

iMATter Mobile Health App: A Virtual Environment to Support Opioid Recovery

Team: Bianca Altman, Jennie Dallas, Victoria Leafgren, Isai Martinez, Cindy Valentin
Faculty Mentor: Dr. Eck Doerry, **Clients:** Dr. Emery Eaves and Dr. Eck Doerry

What is the Problem?

Opioid Use Disorder in the United States:

Over 2 million Americans struggle with opioid addictions which costs the US \$78.5 billion a year for healthcare, lost productivity, and addiction treatments.

Opioid Use Among Pregnant Women:

Between 1999 and 2014, the rate for OUD for women at delivery quadrupled, currently at 6.5 per 1,000 deliveries.

Use of opioids during pregnancy puts the baby at risk for a withdrawal syndrome known as Neonatal Abstinence Syndrome, which can cause short- and long-term health complications for a child.

THE PROBLEM:

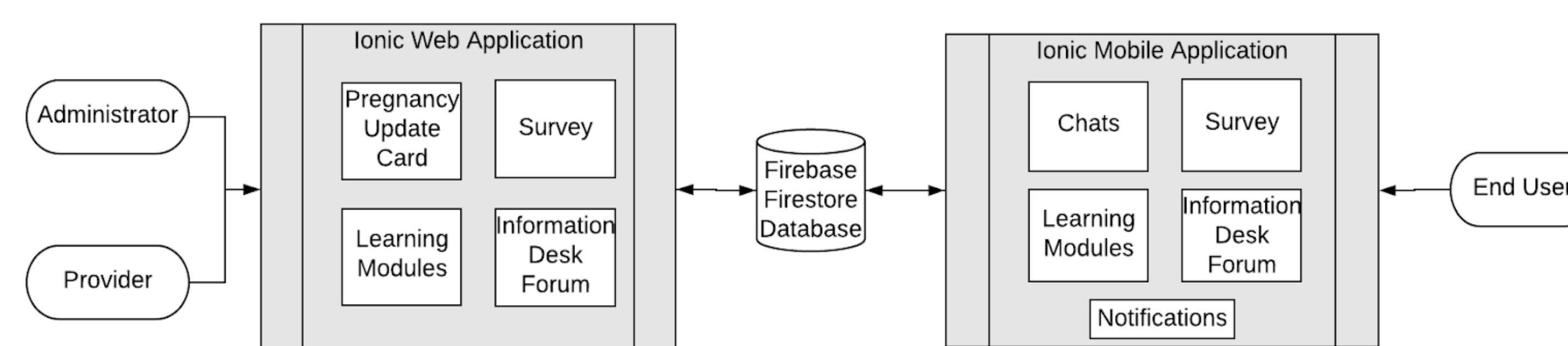
Rates of relapse are relatively high, currently at 56% for women who are 6 months postpartum.

Issues with Traditional Recovery Programs:

Major obstacles faced in recovery programs include:

- High number of appointments to attend, requiring access to transportation
- Lack of social support
- Lack of information access
- Negative stigma placed on those in recovery

Architecture and Technologies



Data between all mobile applications and the web application are synchronized in real-time with the Firebase database as new objects are added in either application.

Technologies used to develop iMATter include:

- Ionic framework for application development
 - Typescript, HTML, and CSS
- Google's Firebase database
- Chart.js for graphing user analytics

Outcomes

With the iMATter mobile application, pregnant women in recovery for opioid use disorder will:

- Access a scalable mobile application that decreases the need to travel to appointments and improves recovery outcomes.
- Experience higher rates of successful recoveries resulting from access to education and social support

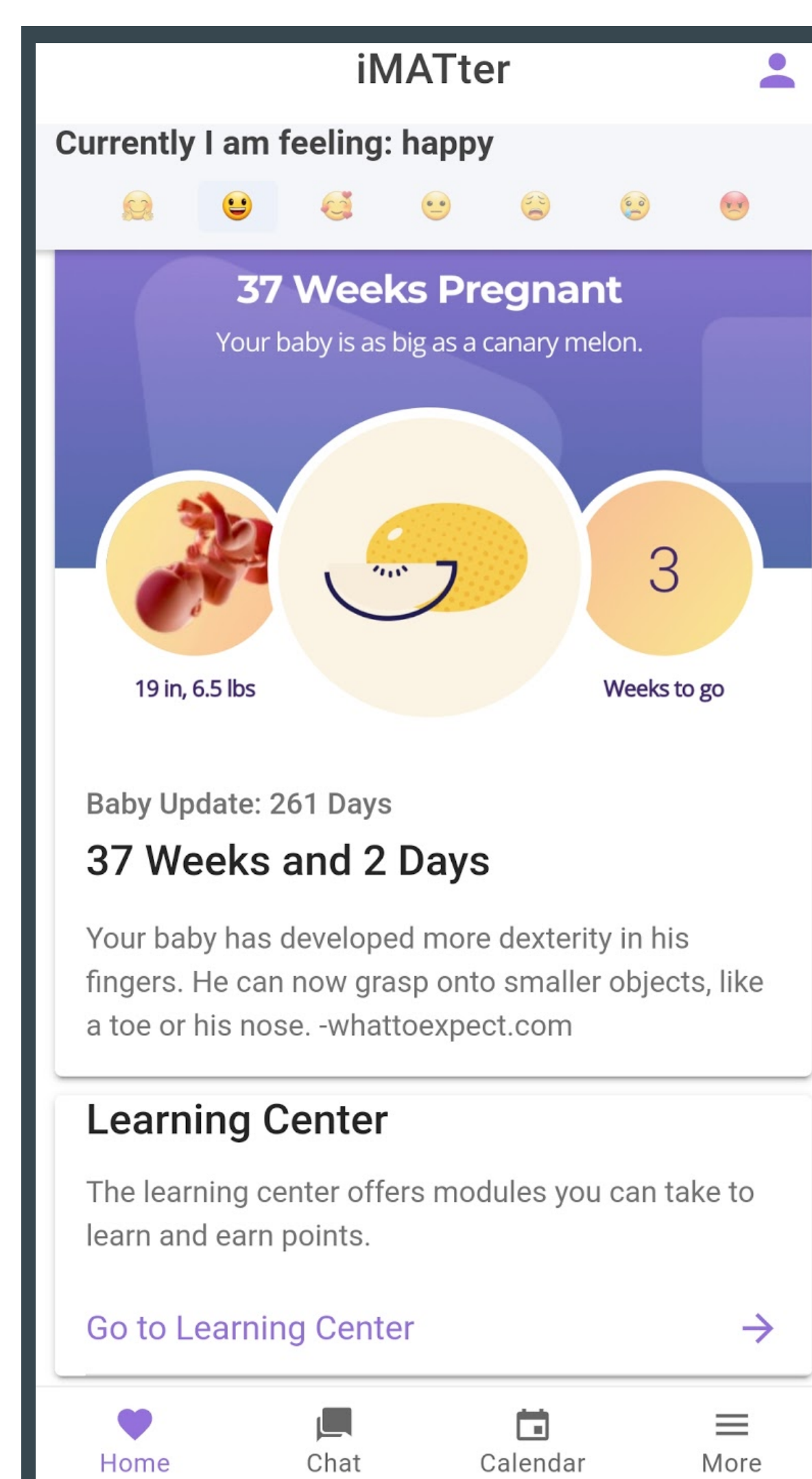
Future Work

As iMATter expands its reach to more users, there are a few important features that should be enhanced:

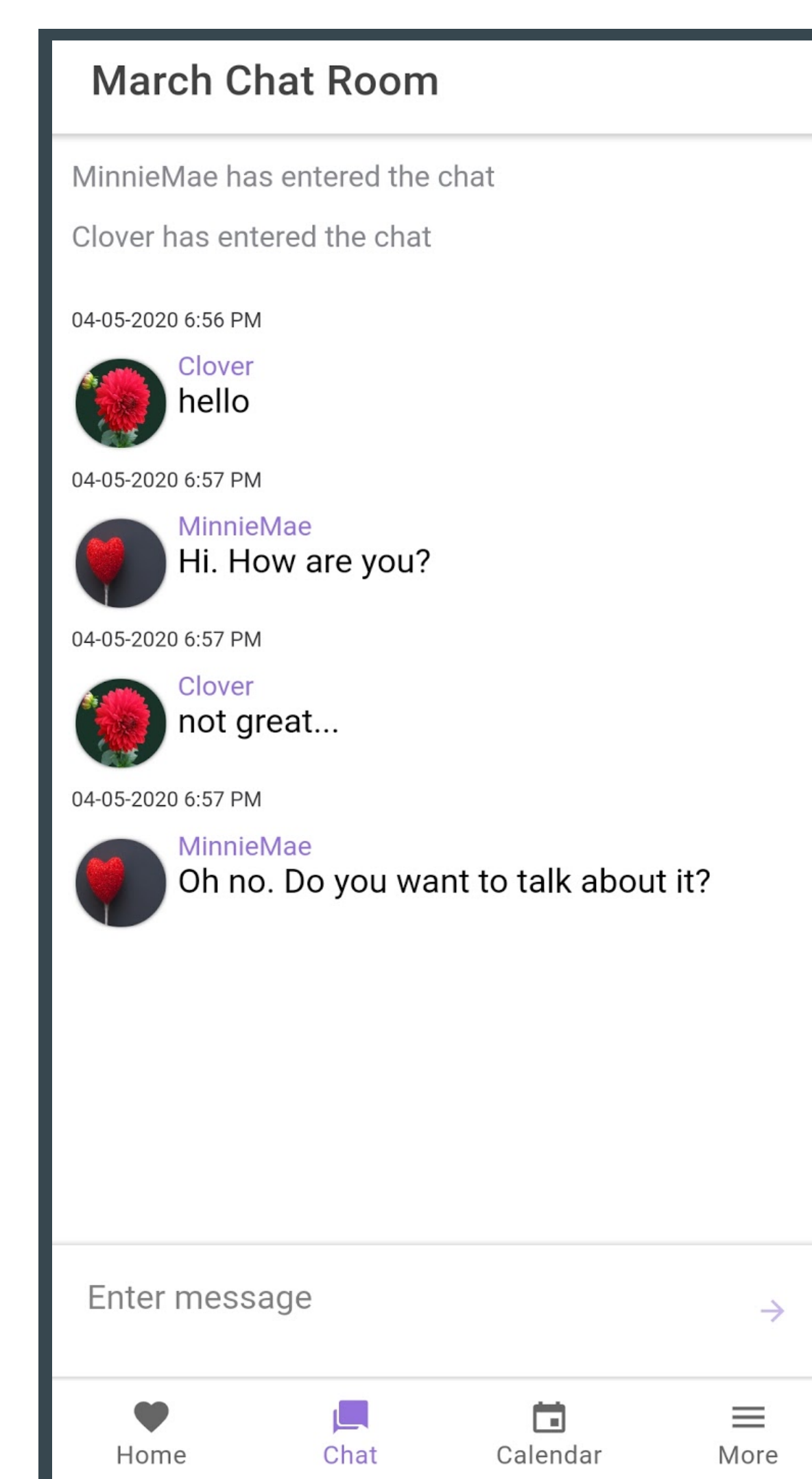
- Creating a more user friendly and intuitive user interface
- Create a way for social interaction and support between providers (nurses, clinic workers, etc.) and mobile application users to further personalize in-app recovery assistance

Final iMATter Mobile Application Product

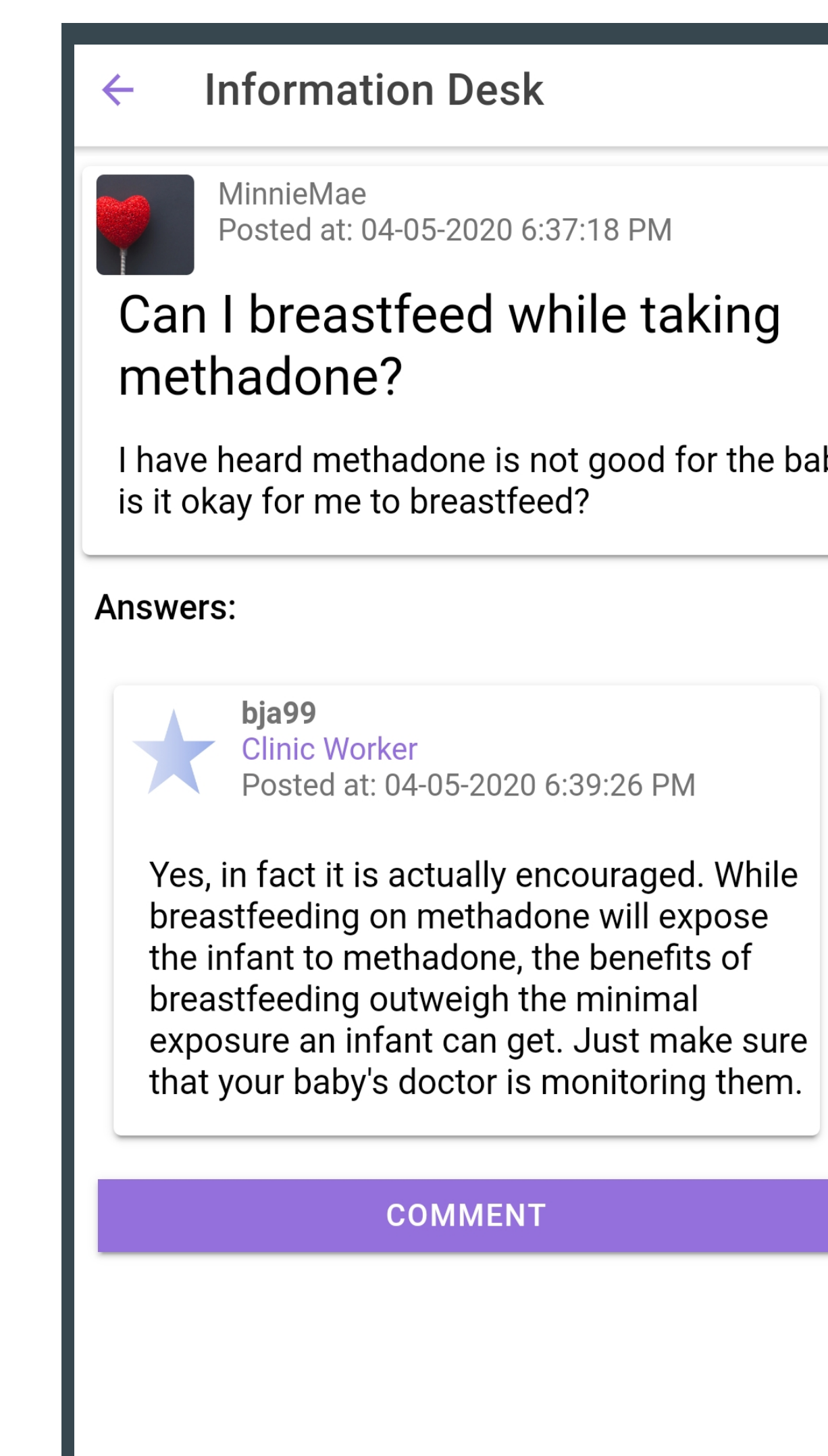
View daily pregnancy updates and update your current emotion for other users to see



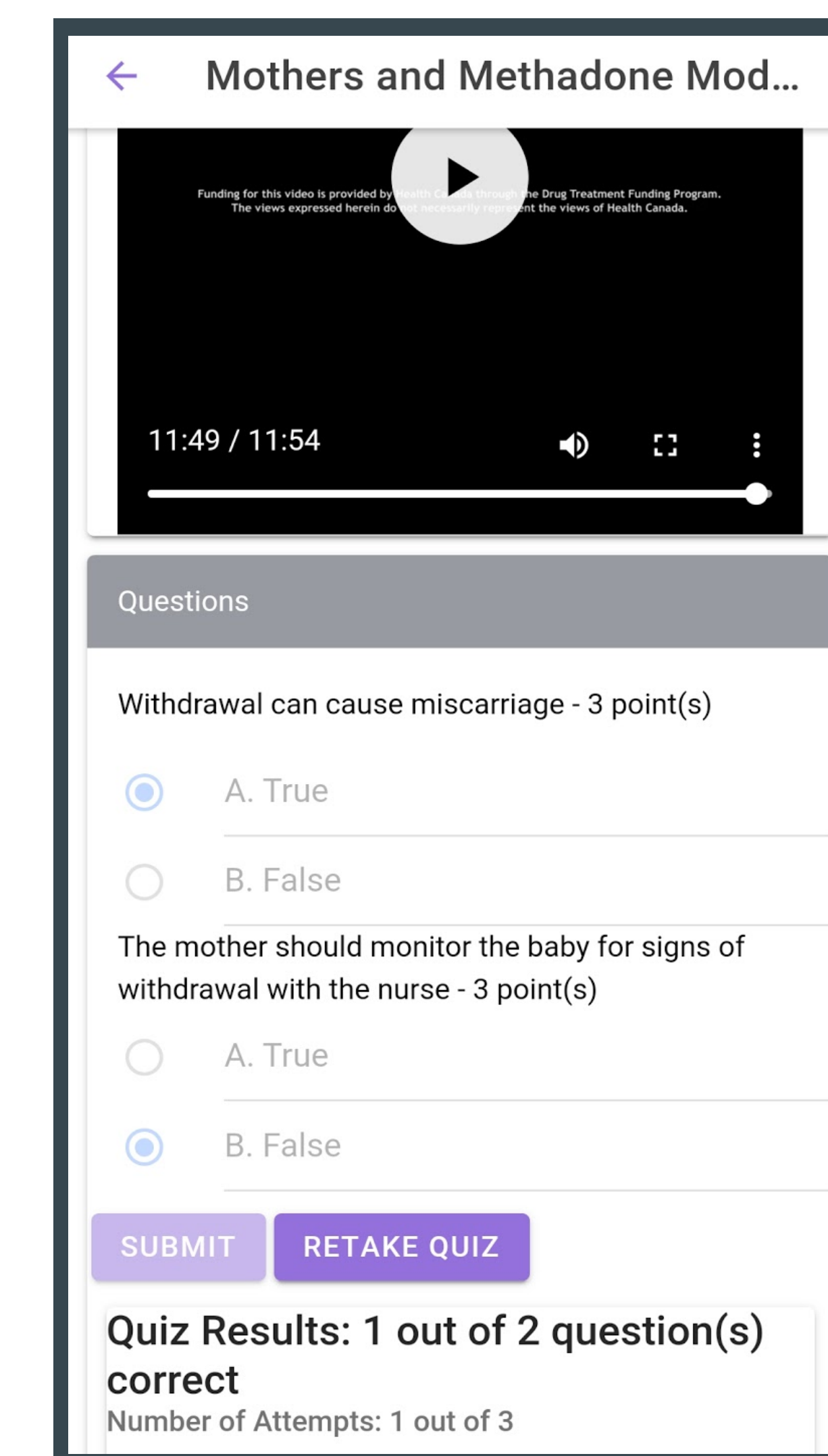
Talk to other users in the same due date month-based cohort – receive and give advice and support 24/7



Get all-hour access to pregnancy and recovery information and ask questions to be answered by clinic workers, nurses, and more



Watch videos and take educational quizzes to help learn about your pregnancy and recovery process



Solution Overview and Key Features

iMATter mobile health application moves aspects of traditional recovery into a virtual space and allows users to remain completely anonymous. The key features of iMATter were developed during weekly meetings with both clients and include:

iMATter will provide:

- 24/7 access to social support and information
- Cohort chat rooms that provide users with social support
- Active learning with a learning center that includes videos and educational quizzes
- Surveys to take for providing information to the clients
- Information desk forum where users can ask medical professionals questions