#### **Sprint #2 – Research, Planning & Requirements**

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| A web based app to track the alcohol intake of a person to help them in alcohol addiction recovery. It will be a motivational app that tracks your alcohol intake, shows consumption timeline, marks milestones and gives the option to connect to your counselor. |

**Features (Given by TA):**

**1.**  **Use user stats for the patient who needs alcohol rehabilitation. (FHIR component) - things related to alcohol consumption** - Checking specific patients who may use the app.- Patients must provide their patient ID - recommended to use smart on FHIR

**2. Input and store intake of alcohol consumed by user (User input)**

**3. Motivational messages and next steps (based on research)** - show positive information mostly

**4. Show statistics to show good effect on physical health for motivation (based on research)** - show alternatives

**5.**  **Suggest alternatives to user when they want to avoid alcohol (based on lifestyle research, can take user input like access to gym, park, proximity to nearest recreation etc.)**

**6. Send milestone information to the doctor (say email)**

User accounts are desirable - but do very basically

Get location to recommend areas - maybe zip code?

**Background Research ((context given by mentor(s), market context, needs, survey, interviews, etc.):**

What other kind of alcohol recovery tools are there?

AlcoDroid Alcohol Tracker: An app that tracks alcohol intake with blood alcohol calculator

Steps Companion: Includes database of AA contacts which allow users to talk to someone. Has notes, calculator and search tools

I Am Sober: App that keeps track of sober days by having milestones, has a community that can talk to one another, has resources that can help with addiction. (Very similar to what we are doing)

Nomo: App keeps track of your alcohol intake. It also allows to notify people close to you when you are feeling tempted and share milestones to social media

Lots of these apps have a system of tracking alcohol intake, while also having milestones which can be shared to their friends. This is what most apps have out in the market, and there is still more that can be done to personalize the situation.

How can we personalize our tool based on patient information?

If we have a big enough dataset, we can use machine learning to help with the personalization of the tool. We can make fun facts that are based on the information which can help users get relevant data. Another way is to notify people close to the user when there is a bad increase in alcohol intake. This allows the personalization of the application by having people get notified of the user drinking alcohol.

**Business Case (what problem, for whom, benefits to end users, solutions, etc.):**

Over 14 million American adults have alcohol use disorder. 88,000 Americans die annually from alcohol-related causes, making alcohol-abuse the third leading cause of preventable death in the U.S. Alcohol abuse also costs the U.S. citizens and taxpayers over a quarter trillion annually. Many of those who abuse alcohol wish to stop, but the psychological addiction can be very strong, and the physical withdrawal can be deadly.

It isn’t easy to get and stay sober. A structured routine is essential to recovery. An app which helps users track their alcohol consumption could provide a means for establishing a sense of organization and order with respect to their sobriety.

Interpersonal support is also an essential aspect to alcohol recovery. Having the ability to not only record their progress, but share it with others (especially their doctor/mentor/sponsor), can provide a telecommunicative solution to the need for those in recovery to feel connected to those who are willing to stay by their side and cheer them on. This is a type of telemedicine, or ‘tele-support’.

Another aspect of a successful recovery program is productivity, or at least the easement of boredom. Boredom is a major trigger with enormous relapse potential. By providing the user with activities to get involved in, they may avoid relapse due to boredom. Research shows that people who engage in productive and/or meaningful activities stay sober longer. Furthermore, by providing activities that are focused on physical exercise, cravings can be reduced even further as exercise has been shown to reduce cravings.

Many drinkers cite their thinking patterns during relapse as the lack of ability to think of a reason not to have a drink. Thus, by including motivational messages and facts about how their mental and physical health is improving based on their recent sobriety history, users will have constant reasons not to have a drink and be inspired not to drink.

Target user: Patients in age group that are recommended alcohol rehabilitation and want to quit drinking

Additional Entities: Doctors/counsellors who receive info on their patient’s drinking habits. Possibly support groups who the target user can share their progress with.

**Ideas:**

-User can share and view other’s progress with “friends” added who also use the app for motivation.

-Maybe user can send support message to fellow users of the app.

- Successful limiting of intake gives user’s “awards” or medals for their success.

- Puts out warnings or types of advice when user’s log in excessive intake

- fact snippets which provide motivational facts, expressing to the user the many harms that may await them if they continue to abuse.

**Relevant Notes from lectures**

-Healthcare organizations are required by law to facilitate transfer of a patient's ehr to any app

.MD file

**# Project Plan**

**\*\*Author\*\*: \*\*Team 31\*\***

**## \*\*1 Introduction:\*\***

**Our project is to design an assistive web application for those recovering from alcohol addiction. The application will provide the ability to track alcohol intake as well as motivate patients and communicate with their physician.**

**## \*\*2 Process Description:\*\***

**a. Patient Stat Monitoring and Management**

**The application will obtain, use, and manage input from users and their health records through FHIR. Users will need the functionality to be able to input their alcohol consumption on a regular basis in order to track their progress. The application will also utilize patient statistics through FHIR to formulate the most beneficial experience for users.**

**Entrance criteria: Input from user and statistics through FHIR**

**Exit criteria: An efficient database system which will manage this data. Users can provide feedback if the app performs poorly and are experiencing high latency.**

**b. Motivate User**

**A primary function of the application is to also motivate users on the road to recovery. One form of motivation the application will offer is sending positive messages to appease users. Another method of motivation the application possesses is displaying metrics. These will serve as visuals to the users to reinforce to them that they are on the right track.**

**Entrance criteria: Regular input from user logging alcohol consumption**

**Exit criteria: Motivational messages through notifications and graphs that will visualize the user&#39;s progress. Users can provide feedback on whether these forms of motivation were effective.**

**c. Advise User**

**The application will also require the functionality of providing alternatives to users when they want to relapse. Our application will need to suggest activities within proximity of the user such as exercising at the gym, visiting a park, etc.**

**Entrance criteria: Input from the user when they feel they have to relapse as well as their geolocation**

**Exit criteria: Motivational messages through notifications and graphs that will visualize the user&#39;s progress. Users can provide feedback on whether these suggestions of alternatives were beneficial**

**d. Communicate with Physician**

**The alcohol recovery application will also need to communicate with the user&#39;s doctor to allow them to track their patient&#39;s progress. This will be done regularly through an email which will summarize the weekly metrics of the patient/user.**

**Entrance criteria: Metrics derived from regular user logs on alcohol consumption**

**Exit criteria: An email containing metrics and summarizing the progress of the user. Physicians can communicate feedback potentially requesting additional information about their patient if unsatisfied with the content within the email.**

**## \*\*3 Team:\*\***

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