

Digital treatments for addiction represent a rapidly evolving area in behavioral health, offering innovative avenues for support and intervention. As highlighted in "Digital Health Interventions for Substance Use Disorders: The State of the Science" in *The Principles of Addiction Medicine*, these treatments leverage technology to deliver therapeutic content, monitor progress, and provide real-time support to individuals struggling with addiction.¹

What Are Digital Treatments for Addiction?

Digital treatments for addiction encompass a broad range of technology-based interventions designed to prevent, treat, or manage substance use disorders (SUD), including alcohol use disorder, opioid use disorder, and stimulant use disorder, as well as behavioral addictions. These can include:



Digital Therapeutics (DTx)

Evidence-based software programs that deliver therapeutic interventions that can be used independently or as an adjunct to prescription drugs. They are certified or cleared by regulatory bodies (e.g., FDA-regulated software as a medical device) and can make medical claims regarding safety, efficacy, and intended use.² They can be prescribed by healthcare professionals and may be covered by insurance.



Mobile Applications (Apps) and Web-based Platforms

Include a range of products from consumer-facing wellness apps to prescription DTx (described above). The wellness apps and programs are meant to promote a healthy lifestyle and general well-being, but are not intended to treat a mental health condition. They can include educational content, cognitive-behavioral therapy-based exercises, mindfulness practices, and self-monitoring or tracking tools. While thousands of apps exist for mental health, very few are supported by original research. They are not authorized by regulatory bodies such as the FDA.³ Wellness apps are not subject to regulatory review and do not require a prescription.



Telehealth Services

Considered to be in the broader category of health information technology (IT) that includes existing care elements, such as electronic health records, patient messaging, and e-fax, telehealth involves using videoconferencing and mobile devices to deliver healthcare services remotely. It can be used to facilitate remote counseling, therapy sessions, and medication management with licensed clinicians. Remote monitoring via drug testing can be a component of telehealth delivery for addiction treatment. Prior to the COVID-19 pandemic, **less than 1%** of mental health and SUD outpatient care was delivered via telehealth, but this increased significantly during COVID-19. The American Telemedicine Association (ATA) and the American Psychiatric Association (APA) have developed [best practices for video-based telemental health](#), including considerations for addiction treatment.⁴



Emerging Digital Health Areas

These include social media, chatbots, remote peer support/groups, wearables, artificial intelligence, and virtual reality. Social media can provide a wide reach for recovery stories and support, while chatbots offer automated conversations, though data on their efficacy is limited. Digital recovery support services, often free and leveraging peer-to-peer connections, increased during the COVID-19 pandemic, although there are concerns around privacy and access. Wearable devices can assist in monitoring patient health, substance detection, and digital phenotyping, providing real-time data for prevention and intervention. Virtual reality (VR) offers immersive environments for exposure therapy and craving management, but widespread clinical implementation requires more rigorous research.

Considerations for Clinicians When Recommending Digital Treatments

When considering digital treatments for patients, clinicians should evaluate several factors to ensure appropriate and effective care. These considerations are often guided by principles from organizations like the Substance Abuse and Mental Health Services Administration (SAMHSA),² the American Psychiatric Association (APA),⁵ the American Psychological Association,⁶ and the Federal Drug Administration (FDA).³



Patient Needs and Preferences

Assess technological literacy, access to devices and internet, motivation, and engagement. Different digital treatments may be more effective for certain patient characteristics and addiction types.



Evidence-based Practice

Prioritize digital treatments that have demonstrated effectiveness in peer-reviewed studies. Digital treatments and apps may make unsubstantiated claims, which require verification. Regulatory approval, particularly for DTx, is crucial.



Data Security and Privacy

Healthcare standards, such as HIPAA compliance, are essential, aligning with the ethical guidelines set by the APA. It is important to ensure the digital treatment will not cause harm by violating patient safety, security, or privacy.



Integration with Existing Care

Consider how digital tools can complement traditional therapy or medications for addiction treatment. A blended approach is often recommended. Look for platforms that allow clinicians to monitor patient progress and facilitate integrated care. Emergency protocols should be clearly understood.



Cost and Accessibility

Investigate insurance coverage and affordability to reduce barriers to access.

Aspect	Pros	Cons
Accessibility & Convenience	<ul style="list-style-type: none"> • Available 24/7, overcoming geographical barriers • Flexible scheduling, fitting into daily routines • Reduces travel time and costs 	<ul style="list-style-type: none"> • Requires reliable internet access and devices • Digital treatments may not suit all, particularly patients needing in-person care or lacking tech literacy
Engagement & Personalization	<ul style="list-style-type: none"> • Interactive and engaging content • Tailored interventions based on individual progress and needs • Anonymity can reduce stigma for some users, a factor often considered in mental healthcare 	<ul style="list-style-type: none"> • Risk of disengagement or dropout if not actively supported (as evidenced by the majority of apps) • The absence of a direct human connection can hinder treatment and conflicts with addiction recovery's emphasis on support networks
Cost-effectiveness	<ul style="list-style-type: none"> • Potentially lower cost than traditional in-person therapy • Scalable to reach a larger population, aligning with public health goals for broader access 	<ul style="list-style-type: none"> • Initial development and maintenance costs can be high for providers to implement in clinics • Insurance coverage may be limited, highlighting the need for advocacy
Data Collection & Monitoring	<ul style="list-style-type: none"> • Ability to track progress, adherence, and outcomes, facilitating measurement-based care • Provides valuable data for research and personalized care, supporting evidence-based practices 	<ul style="list-style-type: none"> • Concerns about data privacy and security, necessitating adherence to regulations like HIPAA • Risk of misinterpretation of self-reported data • Risk in not acting on reported high-risk data
Clinical Effectiveness	<ul style="list-style-type: none"> • Evidence suggests efficacy for various addictions, but engagement is variable for even effective treatments; the same is true for non-digital treatments • Can extend the reach of the clinician 	<ul style="list-style-type: none"> • Effectiveness of digital treatments varies by program and patient, with some groups less supported, though access is improving • Digital treatments alone may not meet the needs of severe or complex cases, according to clinical guidelines

Other Areas to Consider



Complementary, Not Replacement

Digital treatments are often most effective when used as a complement to traditional care, not a complete replacement. A blended approach can offer the best of both worlds. Notably, fully remote treatment programs can be successful, especially when aided by collaborative care.



Regular Updates

As technology evolves, digital treatments are continually being updated and improved. Clinicians should stay informed about new developments and research, referencing reliable sources, such as the American Society of Addiction Medicine and other similar organizations.



Ethical Considerations

Ethics is of utmost importance as digital health evolves. Topics to be mindful of range from informed consent and data privacy to the appropriate use of AI and bias in algorithms.



Training and Support

Clinicians recommending digital treatments should have sufficient knowledge of the program, be adequately trained on its use and have access to support for any technical issues, ensuring competent and ethical delivery of care; digital treatments without technical support may be risky and also less fulfilling for clinicians.



Patient-centered Approach

The "best" digital treatment will vary based on individual circumstances and preferences.

Questions to Guide Digital Treatment Evaluation



A few basic questions (but not an exhaustive list) to ask when evaluating a digital treatment:

- Is the resource evidence-based and safe?
- Will the patient use the solution (considering accessibility, cost, usability, interactivity, and login)?
- What other treatment(s) should it be combined with (working with a professional like a physician, peer support, medications, etc.)? Or, if no other options are available, is digital treatment a reasonable stand-alone solution to consider to reduce the risks and harms?
- How scalable and implementable is a solution?
- How will crises be managed and mitigated?
- Is the offering equitable?
- How is patient data protected? Are the policies transparent around data security and sharing with third parties?

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