

**On the Wagon: How a therapist supported app is keeping clients on track**

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## Introduction and Theoretical Background

Smartphone apps have emerged as an effective tool that supports recovery from both problematic substance use and substance use disorders (SUD) (Hoeppner et al., 2017). From a clinical perspective, apps are an integral relapse prevention tool that can facilitate the continuation of treatment gains (Hoeppner et al., 2017). App technology overcomes several barriers of traditional treatment, including client concerns about time, cost, childcare issues, and the stigma of receiving treatment (Copeland, 1997; Dulin, Gonzalez, King, Giroux, & Bacon, 2013; Hoeppner et al., 2017; Meredith, Alessi, & Petry, 2015). Moreover, the accessibility and convenience of an app addresses the barrier of isolation for individuals in remote communities and bypasses reliance on pre-scheduled appointments (Hoeppner et al., 2017; Hoeppner et al., 2016).

Content analyses of publicly available smartphone apps by Hoeppner and colleagues (2016; 2017) illustrate the logistical and substantive advantage of tailoring. Tailoring, defined as providing personalized health behavior messages to individuals based on their needs (Kreuter & Skinner, 2000), has been shown to greatly increase the effectiveness of health behavior interventions and messages (Chua et al., 2011; Hoeppner et al., 2017; Noar, Benac, & Harris, 2007). Smartphone apps provide a unique opportunity to give feedback on user input which can be proactively solicited or passively collected, depending on the app (Hoeppner et al., 2017). Using these measures, tailoring feedback can be useful to engage the client in their recovery process and to aid the client build protective factors and new habits (e.g., “geofencing to interact with users when they are entering a high-risk location...,” (Hoeppner et al., 2017, pg.68)). Tailoring feedback, as well as the increased development, downloading, and public interest in app use for managing and regulating behaviour, highlight the relevance of apps to the treatment of substance-related issues and dependence (Hoeppner et al., 2017).

Finally, as technology has developed, this form of mediated communication can provide similar levels of support as face-to-face (F2F) interaction, with some clients even preferring this method to express their personal and intimate thoughts and feelings (Basedow, 2016; Derks et al. 2008). The use of apps allows clients to have more time to cognitively appraise their situation in the moment (highly useful for recovery), and immediate responses from the app (e.g., goal completion or tailored goals) can reinforce positive emotional experiences (Basedow 2016; Derks et al., 2008). People are clearly interested in the use of apps for recovery purposes, however, there is a gap in available apps that engage, track (including geographically) and support users through a highly tailored approach (Hoeppner et al., 2017).

## **Introducing Wagon:**

### **Canada's first clinical care app that allows health care providers to monitor and connect with their patients**

The Wagon app was designed in response to growing data that clients seeking support from problematic substance use respond positively to dynamic features and individual tailoring (Hoeppner et al., 2017). Wagon is a clinical digital program based on recovery tracking, monitoring and support. Clients set recovery goals and track their goals in Wagon. Counselors have real-time access to the results and provide coaching and support to help clients achieve those goals and move through difficult obstacles.

The dynamic features of Wagon provide tailored content based on user input. The input includes clients making their own recovery plan with a counsellor to set daily, weekly, monthly and one-time goals. The app can be highly motivating as the recovery plan is easy to follow and goals are checked off by clients when completed. Clients can set up custom reminders and are able to see their day in review. The day in review contains personal data about abstinence, triggers, emotions, resentments and isolation; the review is sent to the client's operating counsellor so the app can continue to be tailored and the client can gain awareness of patterns on their emotional state.

Additional tailored content includes an SOS function which allows clients to access personalized coping strategies and safety telephone numbers in case they are triggered to use. The slippery locations function gathers passive data, known as geofencing, which sends push notifications to the client and notifies the operating counsellor when they enter high-risk locations. The immediacy of intervention from the app allows clients to deal with triggers as they happen, effectively acting to prevent relapse from occurring. Further tailoring includes push notifications sent to users each day to remind them to complete their daily review and goals as well as inspirational notifications. The content of Wagon is designed to address the limitations of other applications identified in the content analysis conducted by Hoeppner and colleagues (2017). Limitations identified include a lack of tailored information for variables that are identified as important in changing addictive behaviours such as triggers, goal setting, and psychosocial variables (Hoeppner et al., 2017). In addition, the cutting edge technology of Wagon proactively engages clients through push notifications and leverages passively collected GPS data. Wagon provides personalized care in the form of setting up the app, creating personalized goals, reminders from counsellors regarding inactivity and a 20-minute personal counsellor coaching call per week, and it is an affordable tool that supports the recovery process.

For clinicians, Wagon offers a quick and easy set-up that helps develop a customized recovery plan that addresses patient needs and challenges. As a patient progresses in their recovery, goals can be easily changed, added, and/or removed. Counselors play a key role in helping patients identify their recovery capital and help them to track their sober date, commitments, and coping strategies to prevent relapse. Counselors help patients identify unsafe locations and design the push notification to remind patients they have other choices, including the SOS function within the app. In real-time, counsellors have access to a counsellor dashboard, including a caseload overview, which helps them view their patients' goals, progress, and timeframe of completion. Counselors can help track patients emotional states by viewing data entered on their daily review and allowing weekly check-ins to have higher therapeutic value based on the data presented by the client.

### **Overview of Pilot Study**

Edgewood Health Network (EHN) conducted a four month (120 day) pilot study to explore Wagon's overall impact and effectiveness for clients. Participants (n = 37) ranged from 26-59 years old (M = 39.54, SD = 9.06). Gender of participants (n = 37) was relatively equal; 56.8% were male, while 43.2% were female. Participants were selected from multiple EHN programs including extended care (35.5%), in-person continuing care (32.3%), online continuing care (16.1%) and individual therapy (16.1%). The primary reported addiction was alcohol (40.5%), followed by alcohol and drugs (35.1%), drugs (21.6%), and other (2.7%). In addition, 51.4% of participants reported having one or more process addictions in combination with their substance addiction.

Preliminary results from the pilot study suggest that Wagon is an effective tool that supports clients recovering from problematic substance use and SUD. The majority of participants (62.2%) reported a decrease in triggers while using Wagon, while only 10.8% reported an increase, and the remaining 27% reported no change. A majority of participants benefited emotionally from the use of Wagon; 47.2% of participants reported a decrease in isolation, and 63.9% reported an increase in happiness. Overall, participants said they would recommend Wagon (73%), and 46.7% said they would be likely or extremely likely to pay for the use of Wagon.

Likert-type data was collected pre and post wagon use regarding patterns of use, frequency of triggers and frequency of isolation. Paired samples t-tests were conducted to analyze the difference between groups before and after using Wagon. Results from the analyses indicated there was a significant difference in patterns of use from the pre-wagon survey (M=

1.74, SE = 0.198) to post-WAGON survey (M = 2.07, SE = .35),  $t(34) = -2.571$ ,  $p = .015$ . Additionally, there was a significant difference in frequency of triggers between the pre-Wagon survey (M = 3.94, SE = .29) and the post-Wagon survey (M = 4.88, SE = .23),  $t(32) = -3.118$ ,  $p = .004$ . Similar results were found for frequency of isolation. Participants (n = 33) reported more isolation at the pre-Wagon survey (M = 3.86, SE = .27) than at the post-Wagon survey (M = 4.71, SE = .25) and this difference was significant  $t(32) = -3.48$ ,  $p = .001$ .

Wagon shows promise to assist clients in their recovery process and build stronger recovery capital. Wagon addresses some of the gaps in previous literature regarding the use and effectiveness of smartphone apps. Edgewood Health Network is launching an experiment in January 2018 to further study the benefits and limitations of the use of this app. This study will look at a random sample of clients taken from an intensive outpatient program, in comparison to a control group of clients in the same program at seven different outpatient clinics across Canada. We hope this study further aids the implementation of Wagon and increases chances of success for problematic substance users and dependents.

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