



Issue Brief: Mobile Engagement and Retention Technology for Substance Use Disorder

COVID-19 has forever transformed the communication and connection amongst and between health care systems, providers, and patients. [Fair Health reports](#) that total telehealth claims increased by 3,806 percent nationally from 2019 to 2020, rising from 0.15 percent of medical claims in July 2019 to 6 percent in July 2020. Much of this increase in volume directly relates to mental health and substance use disorder (SUD) service utilization.

Last year, the American Hospital Association released a [fact sheet](#) indicating that 76 percent of U.S. hospitals connected with patients and consulting practitioners through video and other technology in 2017. According to Definitive Healthcare's fifth annual [Inpatient Telehealth Study](#), adoption of virtual care services or solutions in inpatient settings increased from 54 percent in 2014 to 85 percent in 2019. Most recently, Ziegler's 2020 report, "[Deconstructing the Telehealth Industry](#)," ranked behavioral health as the top target for telehealth deployments saying:

Americans of all ages are struggling to receive adequate behavioral health care for numerous reasons, including cost, geography and provider availability. Virtual care solutions allow patients to access convenient, affordable treatment options with appropriate providers (psychiatrists, psychologists, social workers, etc.) while also alleviating bottlenecks in emergency rooms and other acute care settings. Because behavioral health providers usually do not need to physically touch patients, and because patients may prefer to access behavioral health services discretely, using virtual care technologies to deliver behavioral health services is one of the best and most impactful use cases.

The report asserts that behavioral health, in general, has seen perhaps more virtual care proliferation than any other specialty. However, the majority of Americans with behavioral health challenges continue to struggle to receive adequate care. One of the core challenges of the existing fee-for-service delivery system is SUD clinical care is finite and short-term; as a chronic condition, SUD requires ongoing support and engagement for years, not weeks or months. The COVID-19 pandemic has instigated an increase in access to telehealth services. However, it has not created the underlying shift in care model or provider innovation needed to provide mobile SUD services and recovery supports to patients (see Figures 1 and 2).

As evidenced in the [Surgeon General's report](#), "Research has found that individuals who received proactive engagement services such as direct outreach and a specific follow-up plan are more likely to remain engaged in services throughout the treatment process." The care recovery team must work proactively with each patient to engage them in recommended services based on the initial assessment and enrollment into an Addiction Recovery Medical Home (ARMH).

The industry case examples and associated infographics in this brief provide a general overview of key functions of mobile technology to be considered for adoption of recovery-oriented care management and value-based approaches to SUD.

Figure 1: Key Mobile Engagement Functions for Individuals & Families With SUD

To connect patients throughout the Episodes of Care in the Addiction Recovery Medical Home Alternative Payment Model the Care Recovery Team should harness a variety of existing and emerging mobile engagement techniques and tools

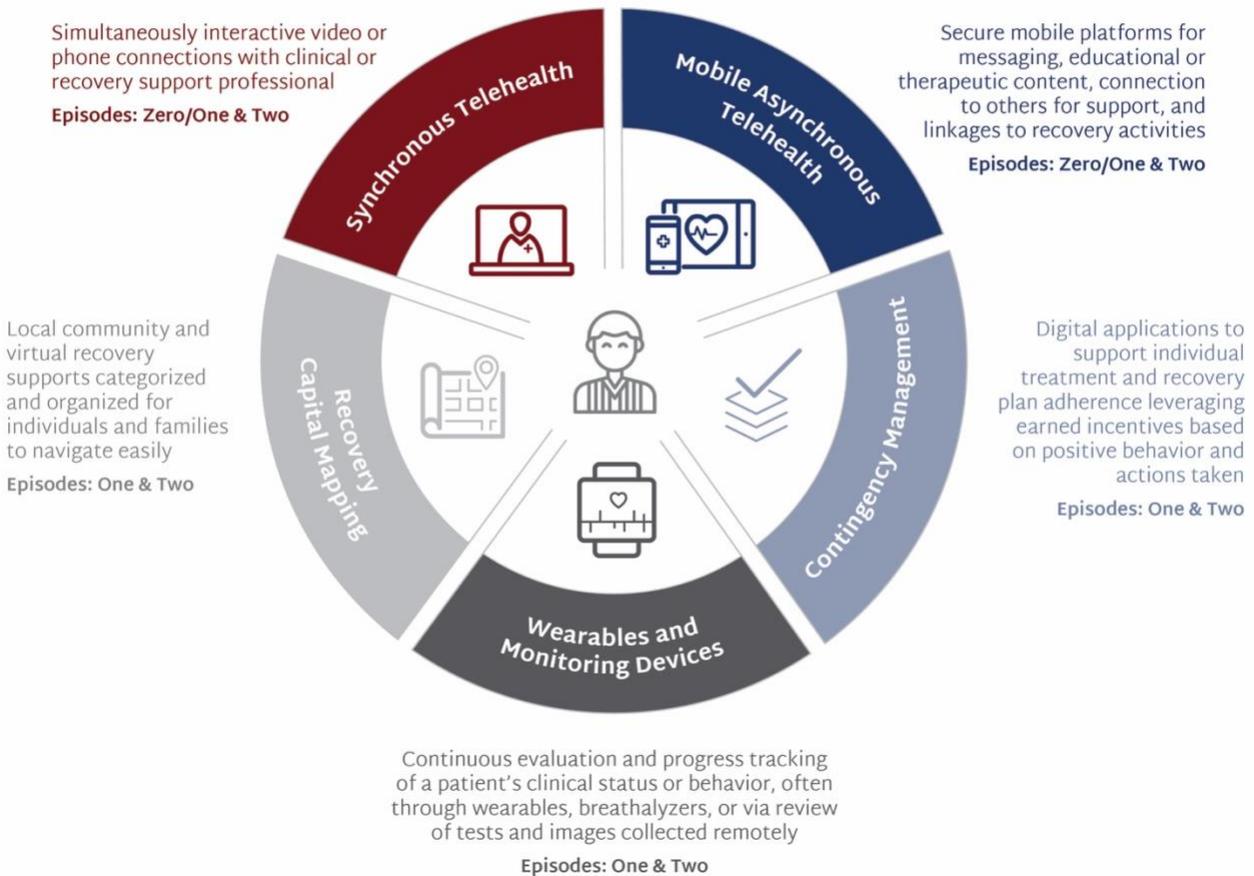


Figure 2: Features and Core Operational Functions

Features	Potential Operational Functions & Solutions
Synchronous Telehealth	<ul style="list-style-type: none"> • Work with patients synchronously one-on-one or in groups from their home for counseling and/or peer support • Provide patient and family education trainings • Engagement, assessment, and screening • Live chat features • Virtual case load consults to enable providers and peers managing high-impact populations to collaborate with substance use experts and mental health experts on the latest treatments and case consultation
Mobile Asynchronous Telehealth	<ul style="list-style-type: none"> • Messaging platforms inclusive of surveys to monitor and trigger action for negative responses • Establish individualized plans of care • Provide patient and family education material • Chat based peer support monitored by artificial intelligence and natural language processing tools and escalated as appropriate • Stratification of patient based on risk factors • Journal and tracking functionality • Integrate interdisciplinary practitioners on what platform • Offer online self-led therapy modules such as CBT or DBT • Use of GPS locator to identify other people in recovery nearby to provide support while in any location • Personalize content and linkage to community-based support groups for specific demographics
Contingency Management	<ul style="list-style-type: none"> • Create a treatment and recovery plan complete with earned incentives contingent on positive behavior and adherence to care plan • Development of treatment and recovery plan in collaboration with patient • Push reminders for reward completion and behavior/activity tracking • Monitor status and tracking of earned of incentives • Ability to determine financial spending using the rewards achieved by the patients
Wearables and Monitoring Devices	<ul style="list-style-type: none"> • Ability to measure progress through breathalyzer and home-based saliva drug tests — performed through the phone, verified by selfie video • Measure medication adherence in medication assisted treatment (MAT) programs through wearables
Recovery Capital Mapping	<ul style="list-style-type: none"> • Map local community and virtual recovery supportive assets for utilization by provider networks and accessible to patients • Categorizes and tracks services with details about restrictions, eligibility, required documents, languages spoken, and many other attributes • Integrate with existing electronic medical records (EMRs) to facilitate workflow and community-based closed loop referrals

Industry Case Examples

Implementing a Mobile Health System to Integrate the Treatment of Addiction into Primary Care

A [study conducted by the National Institutes of Health and the National Institute on Drug Abuse](#) identified three federally qualified health centers (FQHCs) across the country that allowed clinicians to enroll patients with SUD in a program with a mobile solution. The solution included interventions such as patient discussion boards; interactive modules to teach problem-solving, self-regulation, and other skills; tools for coping with cravings and high-risk situations (e.g., relaxation exercises, strategies from cognitive behavioral therapy, links to local 12-step meetings); and health tracking. For clinicians, the tool provided a web portal with a clinician report containing longitudinal information generated by patients' self-reported data about their substance use and well-being (e.g., sleep, depression).

Patients who were given access to the mobile solution saw significant improvements in their risky drinking days (44 percent reduction), illicit drug-use days (34 percent reduction), quality of life, human immunodeficiency virus screening rates, and number of hospitalizations. The tool also provided patients peer support to one another in ways that are unique in primary care settings. Throughout the study patient engagement with the mobile platform was between 53 percent and 60 percent across all three sites.

Contingency Management Medicaid Case Study

A mobile health platform offering contingency management partnered with a Medicaid Managed Care Organization and an out-patient clinical provider [to evaluate the efficacy of the tool for individual beneficiaries with SUD](#) in 2019 and 2020. Ninety-five patients used the tool and 95 patients in a control group did not use the contingency management platform.

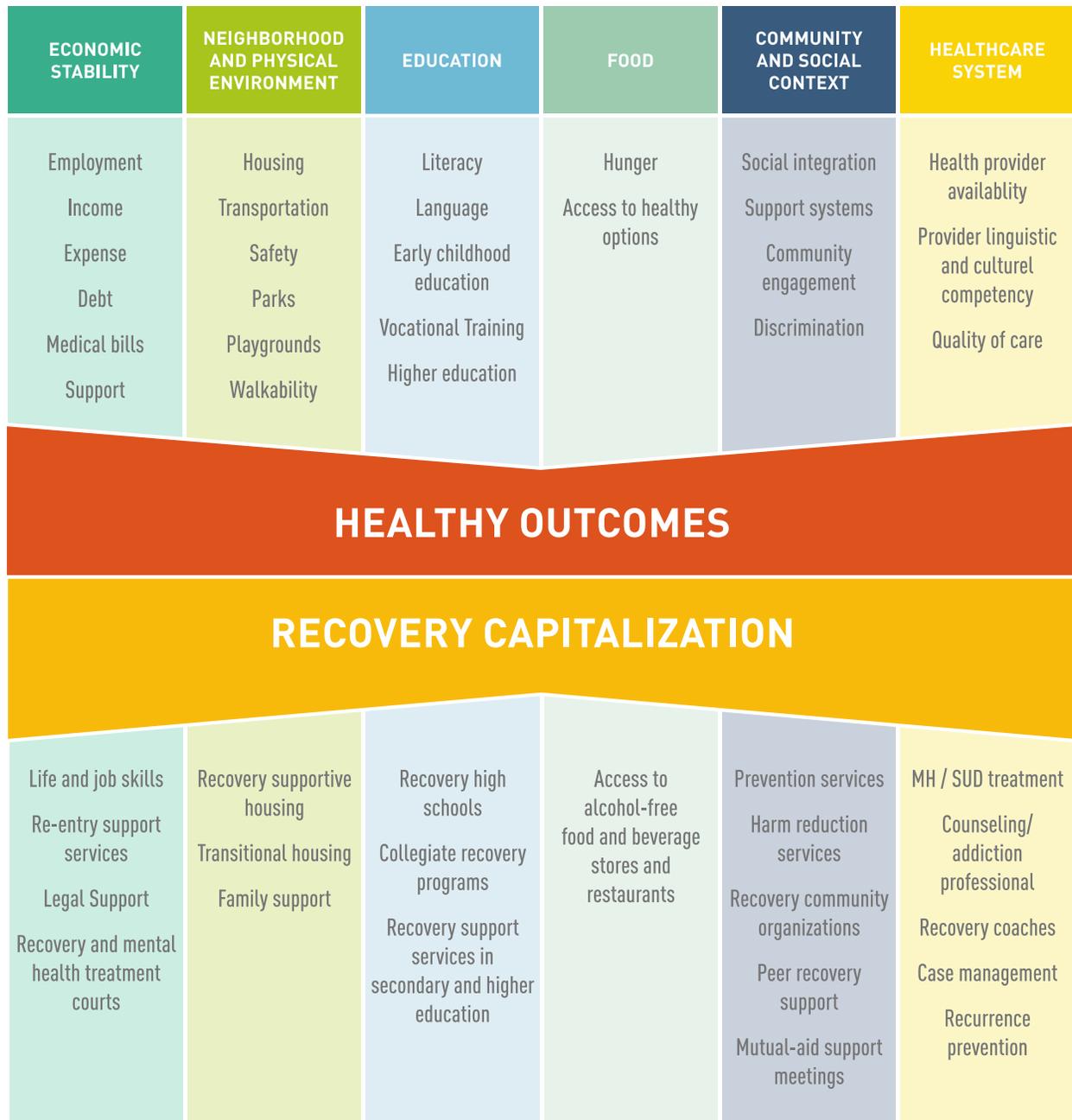
The claims analysis showed a significant increase in primary care engagement and MAT refills among the contingency management cohort. Patients who engage with their Primary Care Provider (PCP) in an initial incentivized visit are more likely to develop a relationship with their doctor and continue to adhere to their treatment plans. In the study, use of the tool was associated with a 76 percent higher rate of PCP engagement ($p < 0.01$) and a 35 percent higher adherence to filling MAT prescriptions in comparison to the control population ($p < 0.01$). Additionally, there was a 15 percent decrease in high-cost Emergency Department visits for the cohort using the application.

Remote Monitoring in Addiction Treatment

A New Jersey based multidisciplinary clinic that provides outpatient and intense outpatient services implemented a remote monitoring intervention to support patients with alcohol use disorder in real-time. The device is wireless breathalyzer that documents results in real-time. Other features include facial recognition technology and tamper detection to ensure validity in self reporting, real time results sent directly to providers, and FDA clearance on the discreet device allowing for patients to test anywhere.

Clients are encouraged to stay on the platform for a year. If a client misses a test or tests positive, the clinic has protocols to immediately intervene with the patient and/or their family. The clinic has reported that the tool has helped many clients have reached their recovery goals and that it has also helped the clinic with more timely follow up and intervention opportunities.

Figure 3: The Intersection of Social Determinants of Health and Additional Recovery Capital Considerations for Individuals and Families Leading Toward Long-Term Recovery Outcomes



*Publication courtesy provided by [sr4-DIS](#) and [The Recovery Resource Hub](#)

The Importance of Implementing Mobile Engagement and Retention Tools

Substance use treatment professionals and recovery coaches on the ground have long understood that connection, sustained engagement, and community-based linkages are the ultimate indicators of positive outcomes for patients. Clinical treatment and recovery supports must be personalized based on individual needs and preferences, as illustrated in Figure 3. Clinical treatment and recovery supports must be personalized based on individual needs and preferences. The system must acknowledge that some people struggling with addiction may need a connection to their care team weekly, while others daily, and some even hourly depending on the severity of the SUD and the phase of the recovery journey a person is in currently.

Historically, the addiction field has essentially treated individuals using short-term acute interventions for what is definitively a chronic disease impacting people throughout their life. As the system slowly moves towards models of long-term engagement and management of individuals and their families, consistent connectivity between the patient and the care team should be measured and incentivized. Mobile technology, now more than ever, will be indispensable to this work and any individual’s longitudinal care journey.

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