Improving Mental Health with Digital Technology
Mental Illness in America

An estimated ~10 million (1 in 25) American adults live with SMI*

There are approximately:

- **2.4 million** people living with Schizophrenia
- **16 million** people living with major depression
- **$193.2 billion** in costs to the US in lost earnings due to SMI
- **6.1 million** people living with bipolar disorder
- **42 million** people living with anxiety disorders

*Based on data from the 2016 National Survey on Drug Use and Health (NSDUH) performed by the Substance Abuse and Mental Health Services Administration (SAMHSA). SMI, severe mental illness, US, United States.
Mental Healthcare Access in America

In 2016...

1 in 5 American adults were living with mental illness*

On average, the US has 1 mental health provider† for every 536 individuals²

Only ~40% of patients with mental illness received treatment in the past year*

*Based on data from the 2016 National Survey on Drug Use and Health (NSDUH) performed by the Substance Abuse and Mental Health Services Administration (SAMHSA).
†The term “mental health provider” includes psychiatrists, psychologists, licensed clinical social workers, counselors, marriage and family therapists, and advanced practice nurses specializing in mental health care.

Technology Use in the United States

The January 2018 Core Trends Survey from the Pew Research Center surveyed 2,002 adults aged 18 or older nationwide with access to a landline or cell phone.

89% currently use the internet

95% have a cell phone

53% have a tablet computer

73% have a desktop or laptop computer

78% have a smartphone

Digital Technology May Provide New Tools for the Assessment and Management of Mental Health

**mHealth sensors**

**Digital interventions and assessments**

**Clinical decision support systems**

**Mobile apps for mental health**

**Medication adherence technology**

**Telepsychology and telepsychiatry**

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## Examples of Mobile Mental Health Digital Technologies in Action

### Popular features of mental health apps include:

<table>
<thead>
<tr>
<th>Feature</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Medication reminders</td>
<td>![Medication Icon]</td>
</tr>
<tr>
<td>Tools for managing stress, anxiety, or sleep problems</td>
<td>![Tools Icon]</td>
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<tr>
<td>Cognitive remediation</td>
<td>![Cognitive Icon]</td>
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<tr>
<td>Skills training and habit tracking</td>
<td>![Skills Icon]</td>
</tr>
<tr>
<td>Illness management and supported care</td>
<td>![Illness Icon]</td>
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<tr>
<td>Symptom tracking</td>
<td>![Symptom Icon]</td>
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<tr>
<td>Health education</td>
<td>![Health Icon]</td>
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<tr>
<td>Delivery of therapeutic interventions</td>
<td>![Delivery Icon]</td>
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</tbody>
</table>

*Such as cognitive behavioral therapy and/or behavioral activation.

The APA’s 5-Step App Evaluation Model

**STEP 1**
Gather background information

**STEP 2**
Evaluate risk, privacy, & security

**STEP 3**
Consider evidence of benefit

**STEP 4**
Gauge ease of use

**STEP 5**
Assess interoperability (when applicable)

APA, American Psychiatric Association.
Pros and Cons of Mental Health Apps

**Pros**

- User identity can remain anonymous
- All users are getting the same treatment program
- Convenience with 24-hour service and support
- Provides service to more people at a lower cost than traditional care

**Cons**

- No national guidelines or standards to prove effectiveness of technology and apps
- No real understanding if apps are effective for all people in all mental health conditions
- Privacy and regulatory concerns

Considerations when selecting an app:

- Ask a trusted health care provider for a recommendation
- Engagement capabilities
- Ease of use design
- Direct evidence with research to support the credibility of the app
- Beware of misleading logos

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