

# Smartphone SUD Recovery App Demonstration Project

MetroPlus Association of Addiction Peer Professionals



*e-recovery technologies*

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## Introduction

Excessive and dependent use of alcohol and other drugs (AOD) constitutes one of the leading public health problems in the United States.<sup>1</sup> Recent research has focused on how individuals, families, and communities are successfully resolving AOD-related problems. Studies of clinical and community populations reveal significant rates of substance use disorder remission (between 35-54%)<sup>2</sup>, a substantial prevalence of American citizens who self-report having resolved a significant alcohol or other drug problem (9.1% of the adult population)<sup>3</sup>, and diverse pathways of AOD problem resolution<sup>4</sup>. The diversity of recovery experience is influenced by such factors as stage of life, gender, ethnicity, primary drug of choice, and degree of religiosity, as well as differences in problem severity, complexity, and chronicity<sup>5</sup>.

Historically, specialized support for the resolution of AOD problems has been limited to addiction treatment services and participation in religious, spiritual, or secular recovery mutual aid organizations<sup>6</sup>. Limitations of addiction treatment include low rates of attraction, problems of accessibility and affordability, engagement primarily at late stages of problem development, limited use of evidence-based methods of treatment, high rates of treatment attrition, weak systems of continuing care, and

a resulting high rate of problem recurrence following treatment discharge—limitations that are magnified for substance-affected youth<sup>7</sup>. Challenges encountered in mainstreaming young people within an adult-oriented treatment system sparked the growth of specialized, developmentally appropriate services for youth, but the availability and quality of such services vary widely across communities in the United States<sup>8</sup>.

Twelve-Step Recovery mutual aid groups (e.g., Alcoholics Anonymous [AA], Narcotics Anonymous [NA], Cocaine Anonymous [CA], etc.) and secular and explicitly religious alternatives to Twelve-Step programs (e.g., Women for Sobriety, Secular Organizations for Sobriety, LifeRing Secular Recovery, SMART Recovery, Celebrate Recovery, Refuge Recovery, etc.) have grown dramatically in the U.S. over the past half century<sup>9</sup>. The potential contributions of addiction recovery mutual aid organizations are constrained by low rates of attraction, limited availability in many communities, and high rates of attrition. Research on participation in Alcoholics Anonymous, for example, reveals a high dropout rate in the first year<sup>10</sup>. Participation in recovery mutual aid groups can enhance recovery outcomes and quality of life in recovery<sup>11</sup>, but their limitations may be magnified for substance-involved youth<sup>12</sup>. Chi and colleagues followed the involvement of youth in Twelve-Step programs for seven years after admission to addiction treatment. Those with higher rates of mutual aid participation achieved better recovery outcomes, but 60% of youth followed had no/low participation rates, and only 14% reported continuous participation over the follow-up period<sup>13</sup>. A recent survey of AA members found that only one percent of AA members were under the age of 21<sup>14</sup>, and youth representation in secular and religious recovery mutual aid groups is even lower<sup>15</sup>. Engagement rates for youth in Twelve-Step groups are

higher when youth are exposed to groups that have higher youth representation—a finding likely related to greater mutual identification and shared problem-solving<sup>16</sup>.

Challenges within the current systems of addiction treatment and recovery support spawned two advances in recent years: 1) the emergence of new recovery support institutions (grassroots recovery advocacy organizations, recovery community centers, recovery residences, recovery high schools and collegiate recovery programs, recovery-based industries, recovery ministries, recovery cafes, recovery-focused sports venues, etc.), and 2) the rapid proliferation of e-technologies delivering a broad array of personal and family recovery support services across the stages of problem resolution. Both advances stand as potentially historic adjuncts and alternatives to addiction treatment and recovery mutual aid, and both include specialized recovery supports for substance-involved young people and their families<sup>17</sup>. The second of these two innovations is the focus of the present report.

The term *e-recovery technologies* encompasses all digital and internet-based media designed to support personal/family recovery from AOD and related problems. A review of the scientific literature on e-recovery technologies reveals several important findings.

Newly emerging e-recovery technologies (more broadly referred to as telemedicine, digital health technologies, or e-therapy) use electronic devices (e.g., computers, tablets, smartphones, wearable self-monitoring devices) as platforms to prevent or postpone AOD use, reduce AOD problem development, promote self-recognition of AOD problems, reduce harm related to AOD use, and support the long-term resolution of AOD problems. At present, these goals are achieved through computerized screening and assessment instruments, telephone-based therapy, telephone-based

continuing care following addiction treatment, smartphone recovery apps, ecological momentary assessment, ecological momentary (just-in-time) interventions, personalized text messaging, and game-based systems. Many of these technologies focus specifically on the goals of recovery initiation and maintenance as well as enhanced quality of personal/family life in long-term recovery<sup>18</sup>.

E-recovery technologies are acceptable to a broad spectrum of people, including those representing the full spectrum of AOD problem severity and brief and long periods of achieved abstinence<sup>19</sup>. E-recovery technologies may be particularly helpful to people who face barriers in accessing or feeling safe within traditional treatment and recovery support venues, e.g., women, racial/ethnic minorities, people with disabilities, people in rural and frontier communities, people who experience social phobia, and other marginalized populations<sup>20</sup>. E-recovery supports provide a new pathway of problem resolution for people with lower AOD problem severity who are first-time help seekers and fear accessing help through traditional channels due to social stigma (i.e., high-status professionals)<sup>21</sup>.

E-recovery technologies are proving to be particularly appropriate for adolescents and young adults who as a group possess high degrees of computer literacy and comfort<sup>22</sup>. Such applicability even extends to youth enmeshed in substance-affected family and social networks where e-recovery technologies can serve as a critically important link to recovery-supportive social networks<sup>23</sup>. In general, people seeking addiction treatment report high rates of mobile phone (and smartphone) possession, high rates of daily social media usage, and high interest in using relapse prevention apps and text messaging as recovery support tools<sup>24</sup>.

The key mechanisms of change within e-recovery technologies include:

- psycho-education (such as sharing of experiential knowledge),
- risk awareness,
- normative feedback,
- self-monitoring,
- action planning (goal setting with multiple time points of expected accountability),
- perceived safety of self-disclosure,
- peer modeling and peer support,
- feedback and encouragement via supportive messaging from peers and perceived professional experts,
- skill prompts that enhance transfer of learning from service environment to natural environment), and
- sociability beyond support for illness management<sup>25</sup>.

Empirically validated research on e-recovery technologies is at its infancy, but preliminary reports suggest that such technologies, including recovery apps, have the potential to sustain high levels of utilization, increase appointment attendance, reduce drinking frequency, reduce days of risky alcohol/drug use, increase days of abstinence and continuous abstinence, increase HIV screening rates, support recovery from co-occurring conditions (e.g., post-traumatic stress disorder [PTSD], anxiety, depression, bipolar disorder), enhance quality of life, reduce hospitalizations, and increase positive service evaluations<sup>26</sup>. Trials comparing brief computer interventions to brief face-to-face interventions reveal similar positive effects on outcomes<sup>27</sup>. Early evaluations also suggest that e-recovery technologies such as telephone-based continuing care are more cost effective than traditional face-to-face follow-up visits with people discharged from addiction treatment<sup>28</sup>.

Research on e-recovery technologies remain at an infancy stage. Randomized controlled trials are needed to validate what appear to be promising e-recovery technologies, define the active ingredients within the most effective e-recovery technologies, and test e-recovery technology efficacy and effectiveness across clinical populations and cultural contexts<sup>29</sup>. Potential limitations and obstacles to e-recovery technologies include escalating costs of smartphones, telephone data plans that limit e-recovery usage, lack of reimbursement for telemedicine services, incompatibility of recovery apps to particular phones, differences in levels of computer literacy (particularly among older populations and within poor communities), and potential resistance of professional staff to the integration of e-recovery technologies into routine clinical care<sup>30</sup>. E-recovery technologies also raise potentially complex ethical and legal issues related to issues of confidentiality and privacy<sup>31</sup>.

E-recovery technologies are part of the increased focus on self-management of chronic health conditions, the shift from acute models of addiction treatment to models of sustained recovery management across the long-term stages of recovery, and the extension of face-to-face recovery support meetings to participation in online recovery communities<sup>32</sup>. A number of federal initiatives are promoting the expansion of e-health technologies, including the National Institutes of Health Wireless Medical Technologies Working Group<sup>33</sup>. Seen as a whole, e-recovery technologies constitute a promising practice for reaching substance-involved youth.

The present project explores the development of a “recovery app” as a pathway of problem resolution for substance-involved youth

## The Sober Grid Demonstration Project

This demonstration project focused on the viability of a campaign to synergize the use of a “recovery app” as a pathway of recovery support. A “recovery app” social media platform is an adjunctive support for youth involved in addiction treatment and recovery mutual aid groups and an alternative for substance-affected youth who are not engaged in treatment or community recovery groups. The demonstration project was conducted by the MetroPlus Association of Addiction Peer Professionals and funded the Oregon Health Authority.

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*The primary goal of this project was to informally evaluate the viability of a campaign promoting a “recovery app” within the youth substance use disorder community, and to assess utilization of the “recovery app” in the 30 days before the campaign and in the 30 days after the launch of the campaign.*

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This demonstration project sought identification of a “recovery app” (smartphone software application) that would have broad appeal to substance-involved youth and that could serve to promote the use of e-technology among the youth recovery community at-large within the metropolitan Portland, Oregon tri-county area. Our objectives were to sign up 1,000 users through a “recovery app” campaign and to assess metro area usage 30 days prior to the campaign and 30 days following the launch of the campaign.

As noted, research has shown that smartphone recovery apps, like A-CHESS, are helpful during the course of substance use disorder treatment services, but little inquiry has been done regarding the benefits and efficacy of smartphone recovery applications post-treatment or among those in the recovery community not involved in professionally-directed treatment services.<sup>34</sup>

A-CHESS has proven efficacy within treatment settings. A-CHESS has been recognized for relapse prevention by the Substance Abuse and Mental Health Services Administration’s (SAMHSA) National Registry of Evidence-based Programs and Practices (NREPP). NREPP noted in a study that the “program is effective for reducing alcohol use and alcohol use disorders.”<sup>35</sup>

Furthermore, an additional study on A-CHESS found that “participants in the treatment group had a greater likelihood of abstinence in the past 30 days, compared with participants in the treatment as usual control group; this difference was statistically significant.” In addition to the reports of increased instances of abstinence, the same study reported “significantly fewer heavy drinking days.”<sup>36</sup> This finding is noteworthy in light of studies indicating that less than 60 percent of individuals continue to participate in aftercare following substance use disorder (SUD)

treatment, whereas more than 90 percent of those in the A-CHESS study reported use of the application.<sup>37</sup>

In our previous 2017 DACUM analysis, SUD Transition Age Youth Peer Delivered Services Best Practice Curriculum<sup>38</sup>, we examined an array of recovery applications within the 4<sup>th</sup> Dimension Recovery Center. This youth recovery center caters to the recovery community at-large, including; individuals in SUD treatment, individuals who have completed SUD treatment, and individuals who have never participated in SUD treatment services.

The examination of recovery apps was conducted by 60 participants with the review including four recovery apps (A-CHESS, Sober Grid, Squirrel Recovery, and a recovery-oriented Facebook Group) that contained elements of “social connectivity.” Many recovery applications support individuals but have little to no social connectivity component. Such applications include: Sober Time-Sobriety Counter, Sober Tool, Clean Time App, Quit Drug/Porn/Food Addiction, No More! Quit Your Addictions, Recovery Elevator, Sobriety Counter – Stop Drinking, NA 12 Steps App, Sobriety Clock, Sobriety Calculator, nomo – Sobriety Clocks, and Day Counter.

In our prior review<sup>39</sup> of four recovery applications (below), Sober Grid was rated the most popular recovery application, especially for individuals not actively participating in addiction treatment.

## A qualitative review of four recovery apps

<p><b>A-CHESS</b></p>	<p>A-CHESS is an application designed to provide ongoing support and relapse prevention to people recovering from substance use disorders during and after treatment. A-CHESS is an evidence-based application on the SAMHSA NREPP registry. A-CHESS includes: social connectivity, a recovery counter, analytics, motivational messages, medication and appointment reminders, recovery planning and journaling functions, a caregiver dashboard (including a relapse warning system), geo-fencing of high risk locations, and the capacity for caregivers to distribute customized content to individuals or groups as well as custom clinical or non-clinical surveys to individuals or groups.</p>	<p><b>PROS:</b> Participants liked the daily check-in and goals creation features. The app also provides reminders without having to open the app. Others appreciated the inspirational quotes and daily survey. One participant said the best part was the feature that allowed him to schedule his medication times.</p> <p><b>CONS:</b> A-CHESS easily loads on Android phones, but is more difficult to load onto an Apple iPhone.</p> <p><b>YOUTH PEER STAFF COMMENTS:</b> This is a great app for individuals participating in addictions treatment. This structured app contains powerful analytics that we were unable to use during the short course of this product review. This app may be less suited for drop-in recovery centers that specialize in youth peer support versus a structured addictions treatment program, because it requires administrative oversight.</p>
<p><b>Sober Grid</b></p>	<p>"Sober Grid is a free iOS/Android app that [GPS] connects you with other sober people. You are instantly connected to a global sober community in your neighborhood and around the globe. You can build strong sober support networks and inspire others."<sup>40</sup></p>	<p><b>PROS:</b> Participants really enjoyed the newsfeed and social connectivity of this app. They also appreciated the meeting finder and recovery readings.</p> <p><b>CONS:</b> Two participants wished there was a way to post video to the newsfeed.</p> <p><b>YOUTH PEER STAFF COMMENTS:</b> This app is recommended for post-treatment social support as it mirrors other popular social media apps (Facebook, Instagram, and Twitter), and is a good choice for youth peer support programs, especially because it is free.</p>

<p><b>Squirrel</b></p>	<p>Squirrel Recovery; Addiction App is personalized to each user. It sets up a recovery circle with sober support people of your choice. You can set personal times for the app to check in when using is most likely to occur. This information is sent in a text message to people chosen to be in your recovery circle. A Panic button bypasses all check-ins so that help can be given immediately. Squirrel Recovery; Addiction App also keeps track of sober days, gives "coins" when milestones are achieved, and offers motivational quotes of encouragement.<sup>41</sup></p>	<p><b>PROS:</b> Participants liked the daily check-in, the daily planner, the social connectivity, recovery reading, and mindfulness techniques. Participants enjoyed the texting features within the app. Users also appreciated the analytics and reporting on “how you are doing.”</p> <p><b>CONS:</b> Some felt that the app could include more features like a meeting finder. Some reported that the app was sometimes “glitchy.”</p> <p><b>YOUTH PEER STAFF COMMENTS:</b> The app requests that you enter information regarding multiple sponsors and many of the participants were confused because most 12-Step participants have only one sponsor. Some who were new to recovery asked if they needed multiple sponsors.</p>
<p><b>Facebook Closed Group</b></p>	<p>Our Facebook group was a “closed group,” meaning only the administrator could add or delete members from the group. Participants were given loose guidelines for posting content: recovery-related events, Twelve-Step meetings, and recovery milestones (clean and sober time, reunification with family and friends, employment and education success, and anything else they felt positive about). Participants were also encouraged to “reach-out” when they felt their recovery may be in jeopardy. To enhance user safety, participants were informed that anyone harassing other members would be removed from the group.</p>	<p><b>PROS:</b> Participants enjoyed learning about a smaller group of recovering young people within the greater recovery community. They enjoyed the Newsfeed and posting. They very much enjoyed the connectivity.</p> <p><b>CONS:</b> One participant reported that this style of social connectivity did not reduce their cravings to use, and another was disappointed in the lack of responsiveness from individuals within the group.</p> <p><b>YOUTH PEER STAFF COMMENTS:</b> This type of recovery-oriented social media support is imperative as many young people use Facebook. Since the conclusion of the survey, and at the request of the participants, the Facebook group now allows other young people in recovery to join. Since concluding the review, more than 25 young people in recovery have been added to the Facebook group.</p>

A significant number of participants in our 2017 DACUM analysis, SUD Transition Age Youth Peer Delivered Services Best Practice Curriculum, reported positive remarks regarding the use of recovery apps:

- 71% used the apps daily to multiple times per week,
- 68% felt the apps were very or somewhat supportive of their recovery,
- 71% reported they are very likely or somewhat likely to continue using the apps,
- 79% reported they are very likely or somewhat likely to refer other youth to the app, and
- 92% report that apps are very easy to somewhat easy to use.

Despite these positive remarks (68%-92%), only 50% reported that the recovery apps were very to somewhat helpful in reducing cravings for alcohol and drugs. Closer examination and interviews with youth revealed that many young people would log onto the recovery app, in a time of need, and no one else was on the app “live” at the time they logged on.<sup>42</sup>

Sober Grid was selected for this demonstration project for the following reasons:

- Sober Grid was rated as the most popular recovery application in our previous analysis.
- Sober Grid is a free application, which is helpful to freestanding community recovery centers that operate on limited funding.

- The administration of Sober Grid demonstrated their capacity to produce data usage statistics for the Portland, Oregon tri-county metropolitan area before the campaign and after campaign.
- Sober Grid has a “familiar feel” given its similarity to other social media apps and is not designed exclusively for those participating in SUD treatment services.

### **The objectives of this demonstration project are to:**

- *sign up 1,000 users in the Portland, Oregon tri-county metropolitan area,*
- *promote technology-based social support in the recovery community at-large, including, both treatment and non-treatment populations,*
- *examine the impact of the project in achieving “critical mass,” wherein individuals in need can have near instantaneous access to others in recovery through a smartphone recovery app,*
- *promote “many pathways” to recovery through a social connection smartphone recovery application, and*
- *assess pre- & post- campaign usage of the smartphone recovery app.*



Photo credit: SoberGrid.com

During March 2018, the MetroPlus Association of Addiction Peer Professionals and 4<sup>th</sup> Dimension Recovery Center spearheaded a campaign to enroll 1,000 users into Sober Grid (within Oregon’s metro tri counties, Multnomah, Clackamas, and Washington) to create a critical mass of users which could generate social connectivity and decrease attrition rates in app usage.

## Methodology

The MetroPlus Association of Addiction Peer Professionals, 4<sup>th</sup> Dimension Recovery Center and Sober Grid enrolled 1,026 new and returning users into the app within the Oregon tri-county area – Multnomah, Clackamas, and Washington – during March 2018.

Sober Grid provided detailed analytics in the pre- vs. post-campaign for February and March. The 4<sup>th</sup> Dimension Recovery Center facilitated the primary outreach to enroll users using three methods: emails to behavioral health providers inside the tri-counties, social media marketing, and person-to-person engagement at both the 4<sup>th</sup> Dimension Recovery Center and within community partners (addiction treatment centers and other recovery support service agencies). Ten-dollar vouchers (food cards) were offered to individuals who downloaded the app with 4<sup>th</sup> Dimension staff and activated their account with recovery center staff.

Sober Grid supplied marketing materials for the campaign, including banners, posters, magnets, and cards.

4<sup>th</sup> Dimension also marketed the Sober Grid Alumni Portal, a commercial addiction treatment retention application, to over 130 tri-county behavioral health providers. Following the conclusion of the campaign, 60 days post-campaign launch, 4<sup>th</sup> Dimension collected a small sample of user experience data (n=30) using a 1 to 5 Likert scale.

## Pre- and Post-Metrics

### Total Daily Active Users: Pre- and Post-

Sober Grid Analytics staff reported that there were 379 tri-county active “daily users” of the Sober Grid smartphone application in the month of February. A daily user is defined as an individual who “opens the app.” In the month of March, following the launch of the campaign, the number of tri-county active daily users increased to 1,379.

*Prior  
to launch*                      *After  
launch*

<i>Active Users</i>	<b>379</b>	<b>1,379</b>
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### User Sessions: Pre- and Post-Metric

Sober Grid Analytics staff reported that there were 1,262 tri-county single user “sessions” of the Sober Grid smartphone application in the month of February, 30 days prior to the launch of the campaign. A “session” is defined as opening the app for a sustained period of time, more than simply checking for messages. In the month of March, following the launch of the campaign, the number of tri-county single user sessions increased to 6,348.

*Prior  
to launch*                      *After  
launch*

<i>User Sessions</i>	<b>1,262</b>	<b>6,348</b>
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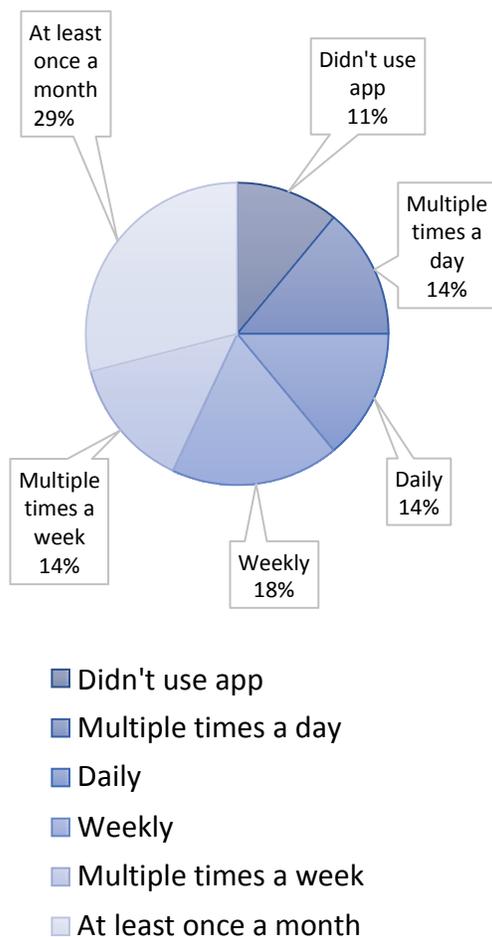
### Post-User Survey:

Of the 1,379 post campaign users, approx. 700 users were signed up through the 4<sup>th</sup> Dimension Recovery Center and received a \$10 voucher card. Of these 700 users, 70 (10%) were asked to complete a post-evaluation survey using a 1 to 5 Likert rating scale. Of those 70, 30 Sober Grid users (4.3% of the 4D group) responded to the request and completed the survey.

- 89% of those users surveyed reported that they used Sober Grid in the 30 days following the campaign.
- 42% reported that they were very to somewhat likely to continue using the recovery application.
- 54% reported that the app was somewhat to very supportive of their recovery.

**89% of those users surveyed reported using Sober Grid after the campaign**

*(how often did you use the app?)*



## Conclusions

Nearly half of the Sober Grid users who participated in this demonstration project reported their desire to continue using the smartphone app, and that the app was helpful and supportive of their recovery.

Our experience with the Sober Grid demonstration project adds to a growing body of evidence on the potential of e-recovery technologies in supporting long-term recovery for substance-affected youth. E-recovery technologies like Sober Grid have the potential to create virtual recovery communities that transcend limitations of time and place and engage people beyond the boundaries of addiction treatment and formal recovery mutual aid organizations.

It is incumbent upon SUD professionals to support alternatives to traditional pathways of recovery and these pathways now include technology-based recovery applications.

The 4th Dimension's Executive Director, Tony Vezina, stated "The Sober Grid app fills a major void and is an important addition to the recovery support continuum. Positive Feedback from practitioners within the larger behavioral health community further confirms the value of e-recovery technologies such as Sober Grid.

The Sober Grid campaign demonstrated the need for recovery mobile apps to be continuously promoted by SUD treatment, recovery support services, community recovery centers, and other behavioral health organizations.

Sober Grid is competing with very powerful social media platforms like Facebook, Instagram, and Snapchat, and several users reported liking the features mirroring those platforms. A few users reported the app being “glitchy” and desired more direction in using the app. Several users reported using the app when they couldn’t get to a recovery support meeting, and one user reported being delighted with “talking to people in recovery across the world.”

This project has successfully demonstrated the viability of smartphone app “campaigns” to jump start utilization of a recovery app within local communities.

Creating more social contact and interdependence within recovery communities and promoting alternative pathways to recovery has the potential to enhance the strength and momentum of recovery and wellness within local communities. These factors will likely demonstrate economic savings in those same communities by capitalizing on that momentum of recovery. We will continue to explore the potential of e-recovery technologies as a medium of recovery support for youth within the Portland, Oregon tri-county metropolitan area.

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