



Integrated Self-Management Apps to Enhance Outcomes for Medicaid Consumers

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Outline

1. Background and Relevance to Medicaid
2. Life Goals app
3. PRIORI app
4. FY19 Integrated Apps Project
5. Future Directions – FY20 Project

Background and Relevance to Medicaid

- Self-management programs have been shown to improve medical and psychiatric outcomes for individuals with serious mental illness including bipolar disorder
- Mobile apps for serious mental illness have not been widely disseminated to lower-income, Medicaid-eligible populations
- Increase access to mobile health technologies for individuals with little to no access to mental health care (e.g. homebound; live in regions with little to no resources)

Life Goals Collaborative Care (LGCC)

- Evidence-based, manualized psychosocial intervention (Bauer & McBride, 2003)
- Includes health behavior change, psychotherapy, and motivational enhancement strategies
- Helps persons with mental disorders achieve personal goals by linking them to tailored health behavior change and symptom coping strategies
- Effectiveness shown in seven randomized controlled trials, especially for persons with co-occurring medical and substance use disorders

Life Goals – Smartphone App

Need for mobile health (m-Health) technologies led to the development of the Life Goals app

- Worked with Mark Bauer, MD (Boston VA/Harvard) to translate consumer workbooks into app content
- Consumer focus groups
- Utilized UM Tech Transfer as a resource to develop wireframes, clickable comps, and pitch book
- Met with local developers; received bids
- Secured MIP (Medicaid Match) funding for pilot testing

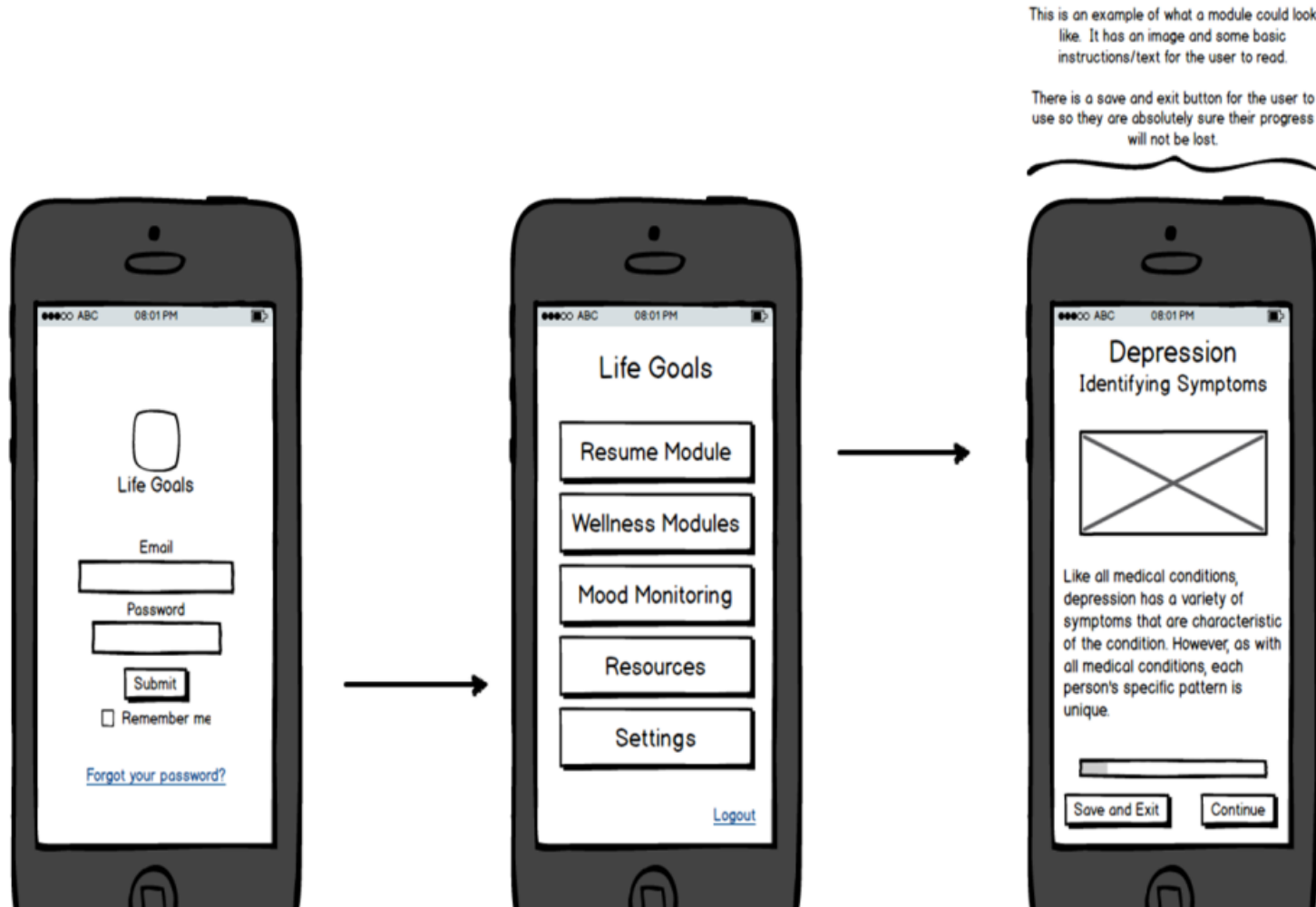
Life Goals App – Modules

- Introduction (basics on mood disorders, self-monitoring, stigma, values, factors impacting mental health, self-management, collaborative care)
- Managing Your Care (how to interact with health care providers in the future)
- Depression
- Mania
- Anxiety
- CBT I-IV
- Trauma
- Suicidal thoughts
- Psychosis
- Anger/irritability
- Substance use
- Foods and moods
- Physical activity
- Managing tobacco
- Sleep and Mood
- Topics are meant to be customizable based on the consumer's needs/wants
- Topic content is broken down into 5-10 minute mini-sessions that the consumer works through via the app
- Consumers have the ability to type in personal responses for questions asked by the app (i.e. customizable to their experience)

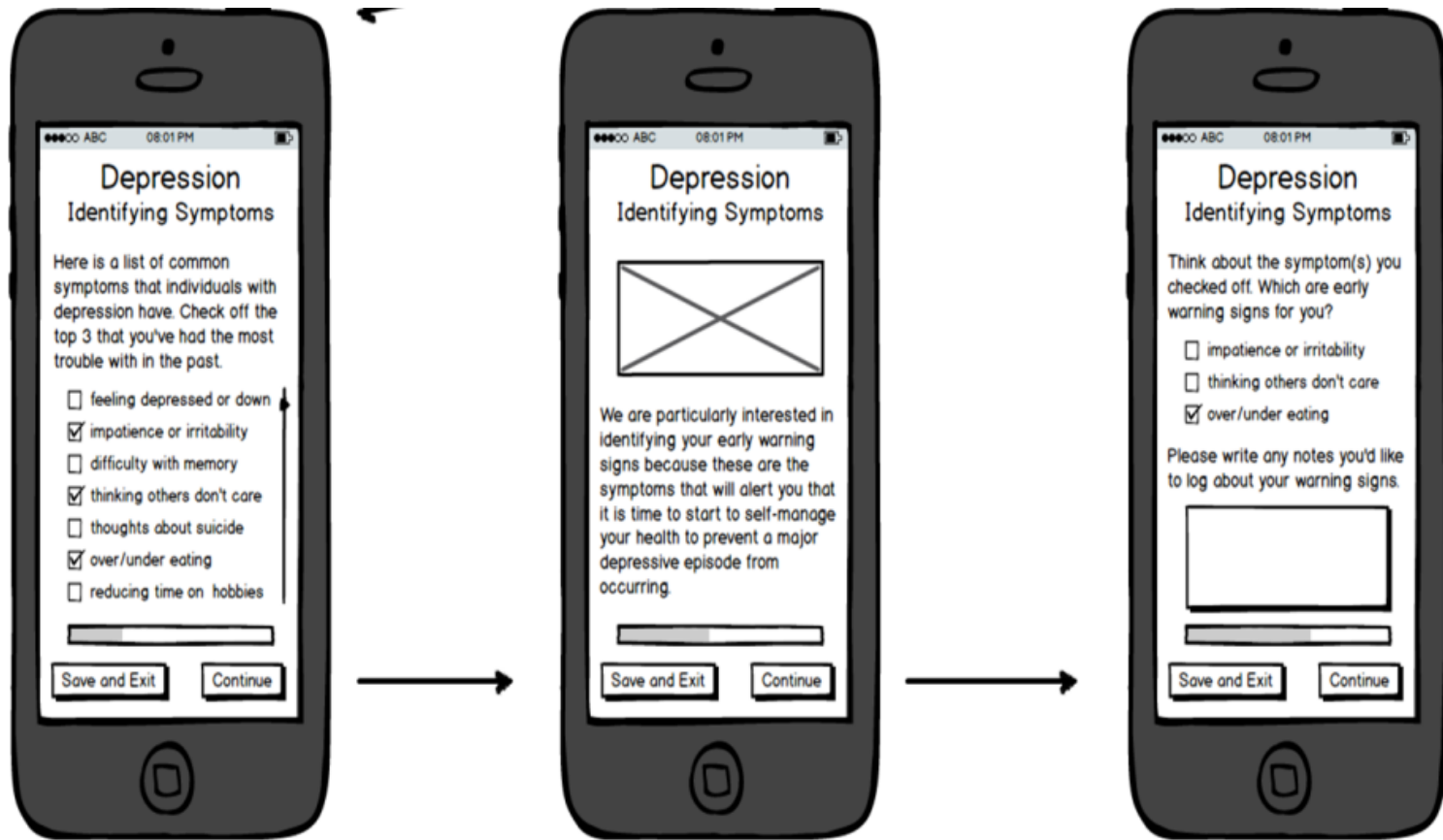
Life Goals Smartphone App						
Directions, questions or education	Possible Response	Alert Status	Session Title	Response	Bookmarks	Special Instructions
Depression - Identifying Symptoms						
Welcome back to the Life Goals Collaborative Care Smartphone App! For the next few sessions we're going to discuss your experience with depression: What are your symptoms, triggers, and how do you respond to these symptoms and triggers. Ready?	Continue		Depression - Identifying Symptoms			
Like all medical conditions, depression has a variety of symptoms that are characteristic of the condition. However, as with all medical conditions, each person's specific pattern is unique.	Continue		Depression - Identifying Symptoms			
Working through depression is a process. The first step to effectively managing depression is to learn how to recognize your personal symptoms.	Continue		Depression - Identifying Symptoms			
Depression can affect a person's thoughts, feelings, and behaviors. Today, we are going to focus on symptoms of depression that you have experienced in your life.	Continue		Depression - Identifying Symptoms			
Here is a list of common symptoms that individuals with depression have. Check off the top 3 that you've had the most trouble with in the past.	Continue		Depression - Identifying Symptoms			
	1-feeling depressed, down, or blue 2-impatience or irritability 3-difficulty with concentration and/or memory 4-thinking others don't care when they really might 5-frequent thoughts about death, dying or suicide 6-over/under eating 7-reducing usual leisure activities or hobbies 8-sleeping too much or too little 9-keeping away from people 10-other [open ended response - fill in text box]		Depression - Identifying Symptoms	1-10: Good, you are able to identify symptoms of depression. The first step to managing your depression is to understand your symptoms.	Bookmark D1	This row will have radio buttons to select answer. If option 10 is selected, then a text box will appear. Individual can select up to 3 symptoms.
Now that you've identified your symptoms of depression, we are going to identify which symptoms are considered early warning signs -- these are symptoms that you might notice right before things get worse.			Depression - Identifying Symptoms			
We are particularly interested in identifying your early warning signs because these are the symptoms that will alert you that it is time to start to self-manage your health to prevent a major depressive episode.			Depression -			

Life Goals Smartphone App						
Directions, questions or education	Possible Response	Alert Status	Session Title	Response	Bookmarks	Special Instructions
We are particularly interested in identifying your early warning signs because these are the symptoms that will alert you that it is time to start to self-manage your health to prevent a major depressive episode from occurring.			Depression - Identifying Symptoms			
Think about the symptom(s) you checked off -- [insert Bookmark D1] . Which are early warning signs for you?			Depression - Identifying Symptoms			
	[insert Bookmark D1]		Depression - Identifying Symptoms	It is great that you've identified an early warning sign for your depression! Keep this symptom in mind and when you start to experience it, think about how you can begin to self-manage your health. Remember you can also contact [insert Bookmark 2] at [insert Bookmark 2a] to discuss ways to manage this symptom.	Bookmark D2	This row will insert Bookmark D1 as possible options and have radio buttons to select answer.
Let's recap what we covered in this session. You've identified [insert Bookmark D1] as your symptom(s) of depression. Specifically, you identified [insert Bookmark D2] as your early warning signs. We will come back to these in later sessions and talk about how you can work to manage these symptoms.	Continue		Depression - Identifying Symptoms			
In the next session we will look at what types of things trigger your depression. Stay tuned!			Depression - Identifying Symptoms			
Depression - Identifying Triggers						
Welcome back to the Life Goals Collaborative Care Smartphone App! In this session, we are going to look at what types of things trigger your depression. Ready?	Continue		Depression - Identifying Triggers			
First, let's recap what we covered in the last session. You identified [insert Bookmark D1] as your symptom(s) of depression. Specifically, you identified [insert Bookmark D2] as your early warning signs. Now, let's move on to your triggers.	Continue		Depression - Identifying Triggers			
When we talk about triggers, we are talking about the things that can be associated with the onset of depressive symptoms.	Continue		Depression - Identifying Triggers			
Triggers set into motion actions. Recognizing what might be a trigger to a depressive episode for you can help you avoid or reduce your exposure to these triggers, reduce the likelihood that depressive symptoms will occur, and reduce the severity of these symptoms if depression occurs.	Continue		Depression - Identifying Triggers			
Think about your past depressive episodes. What might have triggered these episodes? A number of different circumstances are listed here. Read the list			Depression -			

Sample Wireframe – Depression



Sample Wireframe – Depression



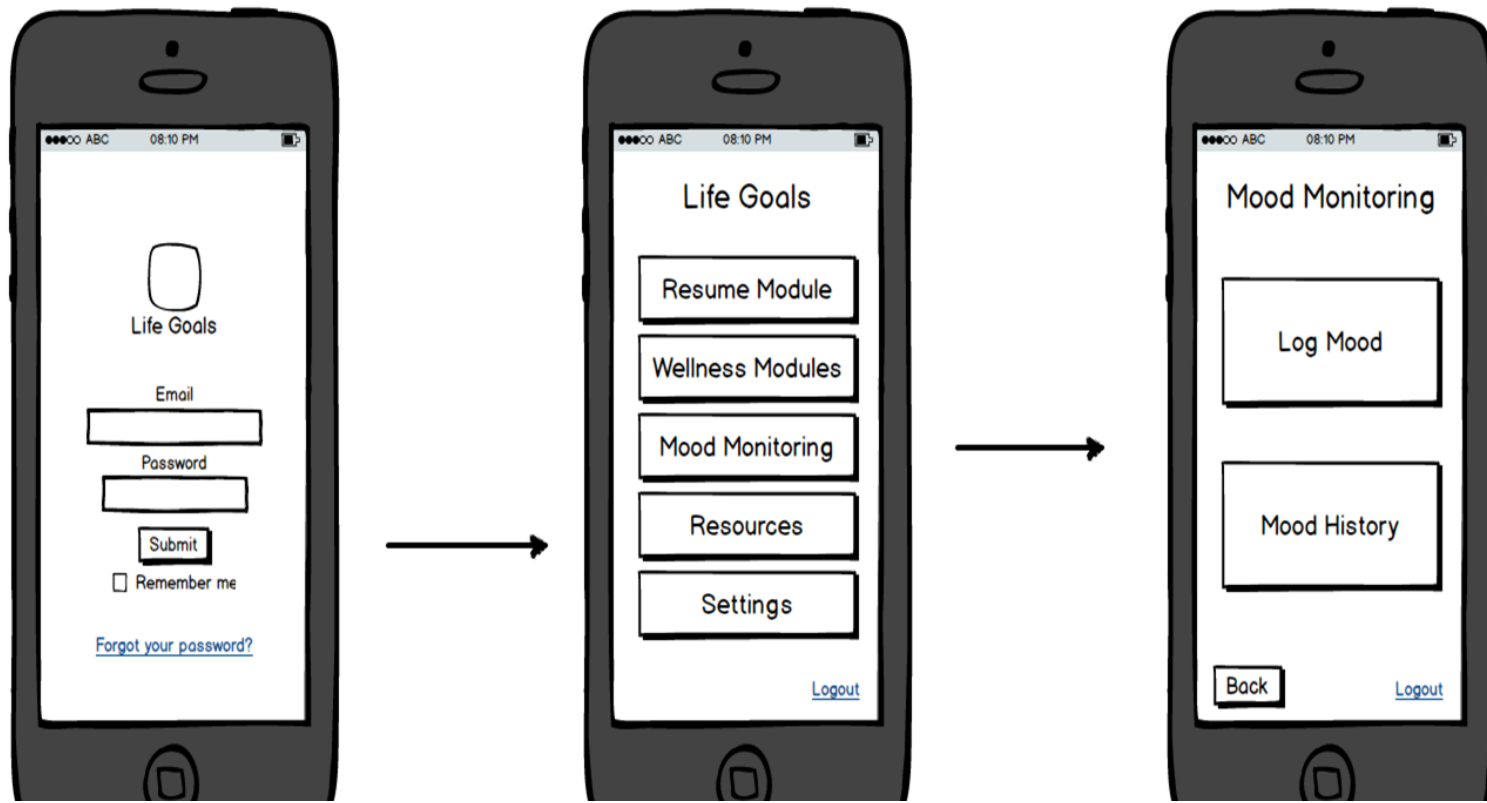
Certain parts of modules have user input. These areas can be referenced later in the module, as shown on the last screen of this wireframe.

The choices laid here are the choices selected earlier in the module. There are also open ended input fields that will be referenced later in modules as well, reminding the user of how they felt at one point.

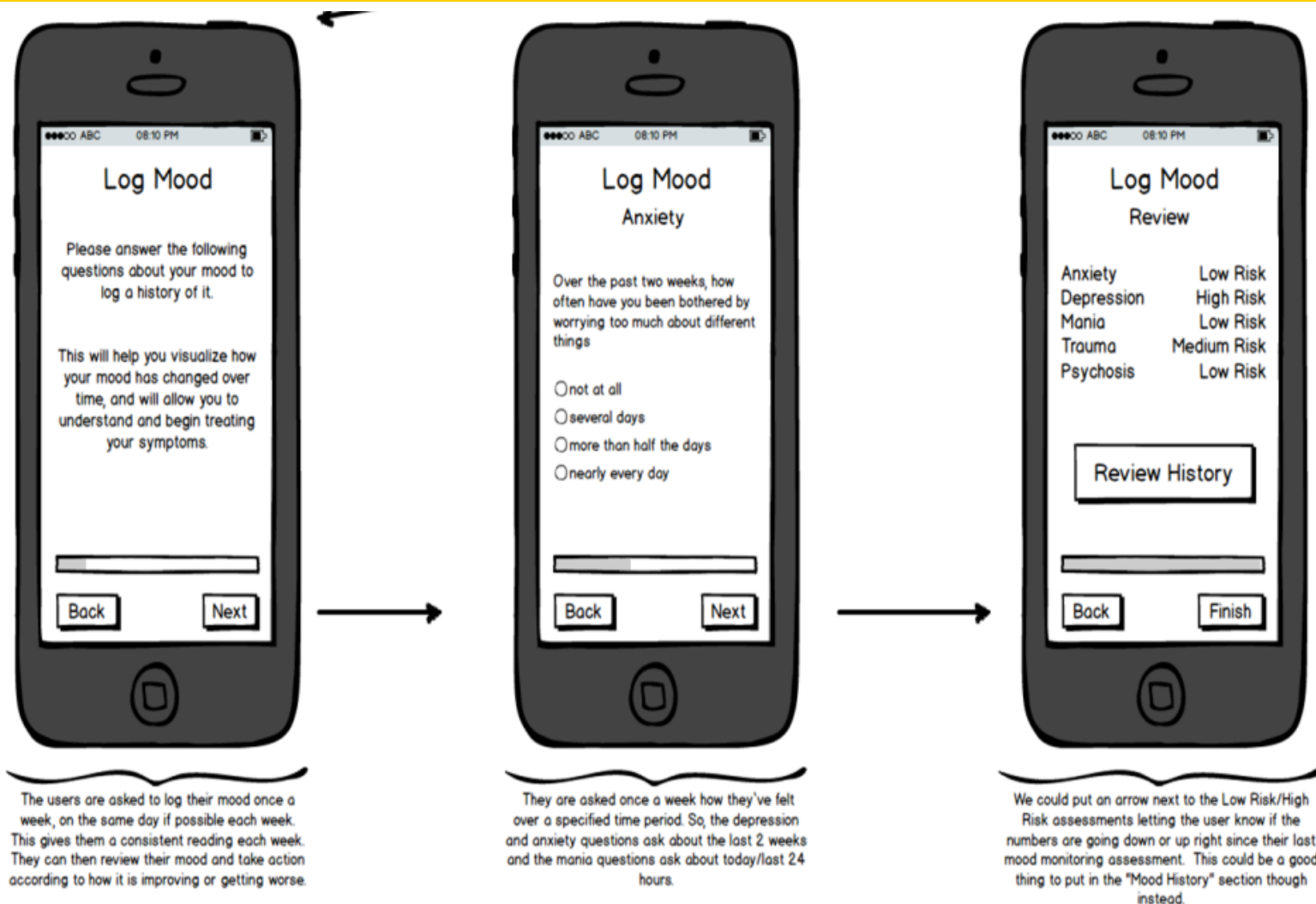
Sample Wireframe – Mood monitoring

Users sign up for the app on their phone after they download it. This is for two main reasons.

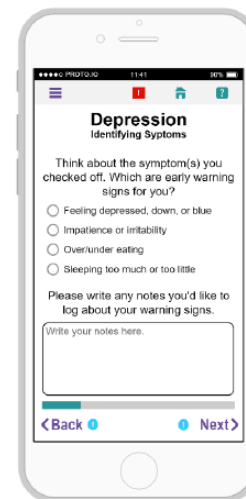
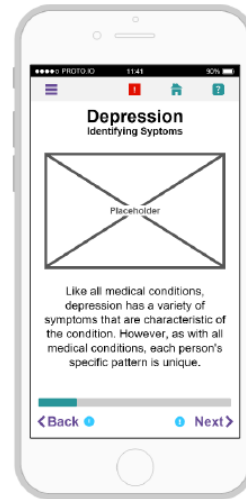
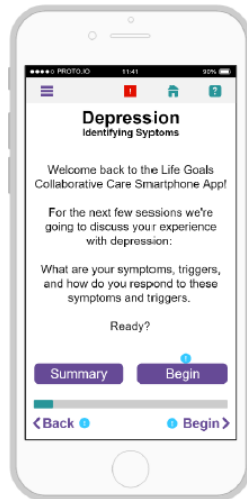
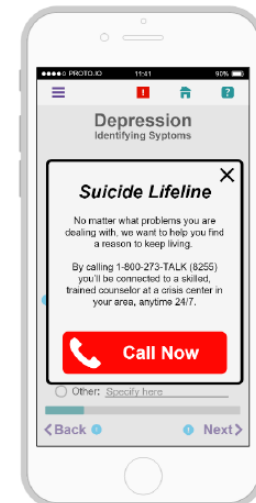
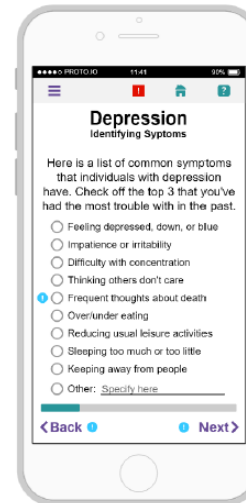
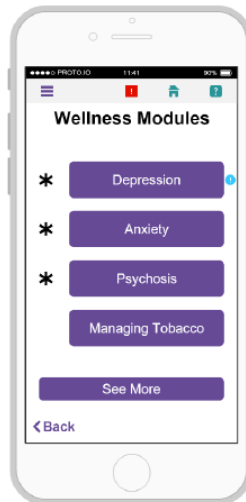
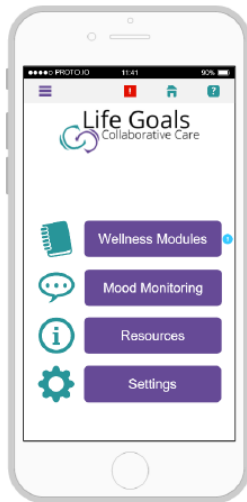
1. To sync data from their server to their phone, that way if they lose their phone they don't lose their data.
2. To keep their data secure, so not anyone can log in and see their data.



Sample Wireframe – Mood monitoring



Clickable Comps



24

25

Actual Screen Shots: Anger/Irritability

Anger-Irritability

Identifying Symptoms ID: 373

Here are common anger symptoms. Check off the top 3 that you've had the most trouble with in the past.

- ☐ lash out with anger by hitting, kicking, throwing things, slamming doors
- ☐ yelling or screaming
- ☐ physical reactions (like headaches, muscle tension, racing heart)

☐ lash out with anger by hitting, kicking, throwing things, slamming doors

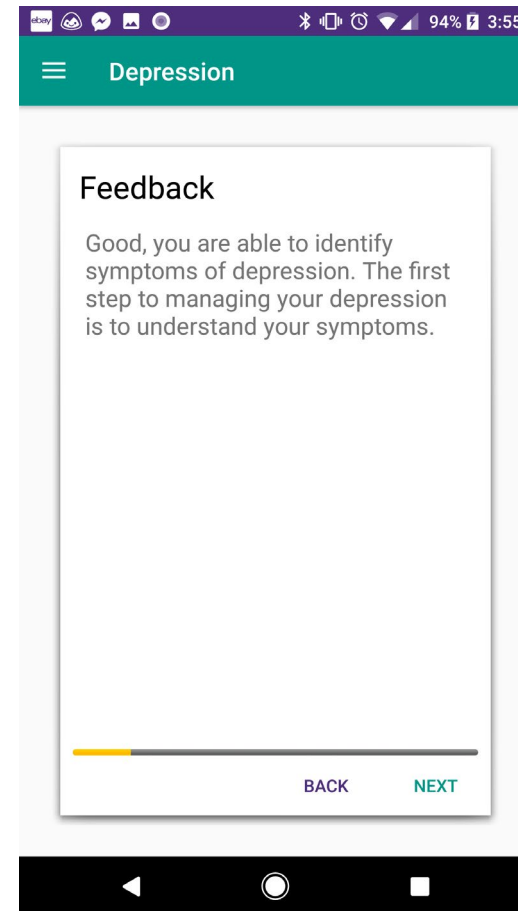
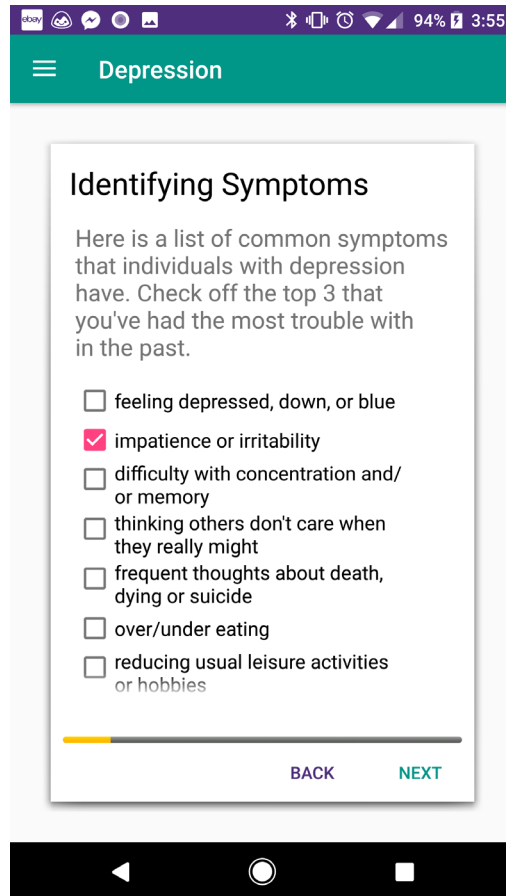
Anger-Irritability

Identifying Symptoms ID: 377

Think about the symptom(s) you checked off. Which are early warning signs for you?

- ☐ lash out with anger by hitting, kicking, throwing things, slamming doors
- ☒ physical reactions (like headaches, muscle tension, racing heart)
- ☐ yelling or screaming

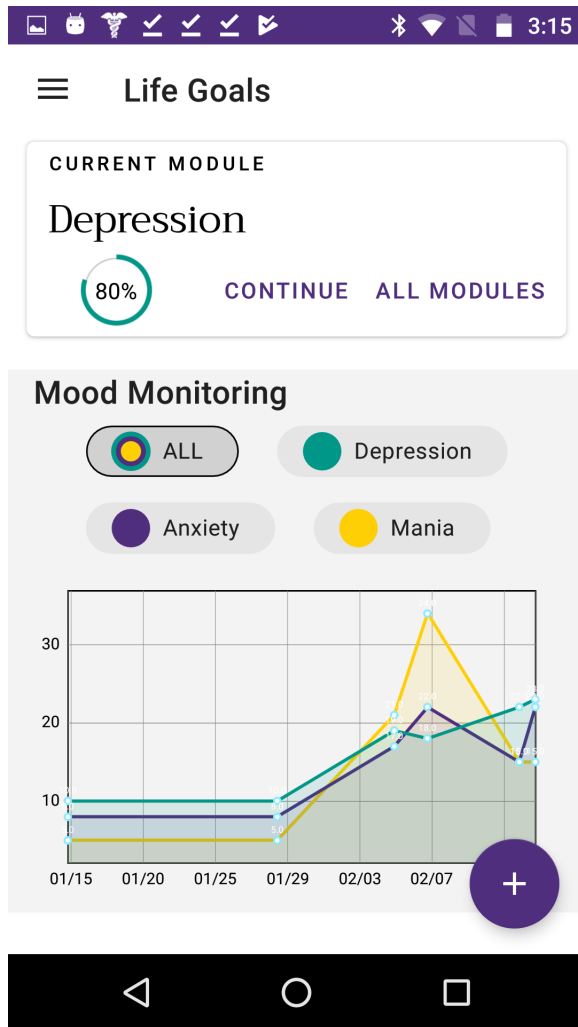
Actual Screen Shots: Depression



Life Goals App – Current refinements in FY19

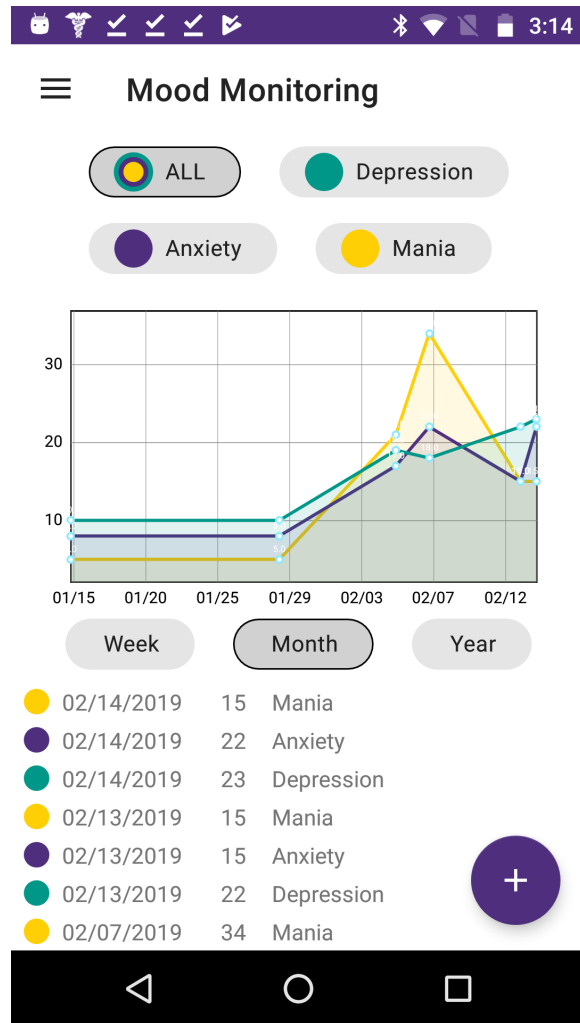
- Improve user experience – easier navigation
- Landing page (dashboard)
- Mood monitoring graphs
- Action plan PDFs

Life Goals App – Landing page (Dashboard)



Landing page displays current module and recent mood monitoring scores

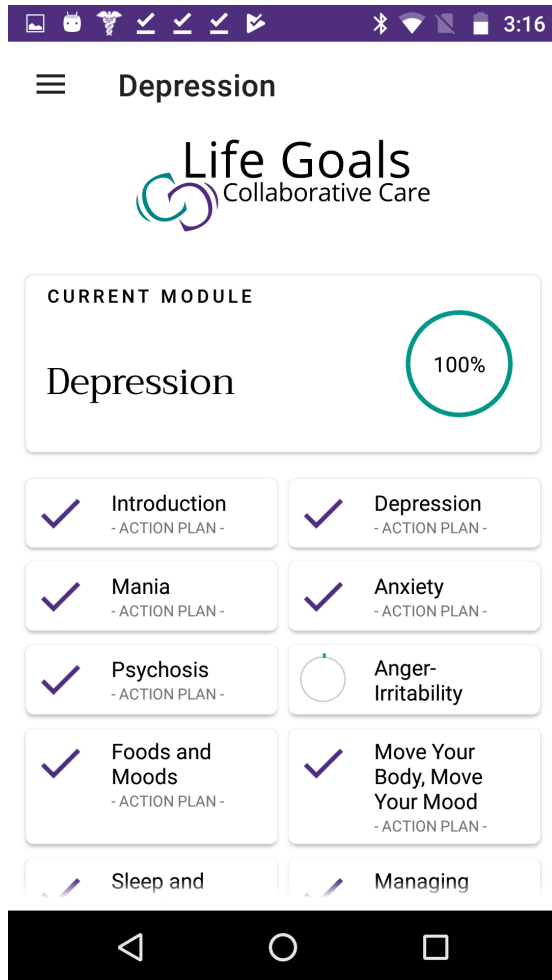
Life Goals App – Mood monitoring



Mood monitoring for depression, anxiety, and mania

History of scores displayed in graphs

Life Goals App – Module progress screen



List of all modules with progress circle

When module is completed, circle turns to check mark

Ability to PDF action plans from completed modules

PRIORI App

- Refinements
 - Data capture
 - Notifications
 - App interface
- Back end improvements; debugging, error logging
- Beta testing new version

FY19 Integrated Apps project

Goal: To decrease the digital divide by disseminating innovative mobile applications (i.e. *priori*; Life Goals) using smartphone technology

- Enhance self-management support for individuals with mood disorders
- Refine and disseminate Life Goals and *priori* apps in CMHs and the Prechter Longitudinal Cohort
- Both apps available at no cost



Project Settings/Sites

- Currently enrolling participants through the Prechter Longitudinal Cohort at the University of Michigan
 - 23 participants enrolled; 19 completed 6 months
 - Majority are Medicaid/Medicare recipients
- CMH recruitment
 - Met with **Shiawassee Health and Wellness** in December 2018
 - Interested but didn't think they had enough participants meeting eligibility criteria
 - Our team amended eligibility criteria to increase pool of potential participants; contacted Shiawassee Health and Wellness to solicit interest again; they ultimately declined participation due to competing demands
 - DWMHA – need RAC approval to work with **Development Centers** and **Hegira**
 - Have been in contact with DWMHA since March 2018 and no movement
 - Additional CMH recommendations?

Current FY19 Activities

- Continued work with Arbormoon
 - Life Goals app refinements: design refresh, updated backend, pdf action plans, mood monitoring
 - *Priori* app refinements
- Continue CMH recruitment
 - Challenge getting DWMHA RAC approval – two CMHs ready and waiting to participate
 - Reaching out to Medicaid population through other groups including NAMI, DBSA, UM Ambulatory Psychiatry Clinic
- Data collection continues and preliminary data analyses underway

Future Directions

- FY20
 - Further refinement of Life Goals and *priori* apps
 - Make *priori* app available on Google Play store, generation of *priori* alert
 - Fix bugs/ maintenance of both apps
 - Launch and test Life Goals iOS platform
 - Dissemination of apps in CMHs
 - Evaluate feasibility and usability of *priori alert*, consumer acceptance of Life Goals IOS
 - Evaluate fidelity of both apps on bipolar symptoms and functioning

Questions and Discussion

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