

## JULY UPDATE

# Statewide High-Level Analysis of Forecasted Behavioral Health Impacts from COVID-19

## Purpose

This document provides a brief overview of the potential statewide behavioral health impacts from the COVID-19 pandemic. The intent of this document is to communicate potential behavioral health impacts to response planners and organizations or individuals who are responding to or helping to mitigate the behavioral health impacts of the COVID-19 pandemic.

## Bottom Line Up Front

- The COVID-19 pandemic strongly influences behavioral health symptoms and behaviors across the state due to far-reaching medical, economic, social, and political consequences. This forecast is heavily informed by disaster research and response and the latest data and findings specific to this pandemic. Updates will be made monthly to reflect changes in baseline data.
- The July update to the forecast is shortened significantly and only highlights the current issues for the next month. The August update will be more robust and detailed to reflect changes related to the end of summer, back-to-classroom instruction for K-12 students, and associated family dynamics.
- Areas of focus for July and August 2021 are related to risk-taking and pleasure-seeking behaviors that may be more impulsive than normal as we recover from such a long-term disaster. Accidents may be more extreme, and behaviors may be more reckless in general, particularly for youth and young adults. See more details in the [Social and Recreational Factors, Risk Taking](#) section of this document.
- Return-to-workplace transitions for many employees may also cause significant behavioral health responses. Some employees may be fearful about expectations, uncertain about in-office policies and procedures related to safety and health, frustrated by the return to commuting, or confused by their mixed emotions about the pandemic ending and the opportunities and challenges associated with returning to in-person work.
- The speed and process of recovering from the pandemic varies significantly among communities (Figure 1), and behavioral health symptoms are also beginning to vary widely among



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groups within our population. Those who have experienced significant primary and secondary effects of the pandemic are likely to progress more slowly into reconstruction and recovery than others and experience more severe behavioral health symptoms (Figure 2). This path is represented by the *disaster cascade pathway* (dotted line) in Figure 1.

- Risk factors that predict a longer recovery cycle (along the disaster cascade pathway) with more severe behavioral health symptoms are also higher for individuals who identify as being part of marginalized social or ethnic groups, families and communities of lower socioeconomic status, and children and youth.<sup>1,2,3,4,5</sup>
- **Children, youth, and young adults are a demographic group at significant risk for challenging behavioral health outcomes and experiences, including risk-taking behaviors, throughout the summer months of 2021.**<sup>6</sup> The effects of isolation, combined with shifting educational and social opportunities and experiences, have contributed to behavioral health challenges for many individuals ages 6 – 25.<sup>6</sup> See the [July Youth Behavioral Health Impact Situation Report](#)<sup>a</sup> for more information on behavioral health impacts to youth in Washington.

## Phase-Related Behavioral Health Considerations

**Behavioral health symptoms will continue to present in phases.**<sup>7,8</sup> The unique characteristics of this pandemic trend towards anxiety and depression as a significant behavioral health outcome for many in Washington. These outcomes have been shown throughout the Behavioral Health Impact Situation Reports published by DOH, which are available on the [Behavioral Health Resources & Recommendations webpage](#)<sup>b</sup> under the “Situation reports” dropdown. Behavioral health symptoms of anxiety, impulsivity, reduced frustration tolerance, anger, depression, and post-traumatic stress disorder (PTSD) are likely to increase with any significant increases in infection and hospitalization rates or reopening plan changes.<sup>9,10</sup>

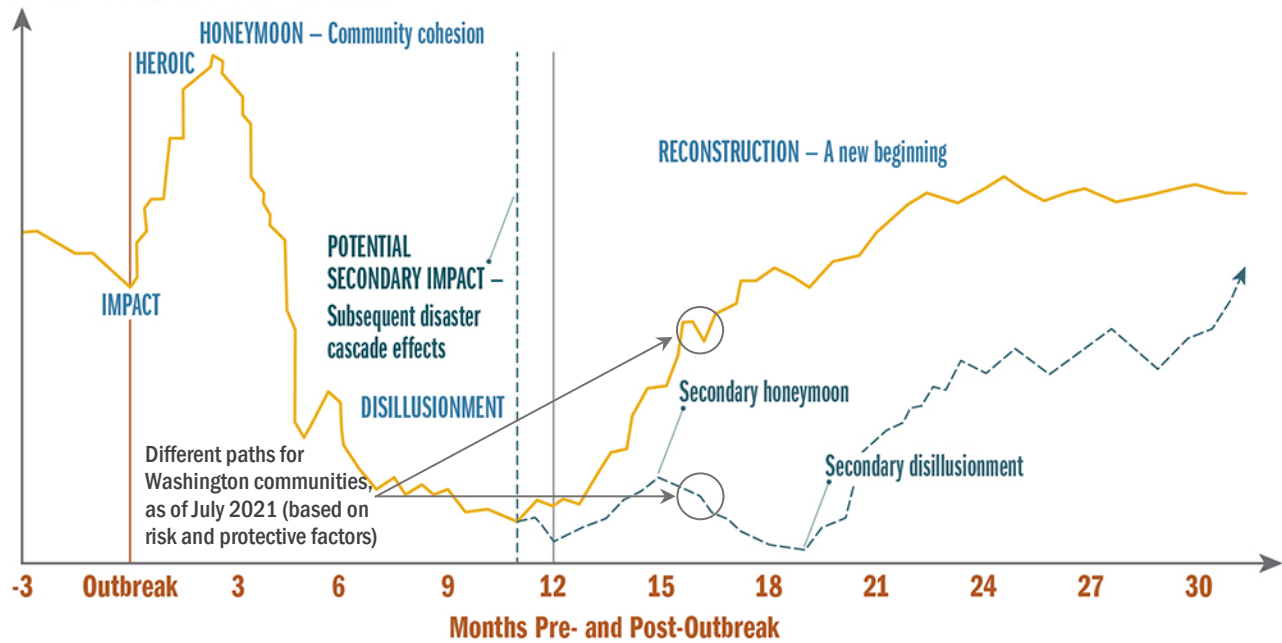
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<sup>a</sup> <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/821-135-YouthBehavioralHealthSitRep-July2021.pdf>

<sup>b</sup> <https://www.doh.wa.gov/Emergencies/COVID19/HealthcareProviders/BehavioralHealthResources>

# Reactions and Behavioral Health Symptoms in Disasters

Emotional Response – Lows to Highs

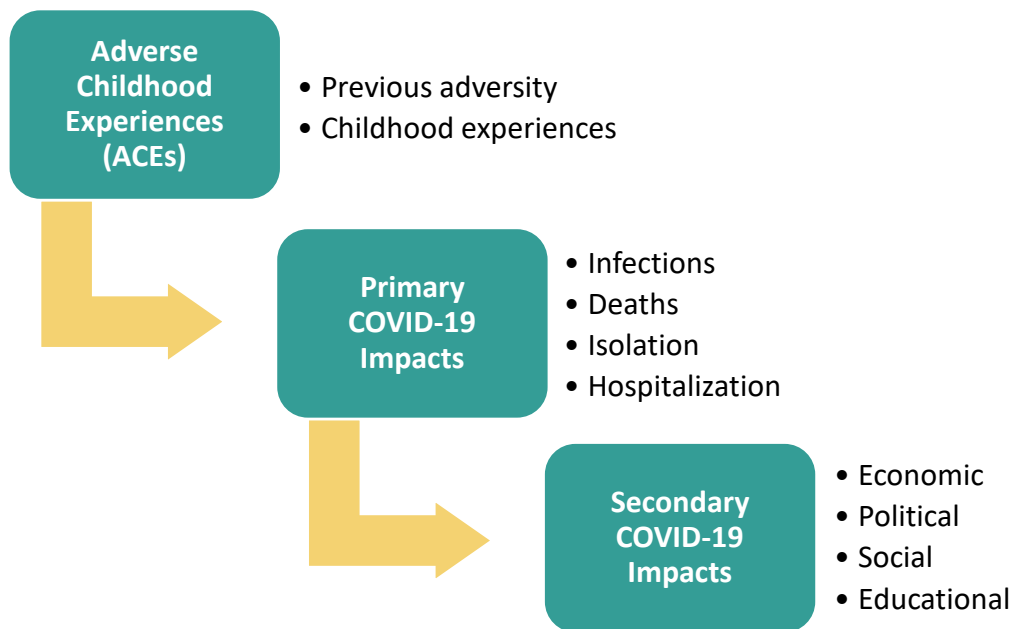


**Figure 1: Phases of reactions and behavioral health symptoms in disasters.** The dotted graph line represents the response and recovery pattern that may occur if the full force of a disaster cascade is experienced by a majority of the population (i.e., the disaster cascade pathway). Protective factors are characteristics, conditions, or behaviors that reduce the effects of stressful life events. They also increase a person’s ability to avoid risks or hazards, recover, and grow stronger. Adapted from the Substance Abuse and Mental Health Services Administration (SAMHSA).<sup>11</sup>

## Phase Divergence within Washington

As we move further into recovery from the pandemic, some communities, families, and individuals in Washington will diverge more distinctly from each other in terms of behavioral health experiences. Factors, such as economic security, social marginalization, and race and ethnicity continue to play a role in the experience of both physical and behavioral health risks and symptoms throughout the pandemic.<sup>12,13,14,15</sup> Disparities throughout the last year will tend to be magnified and worsened in the next several months.

Those who have had more economic, social, educational, and occupational opportunities in the first quarter of 2021 will tend to climb more rapidly into recovery, while those who have experienced more direct primary and secondary impacts from the pandemic (e.g., illness, hospitalization, job loss, eviction) (Figure 2) will likely endure a repetition of the recovery cycle as is consistent with the disaster cascade pathway (Figure 1).



**Figure 2: Disaster and Trauma Cascade Potential.** The figure displays the range of factors (ACEs,<sup>c</sup> primary COVID-19 impacts, and secondary COVID-19 impacts) which may alter the *reconstruction phase* and recovery for individuals based on their experiences.

## Typical Disaster Response and Recovery Pathway Considerations

### Workplace Changes

As many employers move forward with return-to-workplace plans, hybrid models, and the development of new COVID-19-related policies and expectations, many employees across the state could experience strong emotional responses that range from excitement and happiness to anxiety and fear. It may be beneficial for supervisors, managers, and leaders within organizations and businesses to address these transitions and the associated reactions about workplace unknowns and the new normal as directly and transparently as possible. When possible, safety protocol information should be clearly provided, and well-defined expectations about working hours, shifts, and locations should be set at all levels in order to alleviate anxiety and reduce the likelihood of misinterpretation.

Within teams, it may be helpful for managers and supervisors to recognize that team members may have very different experiences and reactions about returning to the workplace. *Active listening*, a form of healthy communication that can support team building, is recommended as an intervention that can help address workplace issues that may arise during these transitions.

It may be common for employees to experience *cognitive dissonance* during this time, which is an experience where people struggle to navigate their own inconsistent beliefs and attitudes about things like workplace relationships, as well as rules, policies, and expectations. For example, some employees may have colleagues whom they like and get along very well with but who have different views and opinions about the end of the pandemic or return to workplace. Sometimes the discrepancies between liking other people and disagreeing with their opinions on sensitive topics may contribute to more emotional exhaustion in the context of professional engagement. Managing strong *cognitive dissonance* is likely to be an important

<sup>c</sup> Adverse childhood experience (ACE): A traumatic experience in a person's life occurring before the age of 18 that the person remembers as an adult.

consideration for supervisors and managers in the return-to-workplace transition over the summer months.

In addition, there may be ongoing questions and concerns about managing childcare, distance learning requirements, and work-life balance. For women in the workforce, these issues are likely to be particularly problematic. There are additional burdens related to caregiving, less secure employment, and the wage gap that may create more stresses for women compared with their male counterparts.<sup>16,17,18,19</sup> For more information, please see the later sections on social marginalization (page 5) and socioeconomic status (page 6).

### Social and Recreational Factors, Risk Taking

The summer months bring additional opportunities for social and recreational activities that were previously unavailable due to pandemic-associated safety restrictions. The need for patience and diligence remains high as the weather improves and pandemic apathy continues to wear on everyone. One area of attention at this time is the considerable likelihood of a *rebound effect* from the pandemic that may include people acting “out” in ways that are consistent with highly expressive, thrill-seeking, or pleasure-oriented behavior (e.g., partying, substance use, risk taking, aggressive or illegal behavior) as a response to the perception that things are returning to the way they were before the pandemic.

The likelihood of significant and dangerous risk-taking behavior increases as more opportunities for social connection with peers and a sense of freedom from pandemic-related restrictions begins to emerge, **particularly for youth and young adults.**<sup>20,21</sup> In addition to the ways in which the neurological consequences of general pandemic apathy may influence decision making, as the weather changes and temperatures increase, generally risky behavior and the likelihood of aggression and violence also increase.<sup>20,22,23</sup>

Keep in mind the **SAFE Model** for a healthy, secure transition beyond the COVID-19 pandemic:

<b>S</b>	<b>Sex and intimacy:</b> It’s important to continue healthy and safe sexual behaviors. Use appropriate protection to reduce the likelihood of sexually transmitted infections. Always confirm consent before initiating any sexual contact.
<b>A</b>	<b>Alternative choices:</b> If you plan to go out drinking or to a gathering, decide on a designated driver ahead of time. One or two extra minutes of planning can save lives. Spend a few minutes before you go out to come up with fun, safe alternative plans if you find yourself in a situation where you are uncomfortable or don’t feel safe.
<b>F</b>	<b>Firearm storage and use:</b> If you have weapons, fireworks, or firearms in your home, please follow safe access and storage guidelines: <ul style="list-style-type: none"> <li>• <a href="https://www.kingcounty.gov/depts/health/violence-injury-prevention/violence-prevention/gun-violence/LOCK-IT-UP.aspx">Lock It Up: Promoting the safe storage of firearms - King County</a><sup>d</sup></li> <li>• <a href="https://hiprc.org/firearm/firearm-storage-wa/">Washington Firearm Safe Storage Map - Harborview Injury Prevention and Research Center</a><sup>e</sup></li> </ul>
<b>E</b>	<b>Events and celebrations:</b> Consider your options when planning to attend a large-scale celebration or gathering of any kind. Be aware of your surroundings, including the people around you and exits.

<sup>d</sup> <https://www.kingcounty.gov/depts/health/violence-injury-prevention/violence-prevention/gun-violence/LOCK-IT-UP.aspx>

<sup>e</sup> <https://hiprc.org/firearm/firearm-storage-wa/>

## Disaster Cascade Pathway Considerations

### Increases in Stigma

As the recovery process diverges among groups, we are likely to see an increase in stigma toward members of our communities who are experiencing ongoing or worsening behavioral health symptoms over the summer months. Under conditions where a large number of the population is feeling better, social norms may shift to reflect that it appears to be less acceptable to struggle with behavioral health-related concerns. As the pandemic continues – even with long-term recovery in sight – it is important for everyone to try maintaining and reinforcing their sense of empathy for the experiences of others. In any group, there is likely to be a highly varied experience of behavioral health needs and concerns. Keeping this in mind while practicing and encouraging active listening to understand more fully the perspectives of others will be helpful for all social and workplace environments.

### Social Marginalization, Racism, and Discrimination

There are a number of groups and communities that have experienced significant social marginalization throughout the pandemic. Risks related to underlying social or systemic factors are exacerbated by historical trauma and anxiety related to discrimination and prejudice.<sup>24</sup> These risks can result in higher levels of PTSD, as well as a variety of other mental health concerns, including substance use issues. There has been a significant increase in crimes against members of Asian communities related to COVID-19 as a result of misconceptions and misinformation about the source of the virus that causes COVID-19 and the tendency to seek a source of blame for the pandemic.<sup>25,26,27</sup> There have been reports of hate crimes directly associated with racism, such as harassment and discrimination, with Asian Americans being shunned, verbally abused, coughed and spat on, and physically assaulted. These experiences have significant negative impacts to behavioral health, as social isolation and perceived separation from the community escalates.<sup>16</sup>

### Socioeconomic Status

Disasters may affect all people, but those of lower socioeconomic status are usually much more negatively impacted than other groups.<sup>28</sup> For example, individuals and families in lower socioeconomic groups are 52% more likely to lose their job or experience a significant reduction in their income than individuals in middle or upper socioeconomic groups.<sup>29</sup>

The following concerns related to socioeconomic status directly or indirectly influence behavioral health symptoms throughout the COVID-19 pandemic:

- Those without a four-year college degree (46%) are more likely than their counterparts with a bachelor's degree (37%) to lose their job or experience a reduction in income.<sup>29</sup>
- When looking at the impact of ethnicity on loss of income, 61% of Hispanic adults report that someone in their household lost a job or experienced a pay cut due to the COVID-19 pandemic, compared with 44% of Black adults and 38% of white adults.<sup>29</sup>
- Overall, more than 26% of individuals have lost their job due to the COVID-19 pandemic. Also, 21% have had their hours reduced, 13% have experienced a pay cut, and 7% have been furloughed.<sup>30</sup> Approximately 65% of these individuals are from low-income households earning less than \$40,000 annually.
- Almost 30% of adults are struggling to pay monthly bills or afford household expenses, such as food or health insurance, due to COVID-19.<sup>30</sup> This increases to 40% among 18 – 29-year-olds, those with annual household incomes of \$40,000 or less, and Hispanic

adults. Additionally, Black adults are disproportionately struggling to pay monthly bills or afford household expenses, with 56% of Black adults reporting these impacts.

- Individuals in lower socioeconomic groups are at higher risk for having their mental health negatively impacted due to COVID-19.<sup>31</sup> For example, 26% of individuals with an annual income of less than \$40,000 report experiencing a significant negative mental health impact, compared to 17% of those with an annual income between \$40,000 and \$89,000 and 14% of those with an annual income of \$90,000 or more.
- Individuals in lower socioeconomic groups are also at a higher risk for developing PTSD after a disaster.<sup>32,33</sup>
- According to a U.S. Census Bureau survey taken by Washington adults, 53% of respondents who live in households earning less than \$25,000 per year, 32% of respondents living in households earning \$25,000 – \$35,000 per year, and 37% of respondents living in households earning \$35,000 – \$50,000 per year reported experiencing frequent symptoms of anxiety.<sup>13</sup> For depression, respondents in households earning less than \$25,000 per year reported the highest rate of symptoms (37%), followed by those in households earning \$35,000 – \$50,000 per year (27%).

### Depression and Suicide

Depression is a common response throughout the disaster recovery cycle. Many children, teens, and young adults are experiencing significant symptoms of depression during the pandemic.<sup>6,34</sup> Older adults are also a group of concern due to isolation and lack of social connection.<sup>35</sup>

Active suicide prevention should be promoted through sharing information on recognizing [warning signs](#)<sup>f</sup> and other related resources, and checking in with colleagues, friends, family members, and neighbors. When someone is expressing thoughts of self-harm, [access to dangerous means of harm should be removed](#),<sup>g</sup> and medications, poisons, and firearms should be stored safely. Suicides consistently account for approximately 75% of all firearm-related fatalities in Washington.<sup>36</sup> [Storing firearms safely](#)<sup>d</sup> and [temporarily removing them from the home](#)<sup>e</sup> of an at-risk person during a crisis can save lives.

### Additional Resources:

- Anyone concerned about depression or other behavioral health symptoms should talk with their **healthcare provider**.
- [Washington Listens](#)<sup>h</sup>: Call 833-681-0211 to talk to a support specialist who will listen and help you cope with the stress of COVID-19.
- **Health Care Authority:** [Mental health crisis lines](#)<sup>i</sup>
- [National Suicide Prevention Lifeline](#):<sup>j</sup> Call 800-273-8255 (English) or 1-888-628-9454 (Español).
- [Crisis Connections](#):<sup>k</sup> Call 866-427-4747.

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<sup>f</sup> <https://www.doh.wa.gov/YouandYourFamily/InjuryandViolencePrevention/SuicidePrevention/HelpSomeoneElse#common>

<sup>g</sup> <https://www.seattlechildrens.org/health-safety/keeping-kids-healthy/prevention/home-checklist/>

<sup>h</sup> <https://www.walistsens.org/>

<sup>i</sup> <https://www.hca.wa.gov/health-care-services-supports/behavioral-health-recovery/mental-health-crisis-lines>

<sup>j</sup> <https://suicidepreventionlifeline.org/>

<sup>k</sup> <https://www.crisisconnections.org/24-hour-crisis-line/>

- [Crisis Text Line](https://www.crisistextline.org/):<sup>l</sup> Text HEAL to 741741.
- **Department of Health**: [Crisis lines for specific groups](https://www.doh.wa.gov/YouandYourFamily/InjuryandViolencePrevention/SuicidePrevention/HotlinesTextandChatResources)<sup>m</sup>
- [TeenLink](https://www.crisisconnections.org/teen-link/):<sup>n</sup> Call or text 866-833-6546.
- [Washington Warm Line](https://www.crisisconnections.org/wa-warm-line/):<sup>o</sup> Call 877-500-9276.
- **Washington State COVID-19 Response**: [Mental and emotional well-being webpage](https://coronavirus.wa.gov/wellbeing)<sup>p</sup>

### Children and Families

It is normal for children to be having trouble during this time. However, if there are concerns about safety, seek professional support and assistance. For more detailed information on this topic, see the [Behavioral Health Toolbox for Families: Supporting Children and Teens During the COVID-19 Pandemic](https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/BHG-COVID19-FamilyToolbox.pdf).<sup>q</sup> This resource provides general information about common emotional reactions of children, teens, and families during disasters. It also has suggestions on how to help children, teens, and families recover from disasters and grow stronger. Parents and caregivers can also use the [National Parent Helpline](https://www.nationalparenthelpline.org/)<sup>r</sup> to access telephone support (1-855-427-2736) and additional resources. Additional information regarding navigating the upcoming school year, back-to-classroom learning, concerns for school refusal and school-based anxiety, and other behavioral challenges parents and caregivers may encounter will be including in future forecasts beginning in August 2021.

### Potential for Violence and Aggression

While potential for violence and aggression remain a possibility, the likelihood of a large-scale event rooted in violence or extremist behavior is likely to decrease as the pandemic is controlled and a return to “normal” is on the horizon. Factors related to an increase in risk related to areas of human behavior, include hope and false hope,<sup>37</sup> subjective well-being,<sup>38</sup> family stress,<sup>39,40</sup> social learning,<sup>40</sup> substance use, and impulse control problems.

### Behavioral Health Outcomes Associated With COVID-19

As the number of people infected with the virus continues to increase nationally, so does the number of survivors. Concerning research, provider bulletins, anecdotal accounts, and case studies have documented specific behavioral health symptoms and diagnoses which seem to occur in those who have survived COVID-19.<sup>35,41,42,43,44,45</sup> Treatment providers and behavioral health systems should be aware of these findings, which include new instances of anxiety disorders and PTSD, as well as a new diagnosis identified as **post-COVID-19 psychosis**<sup>46</sup> and a syndrome recognized as **long COVID-19**.<sup>45</sup>

In addition to increased risks for a *new* psychological disorder after a positive COVID-19 diagnosis, research shows that individuals who had a pre-COVID-19 psychiatric diagnosis were associated with a 65% increased risk of confirmed COVID-19 infection, compared to individuals who only had a pre-COVID-19 diagnosis of a physical health issue and no psychiatric history.<sup>43</sup>

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<sup>l</sup> <https://www.crisistextline.org/>

<sup>m</sup> <https://www.doh.wa.gov/YouandYourFamily/InjuryandViolencePrevention/SuicidePrevention/HotlinesTextandChatResources>

<sup>n</sup> <https://www.crisisconnections.org/teen-link/>

<sup>o</sup> <https://www.crisisconnections.org/wa-warm-line/>

<sup>p</sup> [coronavirus.wa.gov/wellbeing](https://coronavirus.wa.gov/wellbeing)

<sup>q</sup> <https://www.doh.wa.gov/Portals/1/Documents/1600/coronavirus/BHG-COVID19-FamilyToolbox.pdf>

<sup>r</sup> <https://www.nationalparenthelpline.org/>



These researchers also found an increased risk for first-time experiences of psychotic symptoms in individuals that tested positive for COVID-19.<sup>43,44</sup> The individuals who had a new onset of psychosis related to COVID-19 infections tended to have features of disorganized thinking and confusion and were less likely to experience paranoia and delusions as part of their psychosis.<sup>43,44</sup> The individuals who developed this post-COVID-19 psychosis are also less likely to have a family history of psychosis and more likely to present with mild to moderate (i.e., less severe) symptoms of psychosis.<sup>43</sup> Individuals experiencing this type of post-COVID-19 psychosis are typically recovering quickly with the use of low-dose antipsychotic medications.<sup>43,44</sup>

Research has identified a post-COVID-19 group that are referred to as “long-haulers” or as experiencing *long COVID-19*, in which individuals experience symptoms related to COVID-19 for more than six weeks. Many of these individuals only experienced mild respiratory symptoms and never developed pneumonia or hypoxemia (having a below-normal level of oxygen in the blood) requiring hospitalization. It is estimated that 87% of hospitalized COVID-19 patients continue to have symptoms 60 days after COVID-19 onset, and app-based symptom trackers estimate that 4.5% of patients have mild COVID-19 symptoms lasting more than 8 weeks. Accordingly, several million people in the world may already suffer from *long COVID-19*.

The ten most common neurologic symptoms experienced by “long haulers” are *brain fog* (81%), *headache* (68%), *numbness/tingling* (60%), *dysgeusia* (loss of taste) (59%), *anosmia* (loss of smell) (55%), *myalgia* (muscle pain) (55%), *dizziness* (47%), *pain* (43%), *blurred vision* (30%), and *tinnitus* (ringing in the ears) (29%). The most frequent non-neurologic symptoms include *fatigue* (85%), *depression/anxiety* (47%), *shortness of breath* (46%), *chest pain* (37%), *insomnia* (33%), *variation of heart rate and blood pressure* (30%), and *gastrointestinal symptoms* (29%). The constellation of “long hauler” symptoms, particularly fatigue and a sense of cognitive dysfunction (e.g., memory impairment and problems with attention and concentration), in patients resembles the prominent fatigue and cognitive complaints seen in those after mild traumatic brain injury (TBI).<sup>45</sup>

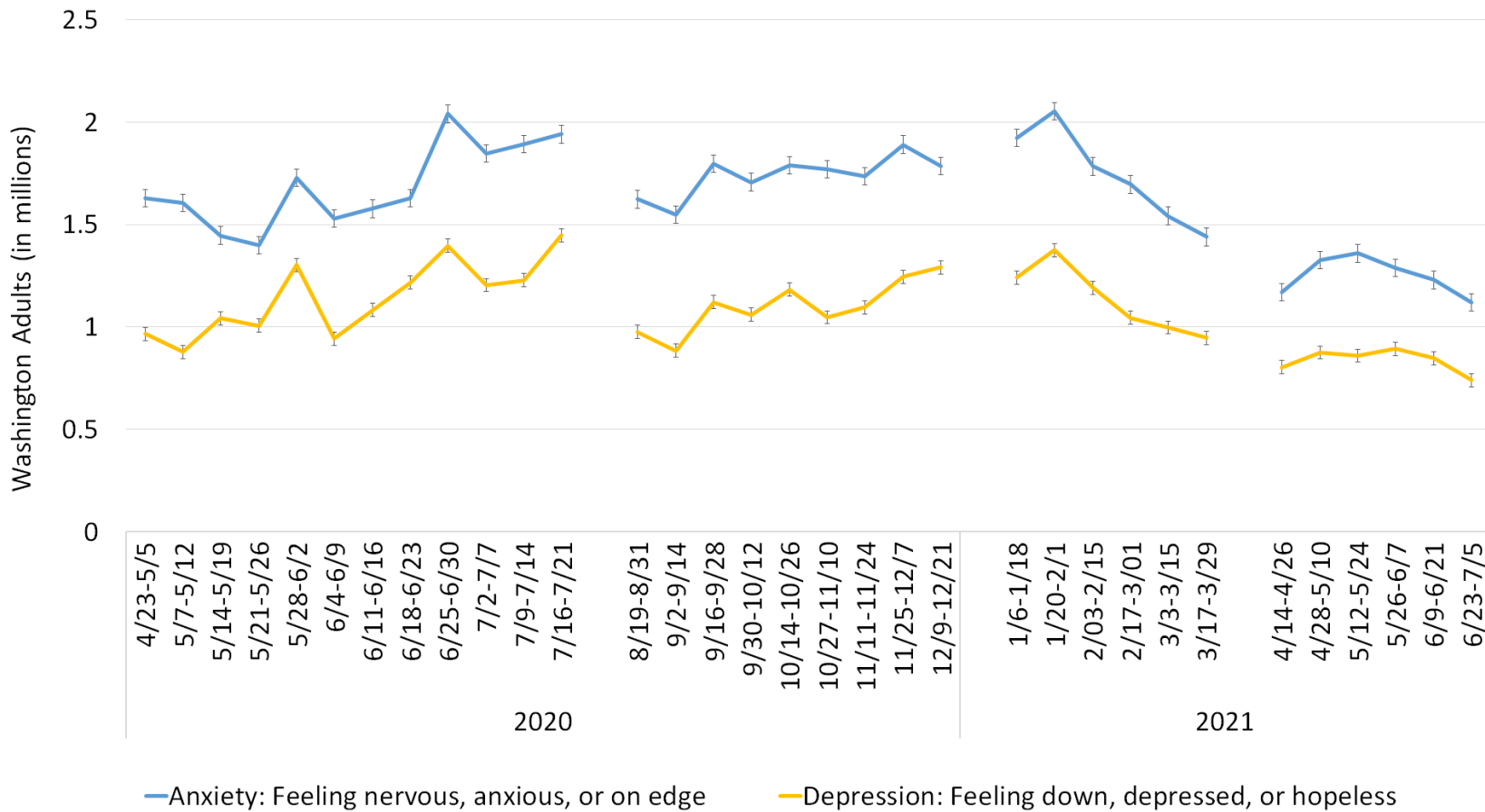
For adults over 65 years, there seems to be a slight increase in diagnoses of dementia in the first 14 – 90 days after a COVID-19 diagnosis.<sup>41</sup> Research indicates that individuals who have been hospitalized for COVID-19 or developed encephalopathy (any brain disease that impacts brain function) due to their illness are more likely to experience neurological complications, a psychotic disorder, mood disorder, anxiety disorder, substance use disorder, and insomnia.<sup>47</sup> Although the estimated incidence is modest in the whole COVID-19 cohort (0.67%), 1.46% of hospitalized cases and 4.72% of those who had neurological symptoms related to their COVID-19 infection received a first diagnosis of dementia within six months.

**Individuals with even mild cases of COVID-19 are at higher risk for depression and anxiety.**

This research is congruent with earlier research on COVID-19 which demonstrated evidence that survivors are at increased risk for mood and anxiety disorders and dementia in the three months following infection.<sup>41</sup>

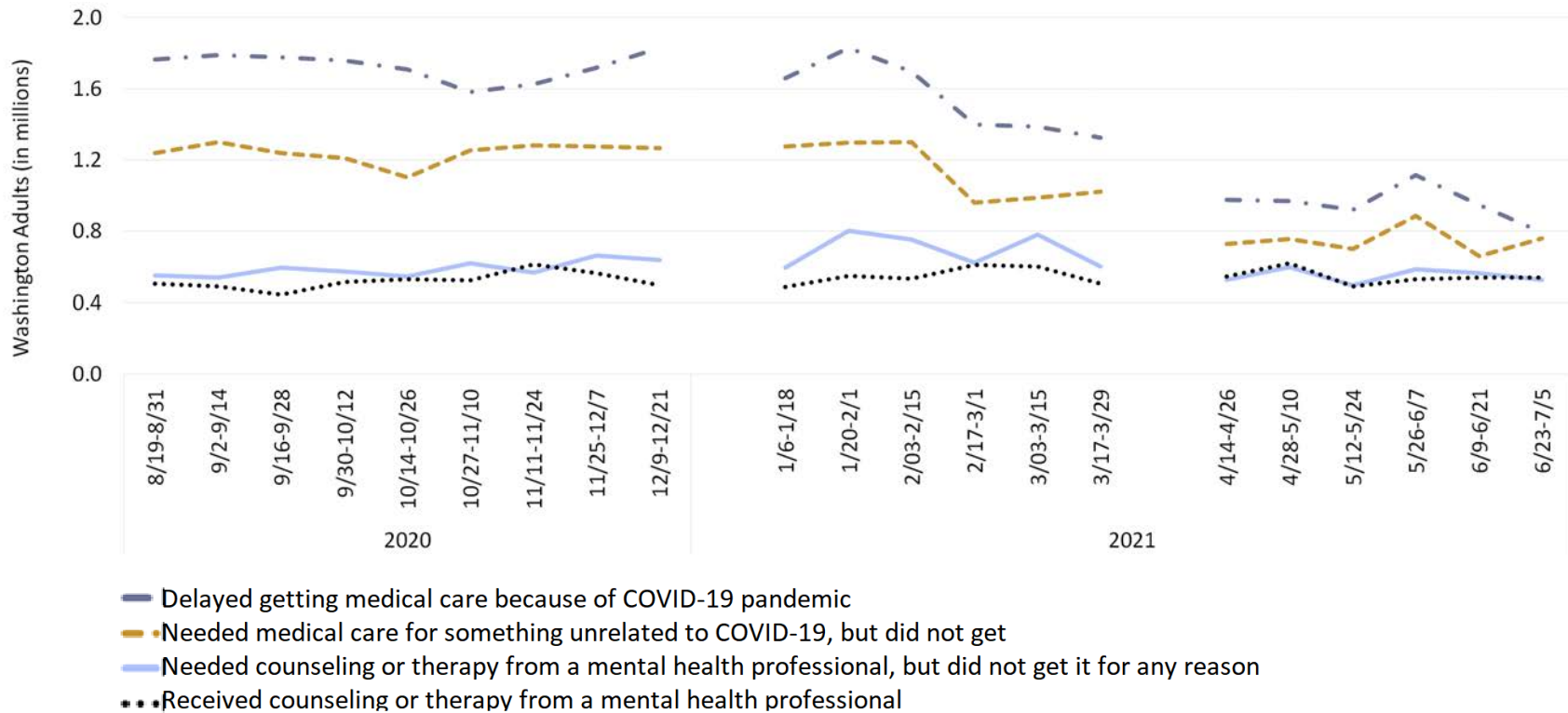
## Key Things to Know

- Risk taking behaviors during the summer months are particularly likely to increase for adolescents, teens, and young adults. This may include driving recklessly, substance use, or other potentially uncharacteristic behaviors that may be a reflection of the need to seek pleasure-oriented activities (and the associated activation of the brain’s “reward center”) as a subconscious reaction to their behavioral health experiences during the pandemic.
- Ambiguity in workplace and social contexts will remain high throughout the summer months. Associated cognitive distortions, interpersonal challenges, and generalized discomfort may remain high in areas of life where significant changes are occurring.
- Weekly survey data suggest that approximately 1.1 million Washington adults are experiencing symptoms of anxiety on at least most days and approximately 740,000 are experiencing symptoms of depression on at least most days (Figure 3).<sup>13</sup> It is possible that these numbers may be close to the pre-pandemic baseline for Washington adults based on where we are in the disaster recovery cycle. Those who identified as female have an increased symptom reporting rate for anxiety (28% for females, compared to 19% for males) and depression (19% for females, compared to 16% for males).
- Survey data collected by the U.S. Census Bureau for August 19, 2020 – July 5, 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 (Figure 4).<sup>13</sup> Among those who responded to the survey, those ages 30 – 39 were the most likely to report they needed counseling or therapy but did not receive it (13%), and those ages 40 – 49 were the second most likely (11%). Survey respondents were not asked why they were unable to receive behavioral healthcare.



**Figure 3: Estimated Washington adults experiencing symptoms of anxiety and depression at least most days, by week: April 23, 2020 – July 5, 2021 (Source: U.S. Census Bureau)**

Note: Census data is unavailable for the periods of July 22 – August 18, 2020, December 21, 2020 – January 6, 2021, and March 30 – April 14, 2021.



**Figure 4: Estimated Washington adults who received or delayed medical care or counseling, by week: August 19, 2020 – July 5, 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 and March 30 – April 14, 2021.

## Acknowledgements

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