Week of December 28, 2020 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 this reporting period (CDC Week 51[1]: week of December 13), 5 of 5 syndromic indicators (psychological distress, suicidal ideation, suspected suicide attempts, suspected overdoses by all drugs, and alcohol) exceeded 2019 levels for the third reporting period in a row. 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.
- Despite rates that exceeded 2019 levels, no statistical alerts were issued based on syndromic surveillance measures.
- Overall, anxiety and depression fluctuations are similar to known behavioral health trends during disasters. Those who identified as African American, Hispanic or Latino, or Multiracial report more frequent symptoms of anxiety and depression. People under the age of 30 and whose household income is less than $35,000 per year also reported high rates of symptoms for anxiety and depression.

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[1] https://wwwn.cdc.gov/nndss/document/2020.pdf

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](#)[2] 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 deviations[3] above a 28-day average count, ending three weeks prior to the week with a warning or alert. These warnings or alerts will be mentioned within each respective syndrome section.

As of the Week of October 12 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 (CDC Week 13), seasonal shifts year-over-year,[4] 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-year[4] 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, rates presented in this report may not reflect the true magnitude and direction of trends for behavioral health conditions and should be interpreted cautiously.

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[2] https://www.doh.wa.gov/ForPublicHealthandHealthcareProviders/HealthcareProfessionsandFacilities/PublicHealthMeaningfulUse/RHINO
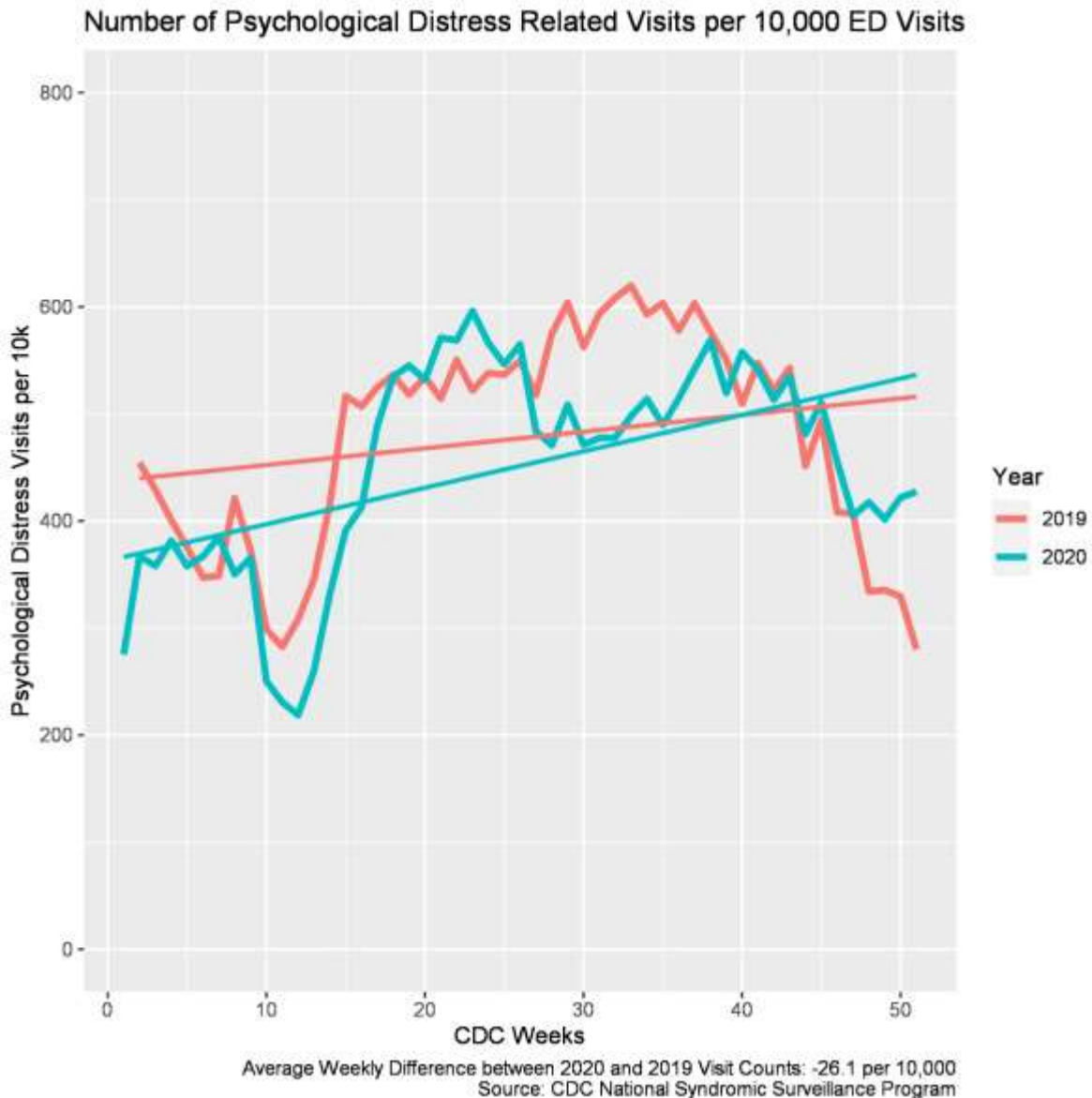
[3] Standard deviation: A measure of the amount of variation or dispersion of a set of values. Standard deviation is often used to measure the distance of a given value from the average value of a data set.

[4] Year-over-year: The comparison of two years, specifically 2020 to 2019.

Psychological Distress

CDC Week 51 (week of December 13) had a relative reported ED visit count for psychological distress[5] that was slightly higher than the previous week. For the third reporting period in a row, the 2020 relative count was higher than that in 2019 (Graph 1).

Graph 1: Relative count of ED visits for psychological distress[5] in Washington, by week: 2020 vs. 2019 (Source: CDC ESSENCE)
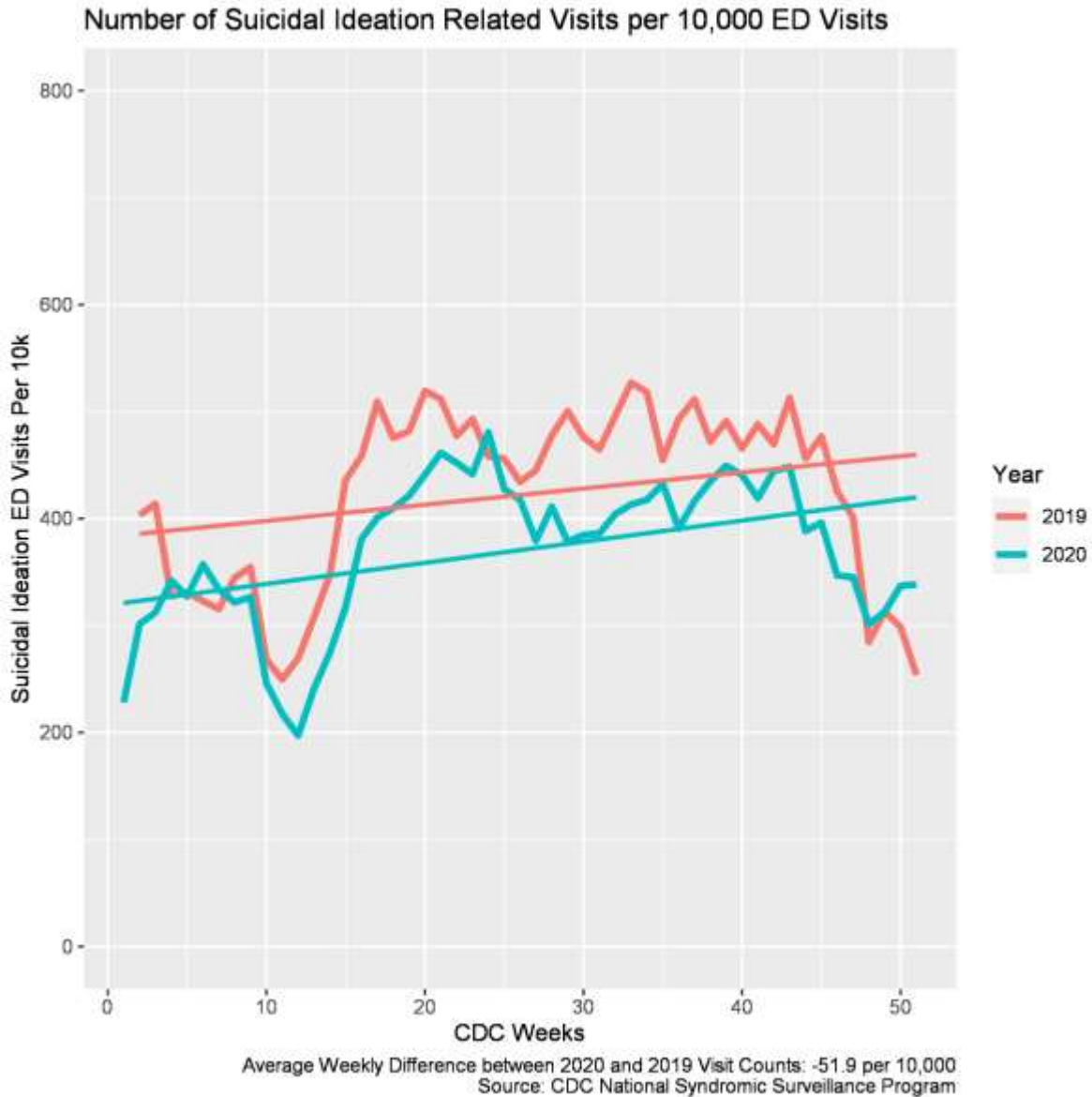

[5] Psychological distress in this context is considered a disaster-related syndrome comprised of panic, stress, and anxiety. It is indexed in the Electronic Surveillance System for the Early Notification of Community-based Epidemics (ESSENCE) platform as Disaster-related Mental Health v1. Full details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

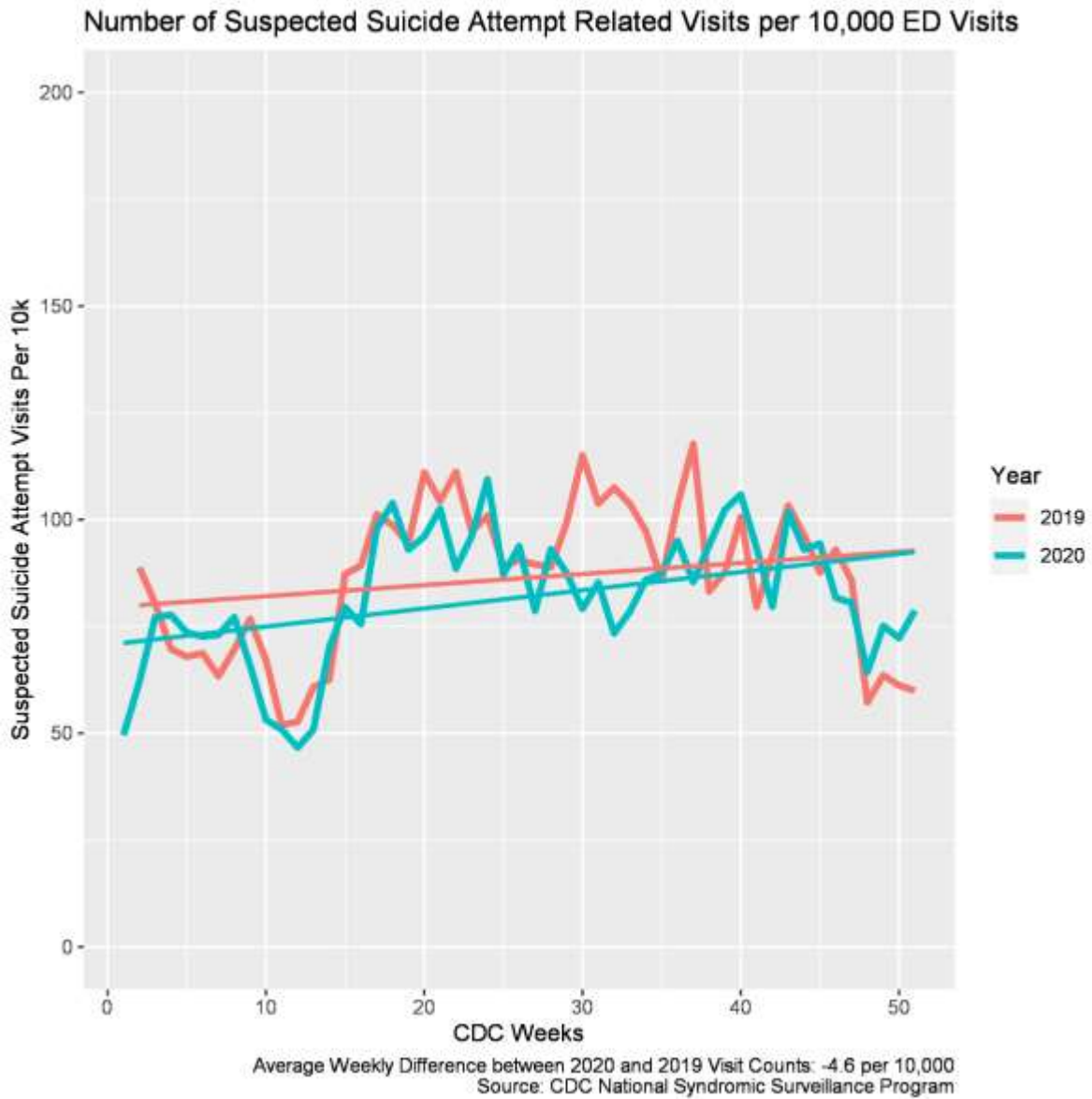## Suicidal Ideation and Suspected Suicide Attempts

For **CDC Week 51 (week of December 13)**, the relative reported ED visits for suicidal ideation was approximately equal to the previous week (Graph 2). For the third reporting period in a row, the number of visits was higher than the same period in 2019. There are no alerts or warnings for suicidal ideation for this period, a trend which has continued for several weeks.

Graph 2: Relative count of ED visits for suicidal ideation in Washington, by week: 2020 vs. 2019 (Source: CDC ESSENCE)

Number of Suicidal Ideation Related Visits per 10,000 ED Visits

Average Weekly Difference between 2020 and 2019 Visit Counts: -51.9 per 10,000
Source: CDC National Syndromic Surveillance Program

ED visits reported for suspected suicide attempts in CDC Week 51 (week of December 13) increased from the previous week and continues to exceed 2019 rates (Graph 3).
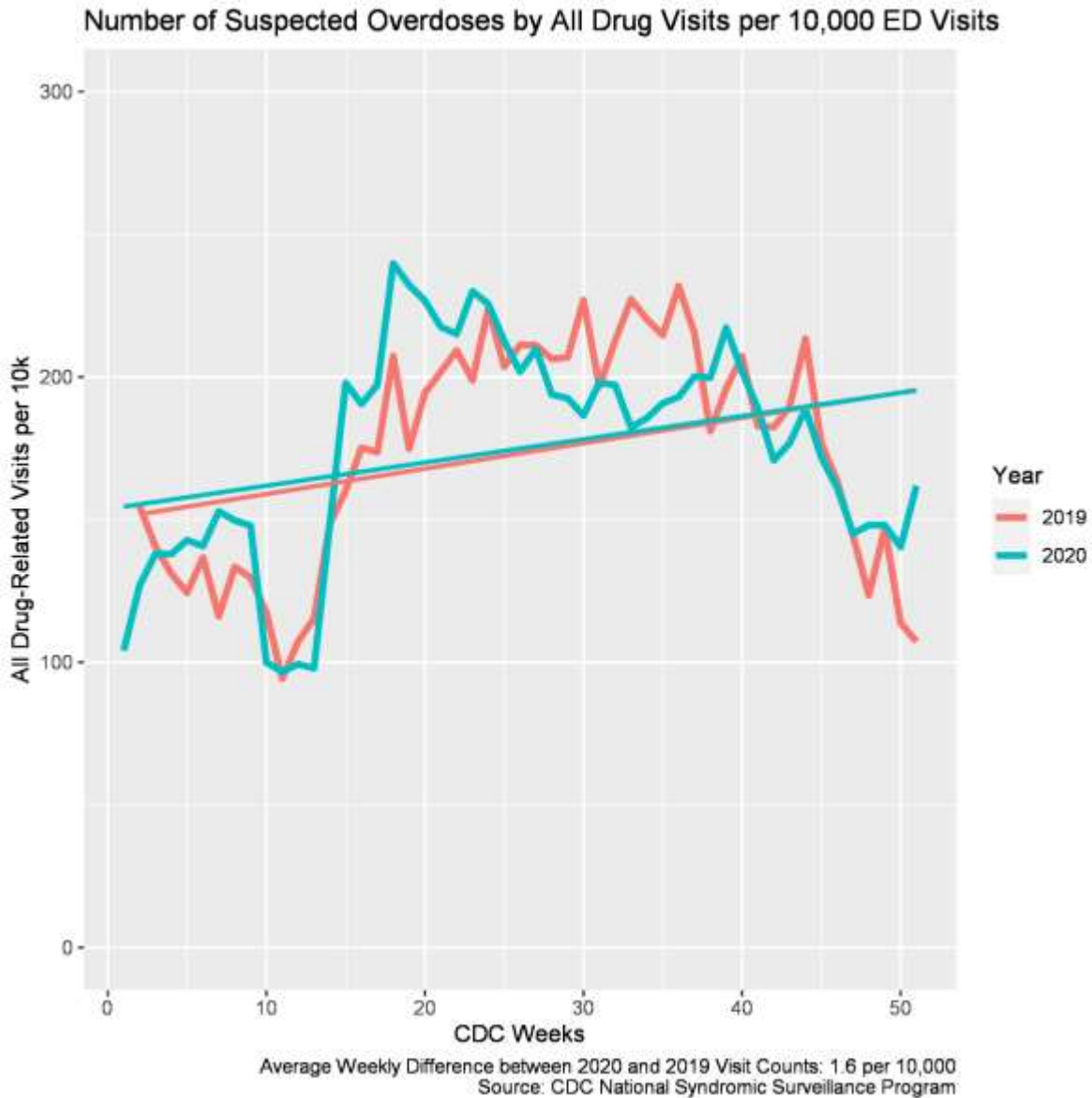
Graph 3: Relative count of ED visits for suspected suicide attempts in Washington, by week: 2020 vs. 2019 (Source: CDC ESSENCE)

Number of Suspected Suicide Attempt Related Visits per 10,000 ED Visits

Average Weekly Difference between 2020 and 2019 Visit Counts: -4.6 per 10,000
Source: CDC National Syndromic Surveillance Program

The relative reports for all drug[6]-related visits increased during CDC Week 51 (week of December 13), the rate of visits in 2020 **once again exceeded 2019 rates** (Graph 4).
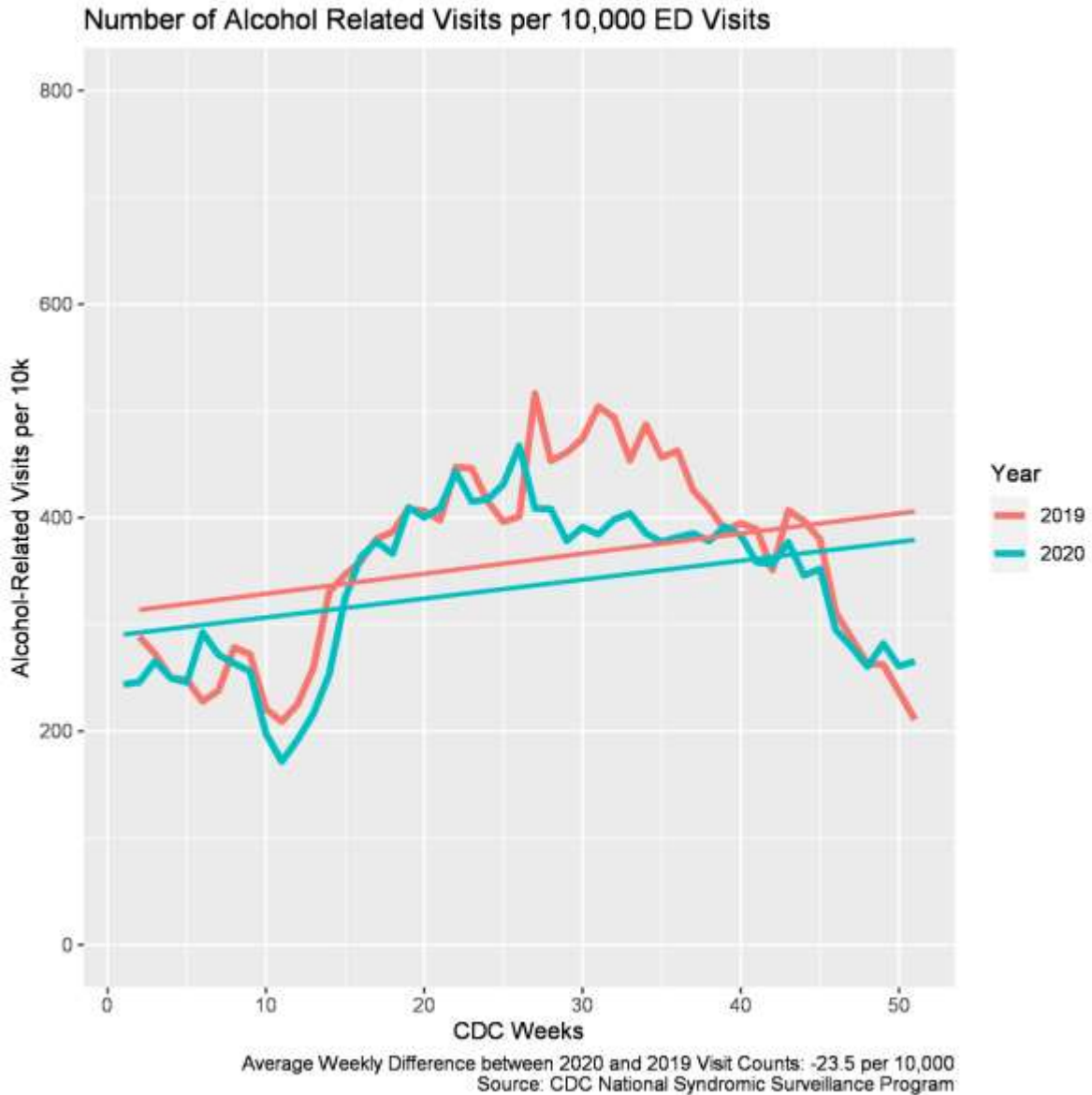
Graph 4: Relative ED count for all drug[6]-related visits in Washington, by week: 2020 vs. 2019 (Source: CDC ESSENCE)

Number of Suspected Overdoses by All Drug Visits per 10,000 ED Visits

Average Weekly Difference between 2020 and 2019 Visit Counts: 1.6 per 10,000
Source: CDC National Syndromic Surveillance Program

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[6] 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 proportion of alcohol-related visits for CDC Week 51 (week of December 13) increased slightly and remained above 2019 rates. The visits are lower than the peak visit rates in CDC Weeks 23–28 of this year (Graph 5), but higher than CDC Week 49 in 2019. It should be noted that 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.
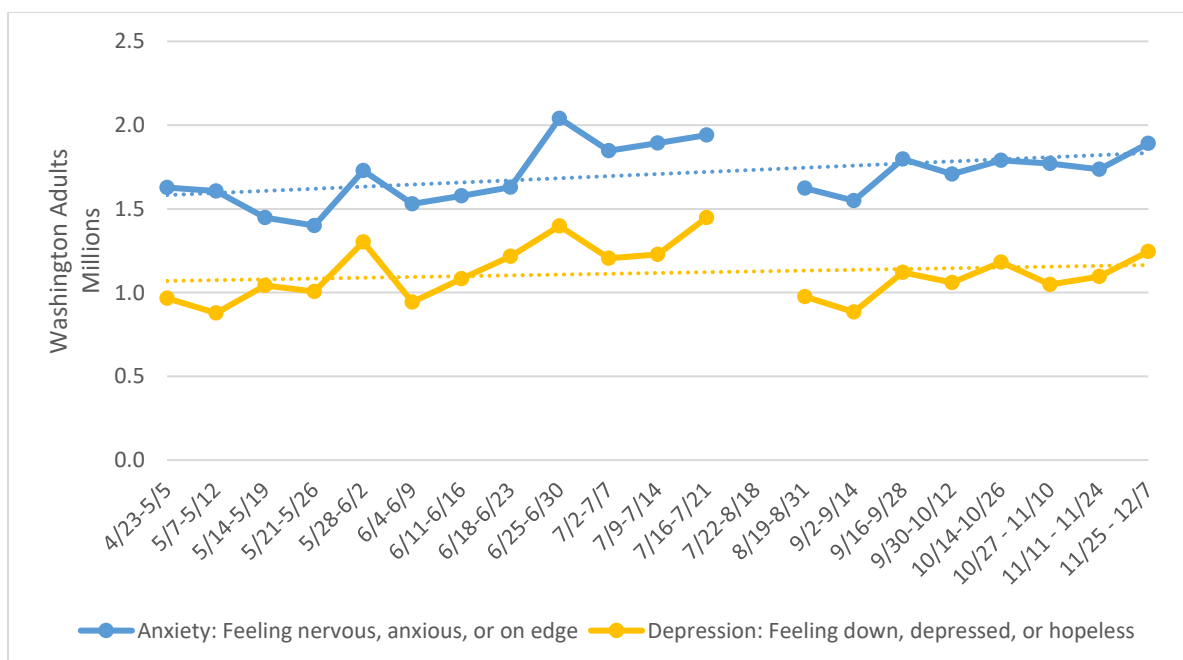
Graph 5: Relative ED count for alcohol-related visits in Washington, by week: 2020 vs. 2019 (Source: CDC ESSENCE)

Number of Alcohol Related Visits per 10,000 ED Visits

Average Weekly Difference between 2020 and 2019 Visit Counts: -23.5 per 10,000
Source: CDC National Syndromic Surveillance Program

General Surveillance – Symptoms of Anxiety and Depression

[Survey data](#)[7] collected by the U.S. Census Bureau for November 25–December 7 show **increases in feelings of anxiety and depression** among adults in Washington. Compared to the previous reporting period (November 11–24), **those reporting symptoms of anxiety on at least half of the days in the previous week increased by 8.8%, while those reporting symptoms of depression on at least half the days increased by 13.7%** (Graph 6). These measures continue an upward trend, with **just under 1.9 million adults in Washington reporting that they experienced symptoms of anxiety** on at least half of the days in the previous week, and **approximately 1.25 million adults in Washington reporting symptoms of depression** in the same time period. For these measures, the standard error suggests that the inaccuracy of estimates may be around 7.5% above or below the numbers previously mentioned. This survey data is not in any way related to the data presented in a previous section.

Graph 6: Estimated Washington adults with feelings of anxiety and depression at least most days, by week: April 23–December 7 (Source: U.S. Census Bureau)

Note: For the period of 7/21–8/19, census data was not available and thus, any trends during this point are an artifact of analysis.

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[7] 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 November 25–December 7 survey data, depression measures 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 depression and anxiety symptoms.

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 (47%), and those in households earning $25,000 to $35,000 per year reporting the second highest rate (35%).

This **trend is more pronounced for measures of anxiety**, with those in households earning less than $25,000 per year reporting symptoms of anxiety at the highest rate (63%), those in households earning $25,000 to $35,000 per year at the second highest rate (50%), and those in households earning $35,000 to $50,000 reporting at the third highest rate (45%). Only those whose annual household income is higher than $150,000 reported rates below 30%, and **no income group reported rates lower than 20%.**[7]
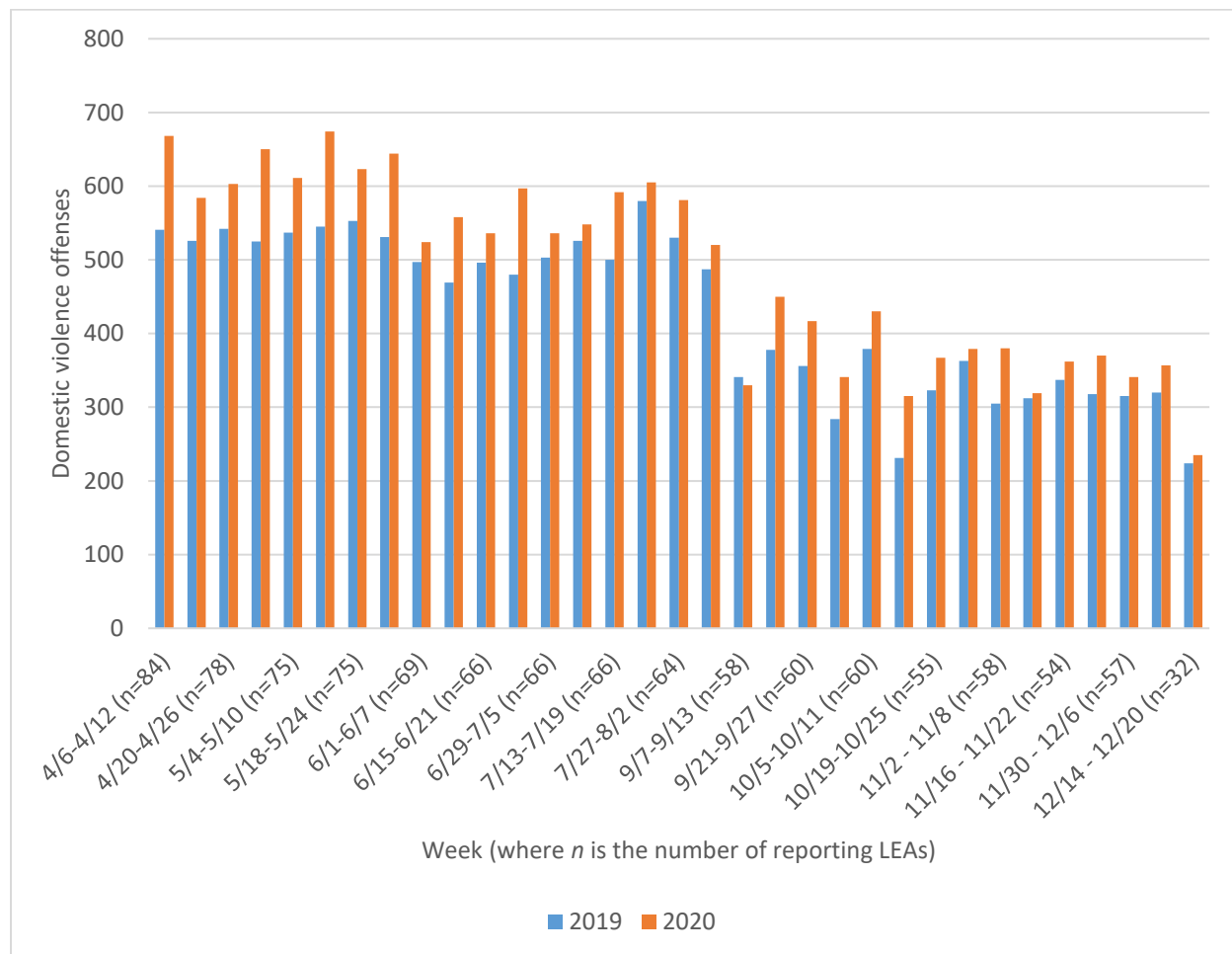
Those who identified as **African American and Hispanic or Latino have the highest symptom reporting for depression** (40% and 39%, respectively). For symptoms of **anxiety, those who identified as African American and those who identified as two or more races both reported at 51%.** Only slightly lower were those who identified as Hispanic or Latino, who reported symptoms of anxiety at a rate of 47%.

Lastly, those who identified as male have an increased symptom reporting rate for depression (28% for males, compared to 24% for females), while those who identified as female were more likely to have reported symptoms of anxiety (43% for females, compared to 31% for males).

Crime – Domestic Violence

The December 14–20 reporting period (in which 32 agencies reported, n[8]=32) saw a continued increase in the number of domestic violence offenses being reported (Graph 7), according to survey data from the Washington Association of Sheriffs and Police Chiefs (WASPC).[9] This survey has also detected **double-digit decreases in other offenses during the week of December 14–20 (18%)**.

Graph 7: Domestic violence offenses reported, by week for April 6–December 20: 2020 vs. 2019 (Source: WASPC)[8,9]

Week (where *n* is the number of reporting LEAs)

■ 2019 ■ 2020

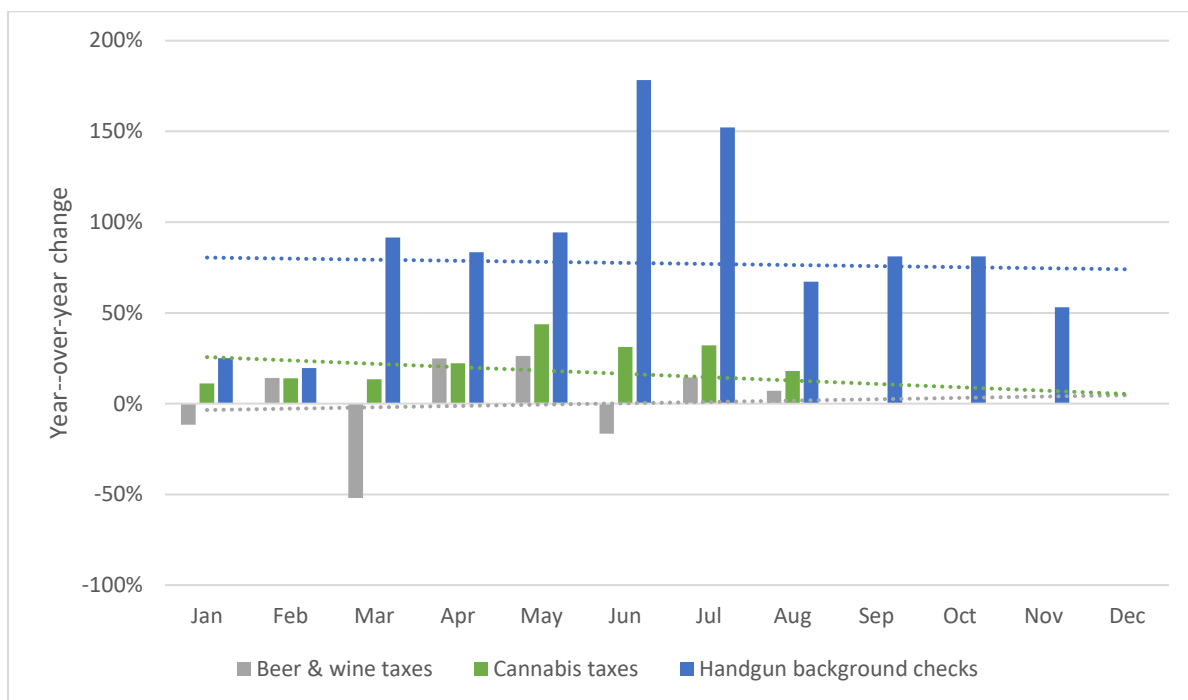[8] *n* is for both 2019 and 2020, specifying only those agencies reporting in both 2020 and 2019.
[9] WASPC began conducting a weekly survey to all Washington law enforcement agencies (LEAs) in April to understand the likely impact of the COVID-19 pandemic on common crimes. Between 24–31% of the 275 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 both 2019 and 2020. A smaller or larger number of reporting agencies does not affect year-over-year comparisons.

Product Sales – Alcohol and Cannabis Taxes & Handgun Background Checks

The Liquor and Cannabis Board (LCB) summarizes monthly beer, wine, and cannabis 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 in the first half of 2020 were consistently higher than in 2019. While changes in year-over-year[4] monthly beer and wine tax collections (combined) have fluctuated, they are generally increasing. Further updates to these data are expected.

Additionally, federal background checks for handgun sales[10] may represent access to firearms,[11] which is a risk factor for suicide and other gun violence.[12] Overall, the number of federal background checks has been higher in 2020 than in 2019, with June and July showing the greatest year-over-year[4] monthly increases.

Graph 8: Year-over-year change in select product sales indicators, by month: 2020 vs. 2019 (Sources: LCB, Federal Bureau of Investigation)

Note: Only data on handgun background checks is currently available for the September–December 2020 period. Beer, wine, and cannabis tax data for this period are expected in future updates.

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[10] 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."

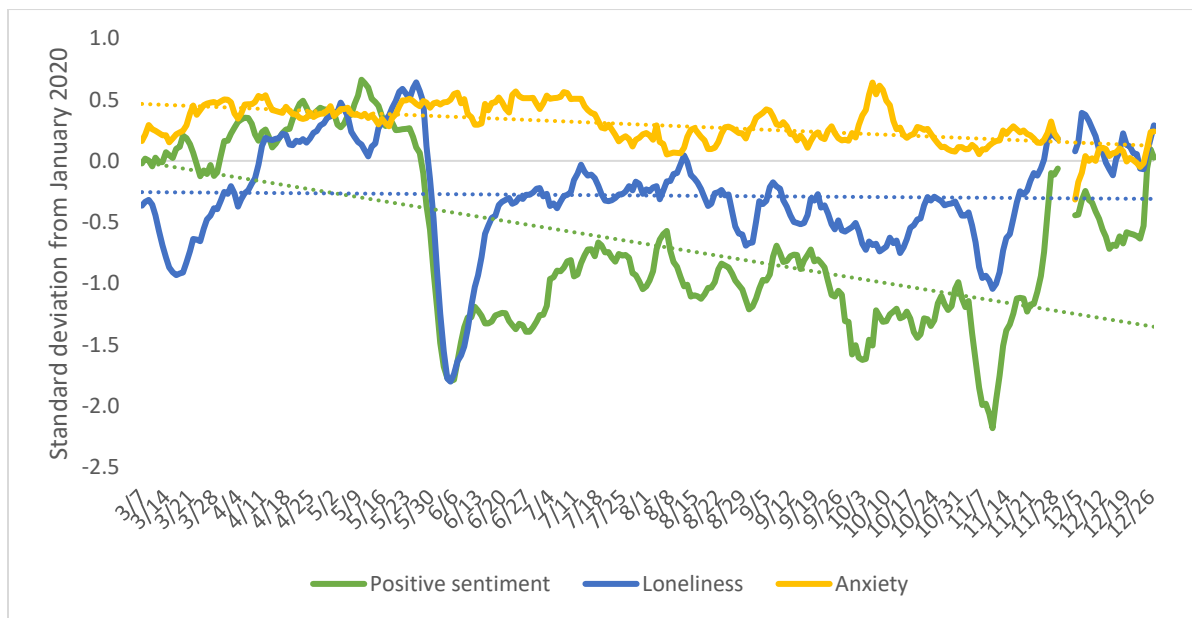[11] Nemerov, H.R. (2018). Estimating Guns Sold by State. SSRN: http://dx.doi.org/10.2139/ssrn.3100289

[12] Anglemyer, 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

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

From mid-June until early November, tweets related to COVID-19 and geotagged to Washington[13,14] for positive sentiment, loneliness, and anxiety fluctuated around average values shown by the dotted lines (Graph 9). The solid line at 0.0 shows baseline content as of January 2020.

Since early November, all three measures have shown greater variation than in the previous months. In particular, positive sentiment (green line) and loneliness (blue line) have deviated from averages that emerged in mid-2020, while expressions of anxiety (yellow line) may be returning to levels seen throughout much of 2020. It is possible that the U.S. election, the fall and winter holiday season, and the introduction of a COVID-19 vaccine may be influencing these expressions via social media.

Graph 9: 7-day moving averages of deviation in select expression measures[13,14] relative to January 2020 baseline: March 7, 2020–December 26, 2020 (Source: Penn Center for Digital Health)

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[13] 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."

[14] 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