

Digital Health Intervention to Promote Engagement in and Adherence to Medication for Opioid Use Disorder: Findings from an Open Pilot Trial

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Background

- Medication for Opioid Use Disorder (MOUD), which includes the use of Methadone, Buprenorphine-Naloxone (BUP), or Long-Acting Naltrexone, is an evidence-based approach to the treatment of Opioid Use Disorder (OUD).
- BUP, a long-acting partial opioid agonist, has grown in popularity over the last decade because of its safety profile and flexible administration.
- Meta-analyses highlight the effectiveness of BUP in reducing adverse outcomes, including lowering fatality rates associated with overdose. Despite its popularity and known efficacy, many patients discontinue treatment prematurely and/or return to illicit opioid use.
- Novel intervention strategies that may be delivered outside of traditional treatment settings are needed to support BUP uptake and maintenance.

Purpose

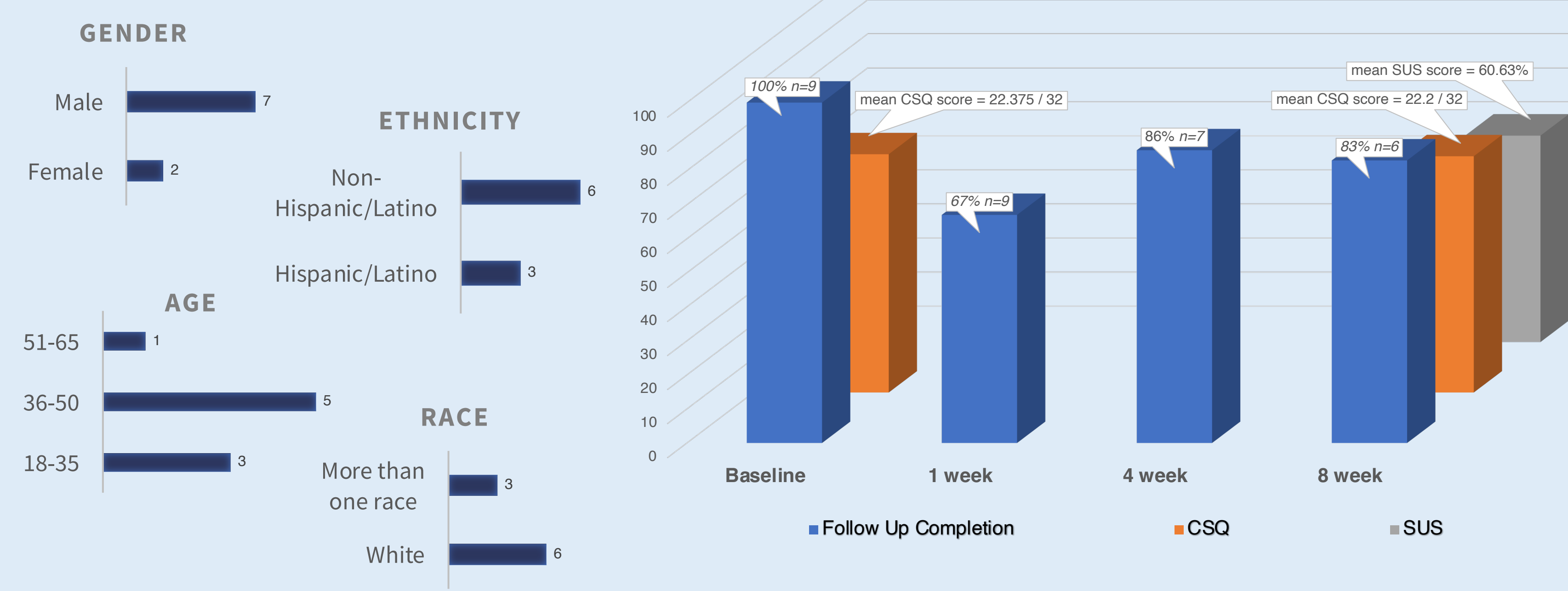
- The goal of this study was to conduct an open pilot trial to elucidate acceptability/feasibility of an interactive computer- and text message-delivered personalized feedback intervention for adults initiating outpatient BUP treatment (see additional details of intervention in the computer and text message sections).

Method

- Patients ($n=9$), who initiated BUP within the past 8 weeks, were recruited to participate in open trial procedures.
- Following informed consent and baseline assessments, participants completed a single-session computer intervention focused on enhancing motivation and providing psychoeducation on distress tolerance skills.
- Over the following 8 weeks, participants received daily text messages that 1) provided a reminder of salient motivational factors, and 2) recommended a coping skill personalized to the participant's assessment of mood and urges/cravings.
- Participants completed follow-up assessments at 1-, 4-, and 8-weeks to assess relevant outcomes as well as perceived satisfaction. We report on feasibility, acceptability and perceived satisfaction in this presentation.
- Additional perspectives were captured via qualitative exit interviews, conducted by trained interviewers, audio-recorded, and transcribed verbatim.

Results

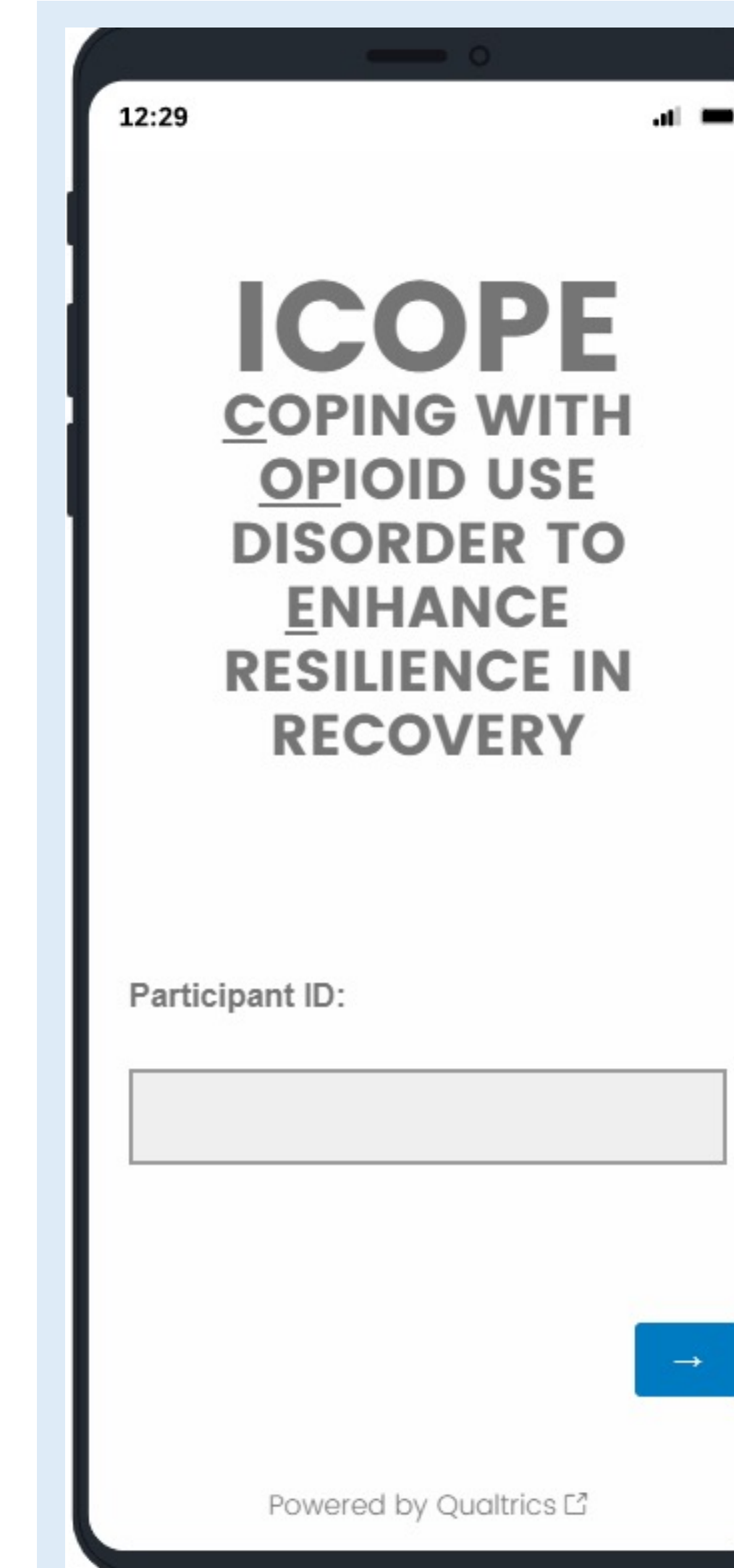
- Recruitment and participation is ongoing. To date, 83% ($n=5/6$) of participants engaged with the text messages throughout the entire 8-week period.
- The mean score on the Client Satisfaction Questionnaire (CSQ-8) was 22.375 following the computer intervention and 22.2 at the end of the text message program, indicating a high degree of satisfaction with the intervention.
- The average rating on the System Usability Scale (SUS) at the end of the 8-week program was 60.63%, suggesting that the intervention was relatively easy to use.
- Completion rates of follow up assessments: 67% ($n=6/9$) at week 1, 86% ($n=6/7$) at week 4, and 83% ($n=5/6$) at week 8, demonstrating a high level of participant retention across the study period.
- Consistent with self-report ratings about feasibility and usability, participants endorsed positive experiences with the intervention. Major thematic findings from the qualitative interviews included perceived relevance of the personalized messages, a sense of internal accountability promoted by the content and structured daily delivery, and general motivation to continue engagement in treatment.



Major Thematic Results	Illustrative Quotes
Perceived relevance of personalized text messages	<p>Interviewer: ... how often were the messages sent to you by the iCOPE program relevant to you and your recovery...?</p> <p>“Probably like 100 percent because, like I said, they all revolved around the answers that I gave for that first survey... Every time it was sent to me, it was based on the questions I had answered in my own words, so every time, it was relevant to me.”</p> <p>“I thought that was a really good thing to use your own feedback. I thought that was a great idea ‘cause each person’s different... Each person’s gonna answer questions differently, so using their own answers is the best way to get through.”</p>
Sense of accountability	<p>Interviewer: What do you think was helpful about answering the questions?</p> <p>“It made me be accountable for my actions. [Accountability] within myself, yeah... Because it was a regiment. You know what I mean? Like it would be a daily ritual almost.”</p>
Motivation and support for treatment engagement	<p>“It was a positive experience. It kept me focused and motivated on the task at hand.”</p> <p>“It’s helped with my overall, yeah... Like I said before, support. Supporting me. You know what I mean? It was like some of my armor when I’m going into battle.”</p>

Conclusion

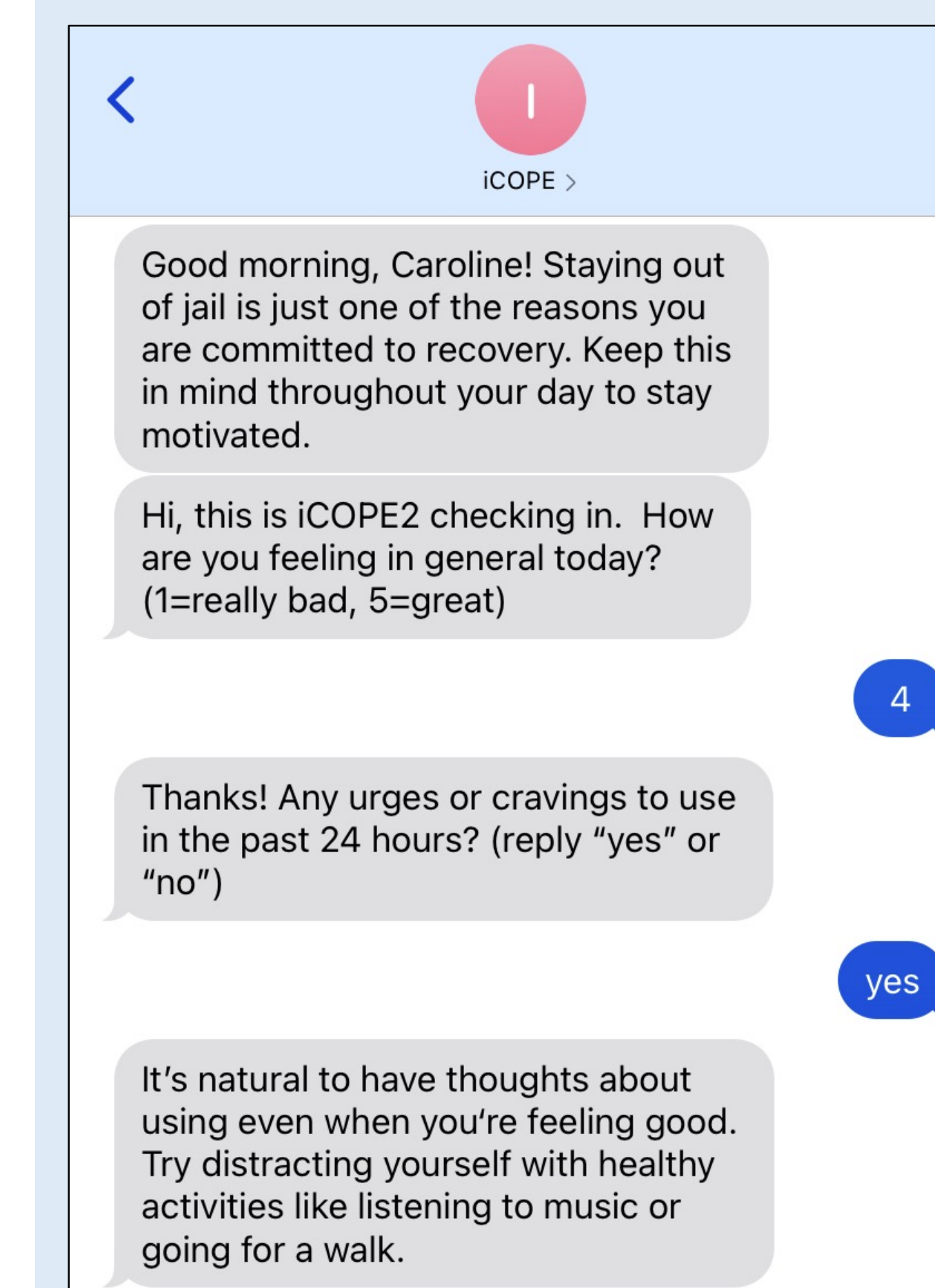
- Preliminary findings of this open pilot trial suggest that iCOPE is perceived as an acceptable intervention to augment outpatient buprenorphine treatment.
- Future work will compare the effects of iCOPE, relative to treatment-as-usual, in terms of promoting motivation for treatment and recovery, abstinence rates, and adherence to buprenorphine and treatment retention.



- ### Computer Intervention
- Enhance motivation to change through decisional balance exercise that assesses pros/cons of engaging in treatment and discontinuing opioid use
 - Assess potential barriers to treatment/recovery
 - Provide personalized recommendations to overcome barriers through use of distress tolerance skills

WHAT MOTIVATES YOU TO QUIT?
 NOW, TELL US WHAT MIGHT BE GOOD AND NOT SO GOOD ABOUT QUITTING. SELECT THE BOXES THAT ARE MOST IMPORTANT TO YOU!

Pros of Quitting	Cons of Quitting
<input type="checkbox"/> Less risk of overdose	<input type="checkbox"/> Feel withdrawal symptoms
<input type="checkbox"/> Better health	<input type="checkbox"/> Give up friends who use
<input type="checkbox"/> No longer feel controlled by drugs	<input type="checkbox"/> Have to face problems
<input type="checkbox"/> Repair relationships	<input type="checkbox"/> Less energy
<input type="checkbox"/> Stop the "chase" of buying drugs	<input type="checkbox"/> More pain
<input type="checkbox"/> More money	<input type="checkbox"/> Can't get high
<input type="checkbox"/> Build back trust	<input type="checkbox"/> Hard to cope with feelings
<input type="checkbox"/> Go back to work	<input type="checkbox"/> Urges/cravings
<input type="checkbox"/> Other, please enter your response in the box	<input type="checkbox"/> Other, please enter your response in the box



- ### Text Message Intervention
- Reinforce motivation by reminding participant of salient motivational factors
 - Provide skills training in “real time” that is personalized by mood and urges/craving

