Assessing potential risks because of personal and work behaviors is a crucial function of the security, suitability, and credentialing (SSC) personnel vetting process. The coronavirus disease 2019 (COVID-19) pandemic has had a significant impact on a wide variety of risk behaviors and indicators that are considered during SSC investigations and adjudications. For example, alcohol use has increased among certain parts of the U.S. adult population, which could lead to impulsive or poor decisionmaking. Work schedules have become irregular, which can mask anomalous behaviors that might have previously indicated a potential insider threat. People might have had difficulty coping with isolation and depression because of lockdowns, quarantine, or business closures. These changes suggest that existing standards or baselines of “normal behavior” for those being evaluated in the personnel vetting process might not apply and that personnel risk models using those baselines might need to be recalibrated to account for pandemic-induced shifts. Without official guidance for how to account for these changes, investigators might struggle to make sense of relevant information, and adjudicators might struggle in making consistent decisions, which could increase backlogs or security risks.

Pandemic-related behavior changes have occurred in parallel with, and in the context of, changes in the personnel vetting process itself. Trusted Workforce 2.0, an initiative to reform the personnel security process, aims to better understand

KEY FINDINGS

- During the COVID-19 pandemic, people consumed more substances (such as alcohol), experienced loss of employment and subsequent decreases in income, and experienced increases in mental health impacts.
- Impacts of the COVID-19 pandemic were unevenly distributed among different groups of people, along racial, gender, and age categories.
- The impact of the COVID-19 pandemic and other crises on people looking to serve in trusted positions is changing, and individual adjudicators do not have as much information about societal shifts as they may need.
- A systematic approach to identifying and categorizing relevant behavior changes will help maintain consistency and justifiability while acknowledging the reality of the new normal.
workforce behaviors and to streamline personnel vetting,\(^3\) in part by reducing the number of personnel vetting models and background investigation tiers.\(^4\) Specific changes under Trusted Workforce 2.0 also include implementing continuous vetting, which includes use of constantly refreshed information to feed vetting risk indicators. The implementation of Trusted Workforce 2.0 is being rolled out in several transitional implementation phases, with a full-deployment phase beginning in fiscal year 2023.\(^5\)

Existing guidelines for adjudication of security clearances specify how adjudicators should interpret and assess potential risk indicators, such as personal and work behaviors. Security Executive Agent Directive-4 (SEAD-4), the government’s adjudicative guidelines, describes, for example, the various ways in which alcohol consumption can indicate risk. However, interpretations of “excessive alcohol consumption” and activities such as drinking on the job might take a new meaning in the context of the COVID-19 pandemic, particularly when the workplace is also an individual’s home. An interpretation that acknowledges an increase in baseline consumption of alcohol during the pandemic might be better able to identify what constitutes “excessive” drinking in this new normal.

The Security, Suitability and Credentialing (SSC) Performance Accountability Council Program Management Office (PAC PMO) asked the RAND National Defense Research Institute to consider how societal changes related to the COVID-19 pandemic might affect SSC processes. To determine factors for consideration in how adjudicative guidelines and SSC processes might be updated, we sought to explore how the pandemic might have changed personal and work behaviors that contribute to risk factors considered in adjudication and then develop considerations for how the adjudication process could be modified to accommodate those changes, along with potential benefits and risks of those modifications.

### Objective and Research Questions

This project sought to create an inventory of personnel behaviors and risk factors routinely considered in adjudication (e.g., those listed in the SEAD-4 Adjudicative Guidelines and related to information obtained through the Standard Form-86 [SF-86]) and then to assess how the COVID-19 pandemic might have affected those factors. In this report, we consider ways to raise awareness of and adjust existing standards or baselines of risk to facilitate better identification and management of risky behaviors and separate them from what might be considered normal coping strategies in abnormal times.

In particular, we sought to answer the following questions:

- How might the COVID-19 pandemic affect each risk factor considered in adjudication?
- What is the magnitude of the effect of the COVID-19 pandemic, and do differences exist among different groups of people?
- What could be done in response, including adjusting mental decision models of risky behavior and updated risk standards?
- What are the benefits and risks associated with updating decision models?

We used a combination of methods to address these research questions, first abstracting and cataloging risk factors likely to be affected by the pandemic from relevant personnel vetting documents, then exploring how these factors might have been affected via a literature review and open-source data...
search and, finally, conducting subject-matter and field expert interviews to understand how the investigation and adjudication process might be affected by the pandemic.

An enduring question pertaining to this research is whether any changes to risk behaviors that might have occurred during the COVID-19 pandemic would be expected to endure beyond the pandemic (and if so, for how long). Because the pandemic was ongoing at the time this research was conducted, we did not expect to be able to draw conclusions about the longevity of any behavior changes. Relatedly, we did not attempt to determine whether any behavior changes were in fact caused by the pandemic or merely occurred simultaneously. As discussed later, these remain topics for further study.

**Risk Factors Affected by the COVID-19 Pandemic**

The first step in understanding how risk factors might have changed is to identify and catalog risk factors that could be affected by the COVID-19 pandemic. We started by abstracting and categorizing the adjudicative factors listed in the SEAD-4 and behaviors and actions covered in the questionnaire sections of the SF-86. We reviewed this list internally and with PAC PMO team members to prioritize those factors that we anticipated would be affected by the pandemic. These potential factors included financial factors that might have been affected by pandemic-related job loss or business shutdowns, mental health factors that might have been affected by social isolation or lockdowns, and health impacts of the pandemic. We then conducted an academic literature and open-source data search to better understand the extent and ways in which these prioritized risk factors might have been affected by the pandemic, and we interviewed subject-matter and field experts to further understand how changes in these risk behaviors might affect the adjudication process. Findings from the literature review and subject-matter expert (SME) discussions are described in greater detail in the following sections; here, we discuss the list of risk factors we established as likely to be affected by the pandemic.

**Identified Risk Factors**

Through the process of abstracting known adjudicative factors and risk behaviors from existing documentation, and after conducting discussions internally and with PAC PMO team members, we prioritized five risk factors that appeared likely to have been affected by the pandemic or pandemic-specific circumstances: financial hardship and unemployment, alcohol abuse or misuse, drug and substance abuse or misuse, mental and emotional health and well-being, and changes or increase in remote or virtual work. Table 1 shows these risk factors and how they correlate to specific adjudicative factors and questions from the SF-86.

Although our initial process for identifying risk factors led us to retain remote or virtual work as a potential security risk factor, a deeper dive into existing literature and open-source data revealed very little evidence of security risks related to changes in remote and virtual work habits in the context of the pandemic. This might simply reflect a lack of research rather than support the idea that there are no security risks associated with remote work during the pandemic; in the end, we further refined the list...
of risk factors to remove “remote or virtual work” as a risk factor. Because some degree of remote or virtual work is likely to endure, potential associated risks (e.g., less-secure home networks or working areas where others in the home might also have access to computers and documents) suggest that this might rise to become a more-significant risk factor in the future. Such risks (i.e., abnormal behaviors that fall within the risk categories) are less observable at home than in the physical workplace. However, to the extent that those behaviors are observed remotely, they would fall under the same required third-party SEAD-4 reporting requirements. As remote and virtual work continues, the extent to which such less-observable problematic behavior occurs might become clearer, but how this behavior can be better detected and reported is an area worth future research and exploration.

**Literature Review: Changes to Risk Factors Caused by COVID-19**

**Overview**

We conducted a review of published academic literature and open-source information to characterize evidence regarding whether and how the COVID-19 pandemic affected people’s risk behaviors, specific to the context of clearance investigations. Our goal was to understand whether the pandemic might have imposed specific contextual factors that could increase or decrease risky behaviors and therefore alter the potential for security threats. Such information could be used to inform future clearance investigations and adjudications, for example, by identifying additional avenues of inquiry or by mitigating the overall threat assessment.

Focusing on the alcohol use, drug use, and mental health risk factors identified in our first step, we reviewed PubMed for published academic literature, using key search terms for each risk factor (e.g., “alcohol abuse” AND “COVID-19” OR “pandemic”) and limiting the time frame to January 2020 through January 2022. In total, our searches yielded 97 articles about alcohol use and abuse, 68 about drug abuse, and 72 about mental health as related to the COVID-19 pandemic. We further narrowed our selection to remove articles that were unrelated to the topic or were included because of possible indexing error. In the end, we reviewed 29 articles about alcohol use and abuse, 12 about drug abuse, and ten about mental health.

We searched open-source databases, such as through the Bureau of Labor Statistics, Department of Labor, and Center on Budget and Policy Priorities, for information on economic and employment trends. Potentially relevant databases were first iden-
tified through a simple Google search, then forward-searched as appropriate with guidance from team members. One area of particular emphasis was literature that could provide insight about effects on specific groups of people, such as demographic groups or regional concerns (e.g., states).

There were a few important limitations to this literature review. First, given limited resources, we focused our search on academic literature and excluded most other open-source data (with the exception of economic data). Second, this literature describes general populations that might differ from populations of people seeking clearances. This potentially limits the applicability of such literature. Going forward, future work could expand the literature review to explore a broader set of sources, such as news media, think tank reports, and trade reports, which have all produced reporting on the impact of the pandemic on personal behaviors of interest to clearance adjudicators.

Unemployment and Financial Issues

The COVID-19 pandemic caused one of the most significant spikes in unemployment levels since the Great Depression, the effects of which are still being felt. Although unemployment rates decreased over the pandemic, as of this writing, they have not yet returned to prepandemic levels, and many who are out of work report the cause as COVID-19 related. Employment rates differed between men and women (81 percent versus 73 percent); non-Black, non-Hispanic people and Black, non-Hispanic people (79 percent versus 70 percent); non-Black, non-Hispanic men and non-Black, non-Hispanic women (83 percent versus 75 percent); and Hispanic men and Hispanic women (82 percent versus 66 percent). Interestingly, Black, non-Hispanic men and women were about equally likely to work in the prior week (about 70 percent). Of those not working, almost 41 percent attributed this fact to the COVID-19 pandemic. Black, non-Hispanic people were more likely to report not working because of the pandemic than non-Black, non-Hispanic people (56 percent versus 35 percent) or Hispanic men (42 percent). Employment rates and reasoning for not working also correlated with education level, with those with a GED or less being less likely to have worked the past week (<61 percent) than those with a high school diploma (71 percent), some college education (76 percent), or a bachelor’s degree or higher (89 percent). Those with a GED or less were also more likely to report not working because of the pandemic at almost 50 percent. Taken together, those with lower education levels and minority workers are particularly affected by the pandemic in terms of employment.

The pandemic has also affected specific industries. According to the Bureau of Labor Statistics, some industries that had been projected to have increased rates of employment are now being projected with much lower or even negative rates. These industries include transit and ground passenger

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The COVID-19 pandemic caused one of the most significant spikes in unemployment levels since the Great Depression.
transportation, air transportation, traveler accommodation, food and drinking services, and nonresidential building construction. It might be reasonable to suspect that employees within these industries might have significantly more or longer gaps in employment because of the effects of the pandemic compared with employees in computer or science, technology, engineering, and math (STEM)-related fields. According to Labor Department employment data, low-paying industries accounted for 59 percent of the jobs lost from February 2020 to October 2021.9

According to Trading Economics, unemployment rates reached a peak of 14.8 percent during the height of the pandemic.10 After a year, the unemployment rate fell to 6 percent, and close to two years into the pandemic, it hovered around 4 percent, nearing, but not completely reaching, prepandemic levels of about 3.5 percent. According to the Center on Budget and Policy Priorities (CBPP), there were 3 million fewer people employed in early 2022 compared with prepandemic levels, and the financial burdens caused by the pandemic have been widespread.11 The Census Bureau began the Household Pulse Survey to track different metrics during the pandemic. Included were questions about whether a respondent’s household had difficulty paying for usual expenses such as food, rent or mortgage, car payments, medical expenses, or student loans in the past seven days. From September to October 2021, 29 percent of adults reported that it was somewhat or very difficult for their household to pay for their usual expenses in the past seven days. Adding to this, about 16 percent of adults were not caught up on rent during this same period. Breaking down these averages by race, minorities appear to be more severely affected. Forty-four percent of Black, non-Hispanic adults; 42 percent of other/multiracial, non-Hispanic adults; and 38 percent of Hispanic adults reported that it was somewhat or very difficult for their household to pay for their usual expenses in the past seven days. Similarly, 28 percent of Black, non-Hispanic adults; 20 percent of Asian adults; 18 percent of Hispanic adults; 18 percent of other/multiracial, non-Hispanic adults; and 12 percent of White adults reported not being caught up on rent. The Bureau of Labor Statistics also reported that 31 percent of adults reported decreased wages and 29 percent of adults reported decreased work hours.12

These metrics of hardship have been improving over time, and there is evidence that government-funded benefit programs have helped. As mentioned previously, unemployment levels (as of early 2022) are nearing prepandemic rates, and weekly claims of unemployment insurance have been steadily decreasing, according to the Department of Labor.13 According to the CBPP, the hardship rates measured in the Pulse survey are at lower rates than in early 2021 after government benefits and economic stimulus packages were enacted,14 and California, for example, saw a decrease in very low food security after raising SNAP benefits.15 However, according to the Census Bureau survey, this might have been short-lived, as progress in these areas seems to have leveled off, with 20 million adults living in households that did not get enough to eat and 12 million adults being behind on rent as of October 2021. Expiring unemployment benefits might further the economic stress felt as the pandemic continues.

There is evidence that further intervention will be able to alleviate some of the negative employment and financial impacts of the pandemic. It is clear, however, that the fallout from the pandemic regarding employment and financial stability is ongoing. It is also clear that minority populations have been particularly affected by the pandemic. Further steps might be required to relieve these populations of
their hardship, particularly as inflation might continue to increase.

 Alcohol Use

Alcohol use is an important risk factor assessed during clearance investigations, tied to poor judgement and decisionmaking and the potential for security vulnerability. We sought to understand whether alcohol use and related risk behaviors had increased during and as a result of the COVID-19 pandemic. We searched academic literature through a PubMed search consisting of [“alcohol use” AND “covid”] limited to English-language publications between January 2019 and January 2022. Out of 34 identified articles, five were dropped on further review for being unrelated to the topic, possibly because of indexing mistakes. The remaining 29 articles—of which 18 (62 percent) describe studies conducted outside the United States but in comparable locations such as Canada, France, and Italy—provide a useful picture of alcohol use during the pandemic.

Alcohol Use Increased During the Pandemic

Prior work has suggested that mass crisis events, such as the September 11, 2001, terrorist attacks or the severe acute respiratory syndrome (SARS) epidemic in 2003, were associated with increases in alcohol use, particularly among already vulnerable populations such as young, single males.16 During the COVID-19 pandemic, many authors hypothesized that increased social isolation, stress, frontline work, and unemployment because of the pandemic would similarly result in an increase in alcohol consumption.17 In fact, early in the pandemic, Nielsen reported a 54 percent increase in national sales of alcohol compared with one year before, and online sales increased 262 percent from 2019.18 In line with these early findings, a nationally representative survey study using a probability-sampled panel of 1,540 adults ages 30 to 80 years showed that the frequency of alcohol consumption increased by 14 percent overall during the pandemic in 2020 compared with 2019, with greater increases seen among women (17 percent increase) and people ages 30 to 60 years (19 percent increase).19 Alarming among women, there was a 41 percent increase in days of heavy drinking (three or more drinks on any day or more than seven drinks per week). These findings point to the adverse impact of the pandemic on alcohol use, particularly among women and younger individuals. Evidence of increased drinking are reinforced by another study demonstrating a significant increase in the number and rate of alcohol-related deaths between 2019 and 2020 (the first year of the pandemic).20 This rate increase, which outpaced the increase in all-cause mortality during the same time frame, likely reflects an increase in drinking behavior to cope with pandemic-related stressors, changes in alcohol policy and access, and reduced access to treatment.

Multiple Factors Might Lead to Increased Drinking

Some key factors might influence increased alcohol use during the pandemic and thus warrant closer attention. For example, one study from Finland found that increased involvement in social media platforms—particularly, online dating apps—during the pandemic was associated with an increase in risky drinking.21 Similarly, mental health well-being also appears to be associated with changes in drinking behavior across various contexts. A study of health care workers in Brazil during the pandemic found that moderate or severe anxiety predicted the likelihood of alcohol abuse.22 Another study found that lesbian, gay, bisexual, transgender, queer/questioning, and other (LGBTQ+) individuals experienced worse mental health and greater problems with drinking during the pandemic than their straight, cisgender counterparts.23 In the context of clearance investigations, alcohol use during and after the pandemic might need to be considered as part of a larger ecosystem of sociodemographic and behavioral factors.

Study Designs Limit Firm Conclusions Regarding Alcohol Use

Despite the strength of the evidence, firm conclusions regarding the impact of the COVID-19 pandemic on alcohol use are difficult to make, due in part to mixed findings, weaker study designs (e.g., cross-sectional rather than longitudinal assessments),
Unintended Consequences of the Pandemic

Just as the pandemic might have imposed restrictions that limited access to alcohol, it also might have restricted access to timely interventions and treatment for those struggling with alcohol use, leading to increased withdrawal symptoms and related health consequences. One state-level study found that because of liquor store closures, there was a significant increase in the number of patients with alcohol withdrawal syndrome requiring repeat emergency department visits. Another study found that although there was a decrease in the number of hospitalizations for acute alcohol intoxication (AAI) in France from 2019 to 2020—likely because of individuals delaying or avoiding care—during the pandemic, there was also a drop in deliveries of medications used to treat alcohol dependence and an increase in in-hospital mortality for patients with AAI. This suggests that individuals were receiving less care for AAI as an indirect consequence, delaying intervention until too late to avoid serious complications and death. Other articles have highlighted similar factors, such as the closure of many outpatient substance use clinics, and underscored the importance of examining indirect impacts of the pandemic on alcohol use–related outcomes.

Summary

There are some constraints in our ability to draw conclusions from the existing data. First, most studies conducted to date use cross-sectional or pre-post comparison designs, which are limited in their ability to establish change over time. Second, many of these studies were conducted early in the pandemic, which, combined with the fact that the pandemic is ongoing, underscores how the true impacts of the pandemic on alcohol use might not be fully understood for many years. Thus, the summarized findings should be considered very preliminary. Third, many of these studies used self-reported questionnaires to assess alcohol use (as alcohol use studies typically use, even before the pandemic), which are fraught with biases (recall, social desirability). However, one study specifically examined the correspondence of self-attribution of drinking with longitudinally measured changes in drinking and found close correspondence,
supporting the validity of self-reported drinking in at least this context. Despite these limitations, even in light of these limitations, taken together, early evidence suggests that alcohol use might have increased during and as a result of the pandemic, though whether this will endure is still unknown. On the one hand, changes in access to alcohol and contextual circumstances for engaging in drinking because of shutdowns and social distancing policies might have prevented anticipated increases. On the other hand, delaying care and restricted access to services might have exacerbated longer-term outcomes related to alcohol use and might warrant further research. In addition, multiple factors might be at the intersection of increased alcohol use related to the pandemic and must be considered as part of a whole-person orientation to clearance investigations.

**Substance Use**

We identified 68 published articles based on a simple PubMed search consisting of [“drug abuse” AND “covid”] limited to English-language publications between June 2020 and February 2022. Out of these 68 articles, 56 were dropped on further review for being unrelated to the topic. The remaining 12 articles describe studies conducted in the United States, Canada, Mexico, and Australia examining trends in substance use and abuse and treatment for substance use disorders (SUDs) throughout the pandemic.

Most authors hypothesized that social disruptions and stress because of lockdowns and other infection mitigation efforts and increased economic stressors would lead to an increase in substance use and decrease in uptake of SUD treatment, and early evidence suggests these did happen.

One study conducted in Mexico illustrated the relationship between increased uncertainty and negative emotional states because of the pandemic leading to a negative impact on resilience, which in turn explains the increase in drug addiction. Another United Kingdom–based review of the literature on pandemic-era drug abuse showed a stark increase in substance use during the pandemic, citing mental health factors as the most-prominent correlation for increase in substance use. A Canadian rapid review study indicated that drug overdoses have increased through the pandemic because of the unintended public health effects of social isolation, staffing reductions, business and border closures, and the early release of people from prisons.

Social distancing to control the spread of infection limited the ways in which people with SUDs were able to access addiction treatment, harm reduction services, and other in-person supports. Between the first and second quarters of 2020, drug overdose–related deaths increased up to 60 percent in the United States and by 58 percent in Canada. Although many addiction facilities and services adapted their practices to accommodate COVID-19 mitigation efforts, mostly through telehealth and facilitating medication distribution, there were disparities in access to such adaptations, mostly for adolescents (even higher in adolescent males, racial/ethnic minorities, people with psychiatric disorders, and those in rural settings).

Early evidence suggests that substance use during the pandemic increased as expected. Restrictions in access to SUD treatment and addiction services have shown to affect the uptake of such treatment and services, which can lead to an increase in overdose deaths. However, delaying care and
restricted access to services might have exacerbated longer-term outcomes related to alcohol use, and these topics warrant further research.

Mental Health

We identified 72 published articles based on a simple PubMed search consisting of [“mental health” AND “covid”] limited to English-language publications between June 2020 and February 2022. Out of those 72 articles, we eliminated 62 on further review that were unrelated to the topic. We identified ten published articles related to mental health during the COVID-19 pandemic. Of the ten identified articles, eight were systematic reviews, with four examining changes in mental health during the pandemic, two examining the scales used in assessing mental health during the pandemic, and two examining mental health interventions during the pandemic.

Many have theorized that negative mental health outcomes will result from trauma caused by the COVID-19 global pandemic. Multiple studies attempted to quantify the impact of the pandemic on mental health. García-Rivera et al. found that the uncertainty caused by the pandemic had a direct and significant influence on negative emotional states and a significant inverse effect on resilience as mediating factors for suicidal ideation but not for drug addiction or alcoholism. Robinson, Daly, and Jones found a small increase in mental health symptoms during the early months of the pandemic but a drop of severity in symptoms in the months after that, which might be because of less uncertainty and the knowledge that was gained about the virus over time. This might also explain the results found in the García-Rivera study, as data was gathered in May 2020, early in the timeline of the pandemic. This indicates that there might be a time-dependent component to the severity of mental health symptoms during the pandemic.

Nam, Nam, and Kwon found mixed subgroup differences in depression, anxiety, and stress in vulnerable populations during the pandemic. Older adults displayed fewer symptoms overall than the control, and patients with chronic diseases had significantly higher stress but insignificant differences in depression and anxiety. Pregnant women had mixed results for both depression and anxiety according to the studies that were reviewed. Similarly, Lieneck et al. found demographic differences, including age and race, personal support and self-care resources, and concerns about finances and income as both protective and nonprotective factors as moderators of mental distress during the pandemic. Their review showed that Caucasians, people older than 65, college-age students, those with support resources, and people residing in states with comprehensive unemployment benefits, including health insurance, experienced less depression than their counterparts. The main nonprotective demographic predictor of mental distress was occupation, especially workers in health care or high-contact jobs. While the presence of social supports and care was a protective factor against mental distress, their absence is associated with poor mental health outcomes. Additionally, nonprotective factors include baseline health and social status, general knowledge about the pandemic, and government mistrust. Those with preexisting health conditions, especially mental health conditions, felt greater levels of distress than their respective counterparts. Low socioeconomic status also acts as a nonprotective factor and, when combined with poor baseline mental health, was observed to affect mental health the most negatively. The literature also indicates that the increase in fear and lack of knowledge around the pandemic and a

Delaying care and restricted access to services might have exacerbated longer-term outcomes related to alcohol use, and these topics warrant further research.
lack of coordinated response or reliable information contributed to the prevalence of mental distress in Americans during the pandemic. Uphoff et al. found high prevalence of mental distress, including depression, anxiety, and posttraumatic stress disorder (PTSD) in health care workers, patients with comorbidities, and children and adolescents in a systematic review. However, the studies included in the review did not include a control group or repeated measures, indicating that the results might be caused by higher baselines of these symptoms in the populations studied. Interestingly, patients with comorbid mood disorders might be at greater risk of mortality after contracting COVID-19. Castro et al. found that those diagnosed with mood disorders prior to becoming infected had a decreased survival probability after contracting the virus. Taken together, there seems to be evidence that certain demographics and subgroups might be differentially affected by the pandemic in terms of mental health, and further research could illuminate why these groups are affected in different ways.

Two of the articles examined the use of mental health interventions during the pandemic, but with limited generalizability. Drissi et al. examined e-mental health interventions for health care workers. Although the study did find interventions that showed evidence of effectiveness, including social media platforms, online resources, and mobile applications, many of the interventions were specifically developed for Chinese health care workers, with only one from the United States. Similarly, Damiano et al. found evidence of the effectiveness of interventions on general mental health, but most intervention studies were conducted in China and lacked quantitative evidence.

Research conducted on mental health during the pandemic appears to generally lack strong indicators of validity. This fact, combined with evidence that questions the integrity of this research, warrants caution in drawing definitive conclusions from these studies. An unprecedented number of human research studies involving the pandemic’s effect on mental health, along with some national agencies allowing for these studies to be expedited, led to a surge of published articles. Sharma et al. examined the quality of surveys related to the evaluation of mental health during the pandemic and found that a large majority of the identified surveys failed to disclose view and participation rates, calling their validity into question. Voitsidis et al. found that most of the scales that were examined failed to report responsiveness and had inadequate content validity. As stated, Uphoff et al. found a lack of external validity, and Nam, Nam, and Kwon found that most of the studies included in their review did not have random samples, which might have resulted in selection bias.

Overall, there is evidence that negative mental health symptoms have resulted from the COVID-19 pandemic, with vulnerable populations being particularly susceptible. However, efforts to examine the extent to which these groups are affected and in what manner have seen mixed results, and the time frame in which these impacts occur might be a factor in symptom severity. Although the number of studies being conducted on the subject is admirable, great care needs to be taken in their quality so definitive conclusions can be drawn and effective interventions can be developed.

**Expert Interviews: Impact of the COVID-19 Pandemic on Investigation and Adjudication Processes and Outcomes**

**Overview**

We conducted eight discussions with SMEs, including personnel security managers, investigators, and adjudicators from across six national security and nonnational security agencies, on the topic of pandemic-related impacts on clearance investigations and adjudications. We identified potential discussants with the help of the PAC PMO and selected individuals representing agencies that were both larger and smaller, as well as national-security related or not national-security related. Many of these individuals had personnel vetting experience at multiple government agencies. We then contacted them by email to share the purpose of our effort overall and specifically of the discussions. Discussions were scheduled at the individual’s convenience.
Each discussion was conducted via Microsoft Teams and included a lead facilitator and one notetaker from the RAND Corporation project team. Discussions lasted approximately 45 to 60 minutes, and all were facilitated by the use of a discussion guide, which addressed the following topics: (1) background information of the SME, such as role and typical responsibilities; (2) key security concerns in the context of the discussant’s agency and any changes to those concerns during the COVID-19 pandemic and challenges faced in assessing and monitoring security risks during the pandemic; (3) observed differences during the pandemic in reported behaviors during investigations and perceptions or knowledge of reasons for the differences; and (4) any modifications to how security risk information is processed, analyzed, and used to make adjudication decisions during the pandemic. We asked discussants to consider these questions in the context of applicants undergoing investigation as well as among their own personnel, as applicable. Notes from the discussions were reviewed by the project team. Using the interview protocol as a guide for categorizing responses, common themes were identified and synthesized across discussants. Emerging findings were discussed by the project team on a weekly basis. We will outline the key observations from these discussions.

There are some limitations to the conclusions we can draw from these interviews. They represent the subjective perceptions and experiences of only eight individuals. Although these individuals represent a variety of agencies and personnel vetting roles, their comments cannot be generalized to make broad conclusions about pandemic-related impacts. Relatedly, although we asked discussants to comment on the pandemic’s impacts on reported risk behaviors, their comments can be inferred only to be related to the pandemic. It is possible that because this effort was not aimed at establishing causality or even correlation, reported changes might not be related to the pandemic but instead to exogenous factors. Still, these observations provide an early look at the different ways the pandemic might have affected risk behaviors and offer directions for further consideration.

Key Observations

Observed Changes in Risk Behavior

Discussants described various changes in certain risk behaviors reported during the pandemic. Some described an increase in reported alcohol use and amount consumed but noted that they did not also see an increase in reports of associated problems such as driving under the influence (DUI) or disorderly behavior. They surmised this was likely because of limits on movement and social interaction imposed during the early stages of the pandemic. Some discussants observed an increase in reports of depression and depressive symptoms but also noticed a corresponding increase in attempts to address this, such as use of antidepressants or seeking counseling. In both cases, discussants emphasized the importance of considering reported attempts made to mitigate the potential concern or the perceived lack of concrete impacts to security (e.g., private drinking behavior might be less concerning than more-visible behaviors such as disorderly conduct). Finally, almost all discussants noted an increase in job loss, unemployment, and consequent debt, which they believed was because of first and second order pandemic effects, i.e., business closures because of extended shutdowns and economic slowdown. Discussants remarked that continued attention to these behavior changes was warranted to identify whether or when such behaviors became more impactful. They also noted that additional leeway in the investigation and adjudica-
tion process, such as changes to debt thresholds, was appropriately reflective of pandemic-induced temporary situations that could be corrected over time.

**Some Risk Factors Did Not Appear to Change**
Discussants noted that although they did not observe an increase in reported substance or illegal drug use, they did notice an increase in reported cannabis use, which they remarked had already started to increase pre-pandemic because of changes in state laws. The Director of National Intelligence issued guidance in December 2021 stating preemployment cannabis use could no longer serve as the sole factor in granting or denying a clearance but should still be considered, as cannabis use demonstrates a failure to comply with federal law. There were also no observed changes in criminal activity or observed subgroup differences (e.g., greater increase in reports among males versus females) in the changes described.

**Other Subject-Matter Expert Observations**
Discussants raised other issues relevant to the overall investigation and adjudication process, in the context of the pandemic. These included a perception that the lack of regular social interaction, direct contact with family and friends, and changes to social routines as a result of the pandemic could create circumstances in which risk behaviors could increase. For example, they remarked that a lack of connection with key social contacts and observations that could be reported from peers in workplace environments could lead to isolation and an increased potential for security vulnerabilities, respectively. They further noted that frayed social support because of distancing and isolation during the pandemic could lead to adverse coping strategies such as increased alcohol or substance use. Still, such changes had not been directly observed by discussants.

In addition to sharing observations of changes in reported risk behaviors during the pandemic, many discussants talked about the impact of the pandemic on their routine clearance processes. For example, they noted that fingerprinting was delayed because it typically requires in-person presence, both for the applicant and the staff. Similarly, one discussant shared how legal actions were taking longer to resolve because of pandemic-related staffing constraints, which meant that some applications were forced to be held while other applicants moved forward. A few discussants noted that although virtual investigations allowed greater flexibility in scheduling and improved timeliness (e.g., staff from other locations could conduct these investigations), they also detracted from the in-person evaluative aspect of typical investigations (e.g., where body language could be better observed).

**Synthesis: Vetting in a “New Normal”**
We identified several potential risk factors that could affect personnel vetting going forward. Results from relevant literature and SME discussions revealed changes over time and among different groups of people. These changes to individual risk factors could be indicators of a broader phenomenon of how people’s lives have changed because of the COVID-19 pandemic. We synthesized trends across the risk factors and potential mitigation actions to offer an accompanying narrative of those changes, overall and by different population subgroups.

Table 2 depicts the framework we used to synthesize the identified risk factors, how and whom they might have affected during the pandemic, how these changes might affect personnel vetting, and several dimensions that might help characterize and evaluate risk factors. Overall, evidence about pandemic-related impact appears sparse. Table 2 summarizes what we found, including where we could not identify rigorous information about risk factors, including either their impact or potential mitigation. These knowledge gaps underscore the importance of gaining a clearer picture of the extent to which the pandemic and future shocks might affect behavior. Overall, the table illustrates the nascent state of this research rather than suggesting the pandemic did not affect a given risk factor or that mitigation is impossible. In the following sections, we provide further detail on the synthesis.
<table>
<thead>
<tr>
<th>Pandemic-Related Impact</th>
<th>Why It Matters for Screening</th>
<th>What Happened During the Pandemic</th>
<th>Who Was More Affected</th>
<th>Impact on Assessment (e.g., baseline, thresholds)</th>
<th>Enduring or Pandemic-Specific Mitigation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol use</td>
<td>Increased remote work, social isolation, and poor psychological well-being, combined with easier access to alcohol, might have led to an increase in alcohol use.</td>
<td>Alcohol consumption generally increased over time.</td>
<td>Non-Hispanic women, Black people, and individuals with low socioeconomic status</td>
<td>None reported or observed</td>
<td>Initial research shows increased at-home alcohol consumption in 2020. Enduring effects are unknown.</td>
</tr>
<tr>
<td>Employment/job</td>
<td>Job loss combined with slow economic recovery has led to sustained job insecurity and instability.</td>
<td>Major spike in unemployment in early pandemic, as of this writing is decreasing but not yet at prepandemic level.</td>
<td>Men, non-Hispanic populations, Black people, and people working in travel and service industries</td>
<td>None reported or observed</td>
<td>Enduring, unemployment has not returned to prepandemic levels, as of this writing</td>
</tr>
<tr>
<td>Financial record</td>
<td>Decline in job stability might have led to sustained financial instability, resulting in difficulty paying debt.</td>
<td>High unemployment has ongoing negative financial impacts.</td>
<td>Racial/ethnic minorities</td>
<td>Debt thresholds were increased by DHS in August 2020</td>
<td>Enduring fallout from spike in unemployment</td>
</tr>
<tr>
<td>Psychological/emotional health</td>
<td>Social isolation might have exacerbated poor psychological well-being, leading to increase in mental health diagnoses, mental health treatment, and psychiatric hospitalizations.</td>
<td>Negative mental effects were prevalent in the first year of the pandemic.</td>
<td>People with mood disorders prepandemic, health care workers, minors, patients with chronic illness, racial/ethnic minorities, and individuals with low socioeconomic status.</td>
<td>None reported or observed</td>
<td>Could be enduring mental health impacts that extend beyond the pandemic</td>
</tr>
<tr>
<td>Substance use</td>
<td>Increase in remote work with decreased structure and supervision, plus social isolation and poor psychological well-being, might have led to increased use of illegal substances.</td>
<td>Drug use and overdose increased over time.</td>
<td>Adolescents, racial/ethnic minorities</td>
<td>None reported or observed</td>
<td>Delay in care and restricted access to treatment</td>
</tr>
</tbody>
</table>

Risk Factors During the Pandemic

The COVID-19 pandemic upended the ways in which people worked and lived their lives. Included in these massive shifts were behavioral changes that affected certain risk factors for personnel vetting. Recent literature that describes such behavior changes shares some similarities with SMEs’ anecdotal accounts of their experiences in investigative and adjudicative work since the beginning of the pandemic. However, discussants’ contributions might diverge from the literature themes because of the small number of SMEs with whom we connected. Moreover, currently available data might describe populations with characteristics that differ from those who go through security clearance activities.

In the literature, we found that, during the pandemic, people consumed more substances (e.g., drugs and alcohol), presumably to cope with difficulties in their lives driven by the pandemic. Some SMEs noted that despite increased alcohol and drug consumption, they did not observe higher rates of alcohol or drug-related issues such as DUIs. At the same time, people might have had limited access to ways to mitigate risk factors, such as by coping in healthier ways (e.g., seeking professional help or increasing social interaction).

Employment and financial record changes throughout the pandemic are well documented in both academic literature and open-source data and were observed by SMEs in their investigative and adjudicative work. Traditionally, unexplained gaps in employment and failure to attend to “bad” debt (e.g., delinquency in loan, rent, or credit card payments) are markers for security risk. Pandemic-related loss of employment and subsequent decrease in income could reflect on some individuals as being a heightened security risk because of lacking the ability to produce sufficient evidence to mitigate these issues.

Our review of the literature focused on mental health issues during the pandemic shows that there has been an increase in mental health impacts across many populations. Discussants shared that there has been no noticeable change in clearance applicants’ reporting of mental health issues, but some SMEs expressed seeing more disclosure of uptake in mental health services such as seeking counseling or therapy.

Although there were profound impacts related to the pandemic, a major theme in our findings is that these impacts were unevenly distributed.

Accessing help for mental health issues is not considered to be a security risk on its own and can be regarded as a positive mitigating factor.

Group Differences

Although there were profound impacts related to the pandemic, a major theme in our findings is that these impacts were unevenly distributed. For example, the literature suggests that non-Hispanic women, Black people, and individuals with low social economic status increased their alcohol consumption, at least in 2020. Overall, racial minorities experienced higher rates of job loss, negative financial record impacts, negative mental health effects, and illegal drug use than their White, non-Hispanic counterparts. Other subgroups who experienced disproportionate increases in negative mental health issues include adults over 60, adults with existing prepandemic mental health issues, health care workers, and pregnant women. This could have important equity implications for fairness in personnel vetting, as it suggests that existing guidance about problematic behavior would differentially affect certain applicants. Yet caution is warranted when considering potential changes to the vetting process that might focus more heavily or differently on certain subgroups. Such changes might lead to actual or perceived discrimination against protected classes of the population.
Mitigation

When determining overall risk, adjudicators or other personnel investigators can consider mitigating factors that might offset the potential severity of a given risk factor. These could include considering the context for which risk indicators appear and whether applicants have taken any steps to mitigate risk, even if it is simply disclosing the potential concern.

In our SME discussions, we asked about whether and how any mitigation might have applied to specific risk factors. Overall, we heard of very few such actions—only in the case of applicant finances did we hear (from multiple discussants) about specific guidance they received and then acted on. In August 2020, DHS issued a policy about new increased bad debt thresholds that superseded previous guidelines from April 2014. In response to the unprecedented financial climate created by the pandemic, DHS redefined the “bad debt” (any delinquent debt 120 days past due) threshold for all DHS applicants, federal employees, and contractors to $20,000 ($15,000 was the 2014 threshold). SME discussants noted that, in their experiences, the threshold change allowed for most financial record issues to be resolved.

Impact on Assessment

Risk assessments could be thought of as judgments of aberrant behavior. Implicit in this framing is the need to define what is normal or expected. Risk assessments typically must be made as comparisons against baseline (i.e., expected behaviors) or using a threshold for concerning behaviors. Large-scale behavior changes, such as in a pandemic in which freedom of movement and social interaction were curtailed, should be expected to change the baseline of this typical or “normal” behavior. Thus, objective, consistent baselines and thresholds are crucial for fair, rigorous risk assessments. However, quantifiable behavior changes related to adjudicative criteria are largely lacking, possibly because of their inherent subjectivity. For example, it is difficult to identify a specific point at which disrupted social routines or frayed social connections constitute increased risk.

We did not observe many specific attempts thus far to alter baselines or judgment thresholds. In our discussions with SMEs, we heard that the only formal threshold change in response to pandemic-related impacts was increasing the bad debt threshold by $5,000. This might be because the bad debt threshold can be easily quantified, but it also raises questions about why only a single agency could issue concrete adjustments to prepandemic thresholds. Other potential impacts were more speculative. Like many other industries and operations, the court system experienced disruptions and delays in carrying out various legal processes and courtroom activities. One discussant described instances in which an applicant with a legal hold (e.g., awaiting hearing/trial) was not pursued in favor of other applicants without active legal issues to speed up the clearance and entry on duty processes. It is unclear how widespread this practice is, which could have negative effects on agencies’ ability to ensure delivery of a fair and equitable clearance process.

Caution is warranted when considering potential changes to the vetting process that might focus more heavily or differently on certain subgroups. Such changes might lead to actual or perceived discrimination against protected classes of the population.
Another consideration for whether to adjust expectations is whether behavior shifts appear to be specific to the COVID-19 pandemic or whether they are expected to endure. If they are pandemic-specific—that is, they will not last beyond the duration of the pandemic—it might make less sense to adjust expectations accordingly. Furthermore, if behavior shifts do not appear to be caused by the pandemic, but rather only appeared alongside the pandemic, perhaps because of other origins, it might also not make sense to adjust expectations to account for those shifts.

Other ways to consider how changes in risk factors can affect risk assessment could include a risk factor's adjudicative value (i.e., how helpful it is in determining overall risk, such as the degree to which risk factors correspond to security-relevant risky behaviors) or the frequency at which it occurs.

**Action Areas and Future Directions**

The broad societal impact of the COVID-19 pandemic will persist for some time, and its full impact on various risk behaviors remains uncertain. For example, behavior changes could have reverted to prepandemic norms or moved in other directions. The initial findings from our exploratory research suggest shifts indeed occurred at least in some behaviors that could have relevant impacts to the vetting process. In addition, second or even third order effects are also likely as society continues to recover from the past few years of the pandemic. Economic conditions in the United States, for instance, have seemingly improved since much of this research was conducted. A fuller understanding of these behavioral shifts can illustrate paths forward and will allow institutions to be more responsive to change.

The project findings described in this report can help the federal government understand how to consider potential adjustments to adjudication guidelines and can help with interpretation or implementation in the context of a “postpandemic” world. In this section, we offer potential action areas and options for consideration, including areas that emerged during SME interviews (e.g., pandemic-related workforce challenges) but were not directly related to applicant behaviors and risk factors.

**Action Areas for Consideration**

**Assess Whether Observed Changes in Risk Behavior Are Caused by the Pandemic**

The current knowledge and published literature presented here can only surmise that any observed changes in various risk behaviors are because of the pandemic’s impact on these behaviors. Although the evidence base is growing, such as in news media and gray literature, most studies have used observational and correlational methods to suggest associations, and it is possible that some of these changes in behavior are unrelated or very distally related to the pandemic. For example, although adjudicators noticed an increase in reported use of marijuana during the pandemic, they also noted that they had observed an increase prior to the pandemic, because of recent changes in state laws. It is not yet known whether marijuana use increased because of either the pandemic or changes in access, or both. Similarly, early research suggests that alcohol use might have increased during the pandemic compared with prepandemic times, possibly because of increased social isolation and greater access in some states because of loosening of sale restrictions; however, it is unknown whether this increase would have occurred regardless of the pandemic. As research on health and social behaviors in the context of the pandemic grows, we might be able to distinguish the impact of the pandemic from unrelated causes.

As social conditions continue to change, additional research will be needed to evaluate second and third order effects of the pandemic on risk behaviors, such as the effects of a prolonged economic depression on financial considerations, employment, and mental health. Such negative life events as financial instability and mental health issues can, for example, influence people to pursue extremist pathways. During the pandemic, many people experienced such negative life events in the context of misinformation or disinformation about COVID-19 and vaccines, which could increase radicalization. Such individuals might then, for example, express antigovernment
sentiment, which would present a clear concern. Although SME discussions suggested no perceived changes in trends of domestic violent extremism during the pandemic, it might be important to monitor risk factors that could lead people closer to expressing or acting on extremist beliefs. Future work should continue to assess the specific impact of the pandemic on such risk behaviors to appropriately and fairly account for pandemic effects in the short and longer term.

**Continue Emphasis on Applicant Disclosure of Risk Behaviors**

Continuing efforts to systematically integrate applicant disclosure of risk behaviors into the adjudication process might be useful in the short-term post-pandemic world. SMEs in our study emphasized the importance of applicant disclosure of risk behaviors, at any time, but especially during the pandemic. Considering the potential impacts of the pandemic on certain behaviors (e.g., drinking more, sustained unemployment) and administrative delays, such as in processing legal actions, investigators and adjudicators viewed proactive disclosure of these issues as a positive mitigating factor, especially when in line with demonstrated attempts to resolve the issue. Although proactive disclosure of potential risk behaviors is always an important factor in the clearance process, during a major disruption such as a pandemic it might hold even greater weight.

**Monitor Vetting Processes to Ensure Fairness to Applicants**

Because the pandemic has had disproportionate impact on certain sectors of the population, it is important to consider how to ensure that vetting processes are applied in a consistent, equitable manner. A first step might be to build on the findings of this study to understand the broader effects of this pandemic and how future crises might affect vulnerable populations (e.g., racial minorities or individuals with low social economic status). This insight can then inform policies to ensure equity.

Complementary equity-focused policies could both target applicant-level decisionmaking and take a broader perspective. Ensuring fairness in individual decisions could involve, for instance, being aware of societal contexts in which applicant behaviors and actions take place. This could involve, in some cases, consistently applying concrete baselines or decision thresholds, or, in other cases, leaving room for subjective decisionmaking to account for broader factors. More broadly, guidance might be issued to multiple agencies that can make individual adjudicators or investigators aware of relevant societal shifts or that provide explicit decision criteria, as in the financial threshold for debt that multiple discussants cited. Determining which of these policies are needed, the effect they have on equity and fairness, and whether interim measures would be beneficial would all be useful ways to help ensure applicants are evaluated in an equitable manner.

**Develop or Formalize Mitigation Actions**

Some of our SMEs noted that specific actions taken to mitigate the potential impact of the pandemic, such as adjusting guidance around bad debt thresholds to reflect the economic context or adjusting lookback time frames for review of prior risk behaviors, was helpful to their investigation and adjudication processes. Yet at an institutional level, few such mitigation steps appeared to have been broadly implemented. It might be useful and reasonable to further consider such mitigation actions in future emergencies or to explicitly allow for flexibility in the review process in certain extreme circumstances. Growing awareness of how the pandemic has affected individuals and their behaviors might help to inform new mitigation actions, such as to accommodate lack of or limited access to treatment around alcohol use because of the pandemic.

**Address Screening Workforce Challenges Caused by the Pandemic**

The COVID-19 pandemic has affected SSC processes in various aspects related to the logistics and mechanisms by which applicants and investigators access and communicate about applicant information and documentation. Almost all discussants shared that they and their agencies experienced delays in receiving applicant information because of closures or staffing shortages, especially in the fingerprint-
ing process. Many applicants were not able to access on-site fingerprinting during times of lockdowns imposed as a COVID-19 mitigation strategy, which created backlogs of applicants needing fingerprinting and having a complete background check. SMEs noted that some agencies changed their policies to allow for use of electronic fingerprints, which addressed some of the delays.

In addition to challenges in accessing on-site fingerprinting services, the abrupt shift to conducting most clearance activities in remote or virtual spaces raises issues around equity and access to technology and the internet. As more in-person work activities shift to being remote, it is critical to examine how to prevent unintentionally excluding those who might lack the resources needed to successfully engage in the clearance application process. As mentioned elsewhere in this report, delays in closing open criminal investigations can pose issues in upholding a fair investigation for all applicants. For instance, those with low socioeconomic status might face challenges in accessing resources needed to participate in the application and investigation process. Furthermore, racial minorities might not receive equal consideration if they are more likely to be placed in a long legal hold.

Future Directions

Personnel vetting processes—particularly those assessing risks posed by certain human behaviors—might need to be contextualized and modified to account for the negative consequences of the COVID-19 pandemic and other similar large-scale events that might occur. In this exploratory project, we identified certain areas where this might be needed and developed an initial categorization. Going forward, a systematic approach to identifying and categorizing relevant behavior changes will help maintain consistency and justifiability, ensuring continued sensitivity of the process while acknowledging the reality of the new normal. In particular, it is important to understand the extent to which changes in risk factors correspond to changes in security-relevant risky behaviors.

Sharing these findings with the personnel vetting community also underscores that the pandemic continues to linger and evolve, warranting continued attention. Other steps might include supporting policymaking entities within the SSC community to identify appropriate adjustments to or interpretation of vetting guidance, to reflect the changing nature of the impact of the pandemic and other crises on people looking to serve in trusted positions.
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About This Report

The COVID-19 pandemic has led to unprecedented societal shifts and behavior change among individuals. Given that the U.S. government personnel vetting process is focused on detecting risk and assessing an individual for their trustworthiness, such changes in behavior related to COVID-19 have the potential to affect decisionmaking and adjudication regarding what constitutes risky behavior for the purposes of personnel vetting. This is particularly important when considering the risk an individual might present if granted a security clearance and access to classified information. This report describes an initial effort to consider adjustments to baseline risk considerations that might allow better identification and management of risky behavior in the context of abnormal times.

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For more information on the RAND Forces and Resources Policy Program, see www.rand.org/nsrd/frp or contact the director (contact information is provided on the webpage).

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