TRAUMA AND COVID-19:

Communities In Need Across The U.S.

Mental Health America

Acknowledgements

Mental Health America (MHA) was founded in 1909 and is the nation's leading community-based nonprofit dedicated to addressing the needs of those living with mental illness and promoting the overall mental health of all. Our work is driven by our commitment to promote mental health as a critical part of overall wellness, including prevention services for all, early identification and intervention for those at risk, and integrated care, services, and supports for those who need them, with recovery as the goal.

Key Stakeholder Involvement

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Administrator and Staff from the Following Federal Agencies
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Executive Summary

As the nation works to mitigate the public health crisis introduced by COVID-19, we have a critical responsibility to ensure a fast and coordinated response to address the growing mental health crisis exacerbated by the pandemic.

The data collected from over 2.6 million users visiting MHA Screening (at www.mhascreening.org) in 2020 is the largest dataset collected from a help-seeking population experiencing mental health conditions during COVID-19. Analysis and dissemination of this data will aid a timely and effective response to the increasing rates of anxiety, depression, psychosis, loneliness, and other mental health concerns in our country.

In summer 2021, MHA published two briefs, *Suicide and COVID-19: Communities in Need Across the U.S.*, evaluating data from individuals reporting frequent thoughts of suicide or self-harm on the depression screen (PHQ-9), and *Severe Depression and COVID-19: Communities in Need Across the U.S.*, evaluating data from individuals scoring at risk for severe depression on the depression screen. This brief, *Trauma and COVID-19: Communities in Need Across the U.S.,* is the third in our series and explores the data from individuals seeking support for post-traumatic stress disorder (PTSD) and individuals seeking mental health supports who self-identify as trauma survivors in the U.S.

As opposed to previous disasters in the U.S. that affected certain specific regions or populations where aid and trauma response could be concentrated, the COVID-19 pandemic has affected the entire population of the country. While the risk of contracting COVID-19 is a population-wide traumatizing event, over the course of 2020 and 2021 it was coupled with traumatic changes to people's social environments, including financial hardship, housing and food insecurity, death of loved ones, dramatic changes to work and schooling environments, and increased household stress that may have led to increases in interpersonal violence. During this time, the U.S. also experienced increasingly visible race-based violence, including the harassment and killing of Black and Asian community members. Each of these experiences can cause an acute stress response that may lead to future mental health problems if not addressed early; and for many individuals in the U.S., these experiences compounded one another. Additionally, for many individuals who had experienced past trauma or were already living with PTSD, these traumatic experiences likely exacerbated symptoms.[1] According to the Centers for Disease Control and Prevention (CDC), 40.9% of adults reported experiencing at least one adverse mental or behavioral health condition related to COVID-19 in June 2020, including 26% of adults who reported symptoms of a trauma- or stress-related disorder.[2]

[1] Fina, BA, Wright, EC, Rauch, SAM, et al. (2020). Conducting Prolonged Exposure for PTSD During the COVID-19 Pandemic: Considerations for Treatment. *Cognitive and Behavioral Practice,* in press. Doi: https://doi.org/10.1016/j.cbpra.2020.09.003

[2] Czeisler, ME, Lane, RI, Petrosky, E, et al. (2020). Mental Health, Substance Use, and Suicidal Ideation During the COVID-19 Pandemic – United States, June 24-30,2020. *MMWR Morbidity and Mortality Weekly Report,* 69:1049-1057. Doi: http://dx.doi.org/10.15585/mmwr.mm6932a1

The PTSD and trauma data within this brief reflect both acute and long-lasting mental health effects of trauma. Following a traumatic event, individuals often experience an acute trauma response. If this response to trauma lasts for an extended period of time, they may begin to explore the onset of PTSD and take a PTSD screen online. However, trauma can also lead to chronic, long-term mental health effects such as anxiety and depression. In these cases, trauma survivors may have already received mental health supports following the immediate impact of the trauma but come to MHA Screening to explore their additional or emerging symptoms. The following data provide insight into the prevalence of PTSD and the challenges people experiencing both PTSD and the mental health effects of trauma face. The data also provide opportunities to identify where early intervention and increased awareness could support people experiencing acute and long-lasting mental health effects of trauma.

State-Level PTSD Risk

- **States with the *highest number* of people:** The three states with the highest number of people scoring positive for PTSD on the PC-PTSD screen (a screening tool that assesses risk for PTSD) from January 2020 to July 2021 were **California** (N=7,882), **Texas** (N=6,099), and **Florida** (N=4,445).
- **States with the *highest percentage* of individuals: West Virginia** had the highest percentage of individuals score with PTSD of those who took a PC-PTSD screen (95%, N=552), followed by **Arkansas** (95%, N=1,107), **Nevada** (94%, N=765), **Oklahoma** (94%, N=1,229), and **South Carolina** (94%, N=1,151). The percentage of individuals scoring positive for PTSD of those who took a PC-PTSD screen ranged from 89%-95% across states.
- **States with the *highest percentage in comparison to overall state population*: Alaska** had the highest percentage of individuals score positive for PTSD in comparison to the overall state population (0.065%, N=479), followed by **Arkansas** (0.037%, N=1,107), **Indiana** (0.032%, N=2,168), **Maine** (0.032%, N=432), and **Oklahoma** (0.031%, N=1,229).
- **States with the *highest percentage when weighted to match state demographics*:** When weighted to match state demographics for gender and age, **Alaska** still had the highest percentage of the population screening positive for PTSD (N=473*, 0.065%), followed by **Arkansas** (N=1,099*, 0.036%), **Maine** (N=430*, 0.032%), **Indiana** (N=2,129*, 0.032%), and **West Virginia** (N=553*, 0.031%).

County-Level PTSD Risk

- **Counties with the *highest number* of people:** The three counties in the U.S. with the highest number of individuals scoring positive for PTSD on the PC-PTSD from January 2020 to July 2021 were **Los Angeles County, California** (N=1,538), **Maricopa County, Arizona** (N=964), and **Cook County, Illinois** (N=770).
- **Large County Analysis: St. Louis County, Missouri** had the highest percentage of the population score positive for PTSD of the most populous counties (0.02917%, N=290), followed by **Franklin County, Ohio** (0.02628%, N=346), **Salt Lake County, Utah** (0.02577%, N=299), **Bexar County, Texas** (0.02271%, N=455), and **Maricopa County, Arizona** (0.02149%, N=964).
- **Small and Mid-Size County Analysis: Benton County, Indiana** had the highest percentage of the population score positive for PTSD (0.09145%, N=8), followed by **Cass County, Iowa** (0.07231%, N=7), **Asotin County, Washington** (0.06642%, N=15), **Giles County, Virginia** (0.06579%, N=11), and **Red Willow County, Nebraska** (0.06527%, N=7).

State-Level Trauma Survivors

- **States with the *highest number* of people:** The three states with the highest number of people identifying as trauma survivors on MHA Screening from January 2020 to July 2021 were **California** (N=26,440), **Texas** (N=19,198), and **Florida** (N=13,509).
- **States with the *highest percentage in comparison to overall state population*: Alaska** had the highest number of trauma survivors in comparison to the overall state population (0.205%, N=1,503), followed by **Oregon** (0.110%, N=4,646), **Maine** (0.109%, N=1,469), **Wyoming** (0.108%, N=626), and **Montana** (0.102%, N=1,093).

County-Level Trauma Survivors

- **Counties with the *highest number* of people:** The three counties in the U.S. with the highest number of individuals identifying as trauma survivors on MHA Screening from January 2020 to July 2021 were **Los Angeles County, California** (N=5,416), **Maricopa County, Arizona** (N=3,194), and **Cook County, Illinois** (N=2,630).
- **Large County Analysis: Salt Lake County, Utah** had the highest percentage of the population identifying as trauma survivors of the most populous counties from 2020-2021 (0.08549%, N=992), followed by **Franklin County, Ohio** (0.08544%, N=1,125), **Travis County, Texas** (0.07755%, N=988), **King County, Washington** (0.07204%, N=1,623), and **Maricopa County, Arizona** (0.07121%, N=3,194).
- **Small and Mid-Size County Analysis: Rowan County, Kentucky** had the highest percentage of the population identifying as trauma survivors on MHA Screening of small and mid-sized counties from 2020-2021 (0.14585%, N=36), followed by **Winchester City, Virginia** (0.14175%, N=41), **Asotin County, Washington** (0.13728%, N=31), **Washington County, Tennessee** (0.13681%, N=177), and **Unicoi County, Tennessee** (0.13421%, N=24).

Opportunities for Policy, Programs, and Research

For our data to be meaningful, it must result in legislation, regulation, and policy implementation that funnels federal, state, and local funding and guidance to increase quality and responsive mental health care for youth, adults, and families.

This data will help communities implement the following federal, state, and local strategies to better support individuals at risk for PTSD and other mental health concerns related to trauma:

- Understand and anticipate the compounding problems that result from trauma and mental illness;
- Evaluate and close the resource gaps on those most impacted by COVID-19;
- Identify where individuals are currently in need of mental health supports and target interventions within communities;
- Coordinate data and generate a better understanding of mental health needs;
- Identify and provide support to programs and resources that already exist in communities;
- Generate new resources to address unmet need;
- Create systemic policy change to prevent future mental health concerns; and
- Move beyond an issues-based approach to create an environment that promotes mental wellness at the population level.

Trauma and COVID-19: Communities in Need Across the U.S

COVID-19 has had a profound negative effect on the mental health of the nation. Throughout the COVID-19 pandemic, Mental Health America (MHA) has witnessed an increasing number[3] of people experiencing anxiety, depression, psychosis, loneliness, and other mental health concerns. As the nation strives to mitigate the public health crisis introduced by COVID-19, we have a critical responsibility to ensure a fast and coordinated response to address these mental health concerns so we are not left with a mental health crisis long after the virus itself is under control.

Since 2014, Mental Health America has provided online mental health screening to roughly 1 million users a year. In 2020, that number expanded to over 2.6 million users. Prior to this series of briefs, MHA published multiple reports and research studies[4] using the data collected from the MHA Screening Program but had never released this data at a county level. County-level data are difficult to find, leaving public administrators such as county board members, local health officials, and school administrators with little insight into their communities' specific problems and how best to invest in services like mental health care.

In 2021, MHA plans to release four briefs publishing data from MHA Screening at a state and county level. MHA's first brief covered rates of suicidal ideation across the U.S. in 2020, and the second brief covered rates of severe depression across the U.S. in 2020. This brief is the third in our series and summarizes data MHA has collected from both individuals seeking support for post-traumatic stress disorder (PTSD) and individuals seeking mental health supports who self-identify as trauma survivors in the U.S. The fourth brief, to be published in the winter of 2021, will cover psychosis. The research, policy, and program opportunities outlined in this brief were developed from a meeting with key stakeholders, including federal partners, researchers, providers, mental health advocacy organizations, and school advocates.

At the end of 2021, MHA anticipates the release of a publicly available dashboard where individuals can obtain information about the counts and rates of suicidal ideation, severe depression, psychosis, and trauma in their counties. For those interested in exploring these data in detail, MHA will release a process where administrators and researchers can request access to the complete dataset to identify and collaborate with MHA on future research, policy, and program opportunities.

[3] https://mhanational.org/mental-health-and-covid-19-what-mha-screening-data-tells-us-about-impact-pandemic
[4] https://mhanational.org/about-mha-screening#ScreeningReportsandResearch

As opposed to previous disasters in the U.S. that affected certain specific regions or populations where aid and trauma response could be concentrated, the COVID-19 pandemic has affected the entire population of the country. While the risk of contracting COVID-19 is a population-wide traumatizing event, it was coupled with traumatic changes to people's social environments as well, including financial hardship, housing and food insecurity, death of loved ones, dramatic changes to work and schooling environments, and increased stress in the household which may have led to increases in interpersonal violence. During this time, the U.S. also experienced increasingly visible race-based violence, including the killing of Black and Asian community members. Each of these experiences can cause an acute stress response that may lead to future mental health problems if not addressed early, and for many individuals in the U.S., these experiences compounded on one another. Additionally, for many individuals who had already experienced past trauma or were already living with PTSD, these traumatic experiences likely exacerbated symptoms.[5]

The PTSD and trauma data presented throughout this report represents the minimum number of individuals who are struggling with trauma and seeking mental health resources at this point in time. Before initiating care for a new mental health condition or seeking care for a relapse of symptoms from an existing mental health condition, people are likely to turn to the internet to seek information and solutions about their concerns. Understanding the data provided by people during this time offers insight into the kinds of challenges people face and the opportunities that exist to help people at the earliest stages of awareness.

[5] Fina, BA, Wright, EC, Rauch, SAM, et al. (2020). Conducting Prolonged Exposure for PTSD During the COVID-19 Pandemic: Considerations for Treatment. *Cognitive and Behavioral Practice,* in press. Doi: https://doi.org/10.1016/j.cbpra.2020.09.003

MHA Screening

In 2014, Mental Health America (MHA) created the Online Screening Program (www.mhascreening.org), a collection of 10 free, anonymous, confidential, and clinically validated screens that are among the most commonly used mental health screening tools in clinical settings. These include the Primary Care Post-Traumatic Stress Disorder screen for DSM-5 (PC-PTSD-5) to screen for PTSD.[6]

PTSD is a mental health condition characterized by ongoing distress that can occur as a response to experiencing or witnessing a traumatic event. The PC-PTSD screening tool consists of five scored items to assess risk for PTSD. For each item, respondents are asked, "In the past month, have you…?" The five items include:

- had nightmares about the event(s) or thought about the event(s) when you did not want to;
- tried hard not to think about the event(s) or went out of your way to avoid situations that reminded you of the event(s);
- been constantly on guard, watchful, or easily startled;
- felt numb or detached from people, activities, or your surroundings; and
- felt guilty or unable to stop blaming yourself or others for the event(s) or any problems the event(s) may have caused.

Respondents can select either "Yes" or "No" in response to each of these questions. The results of the PC-PTSD screen are considered positive when an individual answers "Yes" to any three items.

From January 2020 to July 2021, 225,800 individuals took the PC-PTSD screen to check on their mental health. The analysis of 84,044 people in the PTSD section of this brief represents a subset of our data pulled from individuals within the U.S. who found MHA Screening organically. In 2020, the MHA PTSD screen was one of the top results on Google for the search terms "PTSD test" and "trauma test."

On each MHA Screening tool, users are also asked to answer a series of optional demographic questions. Users do not have to answer any of the questions to receive the results of their screen. One of these demographic questions asks, "Which of the following populations describes you? Select all that apply." The options respondents can select from are "Student," "LGBTQ+," "Trauma Survivor," "New or Expecting Mother," "Caregiver of Someone Living with Emotional or Physical Illness," "Veteran or Active Duty Military," and "Health Care Worker." For the purposes of this brief, we conducted analyses on the results of individuals who self-identified as "Trauma Survivor" on this question.

[6] Prins, A., Bovin, M. J., Kimerling, R., Kaloupek, D. G, Marx, B. P., Pless Kaiser, A., & Schnurr, P. P. (2015). Primary Care PTSD Screen for DSM-5 (PC-PTSD-5) [Measurement instrument]. https://www.ptsd.va.gov/professional/assessment/documents/pc-ptsd5-screen.pdf

Of the 5,619,279 people who took a screen through MHA screening between January 2020 and July 2021, 3,823,225 answered the demographic question about special populations. Of them, 686,694 individuals self-identified as a trauma survivor. The analysis of 244,082 people in the trauma survivors section of this brief represents a subset of our data pulled from individuals who identified as trauma survivors within the U.S. who found MHA Screening organically.

The MHA Screening dataset collects information from a help-seeking population, meaning individuals access the mental health screening tools while searching for mental health resources and support online. As a result, users are more likely to screen at risk or with moderate-to-severe symptoms of mental health conditions than the general population. Thus, the population represented within this dataset differs from other national mental health datasets collected by federal agencies such as the Centers for Disease Control (CDC) and the U.S. Census Bureau Household Pulse Survey, both of which survey a sample of the general U.S. population. This convenience sample allows MHA to understand the experiences of individuals with the highest need who were actively seeking help for PTSD or another mental health condition and had experienced trauma, and therefore can be interpreted as a minimum unmet need for immediate resources and support across the U.S.

The results from MHA Screening constitute one of the largest datasets collecting and distributing national mental health information in real-time, allowing us to recognize and react to changes in the mental health of the nation as they occur, including the mental health effects of COVID-19. MHA Screening also captures information about an individual's mental health needs earlier than other datasets. When people first begin experiencing symptoms of a mental health condition or begin to experience a relapse of symptoms from an existing mental health condition, they often look for answers and resources online, long before speaking to a provider. As such, the data can be an indicator of imminent mental health need, which allows for it to be used for earlier intervention and detection of mental health concerns before they become crises.

The PTSD and trauma data within this brief reflect both acute and long-lasting mental health effects of trauma. Following a traumatic event, individuals often experience an acute trauma response that may lead them to explore the onset of PTSD and take a PTSD screen online. Individuals who have lived through multiple traumatic experiences often develop complex PTSD and have lasting and profound changes in mood, perceptions, and cognition. These individuals may experience the onset of other mental health conditions such as depression, psychosis, or obsessive-compulsive disorder throughout their lifetime, which results in their exploration of other mental health conditions while identifying as trauma survivors.

Trauma and COVID-19: A Race Analysis

In April 2020, MHA added the demographic question, "Think about your mental health test. What are the main things contributing to your mental health problems right now? Choose up to three," to each of the MHA Screening tools. The options include:

- Coronavirus
- Current events (news, politics, etc.)
- Loneliness or isolation
- Grief or loss of someone or something
- Past trauma
- Relationship problems
- Financial problems
- Racism
- Other (where individuals were able to write in a response)

The events of 2020-2021 had profoundly different mental health impacts on individuals of different races and ethnicities, and the differences reveal some of the systemic inequities that Black, Indigenous, and people of color (BIPOC) face in the U.S. that directly affect their mental health. While past trauma is one of the specific options respondents could select as a driver for their searching for mental health resources online, many of these experiences, like poverty, loss of someone or something, COVID-19, current events, and racism, can be traumatic experiences themselves that may lead to the development of future mental health concerns.

Among the 1,792,132 screeners from the U.S. who reported their race/ethnicity from April 2020 – July 2021:

- Screeners who identified as white were most likely out of all racial/ethnic groups to select **current events** (25%) as one of their top three concerns, followed by screeners who identified as more than one race (23%), and Native American or American Indian screeners (21%).
- Black or African American screeners were most likely to select **financial problems** (27%), followed by Hispanic or Latino screeners (23%), and white screeners (23%).
- Screeners who identified as more than one race were most likely to select **loneliness or isolation** (69%), followed by Hispanic or Latino screeners (69%), and Asian or Pacific Islander screeners (66%).
- Native American or American Indian screeners were most likely to select **grief or loss** (33%), followed by screeners who identified as more than one race (26%), and Black or African American screeners (26%).
- Native American or American Indian screeners were most likely to select **past trauma** (59%), followed by screeners who identified as more than one race (58%), and Hispanic or Latino screeners (53%).
- Black or African American screeners were most likely to select **relationship problems** (41%), followed by Native American or American Indian screeners (41%), and Asian or Pacific Islander screeners (40%).
- Asian or Pacific Islander screeners were most likely to select **coronavirus** (27%), followed by white screeners (25%), and Hispanic or Latino screeners (24%).
- Black or African American screeners were most likely to select **racism** (16%), followed by screeners who identified as more than one race (9%), and Asian or Pacific Islander screeners (9%).

Trauma and COVID-19: Analysis of Post-Traumatic Stress Disorder (PTSD)

The following analysis is of the data collected from individuals who took the PC-PTSD screen in the U.S. from January 2020 to July 2021. For detailed information on data cleaning and methodology, see the Appendix.

84,044 **Organic U.S. Users from 2020-2021**

Screening Positive for PTSD

Of the 84,044 individuals who took a PTSD screen from January 2020-July 2021, 93% (N=77,824) scored positive or at risk for PTSD.

PTSD Screen Result	Count	Percentage
PTSD Negative	6,220	7.40%
PTSD Positive	77,824	92.60%
Grand Total	84,044	**100.00%**

When examined by year, the *percentage* of people screening positive for PTSD was highest in 2020, at nearly 93% (N=36,540). However, the greatest number of people took a PTSD screen and scored positive for PTSD from January to July 2021 (N=41,284). The number of people who screened positive for PTSD from January-July 2021 was 13% higher than the total number of individuals who screened positive for PTSD in 2020.

PTSD Screen Result	2020 Count	2020 Percentage	Jan-July 2021 Count	Jan-July 2021 Percentage
PTSD Negative	2,778	7.07%	3,442	7.70%
PTSD Positive	36,540	92.93%	41,284	92.30%
Grand Total	**39,318**	**100.00%**	**44,726**	**100.00%**

The PC-PTSD screening tool consists of five scored items to assess risk for PTSD. The results of the screen are considered positive when an individual answers "Yes" to any three items. Most people (52%) who took the PC-PTSD screen answered "Yes" to all five items of the screening tool.

Score on PC-PTSD Screen	Count	Percentage
0	876	1.04%
1	1334	1.59%
2	4010	4.77%
3	10919	12.99%
4	23538	28.01%
5	43367	51.60%
Grand Total	**84044**	**100.00%**

Gender

Seventy-two percent (N=59,306) of respondents identified as female, 23% identified as male, and 5% identified as another gender. Among the entire sample, 6% (N=4,758) identified as transgender.

Gender	Count	Percentage
Male	19,123	23.23%
Female	59,306	72.04%
Another gender	3,896	4.73%
Grand Total	**82,325**	**100.00%**

PTSD by Gender

Respondents who identified as another gender were most likely to score with symptoms of PTSD (96%, N=3,727).

PTSD Screen Result by Gender	Female Count	Female Percentage	Male Count	Male Percentage	Another Gender Count	Another Gender Percentage
PTSD Negative	3,908	6.59%	1,977	10.34%	169	4.34%
PTSD Positive	55,398	93.41%	17,146	89.66%	3,727	95.66%
Grand Total	**59,306**	**100.00%**	**19,123**	**100.00%**	**3,896**	**100.00%**

Race/Ethnicity

Individuals who took a PTSD screen from 2020-2021 were less diverse than the general U.S. population. Sixty-three percent (N=51,510) of respondents identified as white. Thirteen percent of respondents identified as Hispanic or Latino, 9% were Black or African American, and 7% identified as more than one race. Middle Eastern or North African was not included as an option under Race/Ethnicity until May 2021.

Race/Ethnicity	Count	Percentage
Asian or Pacific Islander	3,378	4.13%
Black or African American (non-Hispanic)	7,227	8.85%
Hispanic or Latino	10,587	12.96%
Middle Eastern or North African	204	0.25%
More than one of the above	5,495	6.73%
Native American or American Indian	1,532	1.88%
Other	1,762	2.16%
White (non-Hispanic)	51,510	63.05%
Grand Total	**81,695**	**100.00%**

PTSD by Race/Ethnicity

Individuals who identified as Native American or American Indian were most likely to screen positive for PTSD (95%, N=1,458), followed by individuals who identified as more than one race (94%, N=5,191).

PTSD Screen Result by Race/Ethnicity	Count Scoring Positive for PTSD	Percentage Scoring Positive for PTSD
Asian or Pacific Islander	2,979	88.19%
Black or African American (non-Hispanic)	6,584	91.12%
Hispanic or Latino	9,706	91.68%
Middle Eastern or North African	187	91.67%
More than one of the above	5,191	94.47%
Native American or American Indian	1,458	95.17%
Other	1,624	92.17%
White (non-Hispanic)	47,958	93.11%
Grand Total	**75,687**	

Age

Most individuals who took a PTSD screen from 2020-2021 were young adults ages 18-24 (31%, N=25,515), followed by youth ages 11-17 (27%, N=22,033), and adults ages 25-34 (20%, N=16,909).

Age	Count	Percentage
"11-17"	22,033	26.59%
"18-24"	25,515	30.79%
"25-34"	16,909	20.41%
"35-44"	9,277	11.20%
"45-54"	5,351	6.46%
"55-64"	2,814	3.40%
"65+"	964	1.16%
Grand Total	**82,863**	**100.00%**

PTSD by Age

Young adults ages 18-24 were also more likely than any other age group to score with symptoms of PTSD on the PC-PTSD screen (94%, N=24,031).

PTSD Screen Result by Age	11-17	18-24	25-34	35-44	45-54	55-64	65+
PTSD Negative	7.06% (N=1,555)	5.82% (N=1,484)	7.32% (N=1,237)	8.81% (N=817)	9.14% (N=489)	12.19% (N=343)	17.53% (N=169)
PTSD Positive	92.94% (N=20,478)	94.18% (N=24,031)	92.68% (N=15,672)	91.19% (N=8,460)	90.86% (N=4,862)	87.81% (N=2,471)	82.47% (N=795)
Grand Total	**100.00% (N=22,033)**	**100.00% (N=25,515)**	**100.00% (N=16,909)**	**100.00% (N=9,277)**	**100.00% (N=5,351)**	**100.00% (N=2,814)**	**100.00% (N=964)**

Household Income

Fifty-five percent (N=37,311) of respondents to the PTSD screen reported a household income under $40,000.

Household Income	Count	Percentage
Less than $20,000	21,009	30.69%
$20,000 - $39,999	16,302	23.81%
$40,000 - $59,999	10,743	15.69%
$60,000 - $79,999	7,184	10.49%
$80,000 - $99,999	4,551	6.65%
$100,000 - $149,999	5,094	7.44%
$150,000+	3,573	5.22%
Grand Total	**68,456**	**100.00%**

PTSD by Household Income

Individuals who reported lower household incomes were more likely to screen with PTSD than those who reported higher household incomes. Among individuals who reported a household income of less than $20,000, 94% (N=19,827) screened at risk for PTSD.

Household Income	Count Scoring Positive for PTSD	Percentage Scoring Positive for PTSD
Less than $20,000	19,827	94.37%
$20,000 - $39,999	15,234	93.45%
$40,000 - $59,999	9,869	91.86%
$60,000 - $79,999	6,546	91.13%
$80,000 - $99,999	4,130	90.75%
$100,000 - $149,999	4,578	89.87%
$150,000+	3,176	88.89%
Grand Total	**63,360**	

Mental Health Care

Finally, most individuals who took a PTSD screen from 2020-2021 and scored at risk for PTSD had received a prior mental health diagnosis and care. Of those who scored with symptoms of PTSD, 57% (N=42,967) had been diagnosed with a mental health condition in the past, and 59% (N=135,817) had received mental health treatment or supports.

Among screeners with PTSD: Are you currently, or have you ever been, diagnosed with a mental health condition by a professional?	Count	Percentage
No	31,969	42.66%
Yes	42,967	57.34%
Grand Total	**74,936**	**100.00%**

Among screeners with PTSD: Have you ever received treatment/support for a mental health problem?	Count	Percentage
No	31,571	40.93%
Yes	45,560	59.07%
Grand Total	**77,131**	**100.00%**

State-Level PTSD Risk

The three states with the highest number of people scoring positive for PTSD on the PC-PTSD screen from 2020 to July 2021 were California (N=7,882), Texas (N=6,099), and Florida (N=4,445). Each of the below state counts represents the number of individuals in each state who took the PC-PTSD screen and scored positive for PTSD through the MHA Online Screening Program from January 2020 to July 2021. These findings indicate the number of individuals who may need support for PTSD at this point in time. **Nearly 4% of the U.S. adult population experienced PTSD in the past year, and 5% of adolescents ages 13-18 had experienced PTSD at some point in their lifetime.**[7]

The percentage of individuals with PTSD is calculated as the percentage of individuals with a score indicating PTSD of those who took a PC-PTSD screen from 2020-2021. The percent of state population is the percentage of the overall state population that took a PTSD screen on MHA Screening from 2020-2021 and scored with PTSD. West Virginia had the highest percentage of individuals score with PTSD of those who took a PTSD screen (95%, N=552), followed by Arkansas (95%, N=1,107), Nevada (94%, N=765), Oklahoma (94%, N=1,229), and South Carolina (94%, N=1,151). Alaska had the highest percentage of individuals score positive for PTSD in comparison to the overall state population (0.065%, N=479), followed by Arkansas (0.037%, N=1,107), Indiana (0.032%, N=2,168), Maine (0.032%, N=432), and Oklahoma (0.031%, N=1,229).

PTSD Risk by State in Alphabetical Order

State	Count of Positive PTSD Screens	Count of Negative PTSD Screens	Total Count PC-PTSD Screens	Percentage of Positive PTSD Screens	State Population Count	Percent of State Population Scoring with PTSD
Alabama	1,499	159	1,658	90.41%	4,903,185	0.03057%
Alaska	479	58	537	89.20%	731,545	0.06548%
Arizona	2,044	179	2,223	91.95%	7,278,717	0.02808%
Arkansas	1,107	64	1,171	94.53%	3,017,804	0.03668%
California	7,882	743	8,625	91.39%	39,512,223	0.01995%
Colorado	1,730	137	1,867	92.66%	5,758,736	0.03004%
Connecticut	813	85	898	90.53%	3,565,287	0.02280%
Delaware	283	19	302	93.71%	973,764	0.02906%
District of Columbia	162	19	181	89.50%	705,749	0.02295%
Florida	4,445	347	4,792	92.76%	21,477,737	0.02070%
Georgia	2,356	185	2,541	92.72%	10,617,423	0.02219%
Hawaii	332	28	360	92.22%	1,415,872	0.02345%

[7] National Institute of Mental Health (NIMH). *Post-Traumatic Stress Disorder (PTSD).* https://www.nimh.nih.gov/health/statistics/post-traumatic-stress-disorder-ptsd. Retrieved September 13, 2021.

State	Count of Positive PTSD Screens	Count of Negative PTSD Screens	Total Count PC-PTSD Screens	Percentage of Positive PTSD	State Population Count	Percent of State Population Scoring with PTSD
Idaho	535	45	580	92.24%	1,787,065	0.02994%
Illinois	2,651	232	2,883	91.95%	12,671,821	0.02092%
Indiana	2,168	157	2,325	93.25%	6,732,219	0.03220%
Iowa	862	55	917	94.00%	3,155,070	0.02732%
Kansas	828	55	883	93.77%	2,913,314	0.02842%
Kentucky	1,258	80	1,338	94.02%	4,467,673	0.02816%
Louisiana	892	73	965	92.44%	4,648,794	0.01919%
Maine	432	32	464	93.10%	1,344,212	0.03214%
Maryland	1,272	123	1,395	91.18%	6,045,680	0.02104%
Massachusetts	1,448	131	1,579	91.70%	6,892,503	0.02101%
Michigan	2,398	195	2,593	92.48%	9,986,857	0.02401%
Minnesota	1,454	97	1,551	93.75%	5,639,632	0.02578%
Mississippi	620	45	665	93.23%	2,976,149	0.02083%
Missouri	1,691	109	1,800	93.94%	6,137,428	0.02755%
Montana	281	23	304	92.43%	1,068,778	0.02629%
Nebraska	476	35	511	93.15%	1,934,408	0.02461%
Nevada	765	45	810	94.44%	3,080,156	0.02484%
New Hampshire	369	23	392	94.13%	1,359,711	0.02714%
New Jersey	1,595	147	1,742	91.56%	8,882,190	0.01796%
New Mexico	516	51	567	91.01%	2,096,829	0.02461%
New York	3,725	356	4,081	91.28%	19,453,561	0.01915%
North Carolina	2,233	169	2,402	92.96%	10,488,084	0.02129%
North Dakota	211	27	238	88.66%	762,062	0.02769%
Ohio	3,374	220	3,594	93.88%	11,689,100	0.02886%
Oklahoma	1,229	74	1,303	94.32%	3,956,971	0.03106%
Oregon	1,259	90	1,349	93.33%	4,217,737	0.02985%
Pennsylvania	3,051	263	3,314	92.06%	12,801,989	0.02383%
Rhode Island	234	15	249	93.98%	1,059,361	0.02209%
South Carolina	1,151	70	1,221	94.27%	5,148,714	0.02236%
South Dakota	225	14	239	94.14%	884,659	0.02543%
Tennessee	1,949	129	2,078	93.79%	6,829,174	0.02854%
Texas	6,099	461	6,560	92.97%	28,995,881	0.02103%
Utah	969	71	1,040	93.17%	3,205,958	0.03022%
Vermont	156	16	172	90.70%	623,989	0.02500%
Virginia	2,119	155	2,274	93.18%	8,535,519	0.02483%
Washington	2,093	151	2,244	93.27%	7,614,893	0.02749%
West Virginia	552	28	580	95.17%	1,792,147	0.03080%
Wisconsin	1,380	113	1,493	92.43%	5,822,434	0.02370%
Wyoming	174	22	196	88.78%	578,759	0.03006%

PTSD Risk by State Weighted by Age and Gender in Ranked Order

The MHA Screening population is more likely to be young (ages 11-17) and to identify as female than the general population. Post-stratification weights were calculated and applied to the dataset for both gender and age to normalize the data to match the demographics of each state population.[8]

The below tables on the next two pages show the states ranked by the percentage of the state population screening positive for PTSD through the MHA Screening Program. Alaska had the highest percentage of the population screening positive for PTSD (N=473*, 0.065%), followed by Arkansas (N=1,099*, 0.036%), Maine (N=430*, 0.032%), Indiana (N=2,129*, 0.032%), and West Virginia (N=553*, 0.031%).

Rank	State	Weighted Count* of Positive PTSD Screens	Weighted Count* of Negative PTSD Screens	Weighted Total* Count PC-PTSD Screens	State Population Count	Weighted Percent of State Population Scoring Positive PTSD
1	Alaska	473.25	63.75	537	731,545	0.06469%
2	Arkansas	1099.39	71.61	1,171	3,017,804	0.03643%
3	Maine	430.44	33.56	464	1,344,212	0.03202%
4	Indiana	2129.47	195.53	2,325	6,732,219	0.03163%
5	West Virginia	552.71	27.29	580	1,792,147	0.03084%
6	Oklahoma	1219.84	83.16	1,303	3,956,971	0.03083%
7	Wyoming	173.50	22.50	196	578,759	0.02998%
8	Alabama	1467.44	190.56	1,658	4,903,185	0.02993%
9	Utah	954.77	85.23	1,040	3,205,958	0.02978%
10	Colorado	1710.27	156.73	1,867	5,758,736	0.02970%
11	Idaho	530.53	49.47	580	1,787,065	0.02969%
12	Oregon	1245.94	103.06	1,349	4,217,737	0.02954%
13	Delaware	279.70	22.30	302	973,764	0.02872%
14	Ohio	3357.16	236.84	3,594	11,689,100	0.02872%
15	Tennessee	1933.78	144.22	2,078	6,829,174	0.02832%
16	Kansas	819.24	63.76	883	2,913,314	0.02812%
17	Kentucky	1243.32	94.68	1,338	4,467,673	0.02783%
18	Arizona	2011.20	211.80	2,223	7,278,717	0.02763%
19	North Dakota	207.49	30.51	238	762,062	0.02723%
20	Washington	2073.10	170.90	2,244	7,614,893	0.02722%
21	Missouri	1667.73	132.27	1,800	6,137,428	0.02717%
22	Iowa	854.50	62.50	917	3,155,070	0.02708%
23	New Hampshire	362.48	29.52	392	1,359,711	0.02666%
24	Montana	274.65	29.35	304	1,068,778	0.02570%

[8]U.S. Census Bureau (2019). Population Estimates 2019. *U.S. Census Bureau QuickFacts*, https://www.census.gov/quickfacts/fact/table/US/PST045219

*Weights were determined for both gender and age using 2019 state population demographic data from the U.S. Census. One of the limitations of the U.S. Census demographic dataset is that it only provides "Male" and "Female" as options for individuals to identify their gender. Therefore, applying weights based on that data undercounts the percentage of the Screening population who identify with another gender. All individuals who identified as another gender in the MHA Screening data were assigned a weight of 1.

Rank	State	Weighted Count* of Positive PTSD Screens	Weighted Count* of Negative PTSD Screens	Weighted Total* Count PC-PTSD Screens	State Population Count	Weighted Percent of State Population Scoring Positive PTSD
25	Minnesota	1439.14	111.86	1,551	5,639,632	0.02552%
26	South Dakota	221.77	17.23	239	884,659	0.02507%
27	Vermont	155.33	16.67	172	623,989	0.02489%
28	Virginia	2108.24	165.76	2,274	8,535,519	0.02470%
29	Nebraska	474.61	36.39	511	1,934,408	0.02454%
30	Nevada	754.64	55.36	810	3,080,156	0.02450%
31	New Mexico	509.73	57.27	567	2,096,829	0.02431%
32	Michigan	2376.44	216.56	2,593	9,986,857	0.02380%
33	Pennsylvania	3029.11	284.89	3,314	12,801,989	0.02366%
34	Wisconsin	1353.99	139.01	1,493	5,822,434	0.02325%
35	Hawaii	328.98	31.02	360	1,415,872	0.02324%
36	District of Columbia	163.47	17.53	181	705,749	0.02316%
37	Connecticut	808.95	89.05	898	3,565,287	0.02269%
38	South Carolina	1146.97	74.03	1,221	5,148,714	0.02228%
39	Georgia	2337.65	203.35	2,541	10,617,423	0.02202%
40	Rhode Island	230.58	18.42	249	1,059,361	0.02177%
41	North Carolina	2227.00	175.00	2,402	10,488,084	0.02123%
42	Texas	6053.88	506.12	6,560	28,995,881	0.02088%
43	Maryland	1259.21	135.79	1,395	6,045,680	0.02083%
44	Massachusetts	1435.43	143.57	1,579	6,892,503	0.02083%
45	Illinois	2636.07	246.93	2,883	12,671,821	0.02080%
46	Florida	4419.84	372.16	4,792	21,477,737	0.02058%
47	Mississippi	610.17	54.83	665	2,976,149	0.02050%
48	California	7813.69	811.31	8,625	39,512,223	0.01978%
49	New York	3676.92	404.08	4,081	19,453,561	0.01890%
50	Louisiana	872.08	92.92	965	4,648,794	0.01876%
51	New Jersey	1579.62	162.38	1,742	8,882,190	0.01778%

*Weighted counts based on 2019 U.S. Census Gender and Age Demographics for each state.

County-Level PTSD Risk

The three counties in the U.S. with the highest number of individuals scoring positive for PTSD on the PC-PTSD from January 2020 to July 2021 were Los Angeles County, California (N=1,538), Maricopa County, Arizona (N=964), and Cook County, Illinois (N=770).

Counties were sorted based on the number of individuals scoring with PTSD. Most of the top 20 counties matched the 20 largest counties in the United States based on population size. However, Franklin County, Ohio; Sacramento County, California; Salt Lake County, Utah; Hillsborough County, Florida; and St. Louis County, Missouri ranked among the top counties with the most individuals screening at risk for PTSD, but are not among the 20 most populous counties in the U.S.

Among this list of large counties, we calculated population percentage as the percentage of individuals who scored at risk for PTSD on MHA Screening from 2020-2021 out of the overall county population. Of the most populous counties, St. Louis County, Missouri had the highest percentage of the population score positive for PTSD (0.02917%, N=290), followed by Franklin County, Ohio (0.02628%, N=346), Salt Lake County, Utah (0.02577%, N=299), Bexar County, Texas (0.02271%, N=455), and Maricopa County, Arizona (0.02149%, N=964).

Top 20 Large Counties with PTSD Risk

County Name	State Name	Count of Positive PTSD Screens	County Population Count	Percent of County Population Scoring Positive for PTSD
St. Louis	Missouri	290	994,205	0.02917%
Franklin	Ohio	346	1,316,756	0.02628%
Salt Lake	Utah	299	1,160,437	0.02577%
Bexar	Texas	455	2,003,554	0.02271%
Maricopa	Arizona	964	4,485,414	0.02149%
Tarrant	Texas	423	2,102,515	0.02012%
Clark	Nevada	453	2,266,715	0.01998%
Hillsborough	Florida	290	1,471,968	0.01970%
Sacramento	California	298	1,552,058	0.01920%
King	Washington	429	2,252,782	0.01904%
New York	New York	297	1,628,706	0.01824%
San Diego	California	586	3,338,330	0.01755%
Wayne	Michigan	304	1,749,343	0.01738%
Riverside	California	423	2,470,546	0.01712%
San Bernardino	California	348	2,180,085	0.01596%
Dallas	Texas	411	2,635,516	0.01559%
Los Angeles	California	1,538	10,039,107	0.01532%
Harris	Texas	713	4,713,325	0.01513%
Cook	Illinois	770	5,150,233	0.01495%
Orange	California	403	3,175,692	0.01269%

Top 20 Small and Mid-Size Counties with PTSD Risk

In addition to evaluating rates of PTSD among more populous counties in the U.S., MHA identified areas with the highest need for PTSD supports within small and mid-sized counties. The 20 small and mid-sized counties with the highest percentages of their populations scoring with symptoms of PTSD on the PC-PTSD through MHA Screening from 2020-2021 are identified below. To ensure that the analyses were not biased toward the smallest counties, we excluded all counties with a sample of individuals scoring positive for PTSD that were lower than the median.[*]

Benton County, Indiana had the highest percentage of the population score positive for PTSD (0.09145%, N=8), followed by Cass County, Iowa (0.07231%, N=7), Asotin County, Washington (0.06642%, N=15), Giles County, Virginia (0.06579%, N=11), and Red Willow County, Nebraska (0.06527%, N=7).

County Name	State Name	Count of Positive PTSD Screens	Count of Negative PTSD Screens	Total Count PC-PTSD Screens	Percentage of Positive PTSD	County Population Count	Percent of County Population Scoring Positive for PTSD
Benton	Indiana	8	0	8	100.00%	8,748	0.09145%
Cass	Iowa	7	0	7	100.00%	9,680	0.07231%
Asotin	Washington	15	0	15	100.00%	22,582	0.06642%
Giles	Virginia	11	0	11	100.00%	16,720	0.06579%
Red Willow	Nebraska	7	1	8	87.50%	10,724	0.06527%
Dearborn	Indiana	31	5	36	86.11%	49,458	0.06268%
Bourbon	Kentucky	12	1	13	92.31%	19,788	0.06064%
Rush	Indiana	10	0	10	100.00%	16,581	0.06031%
Stewart	Tennessee	8	1	9	88.89%	13,715	0.05833%
Red River	Texas	7	1	8	87.50%	12,023	0.05822%
Mason	Kentucky	8	0	8	100.00%	14,192	0.05637%
Fredericksburg City*	Virginia	16	0	16	100.00%	28,622	0.05590%
Clay	Arkansas	8	1	9	88.89%	14,551	0.05498%
Livingston	Missouri	8	0	8	100.00%	15,227	0.05254%
Clinton	Indiana	17	0	17	100.00%	32,399	0.05247%
Ashland	Wisconsin	8	0	8	100.00%	15,562	0.05141%
Coles	Illinois	26	2	28	92.86%	50,621	0.05136%
Johnson	Tennessee	9	0	9	100.00%	17,788	0.05060%
Unicoi	Tennessee	9	1	10	90.00%	17,883	0.05033%
Osage	Kansas	8	0	8	100.00%	15,949	0.05016%

***Fredericksburg City, Virginia is included in county-level analyses because it is an independent city.**

[*] The median count of individuals scoring positive for PTSD at the county level was 7.

Trauma Survivors

On each of the 10 mental health screening tools in the Online Screening Program, users are asked a series of optional demographic questions following the completion of the screening tool. Users are not required to answer these questions to receive the results of their screen. One of these questions asks, "Which of the following populations describes you? Select all that apply." The options respondents can select from are "Student," "LGBTQ+," "Trauma Survivor," "New or Expecting Mother," "Caregiver of Someone Living with Emotional or Physical Illness," "Veteran or Active Duty Military," and "Health Care Worker."

Trauma and COVID-19: Analysis of Trauma Survivors

Screening At Risk for Mental Health Conditions

Individuals who have experienced a prior traumatic event may experience long-lasting mental health concerns. Often individuals who identify as trauma survivors have received previous mental health treatment but may continue to experience mental health problems that lead them to search for additional supports for other conditions. When trauma survivors come to MHA Screening, they will often take multiple screens to try to understand what they are experiencing. To better understand which screens trauma survivors were most likely to take, we included all screens taken by people who reported being a trauma survivor.

People who identified as trauma survivors were most likely to take the PTSD screen followed by the psychosis screen and the alcohol or substance use screens. Fifty-seven percent of people who took a PTSD screen and identified as any special population were trauma survivors (N=49,300). The PTSD screen was followed by the psychosis screen (39%), and the alcohol or substance use screen (34%).

Screen	Number of Screens Taken by Users who Identified as Trauma Survivors	Total Number of Screens Taken by Users Who Identified as any Special Population*	Percentage of Trauma Survivors
PTSD	49,300	87,090	56.61%
Psychosis	55,652	144,075	38.63%
Alcohol or Substance Use	6,653	19,334	34.41%
Bipolar	84,898	266,493	31.86%
Eating Disorder	31,494	118,140	26.66%
Depression	105,909	527,731	20.07%
Anxiety	61,340	308,812	19.86%
Postpartum Depression	3,554	18,008	19.74%
Parent	2,150	13,071	16.45%
Youth	11,571	74,994	15.43%
Total Count	**412,521**	**1,577,748**	

*"Total Number of Screens Taken by Users Who Identified as any Special Population" represents the number of screens taken by users who answered the demographic question, "Which of the following populations describes you?"

Trauma survivors were also more likely to screen at risk for a mental health condition than the general population of screeners. Eighty-five percent (N=348,576) of trauma survivors screened positive or with moderate-to-severe symptoms of the mental health condition for which they screened. This was 7% higher than the general population of screeners during the same period (January 2020-July 2021, 77%).

Screen Result	Count	Percentage
Negative or Minimal-to-Mild	348,576	84.50%
Positive or Moderate-to-Severe	63,945	15.50%
Grand Total	**412,521**	**100.00%**

For the following demographic and state and county-level analyses, we limited the data to include only the first screen taken by each individual identifying as a trauma survivor. The following analysis is of data from 244,082 unique individuals who took any mental health screen on MHA Screening and identified as a trauma survivor in the U.S. from January 2020 to July 2021. For detailed information on data cleaning and methodology, see the Appendix.

Gender

Trauma survivors were slightly more likely to identify as female than the general population of screeners. Seventy-seven percent (N=184,009) of trauma survivors identified as female (compared to 73% in the general population of screeners), 18% identified as male, and 6% identified as another gender. Among the entire sample, 7% (N=17,124) identified as transgender.

Gender	Count	Percentage
Male	42,360	17.63%
Female	184,009	76.56%
Another gender	13,969	5.81%
Grand Total	**240,338**	**100.00%**

Race/Ethnicity

Sixty-three percent (N=150,116) of trauma survivors identified as white. Thirteen percent of respondents identified as Hispanic or Latino, 8% were Black or African American, and 7% identified as more than one race. Middle Eastern or North African was not included as an option under Race/Ethnicity until May 2021.

Race/Ethnicity	Count	Percentage
Asian or Pacific Islander	9,387	3.94%
Black or African American (non-Hispanic)	19,972	8.39%
Hispanic or Latino	31,050	13.04%
Middle Eastern or North African	631	0.26%
More than one of the above	16,983	7.13%
Native American or American Indian	4,580	1.92%
Other	5,399	2.27%
White (non-Hispanic)	150,116	63.04%
Grand Total	**238,118**	**100.00%**

Age

The MHA Screening population typically skews toward younger users, which is consistent with the age of onset of most mental health conditions. Younger individuals are also more likely to search for mental health resources and supports online when they first begin experiencing symptoms of a mental health condition. Among the general population of screeners in 2020-2021, most (43%) were ages 11-17. Among this sample of individuals on MHA Screening who identified as trauma survivors from 2020-2021, most were young adults ages 18-24 (32%, N=77,984), followed by youth ages 11-17 (27%, N=65,838), and adults ages 25-34 (21%, N=50,885).

Age	Count	Percentage
"11-17"	65,838	27.43%
"18-24"	77,984	32.49%
"25-34"	50,885	21.20%
"35-44"	24,098	10.04%
"45-54"	12,457	5.19%
"55-64"	6,422	2.68%
"65+"	2,354	0.98%
Grand Total	**240,038**	**100.00%**

Household Income

Fifty-three percent (N=108,466) of respondents who identified as trauma survivors reported a household income under $40,000.

Household Income	Count	Percentage
Less than $20,000	60,429	29.63%
$20,000 - $39,999	48,037	23.55%
$40,000 - $59,999	32,159	15.77%
$60,000 - $79,999	21,556	10.57%
$80,000 - $99,999	13,801	6.77%
$100,000 - $149,999	15,975	7.83%
$150,000+	12,008	5.89%
Grand Total	**203,965**	**100.00%**

Mental Health Care

Finally, most individuals who took a screen from 2020-2021 and identified as trauma survivors had received a prior mental health diagnosis and mental health care. Sixty-three percent (N=148,392) of trauma survivors had been diagnosed with a mental health condition in the past, and 65% (N=157,680) had received mental health treatment or supports for their mental health.

Are you currently, or have you ever been, diagnosed with a mental health condition by a professional?	Count	Percentage
No	87,335	37.05%
Yes	148,392	62.95%
Grand Total	**235,727**	**100.00%**

Have you ever received treatment/support for a mental health problem?	Count	Percentage
No	85,225	35.09%
Yes	157,680	64.91%
Grand Total	**242,905**	**100.00%**

Trauma Survivors by State

The three states with the highest number of people identifying as trauma survivors on MHA Screening from January 2020 to July 2021 were California (N=26,440), Texas (N=19,198), and Florida (N=13,509).

The percent of state population is the percentage of the overall state population that took a screen on MHA Screening from 2020-2021 and identified as a trauma survivor. Alaska had the highest number of trauma survivors in comparison to the overall state population (0.205%, N=1,503), followed by Oregon (0.110%, N=4,646), Maine (0.109%, N=1,469), Wyoming (0.108%, N=626), and Montana (0.102%, N=1,093).

Trauma Survivors by State in Alphabetical Order

State	Count of Trauma Survivors	State Population Count	Percent of State Population Identifying as a Trauma Survivor
Alabama	5,014	4,903,185	0.10226%
Alaska	1,503	731,545	0.20546%
Arizona	6,609	7,278,717	0.09080%
Arkansas	2,951	3,017,804	0.09779%
California	26,440	39,512,223	0.06692%
Colorado	5,801	5,758,736	0.10073%
Connecticut	2,728	3,565,287	0.07652%
Delaware	892	973,764	0.09160%
District of Columbia	646	705,749	0.09153%
Florida	13,509	21,477,737	0.06290%
Georgia	7,512	10,617,423	0.07075%
Hawaii	1,017	1,415,872	0.07183%
Idaho	1,727	1,787,065	0.09664%
Illinois	8,572	12,671,821	0.06765%
Indiana	6,709	6,732,219	0.09966%
Iowa	2,729	3,155,070	0.08650%
Kansas	2,630	2,913,314	0.09028%
Kentucky	4,052	4,467,673	0.09070%
Louisiana	2,636	4,648,794	0.05670%
Maine	1,469	1,344,212	0.10928%
Maryland	4,053	6,045,680	0.06704%
Massachusetts	5,073	6,892,503	0.07360%
Michigan	7,690	9,986,857	0.07700%
Minnesota	4,412	5,639,632	0.07823%
Mississippi	1,704	2,976,149	0.05726%

State	Count of Trauma Survivors	State Population Count	Percent of State Population Identifying as a Trauma Survivor
Missouri	5,093	6,137,428	0.08298%
Montana	1,093	1,068,778	0.10227%
Nebraska	1,567	1,934,408	0.08101%
Nevada	2,482	3,080,156	0.08058%
New Hampshire	1,290	1,359,711	0.09487%
New Jersey	5,161	8,882,190	0.05811%
New Mexico	1,626	2,096,829	0.07755%
New York	12,381	19,453,561	0.06364%
North Carolina	6,968	10,488,084	0.06644%
North Dakota	657	762,062	0.08621%
Ohio	9,792	11,689,100	0.08377%
Oklahoma	3,752	3,956,971	0.09482%
Oregon	4,646	4,217,737	0.11015%
Pennsylvania	9,259	12,801,989	0.07232%
Rhode Island	753	1,059,361	0.07108%
South Carolina	3,531	5,148,714	0.06858%
South Dakota	718	884,659	0.08116%
Tennessee	5,719	6,829,174	0.08374%
Texas	19,198	28,995,881	0.06621%
Utah	3,124	3,205,958	0.09744%
Vermont	595	623,989	0.09535%
Virginia	6,592	8,535,519	0.07723%
Washington	7,353	7,614,893	0.09656%
West Virginia	1,684	1,792,147	0.09397%
Wisconsin	4,597	5,822,434	0.07895%
Wyoming	626	578,759	0.10816%

Trauma Survivors by County

The three counties in the U.S. with the highest number of individuals identifying as trauma survivors on MHA Screening from January 2020 to July 2021 were Los Angeles County, California (N=5,416), Maricopa County, Arizona (N=3,194), and Cook County, Illinois (N=2,630).

Counties were sorted based on the number of individuals identifying as trauma survivors. Most of the top 20 counties matched the 20 largest counties in the U.S. based on population size. However, Franklin County, Ohio; Salt Lake County, Utah; Travis County, Texas; and Sacramento County, California were each within the top 20 counties in the U.S. with the largest number of people identifying as trauma survivors, but are not among the 20 most populous counties in the U.S.

Among this list of large counties, we calculated population percentage as the number of people who took a screen and identified as a trauma survivor on MHA Screening from 2020-2021 out of the overall county population. Salt Lake County, Utah had the highest percentage of the population identifying as trauma survivors of the most populous counties (0.08549%, N=992), followed by Franklin County, Ohio (0.08544%, N=1,125), Travis County, Texas (0.07755%, N=988), King County, Washington (0.07204%, N=1,623), and Maricopa County, Arizona (0.07121%, N=3,194).

Trauma Survivors in Top 20 Large Counties

County Name	State Name	Count of Trauma Survivors	County Population Count	Percent of County Population Identifying as Trauma Survivors
Salt Lake	Utah	992	1,160,437	0.08549%
Franklin	Ohio	1,125	1,316,756	0.08544%
Travis	Texas	988	1,273,954	0.07755%
King	Washington	1,623	2,252,782	0.07204%
Maricopa	Arizona	3,194	4,485,414	0.07121%
Bexar	Texas	1,402	2,003,554	0.06998%
New York	New York	1,075	1,628,706	0.06600%
Clark	Nevada	1,476	2,266,715	0.06512%
Tarrant	Texas	1,343	2,102,515	0.06388%
Sacramento	California	972	1,552,058	0.06263%
Wayne	Michigan	1,030	1,749,343	0.05888%
San Diego	California	1,922	3,338,330	0.05757%
Los Angeles	California	5,416	10,039,107	0.05395%
San Bernardino	California	1,118	2,180,085	0.05128%
Cook	Illinois	2,630	5,150,233	0.05107%
Dallas	Texas	1,341	2,635,516	0.05088%
Riverside	California	1,248	2,470,546	0.05052%
Harris	Texas	2,311	4,713,325	0.04903%
Orange	California	1,549	3,175,692	0.04878%
Kings	New York	1,228	2,559,903	0.04797%

Trauma Survivors in Top 20 Small and Mid-Size Counties

In addition to evaluating the number of trauma survivors among more populous counties in the U.S., MHA identified areas with the highest need for mental health supports within small and mid-sized counties. The 20 small and mid-sized counties with the highest percentages of their populations identifying as trauma survivors through MHA Screening from 2020-2021 are identified below. To ensure that the analyses were not biased toward the smallest counties, we excluded all counties with a sample of individuals lower than the median.[*]

Rowan County, Kentucky had the highest percentage of the population identifying as trauma survivors of small and mid-sized counties on MHA Screening (0.14585%, N=36), followed by Winchester City, Virginia (0.14175%, N=41), Asotin County, Washington (0.13728%, N=31), Washington County, Tennessee (0.13681%, N=177), and Unicoi County, Tennessee (0.13421%, N=24).

County Name	State Name	Count of Trauma Survivors	County Population Count	Percent of County Population Identifying as Trauma Survivors
Rowan	Kentucky	36	24,683	0.14585%
Winchester City*	Virginia	41	28,925	0.14175%
Asotin	Washington	31	22,582	0.13728%
Washington	Tennessee	177	129,375	0.13681%
Unicoi	Tennessee	24	17,883	0.13421%
Cass	Iowa	17	12,836	0.13244%
Dearborn	Indiana	65	49,458	0.13142%
Bristol City*	Virginia	22	16,762	0.13125%
Ripley	Indiana	42	32,625	0.12874%
Douglas	Kansas	155	122,259	0.12678%
Smyth	Virginia	38	30,104	0.12623%
Sullivan	Tennessee	199	160,615	0.12390%
Missoula	Montana	148	119,600	0.12375%
Hawkins	Tennessee	70	56,786	0.12327%
Madison	Idaho	49	39,907	0.12279%
Staunton	Virginia	43	35,718	0.12039%
Craig	Oklahoma	17	14,142	0.12021%
Athens	Ohio	78	65,327	0.11940%
Lane	Oregon	454	382,067	0.11883%
Humboldt	California	160	135,558	0.11803%

***Winchester City and Bristol City, Virginia are included in county-level analyses because they are independent cities.**

[*] The median count of individuals identifying as trauma survivors at the county level was 17.

Opportunities for Policy, Programs, and Research

Releasing this report and the publicly available dashboard (at the end of 2021) will help communities attend to mental health as a regular and important part of a state or local public health strategy.

The research, policy, and program opportunities outlined in this brief were developed from a meeting with key stakeholders, including federal partners, researchers, providers and industry partners, mental health advocacy organizations, and school advocates.

This data will help communities implement the following federal, state, and local strategies to better support individuals at risk for PTSD and other mental health concerns related to trauma:

- Understand and anticipate the compounding problems that result from trauma and mental illness;
- Evaluate and close the resource gaps on those most impacted by COVID-19;
- Identify where individuals are currently in need of mental health supports and target interventions within communities;
- Coordinate data and generate a better understanding of mental health needs;
- Identify and provide support to programs and resources that already exist in communities;
- Generate new resources to address unmet need;
- Create systemic policy change to prevent future mental health concerns; and
- Move beyond an issues-based approach to create an environment that promotes mental wellness at the population level.

Understanding the Compounding Impact of Trauma and Mental Illness

A trauma-informed approach to mental health care requires evaluation of how social determinants of health and adverse childhood experiences (ACEs) impact mental health. Childhood trauma and multiple ACEs are strong predictors of both early onset of mental illness and additional barriers to recovery from mental illness.[9] Sixty-one percent of adults have experienced at least one adverse childhood experience in their lifetime, and 16% have experienced four or more adverse childhood experiences. Prior to 2020, 45% of children reported experiencing at least one ACE. Individuals who experience several ACEs are more likely to have poor outcomes in adulthood and are at increased risk of mental health problems, including depression and PTSD.[10] Poor outcomes are worse for communities who have experienced historical discrimination, such as Native American[11] or LGBTQ+ community members.[12] Two of the five states, Arkansas and Montana, identified in 2018 as being at historical high risk for ACEs are also in the top five states at greatest risk of PTSD and trauma, indicating they are at high risk for the intersection of trauma and mental health.[13]

[9] https://www.samhsa.gov/sites/default/files/programs_campaigns/childrens_mental_health/samhsa-smi-and-trauma-lit-review-and-issue-brief.docx

[10] Centers for Disease Control and Prevention (CDC) (2021). Preventing adverse childhood experiences. *CDC Division of Violence Prevention,* https://www.cdc.gov/violenceprevention/aces/fastfact.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fviolenceprevention%2Facestudy%2Ffastfact.html

[11] Brockie TN, Dana-Sacco G, Wallen GR, Wilcox HC & Campbell JC. (2015). The relationship of adverse childhood experiences to PTSD, depression, poly-drug use and suicide attempt in reservation-based Native American adolescents and young adults. *American Journal of Community Psychology,* 2015; 55(3-4): 411-421. doi: 10.1007/s10464-015-9721-3. https://pubmed.ncbi.nlm.nih.gov/25893815/

[12] Smith, BC, Armelie, AP, Boarts, JM, Brazil, M & Delahanty, DL. (2016). PTSD, depression, and substance use in relation to suicidality risk among traumatized minority lesbian, gay and bisexual youth. *Archives of Suicide Research,* 2016; 20(1):80-93. Doi: 10.1080/13811118.2015.1004484. https://pubmed.ncbi.nlm.nih.gov/26756389/

[13] Sacks, V & Murphey, D (February 2018). The prevalence of adverse childhood experiences, nationally, by state, and by race or ethnicity. *Child Trends.* https://www.childtrends.org/publications/prevalence-adverse-childhood-experiences-nationally-state-race-ethnicity

PTSD and complex PTSD consist of changes to mood, threat perception, perceptual abnormalities, changes in cognition, and physiological reactions that are not completely understood. For example, individuals with PTSD report symptoms that look like paranoia in psychosis or intrusive thoughts and behaviors of obsessive-compulsive disorder. Comparing symptoms across multiple mental health screening tools can provide insight into the development and progression of PTSD that will help individuals gain insight into emotional, cognitive, and perceptual changes. Evaluating results from individuals who take the PTSD screen and one or more other screening tools, such as the youth, psychosis, depression, or bipolar screen, provides insight into the complexity of trauma-related mental health challenges. This research can help us understand how clusters of symptoms occur across an entire spectrum of experiences, as opposed to within diagnoses. Evaluation of symptom clusters across diagnoses is more in line with the future of brain research like the National Institute of Mental Health's Research Domain Criteria (RDoC). Further, evaluating symptoms across age can help integrate a life span development understanding of mental illnesses among youth.

Closing Resource Gaps for Individuals Most Affected by Trauma Following COVID-19

When a traumatic event occurs in a community, the mental health consequences are hard to quantify, resulting in challenges in developing appropriate responses for care. Having timely data available can allow local communities the ability to evaluate baseline rates of various mental health conditions before and after traumatic events. The changes in rates of number and severity of various mental health challenges provide insight into the kinds of resources that need to be developed for each community. Looking at geographical areas surrounding communities can allow policymakers, health officials, and community leaders to better evaluate how much the impact of an event affects people's mental health over time.

MHA Screening collects voluntary demographic data including age, income, and identification as a special population, such as students and health care workers. Evaluating responses based on these voluntary demographics can provide insight into how trauma affects different members of a community and can support targeted intervention for undertreated populations. Location-based data provides an opportunity to explore needs in local communities as well as to implement and test local-level interventions to reduce the impact of trauma. Analysis of how local data compares to data from neighboring communities or compares to national data can highlight hotspots for trauma, grief, or new mental health challenges related to COVID-19, especially among populations that were affected most severely, like health care workers, and in areas that had more severe outbreaks. As this data continues to be collected and released, local leaders, policymakers, public health officials, and other stakeholders can have greater real-time information on imminent need within their communities that improves targeted treatment, support, and coordinated efforts across communities with diverse needs. Making the data publicly available allows local health providers and advocates to work with health administrators and government agencies to interpret and inform more effective and targeted interventions, programming, and policy change.

Local counties can also evaluate trauma, depression, and anxiety among various populations to understand the impact of COVID-19 and allocate resources where they are needed most. Data analysis from our population is best suited to identify need in early identification and intervention of mental health conditions. Sixty percent of screeners reporting trauma are under 25 years of age, and many are not currently in treatment. Nearly 30% of individuals who already self-identify as trauma survivors on MHA Screening are younger than 18 years old. Allocation of resources should include whole-family care, including support to new and expecting parents and school-based supports. Generating additional mental health resources directed toward children and adolescents in sites where they can access them, like in schools, is especially important following a nationwide traumatic event like COVID-19. Even prior to the COVID-19 pandemic, unexpected death was identified as a public health concern. U.S. population-based studies have shown that unexpected deaths are associated with increased incidence of several mental health conditions across the lifespan, including PTSD and depression.[14] One in 500 Americans have died from COVID-19,[15,16] and over 130,000 children in the U.S. lost a primary or secondary caregiver to COVID-19 in the first 14 months of the pandemic.[17] Further, American Indian or Alaska Native, Hispanic or Latino, and Black individuals are all more than two times more likely to die from COVID-19 than white individuals.[18] As the COVID-19 pandemic continues, there is an ever-increasing need for additional supports to prevent the development of future mental health conditions following the experience of trauma, especially for BIPOC individuals and families who have been disproportionately impacted.

[14] Keyes, KM, Pratt, C, Galea, S, McLaughlin, KA, Koenen, KC & Shear, MK. (2014). The burden of loss: Unexpected death of a loved one and psychiatric disorders across the life course in a national study. *American Journal of Psychiatry,* 2014; 171(8):864-871. Doi: https://dx.doi.org/10.1176%2Fappi.ajp.2014.13081132

[15] Keating, D, Johnson, A & Ulmanu, M. (September 15, 2021). The pandemic marks another grim milestone: 1 in 500 Americans have died of COVID-19. *The Washington Post,* 15, Sep. 2021, *https://www.washingtonpost.com/health/interactive/2021/1-in-500-covid-deaths/?itid=hp-top-table-main*

[16] Centers for Disease Control and Prevention (CDC). COVID-19 Mortality Overview. *National Center for Health Statistics.* Retrieved September 16, 2021 from https://www.cdc.gov/nchs/covid19/mortality-overview.htm

[17] Hillis,SD, Unwin,HJT, Chen, Y, Cluver, L, Sherr, L, Goldman, PS et al. Global minimum estimates of children affected by COVID-19-associated orphanhood and deaths of caregivers: a modelling study. *The Lancet,* July 2021; 398(10298):391-402. https://doi.org/10.1016/S0140-6736(21)01253-8

[18] Centers for Disease Control and Prevention (CDC) (September 2021). Risk for COVID-19 infection, hospitalization, and death by race/ethnicity. *CDC COVID-19 Data and Surveillance.* Retrieved September 16, 2021 from https://www.cdc.gov/coronavirus/2019-ncov/covid-data/investigations-discovery/hospitalization-death-by-race-ethnicity.html

SCHOOLS IN CRISIS

Twenty-seven percent of individuals who took the PTSD screen from 2020-2021 and 28% of people who identified as trauma survivors on MHA Screening from 2020-2021 were youth ages 11-17. The data findings are consistent with research on the onset of mental health conditions. Fifty percent of individuals will develop a diagnosable mental health condition in their lifetime. Fifty percent of those with a diagnosable mental health condition will develop symptoms during puberty.[2] Increasing school mental health funding and programs is the best way to catch children where they are and ensure families have the support they need to address mental health concerns before problems worsen.

The COVID-19 pandemic is exacerbating the need to respond to student mental health. The amount of stress students face, the reduced face-to-face contact in schools, the loss of family members and caregivers, and risk factors associated with home conflict (especially for LGBTQ+ youth or youth in poverty), are examples of compounding problems that may result in mental health problems for students due to COVID-19 alone.

School districts throughout the U.S. are severely underfunded and lack the resources and capacity to screen their students for mental health conditions or track mental health data over time. The available data from MHA Screening will help identify hotspots of minimum risk in school districts throughout the country and disseminate targeted interventions to promote student mental health. There is not sufficient federal funding for local education agencies to meet the mental health needs of students. Stakeholders can use these data to triage care to the communities with the most severe risk. Triaging care in this way is only a first step. To create healthier communities, schools need long-term financial support to build up sustained and sufficient school infrastructure. This infrastructure should include, at minimum, implementing comprehensive mental health education, increasing the number of mental health providers in schools, identifying processes and supports for screening and treating students, and reducing the gap in care when students transition from school to college and college to the workforce.

MHA Screening data serves to support more robust targeted funding to implement mental health supports within schools, create and maintain additional partnerships between schools and community organizations, and tailor programming and support based on the needs indicated by the data. MHA provides additional support for schools to increase mental health screening and education as a holistic approach to improving youth mental health.

Publicly Available Data for Earlier Intervention

Past research on the onset and treatment of mental illnesses reveals that half of mental health challenges begin by the time a person is 14 years old,[19] and individuals often experience a long period of untreated mental illness. Most available national-level data generally have a two-year delay for release or are only available from health care systems when an individual initiates care. At the county level, many counties lack access to consistently and regularly collected data on the prevalence of mental health conditions. Additionally, most counties do not have access to data before individuals enter treatment. This lack of data makes comparison across counties in the country nearly impossible, resulting in a substantial barrier to investing in meaningful prevention and early intervention response.

[19] Kessler RC, Angermeyer M, Anthony JC, et al. (2007). Lifetime prevalence and age-of-onset distributions of mental disorders in the World Health Organization's World Mental Health Survey Initiative. *World Psychiatry: official journal of the World Psychiatric Association (WPA),* 6(3): 168–76. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2174588/

Examples of immediate program opportunities using MHA Screening data include modeling our work from the National Drug Early Warning System (NDEWS) and implementation of the new 988 legislation. The (NDEWS) was developed by the National Institute on Drug Abuse (NIDA) in 2014 to track early signs of potential drug epidemics across the country. MHA Screening data can be used in the same way the NDEWS uses real-time data to identify geographic regions across the U.S. with higher risk of substance use in their HotSpots Reports and long-term local development through their Site Reports. Collaborating with researchers, MHA can track changes occurring at a local level and advocate for, or search for funding announcements that can reduce disparities quickly. Another example of immediate utilization of MHA Screening data is to support 988 implementation. In October 2020, Congress passed the National Suicide Hotline Designation Act, which established a three-digit phone number (988) for users to call during a mental health crisis. By calling 988, users will be linked to a network of mental health crisis supports as opposed to 911. Implementation of 988 requires each state to submit its own legislation to fund and implement 988 infrastructure. MHA data can be used to identify which states have the highest risk for crisis, including trauma, severe depression, and suicide. Our data can help prioritize which states should immediately pass legislation funding 988 implementations to ensure local crisis response teams have the capacity to meet the demand.

Addressing Systemic Barriers and Unmet Need for Mental Health Supports

Individuals experiencing mental health disparities because of systemic racism or intergenerational poverty are more likely to be exposed to serious traumatic events, including losing a parent (to death or incarceration), experiencing child abuse, community violence, early exposure to substance use, or witnessing a murder. Future research with MHA data includes comparing trauma and PTSD data with other available data that impacts trauma such as incarceration rates, low income, food deserts, community violence, under-resourced schools, underfunded neighborhoods, and other intersecting social determinants of health to identify which communities are at highest risk and highest need for mental health resources.

Data on communities with higher numbers of individuals at risk of experiencing PTSD or increases in other mental health conditions related to trauma can also be used to identify hotspots in the U.S where mental health infrastructure does not currently exist or is not sufficient. Combining MHA Screening data with the Substance Use and Mental Health Services Administration (SAMHSA) Treatment Locator or provider data through the Health Resources and Services Administration (HRSA) can uncover areas with the largest gaps in care. Although the presence of mental health providers and facilities are not entirely indicative of access to care, overlaying mental health infrastructure with data on individuals in need can give a baseline view of which areas of the country are in the greatest need of immediate resources and investment. Even where some mental health infrastructure exists, these data can be used to understand where greater investment is needed or where opportunities exist for greater collaboration at the federal, state, and local levels to fill gaps in programming or mental health supports.

Combining the data on social determinants of mental health, risk as measured by MHA Screening, and service utilization can allow stakeholders to explore systemic barriers to care and direct federal, state, and local investments toward more culturally appropriate, representative, and responsive care and support. Understanding where the greatest needs are in a community, or who is currently being served and who is not, can help community leaders identify where more resources need to be generated or where resources need to be allocated more equitably. It can also help leaders identify informal or previously underfunded providers, organizations, or other assets that already exist in their communities and scale them to serve the need that exists. At a minimum, evaluation and advocacy to implement evidence-based practices – such as integrated mental health and substance use treatment, peer support services, telehealth, and collaborative care within the private mental health system – will support increasing severely-needed access to mental health care for all.

Coordinated Intervention and Learning

Aligning the MHA Screening dataset with existing national surveys or health care data can also create opportunities for data coordination to generate deeper and more responsive learning and collaboration to respond to trauma throughout the country. Data from MHA Screening can be included as an additional measure within models using multiple sources to predict true rates of mental health conditions in the community so that health officials, policymakers, and other stakeholders are able to make decisions to provide comprehensive care, which includes timely responses to risks of suicide in their communities.

Several national surveys, such as SAMHSA's National Survey on Drug Use and Health (NSDUH) and the CDC's Behavioral Risk Factor Surveillance System (BRFSS), collect data on rates of adverse childhood experiences and mental health conditions among different samples. The Healthcare Cost and Utilization Project (HCUP) includes longitudinal hospital care data in the U.S. Combining the location-based data from MHA Screening with these other existing national datasets can deepen understanding of both the risks of various mental health conditions among different populations (e.g., between individuals who are searching for mental health resources and supports online, and those who are surveyed through a general population sample), as well as how individuals are seeking and utilizing mental health-related treatment. Using this data, researchers can better understand the factors that may lead individuals at highest risk for PTSD and other mental health conditions following trauma to seek help and how they compare to the general population.

The MHA dataset can also provide insight into the gap between individuals seeking information and resources online and the connection to services and supports. MHA Screening data can be combined with datasets from providers such as those in the Mental Health Research Network to better understand who is being served, what the gaps are between help-seeking and connection to services, and where we are missing individuals searching for help with initial mental health concerns who may later reach levels of severity that need immediate support.

Responsibility for Systemic Policy Change

The mental health care infrastructure has been chronically underfunded for centuries. Lack of funding and lack of coordinated responses results in a system that does not meet the needs of individuals and families who have mental illnesses. Families in our system are left without supports for mental health problems that result in the increased use of crisis services, interaction with the criminal legal system, homelessness, disruptions or termination in education, loss of employment, and – in the case of suicide – loss of lives.

The COVID-19 pandemic highlighted the disparity in funding to mental health care at the same time it exacerbated the need for increased support. The American Rescue Plan Act Funds provided much-needed funding for the mental health system to respond to increased demand for treatment and trauma response. In order to implement an adequate trauma-informed response to COVID-19, our system must ensure that funding granted as a result of the COVID-19 pandemic is ongoing and sustained to ensure long-term care following this health crisis, rather than a one-time infusion of resources. Additionally, the allocation of funding should be focused not just on treatment but also on prevention, and early intervention supports known to identify and treat trauma early, including early childhood development programs, childcare and school-based mental health care, mental health education and screening in schools, and workforce development funding.

Although one in five individuals struggles with a diagnosable mental health condition, mental health impacts all individuals in their personal lives and in their communities. Data has the power to support early intervention, increased learning in research and practice, and coordinated care in communities and schools. However, we cannot accomplish these aims without systemic and material policy change. **For our data to be meaningful, it must result in legislation, regulation, and policy implementation that funnels federal, state, and local funding and guidance to increase quality and responsive mental health care for youth, adults, and families.**

This policy agenda can be accomplished by arming researchers, advocates, providers, administrators, and policymakers with data for meaningful, targeted policy. Furthermore, additional data on demographics and location provides the opportunity and responsibility to explore the intersectional impact of mental health and poverty, trauma, environmental inequities, community development and connectedness, discrimination, racism, and other social determinants of health. With this greater understanding, stakeholders can better invest in working with communities to eliminate harm, promote wellness, and create environments that allow people to thrive.

Appendix

Methodology

MHA did not ask for any identifiable personal information as part of MHA Screening. All identifiable information provided by screeners in question responses, including email addresses, phone numbers, home addresses, and names, were immediately removed from the dataset. To ensure that duplicate users were not included in the analyses, only the first recorded screening result from each user's IP address was included in the dataset, and all additional results were removed. As a result, each count in these analyses represents one individual person who took either took a PTSD screen or identified as a trauma survivor. While most individuals access MHA Screening organically, MHA has 200 affiliate organizations and multiple partner organizations who often refer users to the MHA Screening Program. To reduce oversampling in areas where these organizations are located, data referred from affiliates and partners were removed from the dataset. Data were only included in the final set if it was referred from search engines (including Google, Bing, and Yahoo, among others), from the MHA National main website, or from national social media platforms (including Instagram, Twitter, Reddit, and YouTube). The final dataset for PTSD after cleaning contained PC-PTSD screening results from 225,800 individuals. The final dataset for trauma survivors contained screening results across all 10 screening tools from 473,440 individuals identifying as trauma survivors.

We conducted demographic analyses and state-level analyses using only results from individuals who had reported living in the U.S. on the state demographic question, in which users select the state they live in, "I live outside the U.S.," or "I live in a U.S. territory." The sample size of users who took a PC-PTSD screen from 2020-2021 and reported their state on this question was 84,044, and the sample size of users who took a screen and identified as a trauma survivor from 2020-2021 and reported their state was 244,082. U.S. Census 2019 state resident population totals[20] were used to calculate the percentage of each state's population screening with PTSD or identifying as a trauma survivor. We conducted county-level analyses using results from the ZIP code demographic question, in which users can type in their ZIP code. ZIP codes were then consolidated into counties on Tableau, using an online U.S. ZIP code database.[21] For county-level analyses, additional data cleaning was performed to ensure accurate counts. In some cases, users will enter their ZIP code but will not report their state or will report a state that does not match the ZIP code they entered. Where a user's response for state did not match the ZIP code they provided in the demographic questions, or they did not answer the state demographic question, we verified the user's location at the time of taking a screen with their IP address. U.S. Census 2019 county resident population totals[22] and or a sum of the 2019 American Community Survey population totals by ZIP code[23] were used to calculate the percentage of each county's population screening with PTSD or identifying as a trauma survivor. For a conservative estimate, if the U.S. Census county population total differed from the sum of American Community Survey population totals by each ZIP code within the county, we used the larger of the two figures for county population.

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[20] U.S. Census Bureau (2019). Annual estimates of the resident population for the United States, regions, states, and Puerto Rico: April 1, 2010, to July 1, 2019. *U.S. Census Bureau.* Retrieved from https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-total.html
*The median count of individuals reporting frequent thoughts of suicide and self-harm of all counties within the U.S. was seven.

[21] SimpleMaps (2021). U.S. zip codes database. Retrieved from https://simplemaps.com/data/us-zips

[22] U.S. Census Bureau (2019). Annual estimates of the resident population for counties: April 1, 2010 to July 1, 2019. *U.S. Census Bureau.* Retrieved from https://www.census.gov/data/datasets/time-series/demo/popest/2010s-counties-total.html#par_textimage_70769902

[23] U.S. Census Bureau; American Community Survey, 2019 American Community Survey 5-Year Estimates Detailed Tables, Table B01003. Retrieved from www.data.census.gov.

Post-stratification weights

At the state level, we calculated post-stratification weights to normalize the gender and age demographics based on 2019 state population demographics. Weights were applied to the data using a manual iterative process, beginning with age. Due to limited sample sizes at the county level, we did not apply post-stratification weights to the county-level data.

User Privacy

MHA works to ensure that no one individual is identifiable from information within this dataset. These analyses did not include any demographic or other potentially identifiable information. As noted above, the final dataset only included counties if there were more than seven individuals (the median count of the sample) in the county scoring positive for PTSD on the PC-PTSD, or more than 17 individuals (the median count of the sample) in the county identifying as trauma survivors.