2021 STATE OF MENTAL HEALTH & MENTAL HEALTHCARE

A LOOK AT MENTAL HEALTH TREATMENT IN 2021 AND THE IMPACT OF MEASUREMENT-BASED CARE

Presented by Blueprint

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Introduction

We're in the midst of a **mental health crisis.**

According to a study conducted by the National Alliance on Mental Illness, more than 40 million Americans – 1 in 5 adults – have a mental health condition.

Many of those millions are seeking mental health treatment, and we sought out to examine part of that population more closely.

The content below takes a close look at thousands of patients currently seeking mental health treatment – and the impact that measurement-based care has had on their progress.

We are excited to have consolidated this unique data and share it in Blueprint's first annual State of Mental Health.

Background

Blueprint is a platform used by mental health practitioners to automatically gather patient data, measure patient outcomes, and get insights at the point of care to make more informed treatment decisions.

This is partially done through the use of validated outcome measures. Outcome measures are tools that evaluate changes in mental health by capturing metrics across multiple areas of patient functioning, symptoms, and treatment experiences at baseline and after treatment has begun.

Outcome measures are administered on a regular cadence and must:

- Accurately and consistently capture a particular outcome
- Be sensitive to change, and
- Be comparable across specific populations (e.g., adolescents), types of treatment (e.g., cognitive behavioral therapy), and treatment settings (e.g., an intense outpatient treatment).

Blueprint uses hundreds of outcome measures that can capture clinician, patient, and/or third-party perspectives. There are outcome measures related to changes in symptoms for specific diagnoses (for example, the Patient Health Questionnaire 9 (PHQ-9) for depression), outcome measures not tied to a specific diagnosis (like the Pediatric Symptom Checklist), and treatment specific measures (for example, the Cognitive Fusion Questionnaire (CFQ) for Acceptance and Commitment Therapy (ACT)).

Background

The reason we preface with this is because much of the data that makes up this report is collected via anonymized outcome measures and similar methods.

It's also worth noting that because Blueprint collects assessments from people already receiving treatment for a mental health condition, the results may be different than a study conducted with a sample size of the general population. As a result, some of the data will be nuanced and the explanations may mention the use of assessments.

For example, instead of saying that X percentage of patients were diagnosed with depression, we'll say that X percentage of patients using the Blueprint platform were administered the PHQ-9, a validated outcome measure that screens for symptoms of depression.

Tracking patient progress with outcome measures is a well-established and respected precept of high-quality mental healthcare.

With that, let's dive into the data!

Most prevalent positive mental health screens in the Blueprint population

Among the population of people seeking mental healthcare, what clinical domains had the most positive screens?

When a patient is enrolled onto Blueprint by their clinician, they take the Blueprint Diagnostic Screener, or the BPDS, which uses 25 questions to screen for 15 different clinical domains relevant to mental health and wellness. While this is not an official diagnosis, which requires a mental health professional, we are able to use this population data to confirm what disorder a patient may be screening positively for, and use this information to then assign the appropriate follow-up outcomes.

The table below shows the clinical domains with the most positive screens among the Blueprint population, via the use of our Blueprint Diagnostic Screener.

Clinical Domain	2020	2021
Anxiety	56%	65%
Depression	47%	59%
Anger Management	29%	37%
Sleep Problems	28%	33%
Somatic Symptoms	23%	28%
Obsessive-Compulsive Disorder	21%	28%
Bipolar Disorder	17%	21%
Substance Abuse	11%	20%
Dissociation	11%	16%

*NOTE: DUE TO PLATFORM UPDATES, THE NUMBERS ABOVE ARE NOT COMPARABLE YEAR OVER YEAR

Most prevalent positive mental health screens in the Blueprint population

Notably, the rank order year-over-year didn't change – with Anxiety remaining the most commonly-screened for mental health disorder in both 2020 and 2021.

By far, the two most commonly screened for mental health disorders are Anxiety and Depression.

Of all of the patients using Blueprint as a part of their mental health treatment, 65 percent screened positively for Anxiety, and 59 percent screened positively for Depression in 2021.

> **"Of all the patients using Blueprint as a part of their mental health treatment, 65 percent screened positively for Anxiety, and 59 percent screened positively for Depression."**

According to the Anxiety & Depression Association of America, Generalized Anxiety Disorder and Major Depressive Disorder affect 3.1 and 6.7 percent of the U.S. adult population, respectively. However, only 43.2 percent and 61.3 percent of those groups are seeking treatment.

While Blueprint's findings are not necessarily surprising, they do offer a look at how prevalent anxiety and depression are within mental healthcare.

Most prevalent positive mental health screens in the Blueprint population

Methodology

Quality mental health care starts with an accurate understanding of each patients' symptoms and experiences.

Unfortunately, the fact of the matter is that landing on an accurate diagnosis can be difficult. This is especially the case when initial evaluations rely solely on verbal reports and a clinical interview.

That's because while many people are comfortable disclosing important health information to their clinician, there are still many who are not. Even if clinicians are able to ask the right questions to screen for the range of mental health disorders, some patients aren't comfortable being that forthcoming early on in treatment.

While it's not the sole solution, a first step in the right direction is the implementation of ubiquitous screening measures for people seeking mental health treatment.

When a patient is enrolled onto Blueprint by their clinician, they take the Blueprint Diagnostic Screener, or the BPDS, which uses 25 questions to screen for 15 different diagnostic domains relevant to mental health and wellness. While this is not an official diagnosis, which requires a mental health professional, we are able to use this population data to confirm what disorder a patient may be screening positively for, and use this information to then assign the appropriate follow-up outcome measures.

Biggest stressors in 2021

What topics were on the minds of mental health patients in the past year?

To find out, we analyzed more than 50,000 anonymized patient journal entries and, based on predetermined keyword groups, found the topics that were most predominantly featured.

Coming in on top for both 2020 and 2021 were topics related to anxiety, worry, and burnout.

2020	2021
1. Anxiety/Worry/Burnout	1. Anxiety/Worry/Burnout
2. Eating Disorder/Bingeing	2. Eating Disorders/Bingeing
3. Relationships/Friends	3. Relationships/Friends
4. Sadness/Depression	4. Sadness/Depression
5. Suicide/Self-harm	5. Isolation/Loneliness
6. Isolation/Loneliness	6. Addiction/Substance Abuse
7. Covid-19	7. Suicide-Self-Harm
8. Addiction/Substance Abuse	8. Covid-19

Change from 2020 to 2021

However, while anxiety and stress were still the most commonly mentioned stressors in 2021, there was a 27.2 percent decrease from 2020 to 2021 in frequency of anxiety and worry-related terms.

The biggest increase from 2020 to 2021 was for terms related to substance abuse and addiction, with a 69.2 percent increase in frequency year-over-year. In 2021, 3.7 percent of journal entries contained a mention of addiction or substance abuse.

Biggest stressors in 2021

Covid-19 saw the biggest decrease in mentions year over year, with a 37.7 percent decrease from 2020 to 2021.

Stressor	2020	2021
Sadness/Depression	7.7%	9%
Anxiety/Worry/Burnout	30.7%	22.4%
Relationship/Friends	9%	9.4%
Isolation/Loneliness	2.9%	4.1%
Suicide/Self-Harm	4.7%	3.5%
Eating Disorder/Bingeing	9.7%	10.4%
Covid-19	2.5%	1.6%
Addiction/Substance Abuse	2.2%	3.7%

Methodology:

To determine the above, the Blueprint team created keyword groups related to each of the above topics. Blueprint then used anonymized journal entries from 2020 and 2021 and to find the frequency of each word in a respective keyword group and the percent change in frequency from 2020 to 2021.

The first table refers to the most frequently used keywords groups to the least frequently used. The second table refers to the frequency in which terms were mentioned in both 2020 to 2021.

Safety Nets Triggered in 2021

As mentioned above, suicide and self-harm were mentioned in more than 3 percent of all of the journal entries analyzed, painting a sobering picture about the state of mental health and depression.

However, what's even more notable is the percentage of patients who triggered a Blueprint Safety Net in 2021. A Safety Net is a Blueprint-specific alert that triggers when a patient answers in the affirmative when asked if they've had thoughts of suicide or self-harm.

This is a part of the PHQ-9, a nine item depression scale, and it reads:

Over the past week, how often have you been bothered by thoughts that you would be better off dead, or thoughts of hurting yourself in some way?

The answers available are **Not at all, Several days, More than half the days, and Nearly every day.**

If a patient selects Several days, More than half the days, or Nearly every day, the Safety Net alert is triggered.

In 2021, there were more than 40,000 PHQ-9 assessments administered. Of that number, **19.7% triggered a Safety Net alert.**

> **We analyzed more than 40,000 PHQ-9 assessments completed in 2021 and found that nearly 1 in 5 (19.7%) completed PHQ-9s triggered a Safety Net alert.**

Safety Nets Triggered in 2021

There were more than 3,000 unique patients who triggered a Safety Net alert in 2021 and an average of 2.69 Safety Nets triggered per person.

Average Safety Nets Per Patient	2.69
Percentage of Patients	29%

Most notably, 29 percent of patients who were administered the PHQ-9 – more than a quarter – triggered a Safety Net, or answered in the affirmative to a question about suicide or self-harm, at least once.

More about the PHQ-9:

The PHQ-9 is a nine item depression scale. The nine items of the PHQ-9 are based directly on the nine diagnostic criteria for major depressive disorder. It can function as a screening tool, an aid in diagnosis, and as a symptom tracking tool to track a patient's overall depression severity as well as track the improvement of specific symptoms. The PHQ-9 is well documented and validated in a variety of patient populations.

Positivity, Sleep, Energy, & Social Connectedness in 2021

The Blueprint platform utilizes simple check-ins as a quick way for patients to self-report on four metrics relevant to their mental health: Positivity, Energy, Sleep and Social Connectedness. These are separate from validated assessments and happen outside of a patient's session with their therapist. These are intended to be completed at a more regular frequency - typically daily - compared to the assessments.

Patients report using a sliding scale to answer the following questions:

Positivity: How are you feeling?
Energy: How much energy do you have?
Sleep: How did you sleep last night?
Social: How socially connected do you feel?

When analyzing the results of check-ins between 2020 and 2021, there were five clear themes that emerged:

There was a big drop across the board in 2021, with a comeback in 2021 - but still not to the levels we saw pre-Covid.

Younger people consistently report feeling more "positive" than older people.

People between the ages of 26 and 35 consistently report leaning towards negative in terms of their overall energy.

Patients between the ages of 26 and 65 consistently report getting worse sleep than patients younger than 26 and older than 65.

People between the ages of 19 and 25 saw the biggest uptick in positivity from 2020 to 2021.

Positivity, Sleep, Energy, & Social Connectedness in 2021: Key Takeaways

1. Scores for all four metrics (Positivity, Energy, Sleep, & Social) dropped significantly in 2020. However, while not back to 2019 levels, there is a steady increase in 2021.

2. Younger patients consistently report feeling more “positive” than older patients.

3. Patients between the ages of 26 and 35 consistently report leaning towards negative in terms of their overall energy.

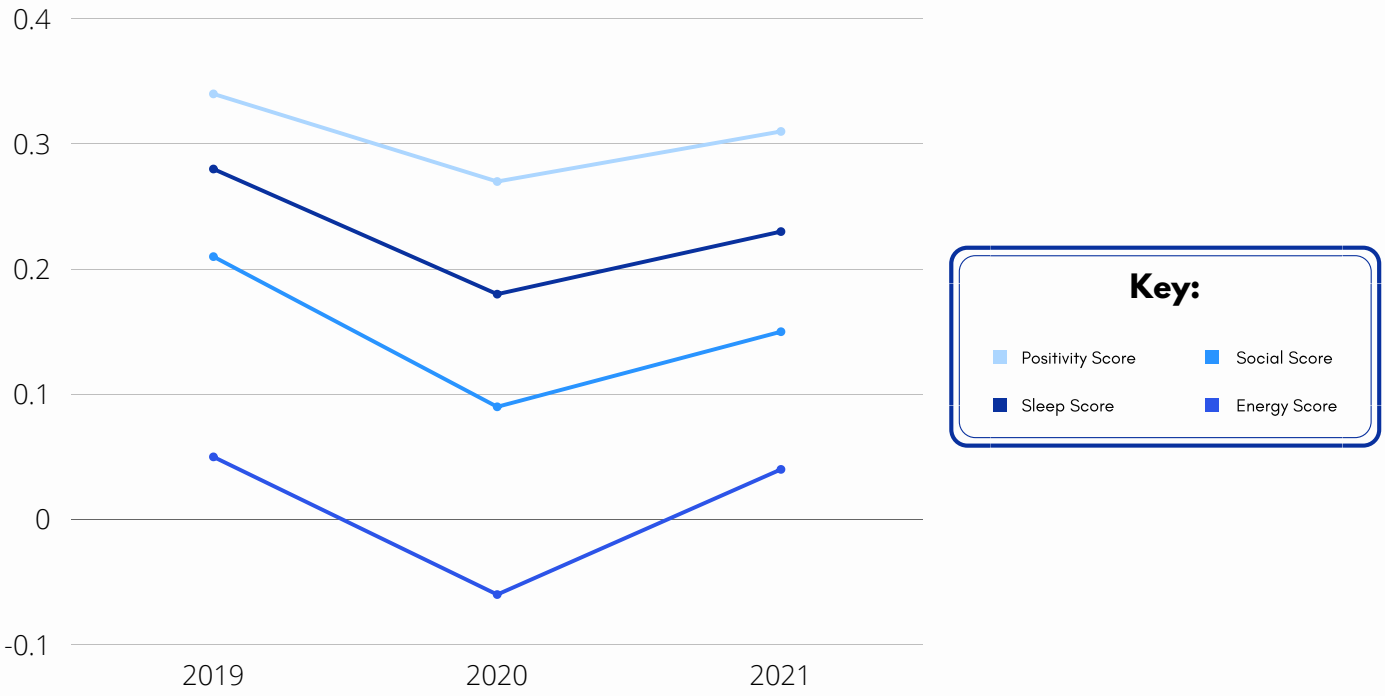
4. Patients between the ages of 26 and 65 consistently report getting worse sleep than patients younger than 26 and older than 65.

5. People between the ages of 19 and 25 saw the biggest uptick in positivity from 2020 to 2021.

Positivity, Sleep, Energy, & Social Connectedness in 2021

As mentioned above, there was an exciting uptick in Check-In Scores across the board from 2020 to 2021.

Check-In Scores



While results like the sleep analysis are almost to be expected (that is, after all, the majority of the work population), the concept that patients may be bouncing back in 2021 in terms of positivity, energy, sleep, and social connectedness is an exciting and welcome finding.

Measurement-Based Care Leads to Better Client Outcomes

To understand the impact of assessments and their use in mental healthcare, we analyzed patient results, focusing on the Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder assessment (GAD-7), as these are the two most common assessments administered with Blueprint.

We found that clients, on average, who enrolled in Blueprint showed improvements in their assessment scores over a period of three months. Additionally, clients who were more engaged with Blueprint faced more significant improvements than those who were less engaged.

Our findings support previous research suggesting that completing more assessments throughout treatment helped drive better outcomes faster.

We collected over 50,000 assessments for both the PHQ-9 and GAD-7 across 10,000 patients since 2018. We documented dates, scores, and clinician correspondence anonymously over time in order to examine how these assessment scores changed over time.

Our results show that clients who take a greater amount of assessments through Blueprint over a three-month time period have greater score improvements than their less engaged counterparts.

Measurement-Based Care Leads to Better Client Outcomes

To understand the impact of assessments and their use in mental healthcare, we analyzed more than 50,000 PHQ-9 and GAD-7 assessments across 10,000 patients. The analysis focused on these two assessments as they are the most commonly administered on the Blueprint platform.

The goal was to determine if more regular use of assessments leads to better client outcomes - and the results were clear.

Clients who completed more than 6 PHQ-9 assessments within three-months of their first assessment saw a 33.28% improvement in outcome scores, 10.81% larger than clients who completed 6 or less assessments within the same time frame.

Clients who completed more than 6 GAD-7 assessments within three-months of their first assessment saw a 33.61%improvement in outcome scores, 8.21% larger than clients who completed 6 or less assessments within the same time frame.

> **Our analysis reveals that all clients enrolled in Blueprint showed mental health assessment score improvements over three months, and the clients who were more engaged with Blueprint had better outcomes than their less engaged counterparts.**

Measurement-based care helps clinicians deliver better care and helps clients experience better outcomes. Platforms like Blueprint aim to make routine assessments easy for every client and clinician to ultimately improve the quality of care clients receive.

Measurement-Based Care Leads to Better Client Outcomes

Methodology and Statistical Significance

We collected PHQ-9 and GAD-7 data from 2018 to July 2021. For each individual assessment type, we extracted a list of every patient who completed at least one assessment (totalling around 10,000 for each test). The number of assessments completed, first 20 assessment dates and scores, and final assessment date and score was calculated.

Patients were split in 3 groups: March-June (MJ), February-May (FM), and December-March (DM). To be placed in one of these groups, clients must have taken the first assessment in March (or February or December, respectively) and taken at least one assessment in June (or May or March). Only patients with an initial score of 10 or higher were considered in the analysis (moderate to severe symptoms).

To explain the rest of the process, we will use March-June (MJ) as the baseline example:
The number of assessments completed between March and June, first date and score, last June date and score were extracted from the aggregate dataset.
Patients were split in 2 groups within each cohort: 1-6 assessments completed and 7+ assessments completed between March and June.

First score and last June score were averaged across each respective group and compared to show the average improvement in client outcomes across this three month time period.

PHQ-9 Clinical Significance
The average score difference over a three-month time frame for clients who took 7+ assessments was -5.0, which meets the threshold for clinical significance at the 95% confidence level.

PHQ-9 Statistical Significance

Coefficient: -10.18%
95% Confidence Interval: [-0.192,-0.011]

Because 0 is not in this interval, this conclusion is statistically significant.

We are 95% confident that completing over 6 assessments in a three-month time frame increases PHQ-9 score outcomes between 1.1% and 19.2% when compared to clients who take less assessments in the same time frame.

GAD-7 Clinical Significance

The average score difference over a three-month time frame for clients who took 7+ assessments was -4.9, which is right around the threshold for clinical significance.

GAD-7 Statistical Significance

Coefficient: -9.38%

95% Confidence Interval: [-0.186,-0.001]

Because 0 is not in this interval, this conclusion is statistically significant.

We are 95% confident that completing over 6 assessments in a three-month time frame increases GAD-7 score outcomes between 0.1% and 18.6% when compared to clients who take less assessments in the same time frame.

Final Thoughts

Much of the content above paints a sobering picture of the current state of mental health for patients seeking treatment. That said, it also shows promise – in improvements across the board in lifestyle data and through the power and impact of measurement-based care.

While clinical assessments offer objective data about mental health patients, their use also offers significant impact and improved outcomes.

BLUEPRINT

If you would like to learn more about Blueprint or measurement-based care, please visit us at blueprint-health.com