

# Exploring Mobile Aftercare for Crisis Stabilization Units used after a Law Enforcement Citizen Encounter

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## About the Authors

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IJRD is a research center housed within the College of Social Work at FSU. Our mission is to use science to improve lives, communities, and institutions by developing and researching innovations that reduce unnecessary reliance on the criminal justice system and by offering solutions that produce equity and prosperity across race, socioeconomic class, and behavioral health status. IJRD specializes in conducting rigorous real-world research using randomized controlled trials and prioritizes rapid dissemination of research findings to advocates, professionals, and policymakers. IJRD team members live and work in communities across the nation, implementing a range of research projects relevant to criminal justice reform. You can learn more about broader work of IJRD at [ijrd.csw.fsu.edu](http://ijrd.csw.fsu.edu)

## Background

Crisis Stabilization Units (CSUs) are short-term public receiving facilities for individuals experiencing a mental health or substance-related crisis. The goal of the CSU is to quickly stabilize individuals, often within 72 hours, and then connect them to additional systems of support in the community. As public receiving facilities, CSUs offer a critical non-refusal option for law enforcement, meaning they are obligated to accept individuals brought under an emergency involuntary psychiatric hold. This CSU policy offers an important alternative to arrest for law enforcement who often encounter individuals experiencing these types of crises. In fact, research indicates that law enforcement often has repeat contact with individuals experiencing mental health and substance-related crises, and that a history of interaction with the criminal justice system is common in the typical CSU patient [1,2].

This repeat contact with the justice system may be, in part, explained by the structural and individual barriers to long-term stabilization, that are often associated with CSU patient populations; These barriers include financial, transportation, and accessibility difficulties [3]. Without attending to these barriers, the average CSU patient may be at risk of relapse and readmission. The IJRD research team believes these barriers are addressable, and that CSUs have the potential to improve individual and public safety outcomes through their diversion to treatment. Individuals, diverted to CSU's and community resources, have a better chance of accessing and engaging with systems of care, leading to more substance-use and mental health treatment. This increased chance for care and treatment is best reflected by comparing the higher recidivism rate for individuals brought to jail (44% average) compared to individuals treated through a short-term inpatient mental health facility, like CSUs (30% average) [4,5].

Moreover, creating successful diversion and treatment options is imperative for individuals experiencing mental health and substance-related crises who are at-risk for long-term entrenchment in the criminal justice system, as well as fatal complications from substance use. Persons with mental health and substance use concerns make up a significant portion of our incarcerated population. According to the Bureau of Justice Statistics (BJS) 44% of incarcerated persons have had at least one mental diagnosis and that between 45-53% also meet the criteria for substance use disorder (SUD) [6]. Furthermore, persons with co-occurring mental health and substance-use diagnosis are

at-risk for long-term entrenchment in the justice system most notably emphasized by their significantly higher rate of recidivism compared to persons without a diagnosis [5]. Additionally, persons in substance use crisis are at-risk for fatal complication like overdose. Opioid specific substance crises continue to be an epidemic in the United States with roughly 50,000 opioid related deaths in 2019 alone, placing opioid related public safety at the forefront of concern [7]. The pronounced rate of mental health and substance use diagnoses in our jails and prisons, along with the epidemic of substance-use fatalities emphasizes the dire need for CSUs to divert persons to treatment and away from incarceration.

In response to the need to optimize CSUs for mental health and substance use treatment and understand law enforcement utilization and diversion of persons into CSUs, the IJRD research team designed the Post-Crisis Stabilization Pilot Feasibility study. This project was specifically initiated in a Southeastern region on the United States, in-part due to the above average opioid-related death rate observed in that region [8]. This pilot feasibility study has three main goals. 1) to explore how CSUs operate as an alternative to arrest and investigate the barriers and facilitators to their utilization, 2) to address barriers to sustained long-term stabilization for CSU patients, and 3) to provide a foundation for a future large-scale randomized controlled trial.

The study is comprised of two co-occurring phases. Phase 1 included interviews with law enforcement and mental health professionals regarding their experience responding to mental health and substance use crises in their community, including the process of using CSUs. Phase 2 included the employment of an aftercare intervention with randomized participants discharged from the CSU. Phase 2 participants were brought to the CSU by law enforcement and recruited by our research team once they were determined to be stable and approaching discharge. This report describes Phase 2 of the study and provides an overview of the recruited participants, and the intervention used with these individuals. We will begin with a description of our participants at time of recruitment to describe demographic and diagnostic characteristics present at time of beginning participation with our project. Then, we will detail the mobile and technology-assisted intervention piloted on these participants.

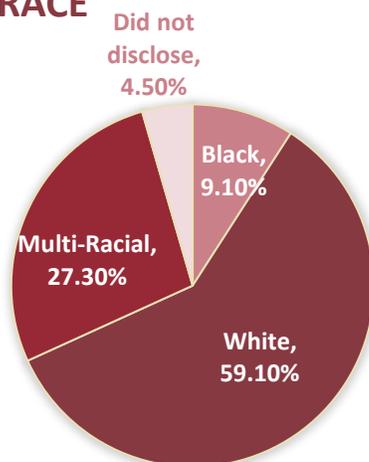
## Participant Information

Participants in Phase 2 were each admitted to a CSU under a law enforcement-initiated involuntary hospitalization. To be included in the study, individuals had to be fluent in English, reside within the designated counties, be at least 18 years old, and be medically cleared by CSU staff as stable. Recruitment lasted approximately 15 weeks between April 2021 and July 2021. During this time, the IJRD research team approached 44 eligible participants, and 22 were consented and randomized into the study. Below is the demographic information and various presenting characteristics notated by the CSU staff for each participant upon their admission into the CSU.

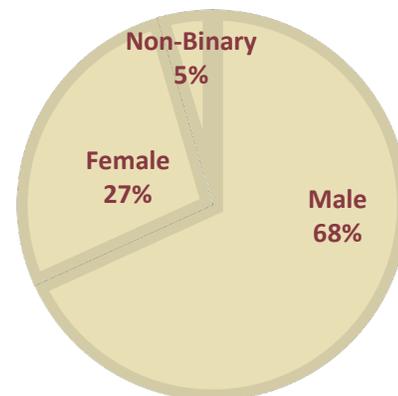
### Demographics

We collected demographic information on recruited participants including age, race, Hispanic ethnicity, and gender. Of the 22 participants, 59.1% reported being White, 27.3% identified as multi-racial, and 9.1% reported being Black. The majority (86.4%) reported being non-Hispanic. The participants were predominantly male (68.2%), with 27.3% identifying as female and one individual identifying as other (4.5%). The average age of our participants was 34 years old, and our participant's ages ranged from 18-58 years old.

#### REPORTED RACE



#### GENDER



## Previous CSU Admissions

We gathered records of previous CSU admissions of participants from our partnering mental health provider's CSUs. Specifically, we gathered CSU admission reports for the five years prior to the CSU admission that resulted in their recruitment (between 2016 to 2021). This allowed us to examine how many times, if any, our participants had been admitted into the CSU during that window. In the five years prior to recruitment, over half of our participants had zero admissions into the partnering CSUs. Nine participants were admitted between one to five times, and one participant had been admitted more than five times in the past five years. That participant had been admitted into one of the partnering CSUs eight times within the last five years.



### Previous admissions into a Crisis Stabilization Unit

- 54.5% reported never having previously been admitted
- 40.9% reported 1-5 previous admissions
- 4.5% reported over 5 previous admissions

## Mental Health Diagnoses

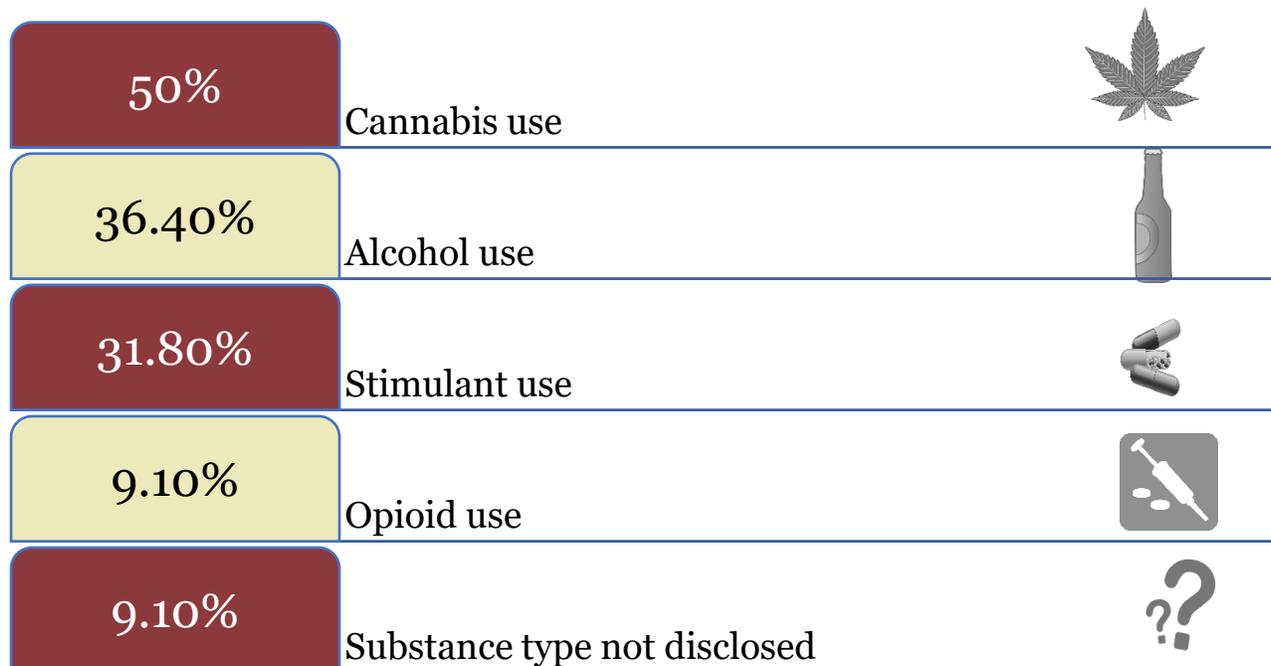
We gathered data on our participant's presenting and/or active diagnoses noted upon their intake into the CSU. These diagnoses were assigned and confirmed by psychiatrists and CSU medical staff during evaluation. All participants had at least one mental health diagnosis. Most participants (63.6%) were diagnosed with major depressive disorder. The second most common mental health diagnosis was bipolar disorder (22.7%). Additionally, two participants (9.1%) were diagnosed with a type of schizophrenia disorder, and two were diagnosed with a trauma-related disorder. Five participants received one of the following diagnoses: generalized anxiety disorder, oppositional defiant disorder, specified learning disorder, narcissistic personality disorder, and adjustment disorder with mixed disturbance.

Presenting Diagnoses	Percentage of Participants With the Diagnosis
Major Depressive Disorder	63.6%
Bipolar Disorder	22.7%
Schizophrenia/Schizoaffective Disorder	9.1%
Unspecified Trauma/PTSD	9.1%
Generalized Anxiety Disorder	4.5%
Oppositional Defiant Disorder	4.5%
Specified Learning Disorder	4.5%
Narcissistic Personality Disorder	4.5%
Adjustment disorder with mixed disturbance	4.5%

*Note: 4 of the 22 participants had multiple mental health diagnoses.*

## Substances

To assess substance use, we collected data from a variety of sources. From the CSU, we gathered data from the urinary drug screens performed upon admission, data from any participant self-reporting of drug use, and clinical diagnoses given at the CSU related to substance use. Out of the 22 participants, 18 either tested positive during the drug screen, self-disclosed use, or were given a substance use diagnosis. Only four participants had no reported substance use. Half of the 18 participants who reported substance use reported using Cannabis. Over a third of the 18 participants who reported substance use reported using Alcohol. The next most common reported substance used were Stimulants, followed by Opioids, and lastly instances where the participant did not disclose the type(s) of substances used.



*\*Note: 10 of the 18 participants reported or tested positive for multiple substance types*

## Co-Occurring Disorders

Out of the 22 participants, 40.9% were diagnosed with co-occurring substance-related and mental health disorders. Two participants were diagnosed with a stimulant use disorder and a type of schizophrenia disorder. The rest of the diagnoses were unique to each individual and are listed in the chart below. When looking across the individuals we see some similarities in diagnoses. For instance, we see that three individuals were diagnosed with alcohol use disorder, and three were diagnosed with cannabis use disorder. Two individuals were diagnosed with amphetamine use disorder, two were diagnosed with stimulant use disorder, and one individual was diagnosed with opioid use disorder.

Presenting Co-Occurring Diagnoses	Percentage of Participants with Diagnosis (n=9)
Co-occurring mental health and substance use disorder	40.9%
Stimulant Use Disorder & Schizophrenia/Schizoaffective Disorder	22.2%
Amphetamine Use Disorder & Major Depressive Disorder	11.1%
Alcohol Use Disorder, Amphetamine Use Disorder & Major Depressive Disorder	11.1%
Alcohol Use Disorder & Major Depressive Disorder	11.1%
Alcohol Use Disorder & Unspecified Trauma	11.1%
Cannabis Use Disorder, Bipolar Disorder & Narcissistic Personality Disorder	11.1%
Unspecified Cannabis Use Disorder & Bipolar Disorder	11.1%
Opioid Use Disorder, Cannabis Use Disorder & Bipolar Disorder	11.1%

## Substance Use Services

During our first interview with participants, two weeks after their discharge from the CSU, we asked about their previous need for substance use services and what services they had used during their lifetime. Of the 22 participants recruited into the study, 15 participants completed this first interview. Five of the 15 individuals (33.3%) reported ever needing help for things like drug use or alcohol use, while six individuals (40%) reported receiving help for things like drug use or alcohol use in their lifetime. Of the six participants who reported receiving services in their lifetime, most attended support group services, followed by psychotherapy, peer support, self-help planning, hospitalization, and medication-assisted treatment.



## Intervention

Upon recruitment into the study, participants were randomly assigned into either the mobile aftercare program or the standard services group. Participants randomized into the mobile aftercare program received the mobile and technology-assisted aftercare intervention for six months following their discharge from the CSU. Participants randomized into the standard services group received the standard services available to individuals leaving the CSU. Standard services included a follow-up appointment with a mental health professional approximately one week after discharge from the CSU, as well as access to any acute and long-term services available from our partnering mental health agency and/or any other service agency in the participant's community.

The mobile aftercare intervention included two major components. 1) A master's level mental health professional called the Community Support Specialist (CSS) who met with participants at their home or a mutually agreed upon community location. 2) Behavioral health mobile applications that provided participants 24-hour access to support. The details of these two components, in-person (home) sessions with the CSS, and the mobile applications, are further described below.

## Home sessions

The CSS met with participants up to one session per week. During these sessions, the CSS provided counseling, goal management, connection and assistance with community resources, psychoeducation, and social support. The focal point for each session involved discussing the participants goals and experience working towards them. Participant goals were created by the participant in collaboration with the CSS. Throughout the first two sessions with the CSS (or more if the conversation was not completed), each participant was asked exploratory questions to identify three goals and provide a plan for future sessions. For instance, participants were asked about their motivation to join the study, what areas in their life were the biggest priority to address, and generally what things were important to them. Importantly, in these conversations the CSS was instructed to use goal-oriented and future-focused language so that participant goals were phrased as something they were working towards rather than something they were trying to avoid or stop. For instance, rather than a goal of ‘stop being so anxious’, the participant’s goal would be phrased as, ‘increase feelings of self-security and self-acceptance.’ Throughout sessions, the CSS used motivational interviewing (MI), solution-focused brief therapy (SBFT), and future-focused language to explore barriers participants were facing at reaching their goals, as well as things that were going well for them. Lastly, the CSS also incorporated conversations about the mobile applications into each session, checking in on use, satisfaction, and education on the app’s functions.



## Mobile Applications

The inclusion of mobile applications served to augment the in-person support provided by the CSS. The mobile apps were free for the participants and uploaded onto their smartphones. If the participant did not have reliable access to a smartphone or did not wish to have the apps uploaded to their device, they were provided a smartphone for free by the research team. There was no cost to participants for the smartphone or technology used for the duration of their participation in the study.



Four mobile applications were chosen for this intervention. These apps were selected after a thorough investigation to meet the standard of being created by mental health professionals or have undergone randomized control trial (RCT) or a clinical trial and showed positive impacts on our intended outcomes. The four apps include Moodtools-Depression Aid, Virtual Hope Box, Recovery Path, and Intellicare Hub. A brief description of activities and tools available on each of the above apps is listed below.

For the intervention, participants were not required to use the mobile applications. However, the CSS encouraged the participants to use the apps and discussed the potential benefits of doing so. During sessions, the CSS asked participants about their general use of the apps, what they liked and did not like about the apps, and provided encouragement on how the apps may assist the participant in reaching their goals.

# Mobile Applications

## Moodtools

- targets anxiety & depression
- functions include:
  - thought diary
  - safety planning
  - PHQ-9 test
  - tracking of symptoms
  - psychoeducati on material
  - links to outside resources

## Virtual Hope Box

- targets depression and suicide prevention
- functions include:
  - lessons on coping skills
  - relaxation and positive thinking activities
  - guided meditation
  - visual and audial guides

## Recovery Path

- targets substance use
- functions include:
  - teaches coping skills
  - psychoeducati on material
  - goal setting & planning
  - locations for nearby addiction recovery resources
  - daily check-ins

## Intellicare Hub

- targets stress, anxiety, & depression
- functions include:
  - symptom tracking
  - PHQ-9 test
  - GAD-7 test
  - psychoeducati on material
  - relaxation and positive thinking acitivies
  - goal setting

*Please see appendix A for citation of each of the four mobile applications above.*

## Next Steps

Future interim reports will detail the data collection methods and trends observed in our participants throughout their participation in the study. Additionally, we will soon be publishing a report that provides a similar overview to our Phase 1, describing the law enforcement and mental health professionals and the qualitative interviews conducted with them.

## References

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## Appendix A

### **Mobile Applications**

Intellicare Hub (mobile app), Actualize Therapy, <https://www.adaptive-health.com/intellicare>

Moodtools (mobile app), Inquiry Health LLC, <https://www.moodtools.org>

Recovery Path (mobile app), Recovery Record, Inc., <https://www.recoverypath.com>

Virtual Hope Box (mobile app), National Center for Telehealth and Technology (T2), of the Defense Health Agency (DHA), <https://health.mil/News/Mobile-Apps>