

### **My Story**

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I was diagnosed with epilepsy when I was 18 years old during my freshman year of college. After 4 other seizures that year, I understand firsthand how epilepsy can turn one's life around as well as their family's. There are many different pain points that arise with the disgnosis, a lot of independence is lost, and it is a lot of trial and error with medications. Its a rollercoaster for sure. Luckily I have been over 2.5 years seizure free due to my amazing neurologist and my incredible support group.

Currently there is a need for epilepsy management resources. My hope is with Noggin, individuals can take control of their epilepsy and gain back their independence.

Sincerely, Brianna





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## Proposal



## **Topic Overview**

Epilepsy is a neurological disorder in which nerve cell activity in the brain is disturbed, causing recurring unprovoked seizures. 3 million adults and 470,000 children in the U.S have epilepsy. There are many different types of seizures and it affects everyone differently.

There is no cure for epilepsy. Controlling epilepsy is all about seizure management.

## **Design Opportunities**

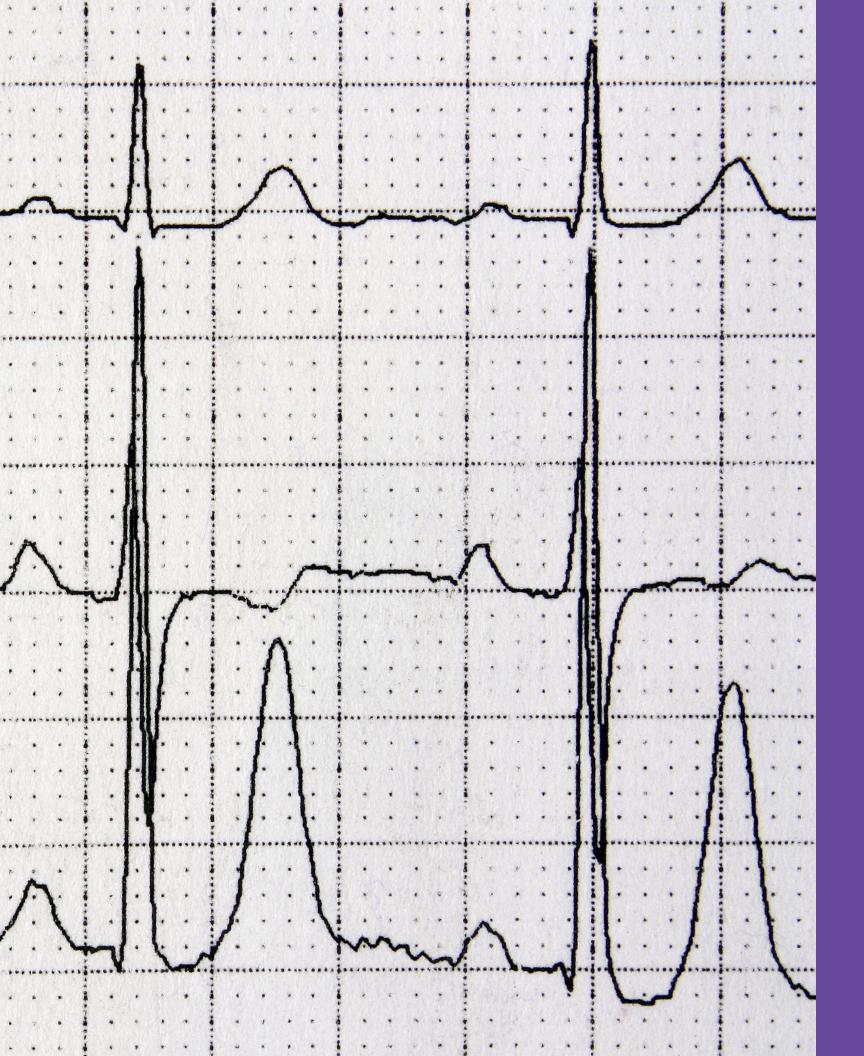
#### **Primary Touchpoints**



#### **SecondaryTouchpoints**

| Micro-Animations         | Widgets & Notifications |
|--------------------------|-------------------------|
| Apple Watch Medical Band |                         |

Noggin is a **digital** application that encourages individuals to take control of their epilepsy and take back their independence through fun and personalized medication reminders, daily mental health activity modules, and other resources.



## Research

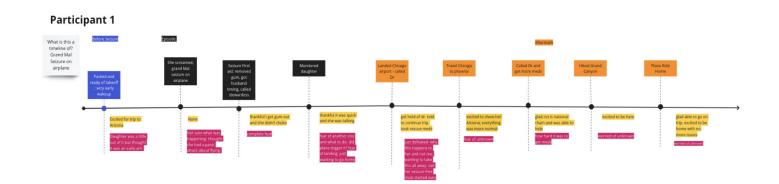
### Media Scan

| TikTok   | Reddit   |
|--|--|
| <ul> <li>"Feeling like a burden to others"</li> <li>Post seizure depression</li> <li>Fear/ Anxiety</li> <li>Loss of independence</li> <li>Physical exhaustion</li> </ul> | <ul> <li>Fear</li> <li>Anxiety</li> <li>Numbness</li> <li>"I wish I was normal"</li> <li>Helplessness</li> </ul> |

## **Co-Design**

The goal of this experience map was to help me find overlap in individuals' journeys with epilepsy diagnoses and seizures. I recruited participants from the survey and had them map their experiences within Miro using a pre-made template. It helped me to see the bigger picture of epilepsy as a whole and helped me narrow down which area of research to focus on.

From this, I was able to identify an individual's journey, actions, thoughts, and emotions. In addition, it allowed me to empathize and build relationships with my participants.



**Conclusions:** 

- Parents have a lot of anxiety and fear for their child
- Parents overwhelmed with medications
- A lot of positives happened despite limitations of diagnosis

| Epilepsy Apps         | Habit Apps  |
|-----------------------|---|
| Seizure Timing        | • Streaks   |
| Recording of Seizures | <ul> <li>Collect items/ badges</li> </ul>         |
| Journaling            | <ul> <li>Parents set rewards or choose</li> </ul> |
|                       | • • •   |

- Connection to Apple Watch
- Days seizure free
- Daily Mood

• Brain fog

Embarrassment

- existing rewards
- Parents select habits that children do

#### Survey

The goal of sending a digital survey was to gain insight into the lives of parents of children with epilepsy. This survey was also able to help me narrow down my target audience and the direction for the children's book. This survey was shared through the Facebook group,"Parents of Children with Epilepsy Support Group".

At the end of the survey, they had the option to leave contact information for follow up research opportunities.

#### "It's not just a big seizure. It is so much more."

"The meds that he takes are what keep him alive... He has to take his meds every 12 hours... No matter where we are or what we are doing it's time for meds. "

"My biggest struggle with a routine is that she does not understand and gets very upset when things are not a specific way."

After receiving the survey responses, I transferred them into FigJam and copied them onto post-it notes. This allowed me to color code the post-its and group them more easily to identify patterns.

Conclusions:

- Emotional impact was mentioned a total of 48 times
- 15 responses mentioned general knowledge of epilepsy and 12 mentioned seizure first aid
- Routine was mentioned only 9 times neurologists mentioning it is the most important part of • living with epilepsy

"I've been diagnosed with anxiety, depression, and even PTSD over my daughter's epilepsy. My therapist has been helping me learn to cope with the fear so it doesn't ruin mine and my family's lives."



"He sometimes feels like he can't "do things" because we are worried about his safety. "

"I can see the fear in other people's eyes."

### Interview

Dr. Sarita Maturu is an Epileptologist at Ohio Wexner Medical Center in Columbus, OH. She helped develop the Epilepsy Transition Clinic that partners with Nationwide Children's Hospital to provide a smooth transition from youth to adult services. She also has relationships with two international nonprofits: My Epilepsy Story and Epilepsy Alliance.



#### This interview helped me:

- Identify a general journey/timeline with epilepsy
- Age group in need of most resources
- Top triggers for epilepsy
- Features she would like to see implemented

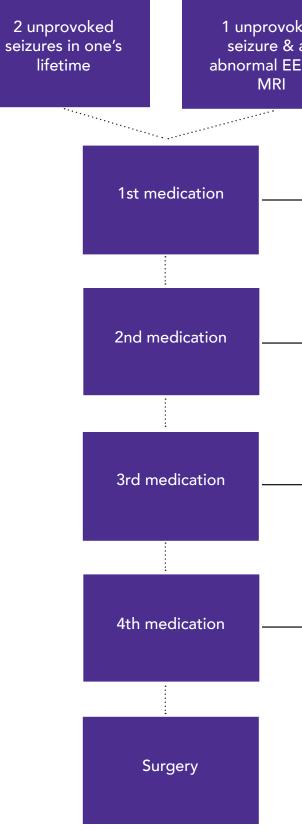
#### **Top 3 Triggers**



Patients will also find their own triggers such as hormones, intense workouts, alcohol, caffeine, etc.

## **Key Insights**

#### What does treatment loo



| ok like?         |                   |                       |  |
|------------------|-------------------|-----------------------|--|
| ed<br>an<br>G or |                   |                       |  |
|                  | Chance o<br>seizu | f becoming<br>re free |  |
|                  | → <b>5</b> 0      | 9%                    |  |
|                  | → <b>70</b>       | )%                    |  |
|                  | _→ <5             | 5%                    |  |
|                  | _→ <1             | %                     |  |

#### **Personas & User Journey**



Young Adult

16-26 years old Busy with school/work Adjusting to adulthood Wants independence Has to manage epilepsy Still figuring out triggers

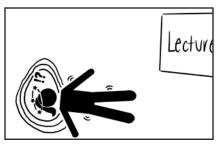


**Anxious Parent** 

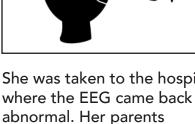
Feels helpless Extreme anxiety Learning to let go Cares about child's safety Wants to be "in the know"

**Caring Neurologist** 

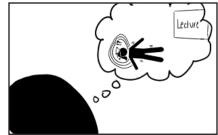
Data-driven Wants patient to succeed "What happens between appointments?"



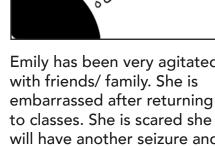
Emily had a breakthrough seizure while in a lecture class in college.



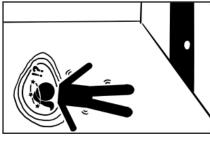
7:30 AM 7:30 PM rom MOM Dia you take your meds?

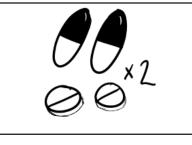


Emily has to take her meds at the same time morning and night. She sets alarms on her phone and her parents text her everyday making sure she took her meds.



life.





Emily has another seizure. Her seizure first aid plan is followed.

Emily alerts her neurologist of the breakthrough. Emily's medication plan is changed.

#### **Pain Points**

#### Depression, anxiety, and agitation

- 50% of individuals with epilepsy have depression
- Anxiety and agitation are the most common side effects for epilepsy medications

#### Balancing parent anxiety vs. young adult's independence

- Many parents of children with epilepsy suffer from PTSD or seek therapy

#### Identifying triggers

- This age group is exposed to new triggers such as alcohol, extreme workouts, hormonal changes, etc.

#### Accountability

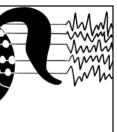
- Responsibility for meds and a schedule gets transferred from the parents to the young adults

#### Adjusting treatment plans

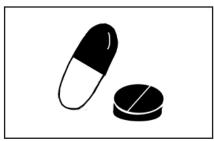
- Neurologists look for breakthrough seizures, side effects of meds, and mood changes in between appts.

#### Current solutions aren't working

- Many apps are outdated, take a long time to log information, and none alert parents/family members of taking medications



She was taken to the hospital came to visit and she was diagnosed with epilepsy.

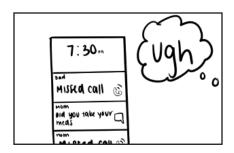


Emily was put on her first medication and was given a first aid plan.

Emily has been very agitated will have another seizure and feels out of control of her

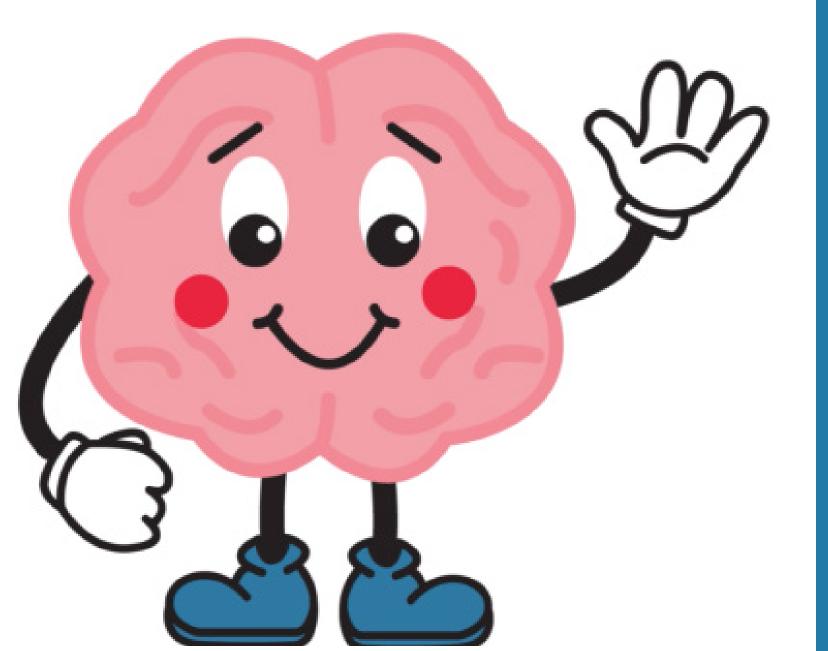


Emily has been seizure free for 1 month and her parents have stopped texting her. She goes out for a late night with friends and forgets to take her meds in the morning.



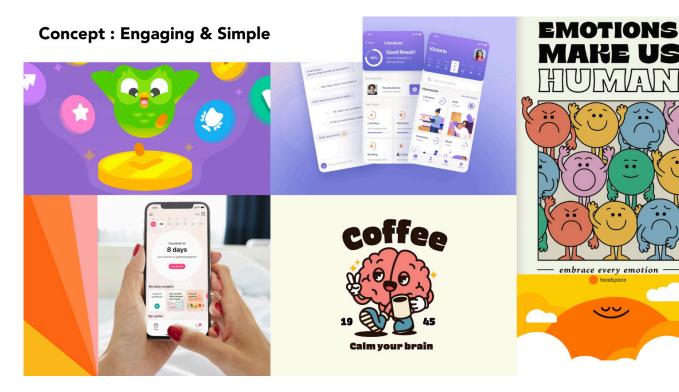
Emily's parents are more anxious and call her to check if she takes her meds. Emily just wants to be normal.

## Branding & Character



## Inspiration

#### Mark





#### Things to consider:

3% of individuals with epilepsy have photosensitive epilepsy. This means that their seizures can be triggered by visual patterns, flashing lights, neon lighting, and video games with quick animations.

This means no:

- Gradients
- Repeating patterns
- Extremely high contrast
- Quick transitions or animations

#### Fonts

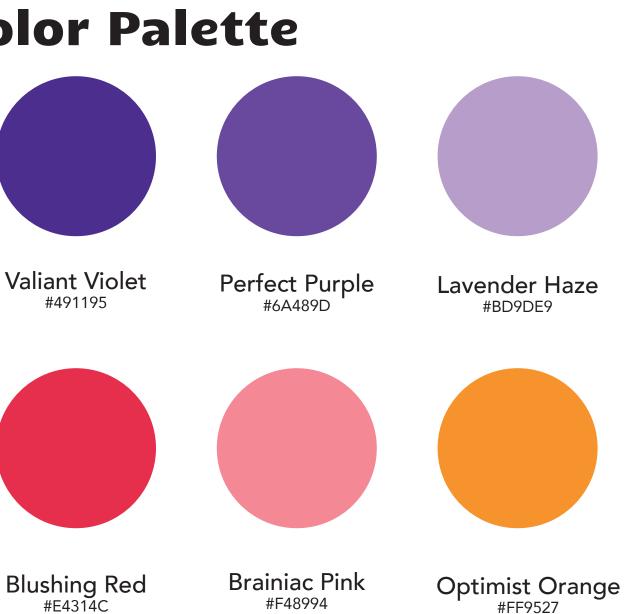
**Primary Font:** 

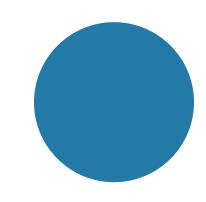
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**Secondary Font:** 

#### Avenir **ABCDEFGHIJKLMNOPQRSTUVWXYZ** abcdefghijklmnopqrstivwxyz 1234567890

# **Color** Palette

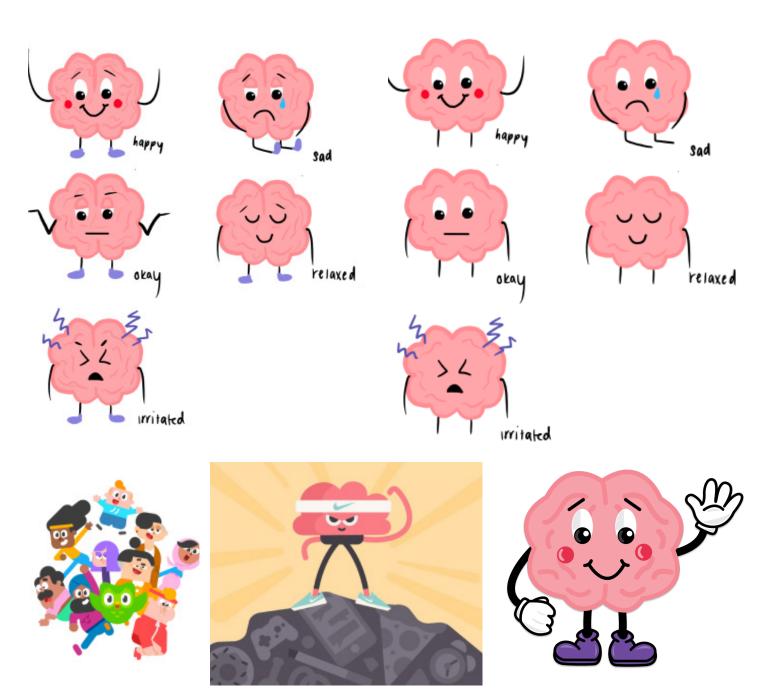


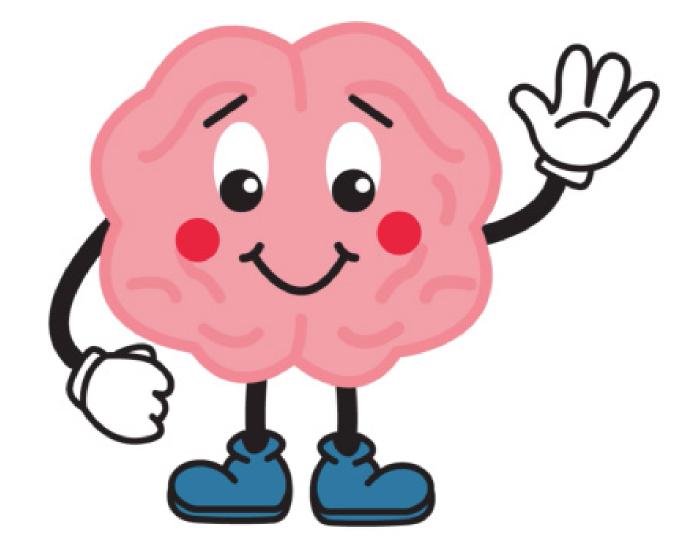


**Trusted Teal** #2679A5

\*Purple is the official color for epilepsy and lavender is the international flower for epilepsy.

#### Character





## **Brand Personality**

Accessible Approachable Authentic Balanced Captivating Collaborative Committed Colorful Compassionate Comprehensive Convienient Curated Custom Efficient Easygoing

Bold

**F**ffortless Empathetic **Empowering** Energetic Engaging Fearless Functional Genuine Human Humble Hopeful Inspiring Interconnected Intuitive Meaningful Mindful

Mindful Motivating Optimisitic Personal Playful Practical Self-disciplined Simple Sincere Trustworthy Uncomplicated Understanding Uplifting United **User-friendly** Valuable

**Empowering:** You are incredibly strong and insprining. You are not in this alone. We understand epilepsy comes with its ups and downs but we want to encourage you to take control of your epilepsy. Setting milestones helps you to stay on track and become one step closer to becoming your best self!

United: We understand your friends and family care about you, but we also understand you want to live your life. We allow you to invite friends, family, and doctors to view your seizure logs and get notifications of when your meds are taken, making communication easier.

**Engaging:** Who said tracking wellness has to be boring? With daily checkin modules curated specifically for you, tracking medications, sleep, stress, and mood have never been more fun or easy!

**Personal:** You are more than just someone with epilepsy. You are uniquely you with your own interests, guirks, and memories.

**Uncomplicated:** You live a busy life. We get it. Epilepsy management shouldn't be another stressor and should be guick and straightforward, giving you more time to chase your dreams.



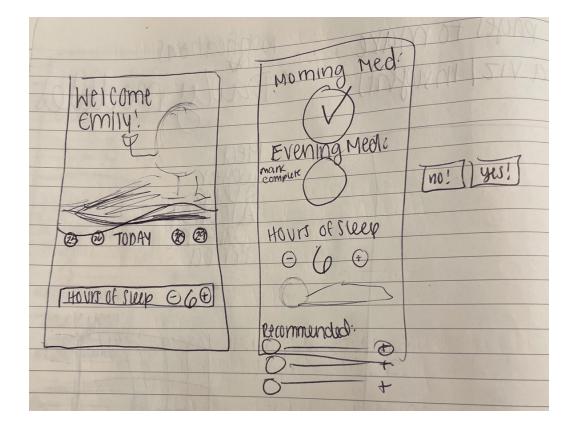


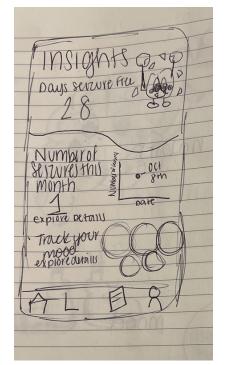
## The App

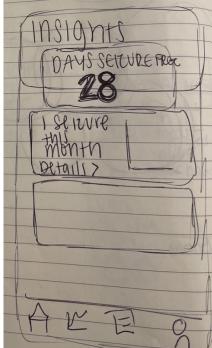


## **Early Explorations**

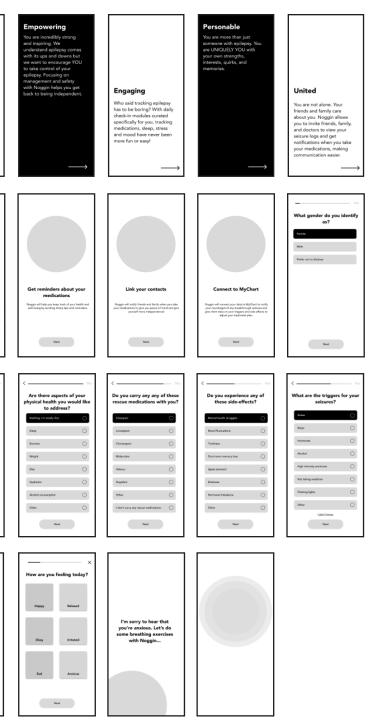
### Wireframes





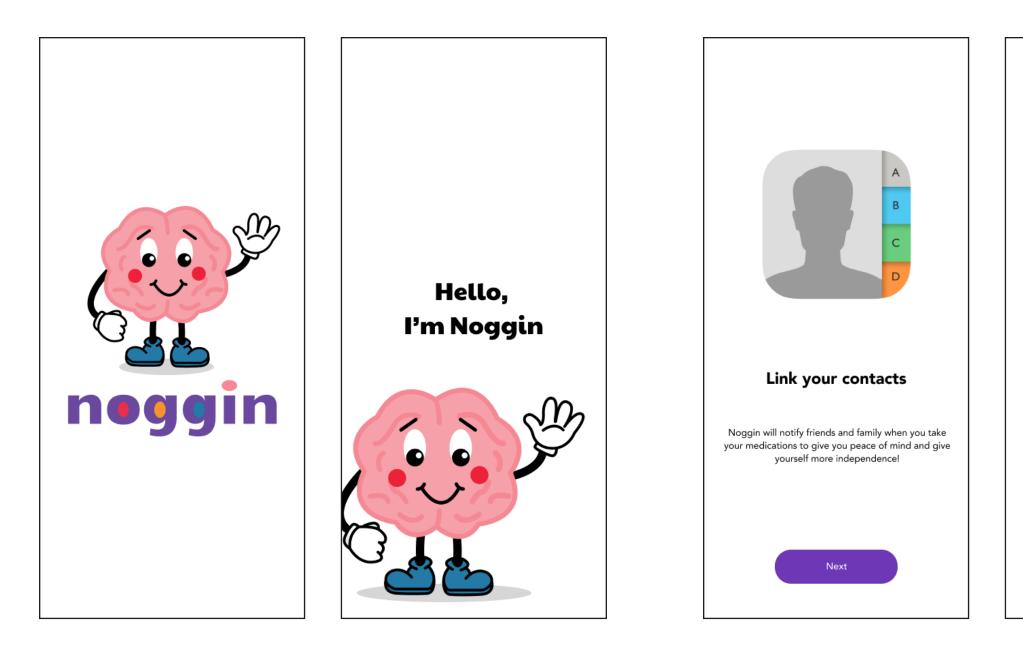


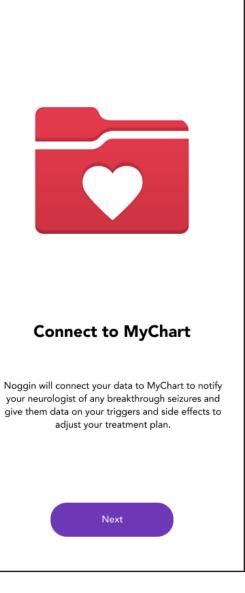
| Noggin  | Hello,<br>I'm Noggin   | A Powerful<br>Epilepsy<br>Management Tool   | At Noggin we<br>believe epilepsy<br>management<br>should be  |
|---|--|---|--|
| Uncomplicated When they life. We get<br>the alway life we get<br>the another the another<br>should rule to another<br>quick and straightforward,<br>giving you more time to<br>chase your dreams.   | Now that we've introduced<br>you to Noggin, tell us a<br>little bit about you!<br>Preferred Name   | Log your year of birth to help<br>us create a dashbaard specific<br>to you<br>2001<br>2001<br>2002  | Take control of your epilepsy<br>with Noggin<br>Centra eth App<br>Contra eth App<br>Contra eth Cospt<br>Contra eth Cospt   |
| C   | Current of the second of the s | Low point take any of these in addition to your prescribed medication?      Low take any of these in addition to your prescribed medication?      Low take any of these in a diversity of the diversity of th | Are there aspects of your<br>mental healthy you'd like to<br>address?<br>Network to usely the<br>Source<br>More Accustors<br>More Constraints<br>More Accustors<br>More Constraints<br>More Accustors<br>More Constraints<br>More Accustors<br>More Accu |
| <ul> <li>Corporation of the stabilished with your established with your established with your envelogist?</li> <li>Total and the stabilished with your envelogist?</li> <li>Total and the stabilished with your established with your</li></ul> | Creating your personal program   | Your program is ready!  | C Point Control of Control  |



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## Onboarding





## Onboarding Questionnaire

| Levetiracetam | 0          |
|---------------|------------|
| Lamotrigine   | 0          |
| Gabapentin    | 0          |
| Carbamazepine | 0          |
| Phenobarbital | 0          |
| Topiramate    | 0          |
| Phenytoin     | 0          |
| Other         | $\bigcirc$ |

| Do you experience any of these side-effects? |            |  |  |
|--|------------|--|--|
| Mental health struggles                      | 0          |  |  |
| Mood fluctuations                            | $\bigcirc$ |  |  |
| Tiredness                                    | $\bigcirc$ |  |  |
| Short-term memory loss                       | 0          |  |  |
| Upset stomach                                | 0          |  |  |
| Dizziness                                    | 0          |  |  |
| Hormonal imbalance                           | 0          |  |  |
| Other  | 0          |  |  |
| Next   |            |  |  |

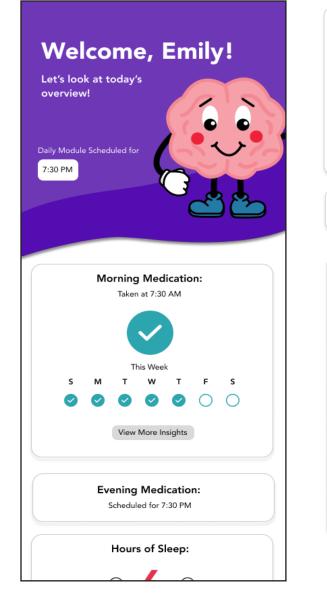
| Oo you have a treatment<br>established with you<br>neurologist? |  |
|---|--|
| Yes   |  |
| No, not yet   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
|   |  |
| Next  |  |

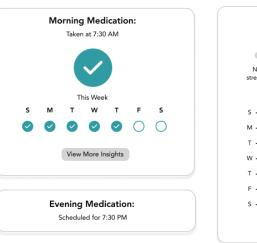
| Skip What are the triggers for your seizures? |   |  |  |  |
|---|---|--|--|--|
| Stress  | 0 |  |  |  |
| Sleep   | 0 |  |  |  |
| Hormones                                      | 0 |  |  |  |
| Alcohol                                       | 0 |  |  |  |
| High intensity workouts                       | 0 |  |  |  |
| Not taking medicine                           | 0 |  |  |  |
| Flashing lights                               | 0 |  |  |  |
| Other   | 0 |  |  |  |
| <u>I don't know</u><br>Next                   |   |  |  |  |

<

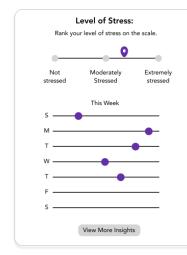
#### Home

## Log Seizure

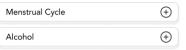


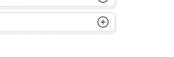


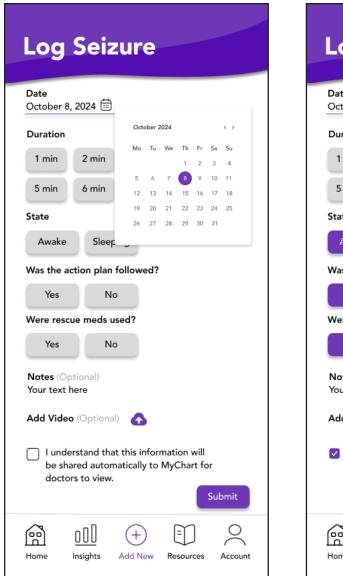




#### **Recommended Metrics to Track:**

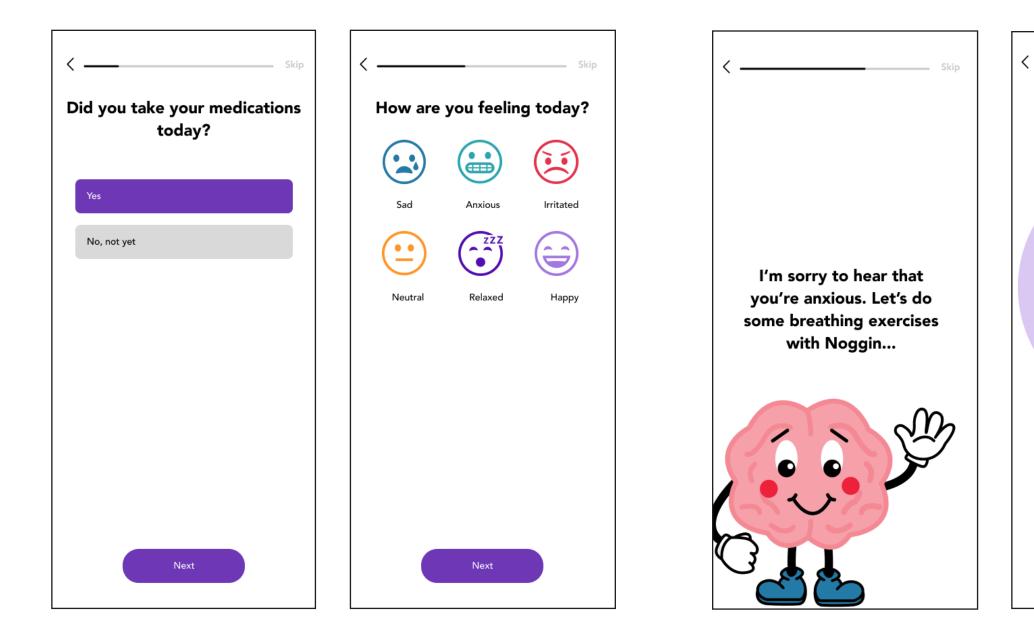


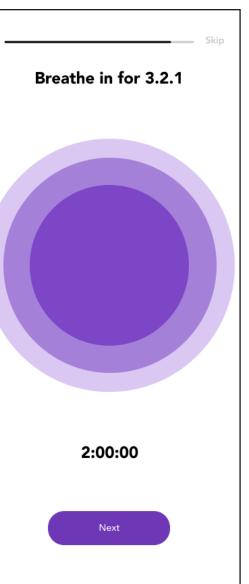




| og Seizure  |
|---|
| te<br>tober 8, 2024 🛅   |
| Iration   |
| I min 2 min 3 min 4 min   |
| 5 min 6 min 7 min 8+ min  |
| ate   |
| Awake Sleeping  |
| as the action plan followed?  |
| Yes No  |
| ere rescue meds used?   |
| Yes No  |
| otes (Optional)<br>ur text here   |
| ld Video (Optional) 🛛 🚹   |
| I understand that this information will<br>be shared automatically to MyChart for<br>doctors to view. |
| Submit  |
| me Insights Add New Resources Account   |

## **Daily Module**

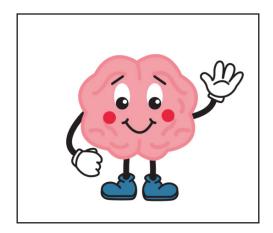


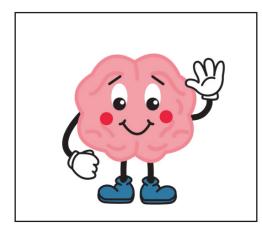


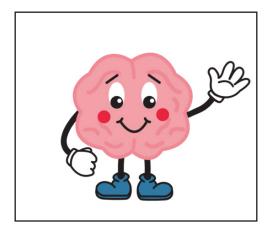


## **Noggin Waving**

## **Breathing Exercise**





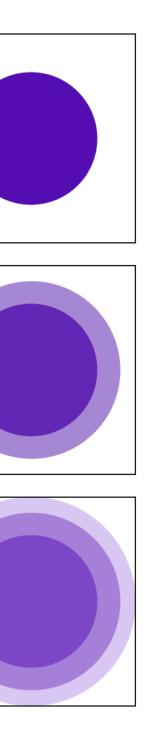












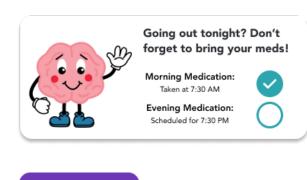


## Widgets & Notifications



### Widgets







## **Notifications**

Noggin will send you reminders to complete your daily module and can notify family, friends, or doctors in an instant. Noggin is also available on your Apple Watch for quick and easy alerts.

| Noggin<br>Hi Er<br>It's time to take<br>your daily check in | <b>nily!</b><br>your medication | n. Take an extra 2 m  | Now            |
|---|---------------------------------|-----------------------|----------------|
| Delay 5 minutes   |                                 | Meds Taken            |                |
|   | Wallen!<br>s had a seizure. C   | Open the app to learr | Now<br>a more. |

These widgets allow you to track your health metrics right from your home screen. You can also set up a Noggin widget to give you encouraging messages when you hit important milestones.



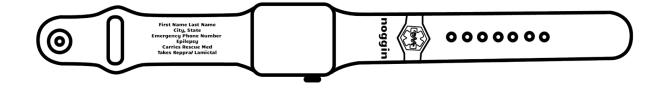




## Medical Apple Watch Bands

## Sketch & Mockups

These medical bracelets are designed to provide first response personnel with important information regarding your health when you are unable to communicate the details of your epilepsy.



#### noggin



First Name Last Name City, State Epilepsy Carries Rescue Med Takes Keppra/ Lamicta



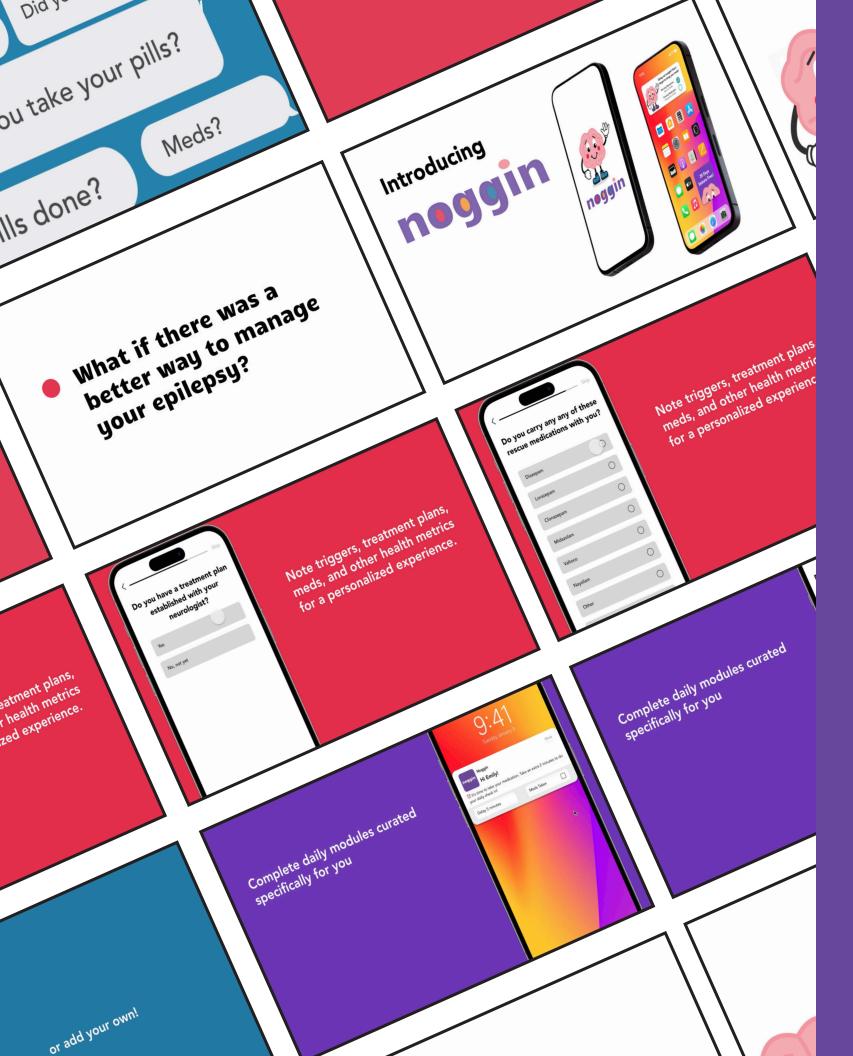
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## Explanation Video

#### Frames

