

Week of April 5, 2021

COVID-19 Behavioral Health Impact Situation Report

This situation report presents 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 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 ninth reporting period in a row** ([CDC Week¹ 12](#): week of March 21), **5 of 5 syndromic indicators exceeded rates in the corresponding weeks of both 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 warning** was issued for **suspected suicide attempts** for those who identified as **Asian**.
 - Despite exceeding rates of previous years, some syndromic indicators decreased from the previous reporting period.
- The **number of FBI background checks for firearms purchases in Washington** showed a year-over-year² **decrease in March 2021**.
 - A background check does not necessarily indicate a firearms purchase.

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.

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. While both warnings and alerts indicate more visits than expected, an alert indicates more caution may be warranted.⁵ These warnings or alerts will be mentioned within each respective syndrome section.

Analysis conducted by the Washington State Department of Health and the Northwest Tribal Epidemiology Center found 9,443 misclassified visits in Washington hospitals from May 15 – September 15, 2020. The visits in question should have been classified as American Indian/Alaska Native and represent a 26.8% misclassification rate during that time period.

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-year averages for a particular week, along with the weekly visit fluctuations, to better assess demand for care and care-seeking behaviors.

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>

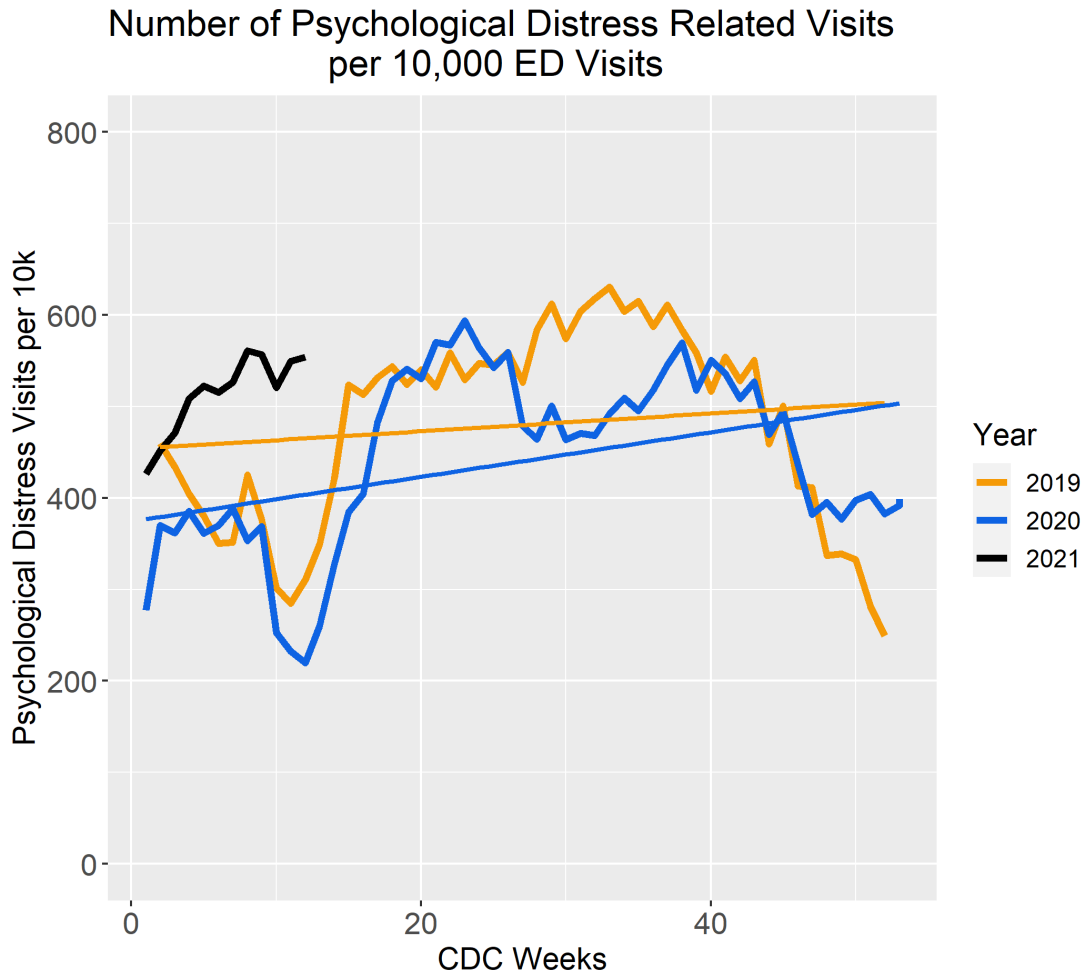
⁴ Standard deviation: A measure of the amount of variation or dispersion of a set of values. Standard deviation is often used to measure the distance of a given value from the average value of a data set.

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

During **CDC Week 12 (week of March 21)**, the relative reported ED visits for psychological distress⁶ **increased slightly from the previous reporting period** and remain higher than rates in the corresponding weeks of 2019 and 2020 (Graph 1). **No statistical warnings or alerts were issued.**

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



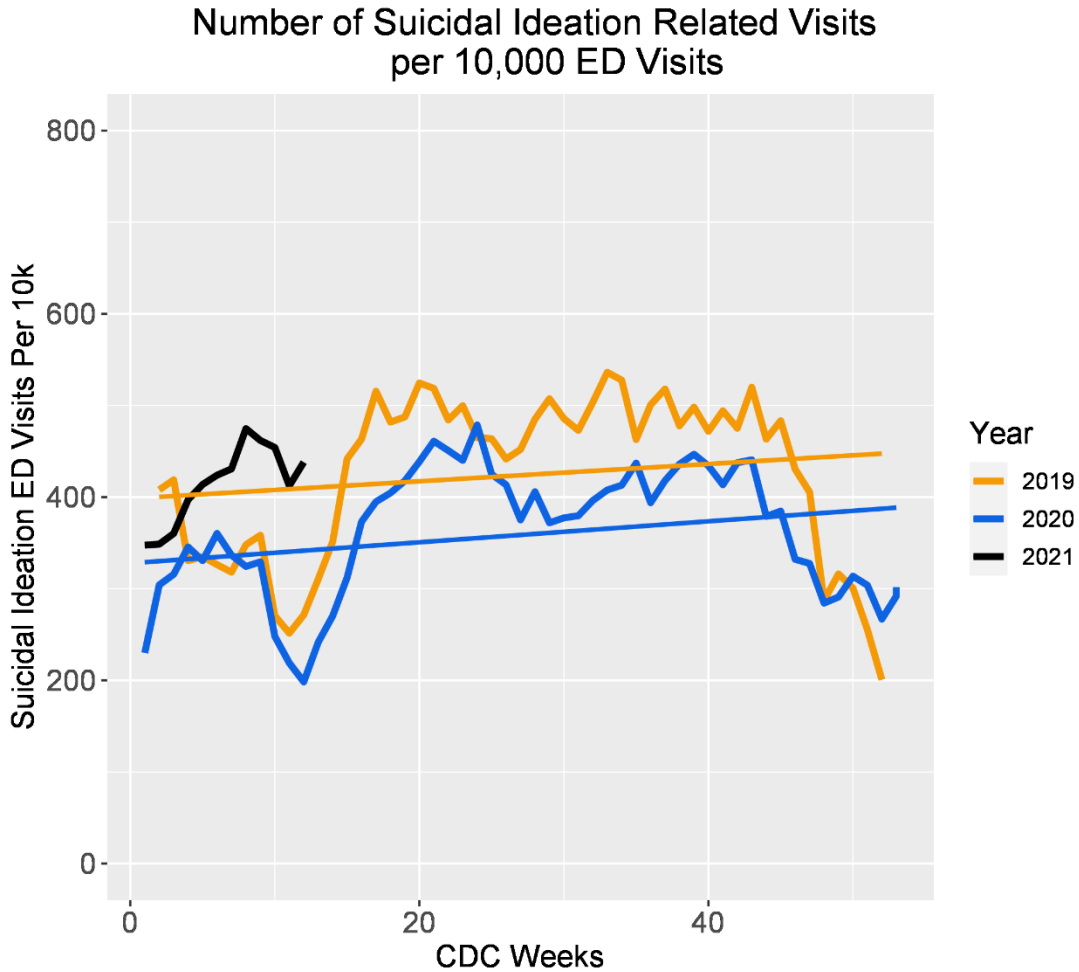
Average Weekly Difference between 2020 and 2019 Visit Counts: -345.7 per 10,000
Source: CDC National Syndromic Surveillance Program
Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

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-definition-subcommittee>.

Suicidal Ideation and Suspected Suicide Attempts

During **CDC Week 12 (week of March 21)**, the relative reported rate of ED visits for suicidal ideation **increased from the previous reporting period** and remains higher than rates in the corresponding weeks of 2019 and 2020 (Graph 2). **No statistical warnings or alerts were issued.**

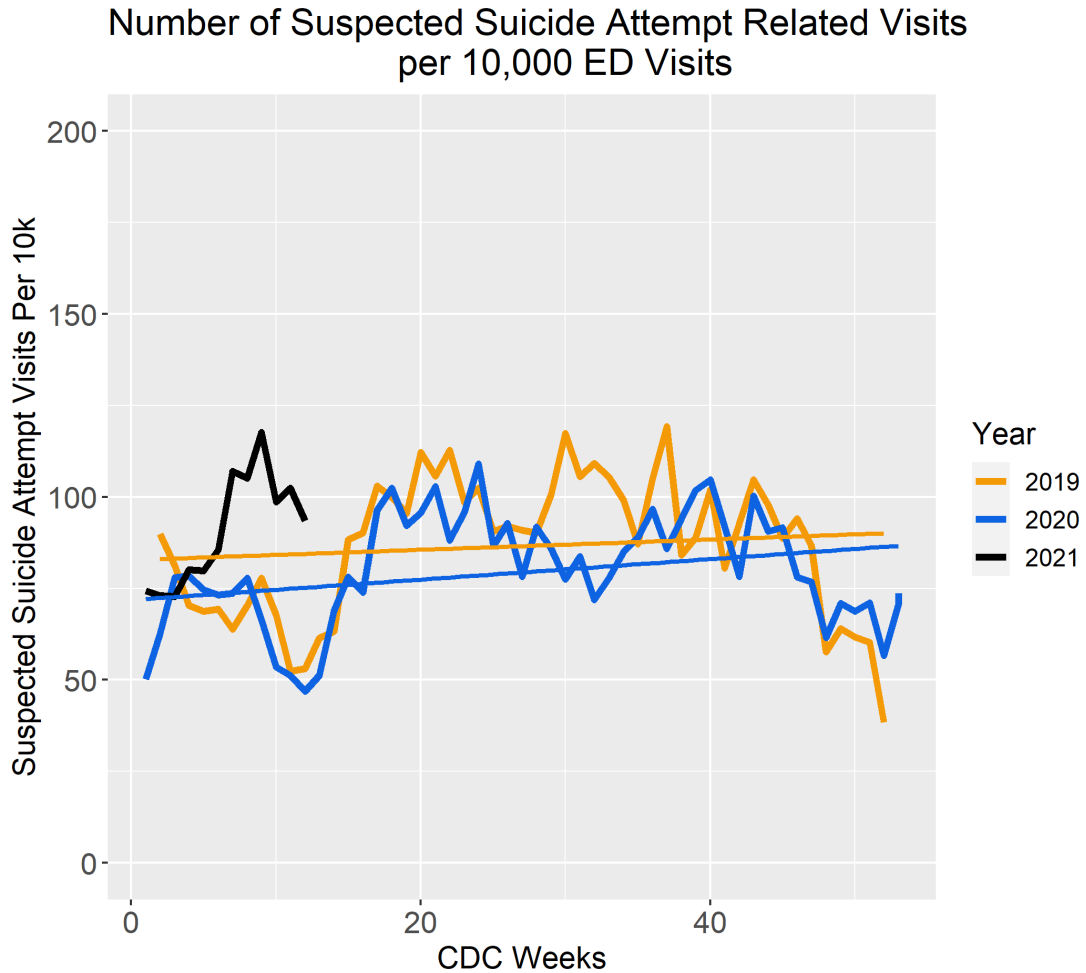
Graph 2: Relative count of ED visits for suicidal ideation in Washington, by week: 2019, 2020, and early 2021 (Source: CDC ESSENCE)



Average Weekly Difference between 2020 and 2019 Visit Counts: -314.2 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 12 (week of March 21)**, the relative reported rate of ED visits for suspected suicide attempts **decreased from the previous reporting period** but remains higher than rates in the corresponding weeks of 2019 and 2020 (Graph 3). **A statistical warning was issued for those who identified as Asian.**

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

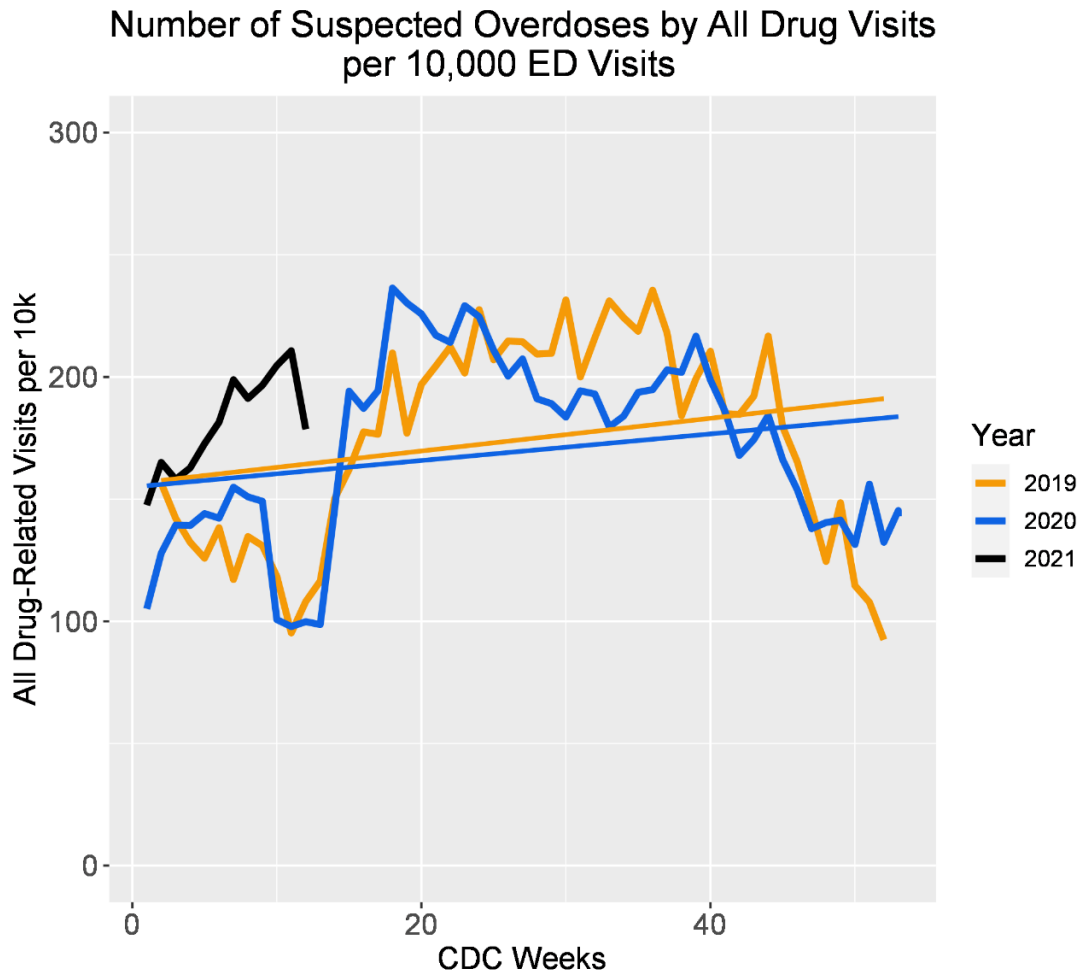


Average Weekly Difference amongst 2020 and 2019 Visit Counts: -63.7 per 10,000
 Source: CDC National Syndromic Surveillance Program
 Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

Substance Use – Drug Overdose and Alcohol-Related Emergency Visits

During **CDC Week 12 (week of March 21)**, the relative reports for all drug⁷-related ED visits **decreased from the previous reporting period** but remain higher than rates in the corresponding weeks of 2019 and 2020 (Graph 4). **No statistical warnings or alerts were issued.**

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

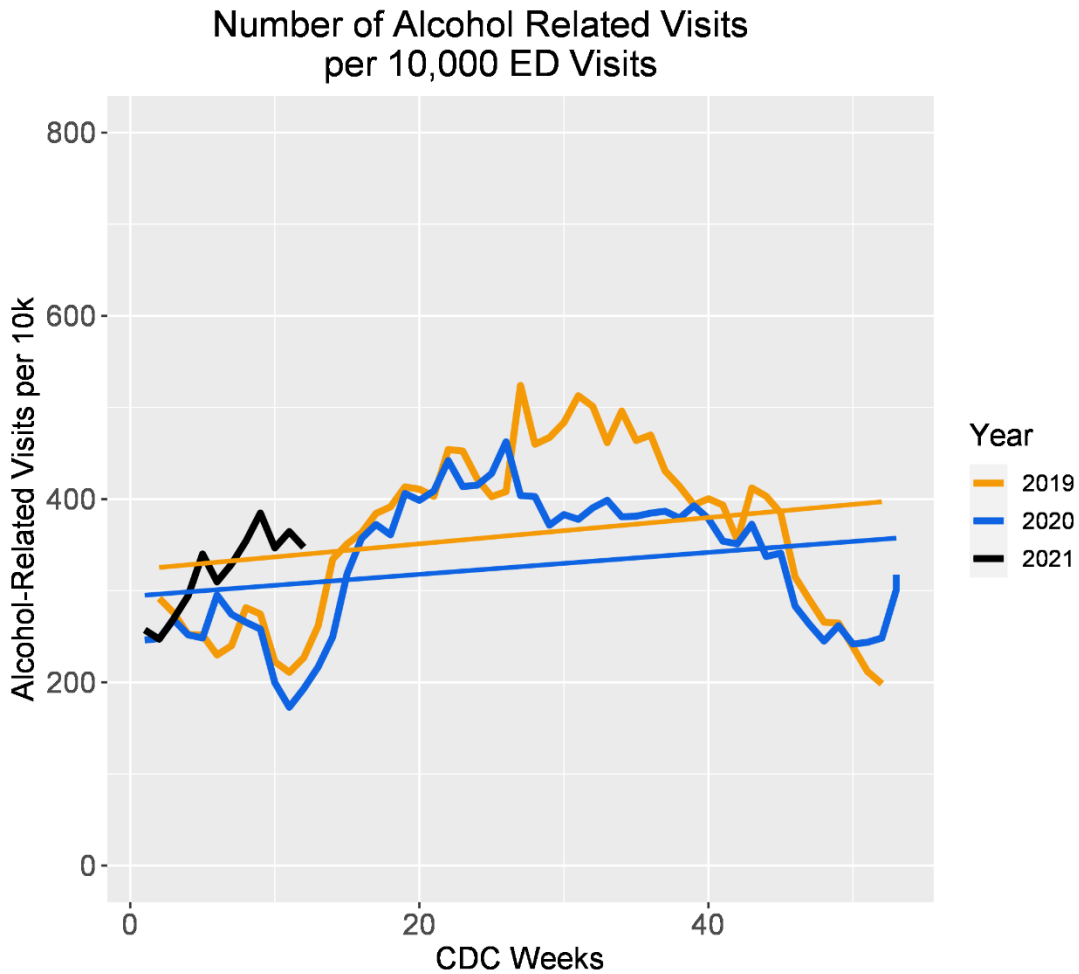


Average Weekly Difference between 2020 and 2019 Visit Counts: -138.5 per 10,000
Source: CDC National Syndromic Surveillance Program
Note: While 2021 is displayed, more data points are needed to showcase average weekly differences among all three years.

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>.

During **CDC Week 12 (week of March 21)**, the relative reports for alcohol-related ED visits **decreased from the previous reporting period** but remain higher than rates in the corresponding weeks of 2019 and 2020 (Graph 5). **No statistical warnings or alerts were issued.** 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 early 2021 (Source: CDC ESSENCE)



Average Weekly Difference between 2020 and 2019 Visit Counts: -302.6 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](#) collected by the U.S. Census Bureau for March 3 – 15, 2021 show a **decrease in both anxiety (-9%) and depression (-4.6%)** among adults in Washington, compared to the previous reporting period of February 17 – March 1, 2021 (Graph 6).⁸ In the most recent reporting period represented below, **approximately 1.5 million adults in Washington reported symptoms of anxiety** on all or most days of the previous week, while just under **1 million reported the same frequency of symptoms of depression**. Please note that the same respondent may have reported frequent symptoms of both anxiety and depression, and these numbers are not cumulative. For these measures, the standard error suggests that the inaccuracy of estimates may be around 7.4% above or below the numbers previously mentioned. This survey data is not in any way related to the data presented in previous sections.

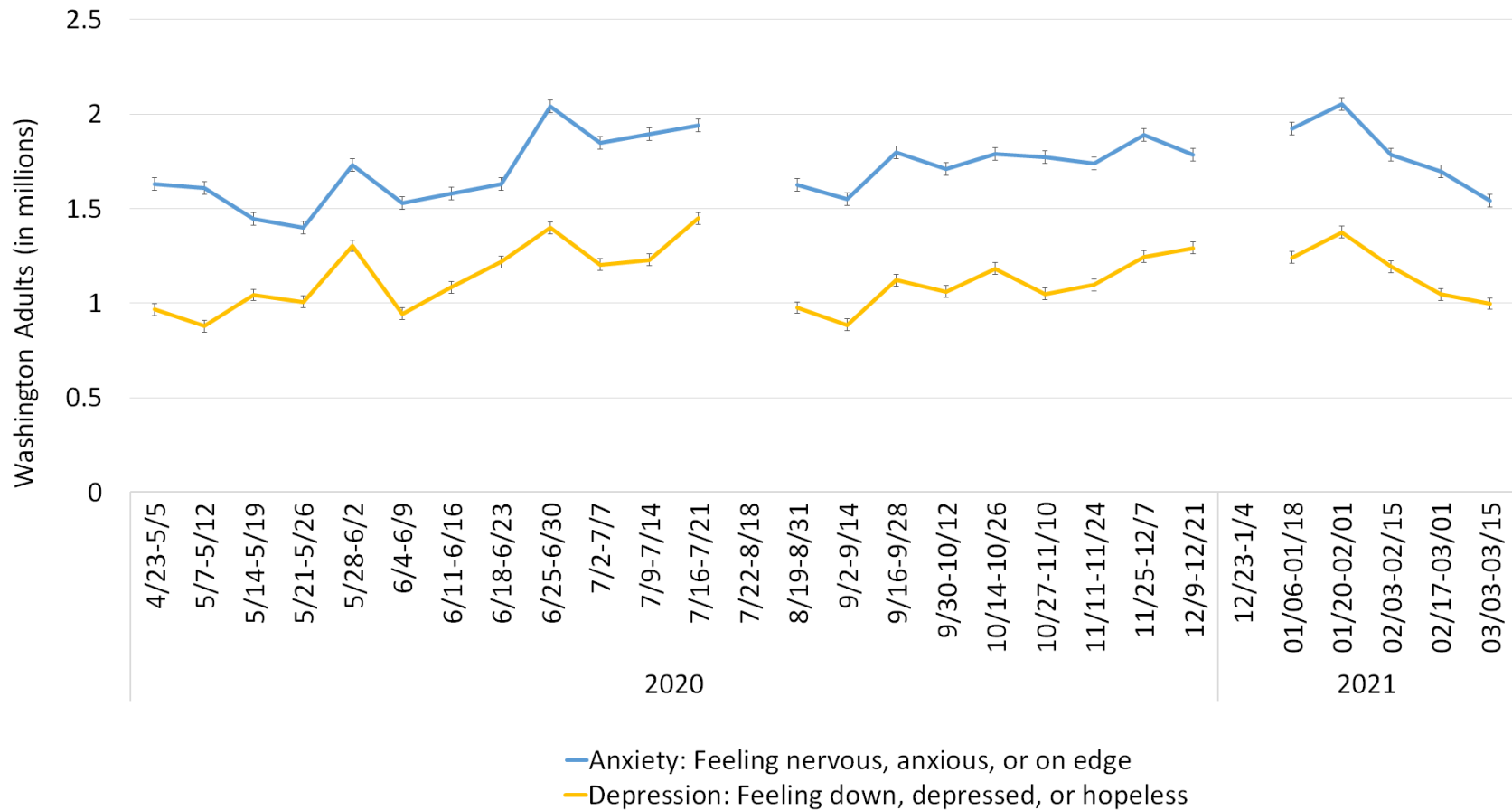
Additionally, the March 3 – 15, 2021 survey data on anxiety and depression measures continue to indicate an inverse relationship between age and frequency of symptoms. In other words, **the younger someone is, the greater their frequency of reporting anxiety and depression symptoms**. People ages 18 – 29 reported the highest rate of frequent symptoms of anxiety (43%) and depression (36%).

Those in households earning \$25,000 to \$35,000 per year report the highest rates of frequent symptoms of anxiety (48%) and depression (34%). Those in households earning less than \$25,000 per year reported the second highest rates of symptoms of anxiety (38%) and depression (32%).

Those who identified as female have an increased symptom reporting rate for anxiety (34% for females, compared to 28% for males) and depression (26% for females, compared to 22% for males).

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

**Graph 6: Estimated Washington adults with feelings of anxiety and depression at least most days, by week:
April 23, 2020 – March 15, 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.

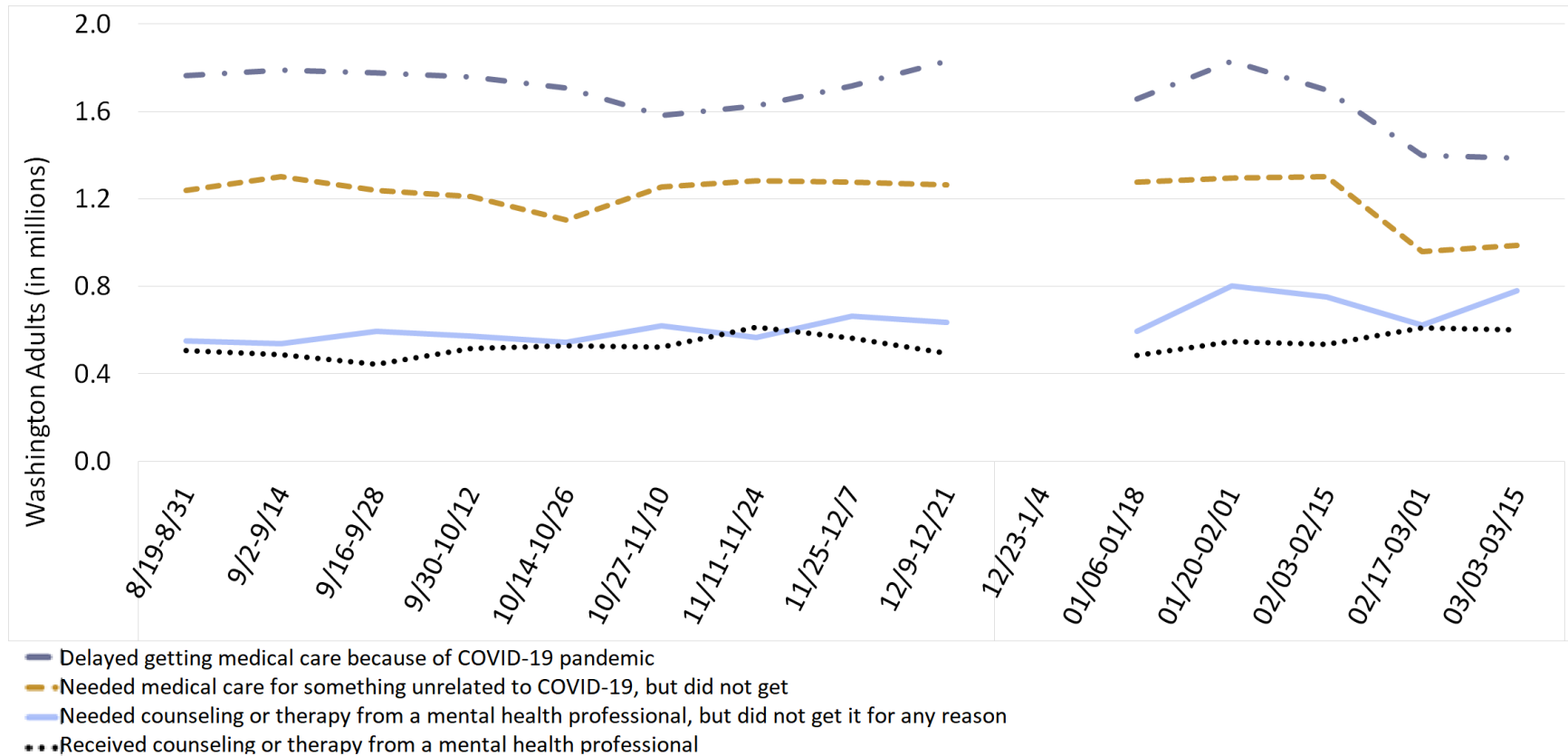
Care-Seeking Behavior

[Survey data](#) collected by the U.S. Census Bureau for August 19, 2020 – March 15, 2021 show the number of adults in Washington who received medical care and counseling, as well as the number who delayed or did not receive care (Graph 7).⁸ Compared to the previous reporting period of February 17 – March 1, 2021, **more people reported needing therapy or counseling but not receiving it for any reason (+25%),** while **approximately the same number of people reported delaying medical care due to COVID-19.**

Among those who **reported needing counseling or therapy and not receiving it, 17% were ages 18 – 29 and 23% were ages 30 – 39.** Within the same reporting group, **26% reported a household income of less than \$25,000 per year.**

For these measures, the standard error suggests that the inaccuracy of estimates may be around 6.9% above or below the numbers previously mentioned.

**Graph 7: Estimated Washington adults who received or delayed medical care or counseling, by week:
August 19, 2020 – March 15, 2021 (Source: U.S. Census Bureau)**

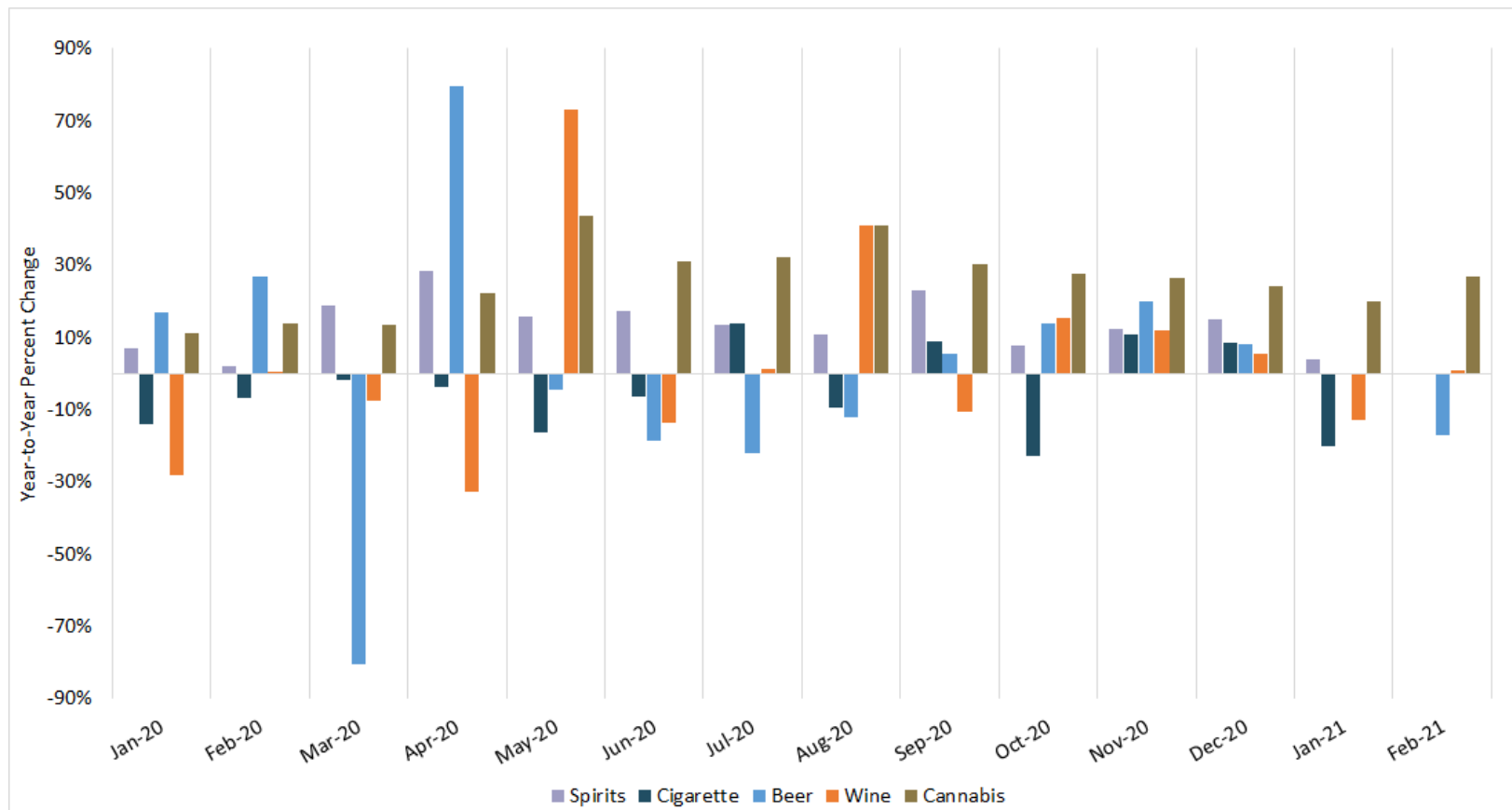


Note: The U.S. Census Bureau began this data collection in August 2020 and paused briefly for the period of December 23, 2020 – January 3, 2021.

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, as well as in early 2021 compared to 2020 (Graph 8). Similarly, sales of spirits were consistently higher in 2020 than in 2019, while cigarette sales fluctuated. Note that on January 1, 2021, the legal age to purchase cigarettes in Washington increased from 18 to 21.

Graph 8: Year-over-year percent change in select product sales indicators, by month: 2020 and early 2021 (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 sales may represent access to firearms, which is a risk factor for suicide and other gun violence.^{9,10,11,12} Nationally and in Washington, the year-over-year percent change of **firearm background checks** fluctuated in the first half of 2020 but maintained an increase from July 2020 to February 2021 (Graph 9). In the same time period, Washington showed a higher percent change of firearm background checks compared to the rest of the United States in all but one month. That relationship changed in March 2021, with Washington showing a year-over-year decrease in the number of background checks, while the rest of the United States showed an increase.

Overall, the year-over-year 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 (Graph 10). Like 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, and again showed a greater percent change in February 2021. 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 early 2021. In March 2021, there was a year-over-year decrease at both the state and national level.

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.

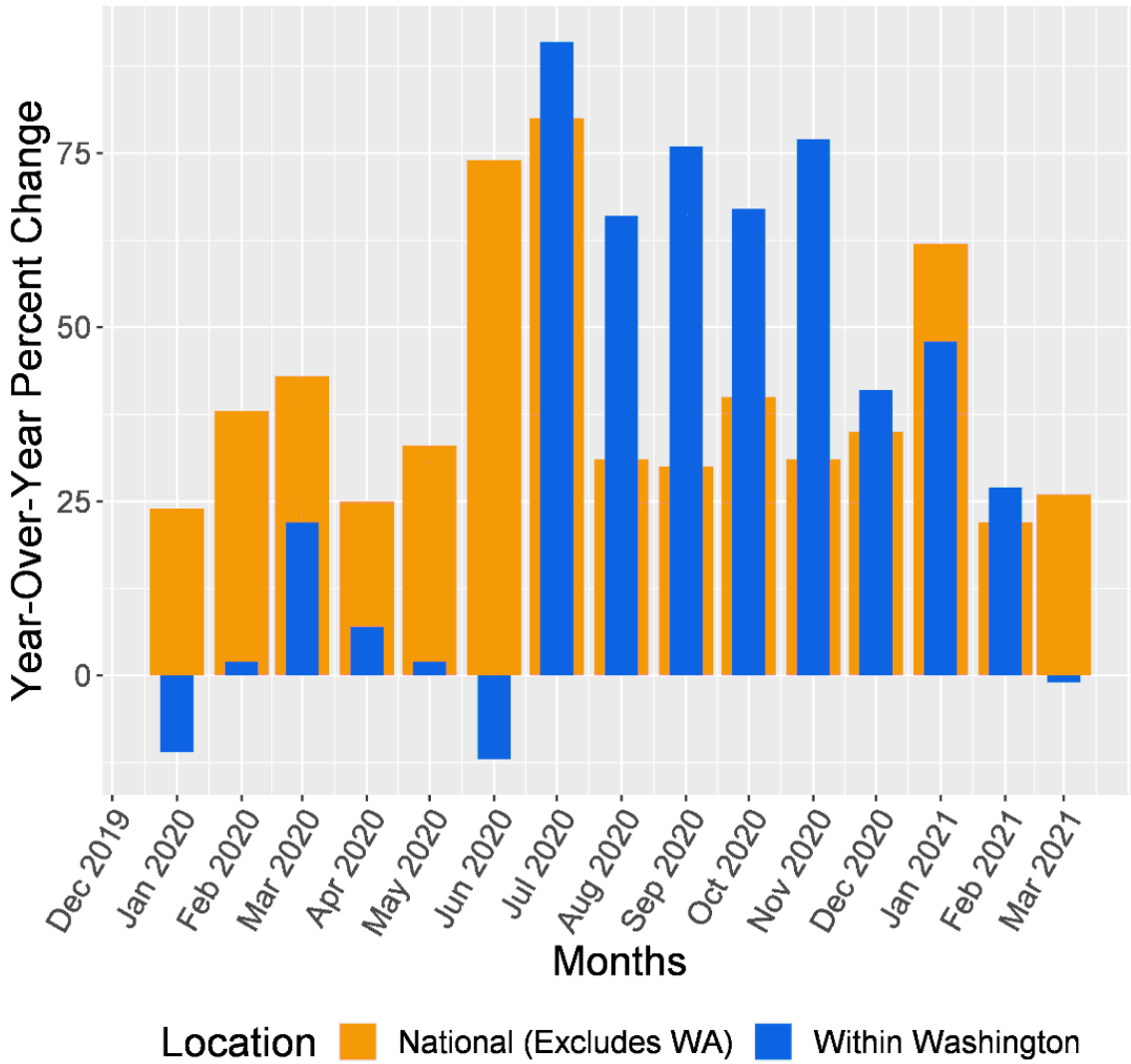
⁹ From the Federal Bureau of Investigation: “It is important to note that the statistics within this chart represent the number of firearm background checks initiated through the NICS [National Instant Criminal Background Check System]. They do not represent the number of firearms sold. Based on varying state laws and purchase scenarios, a one-to-one correlation cannot be made between a firearm background check and a firearm sale.”

¹⁰ Nemerov, H. R. (2018). Estimating Guns Sold by State. SSRN: <http://dx.doi.org/10.2139/ssrn.3100289>

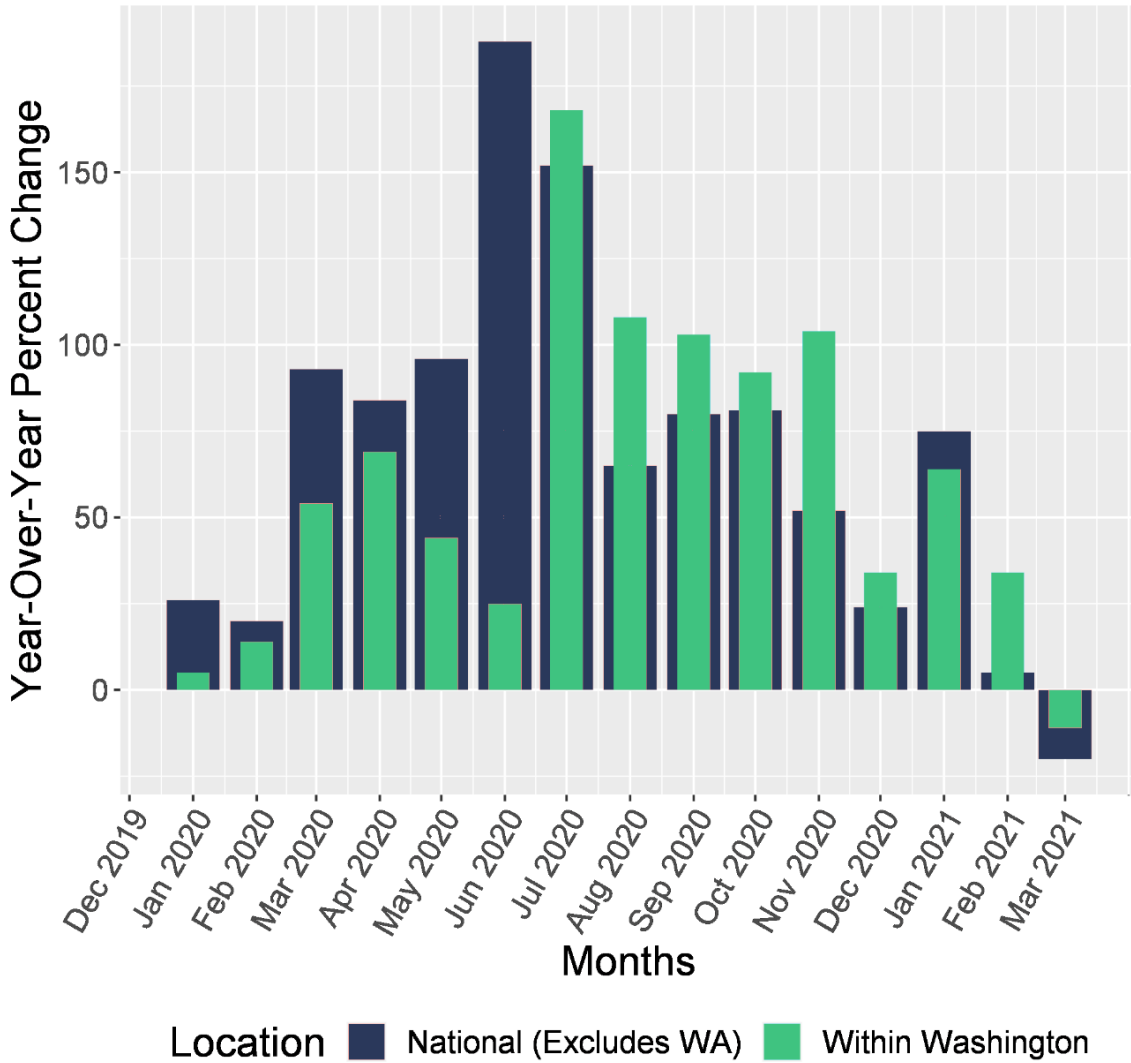
¹¹ Anglemeyer, A., Horvath, T., & Rutherford, G. (2014). The accessibility of firearms and risk for suicide and homicide victimization among household members: a systematic review and meta-analysis [published correction appears in *Ann Intern Med*. 2014 May 6. 160(9), 658-9]. *Ann Intern Med*, 160(2), 101-110. doi:10.7326/M13-1301

¹² 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.

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



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



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

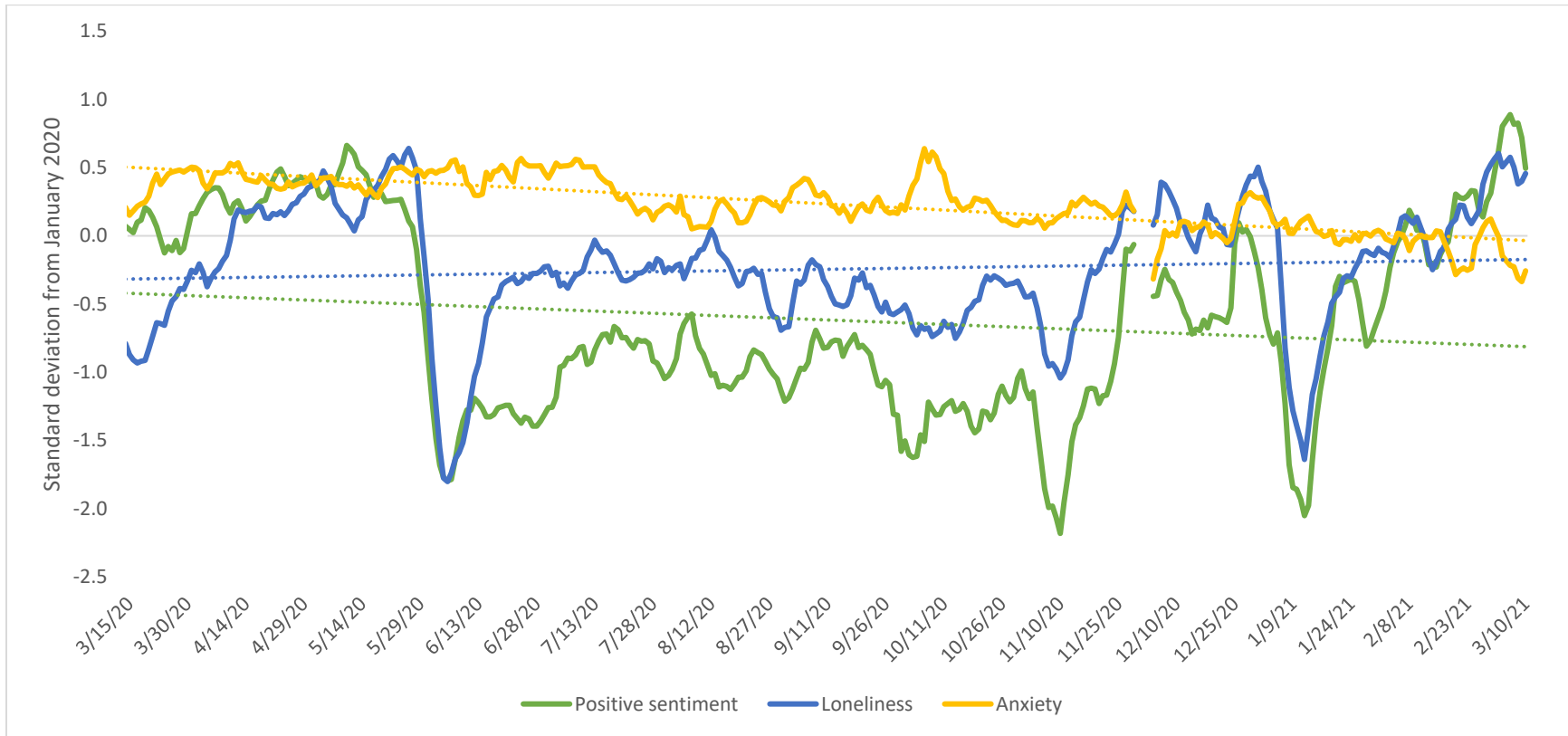
From mid-June until early November 2020, tweets related to COVID-19 and geotagged to Washington for positive sentiment, loneliness, and anxiety fluctuated around average values shown by the dotted lines (Graph 11). The solid line at 0.0 shows baseline content as of January 2020.^{13,14}

Since early November 2020, all three measures have shown greater variation than in the previous months. Following a notable drop in the first week of January 2021, expressions of positive sentiment (green line) and loneliness (blue line) exceeded the averages for 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.

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>

Graph 11: 7-day moving averages of deviation in select expression measures relative to a January 2020 baseline: March 7, 2020 – March 10, 2021
 (Source: Penn Center for Digital Health)



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