

We set out to design a device to assist individuals that require multiple medications on a daily basis. Based on our interviews we discovered that users have developed a number of adaptations to remind them, but it remains difficult for these individuals to sometimes remember at a designated time and frequency. The degree of difficulty increases as their medication intake changes over time. We also noticed the added difficulty of differentiating one medication from another.

After completing our initial research we examined options that were currently available such as pill boxes and digital timers. Existing solutions addressed some of our users' needs, such as organization or basic timers. But we found a lack of options to assist users in identifying the correct medication. This was one of our core design requirements. We also found that the flexibility of available timers/alarms were limited, especially in attaching those alerts to specific medications. Additionally, available options were not always portable. This presented a problem since some of our users travel somewhat regularly and often forgot to take their medication when away from home. Our findings lead us to establish a set of design requirements and principles.

Design Requirements

1. Must provide audible and visual reminders at designated times and intervals
2. Must be programmable (with multiple language options)
3. Must be rechargeable
4. Must be portable
5. Assists user in identifying correct medication and dosage at appropriate time
6. Must be able to give and receive voice commands
7. Controls and UI labels must be clear and legible for users with low vision
8. Must provide easy to manipulate volume controls for individuals with hearing loss

Design Principles

1. Some users may have strength and/or motor skills issues. The device and UI should be easy to hold and operate
2. The design of the device and UI should be self-evident, not dependant on prior knowledge
3. In order to prevent cognitive overload the device should not overwhelm the user with options at any given time