

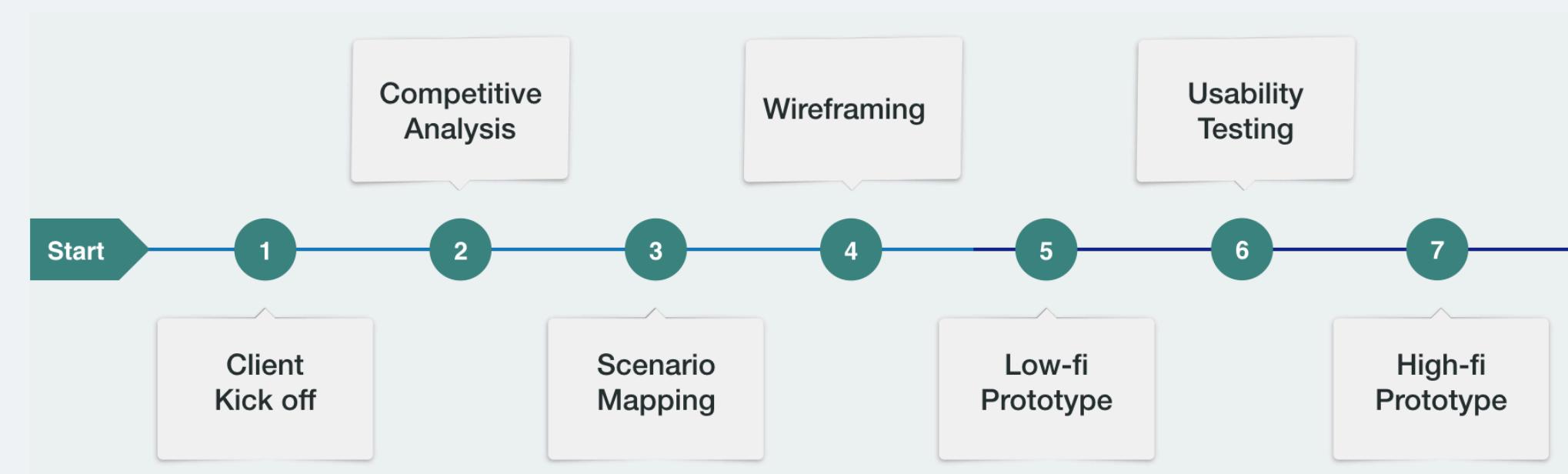
*Sometimes all we
need is a HUG*



Objective

Assist parents and caregivers to build a habit of providing kangaroo care to their baby for larger parts of the day.

Process



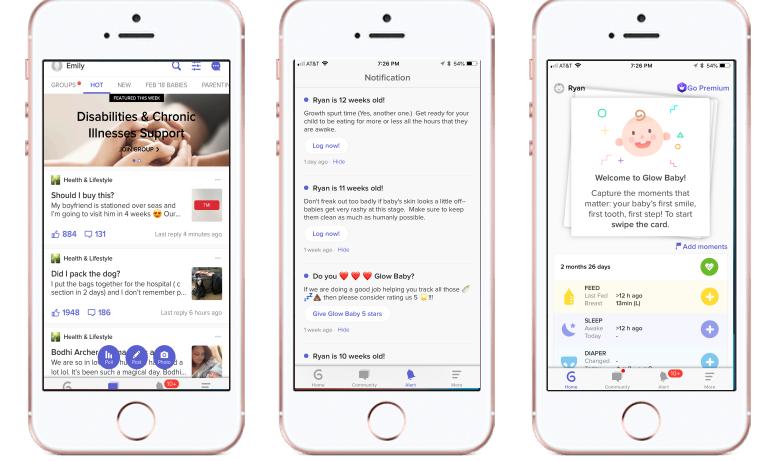


Background

Kangaroo mother care is proven to be more effective than incubators to reduce new born deaths by more than 50% in preterm babies. Nurtured by Design is developing a strapless top called Zaky Zak that wraps around the torso of the adults to help mothers and fathers provide kangaroo care to their babies in a safe manner. A sensor is attached to Zaky Zak that sends information about the baby's vitals to the app and we use this information to monitor baby's growth and assure parents that their baby is doing well due to the care provided by the power of skin to skin contact. We were given all the basic requirements, vision and the architecture of the app. Our job was to come up with design concepts for what the app should look like and any features it should include.



Competitive Analysis

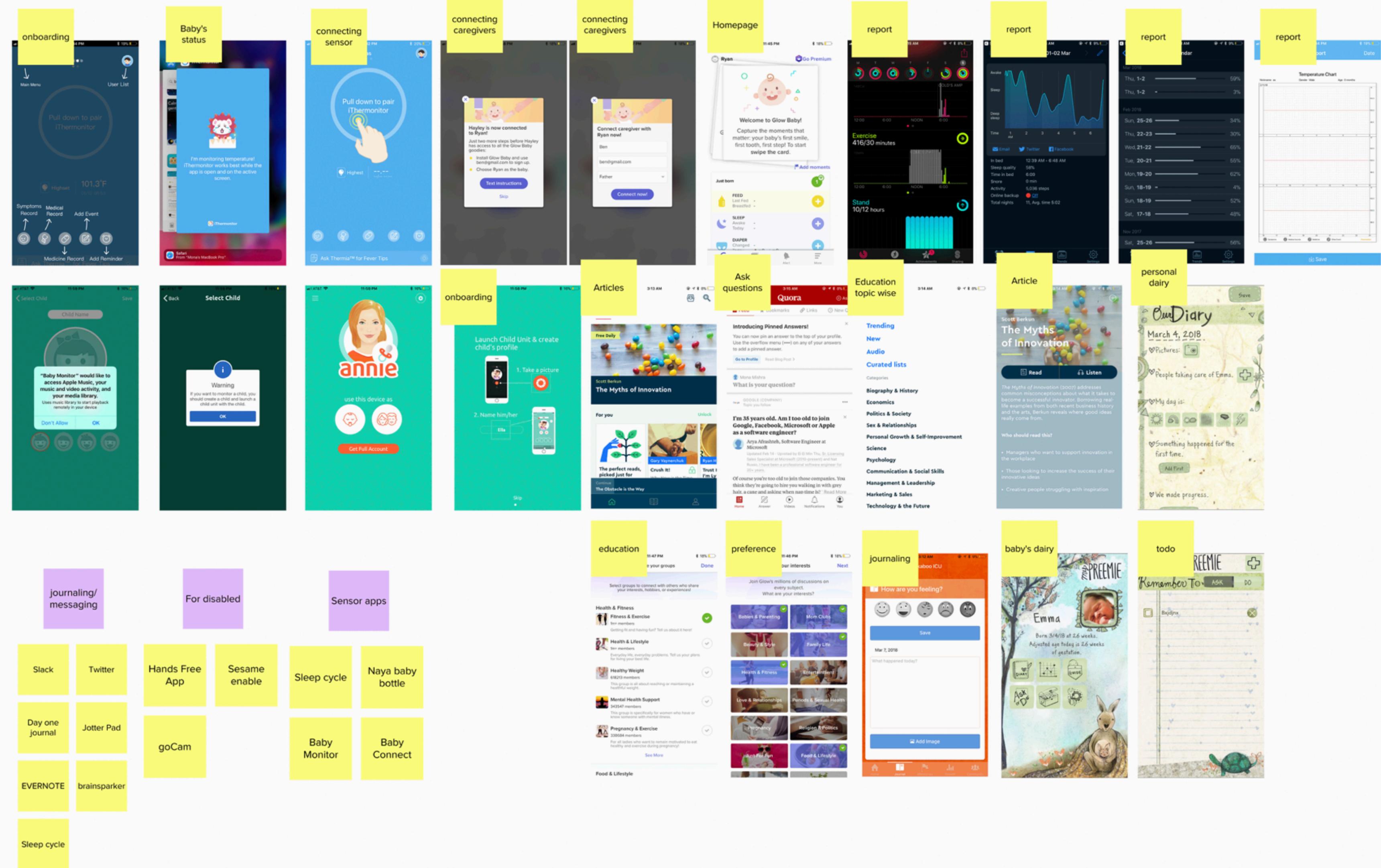
PRODUCT DESCRIPTION	Baby Monitor by Annie	Glow Baby	Baby Tracker
<p>APP SCREENSHOTS</p> 	<p>It can monitor up to 4 children from a limitless number of parent units. Annie Baby Monitor turns any two devices into the perfect babysitting assistant.</p> 	<p>Glow baby helps to record all baby activities like baby's feeding, sleeping, diapers, growth and milestones or moments and provides progress reports for each of them.</p> 	<p>Baby tracker connects caregivers with multiple babies. It mainly focuses on monitoring baby using multiple devices like iPhone and iPad.</p> 
<p>STRENGTHS</p> <p>Users can record baby's vital like body, record baby's medical information and create reminders for medicine. It has the ability to integrate and sync with the Health App on iPhone. It collects data in real time and generates reports for multiple babies and multiple caregivers.</p>	<p>Supported by multiple devices and helps parents be see their baby from any place at any time. Reduces the need to spend on multiple monitoring devices by using devices available at home. Engaging colors and iconography.</p>	<p>Pretty simple and intuitive user interface that makes tracking diaper, feeding, sleeping easy. It also educates parents about baby's growing needs and reports their progress in the form of charts. The community feature is categorized according different topics that new parents or caregivers might be interested in.</p>	<p>Robust tracker that tracks all baby activities and they have the ability to add multiple caregivers who can monitor baby at all times. Parents can add monitor more babies using the same app. Use of colors and iconography is engaging.</p>
<p>WEAKNESSES</p> <p>It cannot compute and display the data points on the reports in a readable manner and it does not give the ability to caregivers to connect to each other. Lack of education for parents about growth and development of their baby.</p>	<p>Does not provide information on baby's vitals, neither does it provide parents the ability to record activities and special moments.</p>	<p>Loads of information can be overwhelming and the UI, although intuitive, looks cluttered and unorganized.</p>	<p>Parents or caregivers cannot use this app to save memories or moments. The app does not have the functionality to share baby's data with health care providers.</p>
<p>SUPPORTED PLATFORMS</p> 			



Mood boards

Although competitive analysis was important to understand the gaps in the market, it was equally important to analyze the user interfaces of the competitors.

Some of them are direct competitors, like iThermonitor, Baby Monitor by Annie, who focus on baby tracking interaction, while others are indirect competitors, like Fitbit, Apple activity, Quora, Preemie, who exhibit great interaction of some of the features that is essential to Zaky app, like reports and journaling. These moodboards were helpful while creating wireframes and low fidelity mock us.

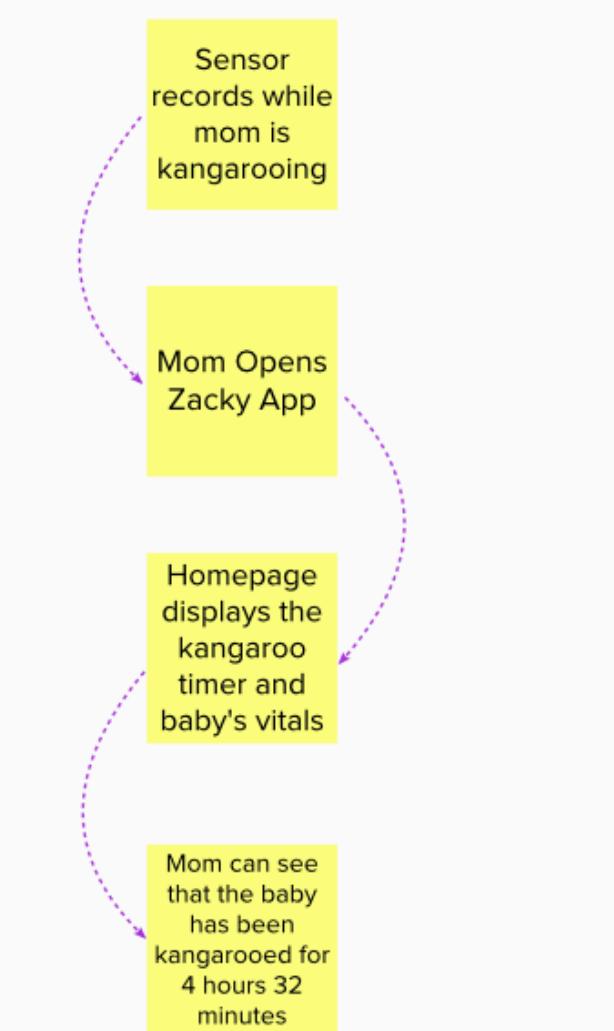


ZAKY ZAK TASK MAP

Reference: Turn User Goals into Task Scenarios Using Usability Testing:
<https://www.nngroup.com/articles/task-scenarios-usability-testing/>

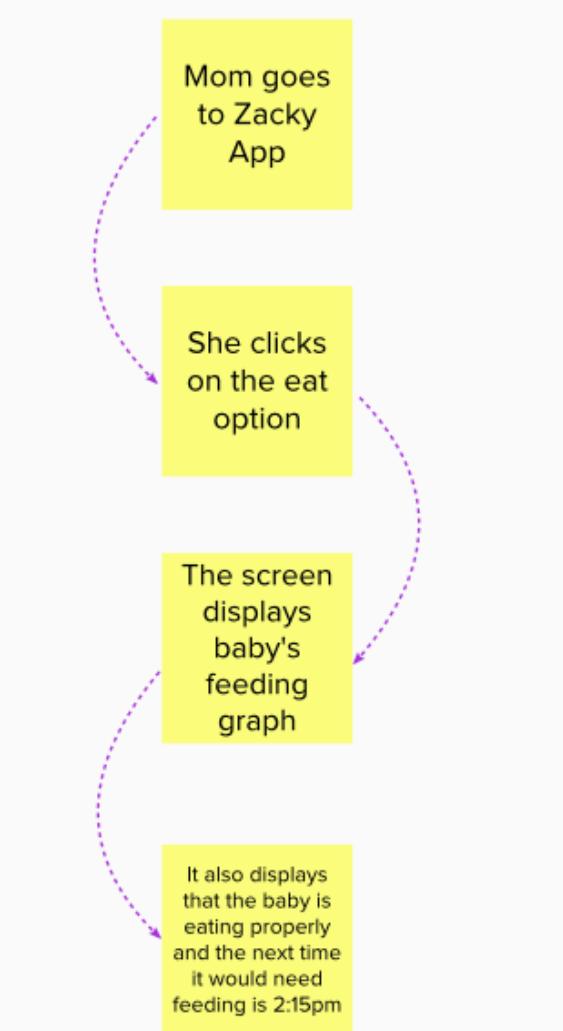
1 Check how many hours your baby was kangarooed

- 1 You have been kangarooring your baby from a long time and you want to check exactly how long have you been kangarooring the baby. Go to the Zacky Zak app and find out how many hours you baby was kangarooed.



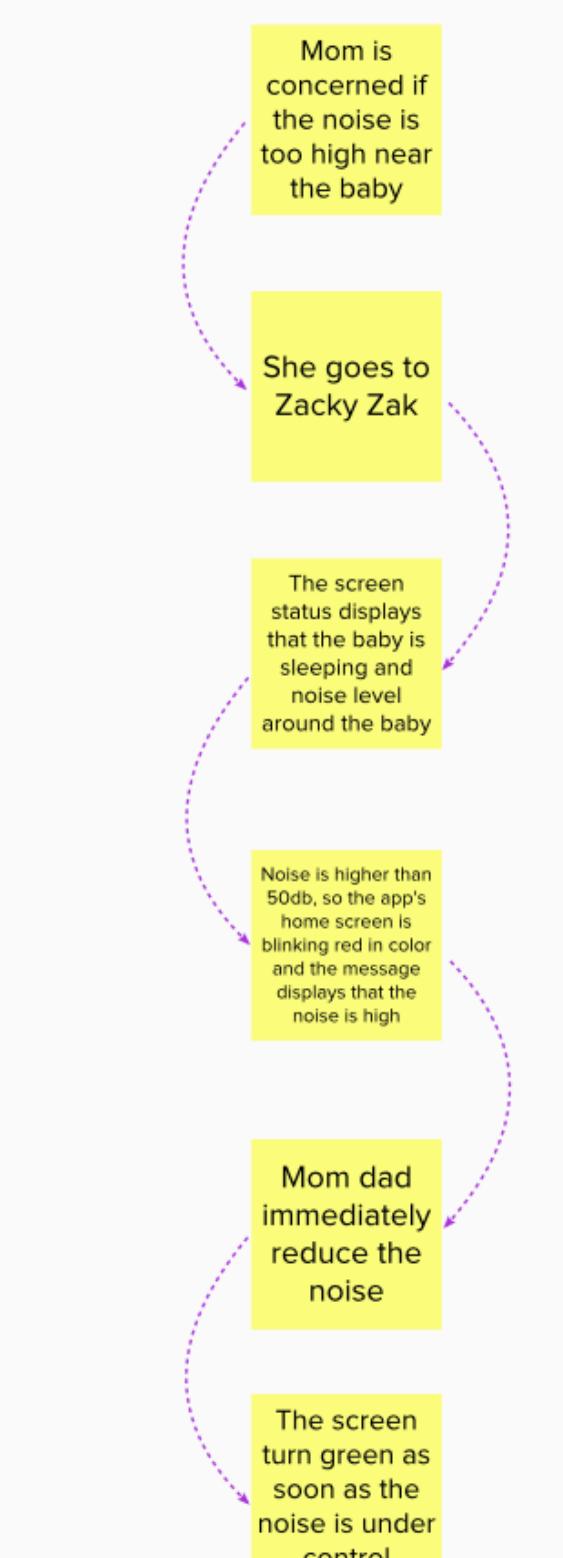
2 Check how much your baby was fed

- 1 You are a new mom and you don't know how much you should feed the baby. Go to the app and tell us if your baby is being fed the right amount of milk (the app should notify if the baby is fed in correct intervals and the right amount of time)



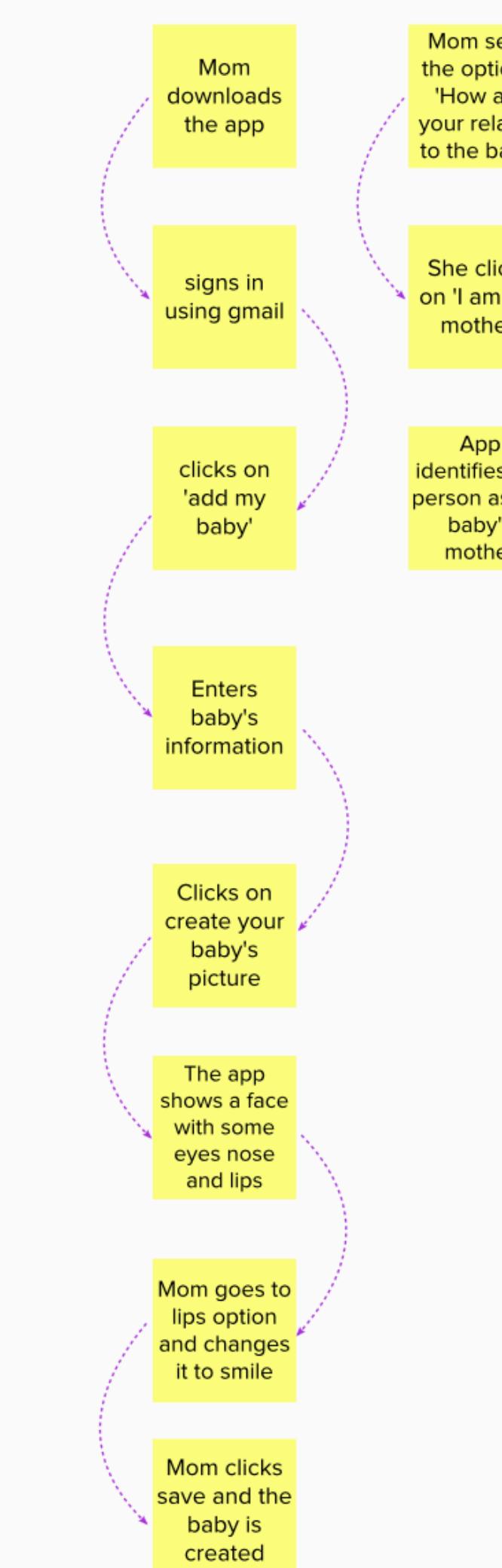
3 Check if the noise level near the baby

- 1 You are a new mom concerned about the noise levels around your new born baby. Go to the Zacky app and tell us if the noise level is under the limit.



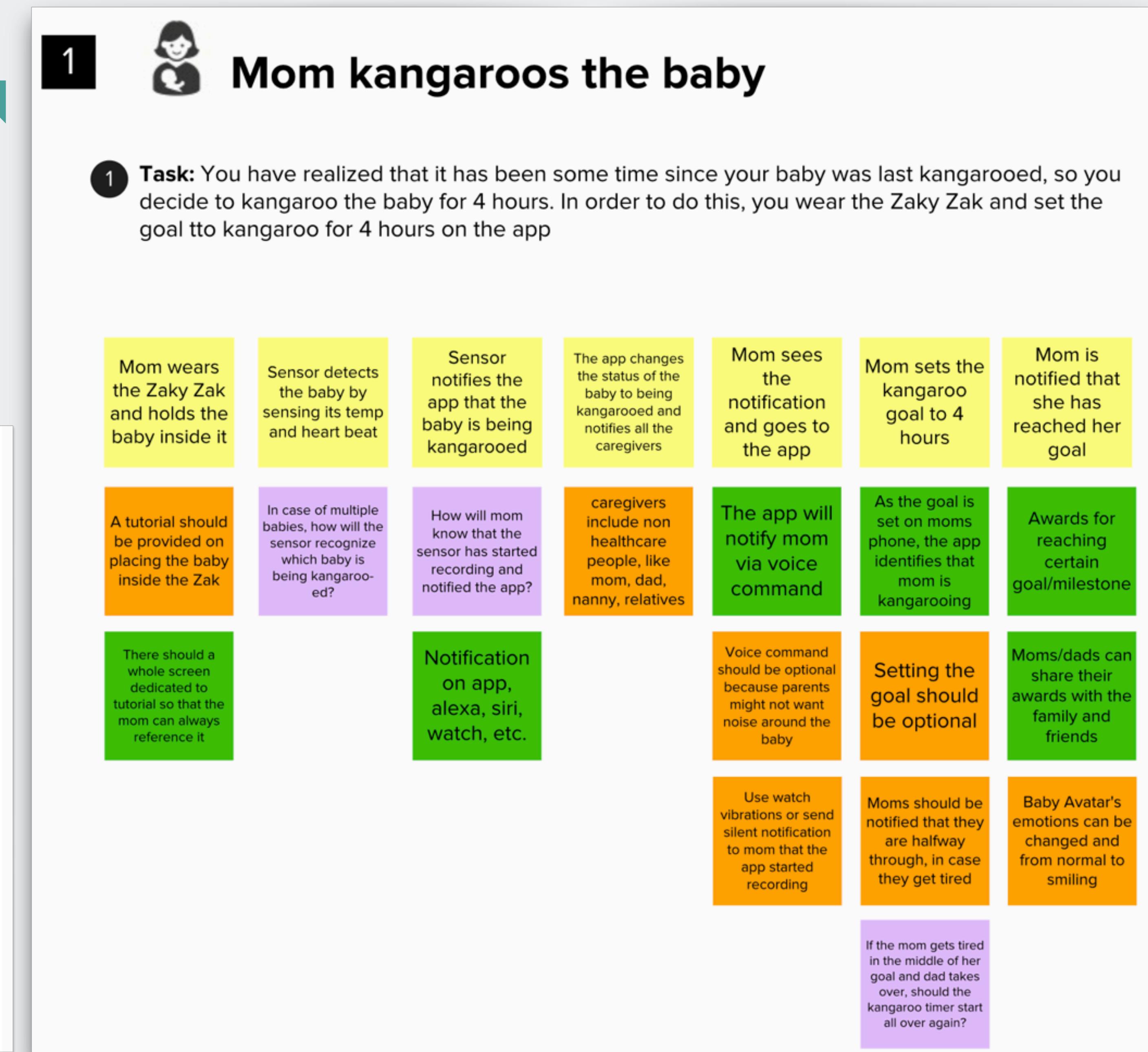
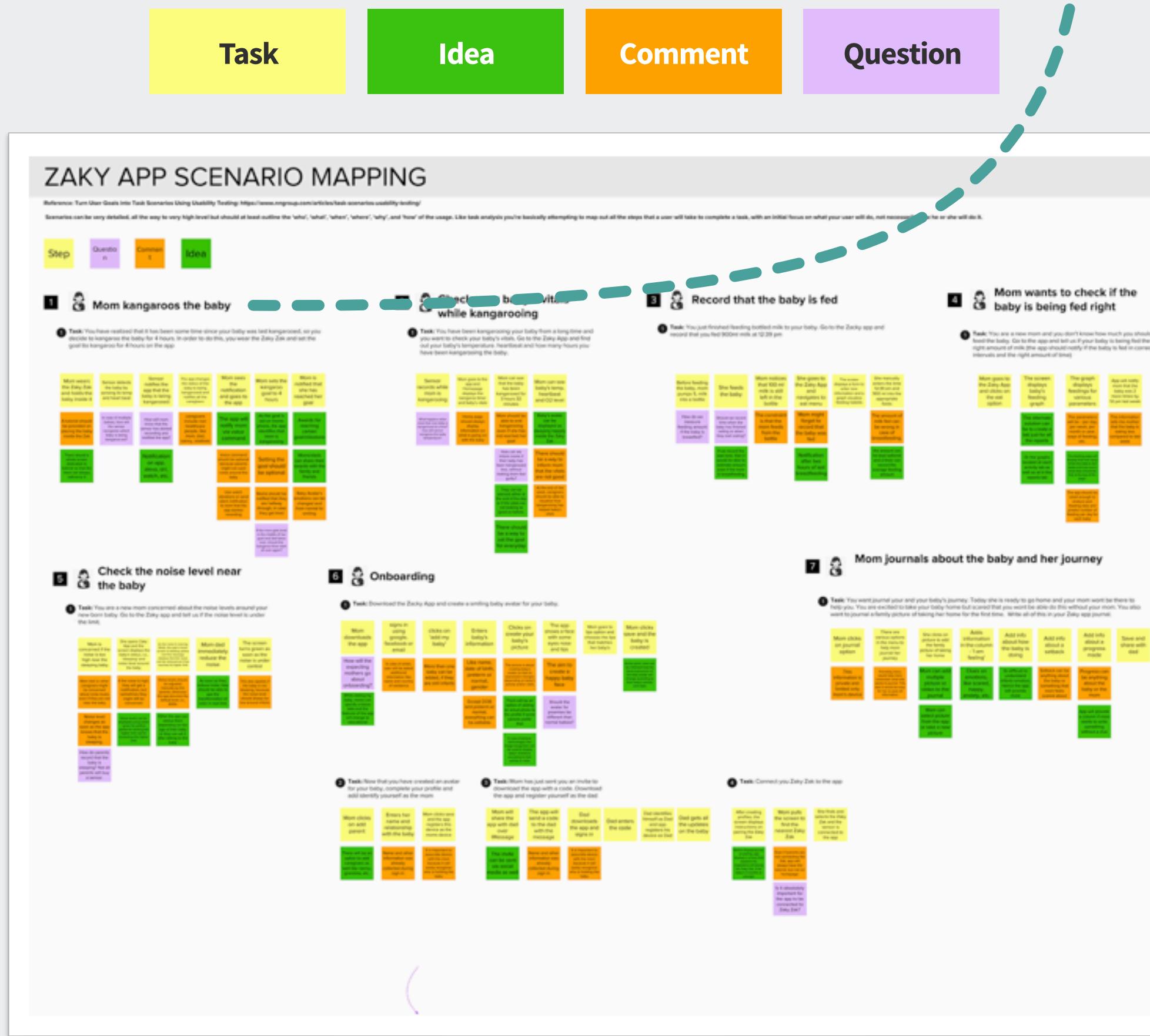
4 Onboarding

- 1 Download the Zacky App and create a smiling baby avatar for your baby.
- 2 Now that you have created an avatar for your baby, complete their profile and add identify yourself as the mom



Scenario Mapping

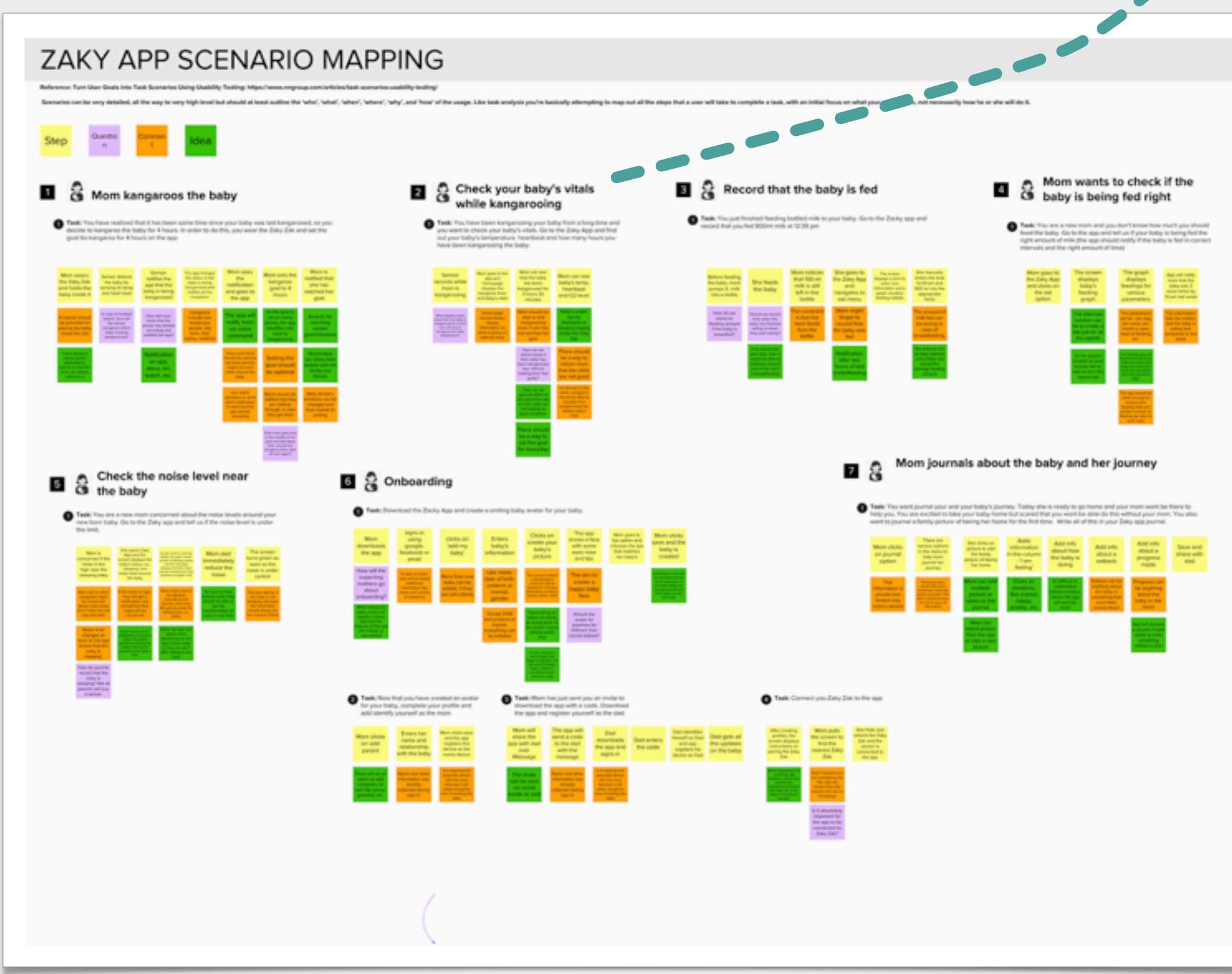
I mapped some scenarios to understand the questions or comments that might come along the way.



Scenario Mapping

I mapped some scenarios to understand the questions or comments that might come along the way.

Task	Idea	Comment	Question
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2 Check your baby's vitals while kangarooing

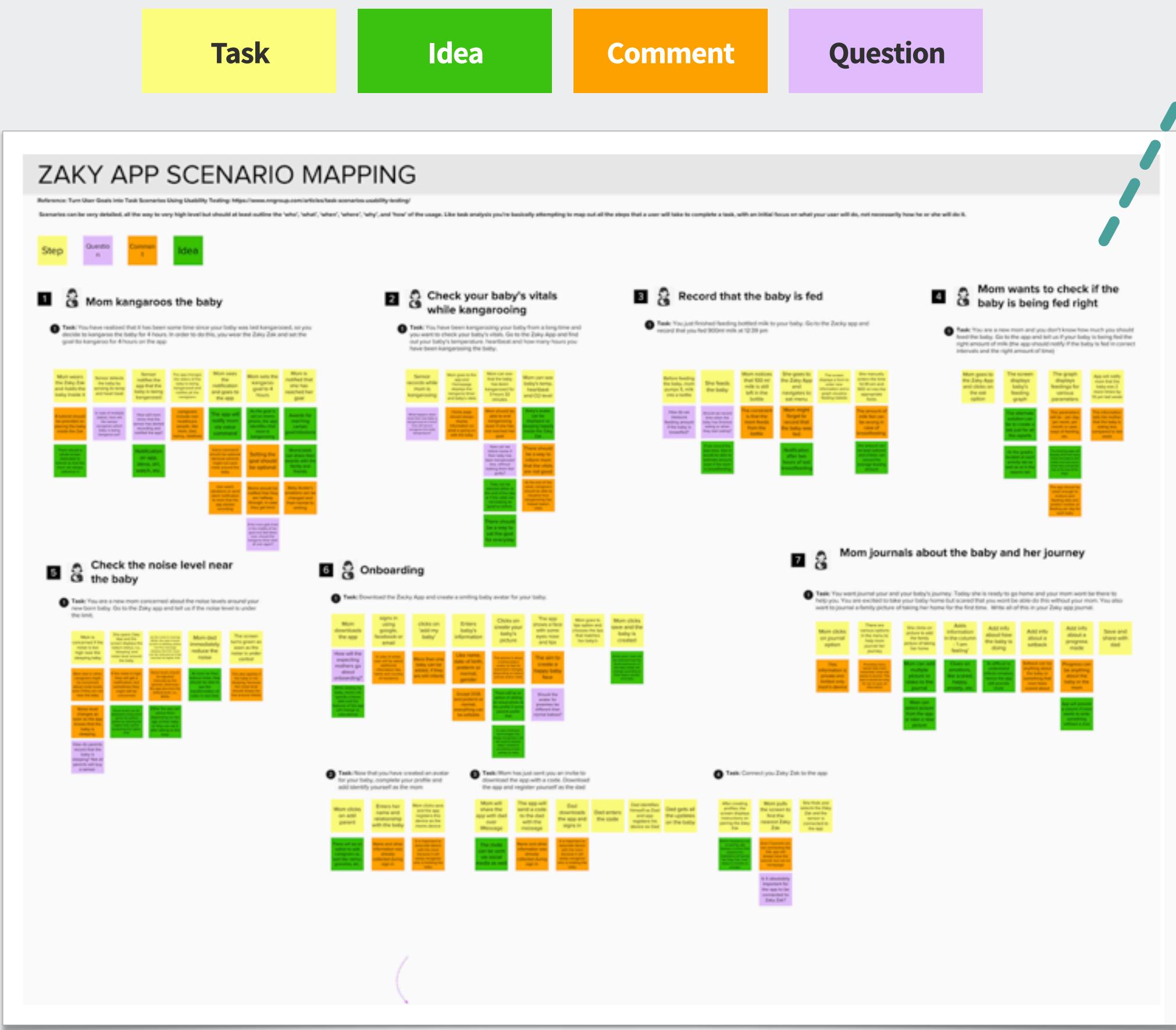
- 1 Task: You have been kangarooing your baby from a long time and you want to check your baby's vitals. Go to the Zaky App and find out your baby's temperature, heartbeat and how many hours you have been kangarooing the baby.

Sensor records while mom is kangarooing	Mom goes to the app and Homepage displays the kangaroo timer and baby's vitals	Mom can see that the baby has been kangarooed for 3 hours 32 minutes	Mom can see baby's temp, heartbeat and O2 level
What happens when more than one baby is kangarooed at a time? how will sensor recognize the body temperature?	Home page should always display information on what is going on with the baby	Mom should be able to end kangarooing even if she has not reached her goal	Baby's avatar can be displayed as sleeping happily inside the Zaky Zak
How can we inform moms if their baby has been kangarooed less, without making them feel guilty?	There should be a way to inform mom that the vitals are not good	They can be advised either at the end of the day or if the vitals are not looking as good as before.	At the end of the week, caregivers should be able to visualize how kangarooing has helped baby's vitals
			There should be a way to set the goal for everyday



Scenario Mapping

I mapped some scenarios to understand the questions or comments that might come along the way.



Mom wants to check if the baby is being fed right

4



1

Task: You are a new mom and you don't know how much you should feed the baby. Go to the app and tell us if your baby is being fed the right amount of milk (the app should notify if the baby is fed in correct intervals and the right amount of time)

Mom goes to the Zaky App and clicks on the eat option

The screen displays baby's feeding graph

The graph displays feedings for various parameters

App will notify mom that the baby was 2 more times by 12 pm last week

The alternate solution can be to create a tab just for all the reports

The parameters will be - per day, per week, per month or year, ways of feeding, etc.

This information tells the mother that the baby is eating less compared to last week

Or the graphs located at each activity tab as well as at in the reports tab

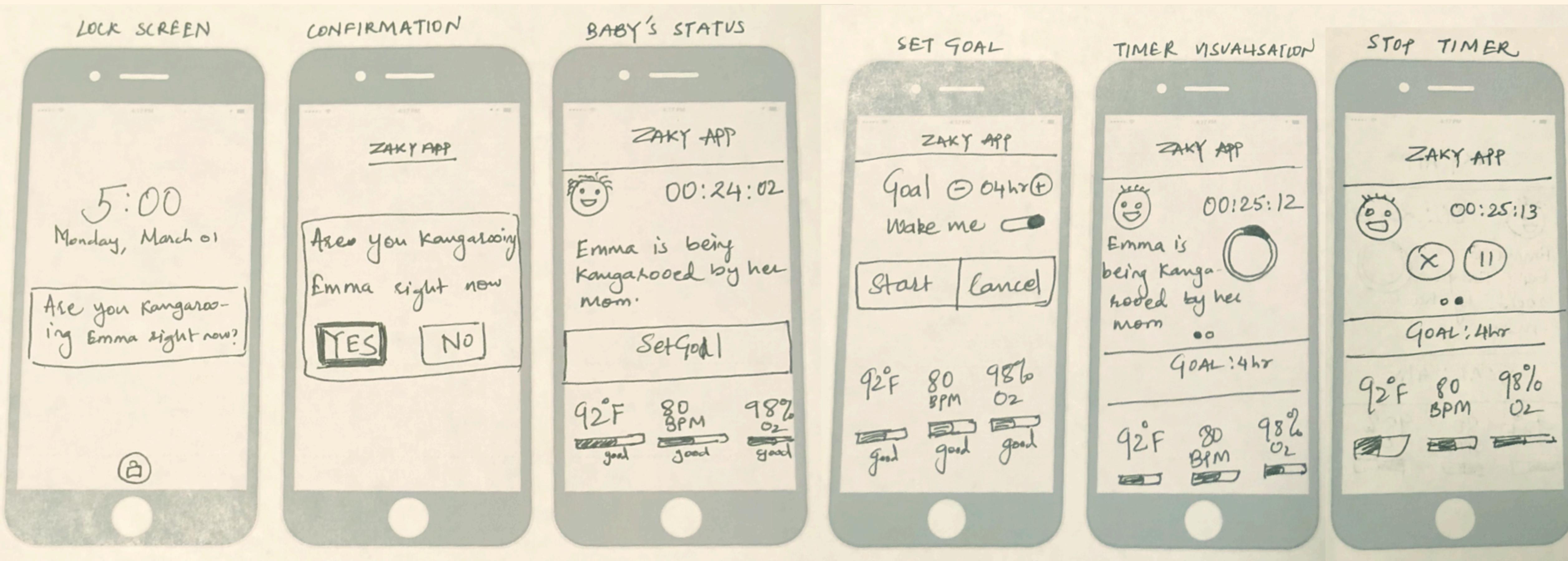
The feeding page will display that how many times the baby is fed today and how much more they should be fed, at the top of the page.

The app should be smart enough to analyze past feeding data and predict number of feeding per day for each baby



Wireframes

Wireframing was helpful to convert the task map into actual interactive design.

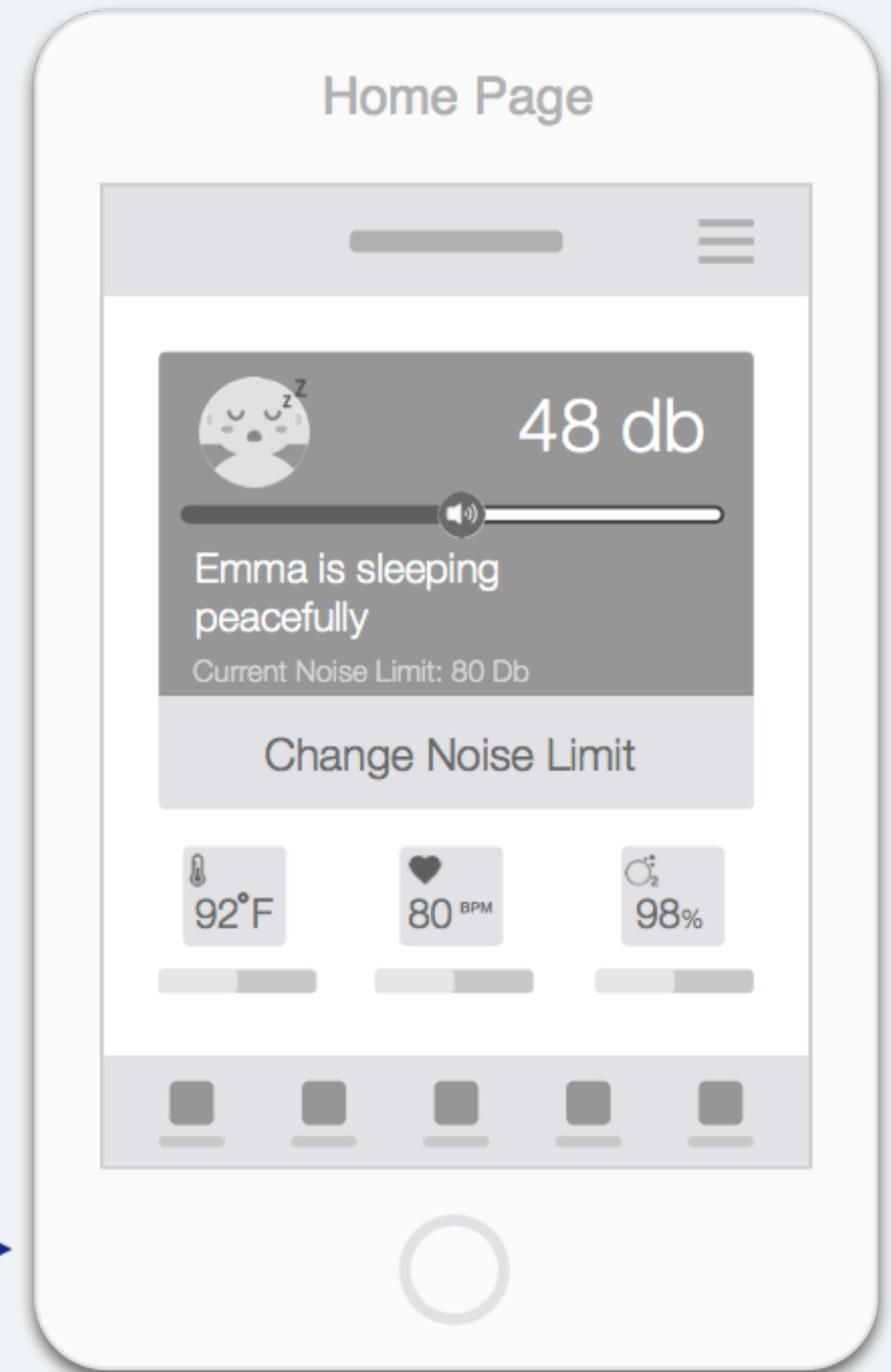
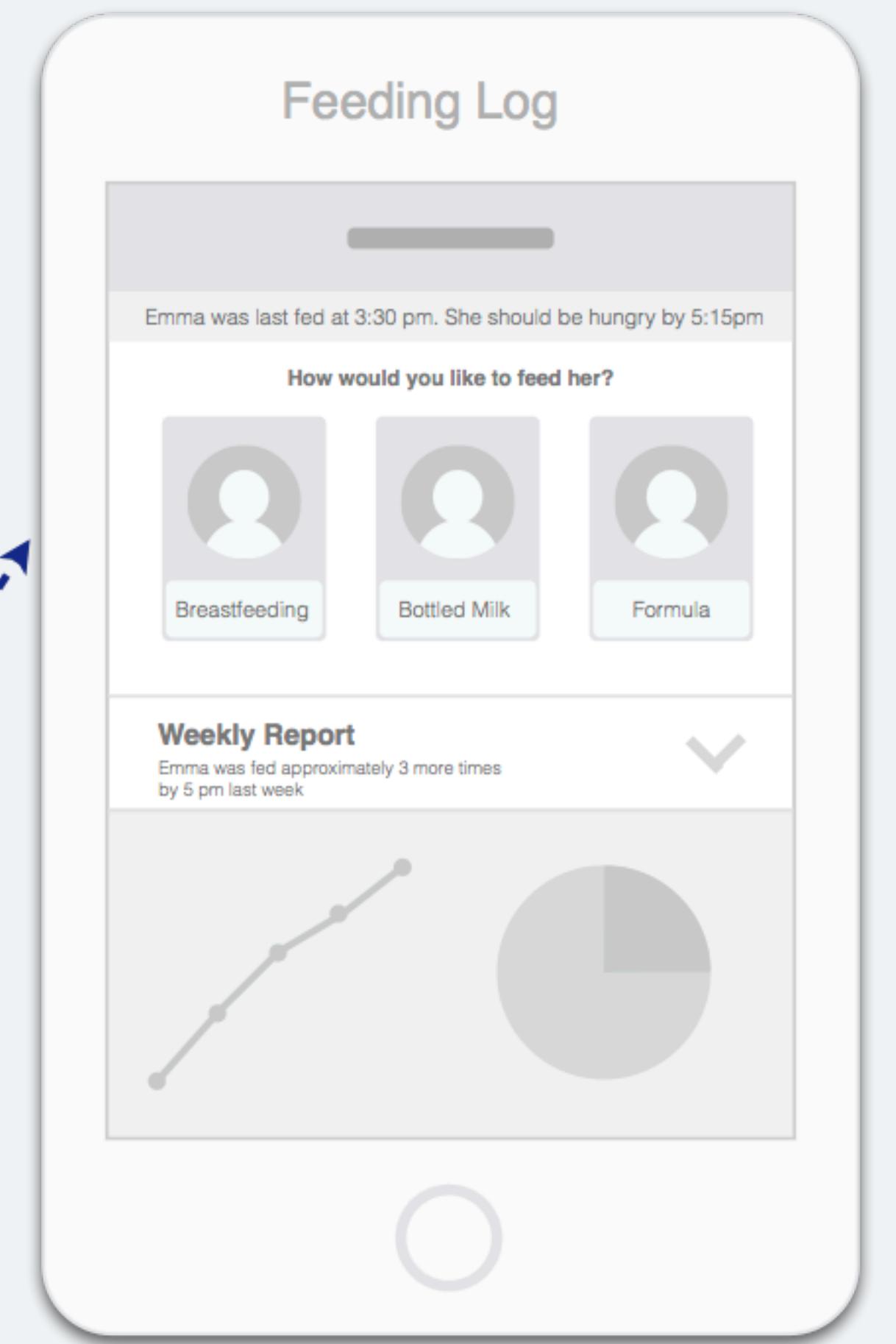
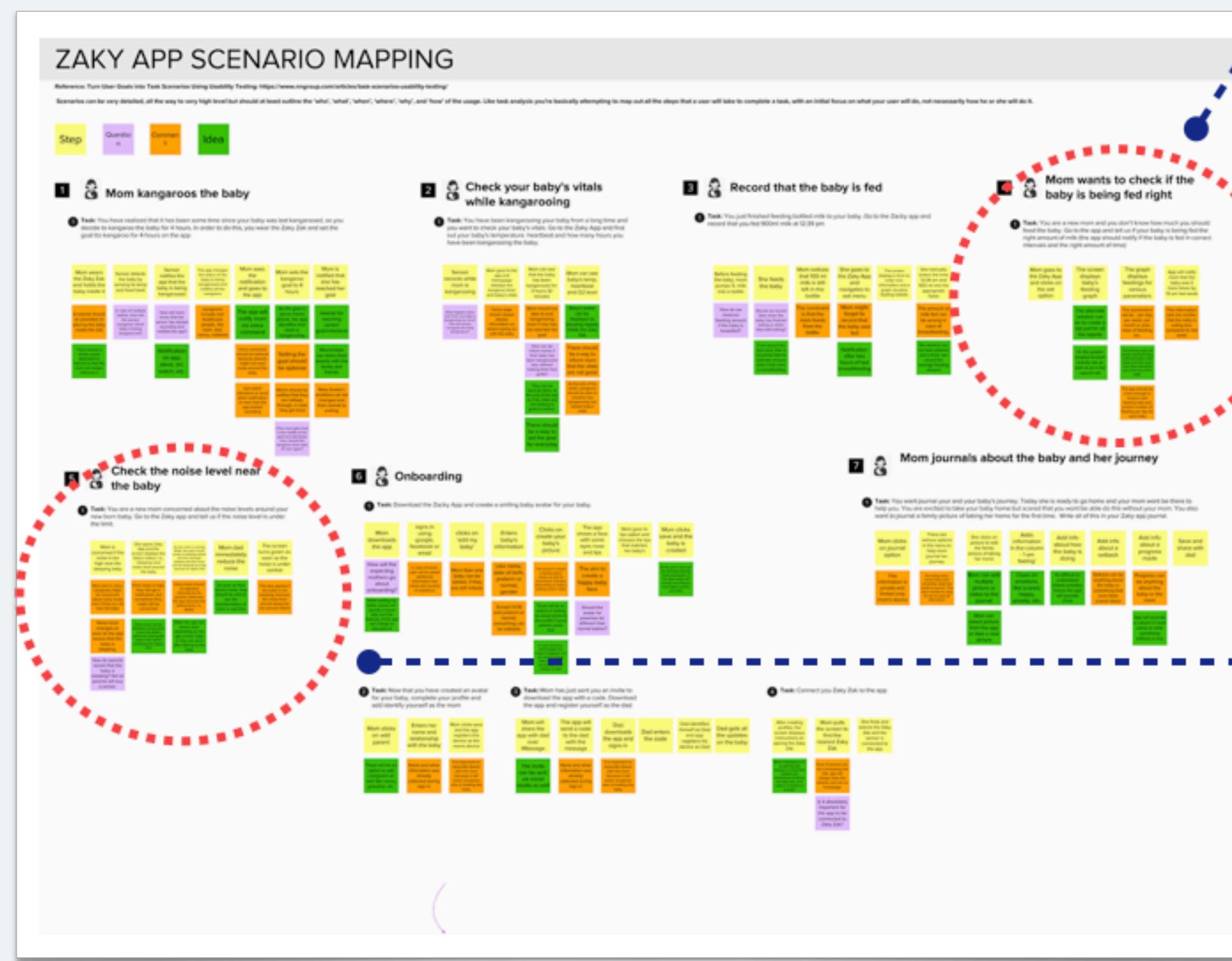


SCENARIO: Mom wants to kangaroo the baby for 4 hours



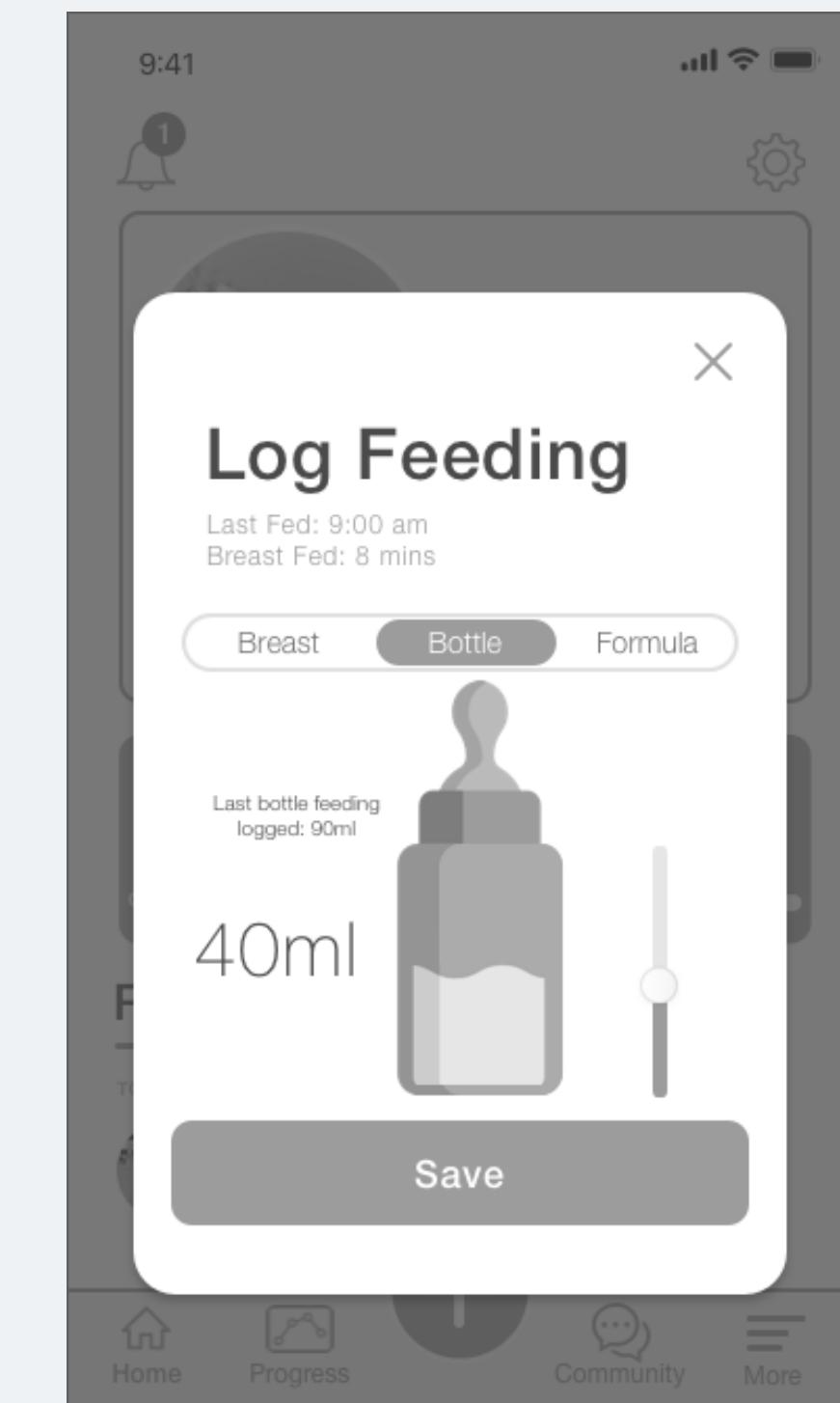
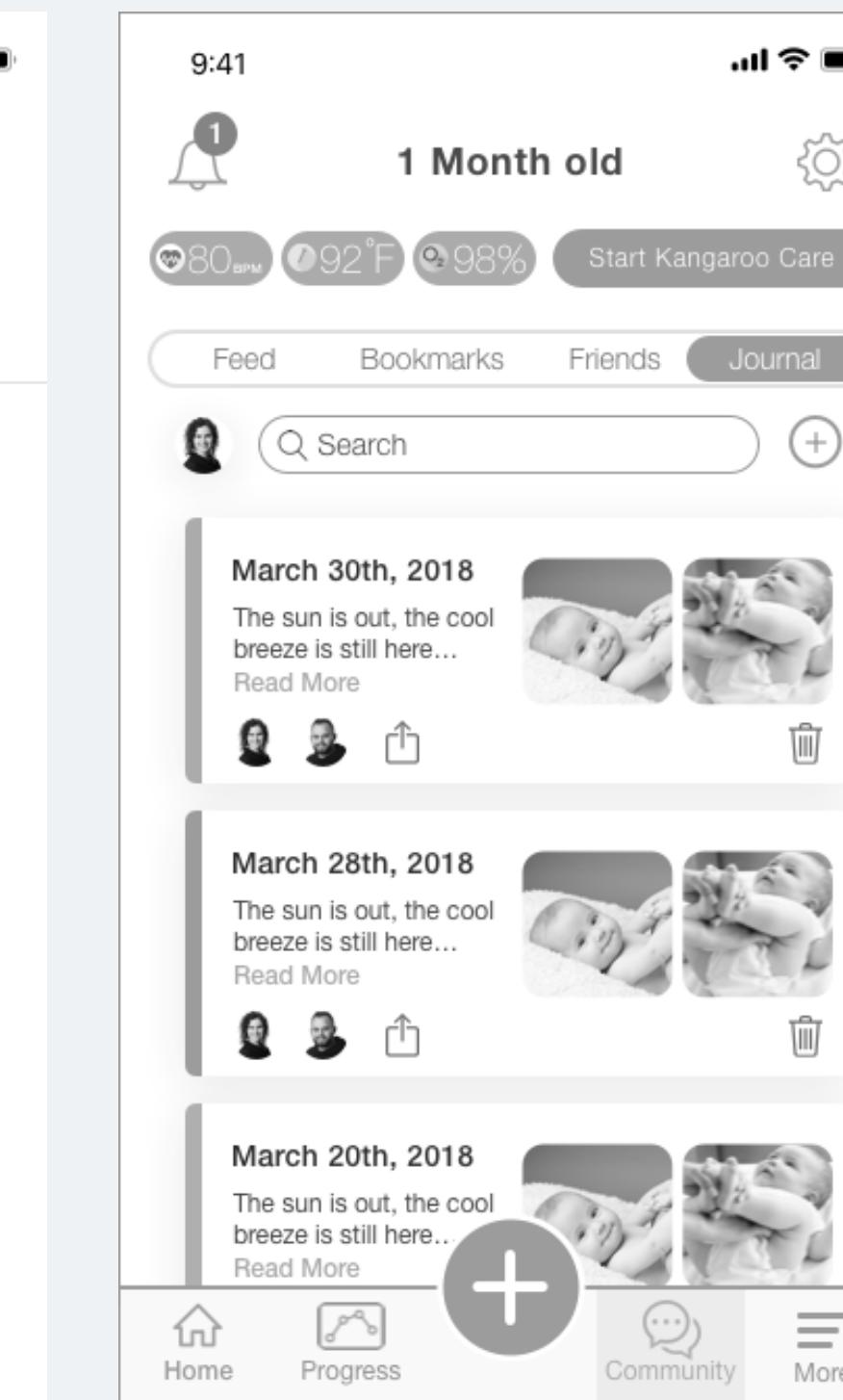
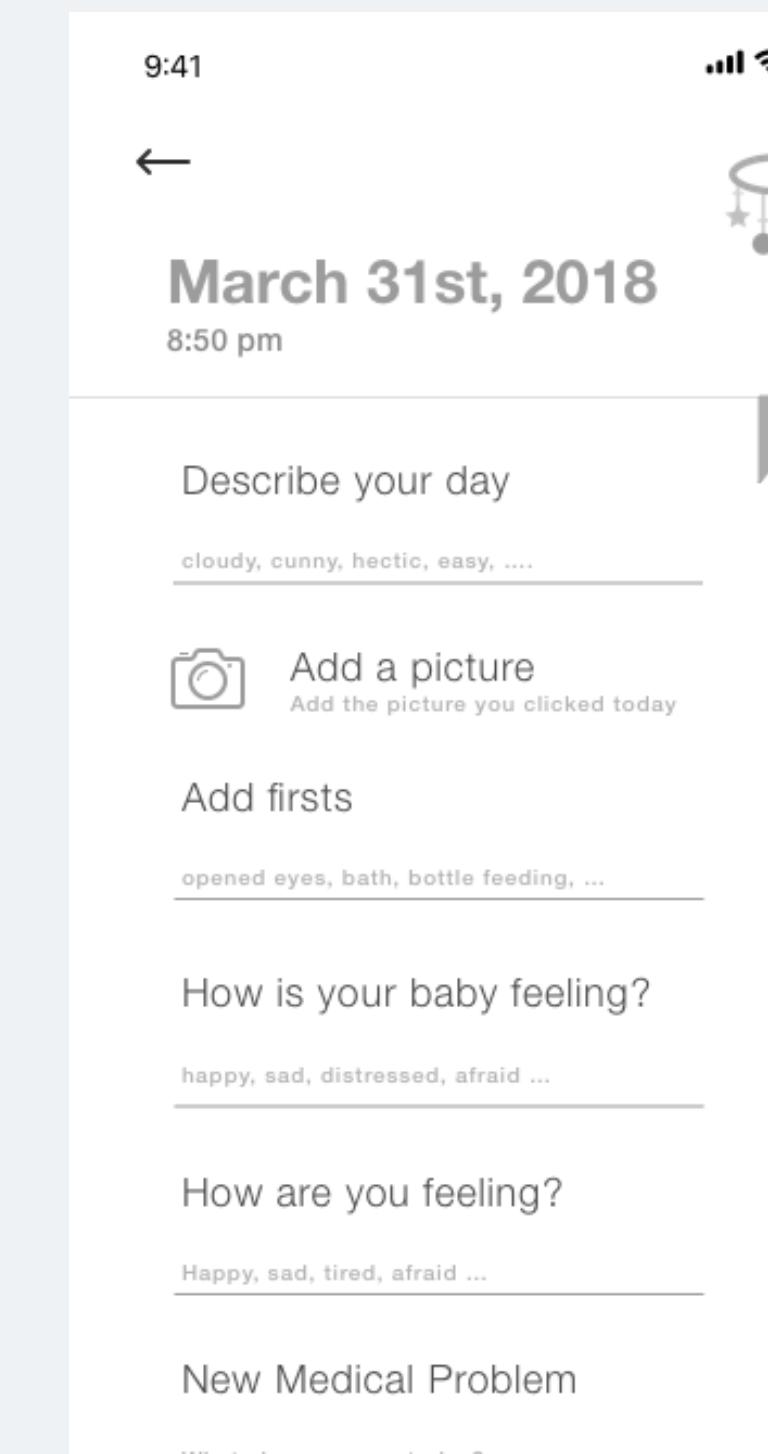
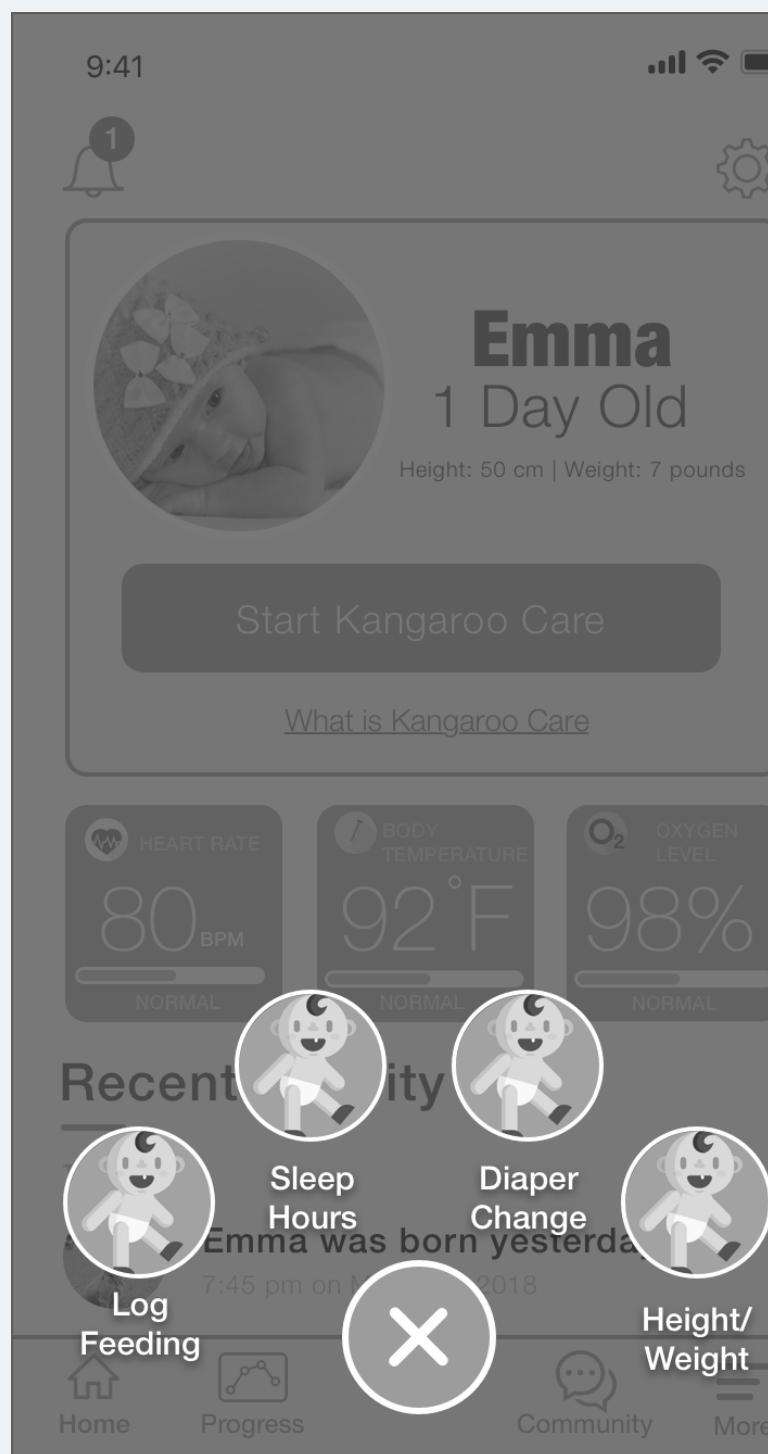
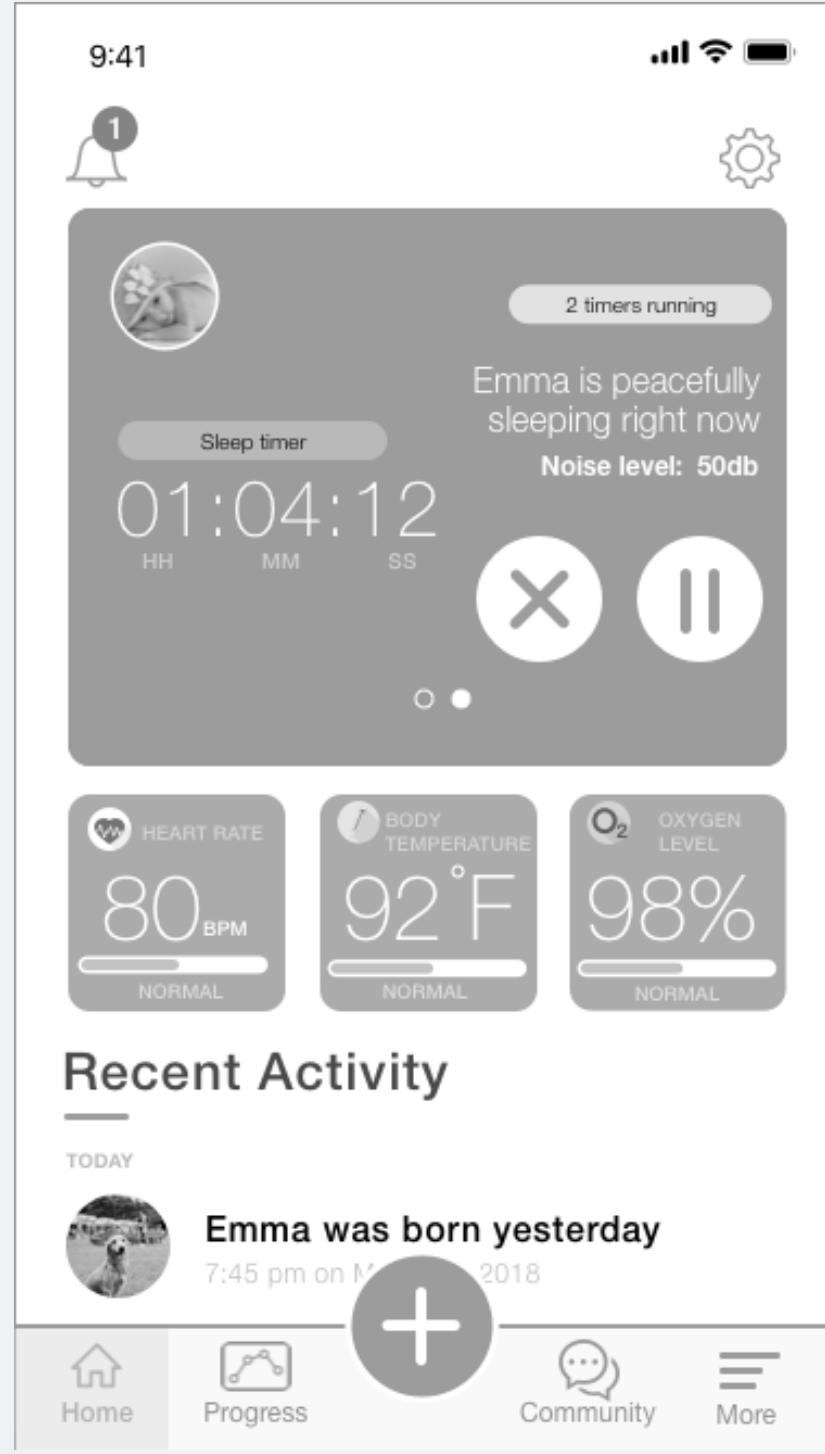
Wireframes

Later I decided to create some high level mocks of the sketches, without really focusing on wordings or the iconography. These wireframes were conceptual and it was helpful to understand the gaps in the interaction that could not have been identified using just the task map and scenarios.



Low Fidelity

Low fidelity mockups were created to mimick the design concepts from the wireframing phase. The main goal of these mock ups was to test the major functionalitites with the users without letting them get distracted by the colors or font styles. Following are some of the snapshots of the low fidelity mock ups.



Usability Test - Tasks

Ideal candidates for usability testing were mother with preemies or babies less than 3 months old. Keeping them in mind, I designed the following tasks to test the low fidelity mockups.

Scenario: I want you to imagine that you just gave birth to your baby and the doctor has talked to you about the benefits of kangaroo care and recommended you to use an app called the Zaky App to record your kangaroo care hours and all of your baby activities. Now your baby is 1 day old and you have downloaded this app.

TASK 1: ONBOARDING

- Start using the app and register yourself and your baby on the app by filling in all the information and uploading baby's picture.
- Identify yourself as the mom and invite the dad named Robert Sanders and nanny named Ashley to join the app.

TASK 2: KANGAROO CARE

- Now you want to kangaroo the baby, so you wear the Zaky Zak and place your baby in it. The sensors from the Zaky Zak notifies the app that the kangaroo care has started. Can you tell me how would you know that the app has been notified?
- Set goal: You decide to kangaroo the baby for almost 4 hours 30 minutes, can you show me how you will do that using the app
- Stop KC: After 2 hours 3 minutes, you remember that you have to do something else, how will you notify the app that you want to stop?



Usability Test - Tasks

Continued ..

TASK 3: FEEDING

- While you are kangarooing your baby, she starts crying because she is hungry, so you want to feed her using the breastfeeding method. How will you use the Zaky app to record feeding her?
- Now you want to kangaroo the baby for 4 hours straight, how will you do that using this app?
- Now the baby is hungry again, but you are not able to breastfeed for some reason. So you decide to bottle feed the baby. Your baby drinks 40ml of milk and then sleeps. Can you record that your baby was fed 40ml milk right now?

TASK 4: JOURNALING

- Now imagine that your baby is happy at the end of the day and you have captured some cute pictures of her, this day made you very happy and you realized that it was the first time your bay was bottle fed. You want to note down all these information on the app. Can you show me how you will do that?



Usability Testing

PARTICIPANTS

4 Moms

Age range - 28-32

Baby's age - less than 1 year

KEY TAKEAWAYS

Sitemap

App's structure was not intuitive, for example, none of the users were able to locate journal entry under the community section on the bottom nav.

Element's weight and color

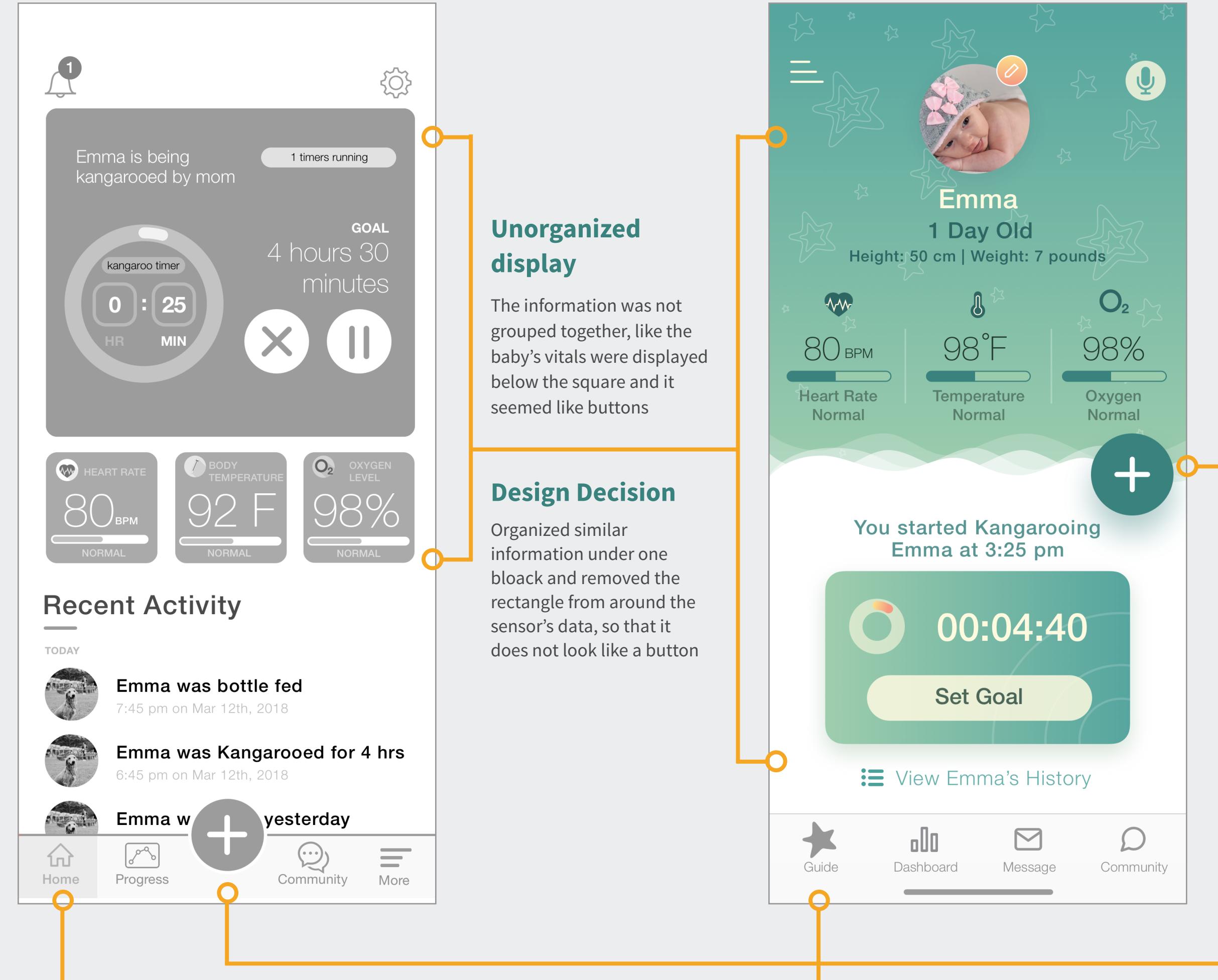
Most of the elements on the homepage were similar in color and weight. Thus, users used to wander a little before finding the plus sign to log the feeding information.

Setting Goal

Setting goal for kangaroo care was quite intuitive and it was successfully completed by all the users

Unclear Icons and words

Some icons and wording were confusing, for example, 'progress' did not signal towards reports.



Unnecessary Home button

Home button was not required at the bottom nav

Design Decision

Replaced the home button with guide that includes all the information a caregiver might need



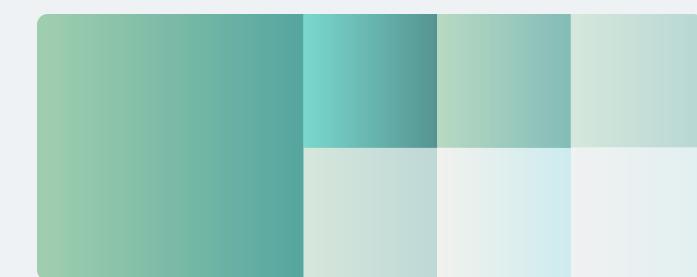
Zaky App Styleguide

Before creating high fidelity screens, it was important to design the styleguide that will be consistent throughout the design. My goal was to stay close to the brand colors of Zaky and green specifically gave a calming vibe.

Colors



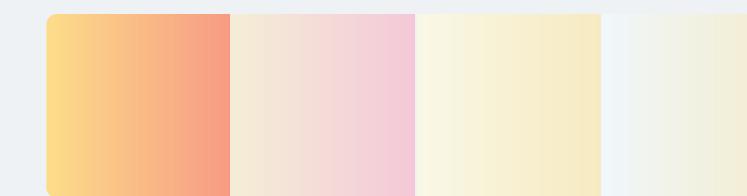
ZAKY APP COLOR GUIDE



MAIN GRADIENT
#9FCEAE / #56A69F



ZAKY MONOCHROMATIC



MAIN GRADIENT
#9FCEAE / #56A69F

Solid Buttons

Normal	Value	Value
Hovered	Value	Value
Disabled	Value	Value
White - Normal	Value	
Small normal	Value	Value

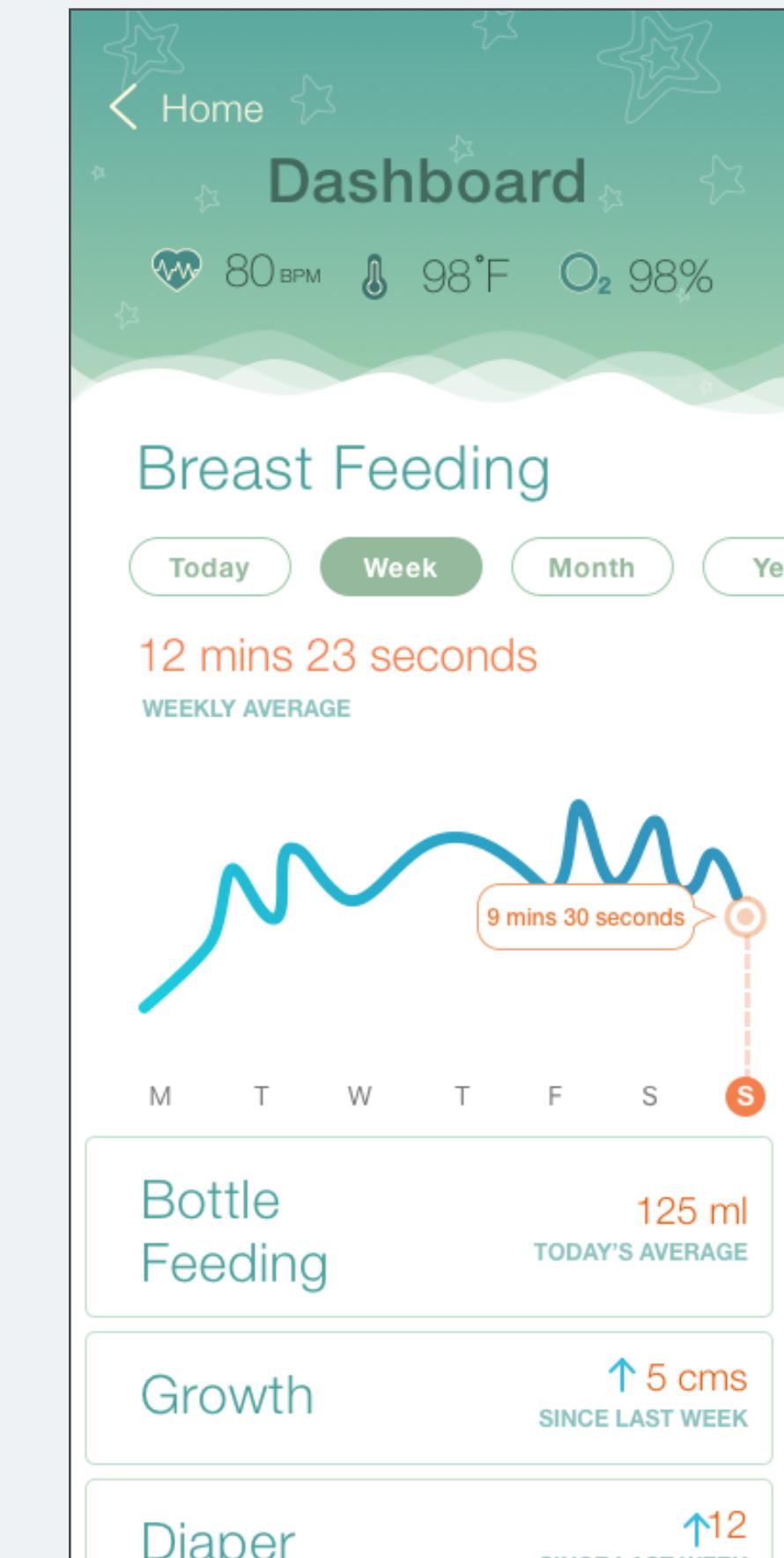
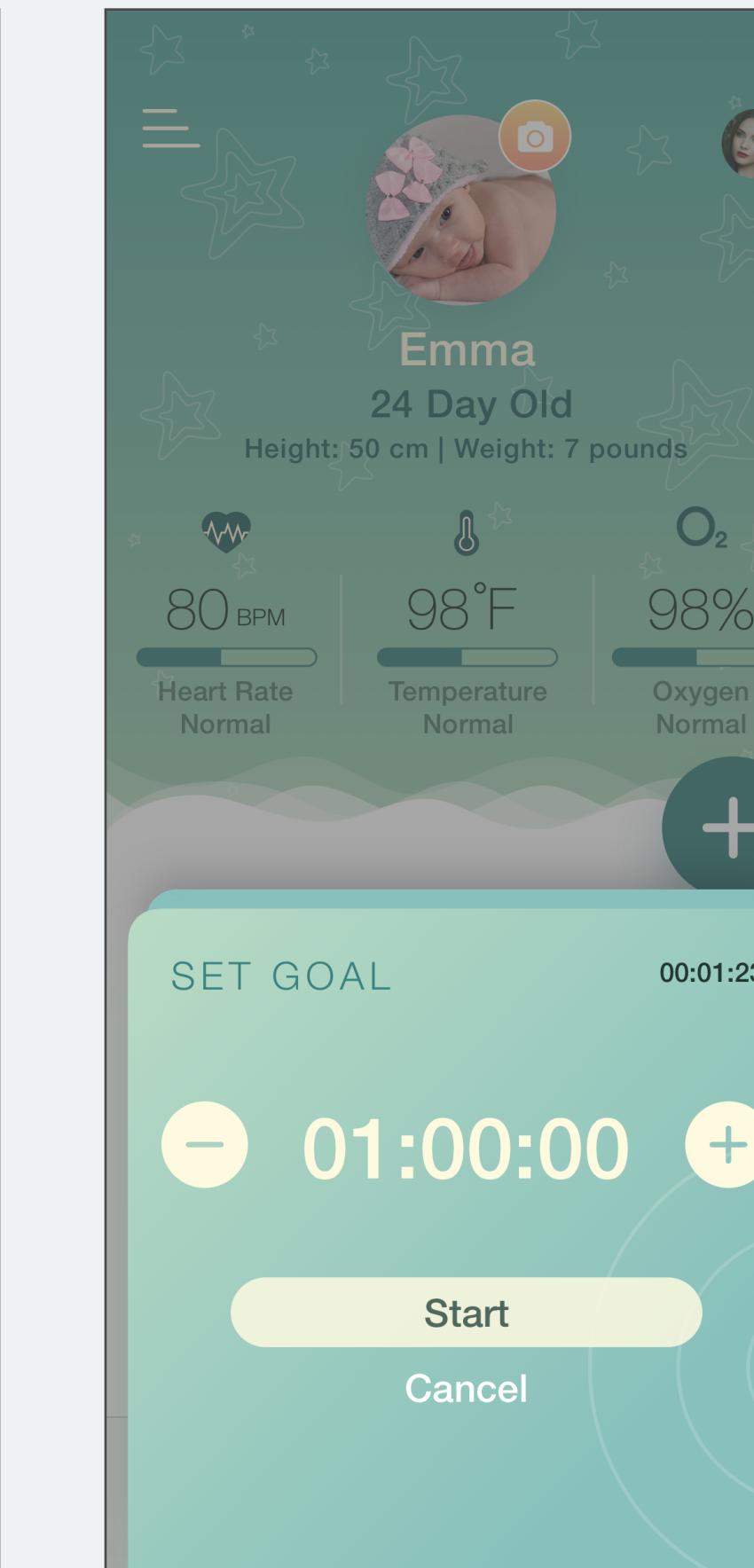
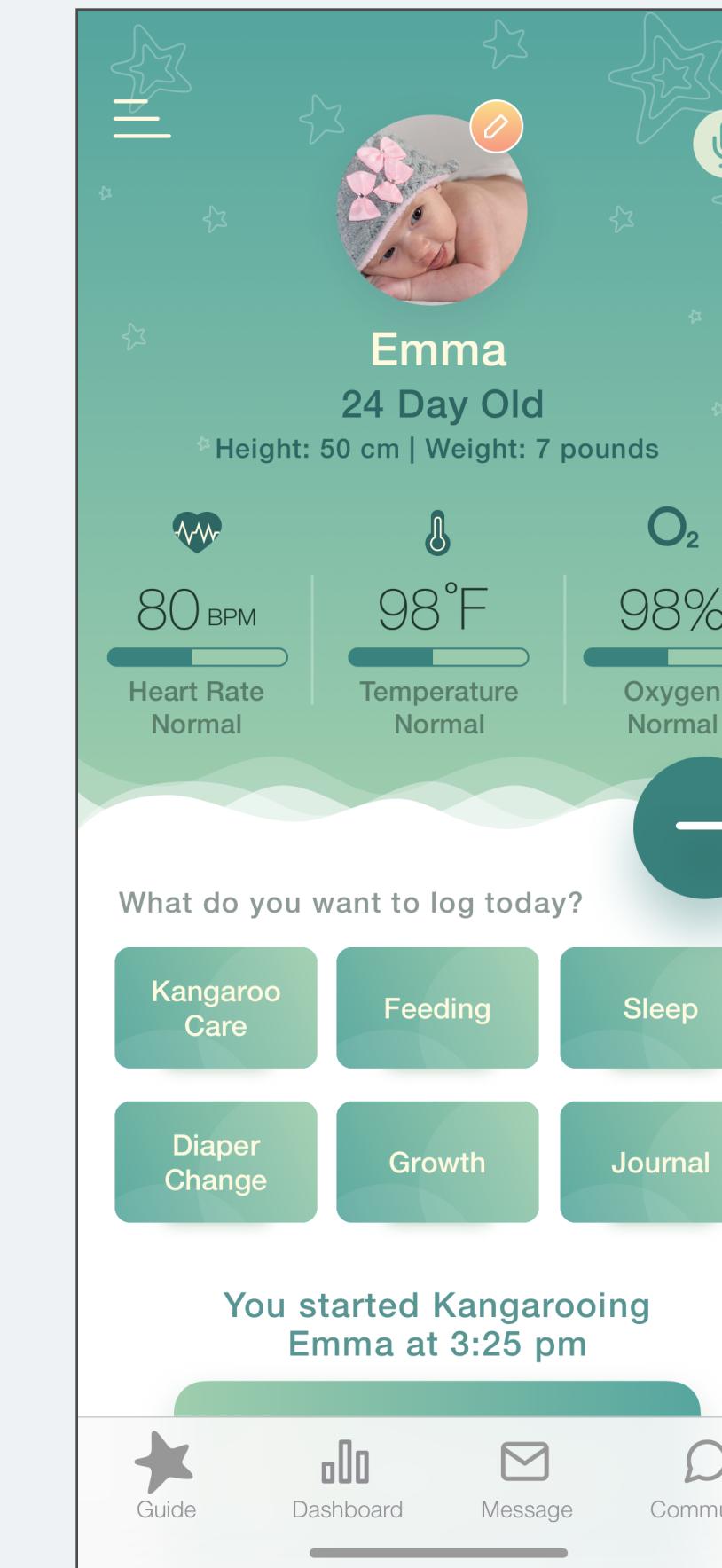
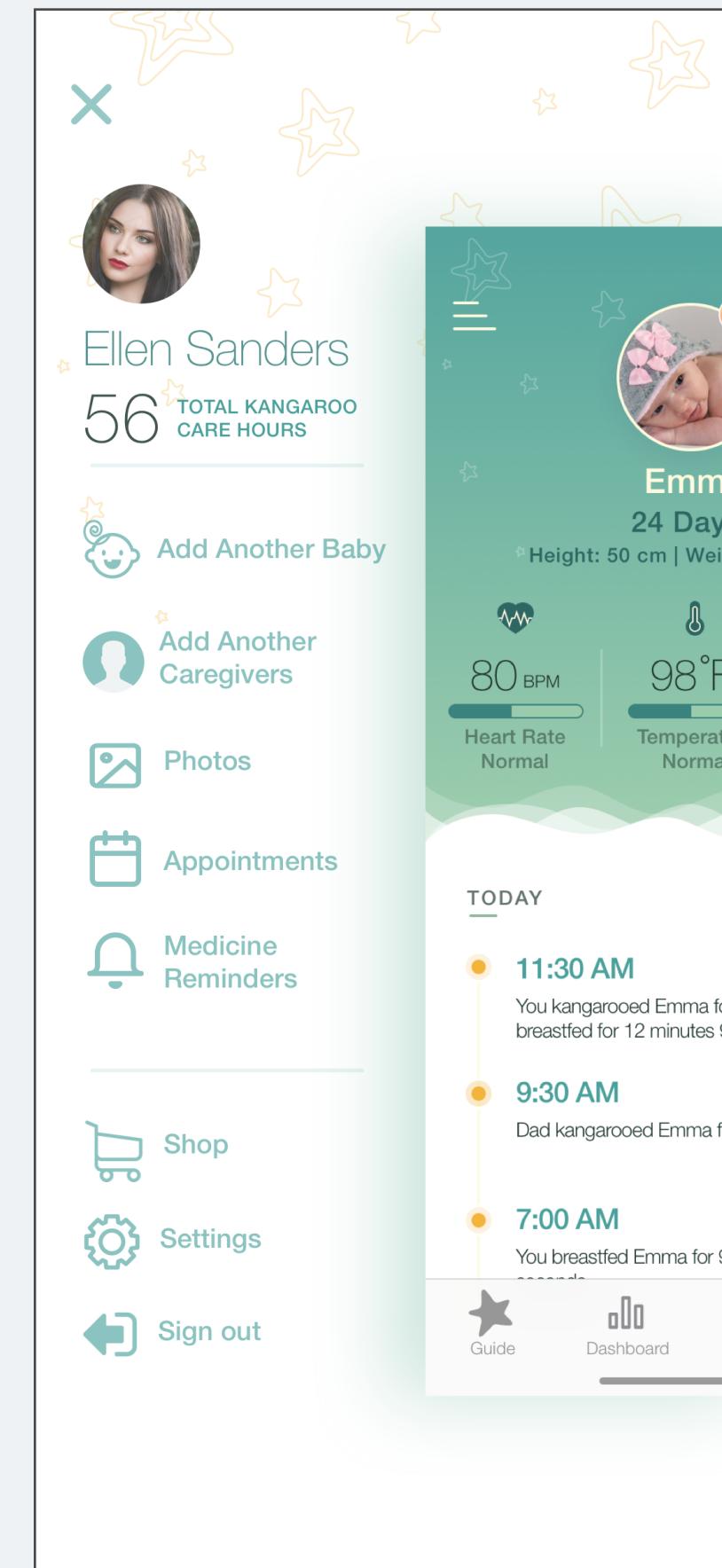
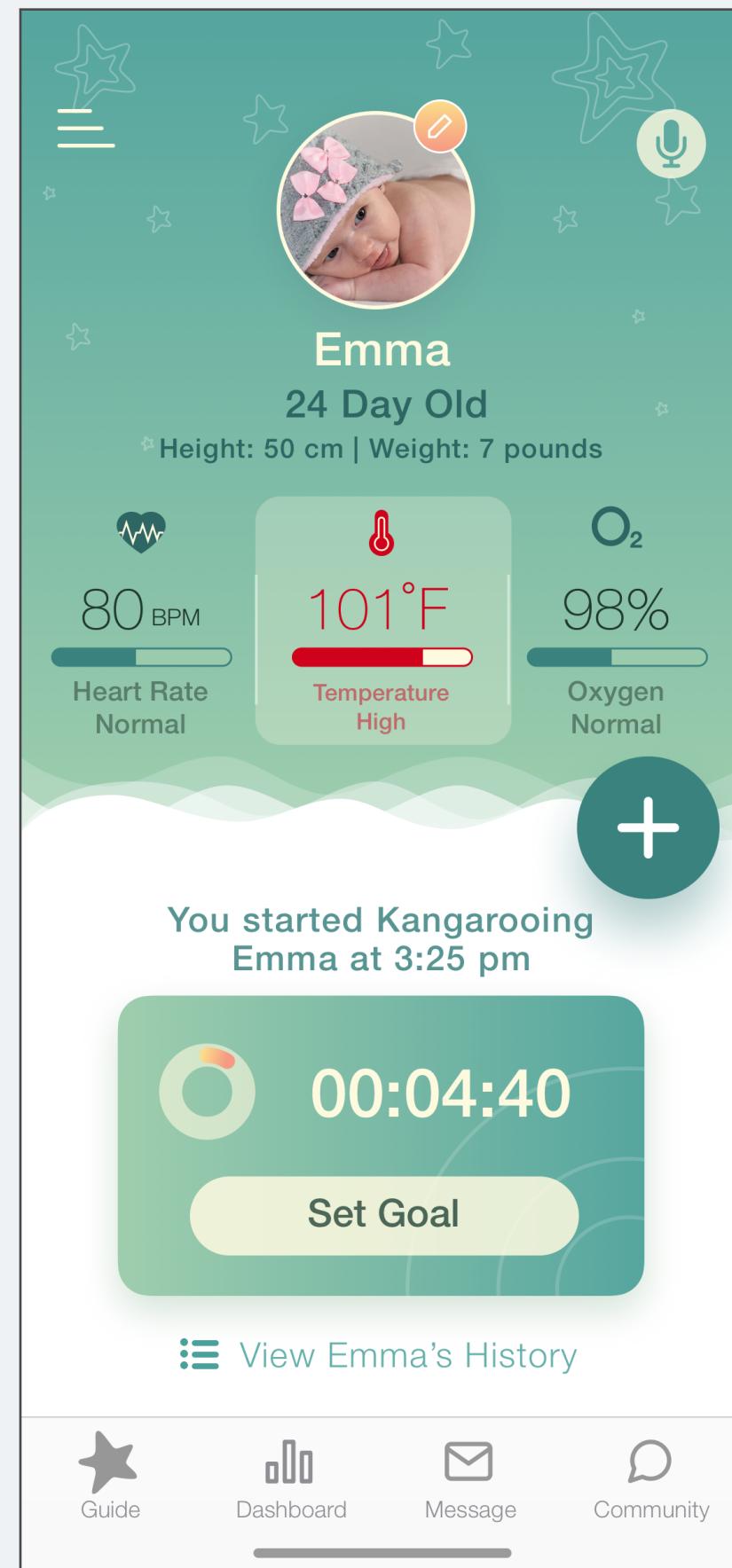
Outline Buttons

Normal	Value	Value
Hovered	Value	Value
Disabled	Value	Value
White - Normal	Value	



High Fidelity

Following mock ups were designed keeping in the results of the usability testing and the styleguide.



INSIGHTS FROM USER INTERVIEWS

New parents trust their family and friends for advice on baby care

It is difficult to interpret baby's behaviour to understand their needs.

New parents are always busy, tired, confused and scared

“ When I couldn't get hold of my mom, I turned to internet to find answers to questions like how to make her stop crying”

AGE: 30
MOTHER OF A 4 MONTH OLD GIRL

“ She used to start with her thumb and slowly her whole fist was in her mouth. This was a signal that she was hungry. It took me sometime to figure that out.”

AGE: 28
MOTHER OF A 9 MONTH OLD GIRL

“ I would love have an app that tells me what to do as my babies grow.”

AGE: 32
MOTHER OF A 8 MONTH OLD TWINS (BOY AND A GIRL)

Recommendations

PERSONALIZED INFORMATION

Building a bond through meaningful and data-driven information

MOTIVATION AND REWARDS

Causing behavioral change through motivation from people they know, i.e., other caregivers.

Rewarding them when they achieve a milestone or break their previous record.



Personalized Information

Parents can act with surety if they are armed with information. Zaky App makes use of information that is logged everyday to predict baby's daily needs. This helps parents to understand their baby's behavior and ultimately strengthens their bond. Following are some of the characteristic of the information presented on the Zaky App.

1 VISUAL

Visual information is easy to locate and understand

2 DATA-DRIVEN

Data driven information is always relevant and it will help parents to gain insights when they need them.

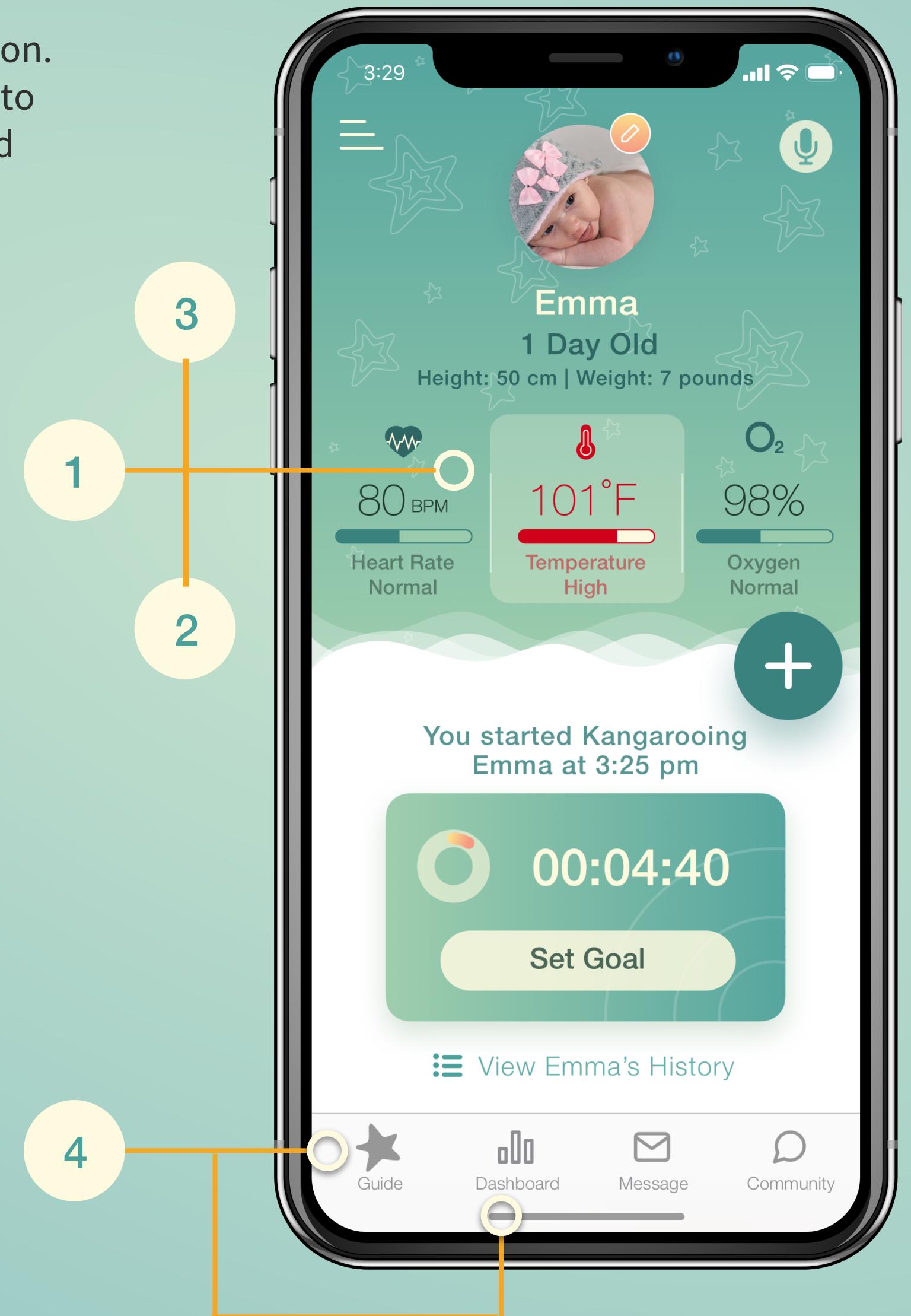
3 DIGESTIBLE

Small pieces of information is less overwhelming and digestible

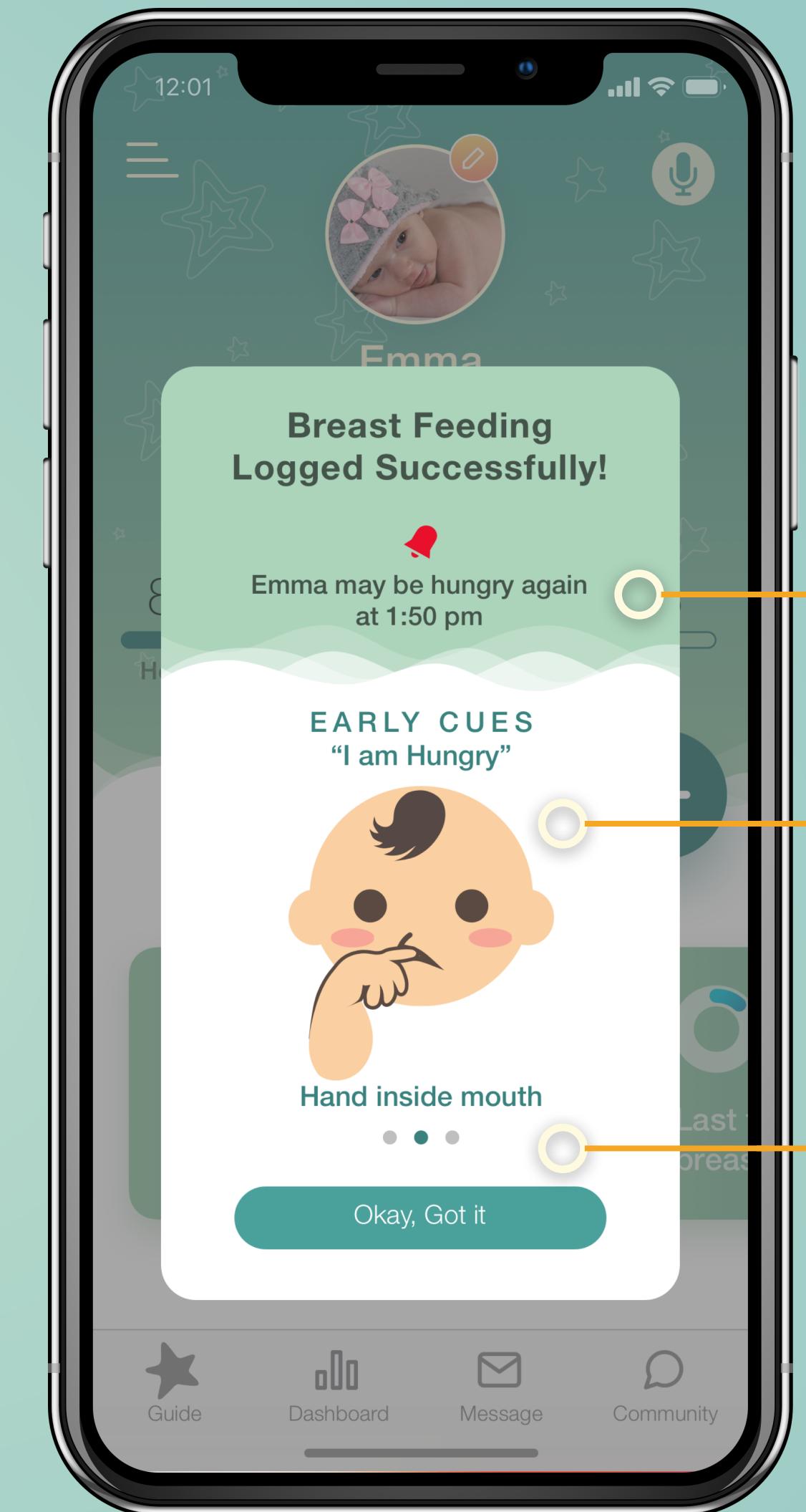
4 AVAILABLE ON DEMAND

The information on Kangaroo Care, Emma's past activity, reports and a guide on how to use the app is always available

Homepage During Kangaroo Care

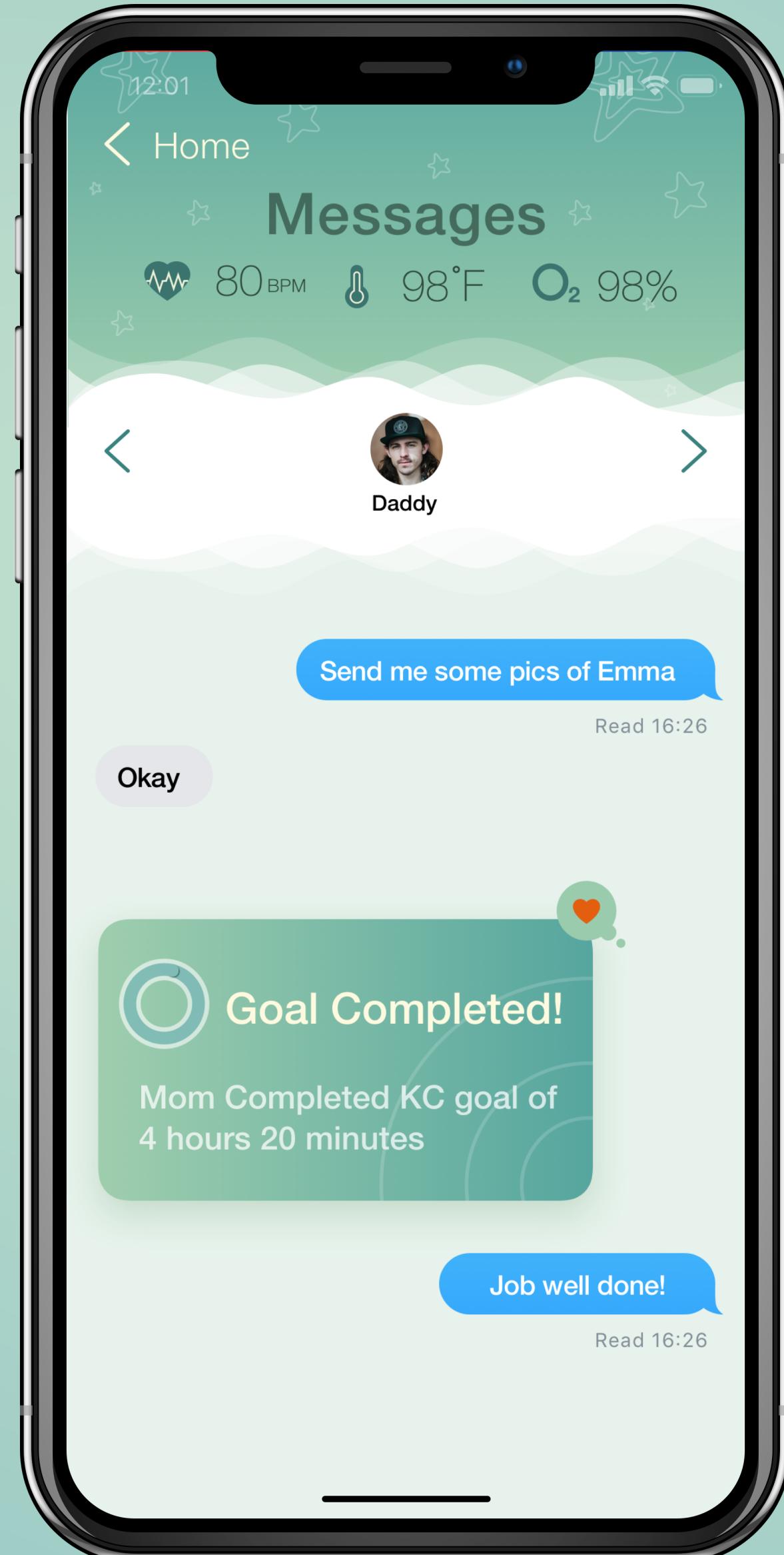


Feedback After Logging Breast Feeding



Motivation and Rewards

Many workout apps have found success in driving users using motivational messages. Parents, especially moms, trust their friends and family for advice. So receiving motivation from caregivers who are their friends and family is bound to drive them towards achieving their goals for kangaroo care. In addition, Zaky App can help parents by reminding them about various milestones with the help of occasional notifications and rewards.



MESSAGE TO DAD/OTHER CAREGIVERS

ZAKY APP

now

Mom achieved Kangaroo Care Goal!

Congratulate Ellen on completing 4 hours 30 minutes of Kangaroo Care for Emma!

ACKNOWLEDMENT ON EXCEEDING GOAL

ZAKY APP

now

Congratulations!

You have exceeded last week's kangaroo care record for Emma

MOTIVATION TO PUSH THEMSELVES - MONTHLY

ZAKY APP

now

Almost there...

If you record two more hours of kangaroo care for Emma, you can break last month's record

CHALLENGING OTHER CARGIVERS

ZAKY APP

now

Time to hold Emma!

Its been two hours since Emma was last kangaroed. Challenge yourself to break mom's record of 4 hours.



Next Steps



USABILITY TESTING

Conduct usability tests to test the flow of visual information and the watch interface

DESIGNING FOR MORE USER GROUPS

Expand the app's functionality for parents who have twins or triplets

DESINGING FOR HEALTHCARE PROFESSIONALS

Build a Zaky App interface for healthcare professionals, like doctors and nurses, so that they are not just able to monitor the babies but are also able to stay in touch with parents whenever needed.

MARKETING

Mostly new parents feel comfortable to follow instructions from their doctors. So if the marketing is focused towards doctors and nurses, they can mostly successfully convince new parents and caregivers to use them on a daily basis.



