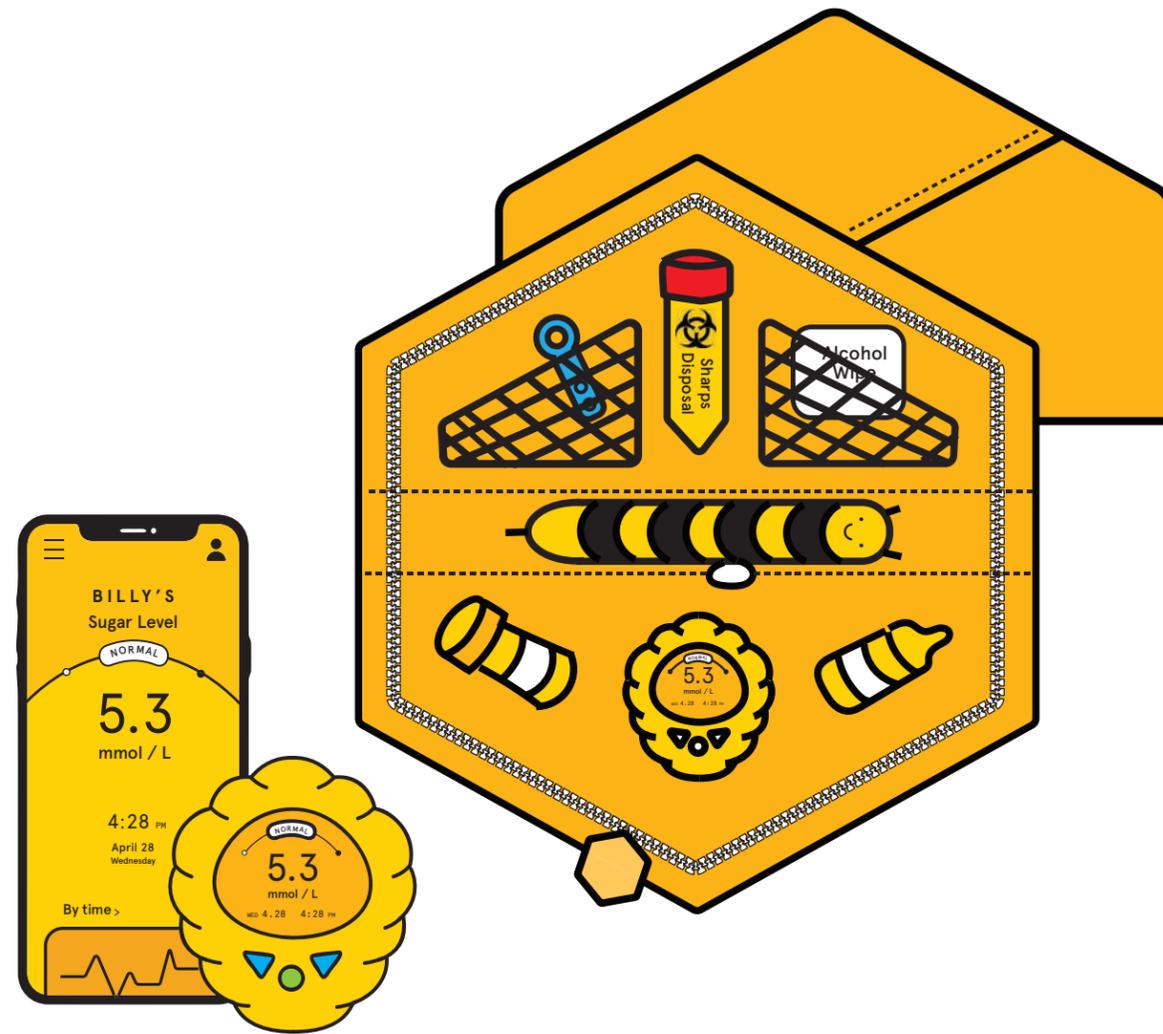




BumbleCheck

Child-Centered
Glucose Monitoring

Michelle Chan
MED+
INTD 310 S001
January-April 2019



Concept

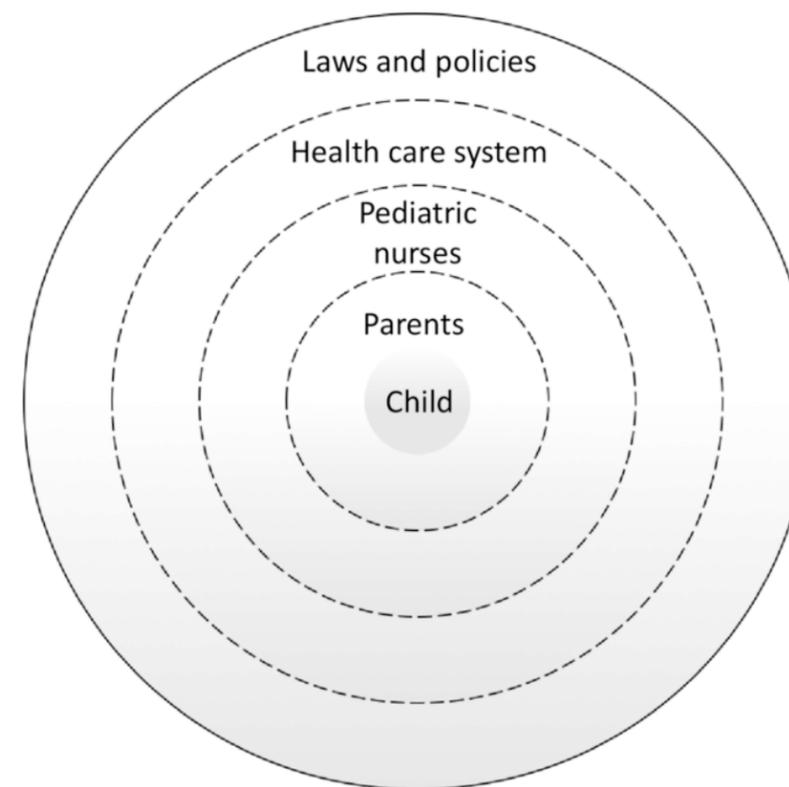
Motivates children to participate in their glucose testing by employing incentives, story-telling and positive reinforcement.

Provides parents with an opportunity to monitor test results, analyze statistics and discuss in community forums to further support their child's health.

Child-Centered Care

is focused on putting the child and their interest in the middle of the health practice.

It requires the engagement of the child, the family, caretakers, health practitioners and the community.



Opportunities

In order to cater towards children in healthcare, we need to consider the needs of the young, but growing body and mind.

Child-Size Devices



Distractions



Child-Friendly Facilities



Youth Health Education



Precedent + Observational Research

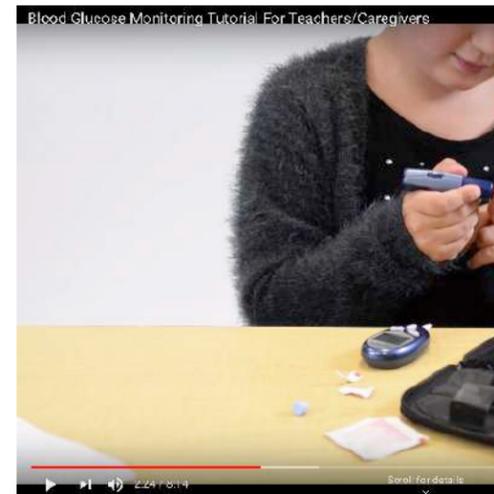
Checking Blood Sugar 

Blood Sugar = Blood Glucose	Blood Sugar Goals
<ul style="list-style-type: none"> Check blood sugars at least 4 times a day: before breakfast, lunch, supper, bed and when you feel low. Check blood sugars more often when you are sick. Write down blood sugars and review often. Checking blood sugars helps you learn about the balance between food, activity, and insulin. 	<p>Before meals: 4 - 8 mmol/L</p> <p>Bedtime: 6.7 - 10 mmol/L</p> <p>Write your blood sugar goals here:</p>

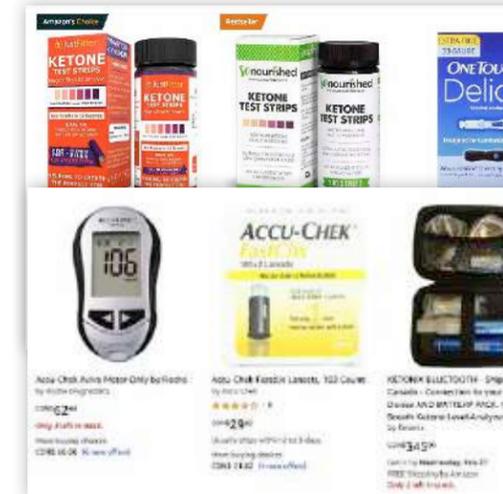
High Blood Sugars	Signs:
<ul style="list-style-type: none"> Check for ketones 	<ul style="list-style-type: none"> Thirsty Tired Blurry eyes Need to pee lots

Feeling Good!	Blood Sugar Range
	- 20.0
	- 17.0
	- 16.0
	- 13.0
	- 10.0
	- 8.0
	- 7.0
	- 6.0

Resources + Information



Video Instruction



Online Retail



Pharmacy



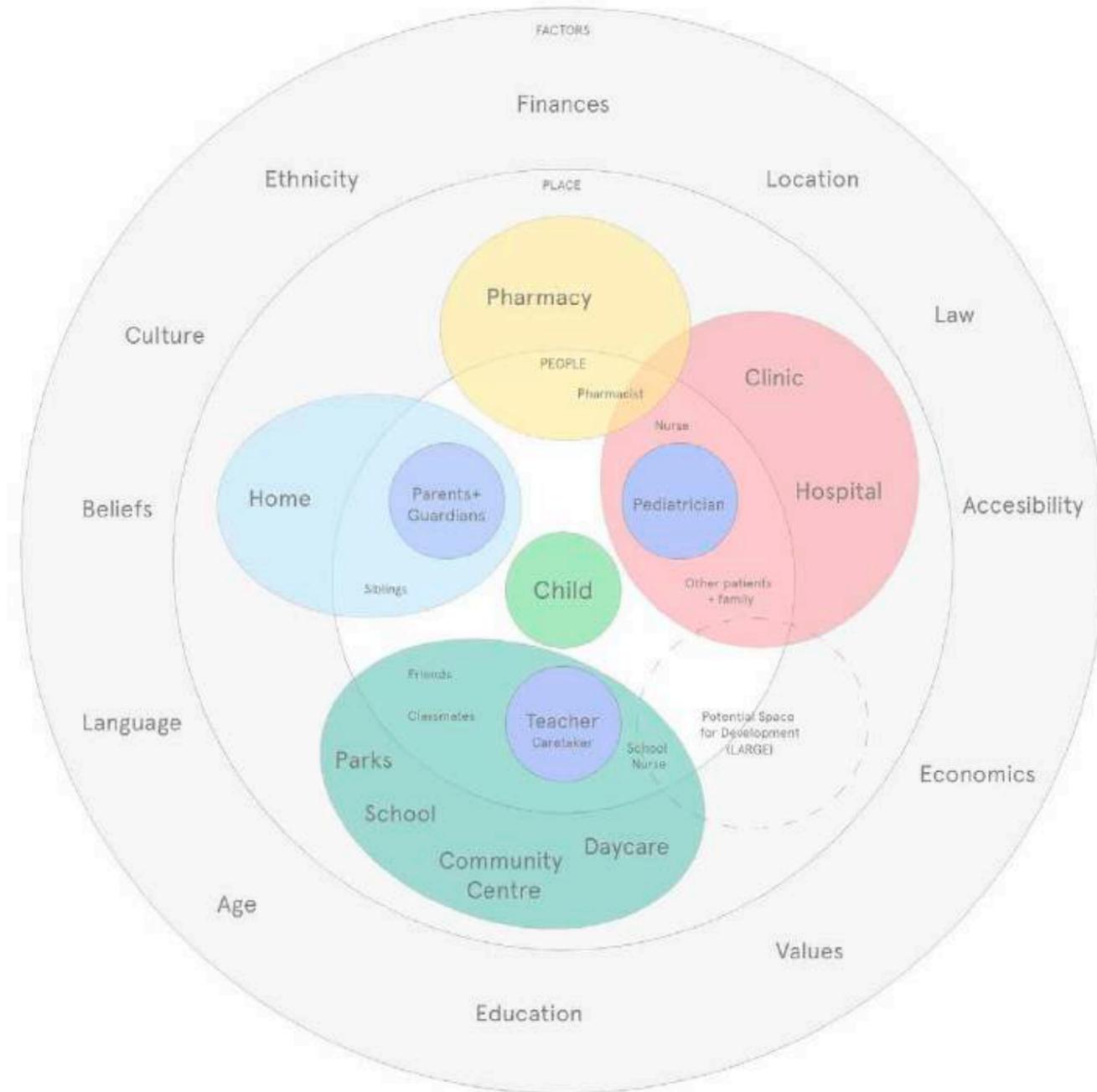
Dentist



ER Waiting Room

Ecosystem Map

Illustrates the people, space and factors that affects a child's wellbeing.



Competitive Comparative Analysis: Glucose Monitor

NAME	Contour Next EZ	Accu-Chek Aviva	ReliON Confirm	OneTouch Verio	FreeStyle Libre	OneTouch Ultra 2
PRODUCT IMAGE						
FEATURES	<p>5 seconds test results</p> <p>Bluetooth connection</p> <p>Quick and easy setup</p>	<p>Bluetooth connection</p> <p>Lancing device within monitor</p> <p>No coding required</p>	<p>Tiny 0.3µL sample size</p> <p>Downloadable readings</p> <p>No coding required</p>	<p>ColorSure™ technology shows when numbers are in or out of range</p> <p>No need to scroll or push buttons</p>	<p>Libre Sensor: No pricking required</p> <p>Water-resistant</p> <p>Graphs results</p> <p>Links to app</p>	<p>Marks before or after meal</p> <p>Large screen w/ backlight</p> <p>Comes w/recipes, tips in the kit</p>
ANALOG DIGITAL	ANALOG	DIGITAL	ANALOG	DIGITAL	DIGITAL	ANALOG
PRICE	\$30	\$30	\$13.50	\$18	\$227 for Starter Kit	\$22.50

Rigorous Sketching

CARDIO

PAMPHLETS / HAND OUT: TRACKING, ACTIVITIES

EVERYTHING NEEDED FITS INSIDE ONE STATION

PORTABLE EXERCISE STATIONS

EXERCISE STATION THAT CAN HOLD EVERYTHING NEEDED: AIMS TO TEACH ABOUT DAILY EXERCISE + HEALTH

EASY STORAGE + TRANSPORTATION

INFORMATION FOR BOTH FACILITATOR + CHILDREN

"FELT STATION"

SERIES COMPOSES OF VARIOUS STATIONS OF EXERCISE

SCHOOLS, AFTER-SCHOOL, EVENTS

THINGS TO CONSIDER:

- FACILITATOR / MOST TRAINING
- LEARNING + RESULTS + LONG TERM

GIRL SELF-CARE KIT

(SPONSORED) SWAG W/ LABEL OF HEALTH PLACES

A KIT TO LET GIRLS KNOW OF RESOURCES, SUPPORT, HELP.

THROUGH SWAG THAT ARE ACTUALLY HELPFUL + USEFUL

THINKING ABOUT: HOW TO APPEAL TO THEM.

MAKING IT CUTE, ACTUALLY SOMETHING THEY WILL USE

- FACE TRACKER (HEALTH)
- HAND SANITIZER
- BATH PRODUCT (CARE)
- HINI CANDLE (RELAX)
- CHAPSTICK / MOISTURIZER (CARE)
- WATER BOTTLE (HYDRATE)
- TAMPON + PADS (NECESSITY)
- VITAMIN PACKET (FUEL)
- LIST OF HEALTH RESOURCES
- HEALTH PAMPHLET (GROWTH)

LIGHTBOX HOSPITAL GALLERY SPACE BY PATIENTS FOR PATIENTS

ALLOWS CHILDREN TO SHARE ARTWORK IN DESIGNATED AREA FOR EVERYONE TO SEE.

← LIGHTBOX COULD BE DISTRACTING

THE HOSPITAL GALLERY

DRAW + CREATE A MASTERPIECE ONCE YOU'RE DONE, WRITE YOUR NAME + PUT IT UP HERE ON THE GALLERY

AN INTERACTIVE WAY TO LET CHILDREN EXPLORE THEIR CREATIVITY. ALLOWS OTHERS IN HOSPITAL TO INTERACT W/ EACH OTHER IN A DIFFERENT WAY. CAN HELP ENCOURAGE + CHEER UP PATIENTS.

THINGS TO CONSIDER:

- HAVING A THEME
- A MESSAGE BOARD (?)

MATERIALS PROVIDED: CLEAR SHEETS + MARKERS (CREASABLE)

THINGS TO THINK ABOUT:

- HISTORY / RECORD
- ADD NOTES
- PROVIDE TIPS
- FOOD ADVICE
- HOW TO MAKE IT EASIER TO UNDERSTAND

HOW CAN IT BE DIFFERENT FROM A CHILDREN'S BOARD FOR DRAWING?

BUMBLEBEE GLUCOSE MONITOR

AIMS TO MAKE GLUCOSE MONITOR FOR CHILDREN MORE ENGAGING FOR BOTH KID + FAMILY.

SILICONE SLEEVE

COLORFUL INTERFACE

REMOVABLE BEE SLEEVE

FOR ADULT-CARE TRANSITION

SAME INTERFACE

TIFFANY'S LATEST CHECK

93 mg/dl

APRIL 28 12:30 PM

NORMAL

APRIL 28 12:30 PM

GOAL: REDUCE TOUCH → TRANSFER OF GERMS WHILE DISTRACTING DURING WAIT

POTENTIAL: ANIMATION SHOW W/ THE QUIZ

HOW TO MAKE IT INTO A SORT OF GAME (TRACK POINTS)

WHAT IS THE CONDITION CALLED WHEN YOUR 2ND TOE IS LONGER THAN YOUR BIG TOE? A HANDEDNESS SYNDROME + WITHE'S FOOT C. (PUN)

THINGS TO THINK ABOUT:

- WHAT ARE TOPICS IN HEALTH PEOPLE DON'T KNOW ABOUT
- NO PHYSICAL TOUCH
- ADDITIONAL INTERACTION THAT'S NOT DISTURBING

HEALTH QUIZ IN PEDIATRIC WAITING ROOM

QUIZ QUESTIONS THAT ARE QUIRKY + INTERESTING - PLAYS @ THE PEDIATRICS

HOW TO MAKE IT INTERACTIVE W/ OTHER PEOPLE

LEARNING ABOUT THE BODY W/ YOUR OWN BODY

LEARN ABOUT THE HUMAN BODY USING AR / TRANSPARENT SHEET.

CHALLENGE IN AR

#1 DIGITAL - AR

"PROTECT THE INSIDES + ELEMENTS ON THE BODY"

POP UP INFORMATION ADJUST TO SIZE WE NEED

THINKING ABOUT: ANIMATION

#2 TRANSPARENT SCREEN

ALLOW PARTICIPANTS TO WALK BEHIND. LOOK @ OTHERS INTERACTIVE BUT NOT ACCESSIBLE FOR EVERYONE

AVERAGE COMPLEX SIMPLE

PERSONALIZABLE HOSPITAL ROOM DOORS

AIM TO HELP CHILDREN FEEL MORE COMFORTABLE / INVITED INTO A FOREIGN SPACE.

#1 CLIP ON METHOD

PRESS ON COLORED PLASTIC SQUARES - HARD TO CLIP OFF?

#2 SLIP IN METHOD

SLIP COLORED IDENTIFIED CARDS INTO SQUARE SLOTS. HARD TO REMOVE?

#3 VELCRO METHOD

VELCRO ON SQUARE SHAPED VELCRO. EASIER TO REMOVE

THINGS TO CONSIDER:

- HEIGHT
- REMOVAL / RESETTING
- ACCESSIBILITY
- SHARING / INTERACTION W/ FAMILY, OTHER PATIENTS

AN INTERACTIVE WAY FOR CHILDREN TO CUSTOMIZE THEIR SHORT-TERM / LONG TERM SPACE.

MAKES THEM FEEL MORE @ HOME, + COMFORTABLE

ALLOWS CONNECTIONS TO BE MADE W/ OTHERS

GERM-ELIMINATION VIRTUAL REALITY

VIRTUAL REALITY GAME (180°) FOR PAIN MANAGEMENT W/ FACTS ABOUT VIRUSES

LOADING SCREEN / INSTRUCTIONS

HEY! I NEED SOME HELP ELIMINATING THESE GERMS

FRED

ANGRY / NOT SCARY VILLAIN

SHOOT THE BACTERIAS

4x2

SOUNDS:

- GALACTIC + ZAPPY
- EXCITING TECHNO MUSIC

THINGS TO CONSIDER:

- HOW FUN THIS UNIQUE
- PROVIDE LEVELS + VARIATIONS

180° + PROVOKES MOVEMENT, BUT NOT SO MUCH THAT IT AFFECTS THE TREATMENT

NO LOSING: THAT WILL BE STRESSFUL

HAVE EDUCATIONAL PARTS

SLOW "WALKING" THROUGH CHALLENGE

STICKER FOR GLUCOSE MONITOR CHECKING

PROVIDE CHILDREN W/ INCENTIVE TO CHECK GLUCOSE LEVELS (STARTING UP)

DAILY STICKERS

DETACHABLE

WEEKLY "SCENE"

> DIFFERENT SCENE EACH WEEK

SMALL ENOUGH TO FIT IN GLUCOSE MONITOR KIT FOR A WEEK

PROVIDE KIDS W/ OBJECTIVE

INFORMATION + FACTS ON BACK

THINGS TO THINK ABOUT:

- HOW CAN THIS NOT GET BORING?

PACKETS W/ DAY OF THE WEEK

PAMPHLET / BROCHURE ABOUT NUTRITION (FOOD PYRAMID)

PROVIDE RESOURCES ON BACK

3D "CARD"

SPINNER PUZZLE

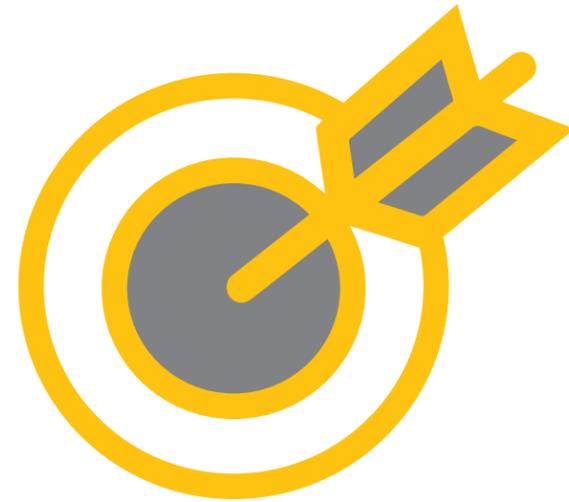
DECEIPHER CODE + RECEIVE MESSAGE ABOUT MENTAL HEALTH CHALLENGES

INTERACTIVE HANDOUTS ABOUT GENERAL HEALTH

PLAYFUL, DIFFERENT PAMPHLETS TO EDUCATE ABOUT COMMON HEALTH.

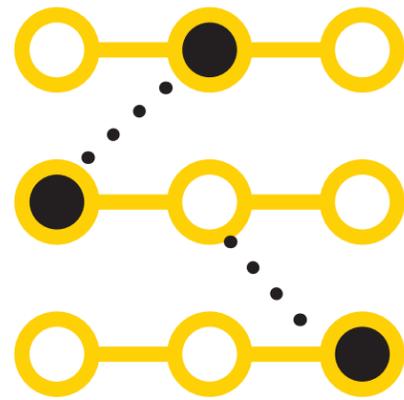
* RISOGRAPH

THINKING ABOUT: ECOLOGICAL PRINTING, THICK PAPER (RECYCLED)



Objective

Find a fun, approachable and practical way for children to learn to monitor their blood sugar level, while also guiding parents, caretakers and friends to appropriately support the child's health and needs.



Experience

User Experience



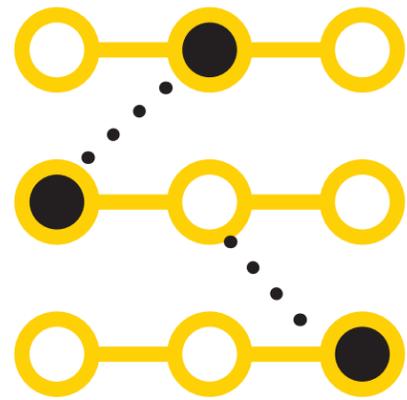
Content of Kit

Physical Components

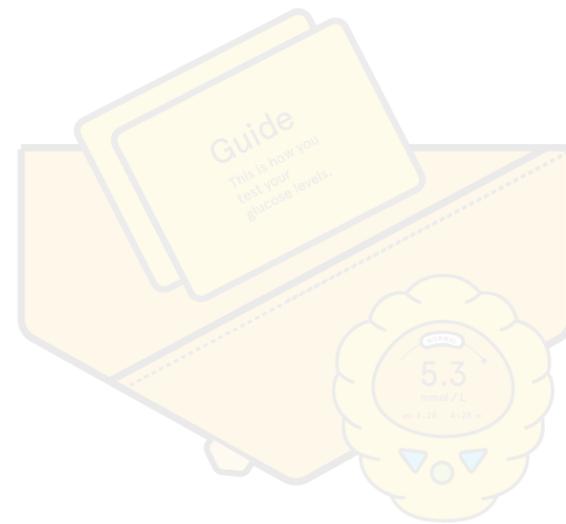


Digital Elements

User Interface



Experience
User Experience



Content of Kit
Physical Components



Digital Elements
User Interface



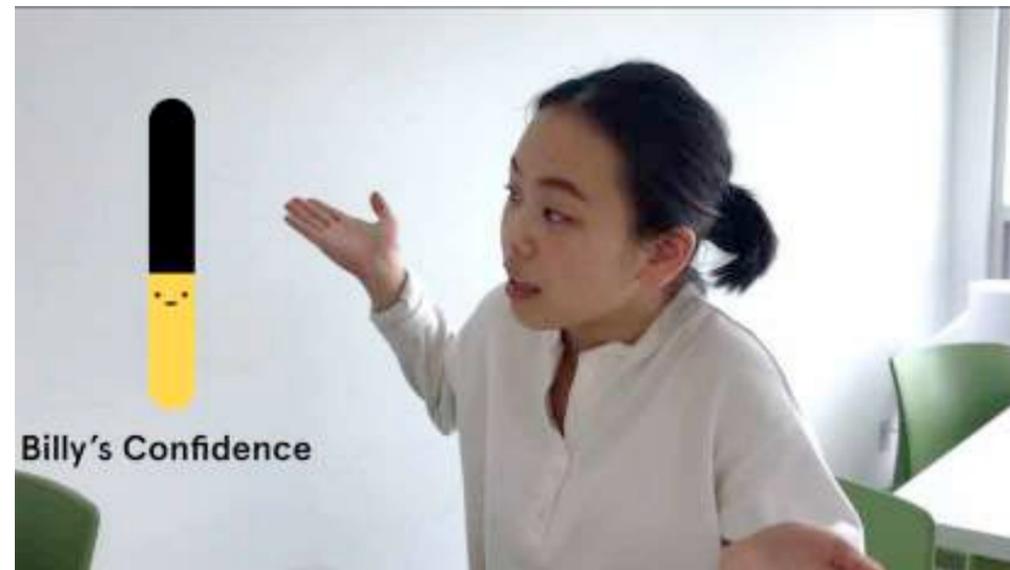
User Journey

In Progress

Looking into all the steps and experiences of the users. A functional way to see which steps could be more pleasant.

Video Prototype

Puts the journey map into action.
The user's change in emotion can be witnessed throughout the process.





Experience
User Experience



Content of Kit
Physical Components

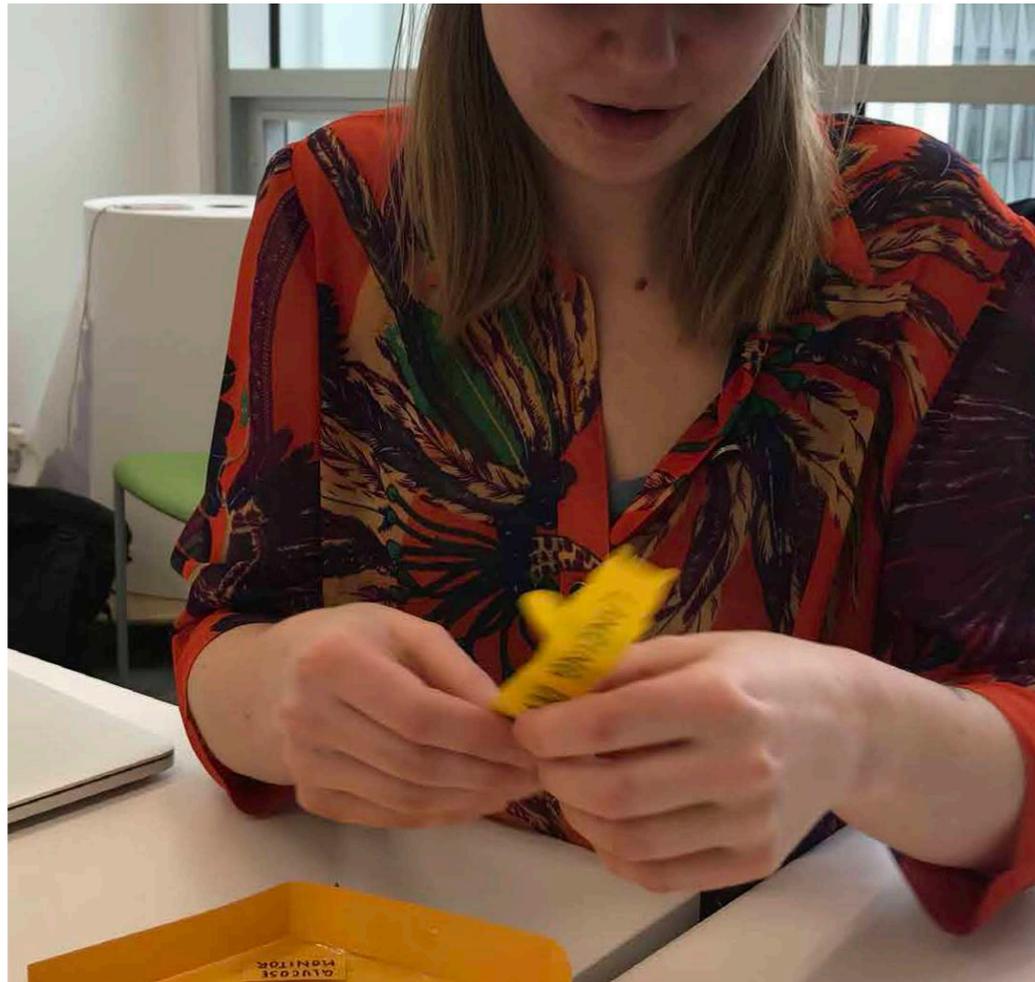


Digital Elements
User Interface

Paper Prototype

Size accurate prototype of the kit. Functions a mock kit during testing.





Prototype Insights

Provide image for reference

Diagrams + Pictures as instructions

Teaching family + friends of the process

Providing family and friends separate instructions

Color-coding, numbering the steps

Emplementing colors + indicator

Offer different colours, styles

Offer different colors + styles (customization)

Label + medical history readily available

Offer different colors + styles (customization)

Bug band-aids: Fun + fits the theme

A fun + relevant detail as part of incentive



**3D Rendering of the
BeeHive Glucose Monitor**



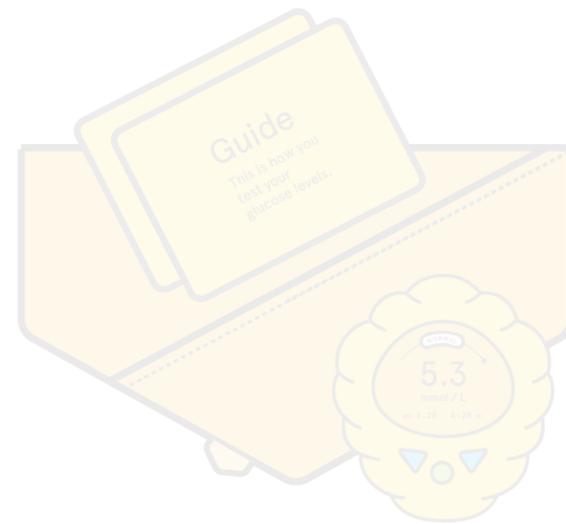
Credits to:
Matthew Chen
Industrial Designer from INDD 310



beautiful, amazing, gorgeous, stunning



Experience
User Experience



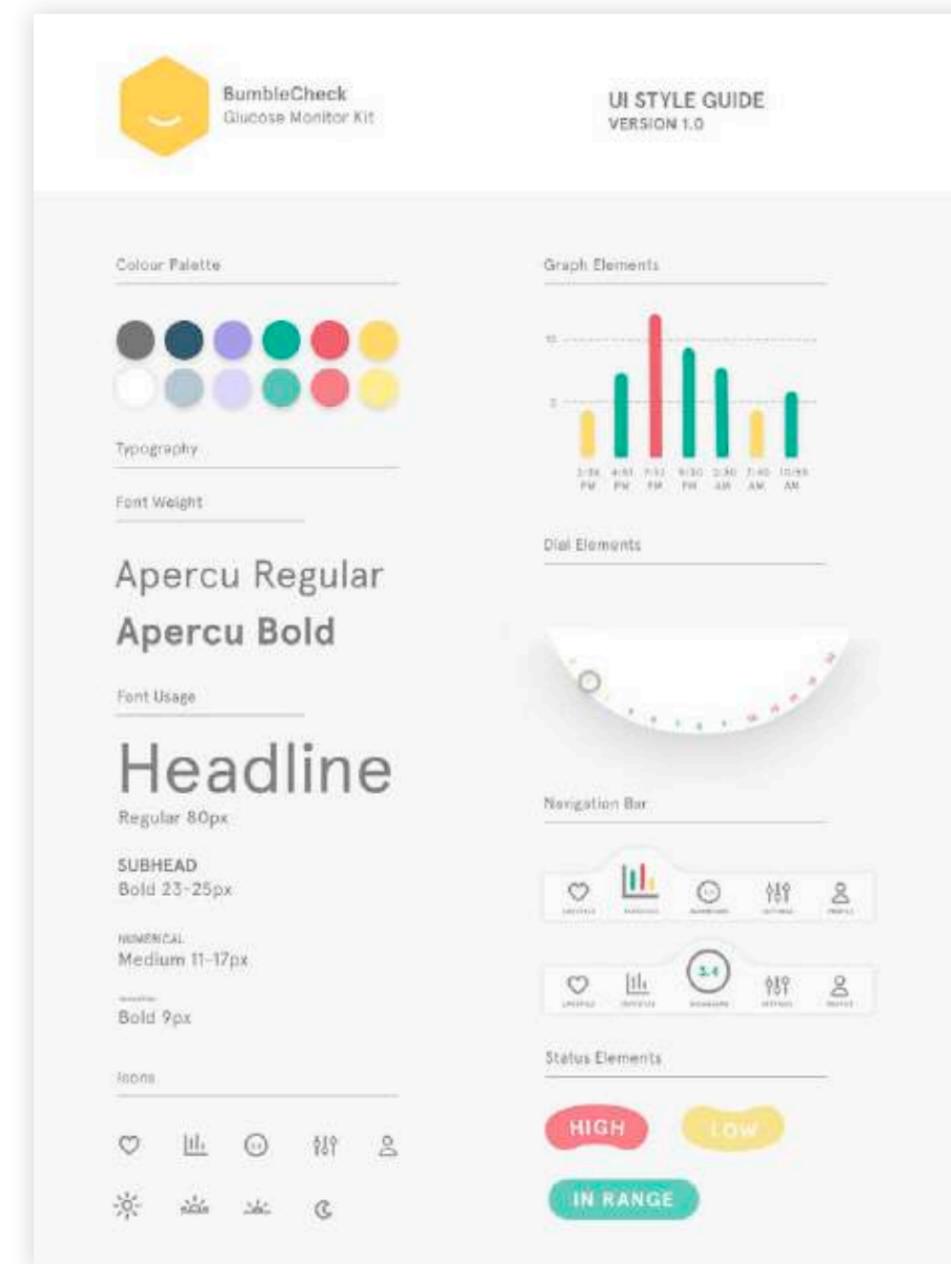
Content of Kit
Physical Components



Digital Elements
User Interface

UI Style Guide

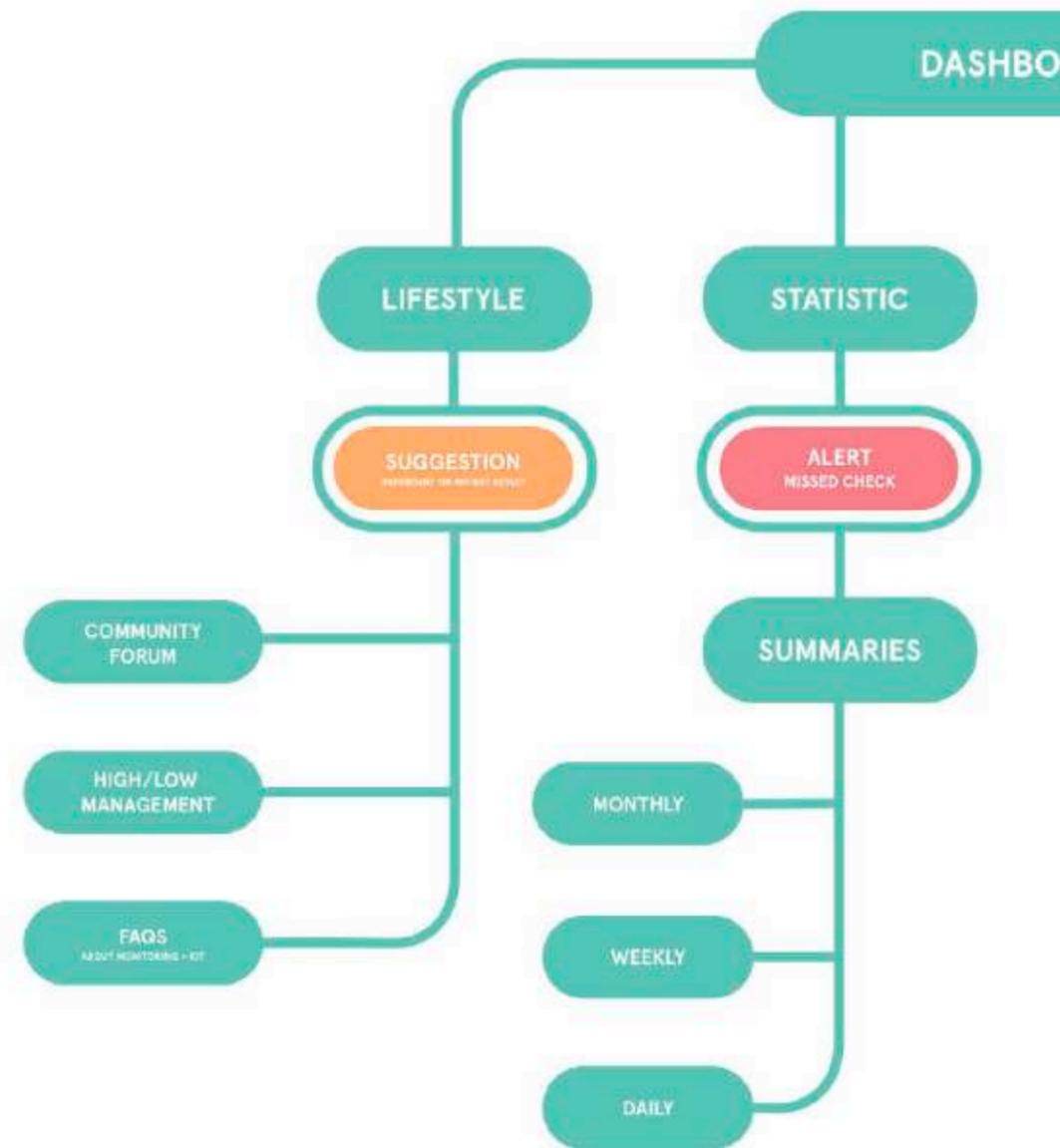
Ensures consistency throughout the app and the monitor UI.



BumbleCheck App: User Flow

In Progress

Maps out all the digital steps of the application.



BumbleCheck App

Provides parents with up-to-date blood sugar level results from their child's BeeHive monitor. Other features such as statistics and lifestyle management are also accessible.





BeeHive Monitor

The UI elements are simple and easy for children to understand. Includes reminder system to develop habit and ensure optimal results. Alternative UI layout is available for intermediate preference.



In Progress...

Components within each category requires far more research, testing, development. The next step is to re-visit the three areas and fill in all the missing details. User-testings are to follow.



BumbleCheck

Child-Centered
Glucose Monitoring



BumbleCheck

Child-Centered
Diabetes Management

Future Development

At this stage, BumbleCheck has been focused exclusively on glucose monitoring. In the future, BumbleCheck will also be considering other aspects that of the diabetic lifestyle, such as medication, wellness and awareness.



BumbleCheck

Child-Centered
Glucose Monitoring

Thank you!

**A special thanks to my
mentors + collaborators:**

Stevie Nguyen

Matthew Chen

Ilya Koveshnikov

Megan Chen

Christine Fwu

Declan Reilly-Gordon



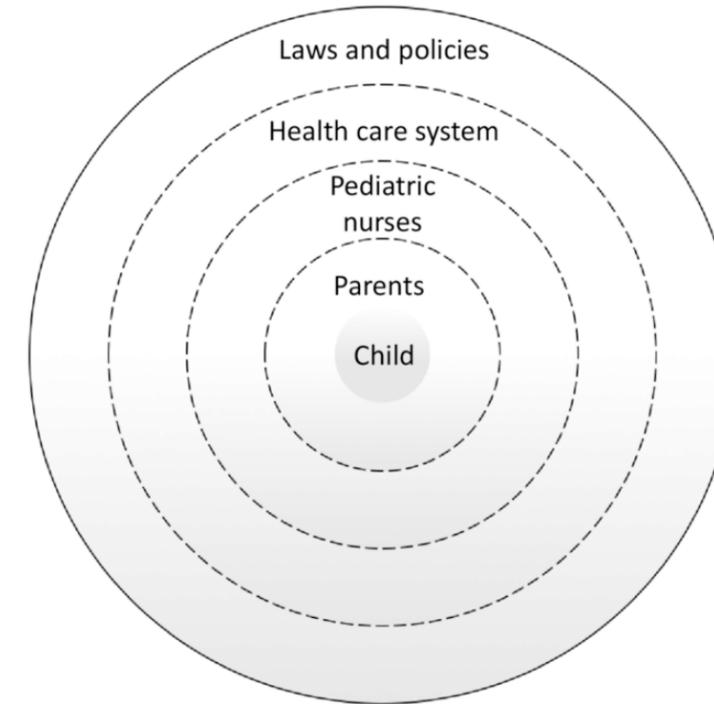
BumbleCheck

Child-Centered
Glucose Monitoring

Appendix

Child-Centered Care

is focused on putting the child and their interest in the middle of the health practice and involves the inclusion and participation of the young individual as part of their own health. It requires the engagement of the child, the family, caretakers, health practitioners and the community. One of the challenges that we will inevitably face, is user-testing. Asides from the obvious step of being certified to work with young individuals, it takes time as adults to understand children, vice versa. It requires a different mindset, which can be hard to channel. There are many unanswered questions that have yet to be discovered.



“Family-centered care as an ecological system: Children, adolescents and parents are treated as partners in care. The services around the child's and the family's needs are coordinated by the nurses who are affected by the health care systems and the laws and policies they are obliged to follow.”

-Charlotte Angelhoff
Linköping University, Department of Social and Welfare Studies (ISV) and
Department of Paediatrics (IKE)



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

For CCC to really succeed as a concept, medical products need to be physically and psychologically more catering and adaptive towards the younger body and mind. It could mean simply that the product is made specifically for the physique of a child (Figure 1). But it could also be a coping mechanism, like a syringe cover to ease scared patients (Figure 2). Distractions contribute to the overcoming of a fear. A good example is having a visual puzzle to decipher during a visit to the dentist (Figure 3). A simple sensory deprivation, can change ones' view on a cast removal appointment (Figure 4). Design could be revolutionize distractions through playing music to blur out the sounds of the whirring saw, or VR, which can be wildly intriguing for younger audiences (Figure 5).

Opportunities



Figure 6



Figure 7

Designing the facilities to fit a child's need is significant in CCC. From colours, textures, themes, to accessibility, this could largely impact the way children feel in hospital and paediatric care. In a physical space, where young patients often spend their time, it is important to design in context of learning, exploring (Figure 6)and engaging with family and others in the facility (Figure 7). This could be a play room, an installation (Figure 8), or even a social event or activity.

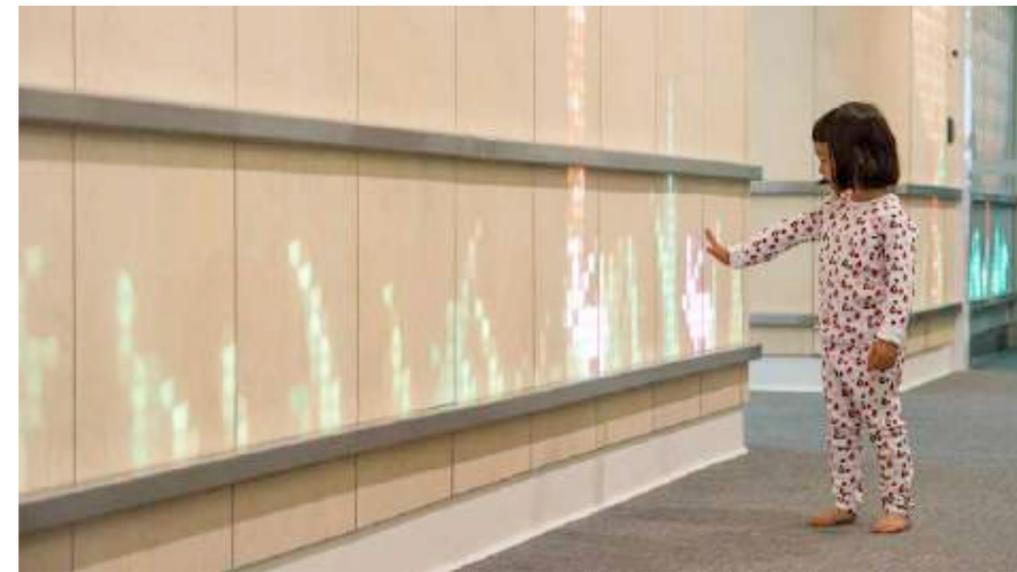


Figure 8



Figure 9



Figure 10



Figure 11

In order to allow children to be in charge of their own health, educating plays a fundamental role. This could be a fun activity about exercising (Figure 9), a guide on medical devices and sex education. Teaching young individuals requires simple language and fun visuals. Making posters, events, videos (Figure 10), discussions, AR (Figure 11), VR. memorable is the way to make health education functional.

These little experiences can completely change a child's perception of healthcare and the medical world forever and therefore affect their involvement in their own health as adults.

Challenges

It will be a new challenge to work and test with children. It would be part of my research plan to figure out how to manage to safely execute this step. It's also going to be harder to be empathetic. Understanding a child's point of view is going to require an innovative process. How can I put myself into their shoes mentally, and physically? What does it mean to think like a child? Students from Northfield Community Middle School, New Jersey were given the challenge to develop an empathetic viewpoint of children in hospitals. They filmed a video called, "Vital Signs: An Exercise of Empathy" (Figure 12) on the paediatric floor to gain a better sense of what it feels like to be in a hospital as a child. Another significant challenge and debate is, the transition between child-centered care and adult-centred care. How can we ensure that individuals grow out of CCC smoothly (figure 13)?



Figure 12

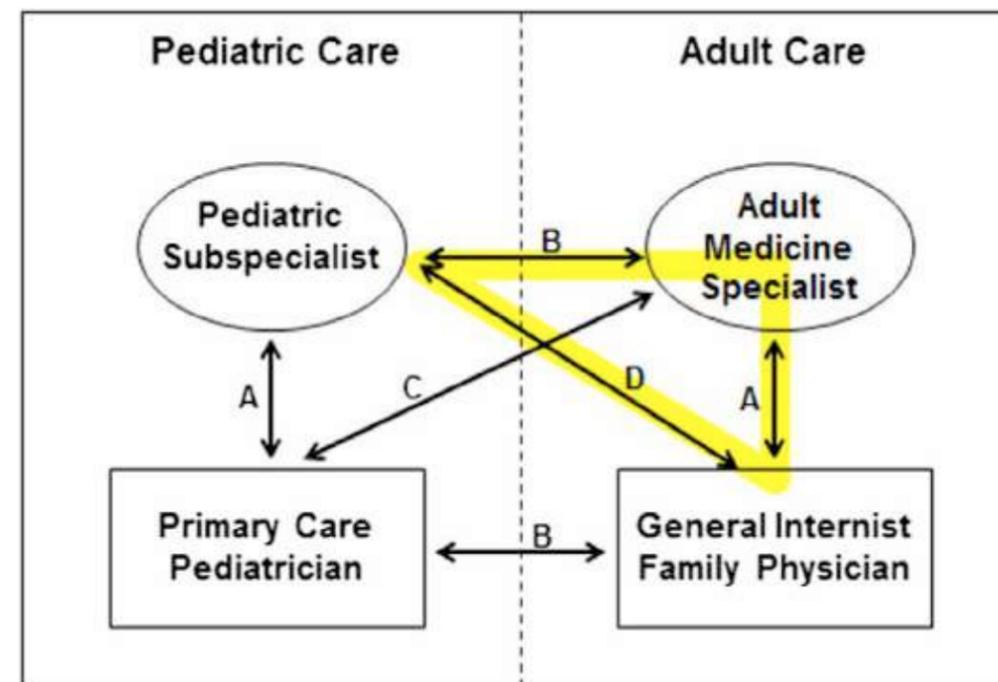


Figure 13

Co-Designers

Co-designing with industrial designers could provide a knowledgeable guidance for materials and ergonomics. Collaborating with healthcare and paediatric professionals could also be very insightful into children's health. It would also be important to find either young testers, or individuals who could channel their inner kid. Finding people to work with will require a lot of asking and connections. Perhaps I could explore different schools and faculties and see if there is any interest in collaborating. I'll be posting on my social media pages to inform friends in other fields about the opportunity.

RESEARCH PLAN

-VISIT: HME Mobility & Accessibility

-PODCAST: Helping Teens Transition from Pediatrics to Adult-Centered Care (HLOL #132)

-VISIT: OHM Medical Training Services Inc

-READ: The concept of child-centered care in healthcare: a scoping review protocol

-WATCH: Patient-and Family-Centered Care: Why it matters and How to Practice it

-WATCH: Patient & Family Centered Care: A New Generation

-INQUIRE: Industrial Designers in Industrial Med+

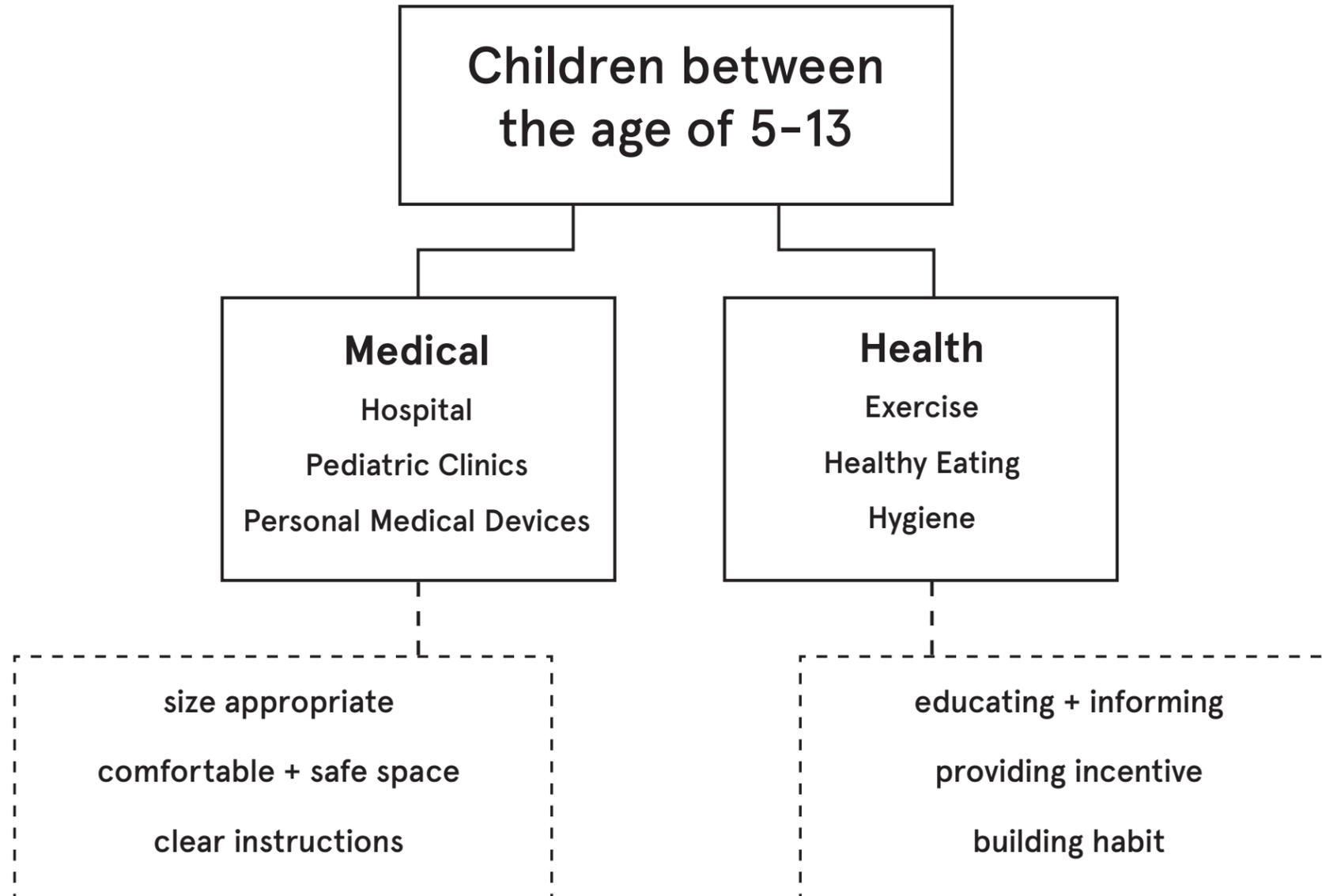
-LOOK INTO: Child Health BC (resources, articles, etc.)

-SEND: Messages and e-mails to potential professional collaborators

*-READ: Youth and Young Adults with Chronic Health Conditions in Transition:
A Provincial Perspective with Regional Focus for Integration*

-POST: About Collaboration on Social Media

Focused Area



Questions

These questions are formulated to ask the collaborator. They are meant to provoke conversation and potentially pull up personal experiences.

Do many children know how to employ their devices themselves?

Are children embarrassed about using their medical devices?

At what age do children know/ understand the importance of (their)health?

Physically, where do children struggle the most?

When do children want/ tend to transition from child-centered care to adult-centered care?

How do other children react to their friend's medical devices?

Is it ethical to distract children from their fears? Should they be confronting it?

How can we make the paediatric healthcare more welcoming for children?

Has there been any case of incorrect usage that you have personally witnessed?

How do you teach children how to use their medical devices?

How often do children get to interact with other younger patients?

Do children get to personalize their space in paediatric hospitality?

Do children need encouragement and incentives to exercise?

Where and when do children forget about their health habits?

Collaborators

*The experts and individuals that have
agreed to collaborate and provide insight*

Stevie Nguyen
Professional Child Care

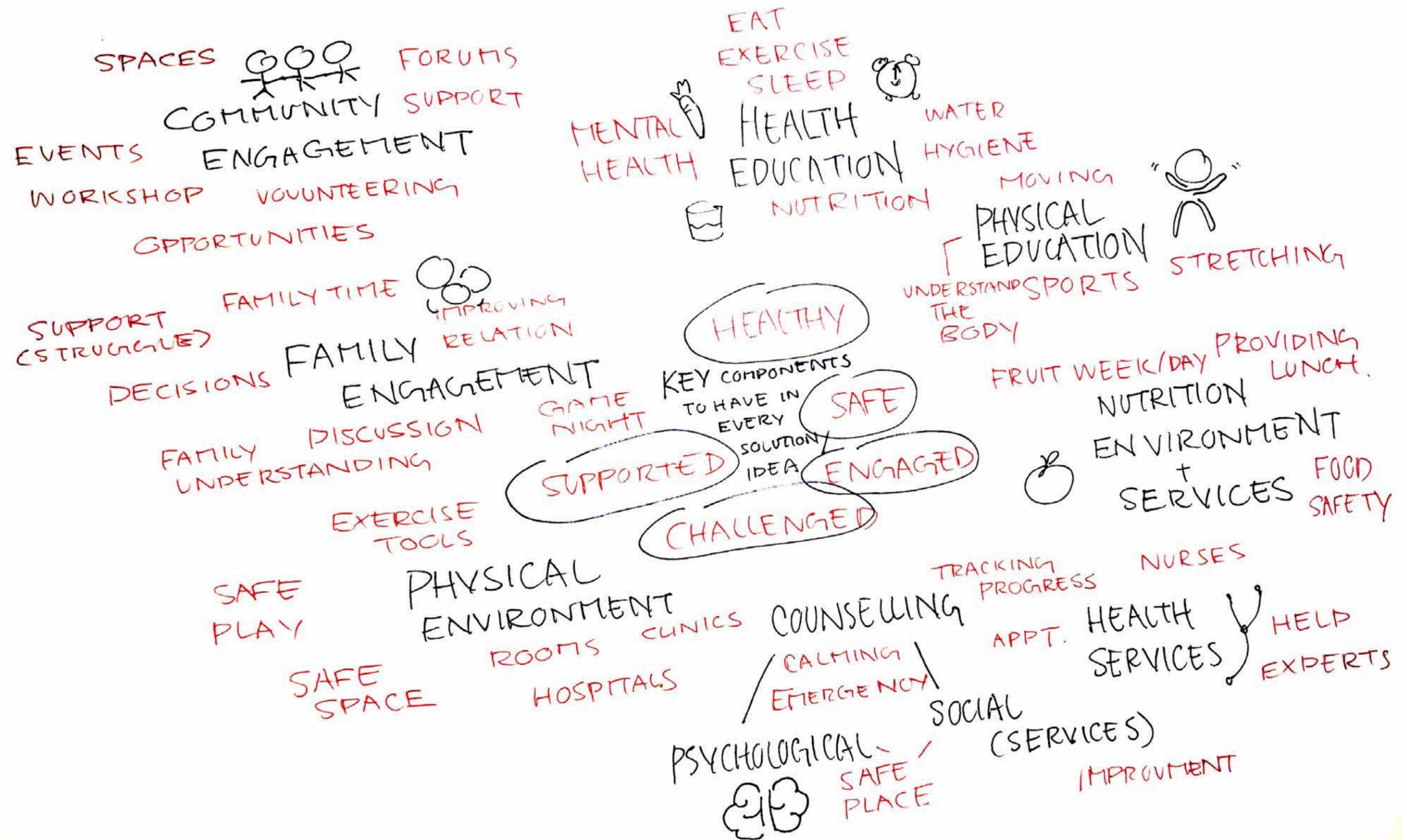
Tiffany Chan
Childcare Worker

Sherman Lam
*Social Skills Worker
with Children with Special Needs*

Karol Patriarca
*Childcare Leader
for out of school care*

Matthew Chen
Industrial Designer

Ilya Koveshnikov
Production Technician

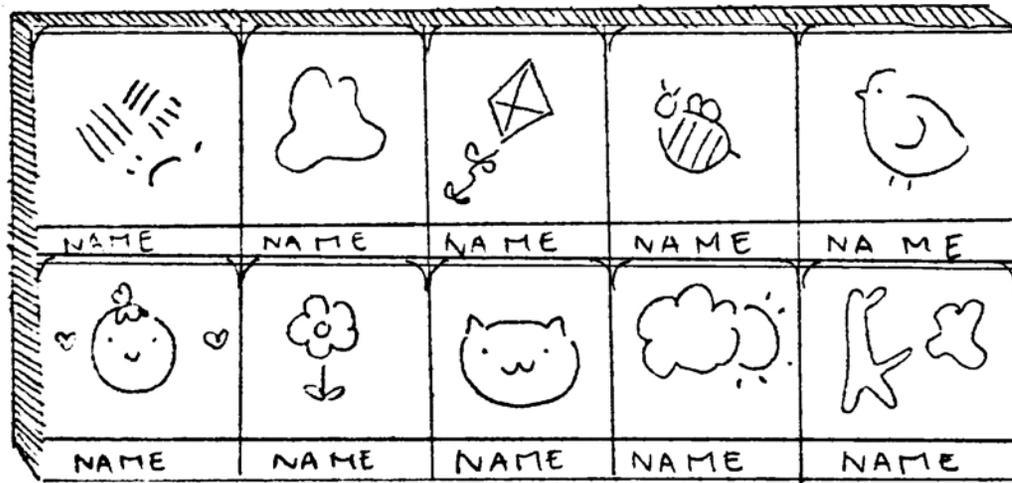


Brainstorm - IDEAS

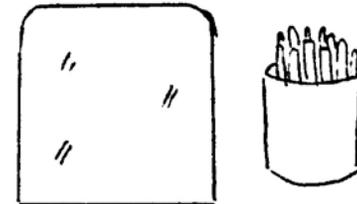
The result of a child-centered care potential idea brain dump. The ideas are fueled and inspired by the 5 terms at the center.

LIGHTBOX HOSPITAL GALLERY SPACE BY PATIENTS FOR PATIENTS

ALLOWS CHILDREN TO SHARE ARTWORK IN DESIGNATED AREA FOR EVERYONE TO SEE.



* LIGHTBOX COULD BE DISTRACTING



MATERIALS PROVIDED:
CLEAR SHEETS +
MARKERS.
(REUSABLE)

THE
HOSPITAL
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DRAW + CREATE A MASTERPIECE
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+ CHEER UP PATIENTS.

THINGS TO
CONSIDER:

- > HAVING A
THEME
- > A MESSAGE
BOARD (?)

*How can it be different from
a bulletin board for drawing?

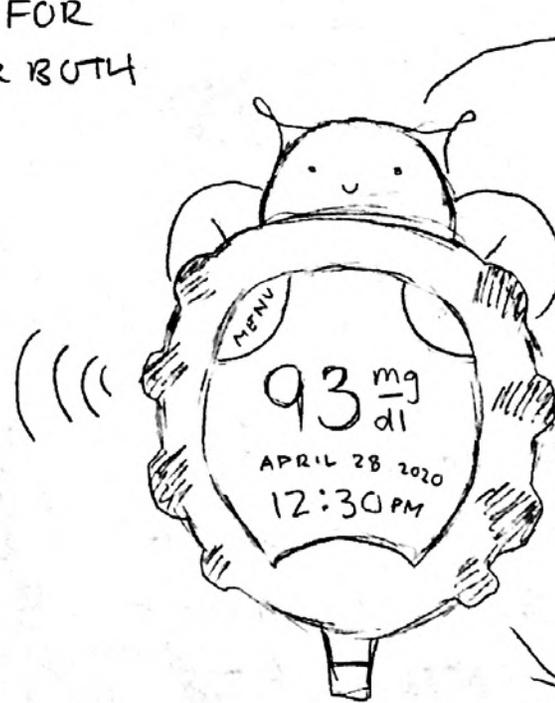
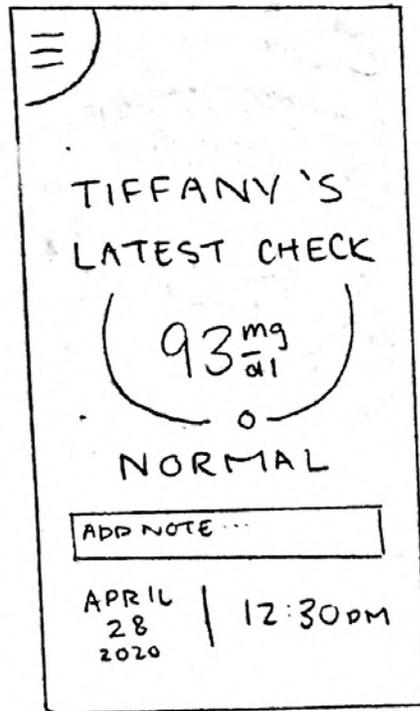
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THINGS TO THINK ABOUT:

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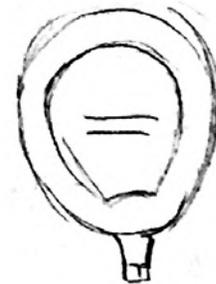


SILICONE SLEEVE

COLORFUL INTERFACE

REMOVABLE BEE SLEEVE

- > FOR ADULT-CARE TRANSITION
- > SAME INTERFACE



GIRL SELF CARE KIT

A KIT TO
LET GIRLS
KNOW OF
RESOURCES,
SUPPORT,
HELP.

↓
THROUGH
SWAG THAT
ARE ACTUALLY
HELPFUL +
USEFUL



THINKING ABOUT:
HOW TO APPEAL
TO THEM.

(SPONSORED)
SWAG W/ LABEL OF HEALTH PLACES



PACE TRACKER
(HEALTH)



BATH PRODUCT
(CARE)



CHAPSTICK
HONEY/NATURAL
(CARE)



TAMPON
+
PADS
(TRIALS)
(NECESSITY)



LIST OF
HEALTH RESOURCES



HAND
SANITIZER



MINI CANDLE
(RELAX)



WATERBOTTLE
(HYDRATE)



VITAMIN
PACKET (FUEL)

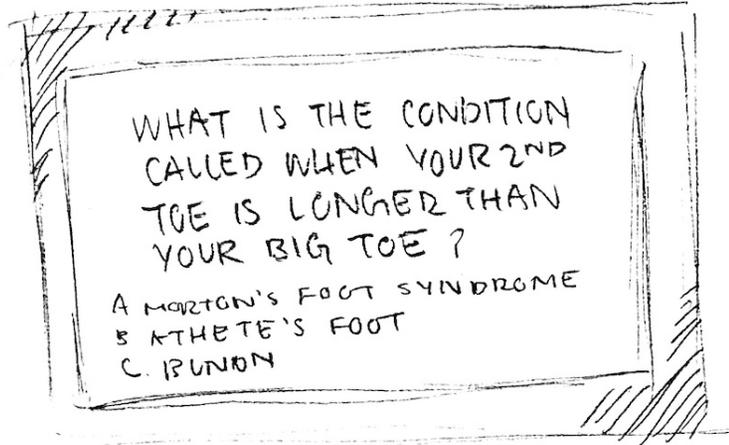


HEALTH
PAMPHLET
(GROWTH)

MAKING IT CUTE,
ACTUALLY SOMETHING THEY WILL USE

GOAL: REDUCE TOUCH → TRANSFER OF GERMS
WHILE DISTRACTING DURING WAIT

POTENTIAL:
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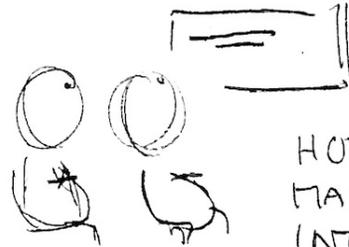


- THINGS TO THINK ABOUT:
- WHAT ARE TOPICS IN HEALTH
PEOPLE DON'T KNOW ABOUT
 - NO PHYSICAL TOUCH
 - ADDITIONAL INTERACTION
THAT'S NOT DISTURBING

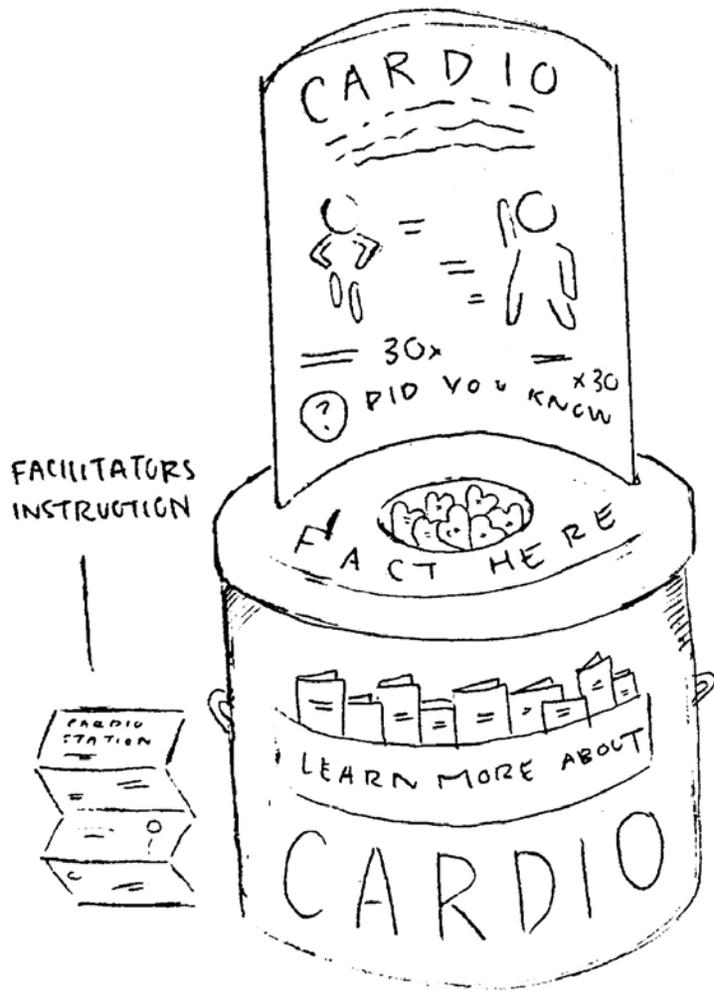
↓
HOW TO
MAKE IT
INTO A SORT
OF GAME
(TRACK POINTS)

HEALTH QUIZ IN PEDIATRIC WAITING ROOM

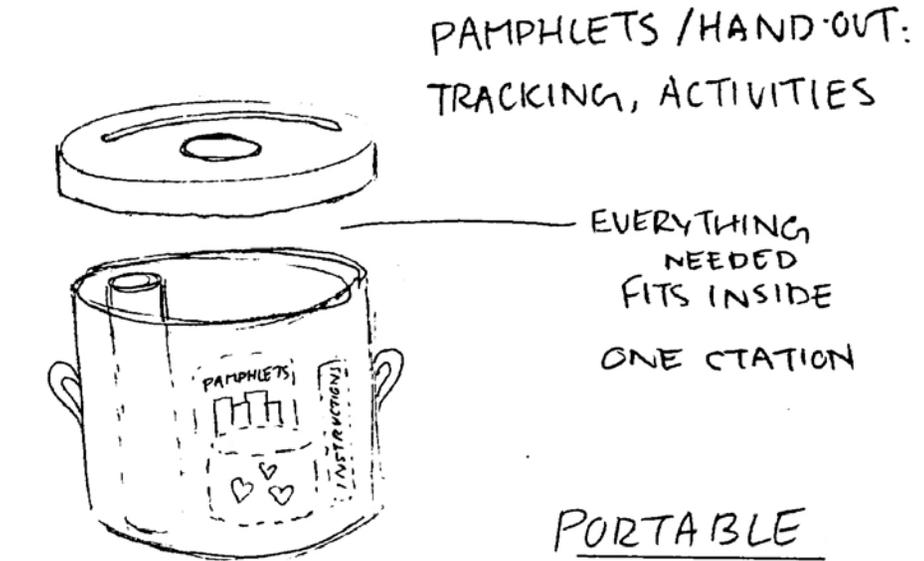
QUIZ QUESTIONS
THAT ARE
QUIRKY +
INTERESTING -
PLAYS @ THE
PEDIATRICS



HOW TO
MAKE IT
INTERACTIVE
W/ OTHER PEOPLE



- THINGS TO CONSIDER:
- > FACILITATOR / HOST TRAINING
 - > LEARNING + RESULTS: LONG TERM



- > EASY STORAGE + TRANSPORTATION
- > INFORMATION FOR BOTH FACILITATOR + CHILDREN
- > FELT "STATION"
- > SERIES COMPOSES OF VARIOUS STATION OF EXERCISE
- > SCHOOLS, AFTER-SCHOOL EVENTS

PAMPHLETS / HAND-OUT:
TRACKING, ACTIVITIES

EVERYTHING
NEEDED
FITS INSIDE
ONE STATION

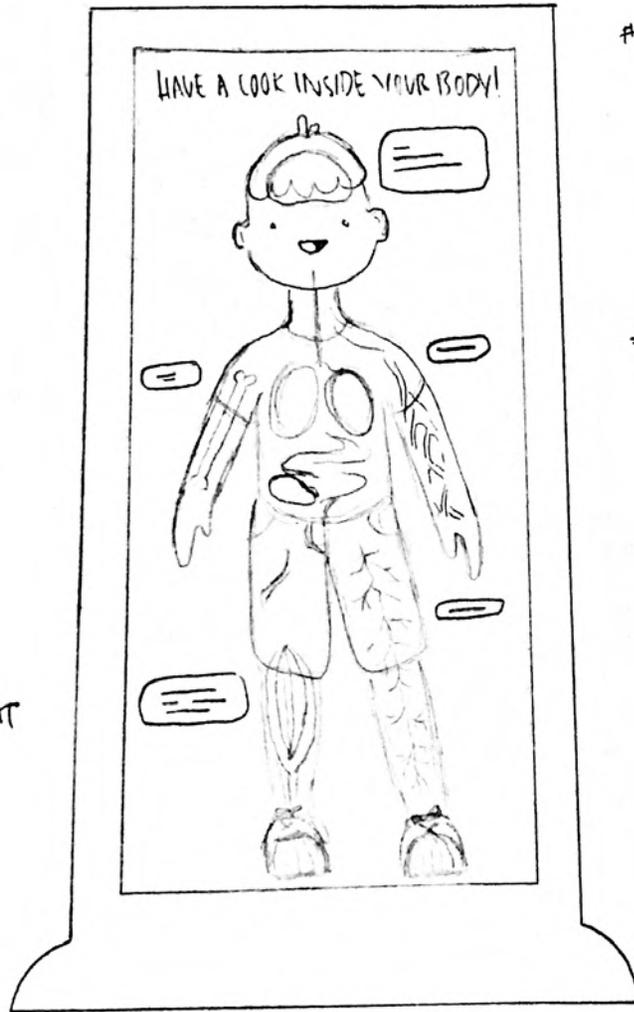
PORTABLE
EXERCISE
STATIONS

EXERCISE STATION
THAT CAN HOLD
EVERYTHING
NEEDED:
AIMS TO TEACH
ABOUT DAILY
EXERCISE
+
HEALTH

LEARNING
ABOUT THE
BODY W/
YOUR OWN
BODY

LEARN ABOUT
THE HUMAN
BODY, USING
AR / TRANSPARENT
SHEET.

*CHALLENGE
IN AR



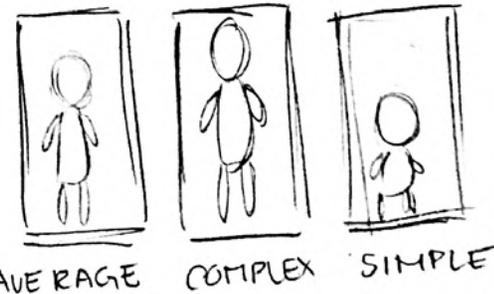
#1 DIGITAL - AR
"PROJECT" THE INSIDES + ELEMENTS
ON THE BODY.

POP UP INFORMATION
ADJUST TO SIZE WE NEED

#2 TRANSPARENT SCREEN
ALLOW PARTICIPANTS TO
WALK BEHIND.

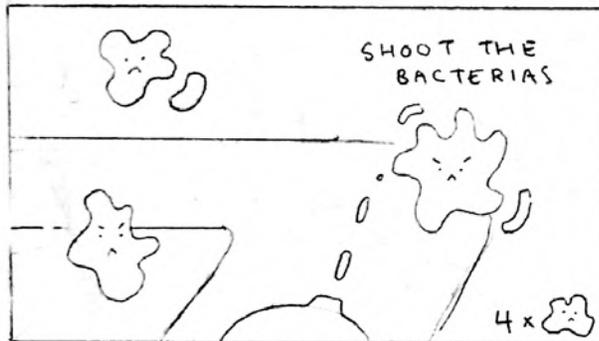
LOOK @ OTHERS.
INTERACTIVE BUT
NOT ACCESSIBLE FOR
EVERYONE

THINKING
ABOUT:
ANIMATION



GERM-ELIMINATION VIRTUAL REALITY

VIRTUAL REALITY GAME (180°) FOR PAIN MANAGEMENT W/ FACTS ABOUT VIRUSES



GAME

SOUNDS:

- > GALACTIC + ZAPPY
- > EXCITING TECHNO MUSIC

THINGS TO CONSIDER:

- > HOW CAN THIS BE UNIQUE
- > PROVIDE LEVELS + VARIATIONS

LOADING SCREEN / INSTRUCTIONS



ANGRY /
NOT SCARY
VILLAIN

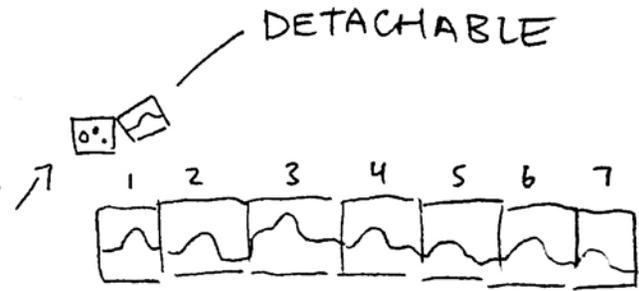
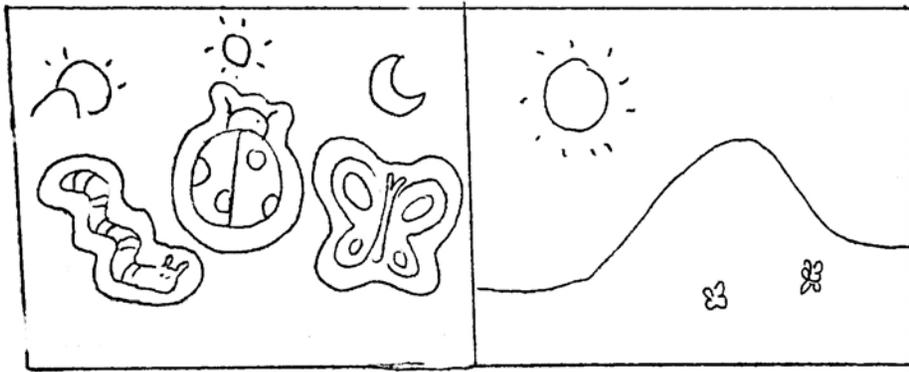
- > 180° + PROVOKES MOVEMENT, BUT NOT SO MUCH THAT IT AFFECTS THE TREATMENT
- > NO LOSING: THAT WILL BE STRESSFUL
- > HAVE EDUCATIONAL PARTS
- > SLOW "WALKING" THROUGH CHALLENGE



STICKER FOR GLUCOSE MONITOR CHECKING

PROVIDE CHILDREN W/ INCENTIVE TO CHECK
GLUCOSE LEVELS (STARTING UP)

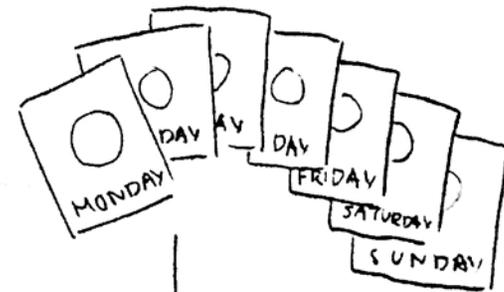
DAILY STICKERS



WEEKLY
"SCENE"

> DIFFERENT SCENE
EACH WEEK

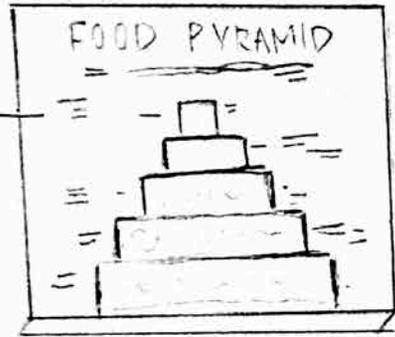
- > SMALL ENOUGH TO FIT IN GLUCOSE MONITOR KIT FOR A WEEK
 - > PROVIDE KIDS W/ OBJECTIVE
 - > INFORMATION + FACTS ON BACK
- THINGS TO THINK ABOUT:
- HOW CAN THIS NOT GET BORING?



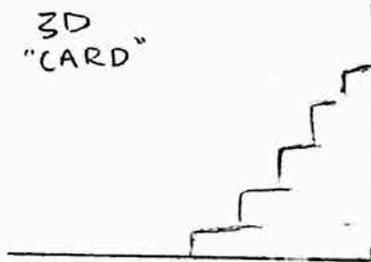
PACKETS W/
DAY OF THE WEEK

PAMPHLET / BROCHURE
ABOUT NUTRITION
(FOOD PYRAMID)

DESCRIPTION
ON
SIDE

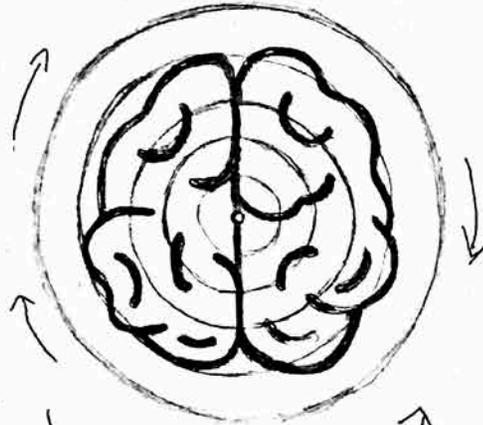


3D
"CARD"



SIDEWAYS VIEW

PROVIDE
RESOURCES
ON BACK,



SPINNER
PUZZLE

- DECEIPHER
CODE + RECEIVE
MESSAGE ABOUT MENTAL
HEALTH CHALLENGES

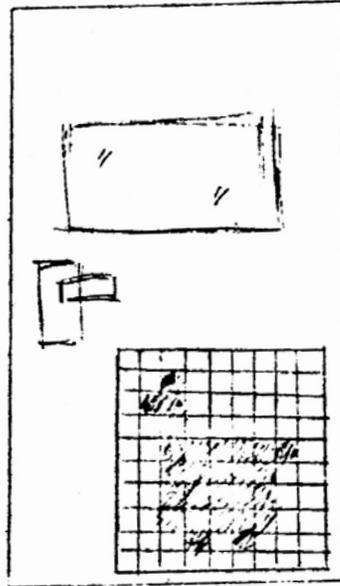
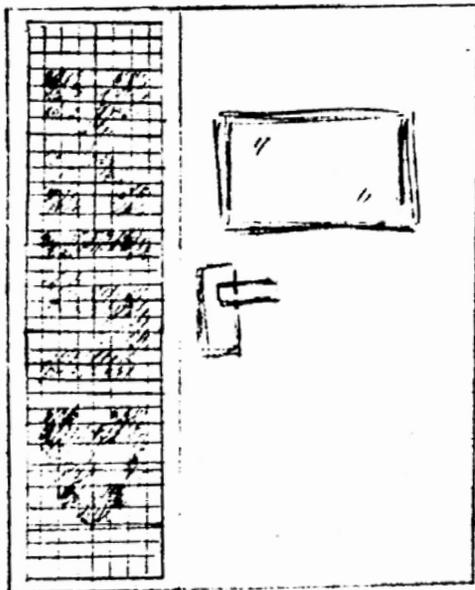
INTERACTIVE
HANDOUTS
ABOUT GENERAL
HEALTH

PLAYFUL, DIFFERENT
PAMPHLETS TO
EDUCATE ABOUT
COMMON HEALTH.

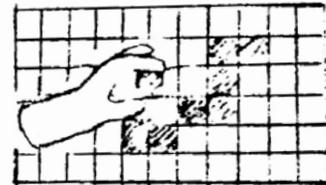
* RISOGRAPH
THINKING ABOUT:
- ECOLOGICAL
PRINTING
- THICK PAPER
(RECYCLED)

PERSONALIZEABLE HOSPITAL ROOM DOORS

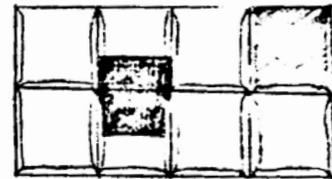
AIM TO HELP CHILDREN FEEL MORE COMFORTABLE / INVITED INTO A FOREIGN SPACE.



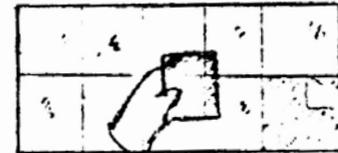
#1 CLIP ON METHOD
PRESS ON COLORED
PLASTIC SQUARES -
HARD TO CLIP OFF?



#2 SLIP IN METHOD
SLIP COLORED / DES-
IGNED CARDS INTO
SQUARE SLOTS
HARD TO REMOVE?



#3 VELCRO METHOD
VELCRO ON SQUARE
SHAPED VELCRO
EASIER TO REMOVE



- > AN INTERACTIVE WAY FOR CHILDREN TO CUSTOMIZE THEIR SHORT-TERM / LONG TERM SPACE.
- > MAKES THEM FEEL MORE @ HOME, + COMFORTABLE
- > ALLOWS CONNECTIONS TO BE MADE W/ OTHERS.

THINGS TO CONSIDER:

- HEIGHT
- REMOVAL / RESETTING
- ACCESSIBILITY
- SHARING, INTERACTION
W/ FAMILY + OTHER PATIENTS



Family Day @ the Steveston Tram

**Monday February 18th
12:15pm - 4:45 pm**

Duties will include:

- Set up and take down
- Helping children create crafts
- Crowd management/ people counting

The Tram has always been an exciting part of visiting Steveston. This volunteer opportunity will allow me to gain a better understanding of how children think and move. Also, who wouldn't want to hang out in the train?

Reflection

During the couple hours of volunteering, I found that this event primarily aimed towards children, was also centered around the parent as well. Dealing with the adults were a big part of the job.

I realized that children have an extremely short attention span, and will only make a bit of effort to troubleshoot. When they come across a conflict, they often ask for help, let it slip or give up.

It's also important to stay organized the entire time to ensure that everyone can have a memorable and seamless experience on a special holiday.

Questions

These questions are formulated to ask the collaborator. They are meant to provoke conversation and potentially pull up personal experiences.

Do many children know how to employ their devices themselves?

Are children embarrassed about using their medical devices?

At what age do children know/ understand the importance of (their)health?

Physically, where do children struggle the most?

When do children want/ tend to transition from child-centered care to adult-centered care?

How do other children react to their friend's medical devices?

Is it ethical to distract children from their fears? Should they be confronting it?

How can we make the paediatric healthcare more welcoming for children?

Has there been any case of incorrect usage that you have personally witnessed?

How do you teach children how to use their medical devices?

How often do children get to interact with other younger patients?

Do children get to personalize their space in paediatric hospitality?

Do children need encouragement and incentives to exercise?

Where and when do children forget about their health habits?

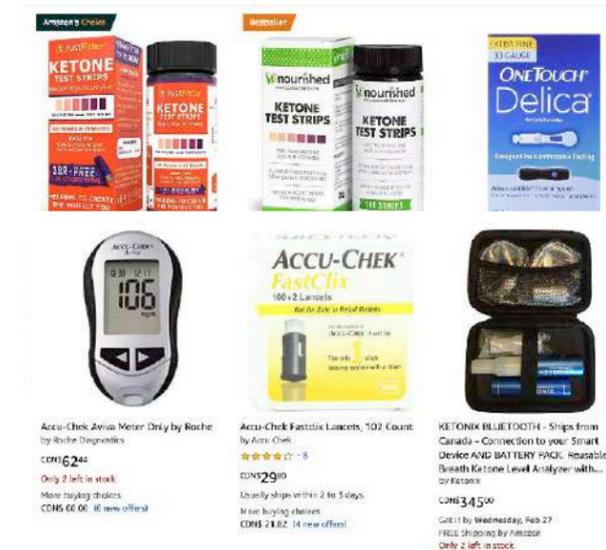


McCue Pharmacy

I decided to visit one of the most popular medical supply store in Richmond. They fill prescriptions for patients who come directly from family clinics on the second level. I was trying to look for glucose monitor kits and they didn't have a wide variety. The options they had were similar to one another. This demonstrates that there are not a lot of options at physical stores.

Amazon

Due to my unsuccessful trips to pharmacy stores, I decided to go online and see the variety of glucose monitor available there. The first 3 items I see were not even the device itself. I thought I searched the wrong phrase. I did not understand why my first options were not the devices themselves. I scrolled further down and found that there were only a few stocked monitors and had little to no reviews.



***Both physical and online stores do not carry glucose monitor kits for children**

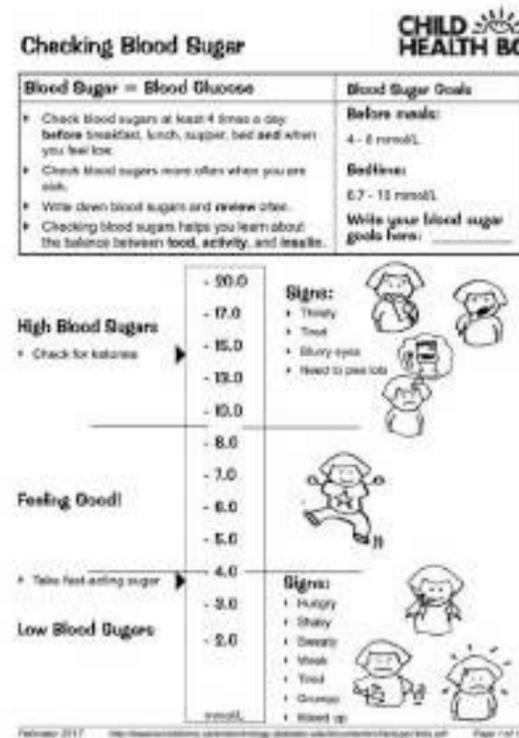
Hospital ER Waiting Room

Over the reading break, I had the (unfortunate) opportunity to visit the waiting room in the ER. Not only is this space small (which makes it stuffy), but there is almost nothing to do there but watch TV and read subtitles. The bulletin

board does not provide any valuable information. There is a lot of space for improvement just in the waiting room itself. I found that many children were in the space, either sick or waiting for a family member. Some of them seem to have found ways to pass the time, like playing on their tablet or phones. I realize that this could be problematic, especially for kids who constantly find themselves in this situation. Considering the aspect of reducing touch in healthcare facilities, I feel that this space could benefit from some minor AR interactions that could be educational and distracting.



A Guide for Families: Diabetes Care for Children and Teens with Type 1 Diabetes



Resources + Information

I looked into some of the resources provided to families with young diabetics and the results that I found challenged my assumptions. While these thick textbooks of information are printed in black and white, they incorporate cartoons and charts that are easy to understand for the young participants. The manual also addresses both the adult and the child, which is exactly what CCC is all about: the involvement of the young patient. I will adopt this feature into my design.

Video Instruction

There is a variety of video instructions for blood sugar testing- but all of them are either, indirect or confusing to follow. There is one in particular that is aimed towards teachers and caregivers, which is one of the clearest ones I found. However, I was unsuccessful looking for one's catered towards young diabetics. There were ones that were created by amateur youtubers, which did not seem entirely trustworthy.





Dentist Appointment

While I was at my dentist for the dreaded yearly check-up, we had a quick chat about how dentist approach young patients. Although he does not practice pediatric dental, he still has techniques with dealing with children.

- Terms: It is important to refer to dental procedures and equipment in a way that are kid friendly (ex. Mr.Shaky is a drill)**
- Distractions: Using visual distractions can be beneficial in this context to steer the patient away from focusing on the pain**
- Positivity: Rewarding is a great way to encourage the kid, and it also gets them to be more comfortable with the dentist**

The downside to pediatric dental is that they're more expensive-they also put a lot of the young patients to sleep so that the patient will not be moving around, crying, etc. But this process can be dangerous.

When I asked him how pediatric patients transition to adult-care, he said that once they turn 18, they expect them to no longer be afraid of the dentist.

Competitive Comparative Analysis: Glucose Monitor

NAME	Contour Next EZ	Accu-Chek Aviva	ReliON Confirm	OneTouch Verio	FreeStyle Libre	OneTouch Ultra 2
PRODUCT IMAGE						
FEATURES	<p>5 seconds test results</p> <p>Bluetooth connection</p> <p>Quick and easy setup</p>	<p>Bluetooth connection</p> <p>Lancing device within monitor</p> <p>No coding required</p>	<p>Tiny 0.3µL sample size</p> <p>Downloadable readings</p> <p>No coding required</p>	<p>ColorSure™ technology shows when numbers are in or out of range</p> <p>No need to scroll or push buttons</p>	<p>Libre Sensor: No pricking required</p> <p>Water-resistant</p> <p>Graphs results</p> <p>Links to app</p>	<p>Marks before or after meal</p> <p>Large screen w/ backlight</p> <p>Comes w/recipes, tips in the kit</p>
ANALOG DIGITAL	ANALOG	DIGITAL	ANALOG	DIGITAL	DIGITAL	ANALOG
PRICE	\$30	\$30	\$13.50	\$18	\$227 for Starter Kit	\$22.50

Child-Centered Care

is focused on putting the child and their interest in the middle of the health practice and involves the inclusion and participation of the young individual as part of their own health.

Collaborators



Eliza Darby
Professional Child Care



Tiffany Chan
Child Care Worker



Sherman Lam
Social Skills Worker



Karol Patriarca
Child Care Leader



Natalie Wong
Elementary School Teacher



Magdalena Fung
Child Psychologist

Opportunities



Child-Size Devices



Distractions



Child-Friendly Facilities



Health Education

Precedences



Pixel Paper Installation
Pixel Art is an easy way to be creative. From patterns, to pictures these square shapes can be very engaging to play with for everyone.



Glucose Monitor Kit
Typically these kits are basic and poorly made. For something that is used everyday, this item can be more functional and elegant.

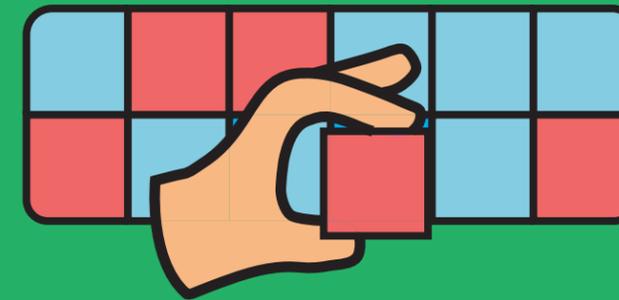
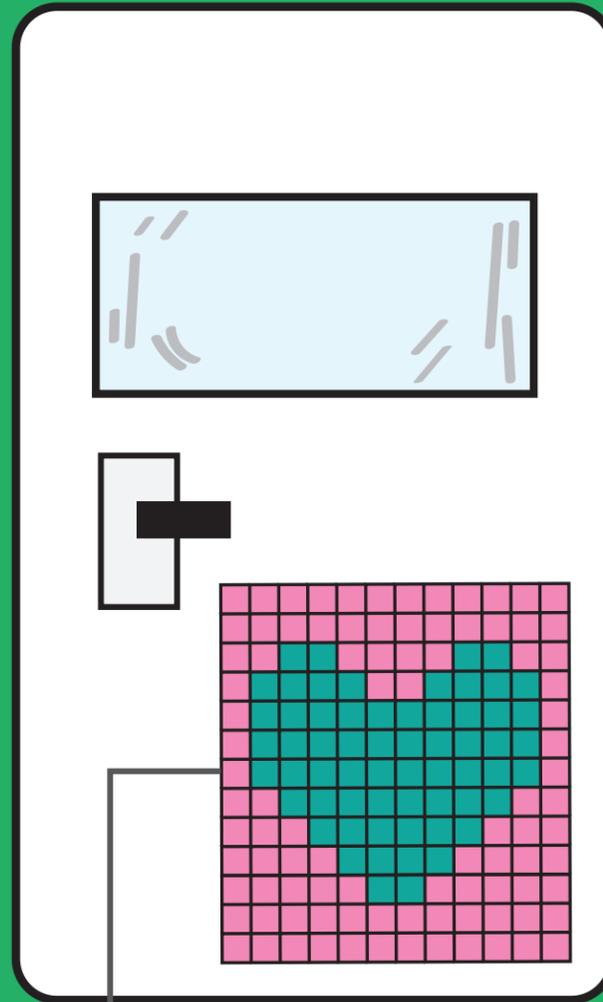
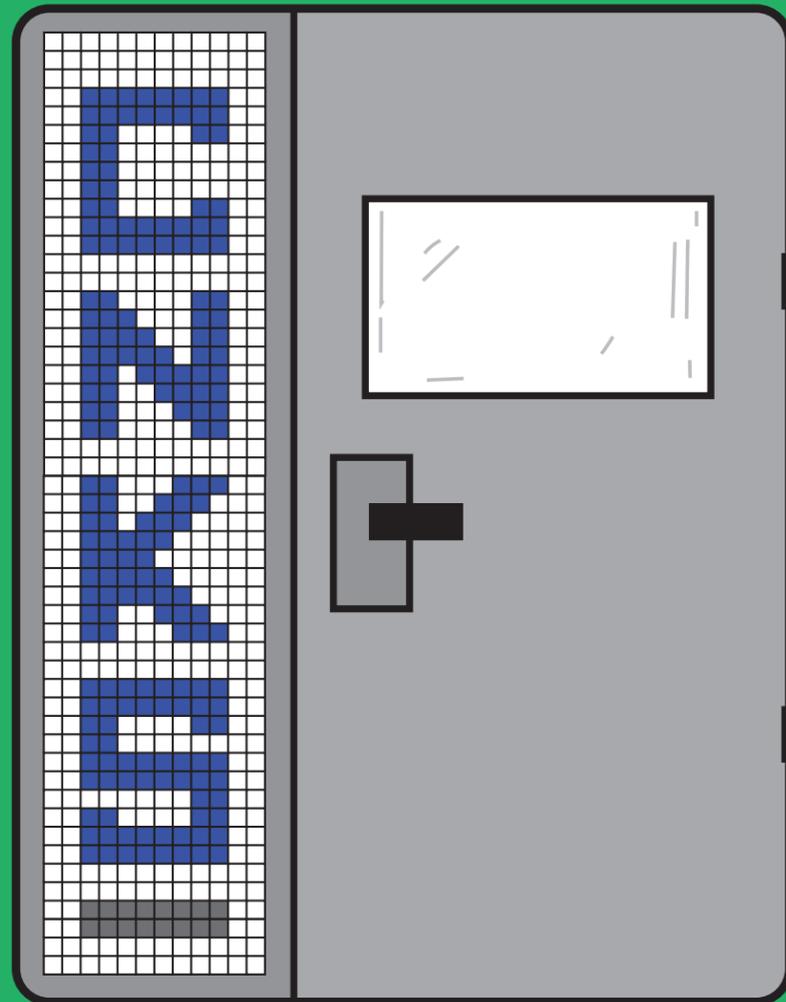
Values



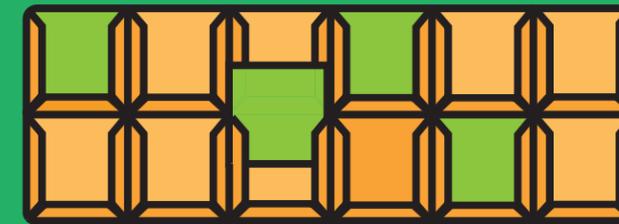
AR Fitting Room
This experience are very amusing and practical. While there is a lot of room for improvement, this concept is surely innovative.

Personalizable Hospital Room Doors

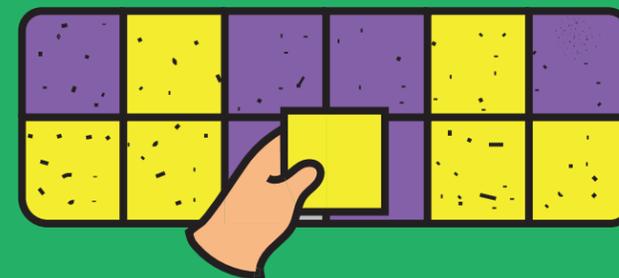
Provide an opportunity to be creative in a foreign space



Clip-on Method
Press on coloured plastic squares



Slip-in Method
Slip in coloured paper into slots



Velcro Method
Stick and pull of coloured velcro

- An interactive way for young patients to customize their short/long term space
- Makes them feel more @ home
- Allows indirect interaction with health practitioners, other patients, etc.

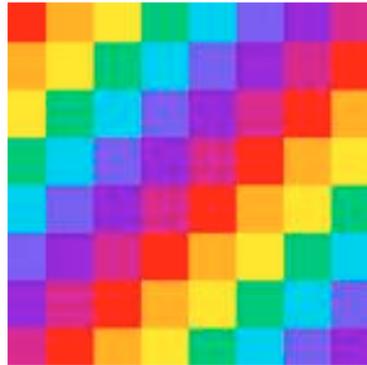
Users can pick from a variation of colours and shades

Components + Values



Questions

- Would this be disruptive to the hospital operation?
- Who will be responsible for the removal of the squares?



Personalizeable Hospital Room Doors

Provide an opportunity to be creative
in a foreign space

Must Have

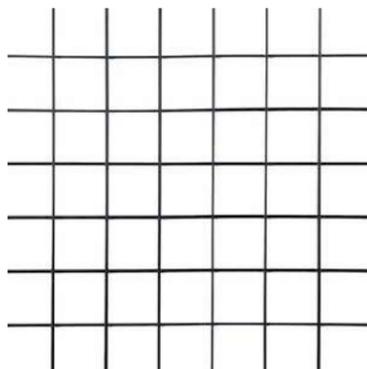
Creativity
Family Engagement
Play
Sanitary
Joy

Variety
Guidance
Encouragement



Nice to Have

Events
Community Engagement
More designs + patterns



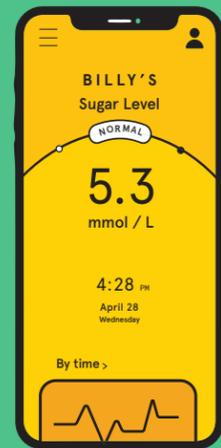
rainbow, velcro, calm, coloured paper, grid, family engagement

Bumblebee Glucose Monitor Kit

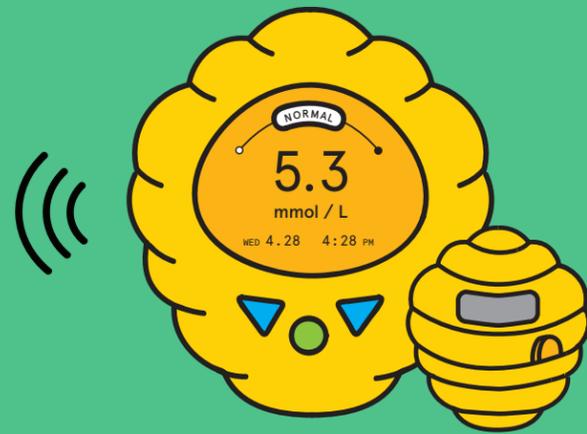
Motivate young diabetic children to participate in their blood sugar glucose testing

- Encourages participation during testings through story-telling
- Updates and notifies the parents of the most recent results
- Employs stickers and games as incentives and rewards
- Modifications that gradually transition into adult-centered care

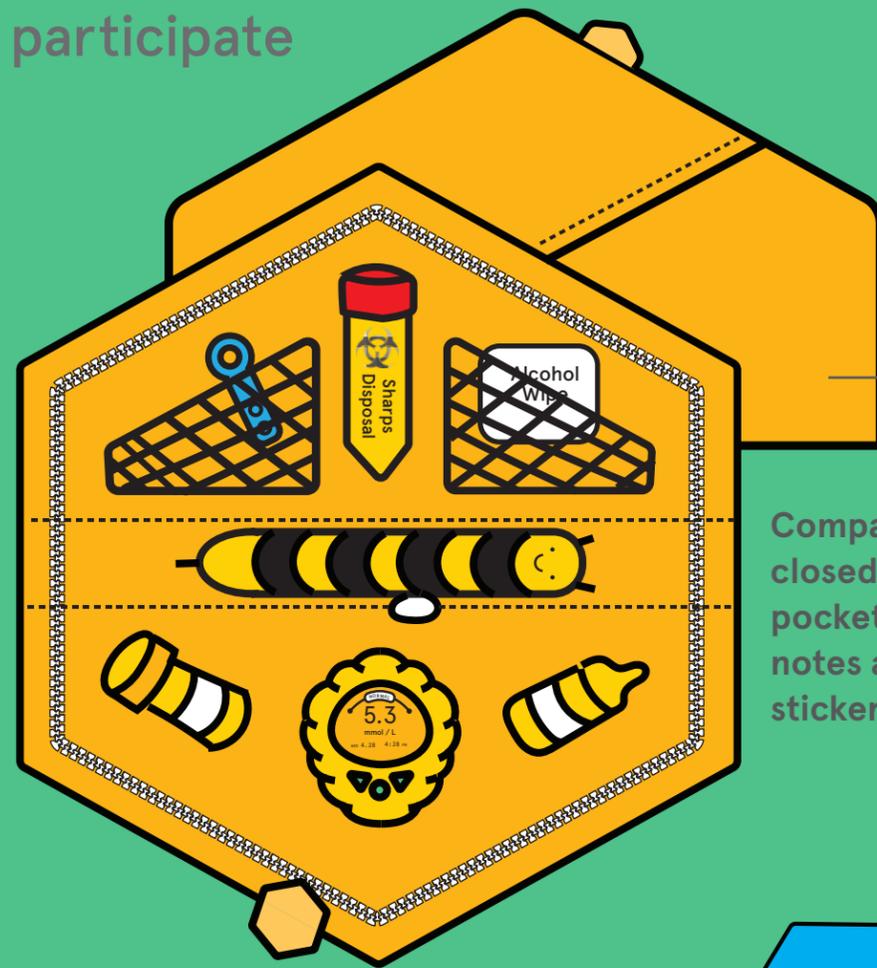
The Glucose Monitor



The results are sent directly to the parent's phone through an app. The parent can go through the history



The interface is simple and engaging to read. The silicone beehive cover is removable



Compact when closed, with a pocket for notes and sticker booklet

The Equipped Kit

The kit is equipped with general glucose monitor kit necessities such as:

- Glucose Monitor
- Testing Strips
- Control Solution
- Lancing Device
- Lancets
- Lancets
- Sharps Disposal
- Alcohol Wipes

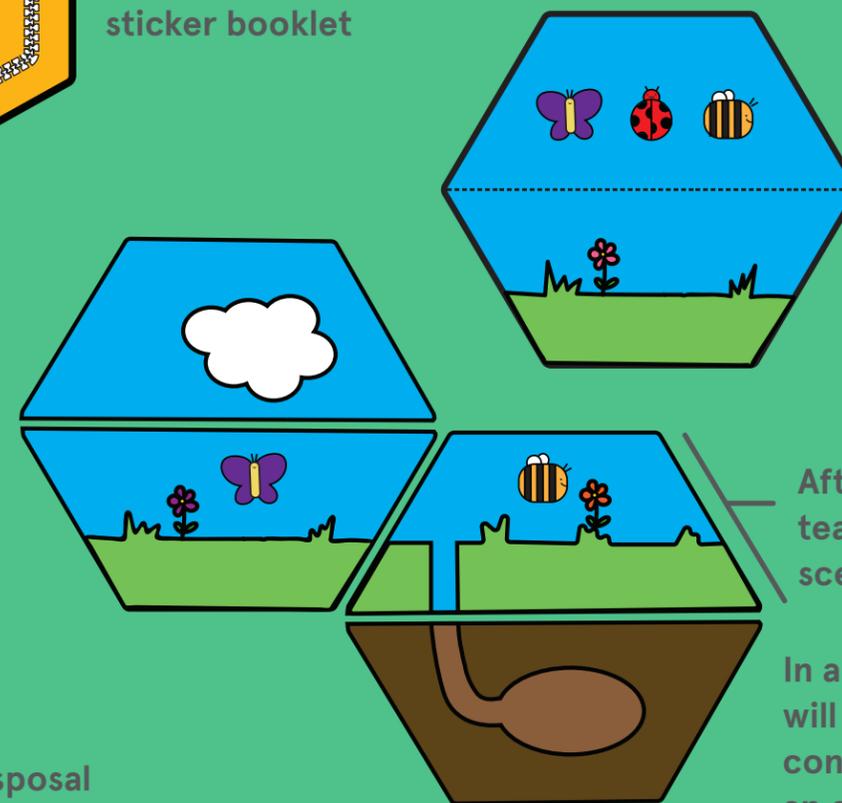
Components + Values



The Sticker Incentive

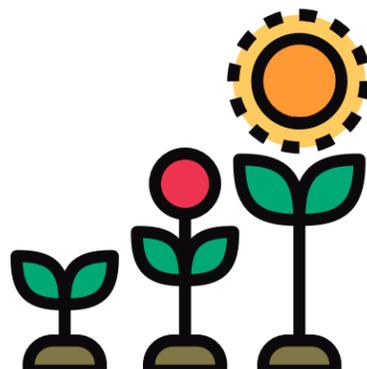
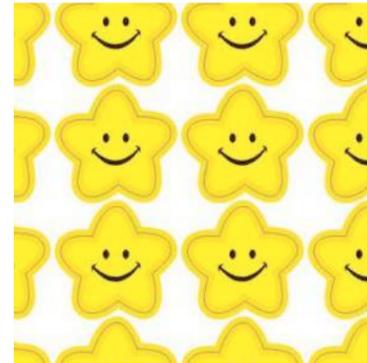
Everyday, the user receives one sticker booklet

Every check during the day, the user takes one bug and places it in their natural habitat



After a day they can tear the completed scene off

In a couple days, the user will find that the scene connect together to make an ecosystem



textured yellow, honeycomb, pride, reward, growth, rounded corners

Bumblebee Glucose Monitor Kit

Motivate young children with diabetes to participate in their blood sugar glucose testing

Must Have

Story

Engagement

Theme

Sanitary

Incentive

Consistency

Legibility

Clean Interface

Clear Explanation

Transitional Component

Nice to Have

Educational Resources

Community/School Engagement

Tips and Recipes

Human Body Systems Augmented Reality Exploration

A fun and interactive way to learn about the different body systems

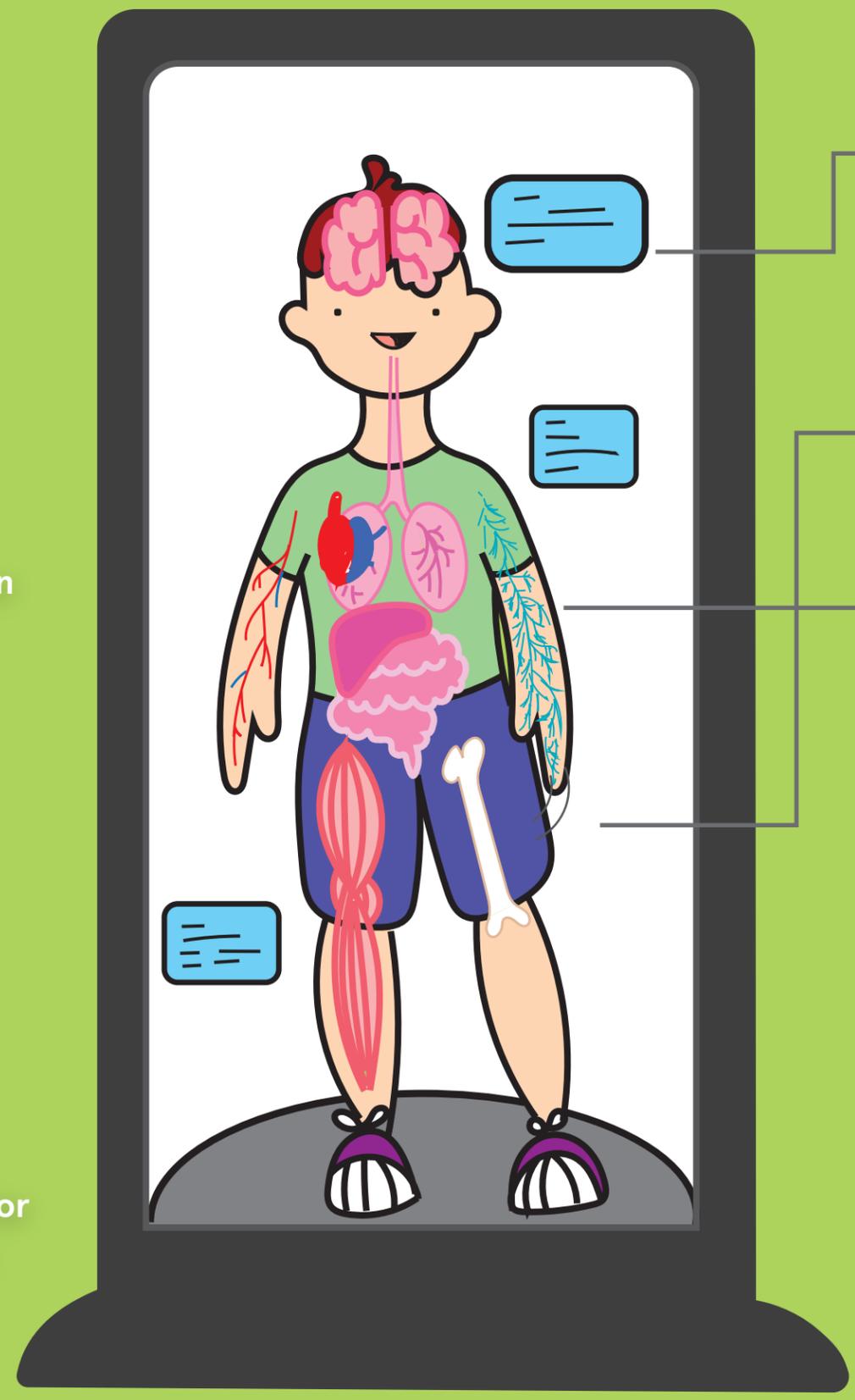
- Using AR to generate interest + participation
- An intriguing and personal way to understand the location of the body system
- An activity that can be explored independently or as a group

Components + Value



Questions

Could this be an uncomfortable interaction for children? How can we adjust this experience to cater to a younger audience?

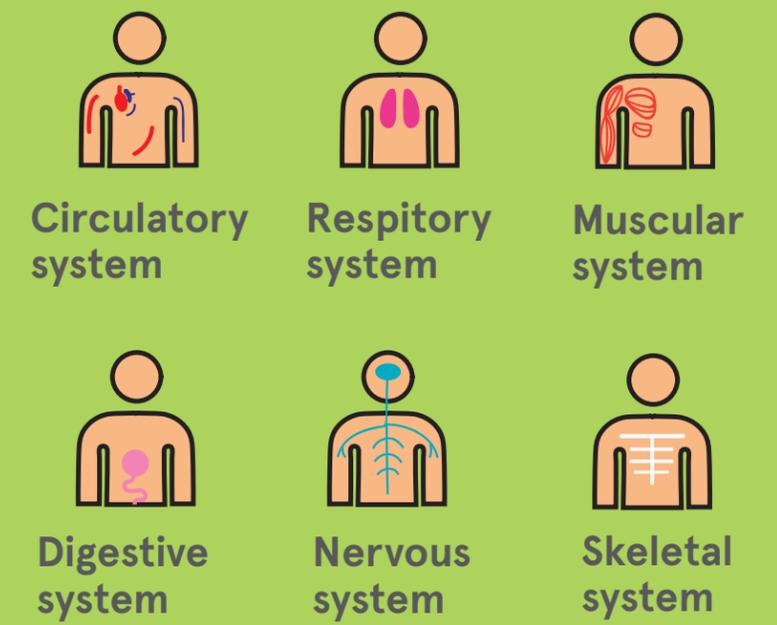


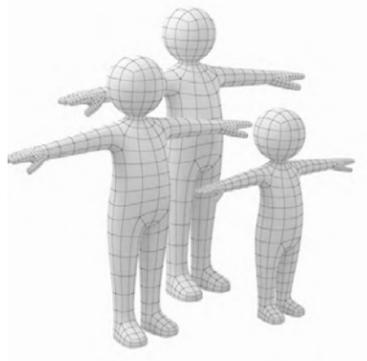
Facts and names displayed near the corresponding body part

The AR is displayed on top of the mirror reflection

Features can be triggered through specific movements

The following systems can be independently explored through the press of a button, a timed rotation or a physical signal (ex .wave on an AR "button"):





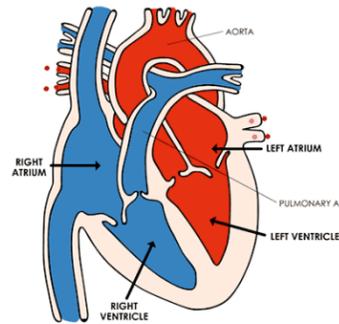
Human Body Systems Augmented Reality Exploration

A fun and interactive way to learn about the different body systems

Must Have

Learning
Excitement
Play
Interaction
Movement

Rotation
Guidance



Nice to Have

Community Engagement
Video Media (Further Explanation)
Take-home infographics

full-body experience, mirror, excitement, name, flesh, movement



Concept Presentation with 3D Sketches

I tried to lay out both the posters and the sketches out in a way that would allow viewers to interact with the 3D items and be able to relate it to the concepts depicted on the posters. I was glad to see people create emoticons and shapes with the pixel art velcro. I wish we invited students from the industrial class- I wanted to get their perspective and see if anyone could provide any prototyping advice.

Feedback

All the insights I received during the crit was very helpful.

Some aspects to keep in mind include:

1. Having an even more specific age range
 - Thinking about developed/developing traits
 2. Designing for the parent
 - Thinking of providing them with different instructions
- Considering the on-boarding process + how to form habit
 -Developing a storyline for the steps

Child-Centered Care FEEDBACK FORM

Please take a few minutes to provide some of your insights.

Which concept did you find the most intriguing?

- Concept 1: Personalizable Hospital Room Doors**
- Concept 2: Bumblebee Glucose Monitor Kit**
- Concept 3: Human Body Systems Augmented Reality Exploration**

Why did you find interesting?

How can the concepts + sketches be more understandable?

Thank you.

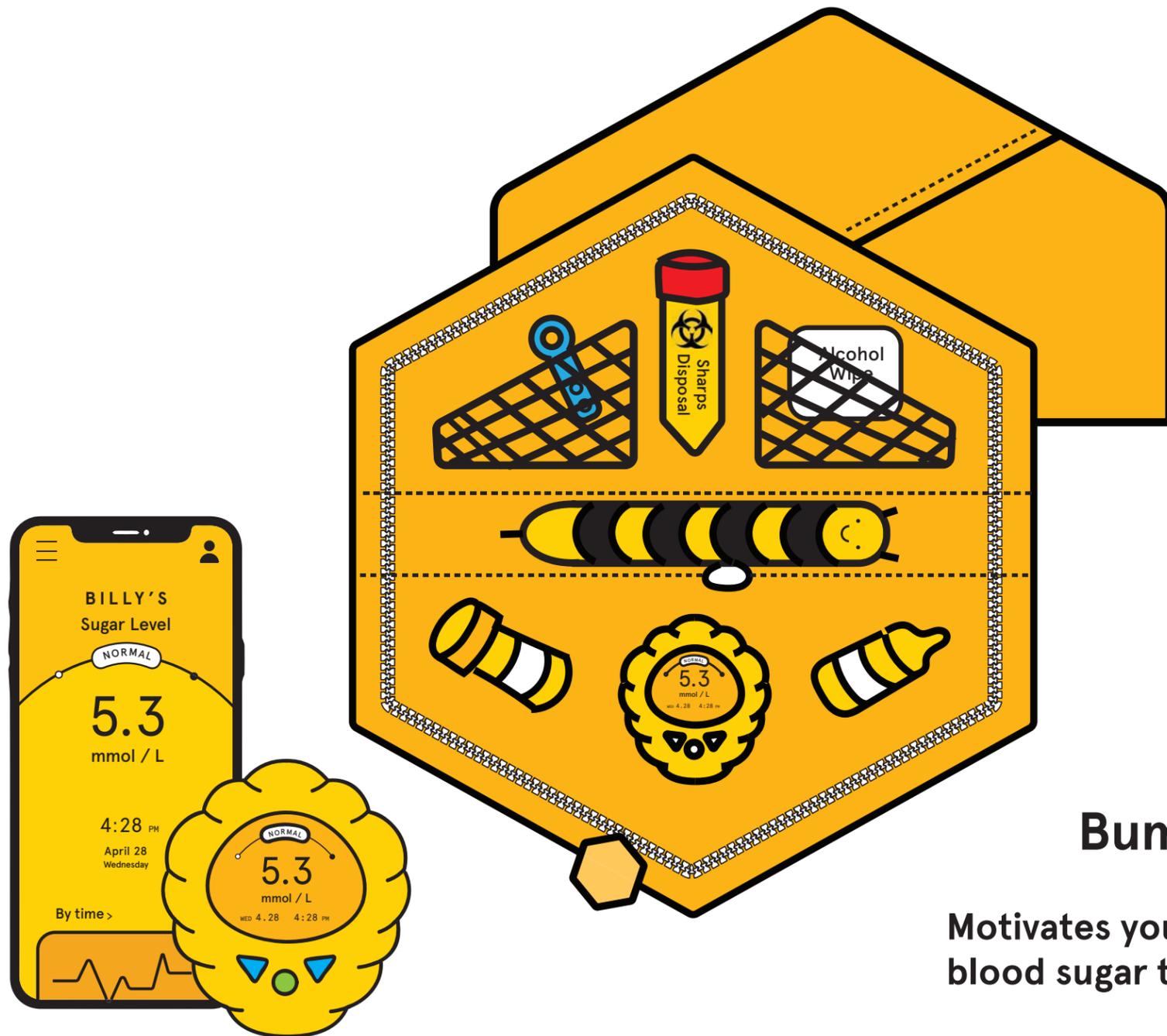
If you have any more suggestions or inquiries please contact Michelle Chan on Slack.

Chieko Asakawa: How new technology helps blind people explore the world

- People who are visually impaired can still do many things such as sports (swimming, scuba diving, rock climbing), however, these activities still require help from others
- Had to DIY her on books in braille for a long time
- **Chieko Asakawa**: designed a digital braille editor, braille dictionary, developed a way to render web to voice
- When the internet came out ,digital world accessible to the blind

Accessibility ignites innovation

- But also text to voice technology help everyone with their everyday tasks- listen to email as we drive, listen to recipe
- App, that allows her to perceive emotions, recognize people and objects, navigate through her environment
- Recognizing emotions through facial expression : important
- This is called **cognitive assistance**: augment missing, weakened senses
- In its early stage of development
- Requires collaboration: open community to accelerate research activities



Bumblebee Glucose Monitor Kit

Motivates young diabetic children to participate in their own blood sugar testing by employing incentives and story-telling

Provides parents with an opportunity to monitor test results, analyze statistics and discuss in community forums.

Prototype

A paper prototype of the
bumble-bee glucose monitor kit



User Insights

Bumblebee Glucose Monitor Kit

Children with diabetes
between the age of 6-7

and

Children with diabetes
between the age of 8-9

Traits of 6-7 Years Olds

- Understands concept of numbers
- Knows daytime and nighttime
- Knows right and left hands
- Can tell time
- Can understand commands with three separate instructions
- Can explain objects and their use
- Can repeat three numbers backwards
- Can read age-appropriate books and/or materials
- Likes to copy adults
- Likes to play alone, but friends are becoming important

Traits of 8-9 Years Olds

- Knows the date
- Can tell time
- Reads more and enjoys reading
- Can name months and days of week, in order
- Can explain objects and their use
- Enjoys collecting objects
- Likes competition and games
- Modest about body
- Can read age-appropriate books and/or materials

Scenario (Child)

You're new to checking your glucose levels. You've gone through this a once at the doctor's , a couple times with mom and dad. This is the first time you're doing this yourself.

Here's the instruction provided to you:

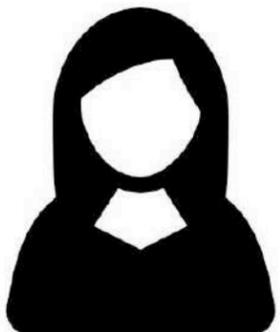
- 1. Wipe your hands + fingers with alcohol wipes**
- 2. Put a test strip into the honeycomb meter**
- 3. Take the bee lancing device and put a lancet in**
- 4. Prick your fingers with the bee's stings**
- 5. Softly push around your finger until you see a bit of blood**
- 6. Touch the test strip with your blood**
- 7. What is the number you see on the glucose monitor? Find that number on this chart to see how your blood sugar levels are doing!**
- 8. Good work! Grab a bug sticker and release it back into the wild!**

Design Target

Bumblebee Glucose Monitor Kit

Parent / Caregiver
of young child with
diabetes

Candace Lee



"I just want my child to be safe."

Age: 32
Work: Free-lance Artist
Family: Married with 2 children
Location: Richmond, BC
Character: Innocent

Careful
Empathetic
Patient
Honest

Goals

- Make sure her family practices a healthy lifestyle
- Learn more about diabetes in children
- Explore + teach her child about their new condition
- Reinforce + affirm her child's glucose monitoring

Frustrations

- Worried about endangering her child if she does not know what she's doing herself
- Seeing her child +struggle with the new lifestyle
- Not knowing where to look for answers + resources

Motivation

Incentive

Fear

Growth

Power

Social

Personality

Introvert	Extrovert
	
Thinking	Feeling
	
Sensing	Intuition
	
Judging	Perceiving
	

Bio

Candace tries to make healthy living a big part of her family. She spends most of her day at home with her young children but plans to go back to work within a couple of months.

She found out recently that her older son has diabetes after coming early from school because of a dizzy head. She's trying to be supportive and encouraging but is finding it hard to adjust to all the changes - her other child does not enjoy the strict diet, her older son is trying to learn all the ways of living with diabetes, her partner seems to be just as confused as her. Candace is looking for advice and answers on online forum platforms, but she struggles to find direct and trustworthy answers.

Brands & Influencers

Influential Touchpoints

Paediatrician

811 Nurse

Diabetes Manual

Forums

Scenario (Parent/ Caretaker)

Your child was recently diagnosed with Type 2 diabetes. They have to check their blood sugar level a couple times every day. These are the steps they need to take to guide your child through the process:

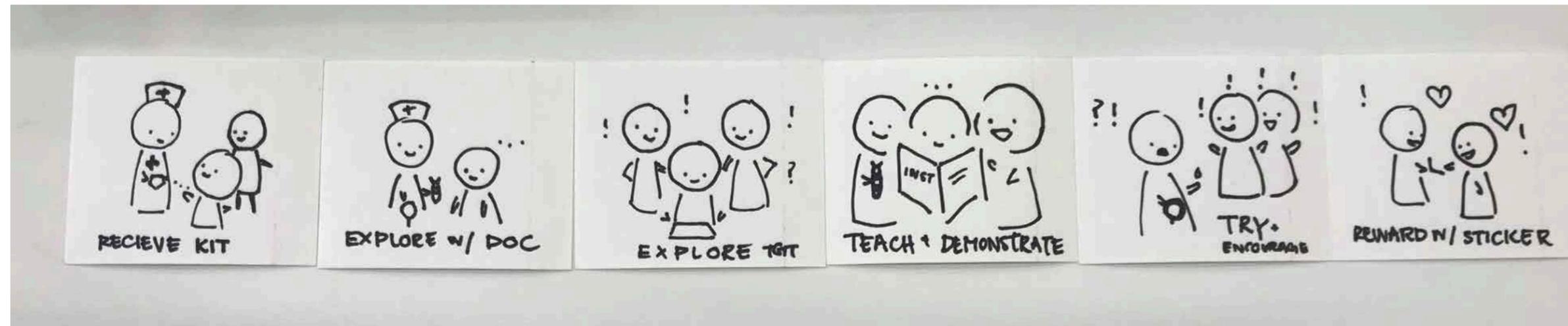
- 1. Wipe their hands + fingers with alcohol wipes**
- 2. Insert a test strip into the honeycomb meter**
- 3. Take the bee lancing device and put a lancet in**
- 4. Prick their fingers with the bee's stings**
- 5. Softly push around your finger until there's blood**
- 6. Touch the test strip with the blood**
- 7. With the number they see on the monitor, they should find the number on the provided chart to analyze whether their blood sugar level is high or low**

If they're struggling, demonstrate and show them the step. Try not to do the step for them. Remember to provide them with a sticker incentive:

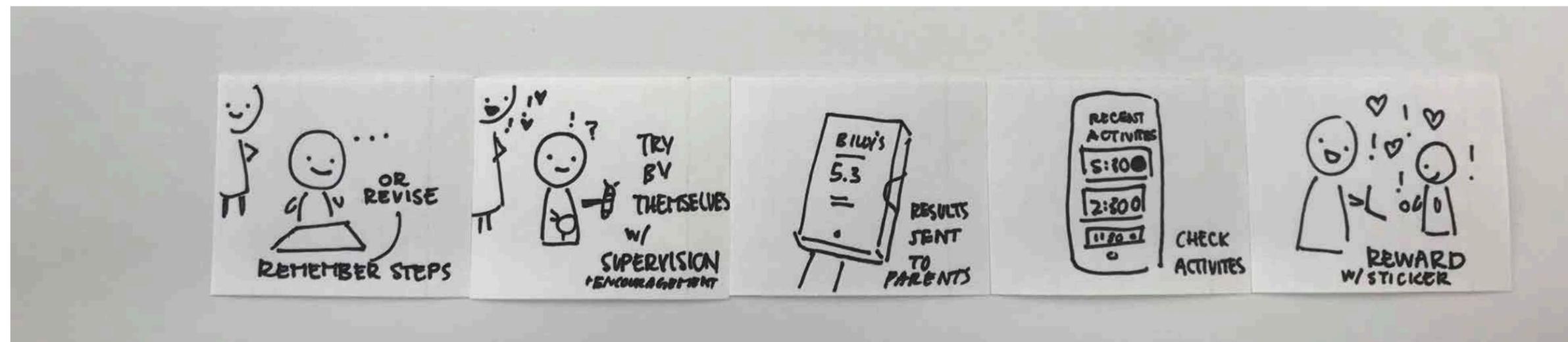
Take the sticker booklet, allow them to grab one bug sticker, and ask them to place it into the wild. By the end of the day, one of the scenes should be filled up—they can now tear it off and keep it as a collection. Remember to refill their kit with a new one for the next day. By the end of a week, place all the scenes together, and they should find a full ecosystem.

Storyboard

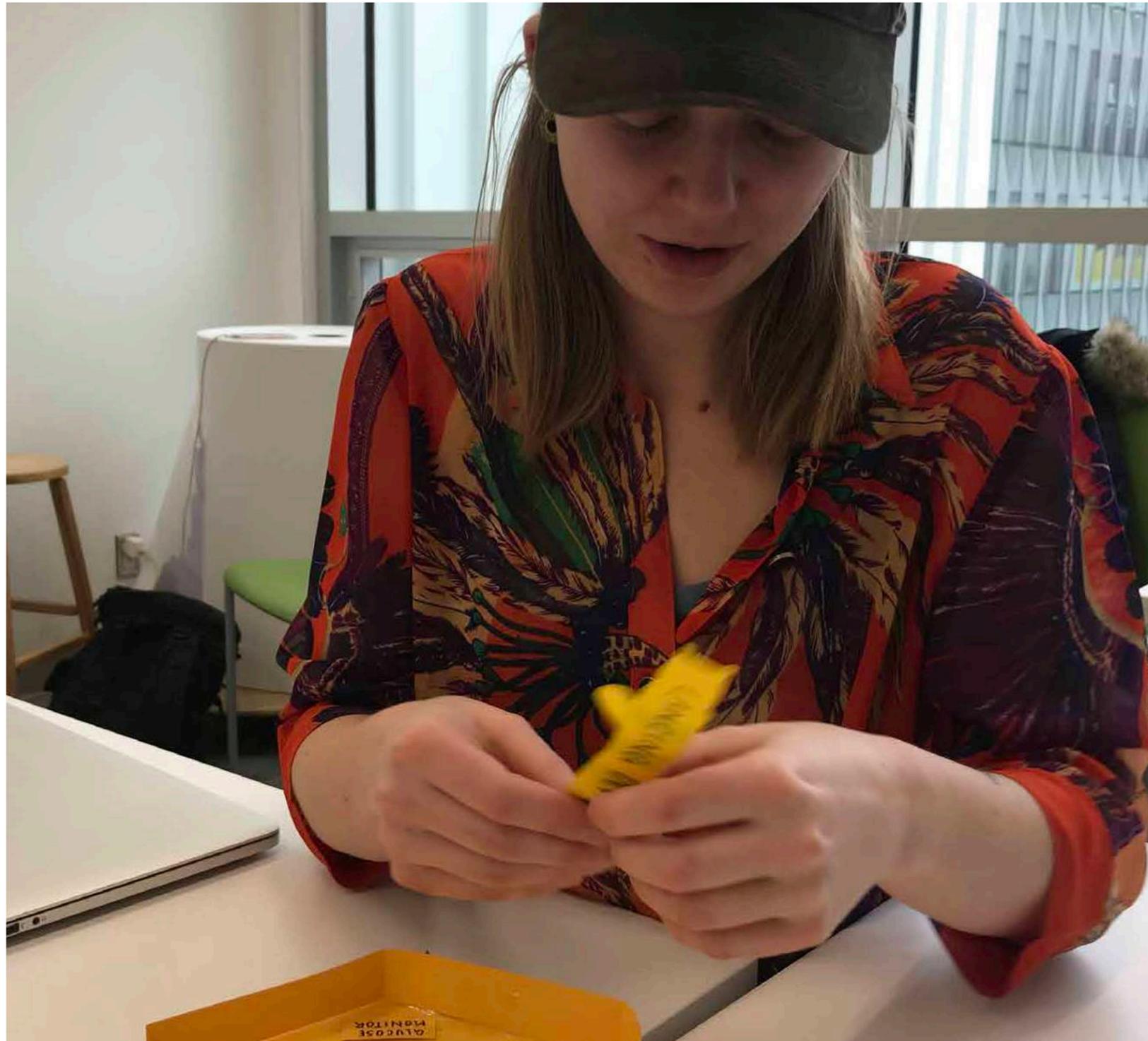
On-boarding Process



Habit-building Process



**Every step requires another independent extensive storyboard*



Prototype User-Testing: Paper Kit

The goal is to observe the interaction between the written instructions and the kit.

Insights + Observation

Provide image for reference

Diagrams + Pictures as instructions

Teaching family + friends of the process

Providing family and friends separate instructions

Color-coding, numbering the steps

Implementing colors + indicator

Offer different colours, styles

Offer different colors + styles (customization)

Label + medical history readily available

Provide compartment for medical information

Bug band-aids: Fun + fits the theme

A fun + relevant detail as part of incentive

Interface: Brief Exploration

Exploring some potential interface features, displays, etc.



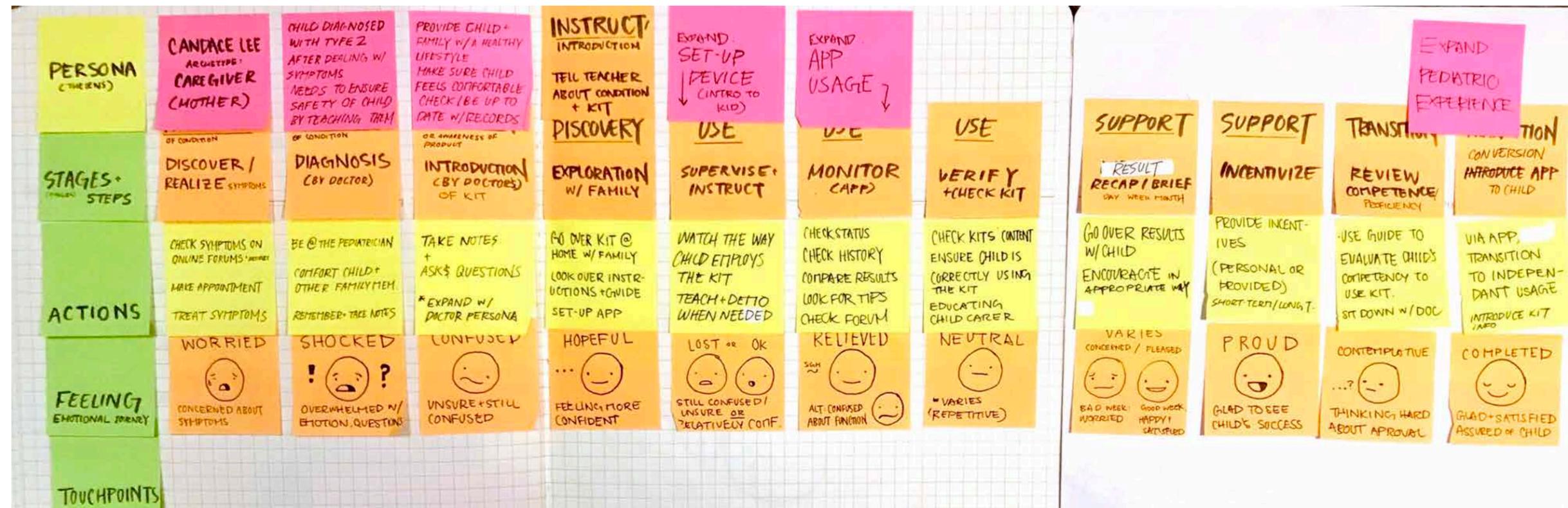
Discussing Priorities, Value of Research + Techniques

Stevie Nguyen

UX Designer, Facilitator, Educator

Following the presentation of our 3 concepts, Stevie and I discussed about ways I could approach the bumblebee glucose monitor kit. Here are some of the key points and tips I found very useful.

1. Map out the goals: Find my goals + needs
2. Avoid bars, try using Reddit, Quora
3. Create UI standards, visual design guidelines
4. Persona: made with real people, use real photo
5. Justify needs. Ask: why do we need this?
6. Think about cognitive overhead: reduce steps
7. UI: Consider cognitive overhead
8. Look into: Figma
9. Books: This is Service Design Thinking, Doing



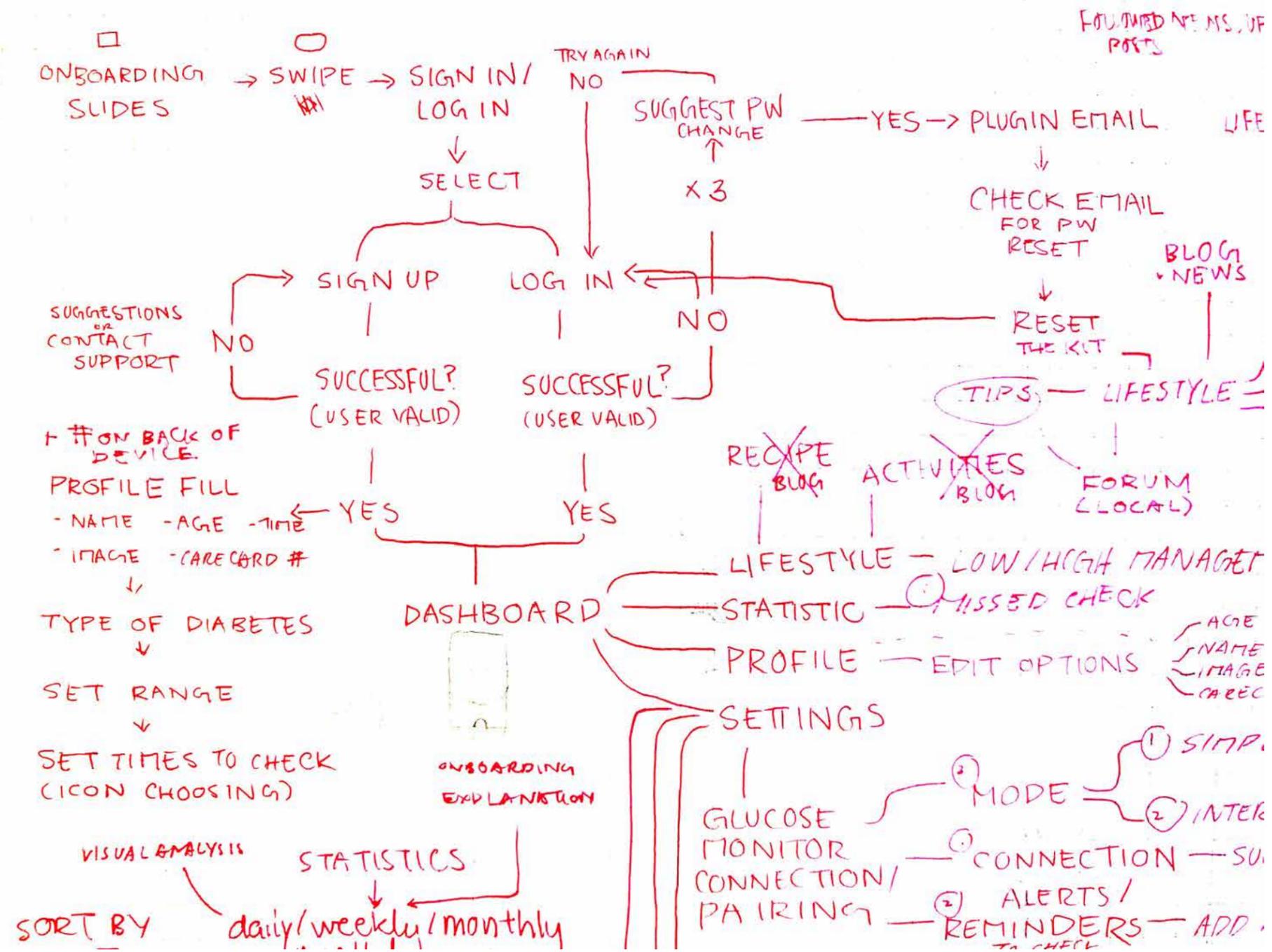
User Journey - Caretaker

In progress

This user journey maps out the parent's journey throughout the process, from on-boarding, continual and off-boarding.

Ideally, I would complete a user journey map for the child as well, by the end of the semester.

Making one journey map for every major stakeholder would be extremely helpful.

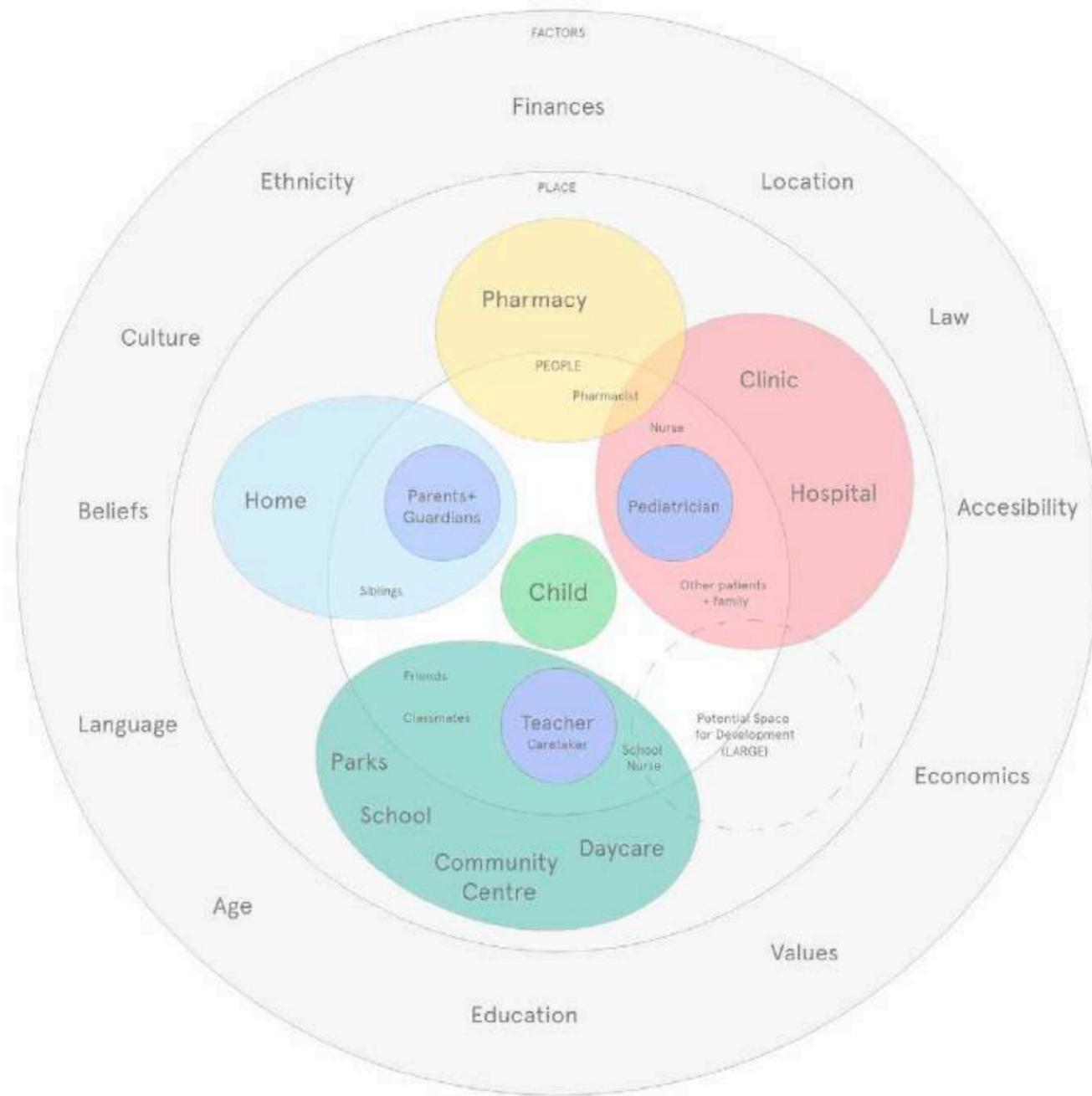


User Flow: Application

In progress

The user flow maps out the functions and elements of the application. Following its creation, a navigation bar has been added to the concept.

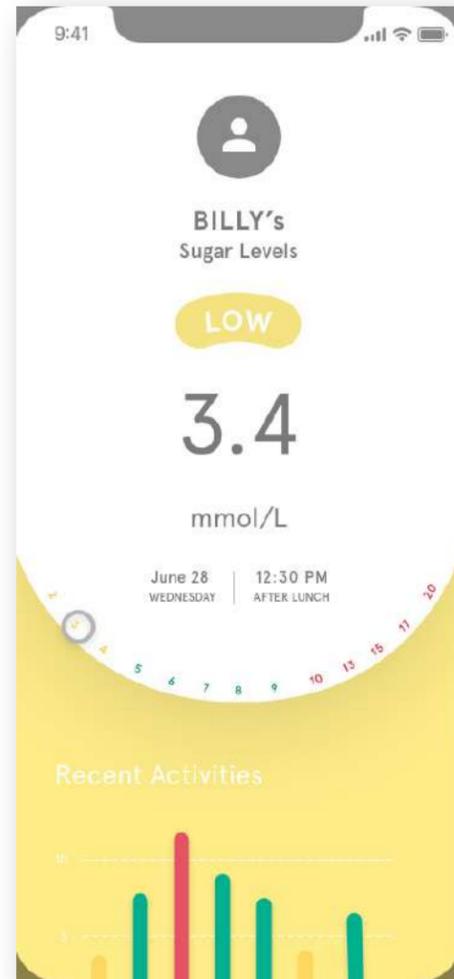
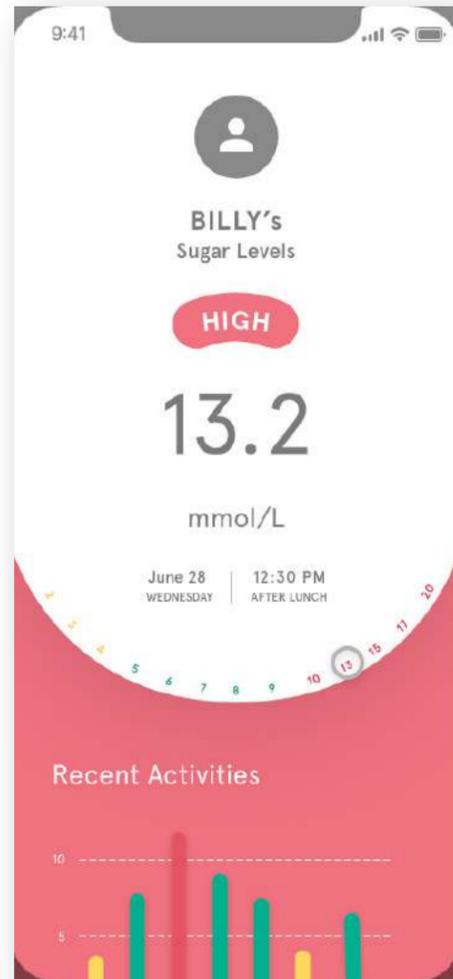
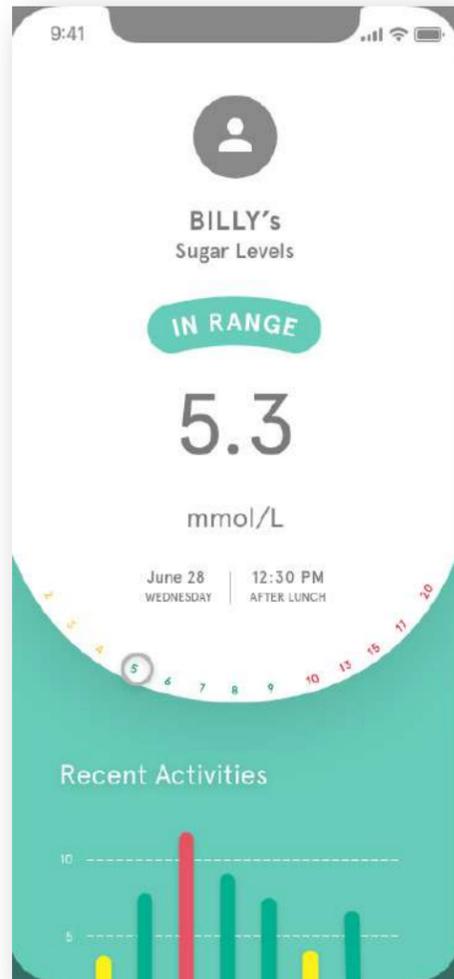
One big part of the user flow is the on-boarding process; this will take further consideration, perhaps later on in the process of this application.



Stakeholder Map

In progress

Illustrates the people, space and factors that affects a child's wellbeing. This map shows the users and elements that could potentially have an effect on this project.



Dashboard UI

Exploration

To gain a solid sense of what I was trying to achieve in my mobile interface for the glucose monitor, I decided to create some dashboard and play with the color. Although this step does not follow the typical design protocol (as I have yet to create a whole user flow), I find that this step allowed me to gain a better sense of the style I am trying to achieve.

Dashboard UI 2.0

Exploration

Some insights from an update presentation suggested that the UI was very colorful, and that it might not be very suitable for a medical application. With this in mind, I decided to keep everything white. I tried creating another version with a tinted shadow as well.

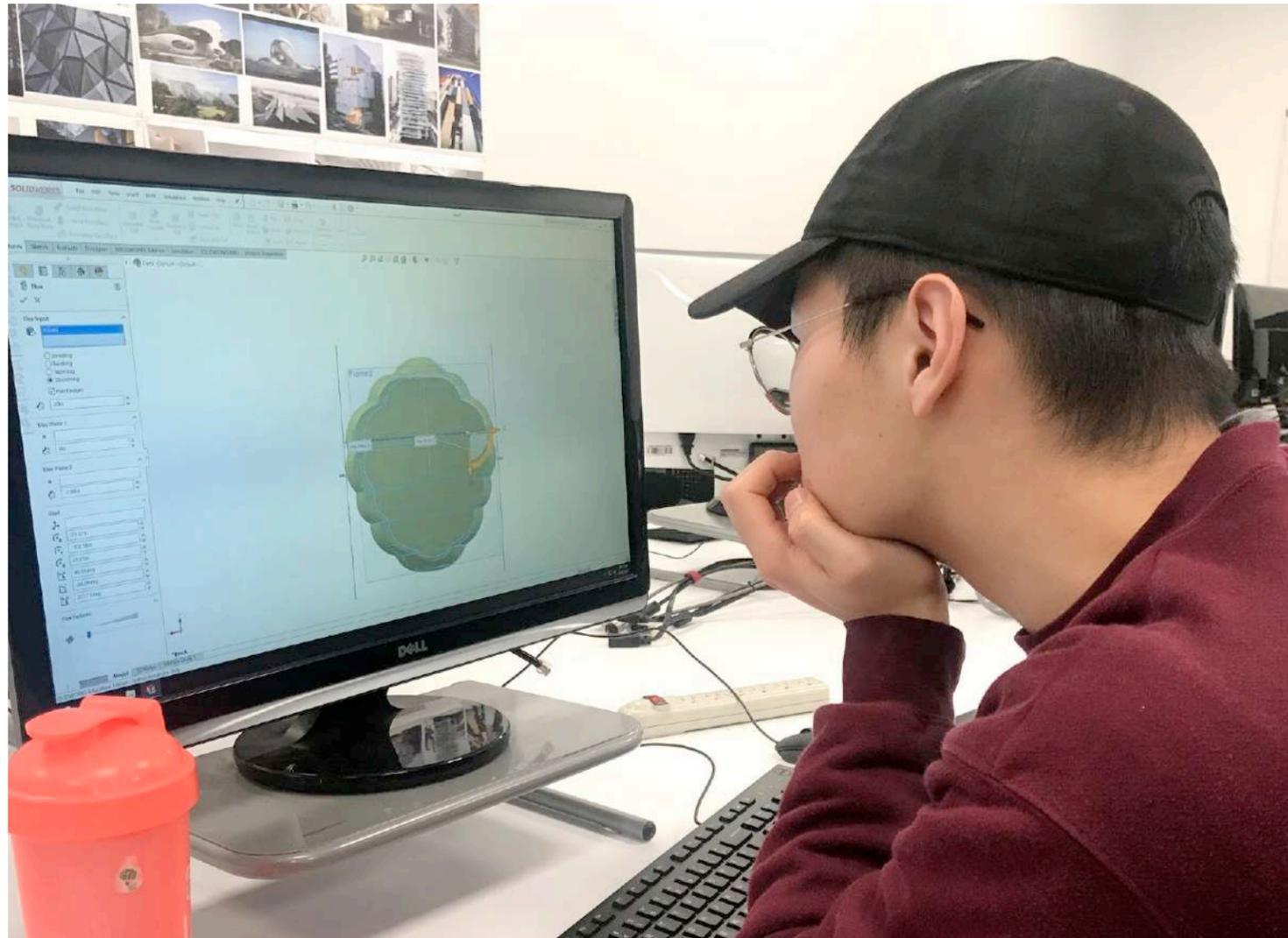




UI Dimensions

After creating the dashboard mockup on XD, I had to test out how legible and functional the UI was. I printed out 3 size accurate iPhones and placed the UI within the cutout. Currently, I'm trying to make a 3D version of the phones for the users to hold.

<https://ios.gadgethacks.com/how-to/print-these-iphone-xr-xs-xs-max-cutouts-see-which-size-is-right-for-you-0187351/>



3D Rendering of the Beehive Glucose Monitor

Matthew Chen

Industrial Designer from INDD 310

Using Solidworks, Matthew imported a shape outline of the glucose monitor from Illustrator. He then rotated the shape and made adjustments to render the shape as ergonomic as possible. Matthew also tried a variation of colours and background. After the device was complete in Solidworks we then decided to 3D print it.



Beehive Glucose Monitor

Various views and angles of the device prototype

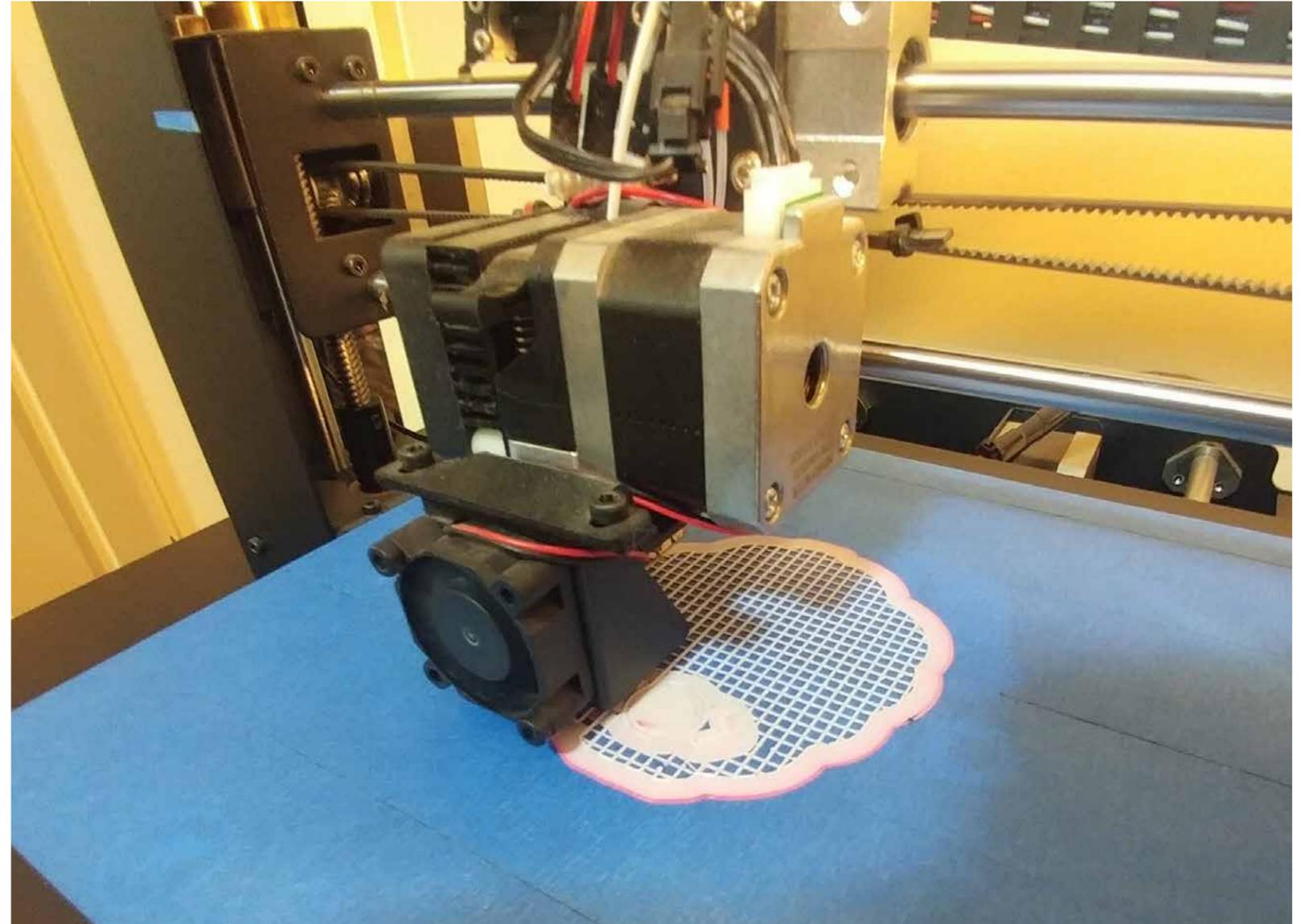


3D Rendering of the Beehive Glucose Monitor

Ilya Koveshnikov

Production Technician

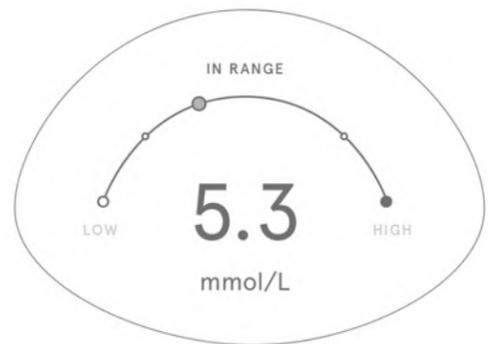
After Matthew finalized the glucose monitor on Solidworks, we sent the file over to Ilya, a technician at TRIUMF, to get it 3D printed. It took 11 hours to complete. The grid printed on the device functions as a support system. There were buttons protruding out of the device- the grid helped support that. It would have to be removed later on.





Unpolished device

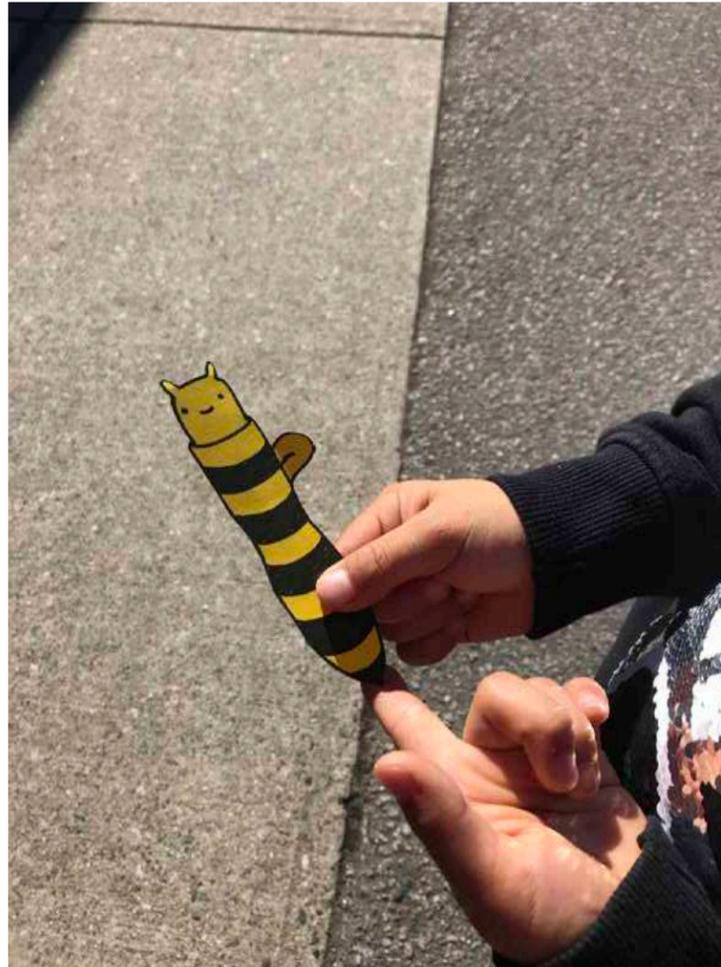
The support system has been filed down, but it has yet to be polished, painted. The UI will be mounted following the high fidelity mockup.



Monitor UI

Exploration

Different iterations of the glucose monitor were created for testing. The UI elements are simple and easy to understand. It was important for me to include an intermediate UI for the child to grow into when they decide to transition into adult-centered care.



Device: Contextualized

To give the device some context, I asked Lucas, 7, to be model the devices.

This allows us to see if the size of the product fits appropriately.

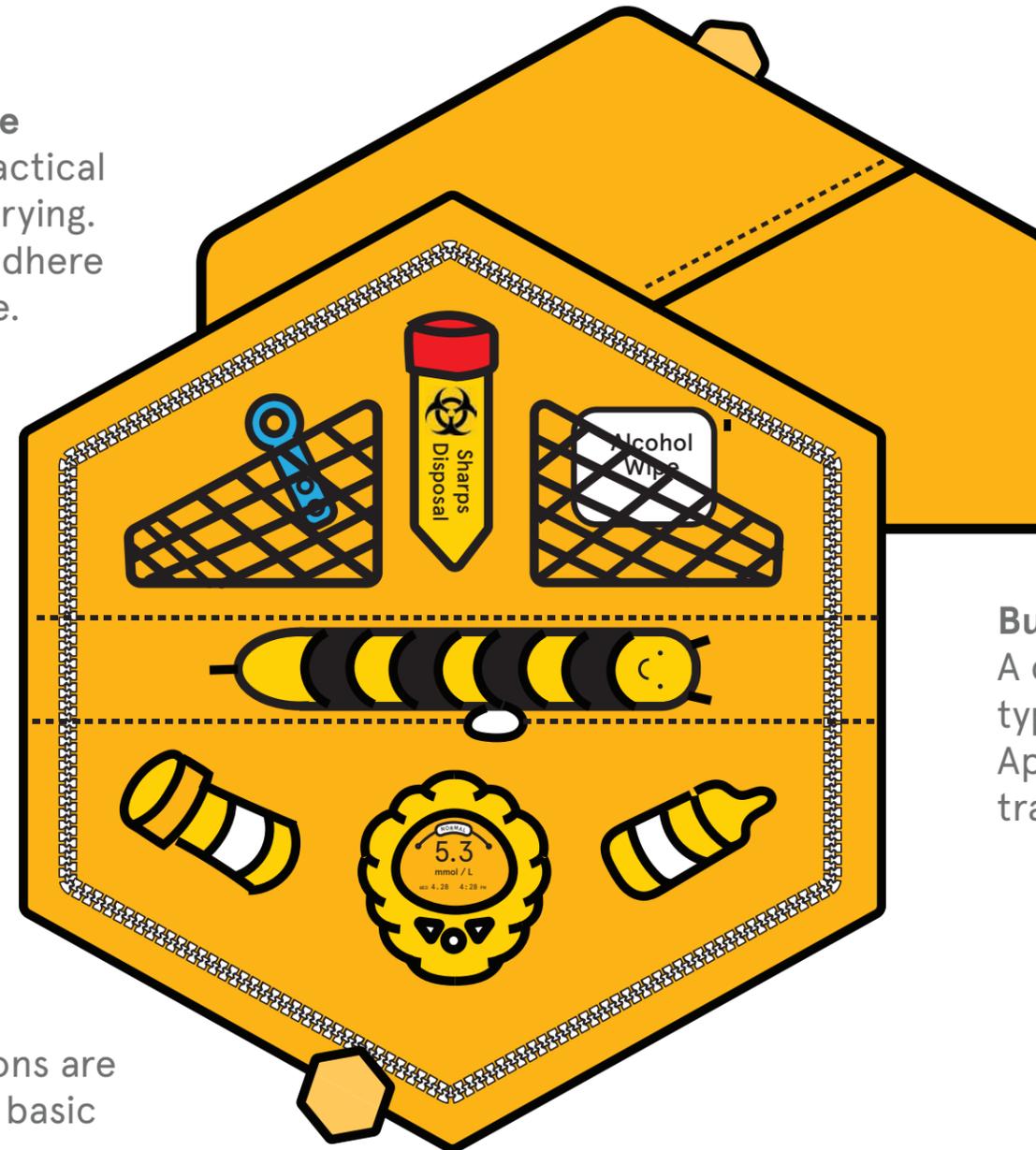


Device: Contextualized

Glucose Monitor Kit

Motivates children to participate in their glucose testing by employing incentives, story-telling and positive reinforcement.

HoneyComb Case
Compact and practical case for easy carrying. Subtle features adhere to the bee theme.



BumbleBee Lancing Device
A delightful twist on the typical lancing device. Approachable design and transparent functionality.

BeeHive Monitor
Ergonomic form for smaller hands. Buttons are straightforward and basic for clear navigation.

Certain elements features removable components which will help facilitate a candid transition to adult-centered care.

Digital Elements

Clear UI and resourceful features simplifies the glucose monitoring process while ensuring the child's wellbeing. The digital aspects helps facilitate habit-building, positive reinforcement and lifestyle enrichment for everyone involved in the child's life.

BeeHive Monitor

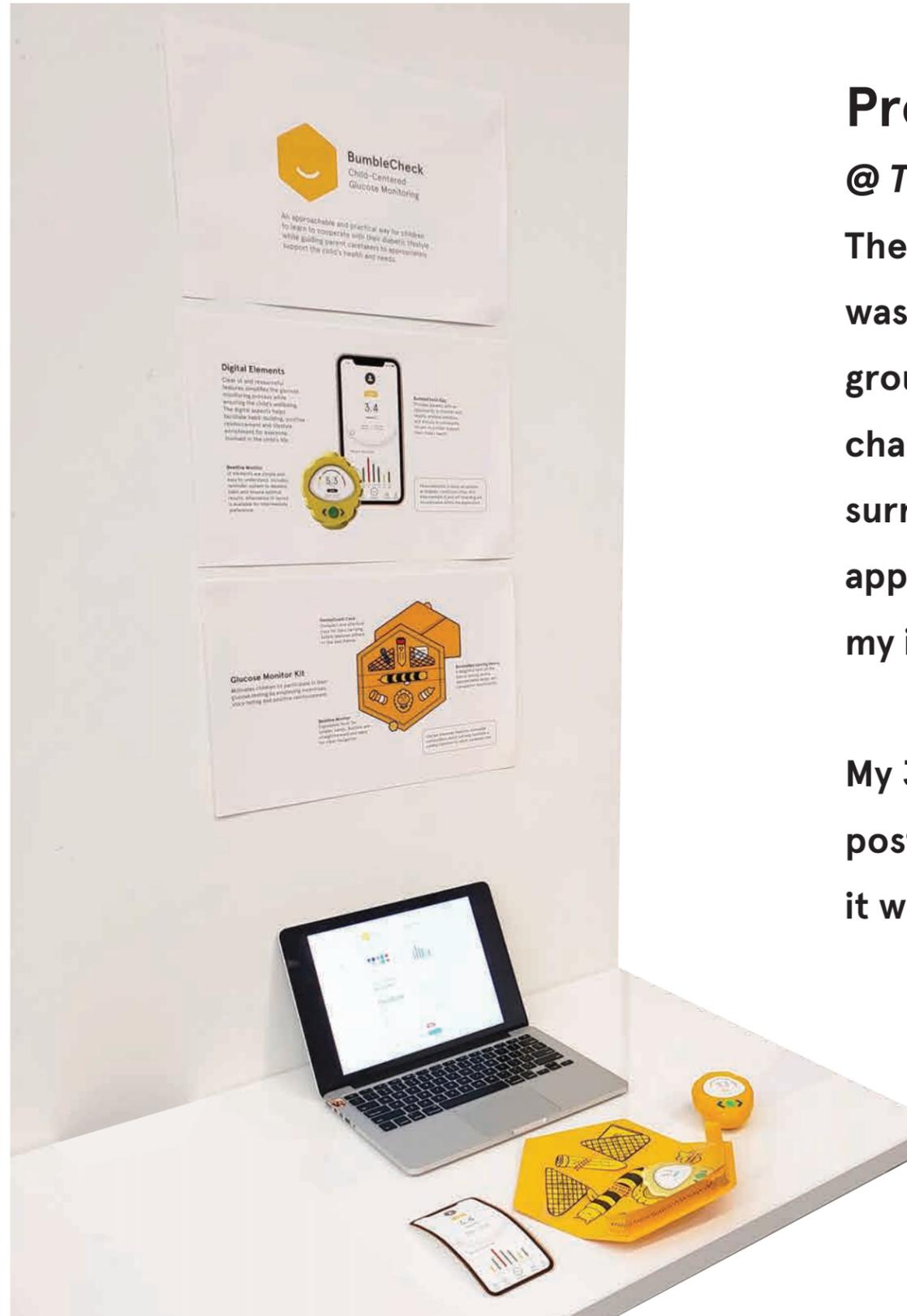
UI elements are simple and easy to understand. Includes reminder system to develop habit and ensure optimal results. Alternative UI layout is available for intermediate preference.



BumbleCheck App

Provides parents with an opportunity to monitor test results, analyze statistics and discuss in community forums to further support their child's health.

Personalization is easily accessible as diabetic conditions often shift. Intermediate UI and off-boarding are incorporated within the application.



Presentation

@ *The Health Design Showcase*

The opportunity to present at the Health Design Showcase was extremely insightful. Presenting in front of a large group of people was very intimidating but it was a good chance for me to practice my presentation skills. It's a surreal experience to have individuals from the audience approach me and for further explanation of my project and my information for potential future collaborations.

My 3 panel layout could have used some more TLC. The posters should have been printed on thicker paper so that it wouldn't warp like it did.

Further Development

I would really like to explore further into this project. This semester allowed me to touch on the different elements of this concept but I wish I had the time to look deeper into the root of the problems and expand more on all of the aspects. If I take this into my grad year, I would look into diabetes management as a whole, rather than just focusing on the glucose monitoring portion.

Video prototype attached as mp4 on Moodle.