

# IMATTER: MOBILE HEALTH APP

Team ReBoot.

Design Review 2

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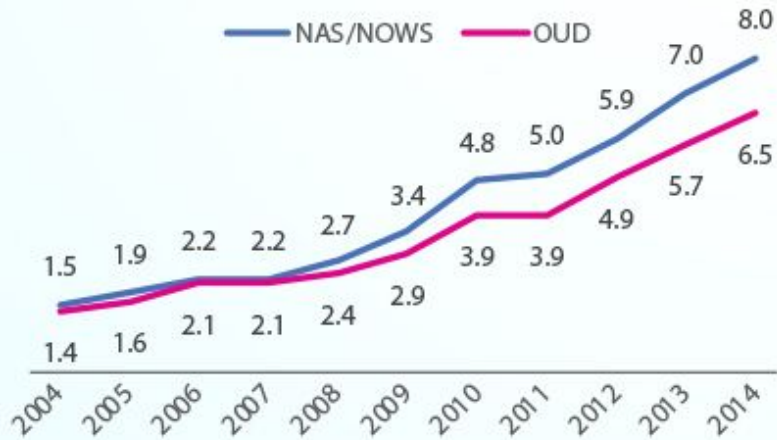
**Mentor:** Dr. Eck Doerry



ReBoot.

# OPIOID ADDICTION EPIDEMIC

**NAS/NOWS and Maternal  
Opioid Use Disorder on the Rise**  
Rates per 1,000 Hospital Births



2+ Million Americans

Struggle with Opioid Use Disorder (OUD)

\$78.5 Billion

In annual costs for healthcare and more

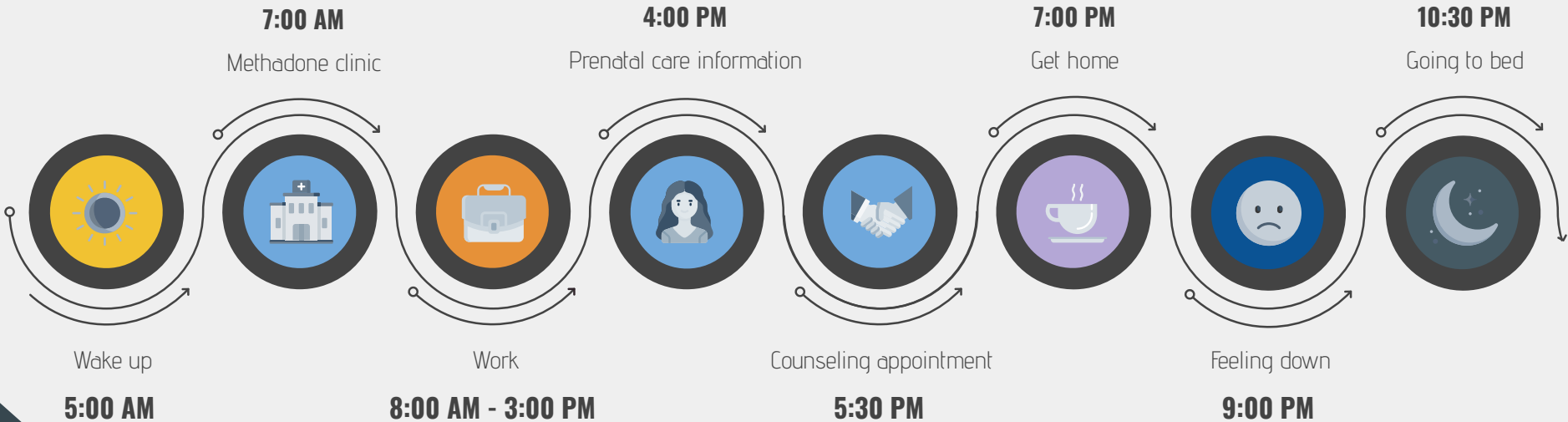
6.5 per 1,000 women

Opioid Use Disorder at delivery

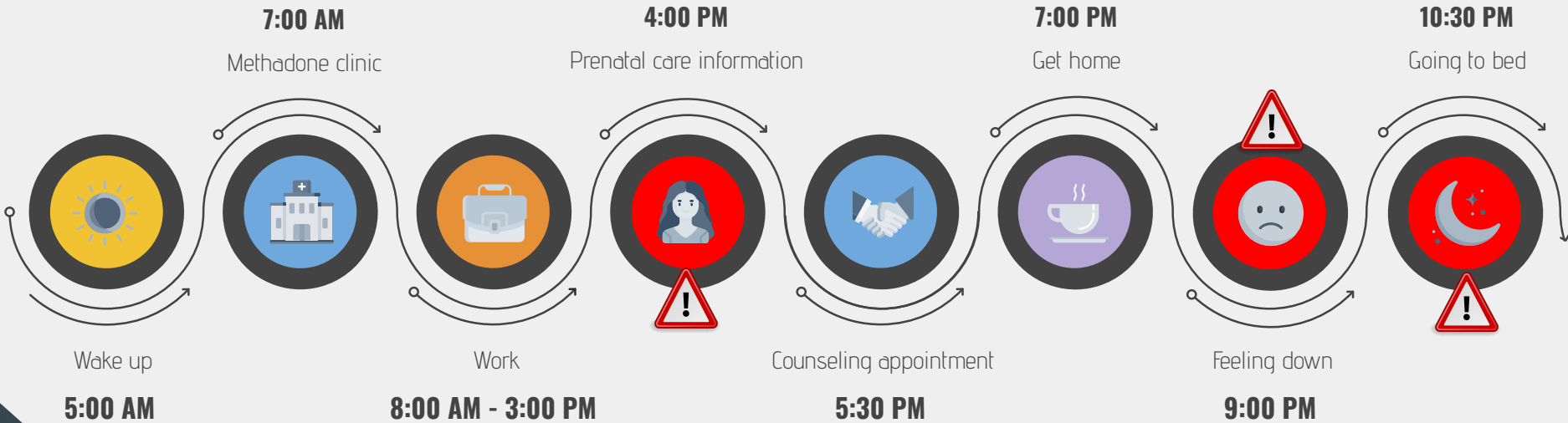
56% relapse rate

For women 6 months postpartum

# SUSAN'S DAY: THE CHALLENGES OF TRADITIONAL RECOVERY



# SUSAN'S DAY: THE CHALLENGES OF TRADITIONAL RECOVERY



Outcomes:

- 1) Many women relapse
- 2) Women in rural areas struggle with staying in program



**DR. EMERY EAVES**

- Medical Anthropologist
- Researches Opioid Use Disorder among pregnant women

# SOLUTION OVERVIEW



Safe, Secure, Anonymous



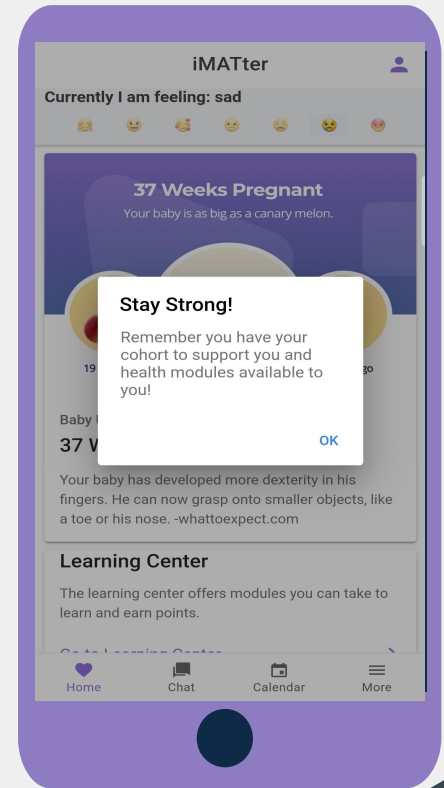
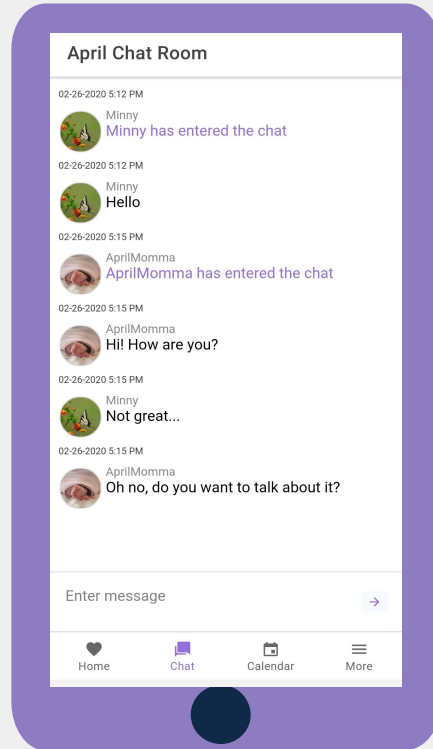
Active Learning



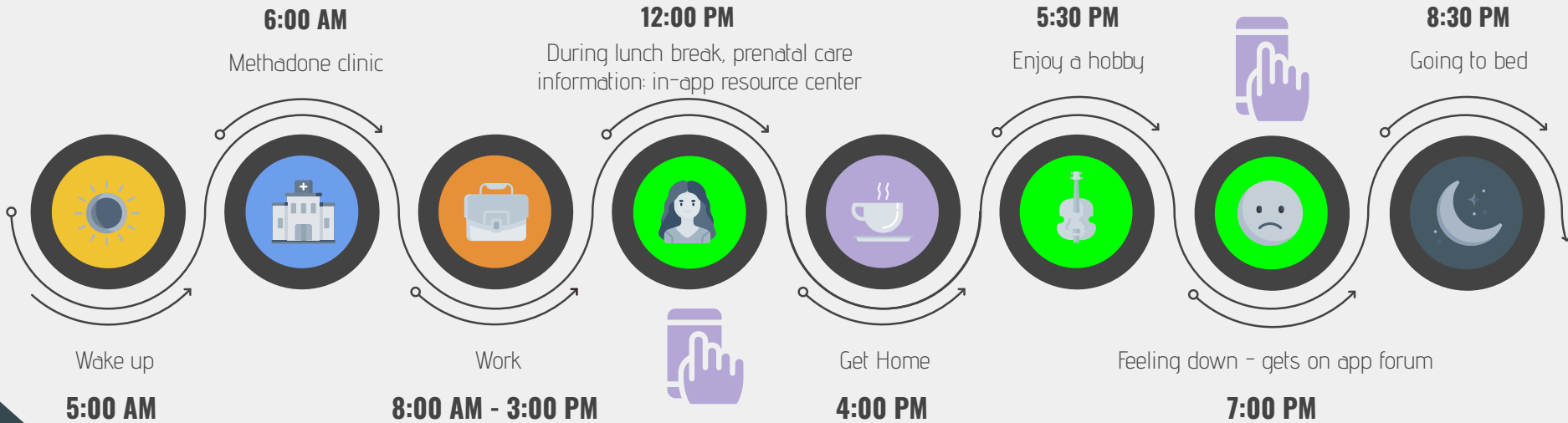
Receiving Support



Mobile: Anytime, Anywhere



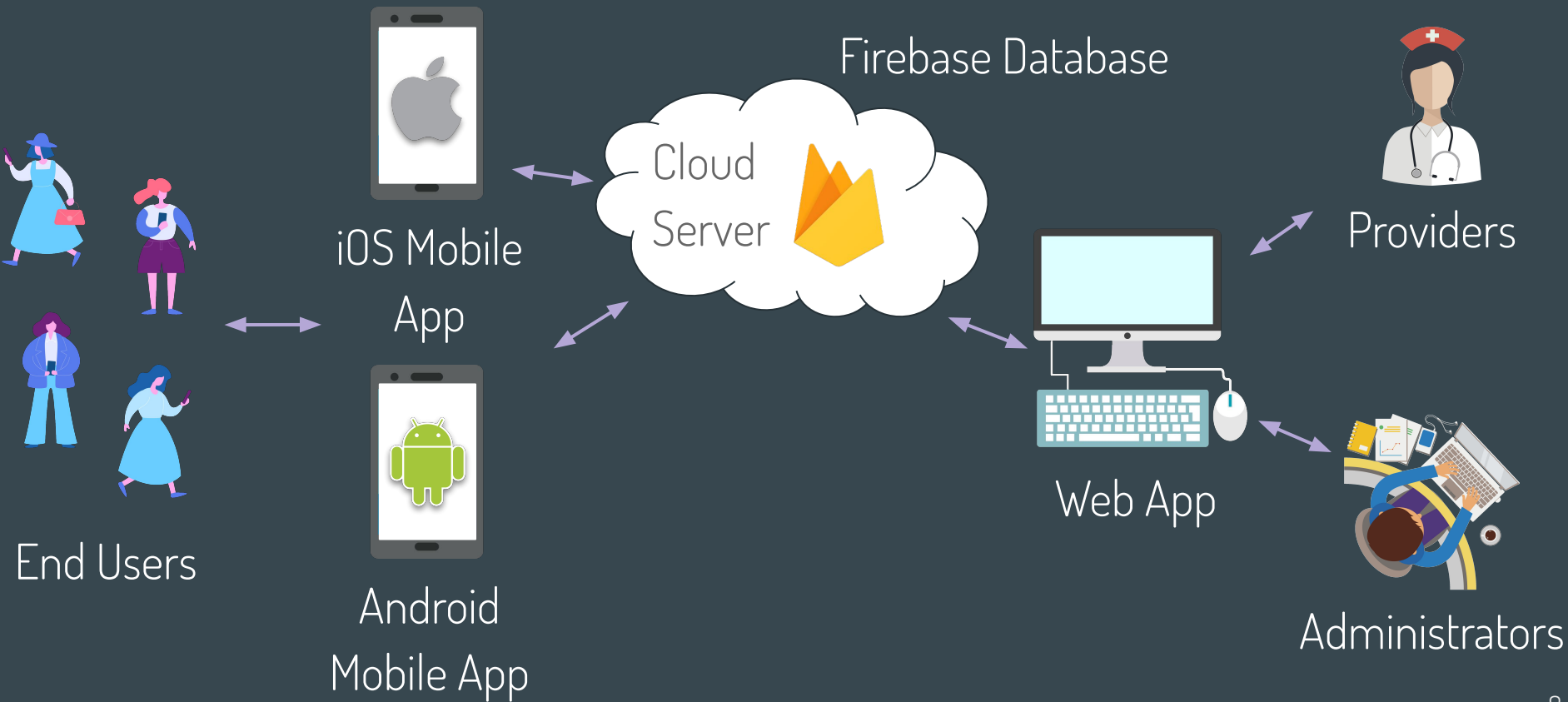
# SUSAN'S DAY WITH IMATTER



What iMATter solved:

- Susan now has time for herself
- Being alone at night is now a night spent with the support of a cohort

# OVERALL IMPLEMENTATION

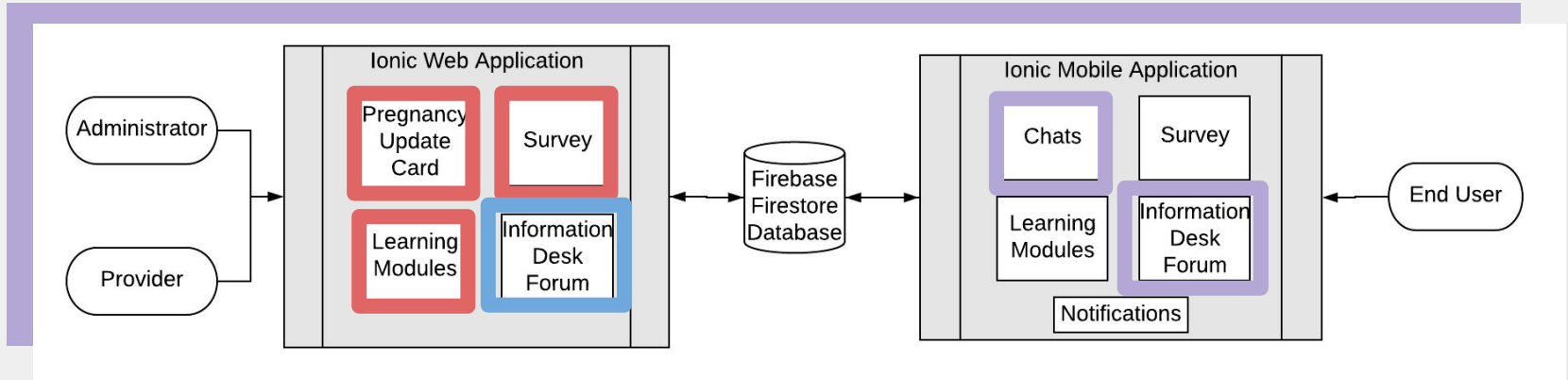




## KEY REQUIREMENTS

- **24/7 Access to Key Medical Information**
  - Info desk forum, resources finder
- **Engaging Social Environments**
  - Cohort chat room, educational quizzes, info desk forum
- **Tailored to Pregnancy eJourney (pregnancy calendar)**
- **Personal Planning Tools - Calendar**
  - Medication reminders
  - appointment reminders

# ARCHITECTURE OVERVIEW



## ADMINISTRATOR (WEB APP)

- **Manage User Viewable Content**
  - Learning Modules
  - Pregnancy Updates
  - Surveys

## PROVIDER (WEB APP)

- **Interact with Information Desk**
  - Post comments on User posted questions

## USER (MOBILE APP)

- **Social Interactions**
  - Cohort Chatroom
  - Send messages

# ADMIN WEB APP - CREATING AND UPLOADING DATA

← Create New Learning Module

Module ID:

About Module

Module Title

Module Description

Display Module During Weeks

Number of Reward Points  
0

Module Contents

Module Media

Module Video ID (YouTube Video ID)

Module PowerPoint URL (src)

Module Quiz

Module Quiz

[ADD QUIZ QUESTION](#)

Link to Another Learning Module

Next Module (ID)

✓ ADD LEARNING MODULE

← Create New Pregnancy Update

Update Day

Pregnancy Update Information/Description

Image to Be Displayed with Information

No file chosen

# USER VIEW OF ADMIN INPUT DATA

The iMATter app home screen displays a user's current mood as 'happy' with a row of emotion icons. The main section is titled '37 Weeks Pregnant' with the text 'Your baby is as big as a canary melon.' It features three circular graphics: a fetus (19 in, 6.5 lbs), a canary melon, and the number '3' (Weeks to go). Below this is a 'Baby Update: 261 Days' section titled '37 Weeks and 2 Days' with a paragraph of text. At the bottom is a 'Learning Center' section with a description and a 'Go to Learning Center' button with a right arrow. The bottom navigation bar includes icons for Home, Chat, Calendar, and More.

A video player interface for a video titled 'Mothers and Methadone Mod...'. The video shows a street scene with a large, metallic, fish-like sculpture. The video player includes a play button, a progress bar at 0:04 / 11:54, and standard video controls like volume, full screen, and share.

A quiz screen titled 'Mothers and Methadone Mod...'. It features a video thumbnail at the top. Below the video is a 'Questions' section with two questions. The first question is 'Withdrawal can cause miscarriage' with radio buttons for 'True' (selected) and 'False'. The second question is 'The mother should monitor the baby for signs of withdrawal with the nurse' with radio buttons for 'True' (selected) and 'False'. At the bottom is a blue 'SUBMIT' button. Below the submit button is a green bar showing 'Quiz Score: 2 out of 2' and a white bar showing 'Number of Attempts: 1 out of 3'.

# PROVIDER WEB APP - INTERACTING WITH INFO DESK FORUM

iMATter Information Desk



Breast feeding and methadone →

Taking methadone while pregnant →

Information Desk



TestUser  
Posted at: 02-23-2020 1:24:20 AM

## Breast feeding and methadone

As this will be my first child, I was wondering if I am able to breast feed even though I am taking methadone.

COMMENT


Answers:




B  
provider  
Posted at: 02-23-2020 1:26:48 AM


Yes, in fact it is generally encouraged. While breast feeding on methadone will expose the infant to methadone, the benefits of breast feeding outweigh the minimal exposure an infant can get. Just make sure that your baby's doctor is monitoring them.


# USER MOBILE APP - COHORT CHAT ROOM





iM iMATter 1:40 AM  
iMATter Chat Room  
There is a new message in the chat room 

### April Chat Room


02-26-2020 5:12 PM  
 Minny  
Minnie has entered the chat


02-26-2020 5:12 PM  
 Minny  
Hello


Enter message 


 Home  Chat  Calendar  More


### April Chat Room





02-26-2020 5:12 PM  
 Minny  
Minnie has entered the chat

02-26-2020 5:12 PM  
 Minny  
Hello


02-26-2020 5:15 PM  
 AprilMomma  
AprilMomma has entered the chat


02-26-2020 5:15 PM  
 AprilMomma  
Hi! How are you?


Enter message 


 Home  Chat  Calendar  More


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Hello





02-26-2020 5:15 PM  
 AprilMomma  
AprilMomma has entered the chat

02-26-2020 5:15 PM  
 AprilMomma  
Hi! How are you?

02-26-2020 5:15 PM  
 Minny  
Not great...

02-26-2020 5:15 PM  
 AprilMomma  
Oh no, do you want to talk about it?

Enter message 

 Home  Chat  Calendar  More

# CHALLENGES AND RESOLUTIONS

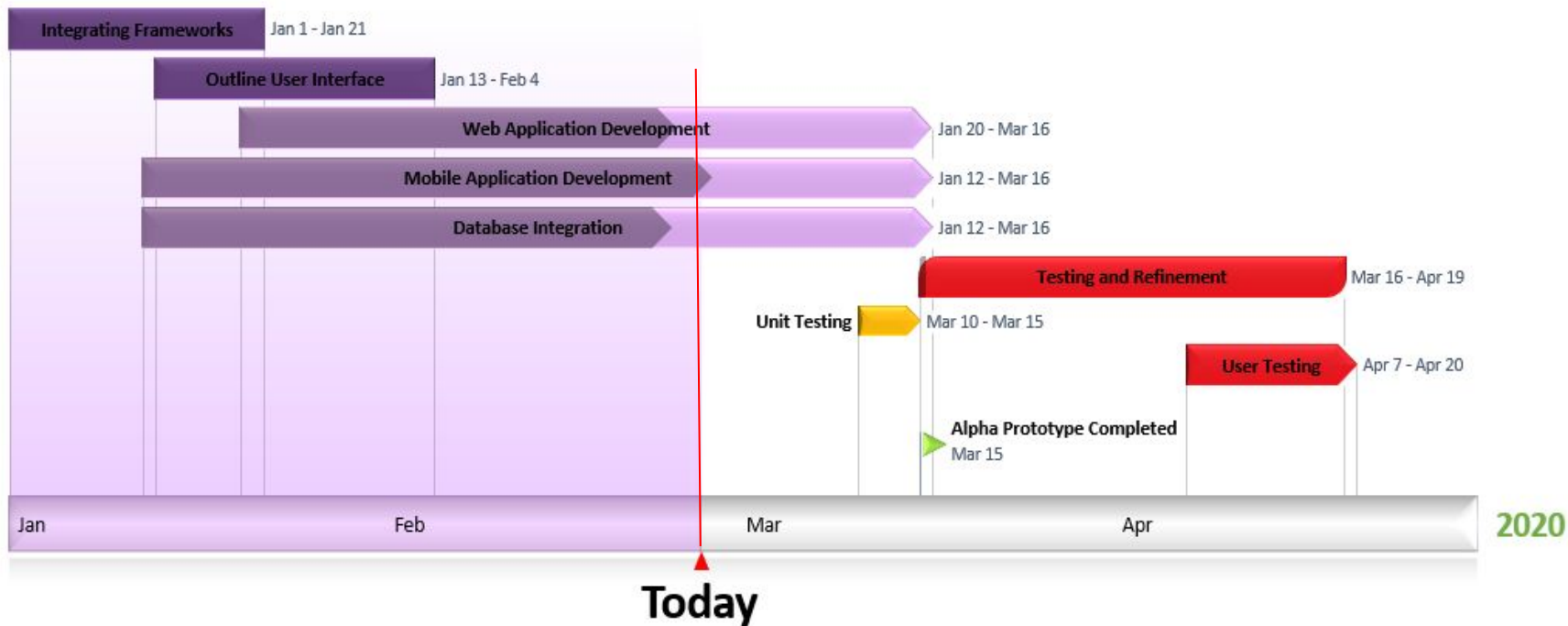
## *Previous Challenges - Now Solved*

CHALLENGE	SOLUTION
<b>Synchronized information on platforms</b>	Firestore's database allowed for easy management of data and information
<b>Uploading and playing videos on the app</b>	Used YouTube API to manage video controls on the mobile app
<b>Survey implementation</b>	Client decided she wanted Qualtrics, a survey service already in use by our client

## *Current Challenges - In Progress*

CHALLENGE	SOLUTION / IDEA
<b>Using user's location for resources</b>	Using Google Maps API or a similar mapping service is what we need to accomplish this
<b>Timed events triggering when user not in app</b>	Best option is to use a server service like AWS, to use timed functions when needed

## ReBoot.





# CONCLUSION

## Solution:

Mobile application with:

- Forum
- Interactive Components
- Information Desk
- Learning Center
- Notifications
- Research Analytics



### Problem:

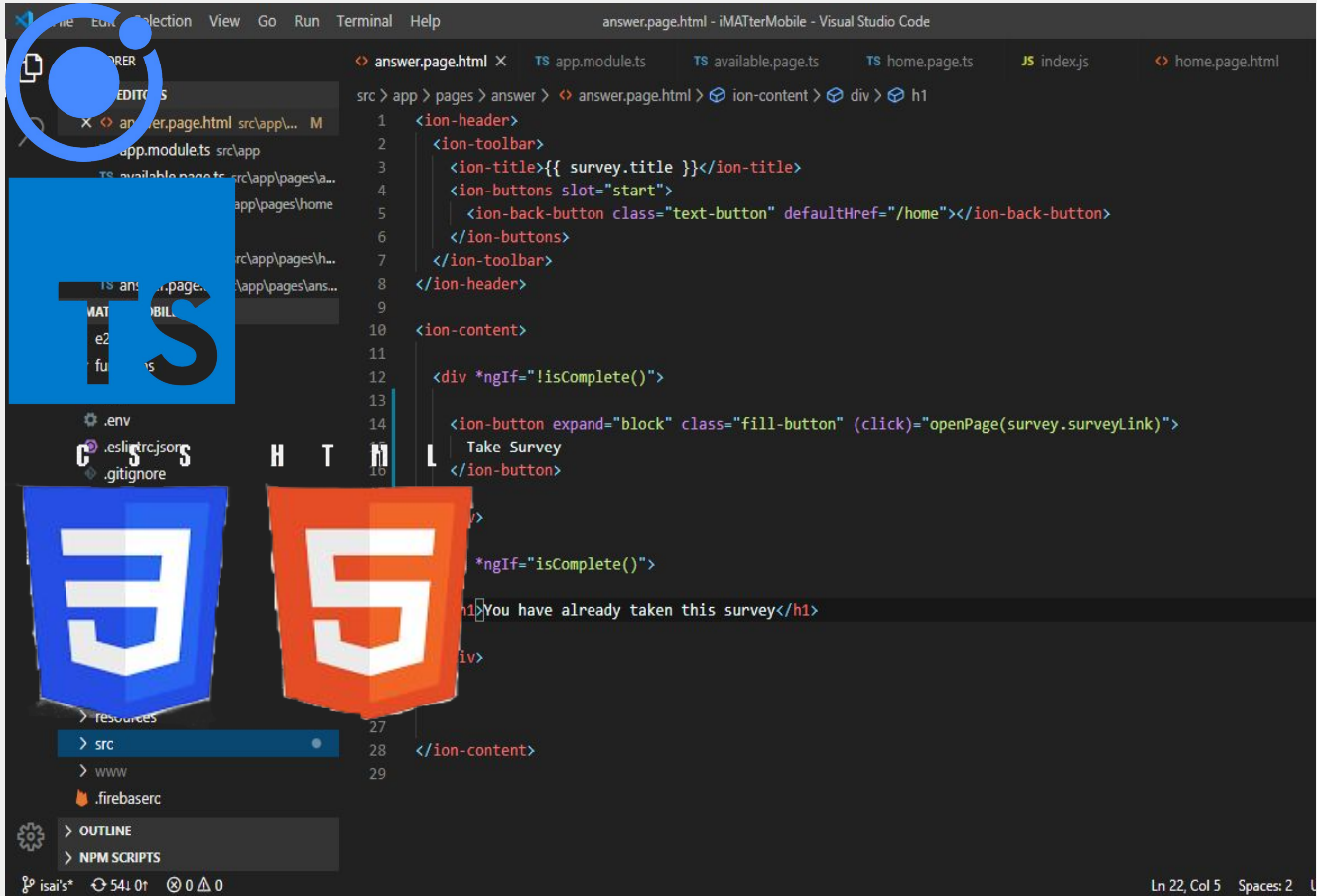
Pregnant women with opioid addictions have a hard time with recovery programs



### Mobile Application:

Safe environment, social forum, information and support

# ARCHITECTURE AND IMPLEMENTATION



- Ionic Framework
- Typescript/Javascript
- CSS & HTML