

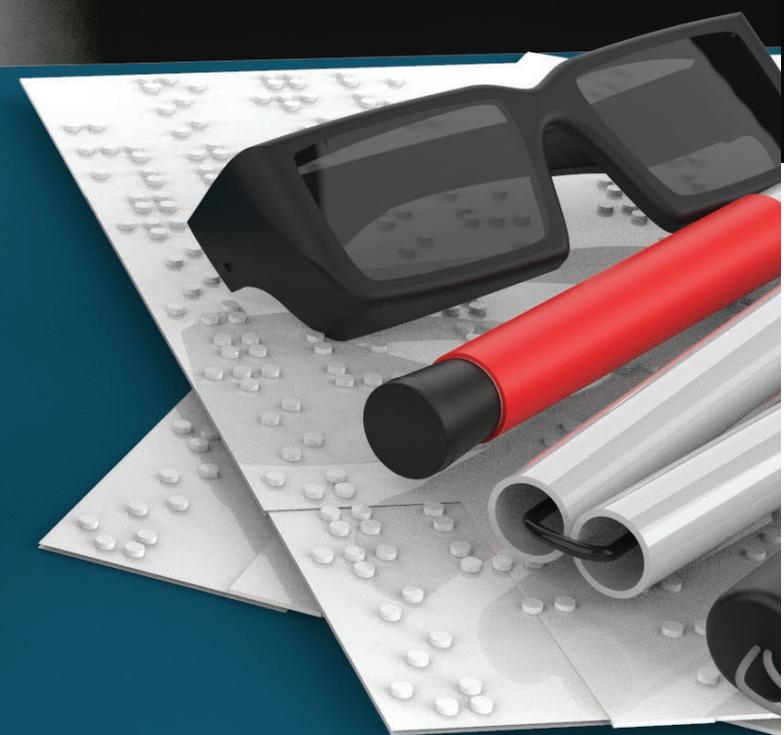
HOPE

A simple product which enables the **Blind** people to consume liquid medicine !

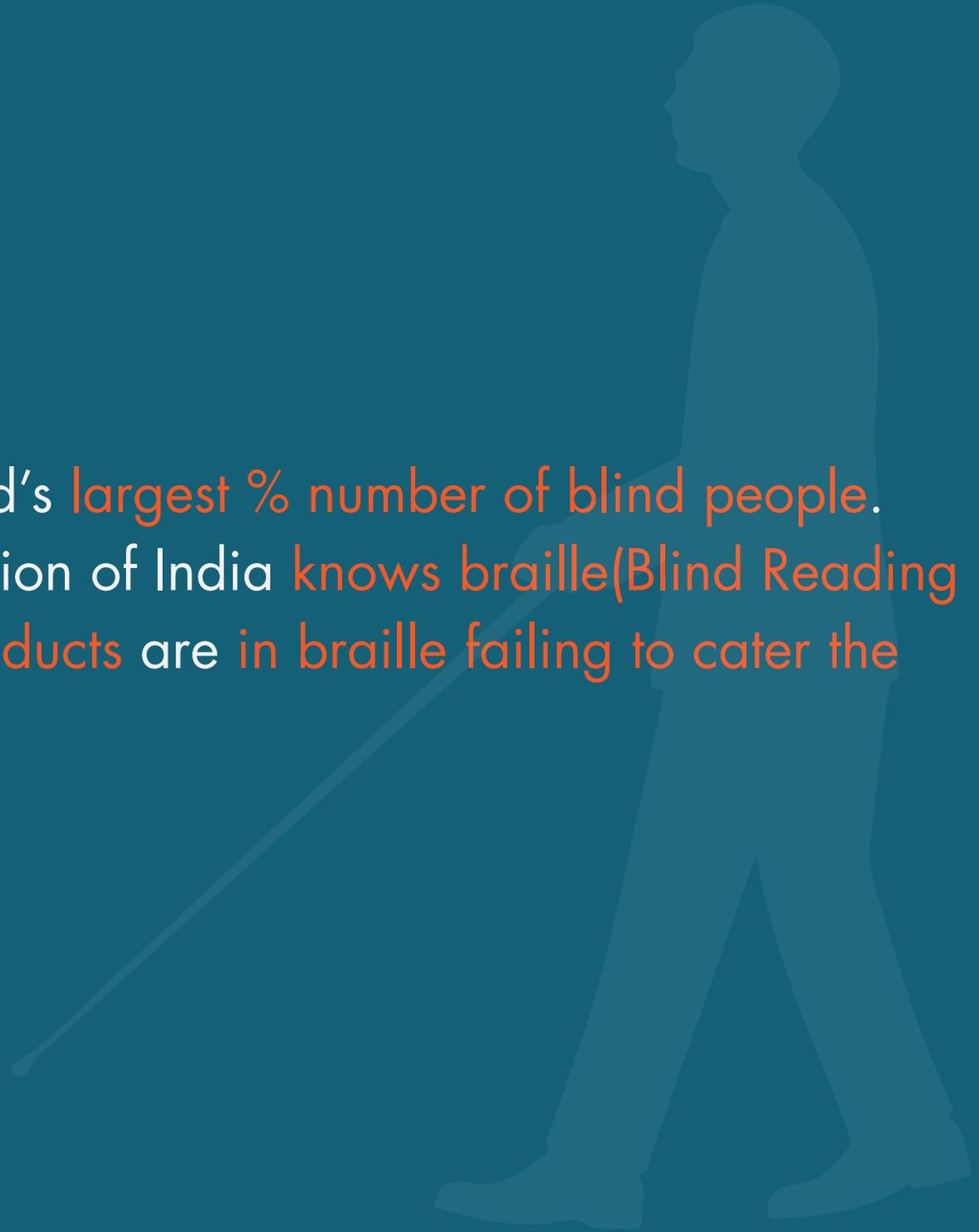
3 GOOD HEALTH AND WELL-BEING



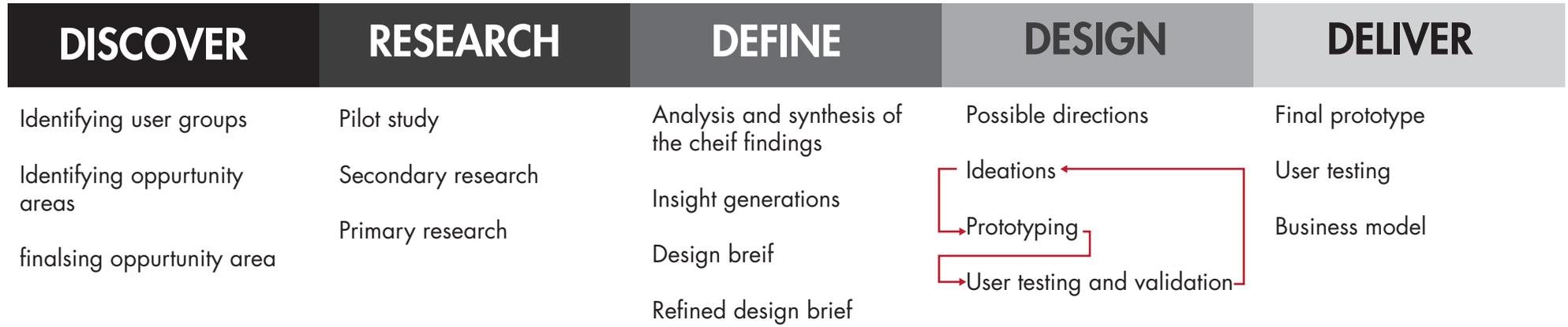
GOOD HEALTH AND WELL-BEING



India being the home to the world's largest % number of blind people. Only 10% of entire blind population of India knows braille(Blind Reading Language) yet all the existing products are in braille failing to cater the community.



The Design Process



For the six weeks of the project I tried spending **most of the time** in different blind schools with variety of **blind people** to understand them better and **trying to absorb their natural way of life** and using their everyday small intuitive actions into my ideation process.



INDIA has the majority of blind people in the world

Research

Research Respondents

The first step of the project was "How would a **day in the life of blind** would be", to empathise and **put myself in their shoe** and understand their **life problems**.



STAKEHOLDERS Those associated with the product and its usage



Developed The Research tool based on **secondary insights** and **Pilot study**

Interview guide for the blindusers



“Wasnt able to **identify** which medicine was what ”

“I have **spilt the medicine** everytime while measuring around the surrounding ”

“There were times I was supposed to consume more than **3 liquid medicine** and it became very difficult to differentiate which one is what. ”



“If I should consume 5ml, everytime I just fill the **entire measuring cup** and it spills evrywhere. I have no clue about the measurement.”



“Living in blind schools and most of my friends here all of need to **self administer** our daily life medications and it is a **huge hurdle** ”

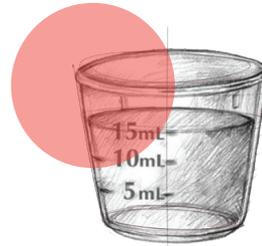


“What can we do we have born like this & need to struggle in everyday activities even in basic neccessities like consuming medicines. ”

Insights and opportunity areas



INCORRECT & INABILITY of measuring medicines



The **existing** measuring cup in **no way** enables the blind to consume medicines.

Even normal users are not comfortable with the usage of this measuring cup.



They try using their finger, by dipping them to make sure the medicine does not overflow, yet being very **UNHYGEINIC** and **not precise** at all.



They try placing the measuring cup in a glass and then pouring the medicine inside which again never give them the desired result.



Everytime they try using the measuring cup the **medicine overflows** and gets **down all over the surroundings**.

Moving on to the next stage of the design process, after coming back from deep understandings and observations from the research now analysing and deriving insights and opportunity areas.



Insights and opportunity areas

INABILITY of distinguishing between medicines



It gets very difficult when 2 bottles **look and feel exactly same.**

Most of the liquid medicine bottles have similar forms.



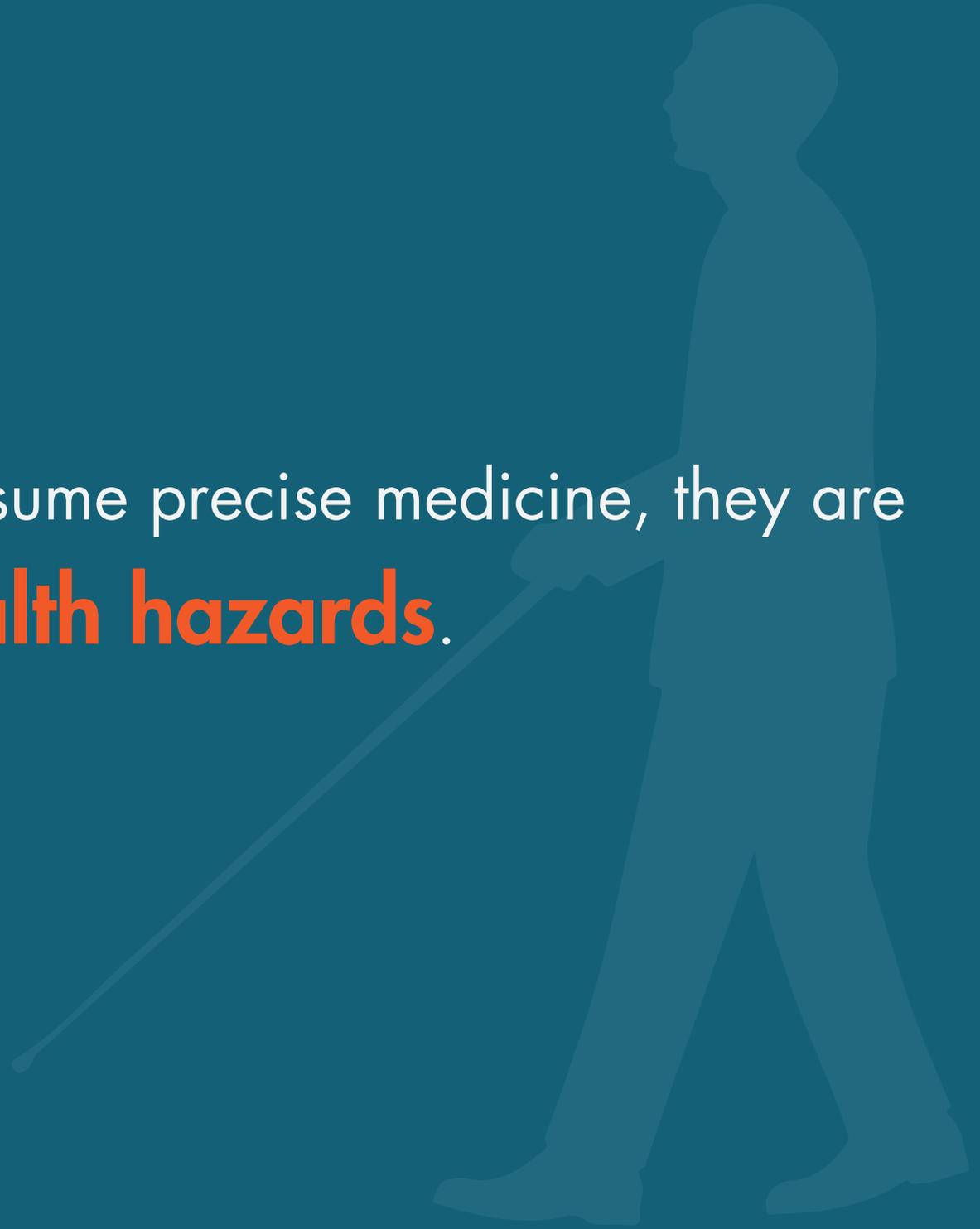
They try using different immediate methods, like sticking textured sheets, **tearing of a label** in one of them etc.

Problems and Health Hazards due to Overdodage of medicines



Ultimately because they dont have the right way to consume medicine they end up taking overdosages. **Overdose** would adversely affect the outcome of acute serious medical conditions such as pneumonia and long-term health issues such as **diabetes, asthma, hypertension, and epilepsy**

Due to their inability to consume precise medicine, they are exposed to **multiple health hazards**.



| Initial Design Brief

To design a liquid medicine bottle so that it enables the blind patient to easily distinguish between the bottles and to consume exact amount of medicine.

Possible directions for ideations based on the research

- A dock for existing liquid medicine bottles
- A new set of liquid medicine bottles
- An attachmet for existing liquid medicine bottles

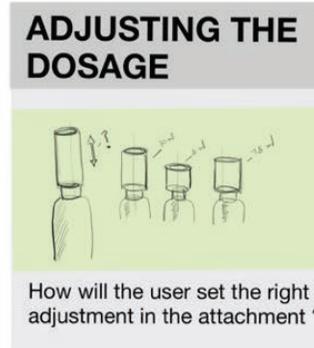
Designing a new bottle it requirs change in entire system level, so after reserach i came to a descision that I need to be designign a retrofit attachment which could be fit to existing medicine botlles.

| Refined Design Brief

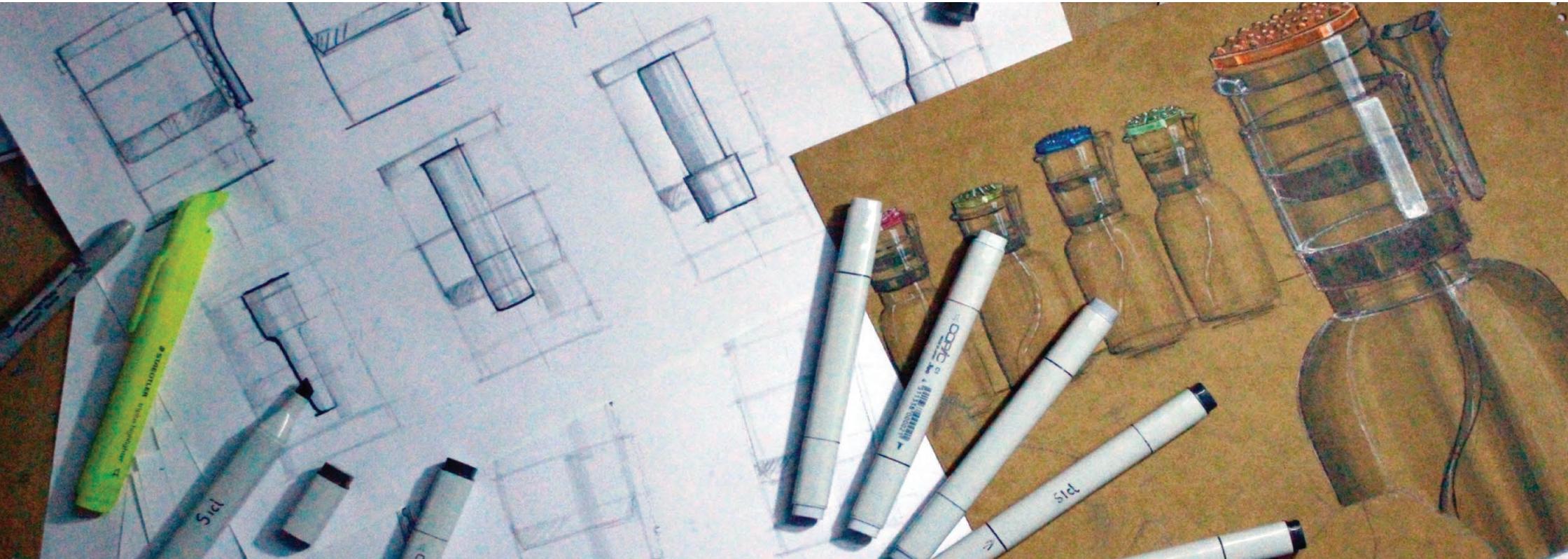
To design an **Inclusive attachment** for liquid medicine bottle so that it **enables the blind** patient to easily **distinguish between the bottles** and to consume **exact amount** of medicine.

Ideations

The task flow of consuming medicine through an attachment.



Througout the entire prosscoss of using the attachment there should be **no-wastage**, **hygeine**, **precision of medicine quantity** and **comfortable user experience**.

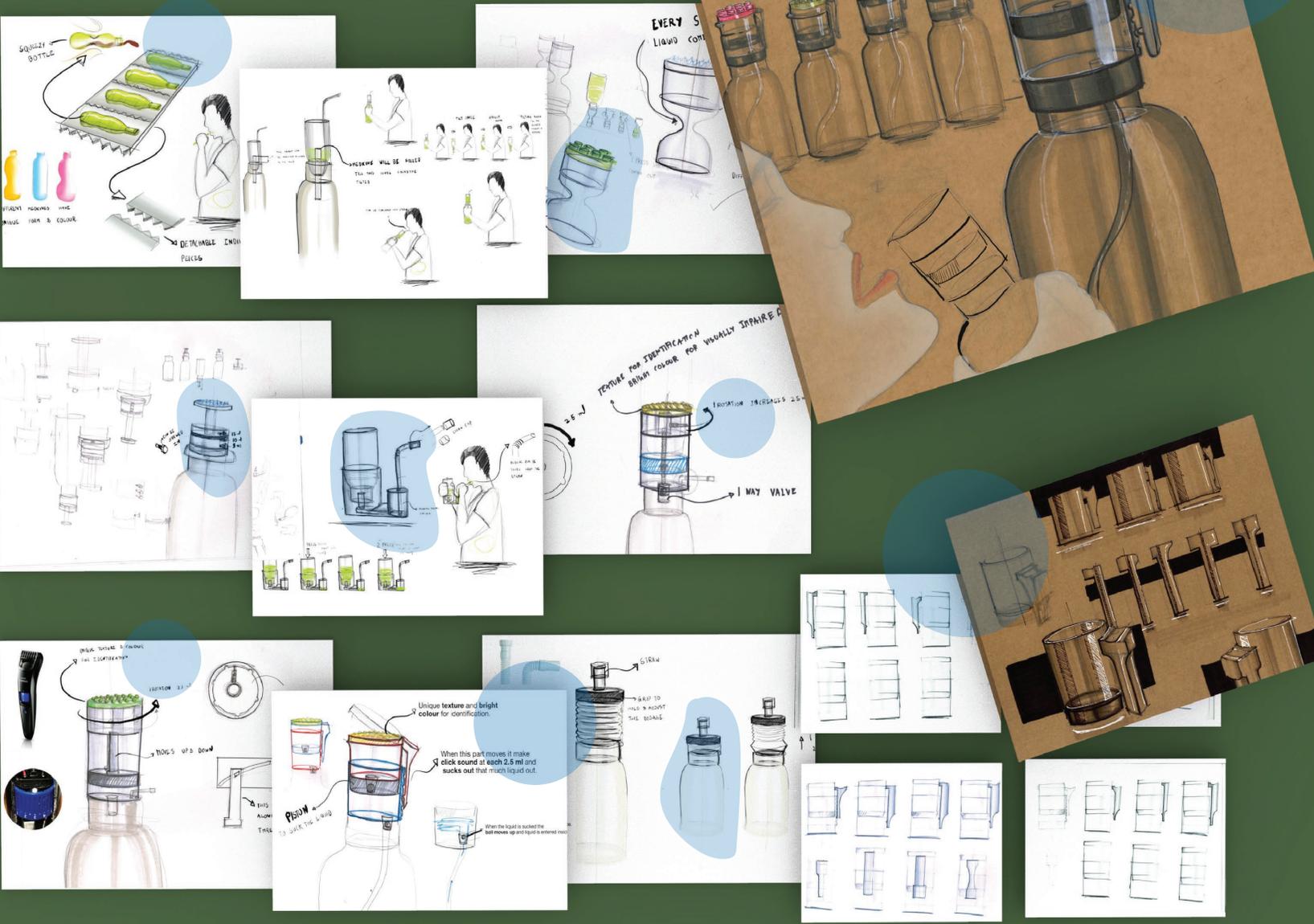
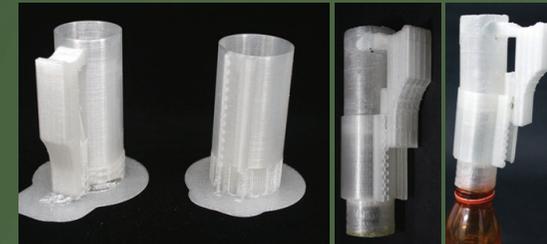


Prototyping

Rapid prototyping of initial concepts



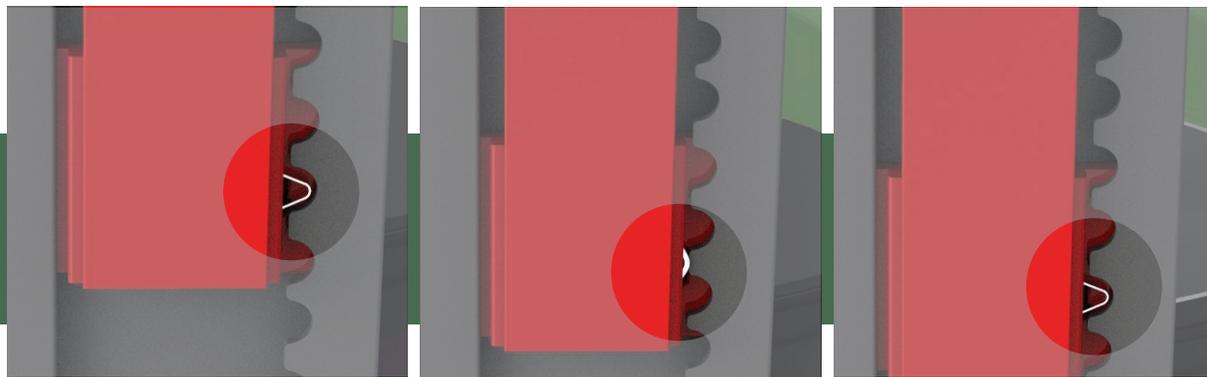
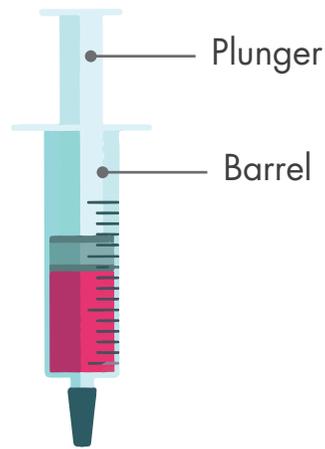
3d printing the final concept



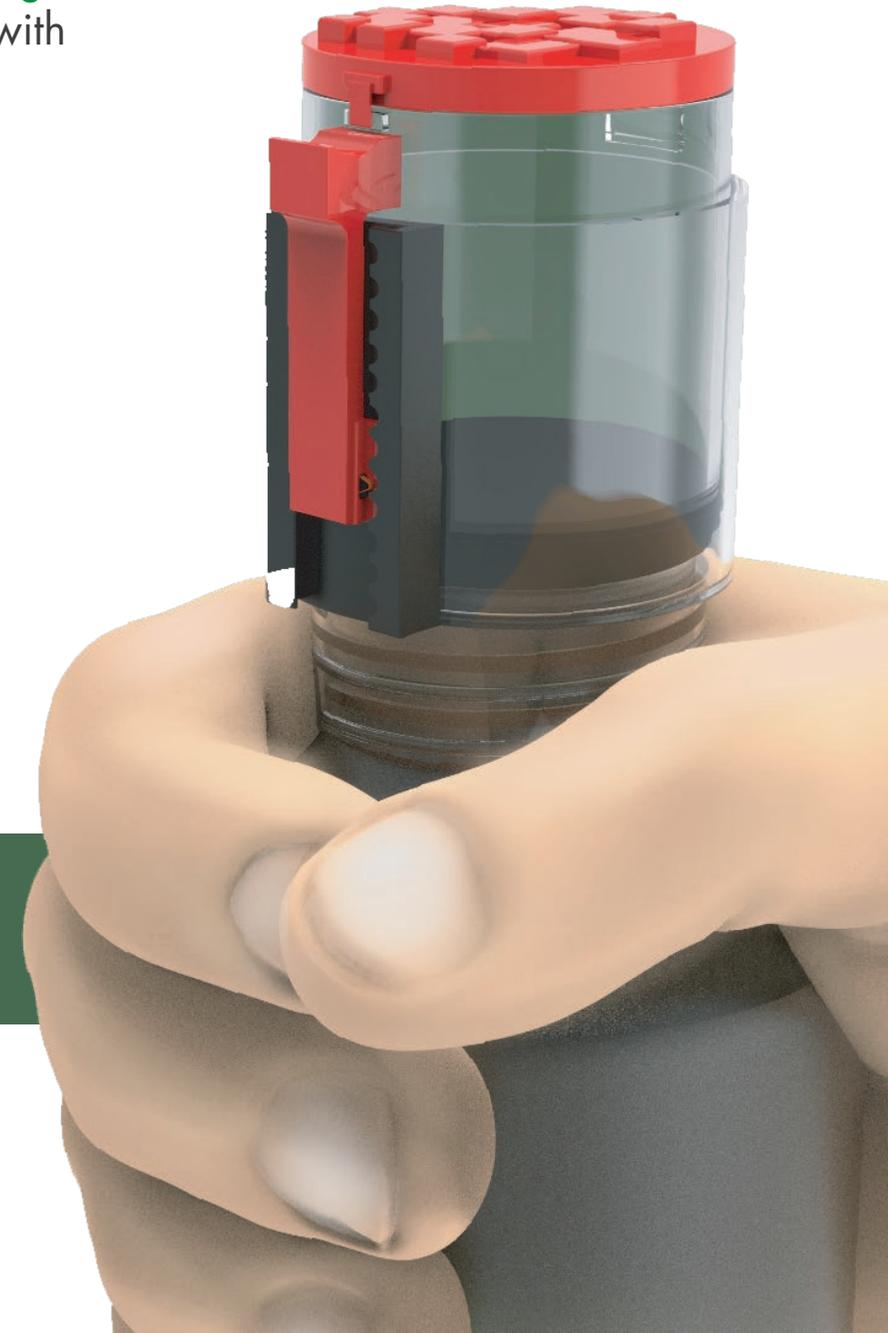
Final Concept

Technology Amalgamation & Innovation

A new technology inspired from the unique abilities of a **traditional syringe** (To suck the liquid) and these **paper cutter** which gives out a click sound with every controlled movement up, the blade comes out.



As the **top component** (Plunger) moves, it gives **both tactile and Audible (clicking sound) Feedback** for every **2.5 ml** of medicine sucked in.



Attaching to Medicine Bottles

Retrofittable & Versatile

Attaching the attachment to the existing medicine bottle by **screwing** it after removing the existing one.



The Natural & the most **Intuitive way** of consuming liquid Medicine.



Using the Inclusive Attachment



Choose the **desired bottle** with the help of the **texture and bright colour**.



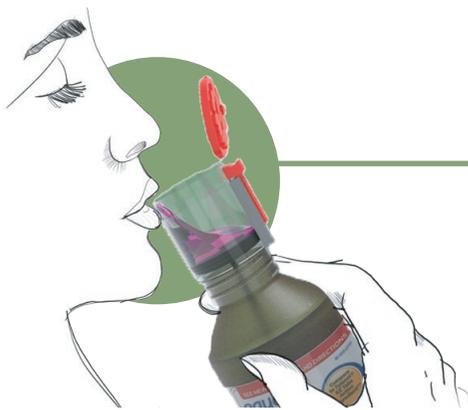
Pick up the **desired bottle**



Move the **top component** up, getting both tactile & Audio (**click sound**) feedback.



For each **click sound**, **2.5 ml of medicine** is filled in the **bottom Component**.



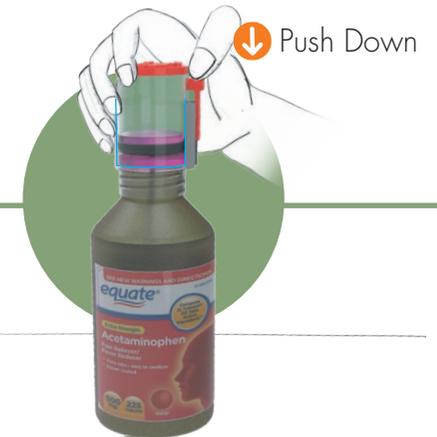
Consume the medicine with a **new experience**.



Open up the lid and the required amount of medicine is in the **top component**.



Similar **click sound** to **confirm the quantity** of medicine filled in the **top component**.

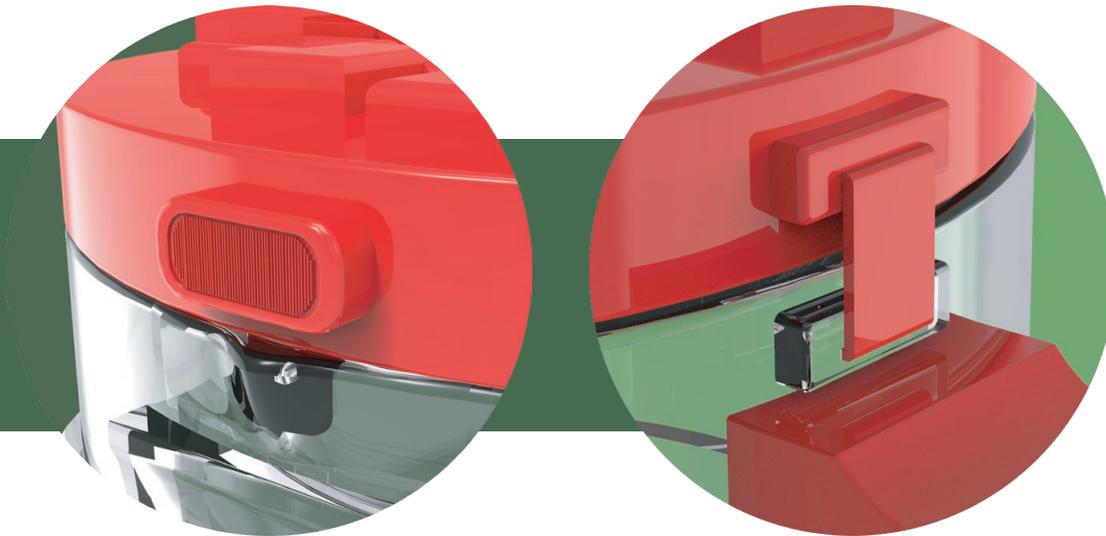
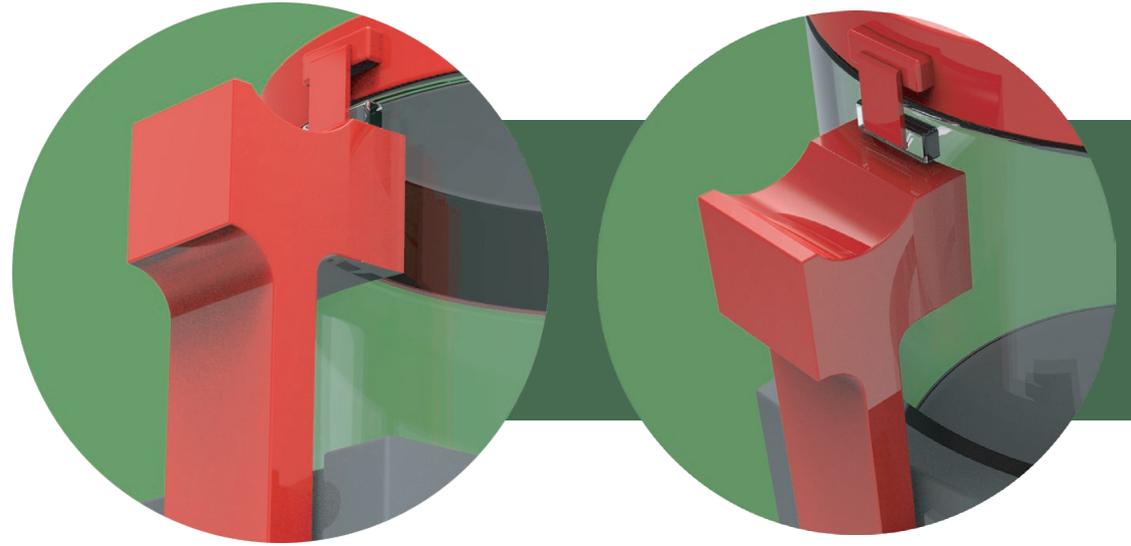


Once the number of clicks are achieved now push the **top component down**.

Comfortable handle for ease in use

Ergonomics & Anthropometry

Ergonomically designed handle which fit perfectly in the fingers which provides a intuitive user experience.



Spring button which makes it easire for blind

Lost-Proof & Intutive

Attached hinges so that there is no chance for missing pieces, and spring hinge pop opens out making it comfortable to consume in a very natural way.

Distinct Fluorescent Different coloured and Textured Caps

The caps have **distinct colour and texture** so that, those who are completely blind can differentiate between medicine using the texture and those who are **visually impaired** can figure out by both bright colours and textures.



What makes Hope special ?

- **First** of its kind to cater the blind community.
- Enables them to **self-administrate** their medications
- The problems related to **misdosages** of medicines in blind will be **massively reduced** and the **health hazards would be minimised**.
- This product makes the blind more **independent** and make their life experience more **hassle free**.
- Small changes made in the lives of people could create huge happiness and would defenitly boost the confidence and the attitude of independancy in the blind community. So **I believe a simple product like HOPE, the life experiences and the way the they live could be risen to next level.**

