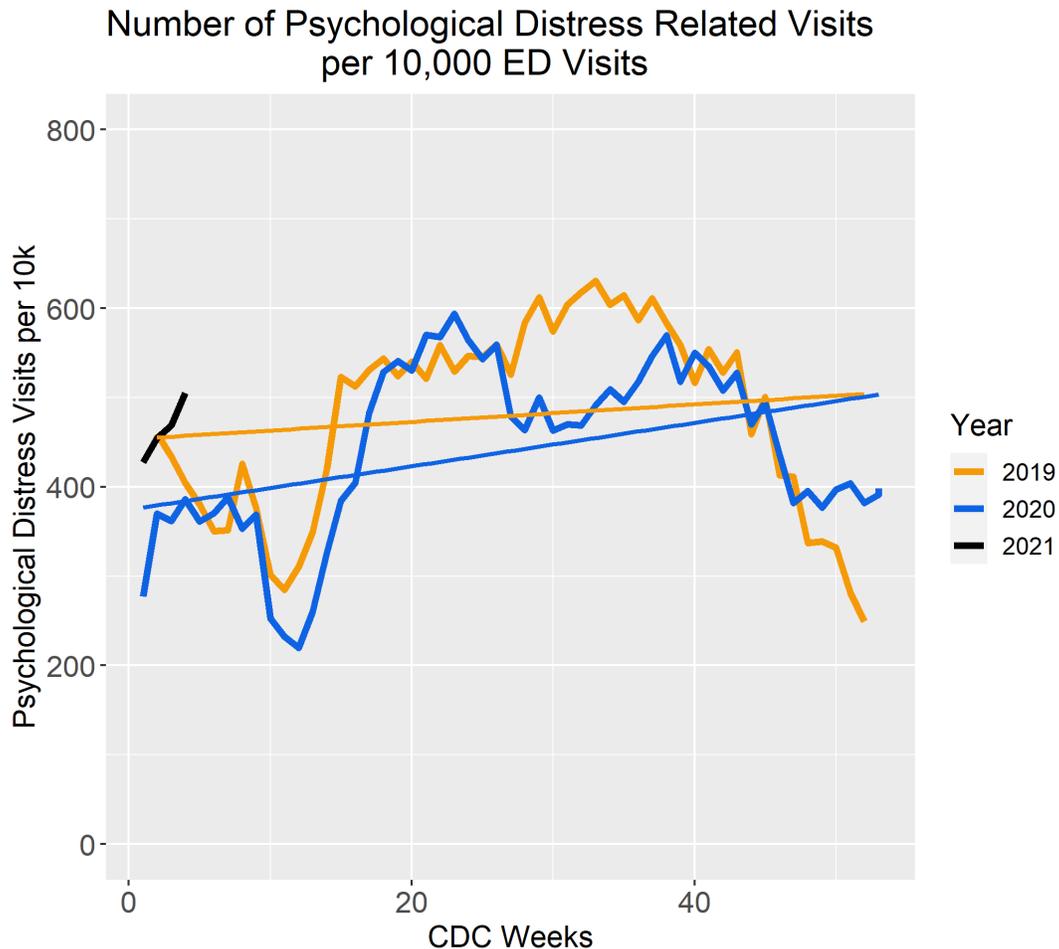
⁴ Standard deviation: A measure of the amount of variation or dispersion of a set of values. Standard deviation is often used to measure the distance of a given value from the average value of a data set.

⁵ A warning is determined by statistical analysis using p-values from 0.01 – 0.05, while an alert is determined by statistical analysis using p-values of less than 0.01.

Psychological Distress

CDC Week 4 (week of January 24) is the second reporting period in a row that the relative reported ED visits for psychological distress⁶ is higher than rates in the corresponding weeks of 2019 and 2020. CDC Week 4 also shows a slight increase from the previous reporting period (Graph 1). A statistical alert was issued for those identified as other race, and a statistical warning was issued for adults ages 18 – 44.

Graph 1: Relative count of ED visits for psychological distress⁶ in Washington, by week: 2019, 2020, and 2021 to date (Source: CDC ESSENCE)



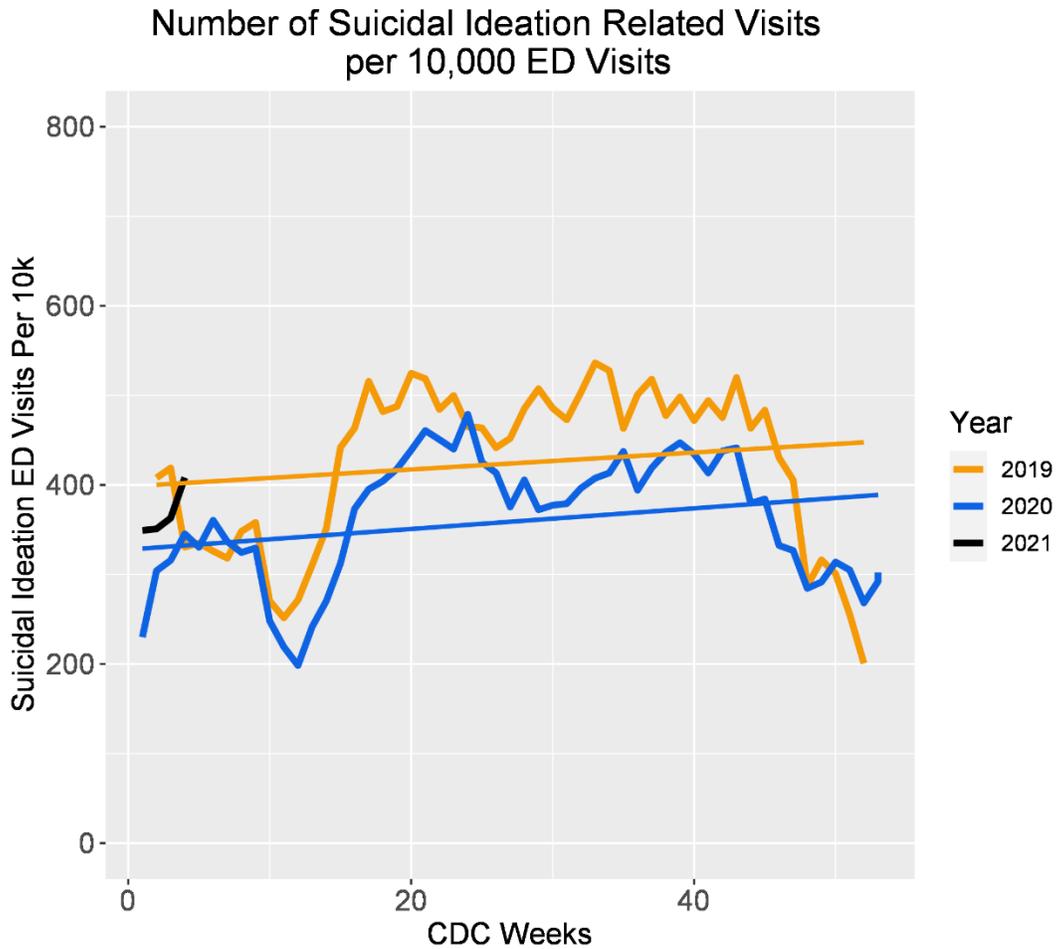
Average Weekly Difference between 2020 and 2019 Visit Counts: -442.9 per 10,000
Source: CDC National Syndromic Surveillance Program
Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

⁶ Psychological distress in this context is considered a disaster-related syndrome comprised of panic, stress, and anxiety. It is indexed in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) platform as Disaster-related Mental Health v1. Full details are available at <https://knowledgerepository.syndromicsurveillance.org/disaster-related-mental-health-v1-syndrome-definitioncommittee>.

Suicidal Ideation and Suspected Suicide Attempts

During **CDC Week 4 (week of January 24)**, the relative reported ED visits for suicidal ideation increased from the previous reporting period and is higher than rates in the corresponding weeks of 2019 and 2020 (Graph 2). No statistical warnings or alerts were issued.

Graph 2: Relative count of ED visits for suicidal ideation in Washington, by week: 2019, 2020, and 2021 to date (Source: CDC ESSENCE)



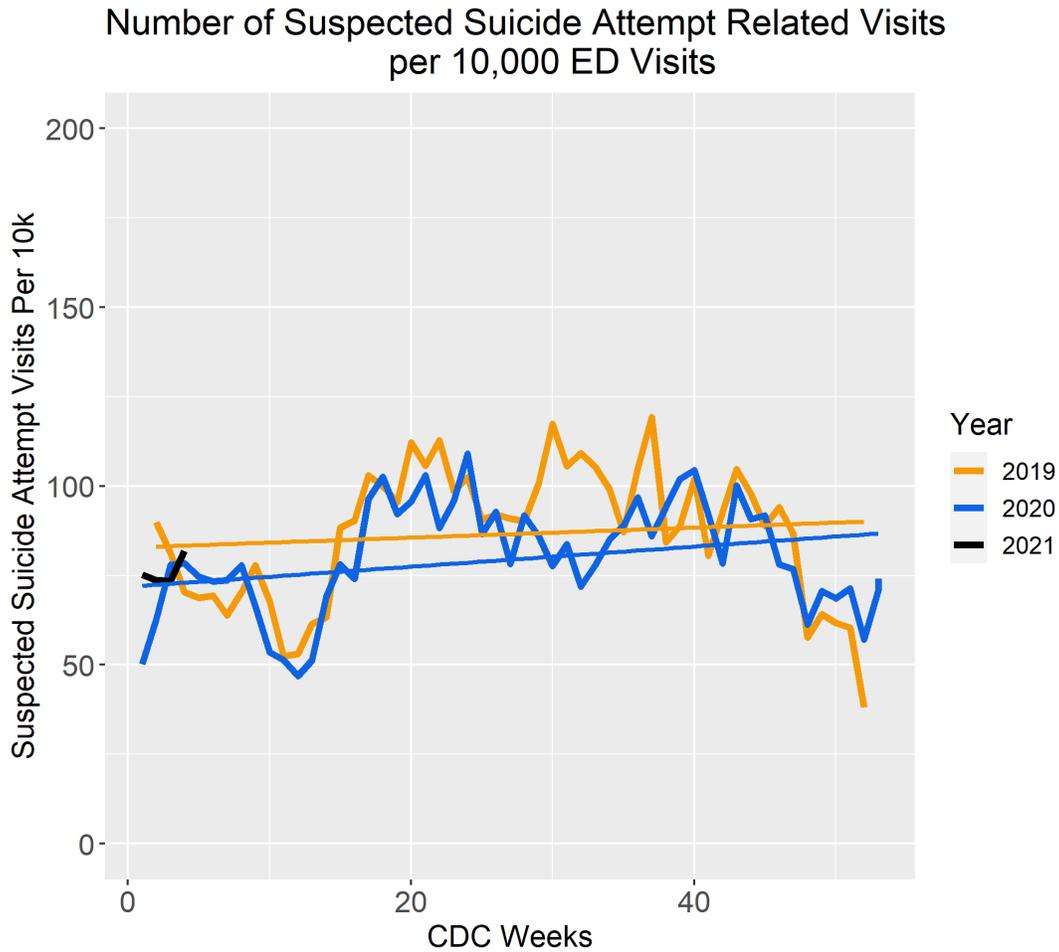
Average Weekly Difference between 2020 and 2019 Visit Counts: -404.3 per 10,000

Source: CDC National Syndromic Surveillance Program

Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

During **CDC Week 4 (week of January 24)**, the relative reported ED visits for suspected suicide attempts increased from the previous reporting period and were higher than 2019 and 2020 rates (Graph 3). No statistical warnings or alerts were issued.

Graph 3: Relative count of ED visits for suspected suicide attempts in Washington, by week: 2019, 2020, and 2021 to date (Source: CDC ESSENCE)

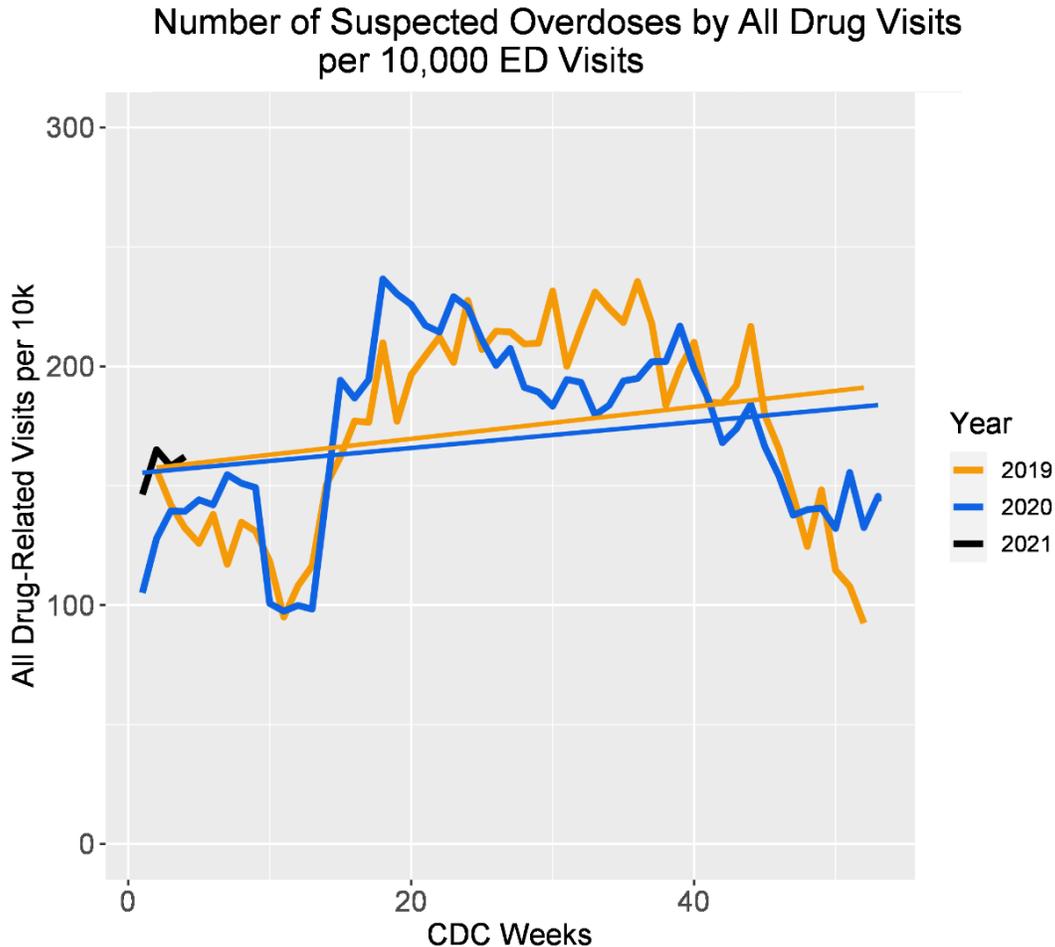


Average Weekly Difference amongst 2020 and 2019 Visit Counts: -85.3 per 10,000
 Source: CDC National Syndromic Surveillance Program
 Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

Substance Use – Drug Overdose and Alcohol-Related Emergency Visits

The relative reports for all drug⁷-related ED visits increased during CDC Week 4 (week of January 24) and exceeded rates for the corresponding weeks of 2019 and 2020. A statistical alert was issued for adults ages 18 – 44, and a statistical warning was issued for those who identified as other race.

Graph 4: Relative ED count for all drug⁷-related visits in Washington, by week: 2019, 2020, and 2021 to date (Source: CDC ESSENCE)



Average Weekly Difference between 2020 and 2019 Visit Counts: -178.4 per 10,000

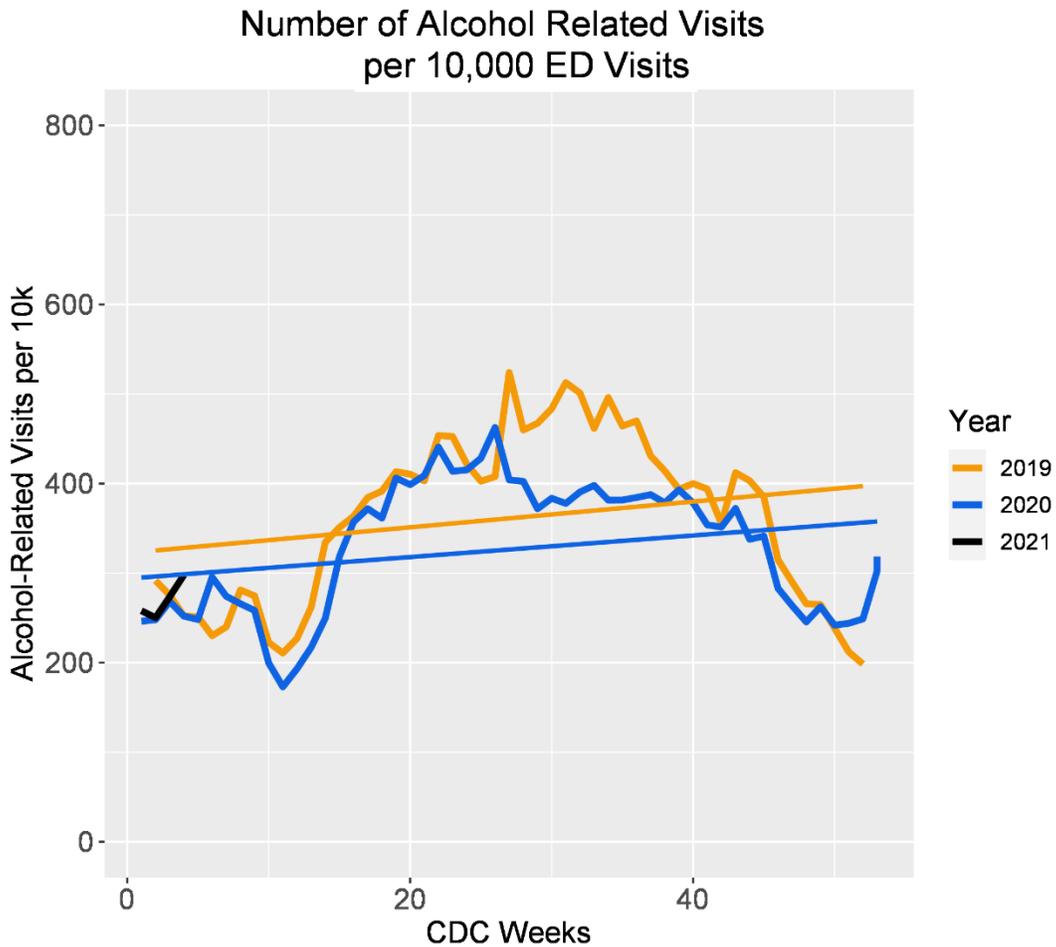
Source: CDC National Syndromic Surveillance Program

Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

⁷ All drug: This definition specifies overdoses for any drug, including heroin, opioid, and stimulants. It is indexed in the Electronic Surveillance System for the Early Notification of Community-Based Epidemics (ESSENCE) platform as CDC All Drug v1. Full details available at <https://knowledgerepository.syndromicsurveillance.org/cdc-all-drug-v1>.

The rate of alcohol-related visits for CDC Week 4 (week January 24) increased from the previous reporting period and exceeded rates for the corresponding weeks of 2019 and 2020 (Graph 5). A statistical warning was issued for adults ages 45 – 64. It should be noted that ED visits per 10,000 for alcohol have remained somewhat stable for 2020, while there was a several week period of sustained decreases in visits in 2019. This has resulted in a slight convergence in visit counts between 2019 and 2020 data.

Graph 5: Relative ED count for alcohol-related visits in Washington, by week: 2019, 2020, and 2021 to date (Source: CDC ESSENCE)

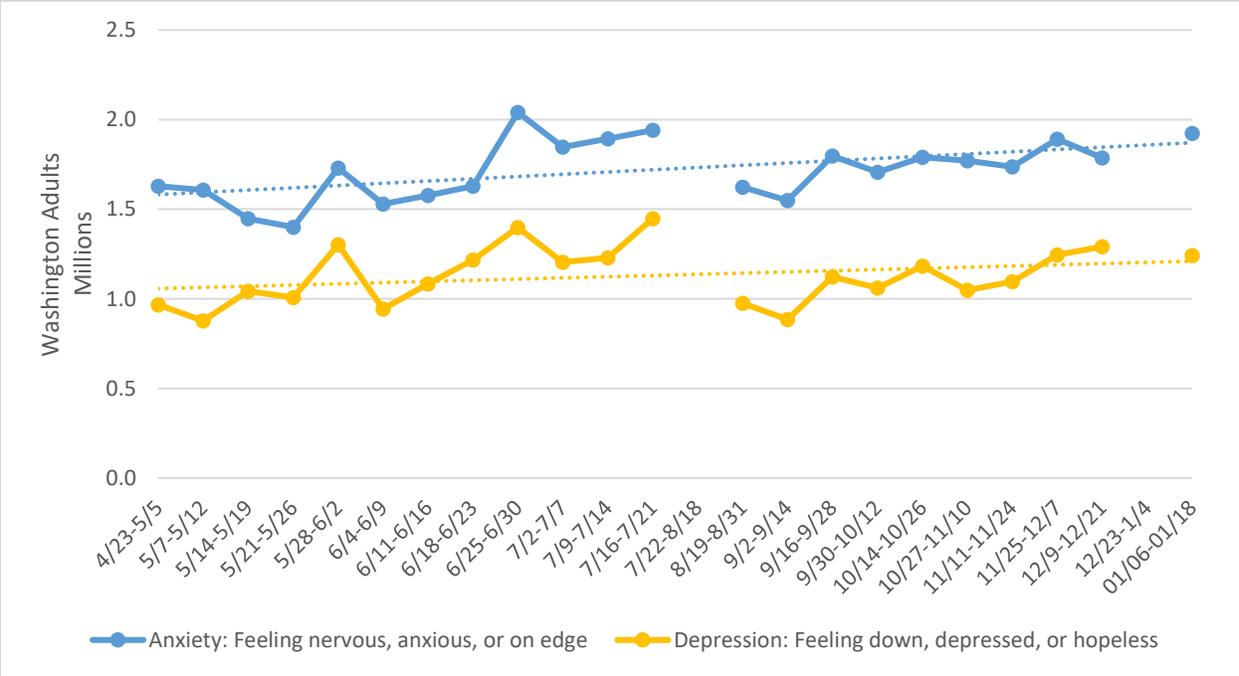


Average Weekly Difference between 2020 and 2019 Visit Counts: -382.8 per 10,000
 Source: CDC National Syndromic Surveillance Program
 Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

General Surveillance – Symptoms of Anxiety and Depression

[Survey data](#)⁸ collected by the U.S. Census Bureau for January 6 – 18, 2021 show **an increase in anxiety (+7.7%) and a decrease in depression (-3.9%)** among adults in Washington, compared to the previous reporting period of December 9 – 21, 2020 (Graph 6). In the most recent reporting period represented below, **1.92 million adults in Washington reported symptoms of anxiety** on all or most days of the previous week, while **nearly 1.25 million reported the same frequency of symptoms of depression**. For these measures, the standard error suggests that the inaccuracy of estimates may be around 6.6% above or below the numbers previously mentioned. This survey data is not in any way related to the data presented in previous sections.

Graph 6: Estimated Washington adults with feelings of anxiety and depression at least most days, by week: April 23, 2020 – January 18, 2021 (Source: U.S. Census Bureau)



Note: For the period of July 21 – August 19, 2020, census data was not available and thus, any trends during this point are an artifact of analysis. Additionally, the U.S. Census Bureau briefly paused data collection for the period of December 23, 2020 – January 3, 2021.

⁸ In May, the U.S. Census Bureau began measuring the social and economic impacts during the COVID-19 pandemic with a weekly Household Pulse survey of adults across the country. The survey asks four questions related to how often survey respondents have experienced specific symptoms associated with diagnoses of generalized anxiety disorder or major depressive disorder over the past week. Additional details about the survey can be found at <https://www.cdc.gov/nchs/covid19/pulse/mental-health.htm>.

In the January 6 – 18, 2021 survey data, depression measures continue to indicate marked disparities among demographic groups. As with the anxiety measure, there is an inverse relationship between age and frequency of depression symptoms. **In other words, the younger someone is, the greater their frequency of experiencing anxiety and depression symptoms.**

For measures of anxiety, those in households earning less than \$25,000 per year and those in households earning between \$25,000 and \$35,000 per year reported the highest rates of anxiety symptoms (47% and 49%, respectively).⁸

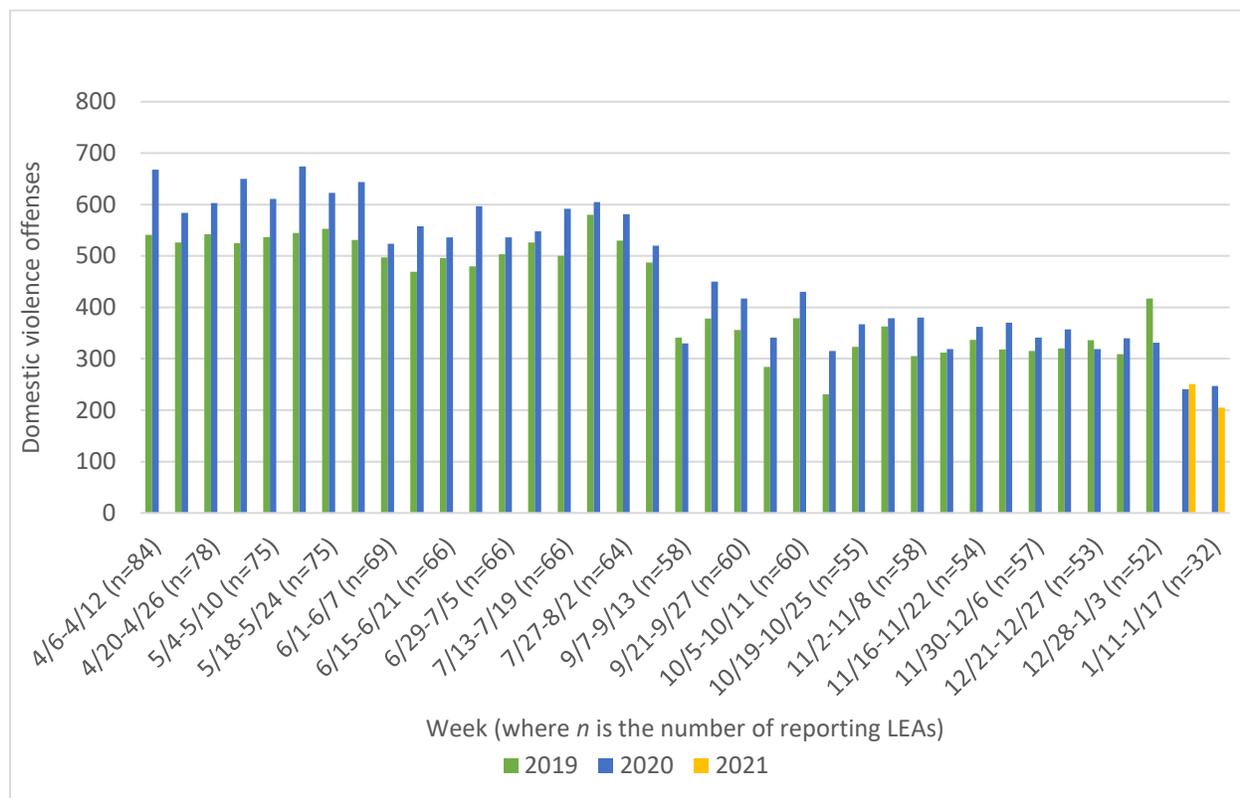
The **frequency of depression symptoms appears to decrease as household income increases**, with those in households earning less than \$25,000 per year reporting the highest rate (41%), and those in households earning between \$25,000 and \$75,000 per year reporting rates between 28% and 30%.

Those who identified as **two or more races reported the highest rate of symptoms for both anxiety and depression**. Those who identified as female have an increased symptom reporting rate for anxiety (44% for females, compared to 34% for males) and depression (28% for females, compared to 24% for males).

Crime – Domestic Violence

In the most recent reporting period (week of January 11), **the number of domestic violence offenses being reported was lower than the corresponding week in 2020** (32 agencies reporting, $n^9=32$) (Graph 7), according to survey data from the Washington Association of Sheriffs and Police Chiefs (WASPC).¹⁰ This survey has also detected **overall double-digit decreases in other offenses during the week of January 11 (40%)**. One notable exception is cruelty to animals (2 in 2021, compared to 0 in 2020).

Graph 7: Domestic violence offenses reported, by week for April 6, 2020 – January 17, 2021: 2020 and 2021 compared to previous years (Source: WASPC)^{9,10}



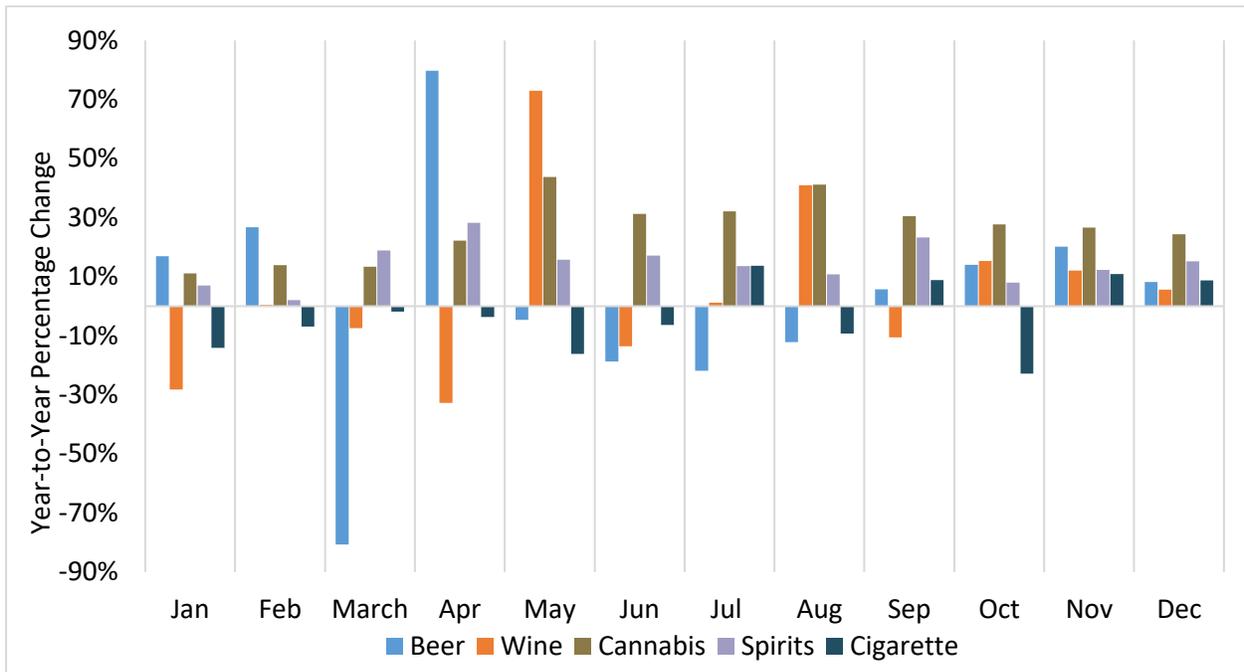
⁹ n is for 2019, 2020, and 2021, specifying only those agencies reporting in 2021, 2020, and 2019.

¹⁰ WASPC began conducting a weekly survey to all Washington law enforcement agencies (LEAs) in April to understand the likely impact of the COVID-19 pandemic on common crimes. Between 24 – 31% of the 275 LEAs respond each week. It should be noted that despite varying numbers of law enforcement agencies reporting offenses week-over-week, all values for each week are tied strictly to that week’s reporting number for 2019, 2020, and 2021 to date. A smaller or larger number of reporting agencies does not affect year-over-year comparisons.

Product Sales – Alcohol, Cannabis, and Cigarette Taxes

The Washington State Liquor and Cannabis Board (LCB) and the Washington State Department of Revenue (DOR) summarize monthly tax collections, which may be used as a representation of sales of legal recreational substances and by extension, potential for substance use issues. Monthly cannabis tax collections were consistently higher in 2020 than in 2019. While changes in year-over-year² monthly beer and wine tax collections fluctuated, they generally increased (Graph 8). Similarly, sales of spirits were consistently higher in 2020 than in 2019, while cigarette sales fluctuated.

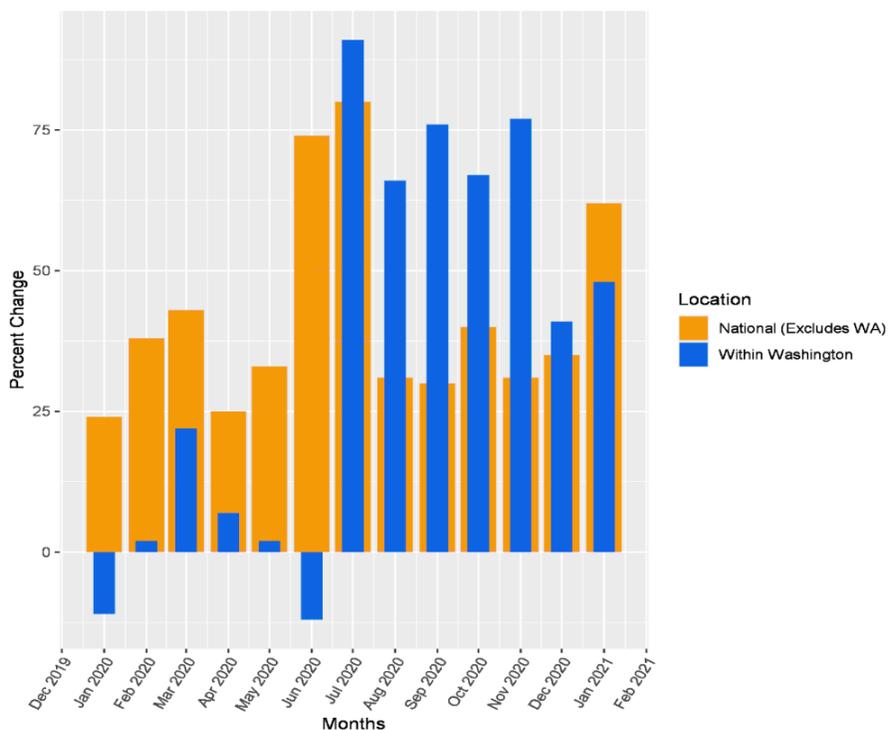
Graph 8: Year-over-year percent change in select product sales indicators, by month: 2019 and 2020 (Source: LCB, DOR)



NICS Background Checks – Firearms and Handguns

The National Instant Criminal Background Check System (NICS), operated by the FBI, requires a national namecheck system for federal firearms licensees (FFL). Federal background checks for gun sales¹¹ may represent access to firearms,¹² which is a risk factor for suicide and other gun violence.^{13,14} Nationally and in Washington, the year-over-year² percent change of firearms background checks fluctuated in the first half of 2020 but maintained an increase from July to December 2020. Washington showed a higher percent change of firearms background checks from July to December 2020 compared to the rest of the United States. While this does not mean the number of background checks was higher, this does mean when comparing 2019 to 2020, the relative increase for Washington was more dramatic than the rest of the nation for the second half of 2020 (Graph 9).

Graph 9: Percent change of NICS Firearms Background Checks, by month: 2019, 2020, and 2021 (Source: FBI)



¹¹ From the Federal Bureau of Investigation: “It is important to note that the statistics within this chart represent the number of firearm background checks initiated through the NICS [National Instant Criminal Background Check System]. They do not represent the number of firearms sold. Based on varying state laws and purchase scenarios, a one-to-one correlation cannot be made between a firearm background check and a firearm sale.”

¹² Nemerov, H.R. (2018). Estimating Guns Sold by State. SSRN: <http://dx.doi.org/10.2139/ssrn.3100289>

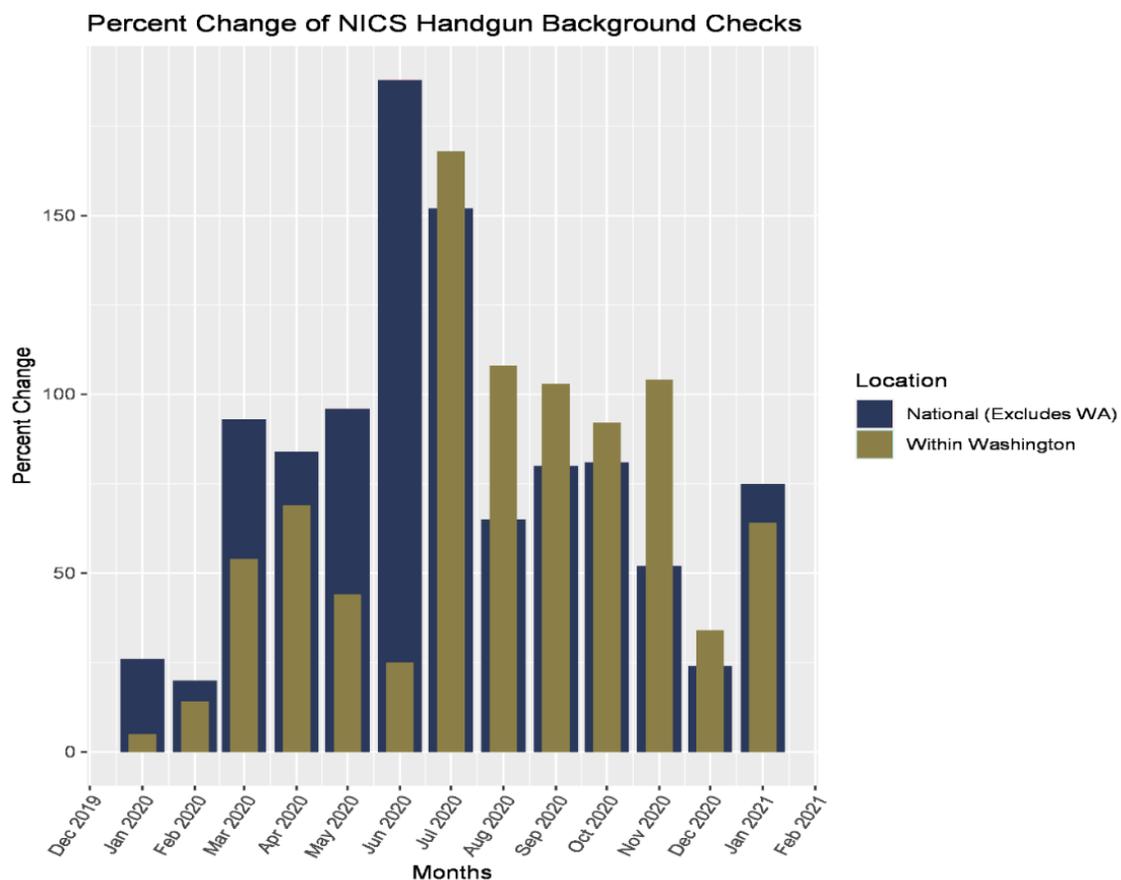
¹³ Anglemeyer, A., Horvath, T., & Rutherford, G. (2014). The accessibility of firearms and risk for suicide and homicide victimization among household members: a systematic review and meta-analysis [published correction appears in *Ann Intern Med*. 2014 May 6. 160(9), 658-9]. *Ann Intern Med*, 160(2), 101-110. doi:10.7326/M13-1301

¹⁴ Saadi, A., Choi, K. R., Takada, S., & Zimmerman, F. J. (2020). The impact of gun violence restraining order laws in the US and firearm suicide among older adults: a longitudinal state-level analysis, 2012–2016. *BMC Public Health*, 20, 1-8.

Overall, the year-over-year² percent change of handgun background checks has been higher in 2020 than in 2019, with June and July showing the greatest year-over-year monthly increases. Similar to firearms, Washington showed a higher percent change of handgun background checks from July to December 2020 as compared to the rest of the United States. While this does not account for a higher absolute number of handgun background checks, this finding reveals an increase of background checks from 2019 to 2020 (Graph 10).

Potential social and political impacts, such as protests in the spring and summer of 2020 and contentious federal elections and subsequent election-related events (November 2020 through January 2021), could be affecting the number of firearm and handgun background checks. More specific to Washington, July 2020 introduced legislative updates on firearm regulations, such as new limitations on where firearms may be carried or stored.

Graph 10: Percent change of NICS Handgun Background Checks, by month: 2019, 2020, and 2021 (Source: FBI)

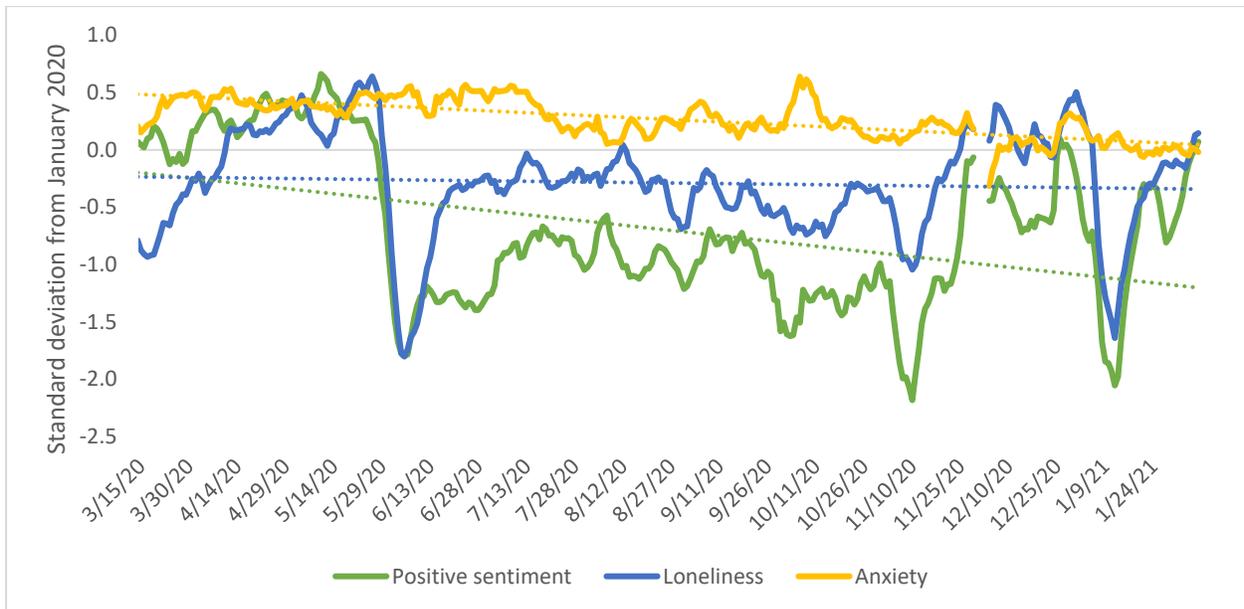


Social Media – Expressions of Positive Sentiment, Loneliness, and Anxiety

From mid-June until early November 2020, tweets related to COVID-19 and geotagged to Washington^{15,16} for positive sentiment, loneliness, and anxiety fluctuated around average values shown by the dotted lines (Graph 11). The solid line at 0.0 shows baseline content as of January 2020.

Since early November 2020, all three measures have shown greater variation than in the previous months. In particular, during the later months of 2020, positive sentiment (green line) and loneliness (blue line) deviated from averages that emerged mid-year. Following a notable drop in the first week of January 2021, expressions of anxiety (yellow line) and loneliness (blue line) may move toward new averages that are higher than those seen in much of 2020. It is possible that a contentious election and subsequent election-related events, the fall and winter holiday season, and the introduction and availability of a COVID-19 vaccine may be influencing these expressions via social media.

Graph 11: 7-day moving averages of deviation in select expression measures^{15,16} relative to a January 2020 baseline: March 7, 2020 – February 7, 2021
(Source: Penn Center for Digital Health)



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¹⁵ Since January 2020, researchers at the Penn Center for Digital Health have been tracking “tweets” about the COVID-19 pandemic, analyzing language used by Twitter users to quantify the extent to which they reflect expressions of positive sentiment, loneliness, and anxiety. Although these measures have been made publicly available, the researchers included a disclaimer, stating that “the data are still being validated and are not ready for public policy decision making.”

¹⁶ Guntuku, S.C., Sherman, G., Stokes, D.C., et al. (2020). Tracking Mental Health and Symptom Mentions on Twitter During COVID-19. *J GEN INTERN MED*. <https://doi.org/10.1007/s11606-020-05988-8>