# REDESIGNING EFFECTIVE MEDICAL ADMINISTRATION

SD2263
STUDIO 2: INFORMATION

Tutor: Brian Kwok

Lena Brake 21021418X
Chan Ka Man Carmen 18013814D
Sun Jaehee 18079778D
Wong Ching Tung Kelly 18052859D

# CONTENTS

# PROJECT BACKGROUND & AIMS

This project of redesigning medicine labels starts from consideration of the elderly users, whose physical and cognitive ability might be less active than their younger ages. Current problem of the labels lies on the accessibility to the information for the elderlies. Their overall organization of the text, space and visual hierarchy are focused on the operators' convenience rather than users. This makes it difficult for the elderlies to easily recognize essential information they should know about the medications, which may cause physical crisis through medical abuse as well as their psychological damage regarding self-consciousness.

According to these problems, we aim to design a new medicine label that is more user-friendly and thoroughly reflects diverse aspects of the medicine taking experience with respectful attitude. Not restricted to the label only, we took our chances to explore further design products that could help with the users' medicine experience. Our design is based on the analysis from first and second hand research: Competitor analysis, two rounds of user studies and design research.

# COMPETITORS' ANALYSIS

## COMPETITORS ANALYSES IN THE FIELD OF DRUG LABELS

We have chosen 2 local examples from a public and semi-private hospital respectively, and labels from Taiwan and the United States. By selecting examples from both Asian and Western countries, we can explore on the differences between countries and systems.
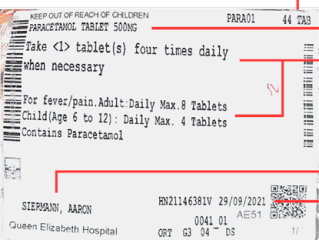
In the following analysis, we will be labelling the labels into:

A (Local Semi-Private)
B (Local Public)
C (Taiwan)
D (United States) respectively.

A HK (Local Semi-Private)

B HK (Local Public)

C (Taiwan)

D (United States)

## LABEL ANATOMY
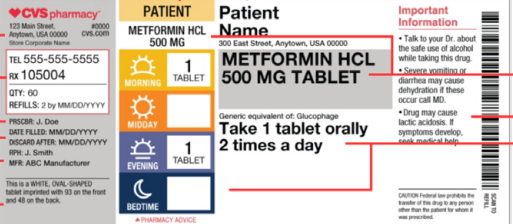
Contant info.
Name of drug & dosage
Intake guidance
Precautions
Patient's name
Doctor's name
Date

Drug quantity
Name of drug & dosage
Intake guidance
Patient's name
Date

Patient's name
Date
Doctor's name
Drug quantity
Name of drug & dosage
Appearance of drug
Drug administration
Precautions
Intake guidance
Contant info.

Patient's name
Name of drug & dosage
Precautions
Intake guidance

Hospital address
Contant info.
Doctor's name
Date
Name of pharmacist & manufacturer
Appearance of drug
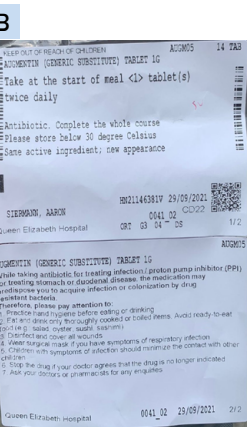
## COMPARISONS IN VISUAL PRESENTATION

| | Example A<br>Local, Semi Private | Example B<br>Local, Public | Example C<br>Taiwan | Example D<br>US |
|---|---|---|---|---|
| Font Size | Hospital name > others | Intake guidance > drug information = patient information > precaution and others | Drug quantity > drug informations > drug precautions > contact information > intake guidance | Patient name and drug name = quantity > intake guidance > Dosage time > Contact info. > important information > others |
| Serif / Sans Serif | Eng: Sans serif, serif only for the hospital name.<br>Chin: Serif | Eng: Sans serif for general caution, hospital name, precautions and few internal information. Other than that all serif.<br>Chin: Serif | Eng: Serif for drug name, sans serif for others<br>Chin: Serif | Sans serif |
| Font Style | Bold for the service centre, no clear difference among major information. | Bold for the drug information and intake guidance. | Regular font for major information, bold for indications. | Bold for patient name, drug information, intake guidance, important information indication. Tight font style to include more information as much as they can. |
| Typography Spacings | Put all major information without a paragraph break. Inconsistent grid system. | Inconsistent leading and grid system. | Lack of space for basic information such as patient information/date/item no./etc.<br><br>Inconsistent line break and grid system. | Consistent and clear leading.<br><br>Organized grid system. |
| Colours | X | X | Red text for few indications. | For important information, pharmacy name, hotline, dosage and intake schedule table. |
| Icons | X | X | For dosage, intake schedule and guidance. | For intake schedule. |

Additionally, the one for the night time resembles the national flag of Pakistan, so it could be seen as inappropriate to clearly show what it aims to. Besides that, the icons indicating meal time show interesting graphics that use chopsticks and rice. This cultural adoption in pictogram apparently targets Asian users, but the problem is that the visual presentation is not clear and simple enough to understand at first glance even for those who have cultural context using chopsticks. For example, the one indicating to take medicine before meals shows the image of rice and chopsticks which can be misinterpreted as taking pills while having meals, if there is no text below.

### Visual Hierarchy

All of the examples have different orders of visual hierarchy. Example A emphasizes its hospital's own logo for the most, and the major information is put together with a single font size, without a paragraph break which makes it lack hierarchy in delivery of information. B uses slightly bold and larger font for the intake guidance, C has less vivid hierarchy but places the major information of drug and intake guidance in the middle upward so that the user could catch it for the first, while D strongly highlights the drug information, patient name and intake guidance through the use of font size, style and spacings.

### Organization

Regarding the grid system, except for example D all of the other examples need to improve in their organizations for the overall layout and typography. Especially inconsistent or wrong leading makes the arrangements of information confusing, even in C some words and numbers are overlapped and makes it hard to read.

### Icons

Icons are only used by example C and D. In C, some of the pictograms are also unclear and inconsistent that can call the users' misunderstandings. The icons for the intake schedule represent each time zone, but they do not have visual consistency as a sequence compared to D which presents a clear sequence of time zones through coherent and easy graphic style.

## SPACIAL DISTRIBUTION
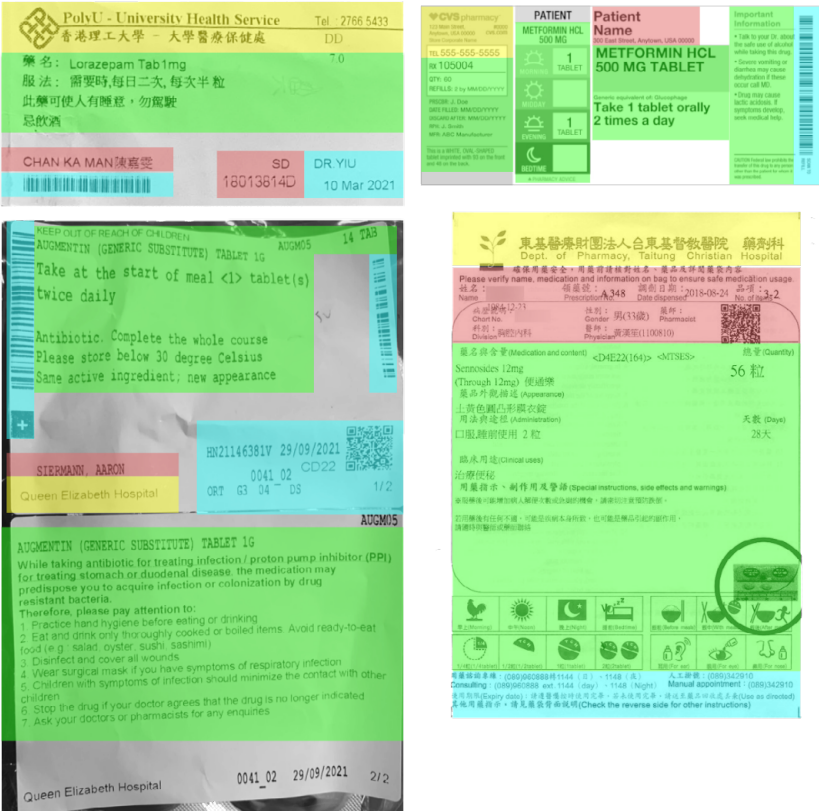


### Information Grouping

The content in each label were categorized into 4 major groups:
- Hospital/Clinic Information (logo, name, phone number);
- Patient Information (name, phone number, address);
- Medicine Information (name, intake method, precautions/side effects)
- Other Information (issue date, internal codes, barcodes/ QR codes)

These are then labeled by different colours to better analyze the distribution of each group in the labels.

### Infomation Grouping



- Hospital/Clinic Logo & Information
- Patient Name & Information
- Medicine: Name, Intake Method, Precautions/Side Effects
- Other Information (Issue Date, Internal Codes, Barcode/ QR Code)

### Ratio/Distribution



Local 1 (Semi-Private)

By reading flow

By proportion (largest to smallest)
3
1
2
4
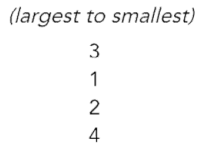
United States
3
1
2
4

Local 2 (Public)
3
4
1
2

Taiwan
3
2
1
4

### Ratio and Distribution

The sequence of the colours were organized according to both the reading flow and by proportion (from largest to smallest) respectively. On these labels, people are most familiar with starting to read from the center as it contains the most important information (i.e. medicine intake methods and precautions).

Even for the one from the local public hospital, where we can see that different blocks of information are placed all throughout the label, people would still read the information in green first, then red and yellow, and lastly the blue blocks on the sides/corner, according to the information hierarchy.

## 1. Hospital/Clinic Information

Except for the local public hospital, all other three labels put the hospital/clinic name as their header. All three contain their logos and telephone number, while for the local public one, the name (with no logo) is put in the lower left corner in a small point size, taking up a very thin proportion (as indicated in yellow).

This can be due to the differences in business/service aims for each institution, in that the public hospital emphasizes on the reliability of their products while private hospitals and clinics emphasize on the brand name and business instead. Also, this part mostly takes up the smallest to 2nd smallest proportion in every label.

## 3. Medicine Information

This part constitutes the biggest part of every label. Including the medicine's name, intake method and precaution/side effects, this part is usually placed in the middle on the label. The name is followed by the intake method, and then the precautions. As this section requires a lot of details and explanation, it may sometimes also be divided into two different sections, like the one from the local public hospital and the United States.

## 2. Patient Information

Except for the Taiwan lab el, the patient information usually follows the medicine information. In terms of proportion, this part usually shares a similar proportion as the hospital name. However, the label from Taiwan contains the most information of patients, including medical history and associated division. On the other hand, the one from the local public hospital only consists of the patient's name. According to each institution, the contribution of this section varies from 2nd biggest to smallest.

## 4. Other Information

Except for the local public hospital, this portion of information constitutes the least on the labels. As this group of information (internal codes and barcodes/ QR codes) is only for the clinic's reference/use, this part is usually put in a less obvious corner on the label and takes up a smaller point size. The fact that the patient's information takes up an even smaller space than this information in the local public hospital label can be due to the emphasis on efficiency and accuracy of information for the institution. In order to quickly look through and find the corresponding information, this part is larger than the patient's name itself.

### Infomation Grouping

- Hospital/Clinic Logo & Information
- Patient Name & Information
- Medicine: Name, Intake Method, Precautions/Side Effects
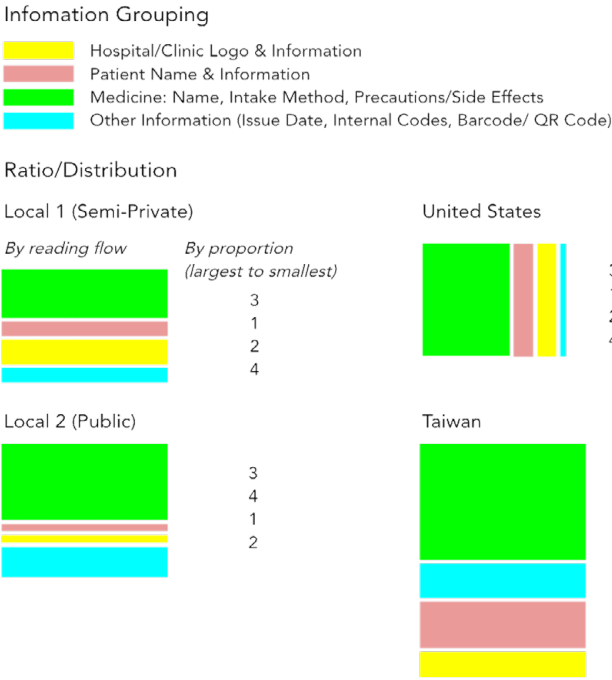- Other Information (Issue Date, Internal Codes, Barcode/ QR Code)

### Ratio/Distribution

Local 1 (Semi-Private)

By reading flow    By proportion (largest to smallest)

3
1
2
4

United States

3
1
2
4

Local 2 (Public)
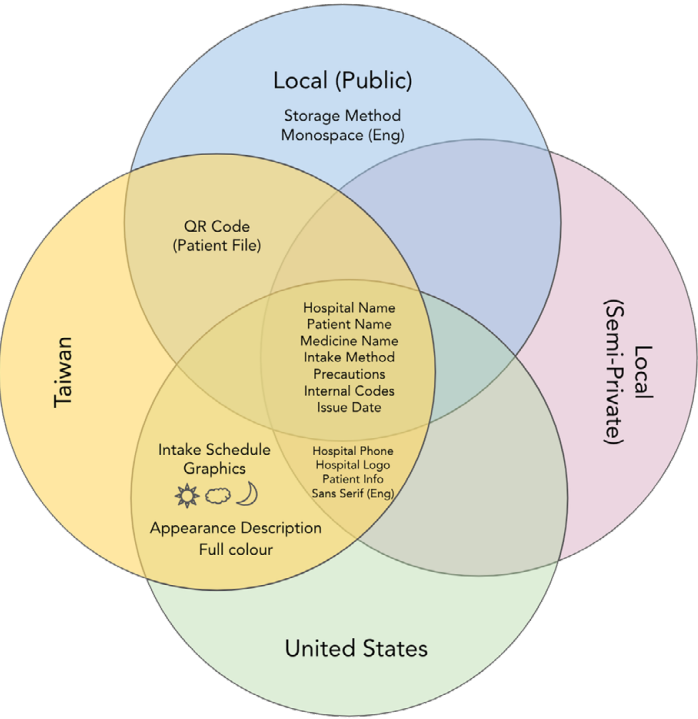
3
4
1
2

Taiwan

3
2
1
4

## OVERVIEW OF CONTENT AND DESIGN

While all 4 labels contain the basic and most crucial information on them (as seen in the diagram), we can see that the 2 local examples lack the most features and specific design approaches in comparison to Taiwan and the United States. First, graphics representing the intake schedule graphics should be added. Not just for elderlies, pictograms are usually more easily and understood quicker than expressing them verbally.
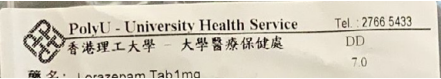
Another important point is the description for the tablet's appearance. Even though this is an important point as it helps people with making sure that the tablet in the bag is the correct tablet, we believe that it will be even better if a graphic or actual picture of how it looks will be even more helpful for readers as they can match up with the tablet right away.

The lack of colours for the local examples is also apparent. This can be due to the emphasis on efficiency in printing and copying, but colours might be able to help with distinguishing different bags and blocks of information.

In addition, the lack of hotline/phone numbers for people to call when in an emergency is also a concern. This might be due to the lack of sufficient human resources to receive these calls, so this is a point for discussion and improvement as well. On the other hand, the local public hospital label is the only one that mentions the storage method of the medicine (e.g. storing below 30 degree celsius), which is something that should be included in all labels.



Venn diagram: Local (Public), Local (Semi-Private), Taiwan, United States

Local (Public): Storage Method, Monospace (Eng)
QR Code (Patient File)
Taiwan
Hospital Name, Patient Name, Medicine Name, Intake Method, Precautions, Internal Codes, Issue Date
Intake Schedule Graphics
Hospital Phone, Hospital Logo, Hospital Info, Sans Serif (Eng)
Appearance Description, Full colour
Local (Semi-Private)
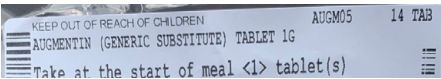United States

## LOGO AND IDENTITY



Lettering (name of the hospital) and logo present.

Cantonese, English

Lettering (name of hospital) present, no logo.

English

Lettering (name of the hospital) and logo present.
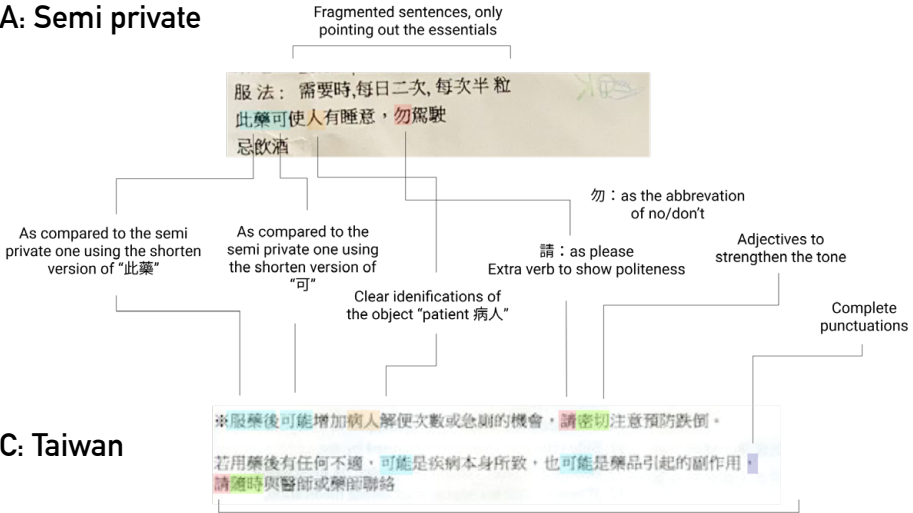
Chinese, English

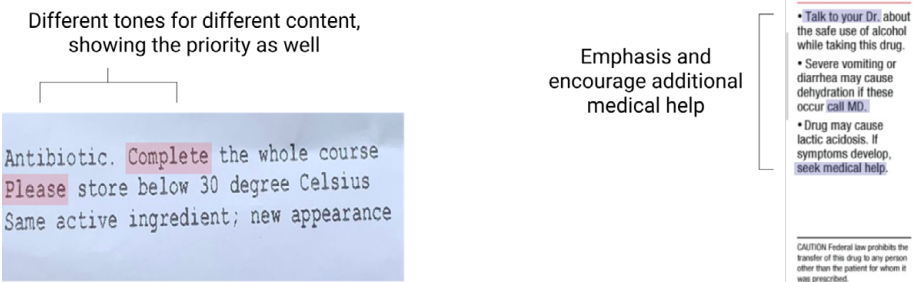Lettering (name of the pharmacy) and logo present.

English

# SWOT ANANLYSIS

| | Hongkong Local (semi private Hospital) | Hongkong Local (public Hospital) | Taiwan Hospital | United States Hospital |
|---|---|---|---|---|
| **S** | - telefone number of the hospital is given for inquiries | - detailed explanation of how to take the medication<br>- well readable due to large font<br>- easy to read for native english speakers as no cantonese was used<br>- given information about how to store<br>- indication of the quantity of tablets is easy to understand | - indication of the quantity of tablets is easy to understand<br>- easy to see for how long the patient needs to take the medication<br>- contact phone numer for inquiries<br>- reference picture how the medicine looks like<br>- Icons for easy understanding | - telefone number of the hospital is given for inquiries<br>- simplified dosage schedule for clearer directions<br>- larger text for increased readibility<br>- code colours for time of the day<br>- Icons for easy understanding |
| **W** | - no indication of the number of tablets<br>- single used plastic packaging<br>- big logo is a waste of space | - larger packaging due to a lot of information<br>- single used plastic packaging<br>- no contact phone numer for inquiries | - single used plastic packaging<br>- green font on white text<br>- Red, green text - what about people with red-green weakness? | - single used plastic packaging<br>- no contact phone numer for inquiries<br>- no indication of the number of tablets |
| **O** | - could be done with more symbolism, less text<br>- removing the logo<br>- recyceled packaging | - could be done with more symbolism, less text<br>- recyceled packaging | - change the font colour<br>- recyceled packaging | - recycled packaging |
| **T** | - single used plastic end up in the trash can | - Without a contact person, the patient may feel left alone<br>- single used plastic end up in the trash can | - single used plastic end up in the trash can<br>- green font on white text is not well readable | - Without a contact person, the patient may feel left alone<br>- bright colors are a danger for children<br>- single used plastic end up in the trash can |

# COMPARISON

| | Hospital (semi-) private Hospital | HK local public Hospital | Taiwan Hospital | United States Hospital |
|---|---|---|---|---|
| Hospital/pharmacy Logo | | ■ | ■ | ■ |
| Doctors Name | | | | ■ |
| Hospitals Contact (tel.) | | ■ | ■ | ■ |
| Date | ■ | ■ | ■ | ■ |
| Patients Name | ■ | ■ | ■ | ■ |
| Patients Gender | | | ■ | ■ |
| Medicines Name | ■ | ■ | ■ | ■ |
| Intake Method | ■ | ■ | ■ | ■ |
| Precausions | ■ | | ■ | ■ |
| Amount of Tablets | ■ | | ■ | ■ |
| Weight of Tablets | ■ | ■ | ■ | ■ |
| durability | | | | ■ |
| Icons for Intake | | | ■ | ■ |
| Colours | | | ■ | ■ |
| QR - Code/barcode | ■ | ■ | ■ | ■ |
| single used plastic | ■ | ■ | ■ | ■ |
| english translation | ■ | | ■ | ■ |

■ Hospital Information      ■ Medicine Information

■ Patient Information      ■ Others

## LANGUAGE

### A: Semi private

Fragmented sentences, only pointing out the essentials

服 法：需要時，每日二次，每次半粒
此藥可使人有睡意，勿駕駛
忌飲酒

As compared to the semi private one using the shorten version of "此藥"

As compared to the semi private one using the shorten version of "可"

勿：as the abbrevation of no/don't

請：as please
Extra verb to show politeness

Adjectives to strengthen the tone

Clear idenifications of the object "patient 病人"

Complete punctuations

※ 服藥後可能增加病人解便次數或會加的機會，請密切注意預防跌倒。

若用藥後有任何不適，可能是疾病本身所致，也可能是藥品引起的副作用，請諮詢醫師或藥師協助

Long and well structured sentence

### C: Taiwan

### B: Public

Different tones for different content, showing the priority as well

Antibiotic. Complete the whole course
Please store below 30 degree Celsius
Same active ingredient; new appearance

### D: US

Emphasis and encourage additional medical help

**Important Information**
• Talk to your Dr. about the safe use of alcohol while taking this drug.
• Severe vomiting or diarrhea may cause dehydration if these occur call MD.
• Drug may cause lactic acidosis. If symptoms develop, seek medical help.

CAUTION Federal law prohibits the transfer of this drug to any person other than the patient for whom it was prescribed.

### A: Semi private

服 法：需要時，每日二次，每次半粒

### B: Public

Take at the start of meal <1> tablet(s)
twice daily

### C: Taiwan

口服睡前使用 2 粒          天數 (Days)
                                        28天

### D: US

Generic equivalent of: Glucophage
Take 1 tablet orally
2 times a day

10 Mar 2021          British format:
                              Date followed by month and year
                              Month in english

HN21146381V  29/09/2021          British format:
                                                Date followed by month and year

For Day to ensure safe in          International standard:
調劑日期  ·2018-08-24          YYYY(Year)/
Date dispensed                              MM(month)/DD(date)

DATE FILLED: MM/DD/YYYY          American format:
DISCARD AFTER: MM/DD/YYYY          Month followed by date and year

## NUMBERINGS SYSTEMS AND DATES

The presentation of numbers vary among the four examples. Most of them use arabic numbers to present the numbers of pills that need to be taken every time, except A, who uses traditional Chinese word to present the idea of "1/2" of the pills. B also bracketed the number to further differentiate it from the other words. Regarding the frequency, the 4 examples adapt different use of langauges, A again uses chinese wordings; B uses english wordings; C & D both uses arabic numbers.

## USE OF LANGUAGE

Chinese/English: A provides a combination of English and Chinese for different information.
Chinese: category name, instructions, precautions, name of patient, name of the hospital.
English: Drug name, name of patient, name of doctor, date, name of the hospital C provides both English and Chinese version for every included text, the English text which is placed after the Chinese text, comes in brackets. B provides full English, but it is believed that the language will change according to the mother language of the patient. D is full English as well.

## FORM OF LANGUAGE

All the labels contain majorly fragmented sentences

in which subject, verb and object may not be found all together. The Taiwanese one has the highest level of completeness of sentence among all. Below will only focus comparing the language used at the precaution part. A used fragmented words to form a sentence that the object (patient) is missing. The sentences are short and simple without proper punctuation marks.  C on the other hand uses adjectives and decorative words that extend the length of sentence and emphasis meanings behind. It also suggests the patient to inquire the doctors if needed on the instructions/precautions part.

D has repeatedly alert the reader/patient to seek for medical help. In this special pack of medicine, the patient is "suggested" to not consume alcohol while taking the drug instead of being requested to.

B shows a combination of fragmented and completed sentence. It uses different tones for different sentence which showcase the level of importance of different instructions.

## CONCLUSION

The above observation report has proven that there are various designs of medicine labelling, each presents different design hierarchies(text and images), use of languages and spatial distribution of the elements. Among the 4 big groups of information on the labels, it has come to our attention that the information of medicine has taken the highest priority over others, in which it was given the most space and comparatively more recognisable typefaces. The preference of other information of other institutions on the labels is on the other hand less alike. The variations may cause by diverse reasons, here we will discuss less practical concerns of the readability but more about the social/cultural background of each institution and thus how they are being represented in the design of medicine labelling.

### Example A: Semi-private hospital

The semi-private hospital we are examining here is located in a university of Hong Kong where only the students and staff can access the medical service there. It has a comparatively smaller target audience base and less space, thus, the pharmacy and medical services departments are located right next to each other that pharmacists can have direct communication with the doctors. It is also suggested that patients have a close relationship with the doctors in which they are encouraged to enquiry the doctors instead of pharmacist regarding the use of drugs. Meanwhile, patients can enjoy a higher frequency of follow up consultation (e.g. weekly, twice a week).

Such a background allows firstly, the patients to update their pills frequently, the bag is thus designed to hold a smaller volume of medicine and have limited space for labels; secondly, patients can contact their doctors via the information written on the labels that details of the medicine may not be necessarily printed on the labels.

The information of the hospital occupies the most space and is at a higher hierarchy in terms of visual design. This may due to the concerns

of public images of the institution since it relies highly on the funding of the university instead of the government. It also constitutes a less level of consistency of the use of languages that may be caused by the more flexible guidelines of working in a semi-private hospital.

### Example B: Public hospital

The Hong Kong public hospitals and pharmacies are usually located in the same area but in different buildings and ruled by different departments. They may have a certain level of connection but it requires extra time and effort to communicate in between them. Besides, the patients will usually get a month or more worth of volume of medicines from the hospital every time since the demand for public medical service is huge but the supply is inefficient.

Under this context, the packaging of the medicine has to be big enough to hold a large number of pills, providing more space for the labels; meanwhile, the design of the labels should be finished in the most cost-effective way to reduce the extra spending. The content should also be user-oriented that the instructions and precautions would occupy the most space for easier reading. Identity is their last priority since they do not need to compete with another hospital

in terms of public image. The extra information about storage may also be caused by the long interval between each time the patients getting their medicine, they have properly stored the pills during this period.

### Example C: Taiwan hospital

The Taiwan hospital we are examining here is a regional private hospital which funds by local Christian organisations. They provide both medical services and pharmacy within the area of the hospital, tho they are located in different buildings and organised by different departments. Patients have to visit another building to get their medicine. Moreover, they can also get the drugs from the privately-owned pharmacies outside, in fact, the pandemic has stopped people from lining up inside the hospital and patients are distributed to different pharmacies outside.

In this context, the medicine labels must provide clear and highly informative information about the medicine, in which patients can identify the correct medicine they are getting from outside of the hospital. Besides, the low level of connection between the pharmacy and hospital is unable to implement further enquiry regarding the use of drugs to the patients, therefore, the precautions and instructions have to be carefully and precisely mentioned on the medicine label to prevent any accidents. It is also noticed that the icons used on the labels are specially designed for Asians (the chopsticks), revealing the cultural background of this hospital.

Example D: US pharmacy

US implements a segregated healthcare system in which pharmacies are highly independent under the capitalistic socio-economic system of the US. Their operation highly relies on the income of selling medicine, and there are lots of competitors in the market. Meanwhile, the cost of reaching the hospitals for normal citizens is highly expensive, so people would prefer buying drugs in their local pharmacies, causing a high demand for medicine from there.

Under such circumstances, the arousing numbers of substitutes of the same medicine provide a higher level of freedom for the patient to choose which medicine to buy. Subsequently, the design of medicine labelling would be part of the consideration when choosing the medicine, the demand for informative and visually appealing medicine labels stimulate the supply, in which we can find more sophisticated editorial design, colour printing and use of pictograms on the labels.

In terms of the language, since the pharmacies are separated from the hospitals, patients may have the risk to mis-take the drugs under no supervision, therefore, it was also repeatedly emphasised on the labels that extra guidance from the professionals are needed but not forced.

# USER TEST
## 1ST ROUND

1 - 10 NOV

**First Round User Test**

1 Nov–10 Nov

| | Medications | Sight Problems |
|---|---|---|

**Derek**

39, Male
Hong Kong, lived in Canada for 20 years
Master's Degree

Home Structure:
Wife, 4 kids

Supplements (Vitamin C)

Should be wearing glasses but is not (for the left eye, but can get dizzy when wearing glasses as the left & right eye condition is very different)

**Anders**

75, Male
North Pole, lived in Hong Kong since 4 years old
Band singer, actor

Home Structure:
Wife, 2 cats
2 toilets in his house, each person get one

For 3 major illnesses, Supplements

Astigmatism
(Must wear glasses while driving)

**May**

69, Female
Hong Kong
Master's Degree

Home Structure:
Mother, younger sister, 4 dogs

Supplements (Vitamin E, omega-3 fish oil, Vitamin K2+D3 (for bone & heart))

Short-sighted. Been wearing glasses since 12, cannot live without it (especially driving)

---

**User Test Structure**

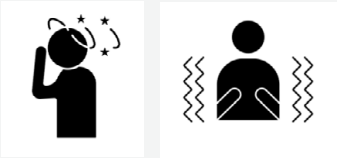| Sessions | Durations |
|---|---|
| Introduction | 5 minutes |
| Personal Information | 5 minutes |
|   1.  Name, Age & Gender, Education Level | |
|   2.  Medical history & sight problems | |
|   3.  Family structure | |
| Image Design | 20 minutes |
|   1.  Build the picked random sentence with the icon cards (2 mins) | |
|   2.  Build the picked random sentence with the icon cards (1 min) | |
| Text Design | 10 minutes |
|   1.  (Font size testing) Study the sentence while standing up (15s), Questions on the label are asked | |
|   2.  (Font testing) Read blurred text | |
| Information Distribution & Layout | 10 minutes |
|   1.  (Composition testing) Study the 3 labels and match with the corresponding patient profile (10s per each) | |
| Content Design | 15 minutes |
|   1.  Organize priority/importance of contents on label | |
| Break | 5 minutes |
| Medicine Storage | 20 minutes |
|   1.  Make use of ALL the medicine and objects and place the icons on the locations ideally | |
| Language | 10 minutes |
|   1.  Collect pills according to 4 types of instructions | |
|   2.  Write down adjectives to describe 2 types of sentences | |
|   3.  Rate the relation with yourself to different identities | |
| Follow-Up Questions: Medicine-Taking Experience | 10 minutes |
| | TOTAL — |
| | 1 hour 40 minutes |

**Image Design**

**ROUND ONE: 2 MINUTES**
Pick 1 cards, hide it from us, try to build the sentence with pictures in front you within 2 mins!

**Miscommunication**

**Anders' pick**

**What Derek thought**

First Try: Pills during Night Time before Dinner use when you are dizzy and shaking.

Second Try: Pills during Night Time after Dinner when dizzy or shaking

Correct: Lunch time
Wrong: Night time

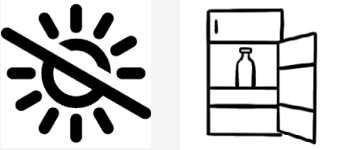Correct: dizziness and shivering as side effects
Wrong: helps with dizziness and shivering

Correct: dizziness
Wrong: not sure about the meaning

"2 tablets with lunch. May cause headache and dizziness."

**Derek's pick**

**What Anders thought**

This medicine should be kept in the fridge and should not be exposed to sunlight

**Insights**

Icons are easily misunderstood. Especially when they don't provide text.

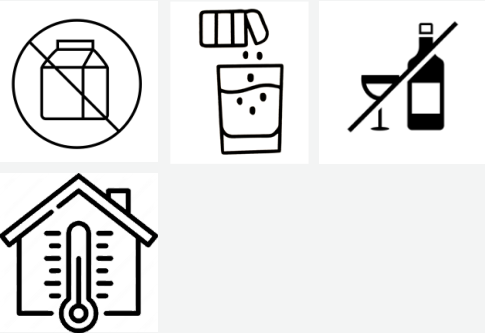Icons can sometimes confuse more than they help.

"Store this medicine in the refrigerator and do not expose to direct sunlight."

**ROUND TWO: 1 MINUTE**
Pick 1 cards, hide it from us, try to build the sentence with pictures in front you within 1 mins!

**Miscommunication**

**Anders 's pick**

**What Derek thought**

Take it with water/dissolve in water don't take it with alcohol, no milk make sure to keep at room temperature.

Correct: dissolve medicine in water first

Wrong: take medicine with water

**Insights**

Less is more – keep it understandable and easy

"Take this medicine with a glass of water. Avoid milk and alcohol. And store the medicine at room temperature."

**Derek's pick**

**What Anders thought**

Half a tablet, after food 3 times a day

Correct: take three pills
Wrong: take three twice a day

The combination of different icons can lead to unwanted, or completely new meanings

Correct: take medicine before meal
Wrong: take medicine after meal

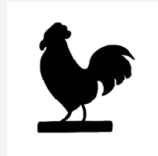"Take half a tablet before meals. Three times a day."

## ROUND ONE



Take 3 tablets after getting up on an empty stomach.

Take 3 tablets after getting up on an empty stomach

### May's pick





She also chose the chicken instead of a sun because she thinks a sun can just mean "a day" or even "afternoon"

### Miscommunication



While finding the cards she skipped the moon icons and chose this bed one, so we asked why, and she said that the moon just indicates "night" but not "before bed", so it might be confusing.



Correct: take medicine before meal
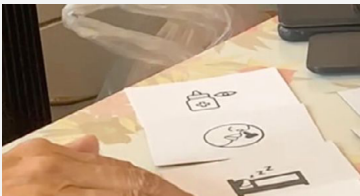Wrong: take medicine after meal

While finding the cards, she was confused about what this card meant. So we asked her and she was confused because the stomach seems half-full but not sure if that's actually what it means, and if it means she should take the medicine in the middle of the meal or with the meal
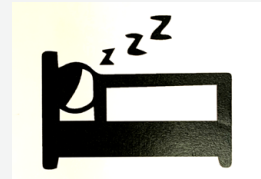
## ROUND TWO



This medicine is intended as drops for eyes and nose. Apply the medicine before going to bed.
This medicine may follow to muscle and abdominal pain.

This medicine is intended as drops for eyes and nose. Apply the medicine before going to bed.

### May's pick



She also mentioned that the graphic in general is just abstract and didnt see the meaning/use.

This medicine may follow to muscle and abdominal pain.



Correct: can cause muscle pain
Wrong: card was not used



Correct: can cause abdominal pain
Wrong: card was not used

---

### Image Design:
### ANALYSIS

#### Visual Understanding

From users' choices of icons and behaviour while selecting & guessing the sentences, it can be seen that a lot of the icons are extremely confusing, sometimes even create double meanings, causing doubt for the users. For example, the icon with pills in a stomach can be interpreted as both an "empty stomach" or simply "to be swallowed"; it can also get confusing when there are multiple icons with number indications on the same instruction. Another problem users raised was how some icons were too abstract and they would rather have text to simply express the relevant instruction. Further, though some icons can be understood easily individually, combining them to express one sentence can create contradicting and/or new meanings. On a cultural level, one thing we questioned was if users would prefer the chicken or sunrise icon as an indication of "morning"; and some users also raised how the moon icon reminds them of a certain flag. This shows the importance of considering the cultural context when creating the graphics as well.

#### Actual Application on Medical Instructions

First, as seen from above, the differences in interpretation and doubts of users indicates the need to narrow down the number of icons on a label. Some users also questioned the need for icons on a label, especially when text can be much easier to be understood right away. This indicates the need to provide supporting text, if different icons were to be used. From the test, it was also seen that users were able to easily understand icons related to intake schedules (e.g. morning, afternoon, night, before sleep), but icons related to intake method (e.g. on empty stomach, before/with/after meal), precautions and storage methods are usually interpreted wrongly. This provides a guidance of what content should be visualized and what should not be on our final labels system.

#### Further Adjustments

With this round's observation, a lot of the icons provided can simply be removed in the next round as the confusions caused by those were clear, especially the ones in regards to precautions, and number of pills intake, which can be simply explained by text. Considering that the intake time-related icons DO help with expressing the instructions, these can be further tested as the insights differs slightly among users, providing guidance for adjusting the details of these icons.

**Text design**

Stand Up! You have 15s to read the sentences on the table! We will ask you questions about it, try to get as much information as possible!

7pt   This medicine relieves inflammation and controls acute pain.

8pt   This medicine promotes insulin secretion and helps cells use sugar well. ● ●

9pt   This medicine can relieve symptoms such as redness, edema, fever, and tenderness. ●

10pt   This medicine is effective for muscle cramps, paralysis, or general muscle pain. ●

11pt   This medicine is effective for muscle cramps, paralysis, or general muscle pain.

### Derek

8pt: "if I am standing straight up, I can't read them... If I bow a little bit and be really focus, I can read it."

9pt: "It's still okay, if I really focus."

#### Insights

Text in medical label is always so small, an extra tool is needed to help.

### Anders

A:"I can't read it even with glasses on, I need to get a bit closer."

1 Anders bowed a bit, to try look closer.

2 Derek squeezed his eyes to focus on the cards.

A:"The font on the existing medicine labelling are way too small, actually they put a lot of like, ingredients, precautions, they are so tiny I have to use a magnifying glass. And I suspect maybe even younger people need to use it."

S:"So you also use the glass?"

A:"No, I google for the medicine, that's much more effective than trying to read it on a bottle."

D:"My dad asks me to do it, he can never read any of the informations on the labels."

Willing to ask other people to help with the medication.

### May

The text order in 1st round was small to big. It eventually failed because the user could not read text starting from 7pt.

In 2nd round, we rearranged the order as bigger to smaller texts. She could not read anything in the distance of standing so she had to bend down. She was able to remember some key words of the text.

10 pt: cramps
9pt: x
8pt: something related to sugar

M:" What is the purpose of the test? Do you want to test my sight? Or is it my intellectual ability?"

S: (Not in the video) "We are not testing your ability, But our design."

-> Should have noticed this before starting the interview.

---

Try your best to read the blurred text!

Proxima Nova
Public Sans
FP Dancer serif

### Derek ●

Taking large amounts of this medicine can harm your liver. Don't take more than three pills.

Proxima Nova: Took 17 seconds to read. Hesitated recognizing condensed word like soft drink. All correct.

Derek tried reading the blurred text in the same distance as exercise A (small font size), he could success without much effort.

Derek reading blurred text in a far distance

### Anders ●

Taking large amounts of this medicine can harm your liver. Don't take more than three pills.

Proxima Nova: Took 4 seconds to read. All correct.

This medicine can occur side effects of nausea, swelling legs and feet, headache.
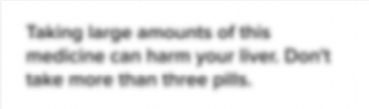
Public Sans: Took 15 seconds to read. All correct.

S: "Is the blurred text more clear than those in small sizes?"

A:"Yes"

### May ●

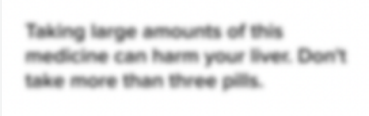Taking large amounts of this medicine can harm your liver. Don't take more than three pills.

Proxima Nova: 18 sec, 1 mistake (amounts->accounts)

This medicine can occur side effects of nausea, swelling legs and feet, headache.

Public sans: 13 sec, all correct

Taking large amounts of this medicine can harm your liver. Don't take more than three pills.

FP Dancer serif: 47 sec, difficult to read from the start. Confused Do/Do not, coffee, soft drinks.

Unlike the previous users, May had more difficulties in reading blurred texts than small font sizes.

#### Insights

Could it be the lightings? or eye sight problems? But Derek's one side of eye is also bad, and Anders has astigmatism. Perhaps May's farsightedness due to old age is more serious than Anders.

You will have 10s to read 1 card (total 3), try to find the person with the labels. After you find the first one, we will then give you the second card.

**A**

Patient: _ _ _ _ _ _ , Gender: F, Age: 63

Meclizine HCL 12.5 mg
For dizziness

Take 1 pill orally when it is necessary

_ _ _ _ Hospital

**B**

Patient: _ _ _ _ Gender: F Age: 75

For skin diseases such as skin attacks, hives, and itching.    Precautions
                            -------------
Take 1 pill whenever necessary.    -------------

_ _ _ _Hospital

Contact info.    Metoclopramide
000 0000      400mg

**C**

Patient: _ _ _ _    RoActemra      Precautions
Gender: M      400mg
Age: 71                       -------------
           For arthritis      -------------
Contact info.    joint care
000 0000

           Take 1 pill
           orally twice a
           day after meal
_ _ _ _Hospital

**Profile examples**



Name: Karen
Age: 75
Symptoms: Irritations, red and itchy skin

Name: Ricky
Age: 63
Symptoms: Dizzy

Name: Clive
Age: 69
Symptoms: Cough and sore throat
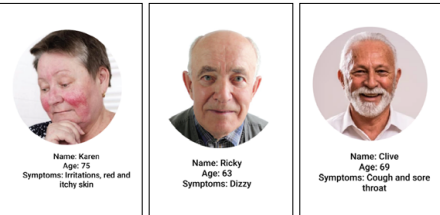
**Derek** 🔴
**Anders** 🟡

Could not process the proper test, by following reasons
- Wrong material (There was no profile matching the labels.)
- Lack of instruction (Was supposed to get their layout cards back, but did not)

A:"Name, gender and age is irrelevant to the medicine information. I think you need to separate."

**Insights**

Medication is often mixed up with others'.

The name of pills is less concerned.

**May** 🔵

A: Correct. She came up with two profiles, but chose the right one because later she remembered the symptoms. She could not clearly remember the patient's gender.

B: Checked four times for all profiles. She remembered the patient's gender and representative symptoms, but could not remember the age.

C: Found the right profile quickest. M: "I tried to focus and remember the key information". Perhaps it's because she got used to the profile options.

S:"Among three layouts, which one is the easiest to read? Which one would you prefer?"

M:"B. I failed to find the profile for this, but I could not remember only the age.  But the order of information is from most relevant to least to the patient (patient info-symptoms-intake info-medicine info). The medicine information is the most difficult part for user to remember, and not very important in taking medicine."

May read out loud to remember the information.

The age section of layout 2 was a bit out of the block. Should revise it.

May lives in less organized environment with two family members and 4 big dogs, so her medication is often mixed up with other's. She also do not pay attention to the name of medication, but mostly the efficacy.

---

**Content design**

Card sorting

Derek 🔴
Anders 🟡
May 🔵
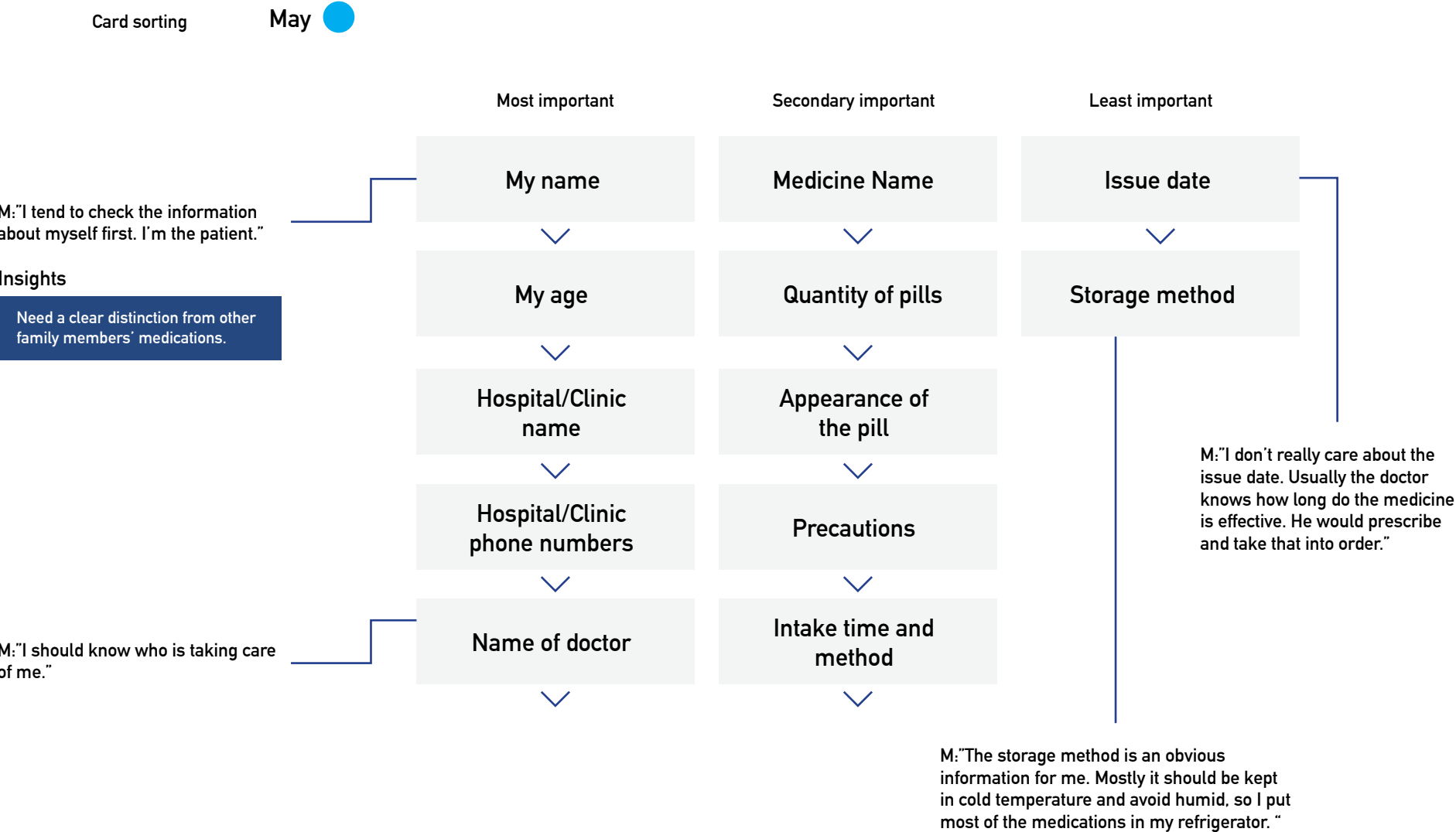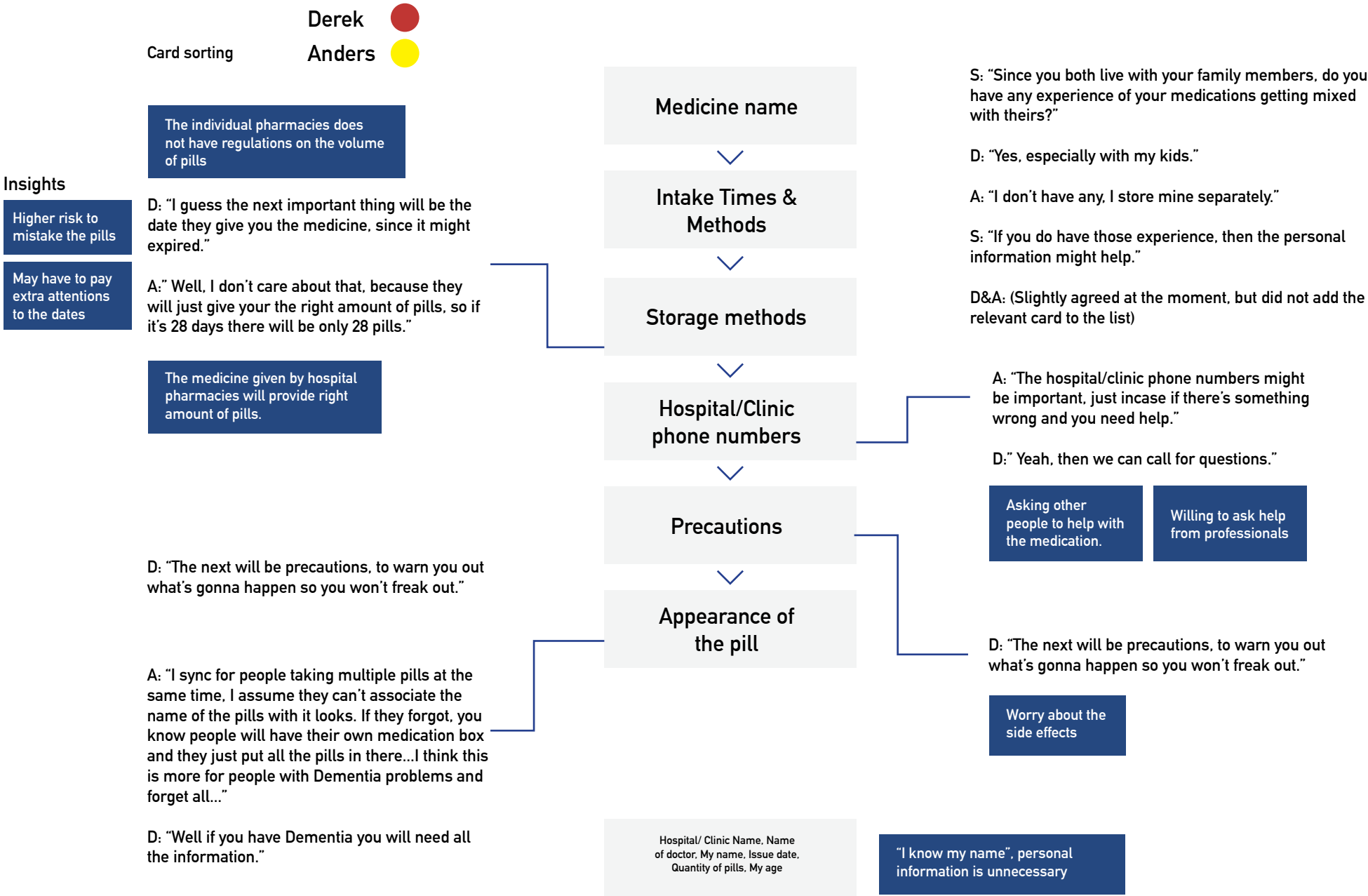
Hospital information    ▨
Patient information    ▨
Medicine information    ▨
Medicine instruction    ▨

🔵        **Most Important**        🔴 🟡

| | |
|---|---|
| My name | Medicine name |
| My age | Intake Times & Methods |
| Hospital/Clinic name | Storage methods |
| Hospital/Clinic phone numbers | Hospital/Clinic phone numbers |
| Name of doctor | Precautions |
| Medicine Name | Appearance of the pill |
| Quantity of pills | Hospital/ Clinic Name |
| Appearance of the pill | Name of doctor |
| Precautions | My name |
| Intake time and method | Issue date |
| Issue date | Quantity of pills |
| Storage method | My age |

**Least Important**

**Card sorting**

Derek 🔴
Anders 🟡

The individual pharmacies does not have regulations on the volume of pills

**Insights**

Higher risk to mistake the pills

May have to pay extra attentions to the dates

D: "I guess the next important thing will be the date they give you the medicine, since it might expired."

A:" Well, I don't care about that, because they will just give your the right amount of pills, so if it's 28 days there will be only 28 pills."

The medicine given by hospital pharmacies will provide right amount of pills.

D: "The next will be precautions, to warn you out what's gonna happen so you won't freak out."

A: "I sync for people taking multiple pills at the same time, I assume they can't associate the name of the pills with it looks. If they forgot, you know people will have their own medication box and they just put all the pills in there...I think this is more for people with Dementia problems and forget all..."

D: "Well if you have Dementia you will need all the information."

**Flow (cards):**
- Medicine name
- Intake Times & Methods
- Storage methods
- Hospital/Clinic phone numbers
- Precautions
- Appearance of the pill

Hospital/ Clinic Name, Name of doctor, My name, Issue date, Quantity of pills, My age

"I know my name", personal information is unnecessary

S: "Since you both live with your family members, do you have any experience of your medications getting mixed with theirs?"

D: "Yes, especially with my kids."

A: "I don't have any, I store mine separately."

S: "If you do have those experience, then the personal information might help."

D&A: (Slightly agreed at the moment, but did not add the relevant card to the list)

A: "The hospital/clinic phone numbers might be important, just incase if there's something wrong and you need help."

D:" Yeah, then we can call for questions."

Asking other people to help with the medication.

Willing to ask help from professionals

D: "The next will be precautions, to warn you out what's gonna happen so you won't freak out."

Worry about the side effects

**Card sorting**

May 🔵

M:"I tend to check the information about myself first. I'm the patient."

**Insights**

Need a clear distinction from other family members' medications.

M:"I should know who is taking care of me."

| Most important | Secondary important | Least important |
| --- | --- | --- |
| My name | Medicine Name | Issue date |
| My age | Quantity of pills | Storage method |
| Hospital/Clinic name | Appearance of the pill | |
| Hospital/Clinic phone numbers | Precautions | |
| Name of doctor | Intake time and method | |

M:"I don't really care about the issue date. Usually the doctor knows how long do the medicine is effective. He would prescribe and take that into order."

M:"The storage method is an obvious information for me. Mostly it should be kept in cold temperature and avoid humid, so I put most of the medications in my refrigerator."

**Text & Content Design**
**ANALYSIS**

### Text Font & Size

Especially for text sizes 7pt to 9pt, users were only able to roughly read the keywords in the sentences, and requiring their original knowledge to guess the words. Further, they also suggested the need to use extra tools (magnifying glass) or asking younger family members to read the labels. This is a clear indication that these sizes are uneffective for medical labels.It was also interesting how Anders and Derek raised that blurry text was easier to be read compared with small font sizes, indicating the importance of text size on labels regardless of the font used. As an improvement for next round, it is also important for us to clearly indicate how this test is simply to test the labels but NOT the reading ability of users, as questioned by May. Also, considering how the tests were conducted in a well-lighted space, we may also consider testing the readibility of the text in different lighting or situations in the 2nd round.

### Composition

Due to the mistakes and misunderstanding caused by the materials in Anders & Derek's round, no clear results regarding the composition preferences were deduced. For May's round, putting aside the factor that she was able to find the correct profile quicker for Label C due to increased familarity with the activity, it can be seen that for all three labels, she would read the efficacy of the medication first before anything else, putting less emphasis on the patient's information. Interestingly, different from the usual medicine labels where they would put the medicine name as one of the top rows. May preferred Label B, where information is arranged from most to least relevant to the patient. In particular, the medicine name is put at the last row on the label. This indicates that the name of the medicine is not necessarily important for patients as they are not medical professionals who would understand the name/related information and help with their intake process.

### Content Importance

All users showed low emphasis on the medicine's issue date, quantity and storage methods. However, it is important to note that while hospitals would give the right amount of pills, pharmacies (which some users stated they would get them prescribed there) do not have regulations on dosage amount. Therefore, the important of thisb content varies according to institution. Generally, high emphasis was put on information related to the hospital's name and contact numbers, patient's name (not gender or age, as the name is enough for identifying the right owner at home) and intake time/method. This indicates the need for content on the label to consider all sorts of situation — households with a number of family members, normal intake routine, and emergency situations.

An additional point to note is the "appearance of pill", which is rarely seen in Hong Kong medicine labels. While users are originally not familar with this content, they have agreed with the importance of this information, especially for patients who would pack their own medication in a separate container (so that they can identify the pills), as well as those who have difficulties or would pay extra attention in which medication they are taking.

---

**Medicine Storage**

Derek ●
Anders ●

HOME
Bathroom



Medicine from hospital

Self-packed medicine
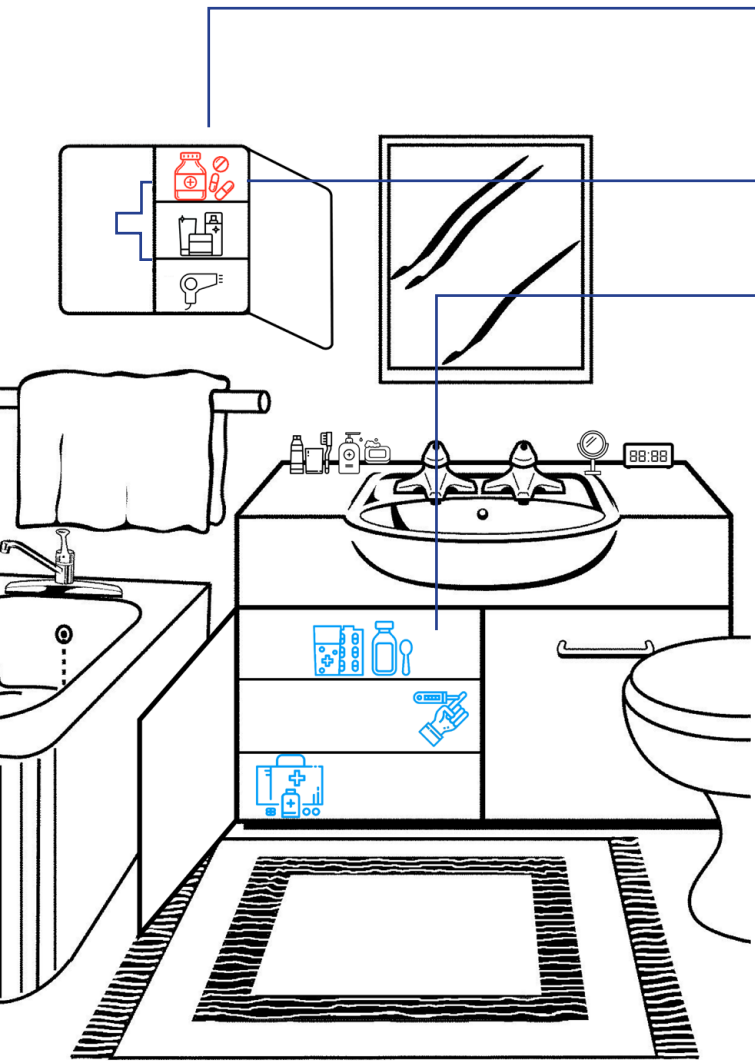
1. Immediately points at the cabinet with a "+" label: "for regular use, somewhere out of reach for children & cats", "one of my cats is very interested in medicine as it's small and round"

2. Would put all the medications in cabinets, usually collective and altogether
Would put most of the medication on the top shelves (out of reach for children)

3. Emergency box is put in the bottom cabinet under the sink (lowest shelf), so that children can get access to it as well, and would not add a lock
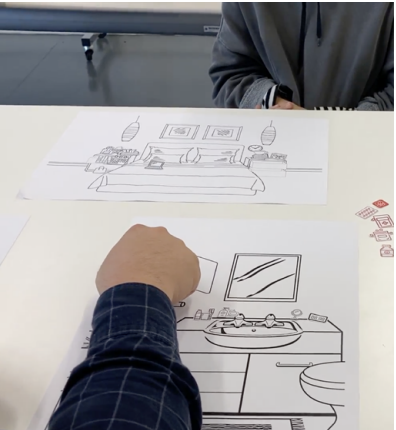
A: "I pretty much use my own pill box"
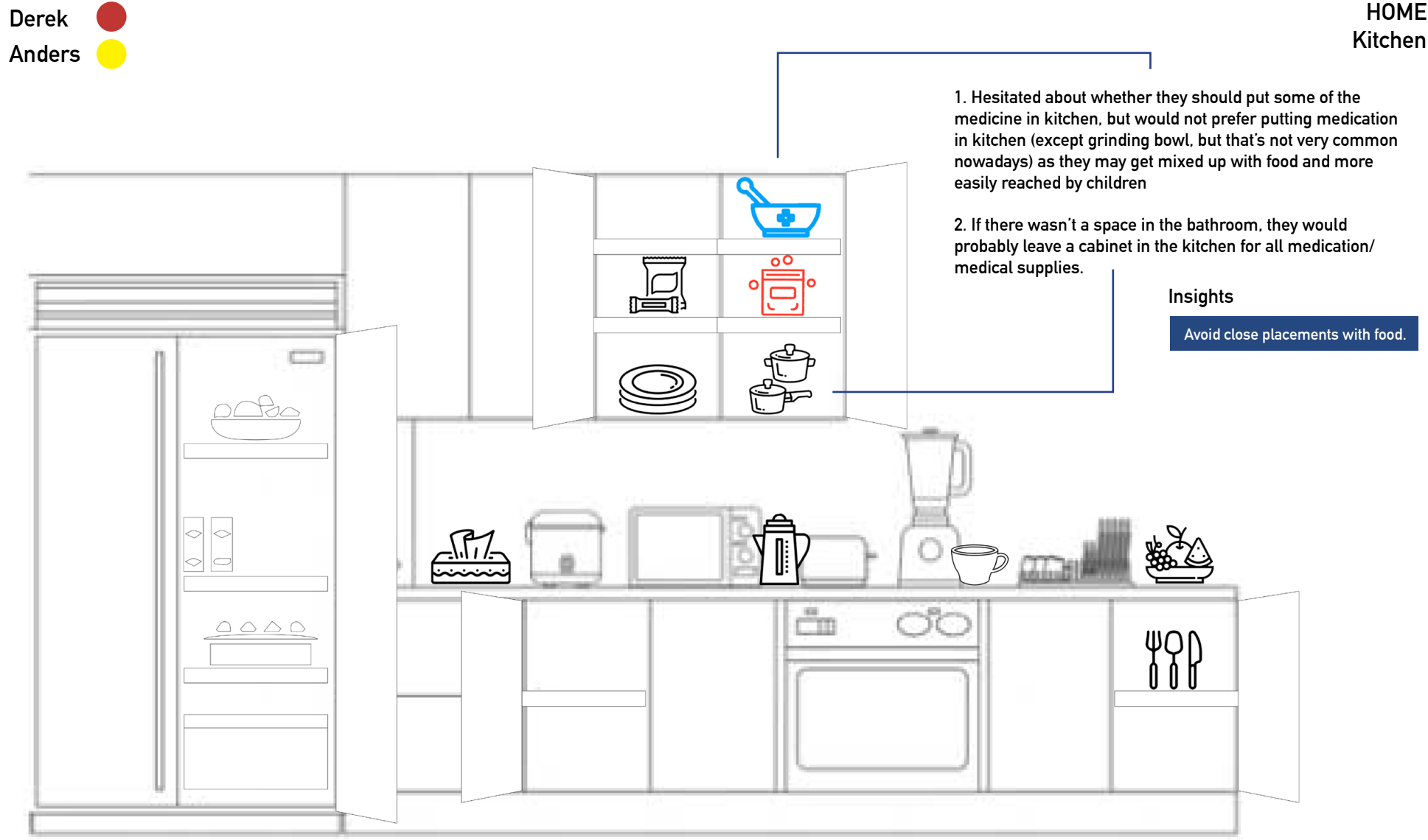
S: "is it like a Monday to Sunday thing?"

A: "No, it's just different compartments and they are placed so that the ones I take daily I just countdown (from top to bottom). And then there's a section for things like headaches or muscle pain"

Insights

Prefer to put all medication in the same location.

High consideration based on kids & pets

Derek ●
Anders ●

## HOME
### Kitchen

1. Hesitated about whether they should put some of the medicine in kitchen, but would not prefer putting medication in kitchen (except grinding bowl, but that's not very common nowadays) as they may get mixed up with food and more easily reached by children

2. If there wasn't a space in the bathroom, they would probably leave a cabinet in the kitchen for all medication/ medical supplies.

**Insights**

Avoid close placements with food.

## HOME
### Bedroom

1. Immediate action of putting the asthma inhaler on the bedside table for quicker reach (asthma will be triggered more often at night)

2. Anders: keep a tool box (with double lock) next to the bedside table

3. Only emergency medication are put in the bedroom, especially for middle of the night

**Insights**

Convenience for emergency-use medication (e.g. inhaler)

Derek ●
Anders ●

"Asthma usually happens in the middle of the night, the air quality is worser than morning"

## HOME
### Dining Room



1. Would not put any medication in the dining room (too open for everyone)

2. Might bring the necessary medication (for after meal) from the bathroom to the dining room

A: "I would take the medicine I should take after the meal from the bathroom (e.g. 3-5 pills) and take it with me to the dining table"

**Insights**

`Avoid open spaces`

**Derek** 🔴
**Anders** 🟡

## OUTDOORS
### Carrier/Bag



`Emphasis on mobility (both around the house & outdoors)`

`Would pack their own medication.`
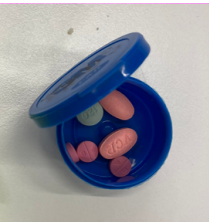
1. Immediately uses the small pouch to put in the small pill box
2. Put all medical related things (e.g. bandaid) in pouch
3. Put candies into the pouch, " for people with diabetes"
4. Would use a small case to pack only the necessary medication for the day (Anders)

**May** 🔵



## HOME
### Bathroom

Would NOT put any medicine in the bathroom (Too wet and humid, not cool)

`Environment Considerations`

## HOME
### Dining Room

Would NOT put any medicine in the dining room (not convenient for emergencies, which usually happens in the kitchen or bedroom)

`Emergency Considerations`

**Insights**

Prefer to put all medication in the same location

**May** ●

**HOME**
**Kitchen**

Easiest storage spaces (e.g. refrigerator to keep the medicine condition)

1. First instinct: puts most medicine in the refrigerator (safest to be put in a cool, dry and dark place)
2. Hospital medicine usually have a time limit
3. Put all medicine in the kitchen (in one place for easy reach)
4. Especially for emergency medicine like ointment, where it is needed immediately when I accidentally cut my fingers

Convenience for emergency-use medication (e.g. inhaler, ointment)

M: "Medicine should be put in a central place, so that you won't forget. Especially for elderlies like me who tend to forget. If it's fixed, then I know where to go to. Also for my family members"

"There is nothing wrong with putting medicine in the refrigerator, but if you put it somewhere else, it could be wrong"

**HOME**
**Bedroom**

**May** ●

1. Put the inhaler on the bedside table for quicker reach (asthma will be triggered more often at night)

"Asthma usually happens at night, it is very dangerous"

Convenience for emergency-use medication (e.g. inhaler)

**Insights**

Extra protection for carrying outdoors.

1. Zip-loc bag, in a separate section in the bag (extra protection)
2. Won't mix medicine with other things (e.g. water bottle, which might get in contact with water)

**Medicine Storage:**
**ANALYSIS**

Spacial Consideration

While all users have stated that they would put most medications in one space for easy reach and require less effort to find a certain medicine, its placement in different rooms of the house depends highly on the interaction with other non-medical related objects. For example, putting in the kitchen cabinets is not preferred by Anders to avoid close placements with food; and putting in the bathroom is not preferred by May to avoid the humid environment.

Population Consideration

As all the users live in households consisting of other family members, including pets, HIGH consideration is put on the interaction between other members and the medications. Especially in terms of children and pets, Derek would put this aspect as his major concern in storage. To avoid the members getting in contact with the medications, he would always place them in higher levels and avoid open spaces in the dining room. At the same time, with adults, May would prefer placing all medication in one place so that others can have an easy reach, This indicates the high emphasis on consideration of other family members in terms of storage patterns.

Emergency & Convenience Consideration

For medications that are not taken by schedule but used in emergencies, all users prefer placing those in spaces of easiest reach even without big physical movements, like the asthma inhaler beside the bed. In addition, the convenience of finding medication in the going-out bag is also highly emphasized, like placing it in a separate section/pouch for extra protection and quick reach.

Further Exploration

Through this activity, the general location preferences both at home and outdoors has been analyzed. To further explore on the storage patterns, organization methods like by time, schedule, size or expiry date etc. should be examined on a microscopic level. Hence for 2nd Round, instead of focusing on the division of medication placement in different rooms at home, the emphasis should be put on the different storage units (e.g. shelves, cabinets, drawers) and how users would place the medications in these units.

---

**Languages**

Collect the pills according to the instructions

**Derek** 🔴

Green pills:
Take three tablet(s) everyday

⌄

Red pills:
Take <5> tablet(s) everyday

D: "The bracket throws me off, but I totally understand/recognise the number."

⌄

🟡🟡🟡
🟡🟡🟡 Tablet(s)

D: "I think the word "everyday" is hard to be represented in this sense, so for me the most straightforward way is the numbers itself or the english one."

**Insights**

Difficult to represent abstract ideas with the graphics.

⌄

Tablet(s)

D: "I can totally see the 4, but the box throws me off, I will have a second doubt about the meaning of the boxes, I tend to overthink."

S: "So the visuals will mislead or remind you of other related things?"

The visuals triggers other associations, can be misleading.

D: "Yes, I don't see the necessity to show me a box... I mean I might have a different box."

The boxes do not relate to his usual storage/ counting practices,

**Anders** 🟡

white pills:
Take seven tablet(s) everyday

⌄

Yellow pills:
Take <3> tablet(s) everyday

A: "The 3, if you are not wearing any glasses, it may look like an eight."

A: "I also don't understand why there's a bracket S after tables. The bracket with the S is not correct in terms of grammar."

⌄

🟢🟢🟢 Tablet(s)

A: "Pretty much the same reasons Derek just gave, I just think they are irrelevant to put a drawing there rather than written out."

S: "So it's more about your personal preference or you found it harder to read the numbers?"

⌄

🔴🔴

A: "I could imagine maybe someone with Dementia that have lost the ability to read, that might work to have symbols instead of written words. But I am relating this to me. My preference will be the first two, also I think it could be mixed up with the brand logos on the labelling, so it is more obvious to write it out."
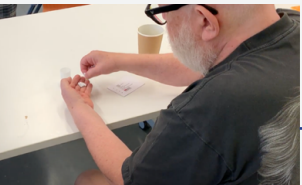
Helpful for people with reading problem

Risk of mixing up with other logos on the labelling.

S: "How will you count the numbers of pills, will you place them on a table or your hand and count it one by one?"

D: "I will count it one by one, or if there's too many pills, I will just separate them into two groups, like 3/3, total six, then I won't count it wrong."

Dividing numbers into groups for better calculation

Accurate and precise

Similar shapes/ figures of numbers causing confusion



1 Pour out numbers of pills on his hand



2 Put down the bottle



3 Count the numbers of the pills two at the time

## May ●

**Tablet(s)**

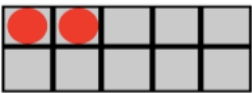### Insights

Might pour out more than needed, need to calculate the excesses again

Hold the pills with a hand, avoid touching the table

Check while holding pills.



1 Pour out numbers of pills on his hand



2 Use her fingers to press on the pills, and drop the excess pills back to the bottle.



3 Put down the bottle, close her fist to hold the pills, while looking at the next instructions

S: "which one is the easiest to understand?"
M: "Of course the green one,
...
Visually, it is very clear...

But, it also depends on what kind of patient, because like my mother, she may not understand this, but for me as a contemporary person, so I understand colours and this (referring to the layout of dots)...This is also more pleasant for me, and easily understood, for me, but I don't know for others.

The problem with this is the missing frequency, but the others are clear..."

Yellow pills:
Take <3> tablet(s) everyday

Read the sentence loud to reconfirm the instructions.

Differentiate the used ones from the others by putting them away from each other.



1 Read the sentence out while holding the green pills in her left hand.



2 Shake to pour out the pills from the bottle



3 Put the finished one next to each other, differentiate them from the unfinished ones.

Modern people can identity the number on a dice better than an older person

white pills:
Take seven tablet(s) everyday

Takes more time to reconfirm the numbers again.



1 Read the sentence out and shows frustrations, continually to pour the white pills on her left hand.



2 Pour the pills slowly and one by one. Point and count the total number again after finish.

M: "These are the usual things,
...
These are more straight forward for my mother, but of course in Chinese, but it also needs to be careful, for the colour blind people."

S: "Then how about for option 2 and 3, which one you prefer more, including the wordings?"

M: "The third one, why would you use a bracket?  It means nothing, reluctant in a way."

S: "If we remove the bracket of 2 will it be easier to read than 3?"

M: "Arabic numbers are easier to read, seven is not that good, just a number 3 is good."

May got distracted by other things happening around.





1 Pour the pills right from the bottles

M: "Because this is rather confusing, why 2 out of 10? It is useless, I mean the other grey squares. Except if there are 10, then I understand, I have to take 5 days, 2 for each day. But then it doesn't mean anything. "

---

Use the memo pad on the table to write down some adjectives to describe the following two sentence.

**Sentence 1:** After consumption of pills, excess defecation may occur. Please also be cautious to prevent falling down.

### Insights

Liability warning

Description of a specific situation, instead of the effect on human body.

● (yellow)
● (blue)

CLUMSY SENTENCE

WARNING: MAY CAUSE LOOSE BOWEL AND DIZZINESS

A: "Clumsy sentence, should be "warning: may cause loose bowel and dizziness."

A: "Prevent falling doesn't make sense...Is it from a US packaging? US people doesn't know English that well..."

definitive, not clear

M: "Very clear, more human"

**Sentence 2:** This medicine cause excess defecation. Prevent falling.

Descriptive scenerios do not provide enough information.

Demand for reasons behind

● (red)
● (blue)

Short, print from

D: "prevent falling doesn't make sense and a lot of the sentences like these are more to enhance the liability & legal reasons etc, with no "actual" precautionary meaning."

Very clear more human

M: "This is a must have situation and the other is just a possibility, maybe some people can hold their poop...it really depends.
...
The prevent falling is also not clear because it didn't state why the person will fall, what cause the fall?
...
It is also too straight forward, too rude."

M: "It will depends on the person, or if the precautious are inclusive to all people, then 2 should be the one to use identification. But if the side-effects are just a possibility, 1 will be better to use."

S: "Will you be bother to read longer sentences?"

M: "I don't mind, for me as a patient, I need to fully aware of what I am taking, I don't need inefficient information."

Matters of humanity

Matters of accuracy

How much you relate yourself to the following identities? (1 least related- 5 most related) Write the number and your name near the option(s)

## Anders ⬤

**Patient**

=

**Anders**

⌄

**Clients**

⌄

**You**

⌄

**Elderlies**

### Insights

Names help to identify the owner of the medicine.

Not special feelings towards subjectivity.

Dislike being called "elderly"

A: "I don't like to be called elderlies... and why would be called a client?"

S: "Well, as you said, you may buy the medicines from the pharmacies yourself, so you will become a client in that sense."

A: " But I am also not a client, I am a customer"

A: "Because it's for me! I know that it is for me, so I don't really care about the subjects...but if I am in a home with a lot of people, the name can help to scan through…

And the word "patient" is clearly indicating me being sick.

the term "you" is too generic, maybe it can be for the kids."

## Derek ⬤

**Patient**

⌄

**Users**

⌄

**You**

⌄

**Derek**

⌄

**Elderlies**

⌄

**Clients**

Right indications of the owners more important.

Important for family members like children

More accurate identifications of these group of people?

Prevent direct addressing the identities of elderlies/patients, May have some negative impressions

## May ⬤

**May**

⌄

**You**

⌄

**Patient**

=

**Users**

=

**Elderlies**

=

**Clients**

Preferred being identified as a individual

M: "The hospital treats me personally as a human, take personal care of my feelings."

M: "The most general one."

M: "Patient is just a bad description, I am a patient, but I don't want to be reminded as patient, alright? I want to be cured…

I don't want to be addressed as patient."

M: "Even I am old, I don't to be addressed as elderly!
...
I think the Chinese term to describe old people is better (長者), because it won't emphasis that you are old. And the English word "Elderly" will definitely have a stronger cognation of being old."

M: "Client/customer are too commercial oriented, it feels like a transaction, but it's not, isn't it?"

長者 as supposed to have the same meanings as elderlies are seen to be less related to old person

---

## Languages: ANALYSIS

### Pills Calculation & Instructions

In terms of the written and graphics expression of the instructions, all users have shown more preference for the written ones. In regards to the two graphical instructions, it took users slightly longer to begin counting the pills as they had doubts in what the instructions are trying to express. For example, the one with a rectangular box looking like a pill box misleads users into thinking that it has something to do with putting pills into a box with 10 slots or intaking "4 out of 10 pills". For the written instructions, however, users also stated confusions towards unnecessary punctuations like < > . While May preferred numbers over words (e.g. "4" over "four") as it is quicker and easier to be translated to the brain right away, one important note when using numbers is the use of font & size, as Anders mentioned, "3" may be misinterpreted as "8" without glasses.

Users' behaviour in taking out and calculating the pills is also examined. It was noticed that as users would either pour the pills out onto their hands to calculate, which caused troubles as the number of pills may exceed and slide away, a flat surface is necessary for their intake process. Moreover, in the process of counting the right number of pills, different methods can be seen to be used — dividing into groups, pouring out a large amount and counting one by one, count an initial number and double check with instructions once more. While most users can correctly calculate the pill numbers, the extra steps required and doubts provide a possible direction for an experimental design to make

the pills calculation process less troublesome.

### Language style

Comparing the sentences, users have stated contradicting opinions on the 2 types of wording — Anders & Derek suggested that the longer sentence was clumsy and included information that did not make sense (e.g. "prevent falling"), while May suggested that this sentence was clear and more human. For the shorter one, Anders & Derek thought it was short and concise, while May raised questions regarding the instructions as it is too straightforward and rude, also not enough information is provided for the precautions where as a patient, she would rather have detailed information on the label. This is a clear indication in the need to balance the humanity and accuracy of wordings on the labels, and avoiding "inefficient" information like "must/may" scenarios and accidents, but not explaining WHAT may cause the accidents (e.g. falling).
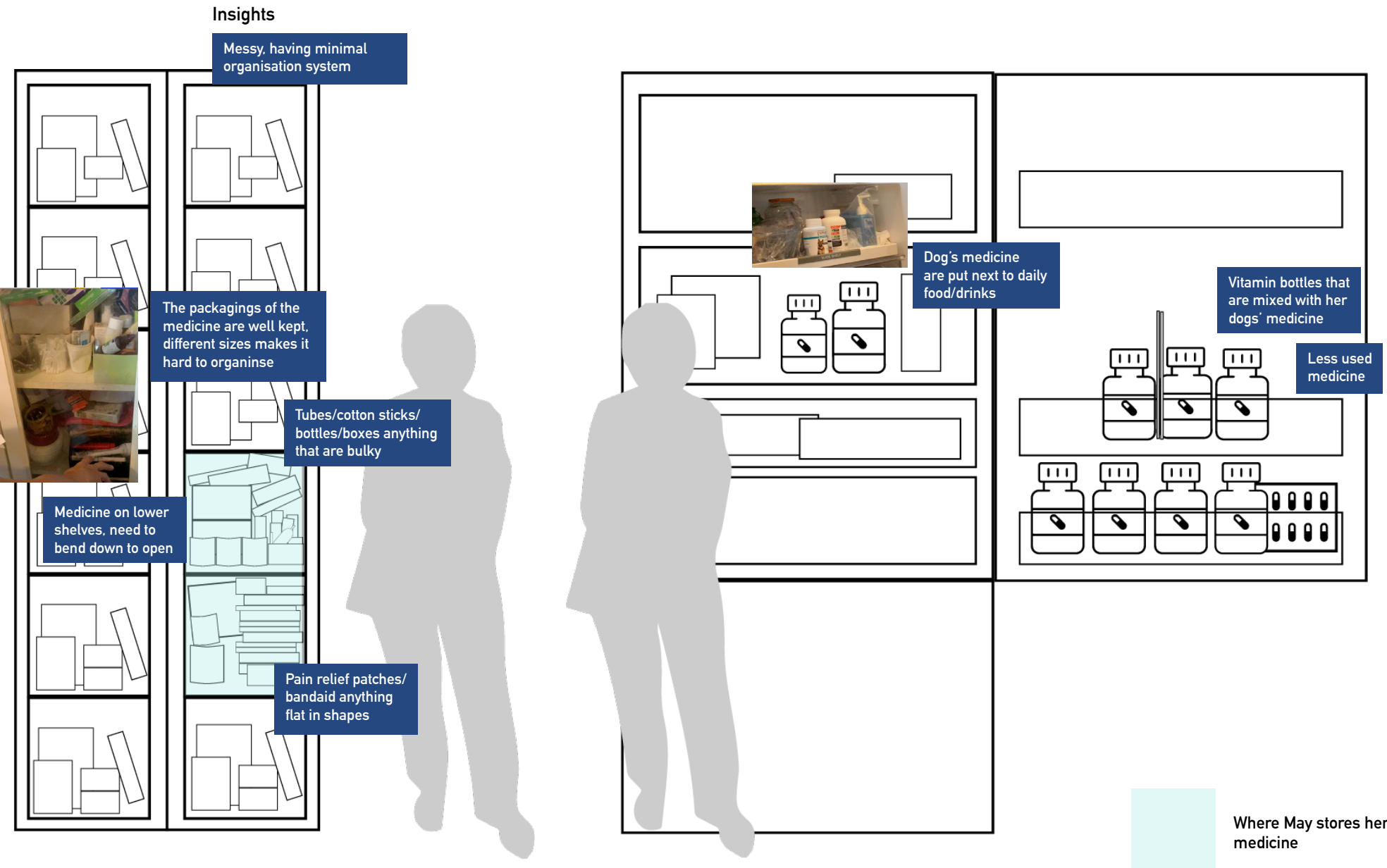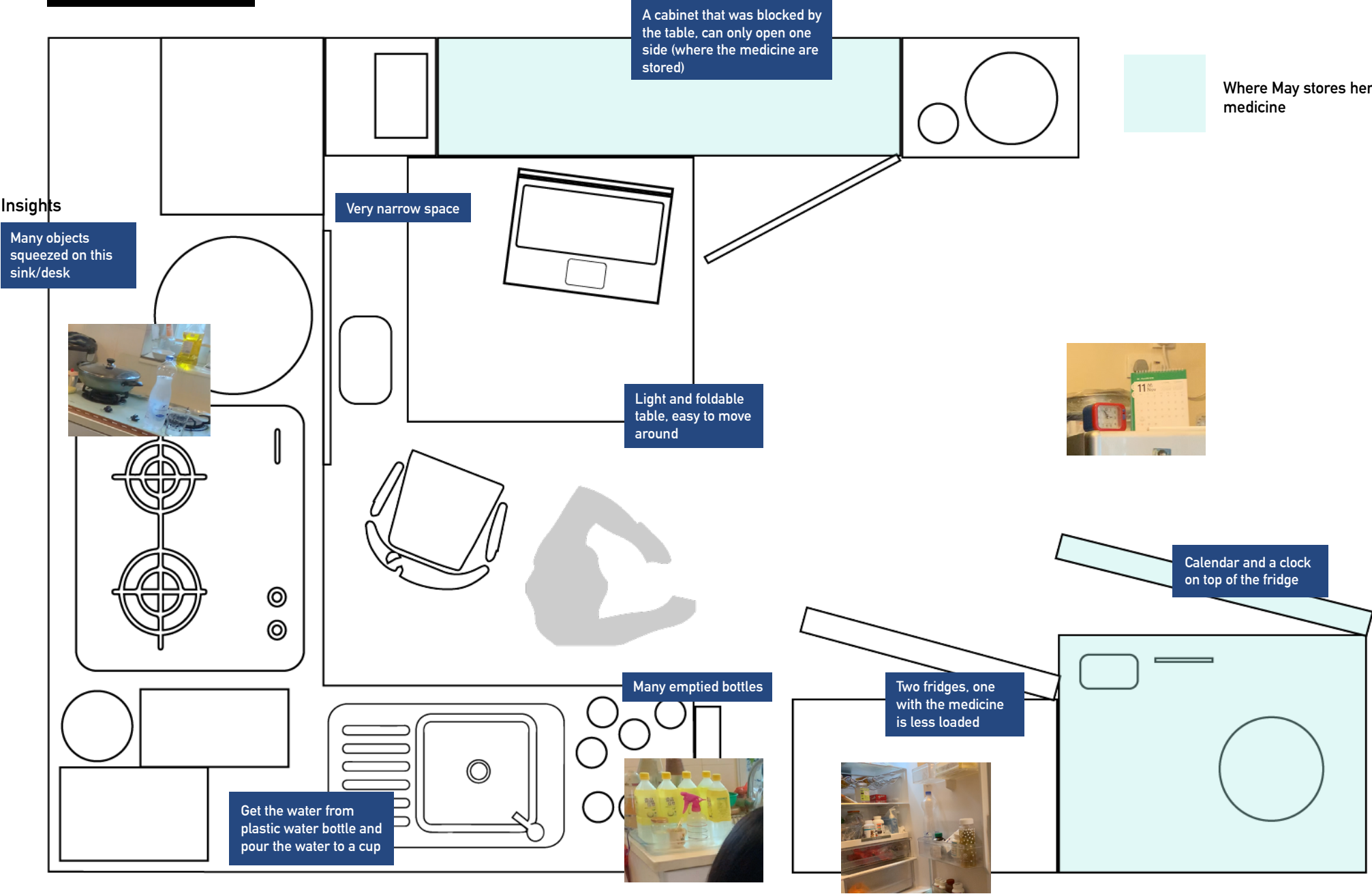
### Addressing the user

Users stated that addresses like "clients" and "users" are not necessarily the most suitable word for the situation they are in and it sounds too commercial. Putting these two addresses aside, the users also generally feel a weaker relation towards being addressed as "elderly". While they are aware of the fact that they are an elderly (in terms of age), and even a "patient", May suggested that she does not want to be identified by such names. Another interesting point May stated is the differences in sound/meaning for "elderly" in English and "長者" in Chinese, where she believes that the one in Chinese has a more positive connotation. From the chosen priorities, it can also be seen that they would prefer to be identified as an individual over a group of people; and that "you" might be too general especially for households of a number of family members, causing misunderstanding especially for kids. Overall, from this round, we can see that a more accurate yet human way of addressing the users have to be identified.
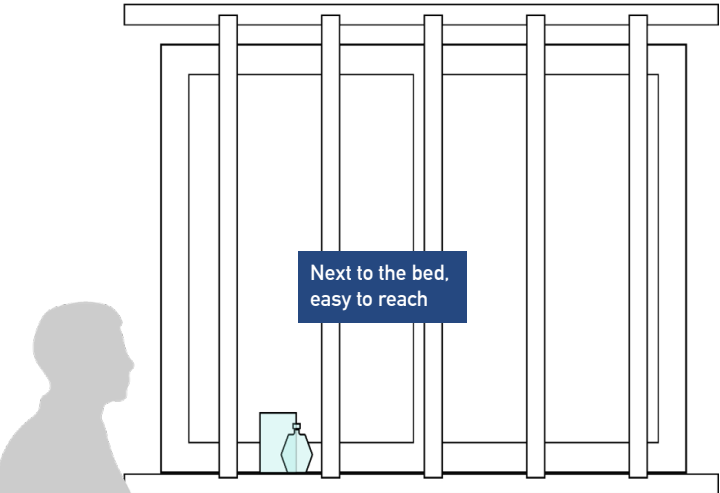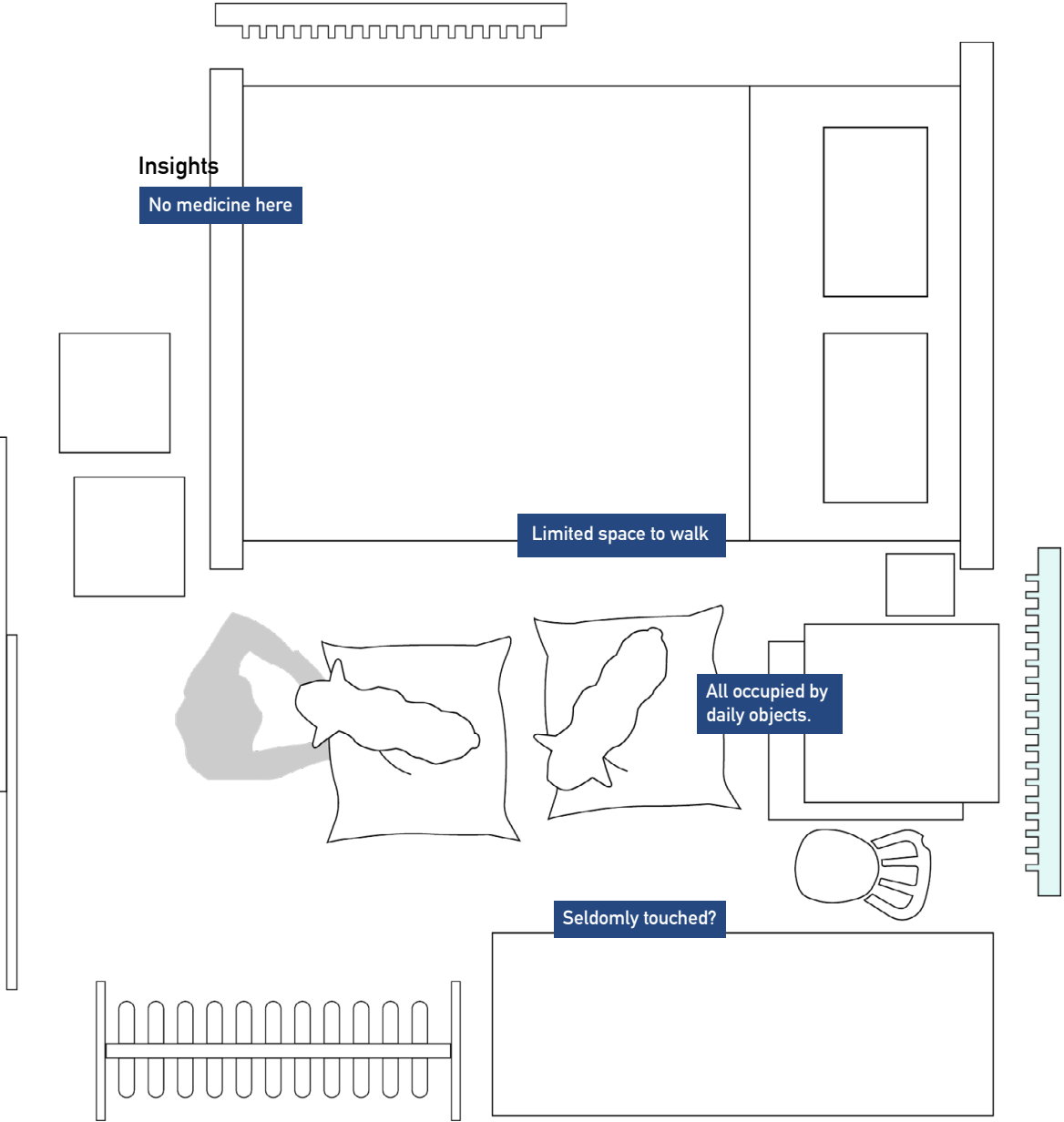
# HOME VISIT WITH MAY

A cabinet that was blocked by the table, can only open one side (where the medicine are stored)

Where May stores her medicine

**Insights**

Many objects squeezed on this sink/desk

Very narrow space

Light and foldable table, easy to move around

Calendar and a clock on top of the fridge

Many emptied bottles

Two fridges, one with the medicine is less loaded

Get the water from plastic water bottle and pour the water to a cup

**Insights**

Messy, having minimal organisation system

The packagings of the medicine are well kept, different sizes makes it hard to organinse

Tubes/cotton sticks/ bottles/boxes anything that are bulky

Medicine on lower shelves, need to bend down to open

Pain relief patches/ bandaid anything flat in shapes

Dog's medicine are put next to daily food/drinks

Vitamin bottles that are mixed with her dogs' medicine

Less used medicine

Where May stores her medicine

Insights

No medicine here

Limited space to walk

All occupied by daily objects.

Seldomly touched?

Next to the bed, easy to reach

Where May stores her medicine

## Follow-Up Questions: Medicine-Taking Experience

### Have you ever mistaken a medication?

**Anders** 🟡

No, as there are 2 separate bathrooms for wife and him; the medications are in very different shapes & colours.

Importance of storage method

**Derek** 🔴

Sometimes for the kids

Importance of clear identity indication

**May** 🔵

No, it has become a habit and we don't take a lot of medicine

Highly cognitive users

### Do you use any reminders for your medication?

**Anders** 🟡

No and I never miss it

Highly cognitive users

**Derek** 🔴

Reminded by wife

Open to help from others

**May** 🔵

No, it has become a habit, no need to be reminded.

Highly independent users

### Have you ever misread or ignored the precautions/intake methods?

**Anders** 🟡

I would triple the dosage sometimes, even before the doctor's instructions.

Highly independent users

**Derek** 🔴

Yes, sometimes I would read but not follow > why?

Use of language on labels?

**May** 🔵

No. "Going to see a doctor is very unpleasant, because you are sick, and I don't want to be sick. So I would listen to the doctors advice very well, because I want to get rid of the diseases, I want to recover ASAP. So I am very obedient in that sense."

Avoid troubles

### Any other difficulties?

**May** 🔵

Sometimes I need to pay extra attention to the sequence of eating different medicine (which one first and which one after)

Use of language on labels

**ROUND 1:**
**FINAL ANALYSIS**

We gathered and reorganized the insights from each section and concluded
a few major themes to further explore on.

## STORAGE SPACE PREFERENCES

- Avoid close placements with food
- Prefer to put all medication in the same location
- Avoid open spaces (unless temporary)
- Without/minor organization system
- Medicine packaging are well-kept, the different size makes it more difficult to organize tidily
- Convenience for emergency-use medication (e.g. inhaler, white flower oil on bedside)
- Very narrow space
- Mixed with daily objects
- Cabinet was blocked by the table, only one side of it can be opened (where the medication are stored)

## WHERE & HOW THEY TAKE MEDICATION

- Differentiate the used ones from others by putting them away from each other
- Need a flat surface to place & take the medication
- Need more space to take the medicine than expected
- Hold pills with hands, avoid contact with table

## HOW THEY TAKE/ CONFIRM MEDICINE

- Might pour out more than needed, calculate again
- Dividing into groups for better calculation
- Hold pills while counting
- Reconfirming numbers
- Reading the instructions out loud
- Younger generation can identify numbers of a dice (visual) better than older person

## SEEKING HELP (EXTERNAL SOURCES, NOT MEDICAL)

- Asking others with help
- Searching online to check
- Willing to use technology
- Would pack their own medication
- Liability warning

## ACCURACY

- Descriptions do not provide enough information
- Extra tools may be needed to help with reading
- Demand for reason behind instructions
- Less is more
- Humanity
- Accuracy & precise
- Consideration of users' sight problems

## ICONS

- Easily misunderstood, especially without text
- Difficult to represent abstract ideas with graphics
- Risks of mixing up with logos on labels
- Similar shapes/numbers causes confusion
- Are icons more misleading than useful?
- Sun & moon symbols may not be the clearest indication
- Double meanings
- Overlooking the icons
- Visuals triggering other associations

## CONCERNS OF GOING OUTDOORS

- Emphasis on mobility
- Extra protection used (e.g. zip-loc bag, pouch, separate section in bag)

## HIGH CONSIDERATION OF OTHER FAMILY MEMBERS

- Usually all put in the same cabinet, with/without division
- Size of family affects priority of content
- Clear distinction is necessary

## NEGATIVE IMPRESSIONS TOWARDS "ELDERLY"/"PATIENT"

- Prefer to be identified as an individual
- Not special feelings towards subjectivity
- Dislike being called "Elderly"/"Patient"
- Consideration of users' sight problems
- 「長者」 has a more positive impression than "elderly"

## HIGHLY INDEPENDENT

- Would buy their own medicine from pharmacy (instead of directly from hospital)
- "I know my name and age" - personal information is unnecessary
- Avoid going to the doctors again > follow instructions tightly
- Highly cognitive

### ADJUSTMENTS FOR NEXT ROUND

Based on the problems noticed in 1st round and the findings, the following adjustments are
to be made for 2nd round for further exploration —

#### DEVELOPMENT OF LABEL SYSTEM

- Information hierarchy: organized based on card-sorting
  result in 1st round
- 4-5 label samples with icons for testing
- Manual for language use
- Storage: focus on the storage sequence/order (e.g. time,
  size, name), instead of location

#### TESTING ACTIVITIES

- Continue tests with icons (to gain more insights on
  different understanding from users)
- Continue tests with composition (to check any problems
  regarding the developed label system)
- Storage activity: provide different sizes and types of
  medicine and cabinets/drawers (to examine organization
  patterns)
- Languages: Narrow down to "pills counting" and "identity
  relation" activity

#### EXPERIMENTAL DESIGN

IDEA 1 (DIGITAL):

- Adding QR codes on label to test users' awareness &
  willingness on learning extra information
- Simple digital prototype (to test types of information
  needed, flow of information, interactivity between the
  user and the design, overall effectiveness etc.)

IDEA 2 (PHYSICAL PRODUCT):

- Packaging/product that can hold/calculate number
  of pills
- Gathering all pills at once

# USER TEST

## 2ND ROUND

16 - 23 NOV

**Second Round User Test**

16 Nov-23 Nov

| | | Medications | Sight Problems |
|---|---|---|---|
|  | **Amy**<br>55, Female<br>Filipino<br>Administration work<br><br>Home Structure:<br>Husband, 3 kids, a dog | Supplements (Vitamin C) | Far-sighted.<br>uses reading glasses |
|  | **Aarón**<br>63, Male<br>Hong Kong - Spanish<br>Translator, industrial design graduate<br><br>Home Structure:<br>Wife | Cannot take many kinds of medicine due to cardiac condition<br>Supplements (Q10, multiple vitamins) | Glasses all the time |
|  | **Michael**<br>65, Male<br>Hong Kong - British<br>Insurance, post-secondary<br><br>Home Structure:<br>Wife, 2 dogs | Anti-inflammatory pills (Car accident 2019),<br>Supplements (Vitamin D, omega-3, calcium, magnesium) | Far-sighted (reading glasses),<br>Floaters and flashers |
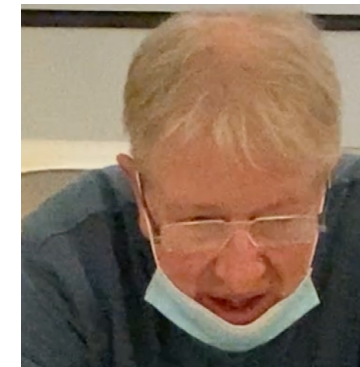
**User Test Structure**

| Sessions | Durations |
| --- | --- |
| Introduction | 5 minutes |
| Personal Information | 5 minutes |
|    1.  Name, Age & Gender, Education Level<br>   2.  Medical history & sight problems<br>   3.  Family structure | |
| Image Design | 15 minutes |
|    1.  Build the picked random sentence with the icon cards (2 mins)<br>   2.  Build the picked random sentence with the icon cards (1 min) | |
| Composition Design | 10 minutes |
|    1.  Study the 3 labels and match with the corresponding patient profile (10s per each) | |
| Content Design | 15 minutes |
|    1.  Organize priority/importance of contents on label | |
| Break | 5 minutes |
| Medicine Storage | 15 minutes |
|    1.  Make use of ALL the medicine and objects and place the icons on the cabinet & drawers ideally | |
| Language | 10 minutes |
|    1.  Collect pills according to 4 types of instructions<br>   2.  Rate the relation with yourself to different identities | |
| Follow-Up Questions: Medicine-Taking Experience | 10 minutes |
| | TOTAL —<br>1 hour 30 minutes |

**Image Design**    Amy 🟠
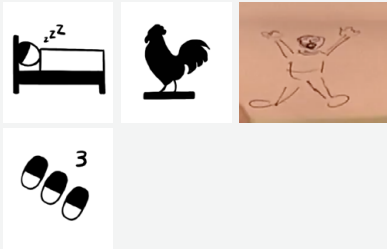
ROUND ONE: 2 MINUTES
Pick 1 cards, hide it from us, try to build
the sentence with pictures in front you
within 2 mins!

Sentence given:
"Take half tablet, before meals three times a day"



**Selected icons**
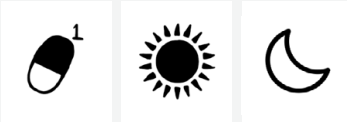
**The Guess**

One pill, morning night and evening/ a pill for three times a day

Sentence given:
"Take three tablets after getting up on a empty stomach"



**Selected icons**

**The Guess**

What? Three tablets in the morning

**Miscommunication**

Sunrise or sunset?

One or half a pill?

Stomach icon is not understandable:
Can't see it's an empty stomache

Insights

Older generation are more used to reading, not a visual person. They prefers words over images.

Simple icons are preferred, current ones are too confusing

## Amy 🟠

**ROUND TWO: 1 MINUTE**
Pick 1 cards, hide it from us, try to build
the sentence with pictures in front you
within 1 mins!

**Miscommunication**

**Sentence given:**
"Take this medicine with a glass of
water, no drinking alcohol. Store the
medicine at room temperature"



### Selected icons



### The Guess

No drinking when taking
medicine/ no drinking
alcohol when u are sick

 Temperature yes,
but not seen as
room temparature

 Rooster is preferred
for "morning" as Amy
comes from the
Philippines. When they
hear the rooster, this is
when you get up.

    **Cultural context**

**Sentence given:**
"Take three tablets after getting up
on a empty stomach"



### Selected icons



### The Guess

No drinking when taking
medicine/ no drinking alcohol
when u are sick

## Aarón 🟢

**ROUND ONE: 2 MINUTES**
Pick 1 cards, hide it from us, try to build
the sentence with pictures in front you
within 2 mins!

**Miscommunication**

**Sentence given:**
"Take half a tablet before meal
three times a day"



### Selected icons



### The Guess

Take this medicine with meal.
food three times a day

 One or half a pill?

 Before or after? or with
meal? Not clear

 "No alcohol" icon was
not seen as no alcohol

**Sentence given:**
"Take this medicine with a glass
of water. Avoid milk and alcohol.
And store the medicine at room
temperature"



### Selected icons



### The Guess

Dissolve medicine in water,
Store in refrigerator in room
temperature

## Aarón

**ROUND TWO: 1 MINUTE**
Pick 1 cards, hide it from us, try to build the sentence with pictures in front you within 1 mins!

**Sentence given:**
"Two tablets with lunch, This medicine can cause headache and dizziness"



**Selected icons**



**The Guess**

This medicine is intended as drops for ears, take this medicine with meals

**Insights**



Bed icon and moon icon differs in that one clearly states "before sleep" but not "at night"

**Sentence given:**
"This medicine is intended as drops for eyes and nose. Apply the medicine before going to bed. This medicine may follow to muscle and abdominal pain"



**Selected icons**



**The Guess**

Take the medicine for nose or drop in eyes before sleep

---

## Michael

**ROUND ONE: 2 MINUTES**
Pick 1 cards, hide it from us, try to build the sentence with pictures in front you within 2 mins!

Drew his own icon for "getting up". Added facial expression to show yawning.

**Miscommunication**

**Sentence given:**
Take 3 tablets after getting up on an empty stomach.



**Selected icons**



**The Guess**

**1st:**
This medicine needs to be taken 3 times a day, first and last intake should be at before you sleep, and after you wake up.

**2nd:**
Three pills taken after you wake up.



The stomach icons are confusing, not clearly highlighting the 'empty' condition of stomach.



3 times a day or 3 pills each time?

**2nd trial**



**Selected icons**



Added the 'breakfast' icon after the 'tablets' icon, to imply the medicine should be taken before the breakfast.

Michael ●

ROUND TWO: 1 MINUTE
Pick 1 cards, hide it from us, try to build
the sentence with pictures in front you
within 1 mins!

Sentence given:
"Two tablets with lunch, This medicine
can cause headache and dizziness"



**Selected icons**



**The Guess**

Two pills during meal,
consume with water.

---

2nd trial

**Selected icons**



**The Guess**

Two pills during meal,
consume with water. Take
it whenever necessary.

Drew his own icon to show side effects of
headache and dizziness. Again, he directly
described a person with facial expression.

**Miscommunication**


'With meal' icon was
replaced with just 'meal'
icon. Perhaps it's because
he had to add the 'two pills'
icon, and it might cause
confusion if there are two
icon for pill itself.


He thought this 'stomach'
icon is unnecessary, later
removed after the guesses.


Not sure what exactly it
tried to imply, perhaps the
warning of side effects.

**Insights**

He drew the icon to show conditions
of the medicine user with facial
expressions. It can be seen that he
thinks that it is easier to understand
when the icon shows humanity, directly
describing a person's behavior.

Unlike how other users took the icons
separately in individual meanings, he
arranged the icons as a set of series in
consequences, from left to right.

Interpretation on the icons showing a
situation or condition variable; after/
during/before the situation or condition.

---

**Image Design:**
**ANALYSIS**

Visual Understanding

This round of testing shown similar results with round 1, in that it is observed that
users would hesitate for a while before guessing the sentence and/or simply get
a different interpretation from the expected. Not just for misunderstanding caused
by single icons, but contradicting or complex meanings formed by a combination
of images. While we did narrow down the number of icons after evaluating the 1st
user test. these problems are still present, indicating whether it is really
necessary for us to use icons to express these information in an effective
medicine label.

Actual Application

From this 2nd round of testing, we have concluded that the use of icons is not
necessarily the most effective way to communicate intake methods and
precautions due to a large amount of possible interpretations by each user.
Most of our users have shown or indicated that it's much more easiler and
accurate to be explained by actual text, especially for the older generation (as
supposed to younger people who are more familiar with visual expressions).

Also, as we invited Michael to draw the images he would expect to see with the
corresponding instructions, it was interesting to see that he would use more
"human" expressions (e.g. a person with a yawning expression to indicate "getting
up"). However, it is important to note that there is a possibility that this icon might
also be interpreted as "before sleep"; also judging from the fact that most of our
users are extremely self-aware and prefer more sophisticated design, the use of
these icons may have a negative impression from them, once again proving that
the use of icons for these information might cause unnecessary misunderstand-
ings.

**Composition Design**

You will have 10s to read 1 card (total 3), try to find the person with the labels. After you find the first one, we will then give you the second card.

### Label A — David Kwok

**David Kwok**
Gender: M, Age: 63

**Precaution**
This medicine can cause dizziness, nausea, and digestive problems.

Statins 200mg (50 tablets)
This medicine improves heart function and relieves the heart from beating fast.

**Medicine intake**
Please take 1 tablet orally after meal, 3 times a day

North Lantau Hospital
**Contact info.**
0000 0000

Issue date: 00-00-0000

**Medicine appearance**
This medicine is a white, oval tablet imprinted with 'APO' and 'ATV 20'.

**Medicine storage**
Store your medicines in a cool, dry place under 25 °C.

### Label B — Clive Ng

**Clive Ng**
Gender: M, Age: 71

**Precaution**
If you have allergic reactions such as rash after taking this medicine, please contact the hospital immediately.

RoActemra 400mg (30 tablets)
This medicine relieves joint pain and prevents swelling of joints.

**Medicine intake**
Please take 1 tablet orally after meal, 3 times a day.

North Lantau Hospital
**Contact info.**
0000 0000

Issue date: 00-00-0000

**Medicine appearance**
This medicine is a white coloured, pillow shaped tablet imprinted with '236' on one side.

**Medicine storage**
Store your medicines in a cool, dry place under 25 °C.

### Label C — Mary Lau

**Mary Lau**
Gender: F, Age: 65

Precaution
This medicine can cause dizziness, nausea, and digestive problems.

Meclizine HCL 70mg (5 tablets)
This medicine is for dizziness and nausea.

**Medicine intake**
Please take 1 tablet orally whenever necessary.

North Lantau Hospital
**Contact info.**
0000 0000

Issue date: 00-00-0000

Medicine appearance
This medicine is a blue, oval tablet imprinted with 'par' and '034'

Medicine storage
Store your medicines in a cool, dry place under 25 °C.

### Label D — Karen Paige

**Karen Paige**
Gender: F, Age: 75

**Precaution**
This medicine can cause dizziness, nausea, and digestive problems.

Metoclopramide 100mg (20 tablets)
This medicine is for skin diseases such as skin attacks, hives, and itching.

**Medicine intake**
Please take 1 tablet orally whenever necessary.

North Lantau Hospital
**Contact info.**
0000 0000

Issue date: 00-00-0000

**Medicine appearance**
This medicine is a white, round tablet imprinted with 'N' and '581'

**Medicine storage**
Store your medicines in a cool, dry place under 25 °C.

---

## User Responses

### Amy

**A.**
1. Took 23 Seconds to find the right profile.
2. "Remembered the symptoms - heart disease."

**What caught your eyes first?**
- Efficacy of the medicine
- Precautions
- Did not pay attention to names

**B.**
1. Took 19 Seconds to find the right profile.
2. "The profile's disease accords to the medicine efficacy."

**Comparing with Label A**
- A is easier and clearer
- Colour highlights on name and intake instructions

**C.**
1. Took 34 Seconds to find the right profile.
2. "I was reading for the function of the medicine, the symptoms and disease. I could not remember everything else."

**D.**
1. Took 21 Seconds to find the right profile.

### Aarón

**B.**
1. Took 40 Seconds to find the right profile.

**What caught your eyes first?**
1. Age.
2. Gender
3. Medicine efficacy

**C.**
1. Took 10 Seconds to find the right profile.

**Comparing with real life medicine**
- Would ignore personal information as I know the medicine is for him

### Michael

**C.**
1. Took 5 Seconds to find the right profile.
2. "The symptom was itchiness, so I knew it from her photo."

**Focusing on medicine efficacy**
- Focused on the consequences and why she takes the medicine

**D.**
1. Took 15 Seconds to find the right profile.

**Personal information**
- Focused more on the gender but not age, as some people don't look their age.

---

## ADDITIONAL INSIGHTS

### Amy

**A.**
1. She could easily recognize about this label's medicine because she is familiar with the heart disease medication due to family background.
2. She is sensitive to side effects, so it led her to unconsciously find the precautions.
3. Placing efficacy at the middle of the label help identify the medicine.

**B.**
1. Medicine efficacy as main hint
2. Dividing space with colors helps sort out information.

### Aarón

**B.**
1. He sorted out the profiles according to the gender first, and hesitated between two profiles, the right one and the one which had closest age to the answer. It shows Aarón's organized personality and comparatively acute memory.

**C.**
An extra environment of the user taking same medications with his family member.

### Michael

**D.**
Especially fast answering time shows his high cognitive ability and memory. He accurately sorts necessary information very quick.

---

**LABEL PREFERENCES**     A > B     A > C > D > B     B > A

## Content design

### Card sorting

Amy 🟠
Aarón 🟢
Michael 🟣

Hospital information ▨
Patient information ▨
Medicine information ▨
Medicine instruction ▨

**Most Important**

🟠 🟢 🟣

| Medicine Name | Medicine name | My name |
| Issue date | My name | My age |
| Quantity of pills | Intake Times & Methods | Medicine name |
| Intake time and method | Precautions | Intake Times & Methods |
| Precautions | Issue date | Appearance of the pill |
| Storage method | Hospital/ Clinic Name | Issue date |
| My name | Hospital/Clinic phone numbers | Precautions |
| Hospital/Clinic name | Name of doctor | Quantity of pills |
| Hospital/Clinic phone numbers | Appearance of the pill | Storage methods |
| Name of doctor | Quantity of pills | Hospital/Clinic phone numbers |
| My age | Storage methods | Name of doctor |
| Appearance of the pill | My age | Hospital/ Clinic Name |

**Least Important**

62

### Card sorting    Amy 🟠

The medicine functions is actually missing, do you think it's important to have it on the labels?

A: "We usually associate it with the name of the medicine, especially we can search it up online. We also have a medical background, so it's easier for us. My husband is a nurse, he knows what is he taking, he knows how to take care of himself."

**Insights**

[Open to digital aid]

"I will always look at the expiry date, especially for the headache thing...sometimes you take the panadol and it's expired...we have to throw away the stuff...and the allergy pills also... "

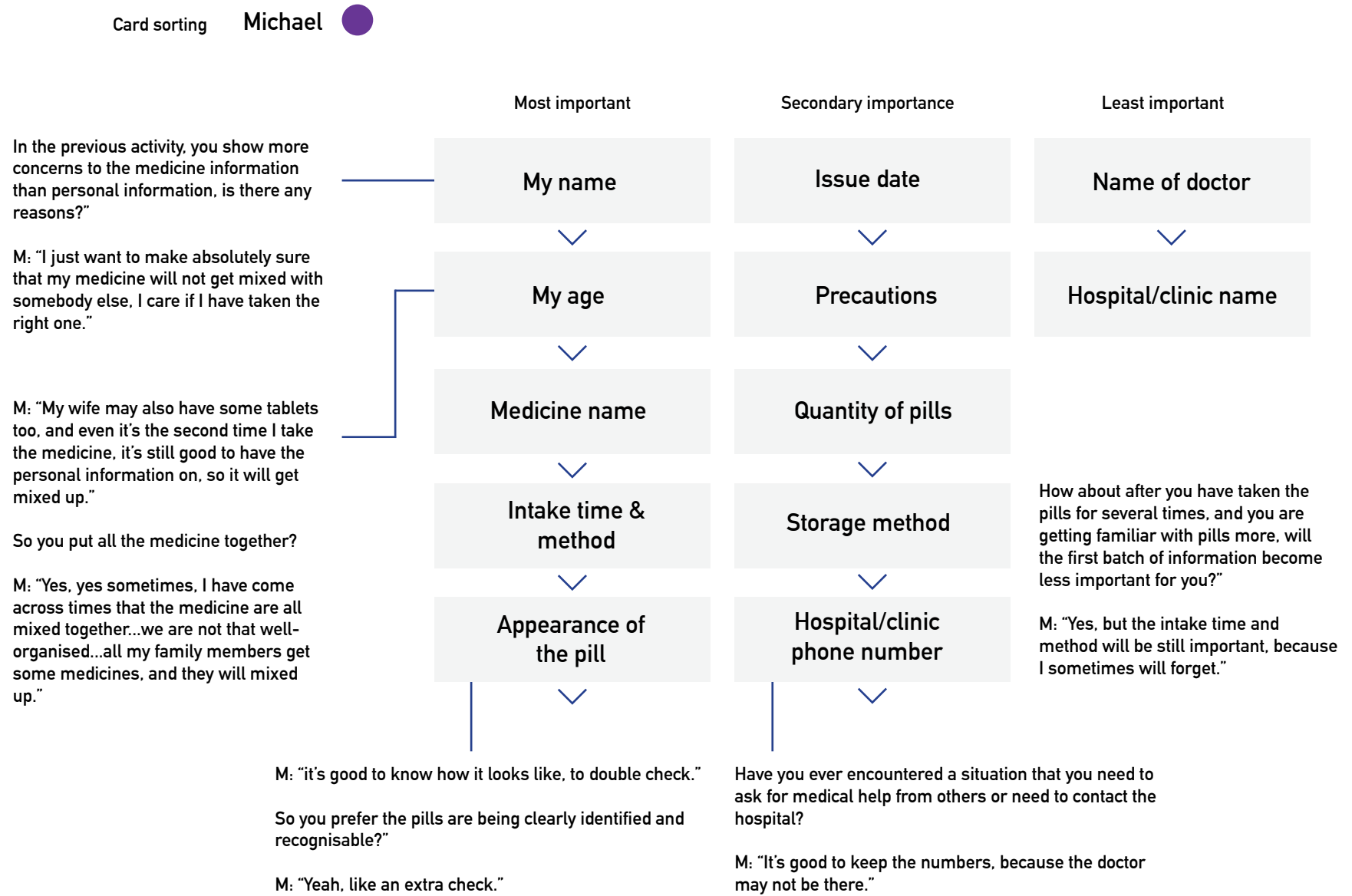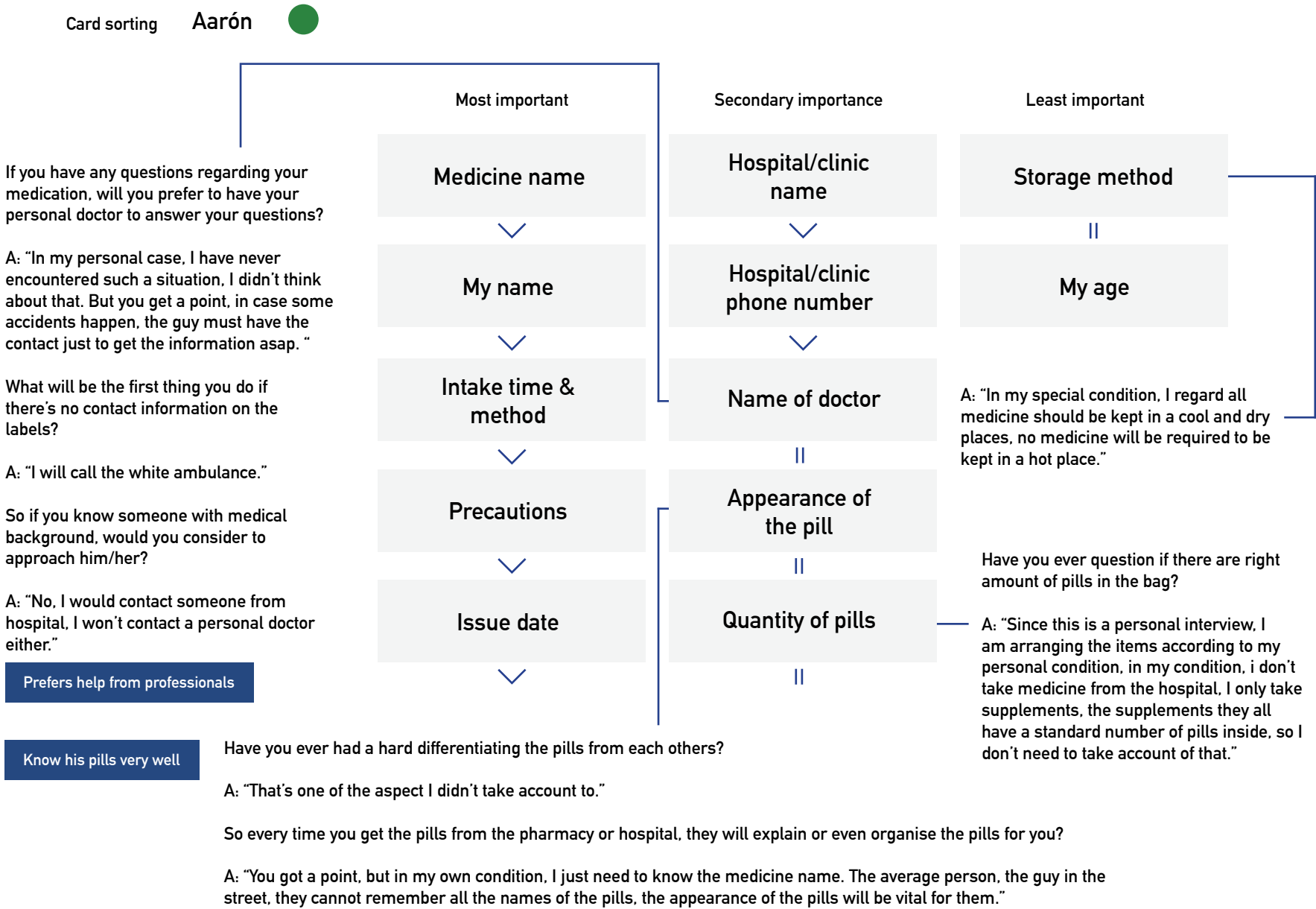Do you often buy your own pills or you just get them from the hospital?

A: "Well just like antihistamine, my children has to take it because he has allergy issues. And we buy it...And those stomach pills... But for panadol we get it from the clinic... They give a lot, so you have to store them."

So they will give you a date?

"Because they usually give you a lot, both private and public, they are the same, and you go there once, they will give you all the set of medicine, in HK, they assume to have certain problems, for instance they will give you medicine for coughing, but you are not coughing yet... just in case you have it."

| Most important | Secondary importance | Least important |
|---|---|---|
| Medicine name | My name | My age |
| ⌄ | = | = |
| Issue date | Hospital/Clinic name | Appearance of the pill |
| ⌄ | = | |
| Quantity of pills | Hospital/Clinic phone number | |
| ⌄ | = | |
| Intake time & method | Name of doctor | |
| ⌄ | = | |
| Precautions | | |
| ⌄ | | |
| Storage method | | |
| ⌄ | | |

So you won't mix up the pills.

A: "Actually you are right, especially you are taking different kinds of medications, you have an underlying conditions, so you have to have different kinds of colours... For example, my husband needs to take a medicine to protect his stomach from having too much medicine, so the pills are in yellow colour, oval shape. I also get orange and white in different shapes. I can remember them pretty well."

So if you have any questions regarding the medicine, will you just search online or ask someone to help?

A: "A: " Sometimes we call families to know if the medicine is right for us. We have our source... We will double check the generic name, scientific name and the nickname of the medicine... We will search it online."

So you will use your phone to search?

"I think I am still computer literate, so I am OK with it."

[Open to digital aid]

[Usually get pills from pharmacies instead of hosipitals]

[Have more pills at home than they actually need]

63

## Card sorting   Aarón 🟢

|  | Most important | Secondary importance | Least important |
|---|---|---|---|
|  | Medicine name | Hospital/clinic name | Storage method |
|  | My name | Hospital/clinic phone number | My age |
|  | Intake time & method | Name of doctor |  |
|  | Precautions | Appearance of the pill |  |
|  | Issue date | Quantity of pills |  |

If you have any questions regarding your medication, will you prefer to have your personal doctor to answer your questions?

A: "In my personal case, I have never encountered such a situation, I didn't think about that. But you get a point, in case some accidents happen, the guy must have the contact just to get the information asap. "

What will be the first thing you do if there's no contact information on the labels?

A: "I will call the white ambulance."

So if you know someone with medical background, would you consider to approach him/her?

A: "No, I would contact someone from hospital, I won't contact a personal doctor either."

**Prefers help from professionals**

**Know his pills very well**

A: "In my special condition, I regard all medicine should be kept in a cool and dry places, no medicine will be required to be kept in a hot place."

Have you ever question if there are right amount of pills in the bag?

A: "Since this is a personal interview, I am arranging the items according to my personal condition, in my condition, i don't take medicine from the hospital, I only take supplements, the supplements they all have a standard number of pills inside, so I don't need to take account of that."

Have you ever had a hard differentiating the pills from each others?

A: "That's one of the aspect I didn't take account to."

So every time you get the pills from the pharmacy or hospital, they will explain or even organise the pills for you?

A: "You got a point, but in my own condition, I just need to know the medicine name. The average person, the guy in the street, they cannot remember all the names of the pills, the appearance of the pills will be vital for them."

## Card sorting   Michael 🟣

|  | Most important | Secondary importance | Least important |
|---|---|---|---|
|  | My name | Issue date | Name of doctor |
|  | My age | Precautions | Hospital/clinic name |
|  | Medicine name | Quantity of pills |  |
|  | Intake time & method | Storage method |  |
|  | Appearance of the pill | Hospital/clinic phone number |  |

In the previous activity, you show more concerns to the medicine information than personal information, is there any reasons?"

M: "I just want to make absolutely sure that my medicine will not get mixed with somebody else, I care if I have taken the right one."

M: "My wife may also have some tablets too, and even it's the second time I take the medicine, it's still good to have the personal information on, so it will get mixed up."

So you put all the medicine together?

M: "Yes, yes sometimes, I have come across times that the medicine are all mixed together...we are not that well-organised...all my family members get some medicines, and they will mixed up."

How about after you have taken the pills for several times, and you are getting familiar with pills more, will the first batch of information become less important for you?"

M: "Yes, but the intake time and method will be still important, because I sometimes will forget."

M: "it's good to know how it looks like, to double check."

So you prefer the pills are being clearly identified and recognisable?"

M: "Yeah, like an extra check."

Have you ever encountered a situation that you need to ask for medical help from others or need to contact the hospital?

M: "It's good to keep the numbers, because the doctor may not be there."

**Composition Design & Content**

**ANALYSIS**

Composition Design

For this round, we have developed 4 more comprehensive labels for the profile-matching exercise. Those included ones with use of icons and colour blocks on different information. As users have stated that they would always search for the medicine efficacy and precautions first instead of focusing on the patient's personal information, it can be seen that it is important to highlight such parts of information on the label. Overall, Label A was seen to be the most preferred by users. This might be due to the clear use of colour blocks to indicate important information as well as with the aid of icons. However, it is important to consider that this test did not examine the effectiveness of icons and judging from the previous Icons Design test, icons are not necessarily the most useful on labels. This might indicate that visualization can be included in labels, but with regards to other important information other than intake methods and precautions.

Content Importance

Pharmacies usually give a large amount of pills at once while hospitals would give just the right amount for the corresponding dosage. As most of our users actually get their medication from the pharmacies instead of hospitals, It is important for the labels to indicate clearly how much should be taken at once and for how long, as they actually have more pills at home than they actually need it.

In addition, it was also found that some users would double check the appearance of the pills before consuming them. This indicates that it might be useful to have simple icons related to this information on the label (which is rarely found on Hong Kong medical labels).

From the overall card-sorting result, we can also see that users would put hospital-related information at a lower priority. This corresponds to our users' preference of searching online for information first before asking help with professionals, proving their independency and will to learn more. Nonetheless, they still insisted that this information is important to have on labels in case of emergencies.
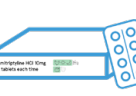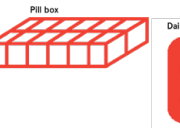
**Medicine Storage**

For this round, we have focused more on the specific placements of medicine instead of the home locations.

2 scenarios:

Drawer

Cabinet
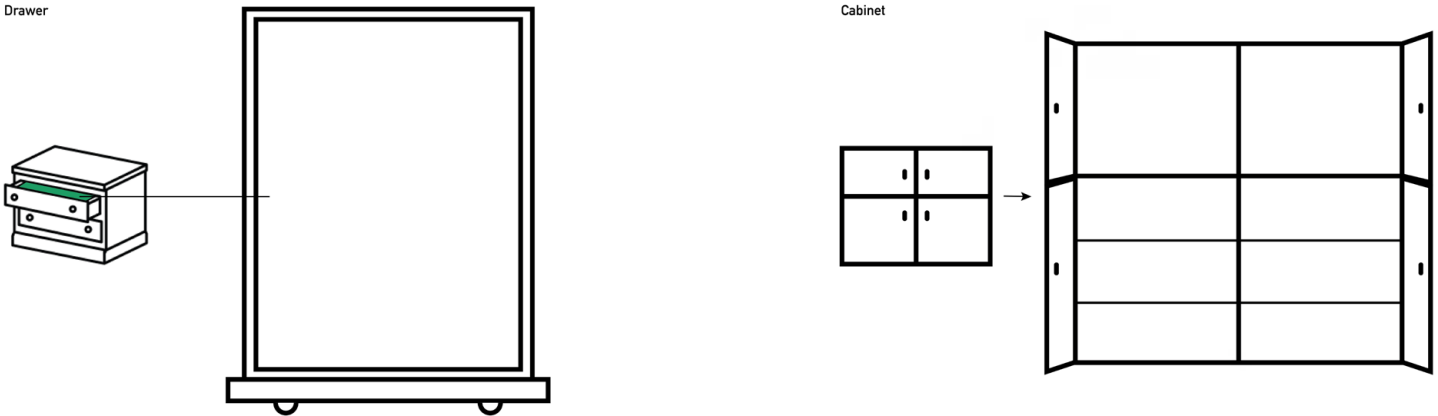
Medications of different types of containers, intake schedules and issue dates are to be organized:
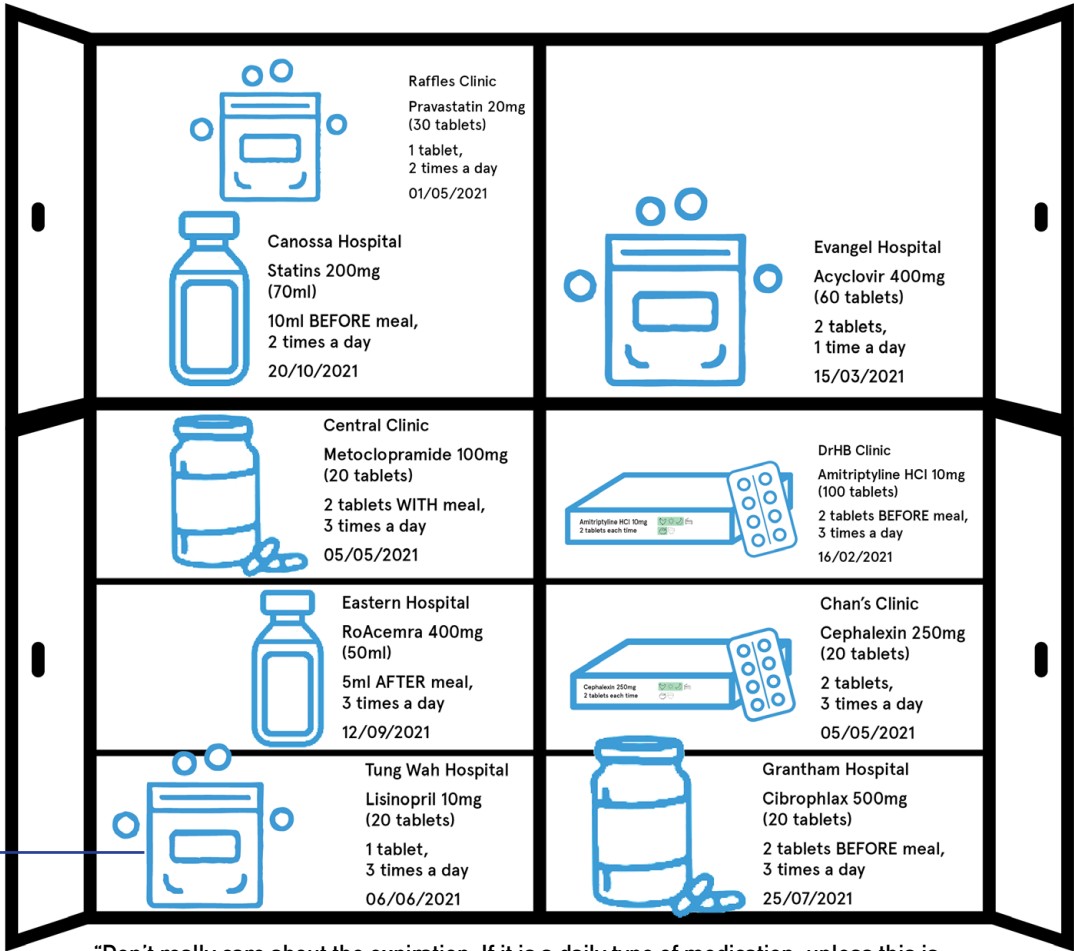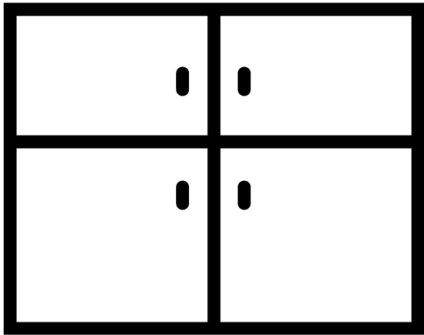
## Amy 🟠

### Cabinet (*Dining Room)

"If we put it in the kitchen or bathroom, we may accidentally get it wet."

Most accessible storage space (dining room: where they take medication)

1. Sort by <u>intake schedule</u> (frequency of use) (3 times a day: lowest (most frequent & easiest reach)
2. "Before/with/after meal" organization order doesn't matter
3. Don't really care about the expiration as the medications are daily
4. All medicine in one cabinet
5. Placed near the dining table — accessible and with water, and family members mostly take their medications on the dining table.



Raffles Clinic
Pravastatin 20mg (30 tablets)
1 tablet, 2 times a day
01/05/2021

Evangel Hospital
Acyclovir 400mg (60 tablets)
2 tablets, 1 time a day
15/03/2021

Canossa Hospital
Statins 200mg (70ml)
10ml BEFORE meal, 2 times a day
20/10/2021

Central Clinic
Metoclopramide 100mg (20 tablets)
2 tablets WITH meal, 3 times a day
05/05/2021

DrHB Clinic
Amitriptyline HCI 10mg (100 tablets)
2 tablets BEFORE meal, 3 times a day
16/02/2021

Eastern Hospital
RoAcemra 400mg (50ml)
5ml AFTER meal, 3 times a day
12/09/2021

Chan's Clinic
Cephalexin 250mg (20 tablets)
2 tablets, 3 times a day
05/05/2021

Tung Wah Hospital
Lisinopril 10mg (20 tablets)
1 tablet, 3 times a day
06/06/2021

Grantham Hospital
Cibrophlax 500mg (20 tablets)
2 tablets BEFORE meal, 3 times a day
25/07/2021

### Insights

Sort by intake schedule
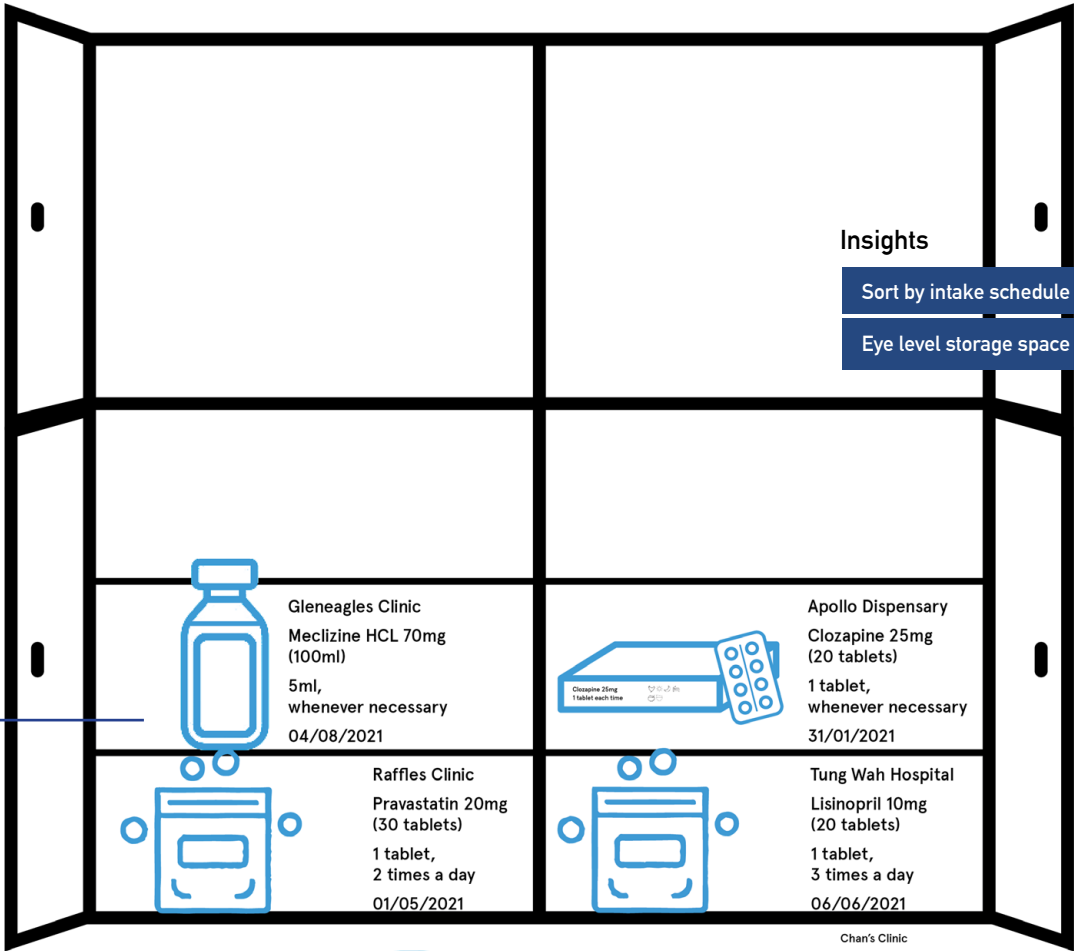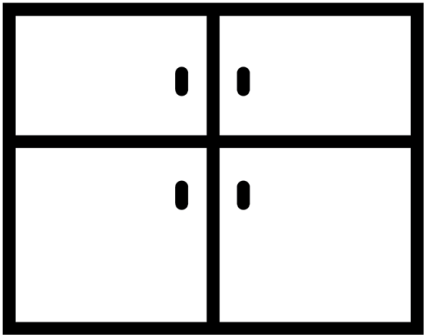
All medicine in one storage space

"Don't really care about the expiration. If it is a daily type of medication, unless this is like Panadol, then I will go by the expiration date. And I will put the medications with closer expiration date upper."

Less emphasis on expiration dates for daily medicine

68

## Aarón 🟢

### Cabinet (*Kitchen)

1. Sorted by <u>intake schedule</u>
2. Put everything in the 1st and 2nd levels for easiest reach (eye level)
3. Put 3 times a day in same section, 2 times a day in same section
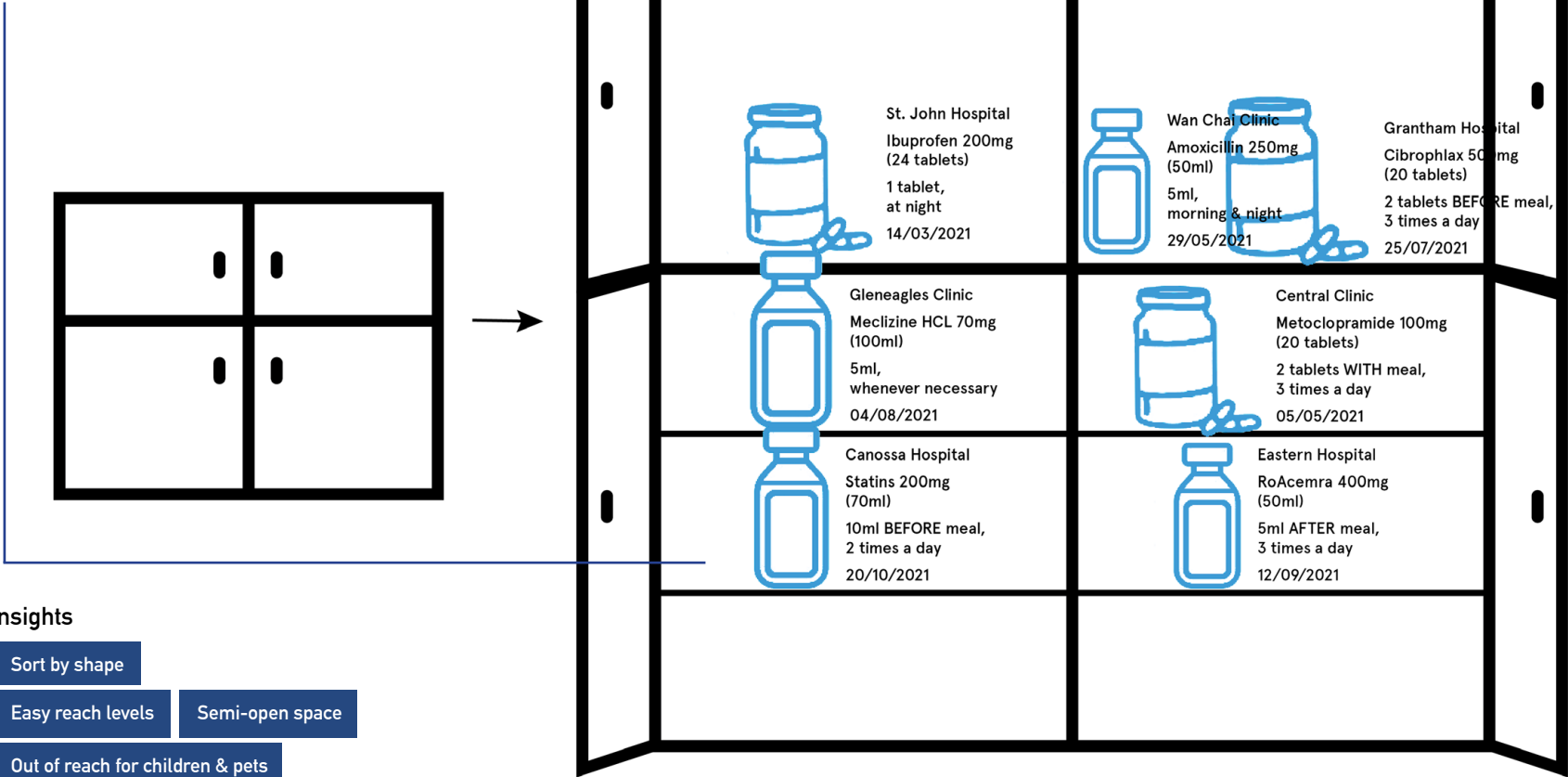4. "Whenever necessary": not daily, so 2nd level

### Insights

Sort by intake schedule

Eye level storage space



Gleneagles Clinic
Meclizine HCL 70mg (100ml)
5ml, whenever necessary
04/08/2021

Apollo Dispensary
Clozapine 25mg (20 tablets)
1 tablet, whenever necessary
31/01/2021

Raffles Clinic
Pravastatin 20mg (30 tablets)
1 tablet, 2 times a day
01/05/2021

Tung Wah Hospital
Lisinopril 10mg (20 tablets)
1 tablet, 3 times a day
06/06/2021

Central Clinic
Metoclopramide 100mg (20 tablets)
2 tablets WITH meal, 3 times a day
05/05/2021

DrHB Clinic
Amitriptyline HCI 10mg (100 tablets)
2 tablets BEFORE meal, 3 times a day
16/02/2021

Eastern Hospital
RoAcemra 400mg (50ml)
5ml AFTER meal, 3 times a day
12/09/2021

Canossa Hospital
Statins 200mg (70ml)
10ml BEFORE meal, 2 times a day
20/10/2021

Grantham Hospital
Cibrophlax 500mg (20 tablets)
2 tablets BEFORE meal, 3 times a day
25/07/2021

Chan's Clinic
Cephalexin 250mg (20 tablets)
2 tablets, 3 times a day
05/05/2021

DrHB Clinic
Amitriptyline HCI 10mg (100 tablets)
2 tablets BEFORE meal, 3 times a day
16/02/2021

69

## Michael 🟣

### Cabinet (*In between open kitchen & dining area)

1. Sort by shapes: Bottles in cabinets instead of drawers
2. Longer expiry dates: lower level (less reached)
3. Semi-open space (out of sight for kids & pets, but easy reach)

St. John Hospital
Ibuprofen 200mg
(24 tablets)
1 tablet,
at night
14/03/2021

Wan Chai Clinic
Amoxicillin 250mg
(50ml)
5ml,
morning & night
29/05/2021

Grantham Hospital
Cibrophlax 50mg
(20 tablets)
2 tablets BEFORE meal,
3 times a day
25/07/2021

Gleneagles Clinic
Meclizine HCL 70mg
(100ml)
5ml,
whenever necessary
04/08/2021

Central Clinic
Metoclopramide 100mg
(20 tablets)
2 tablets WITH meal,
3 times a day
05/05/2021

Canossa Hospital
Statins 200mg
(70ml)
10ml BEFORE meal,
2 times a day
20/10/2021

Eastern Hospital
RoAcemra 400mg
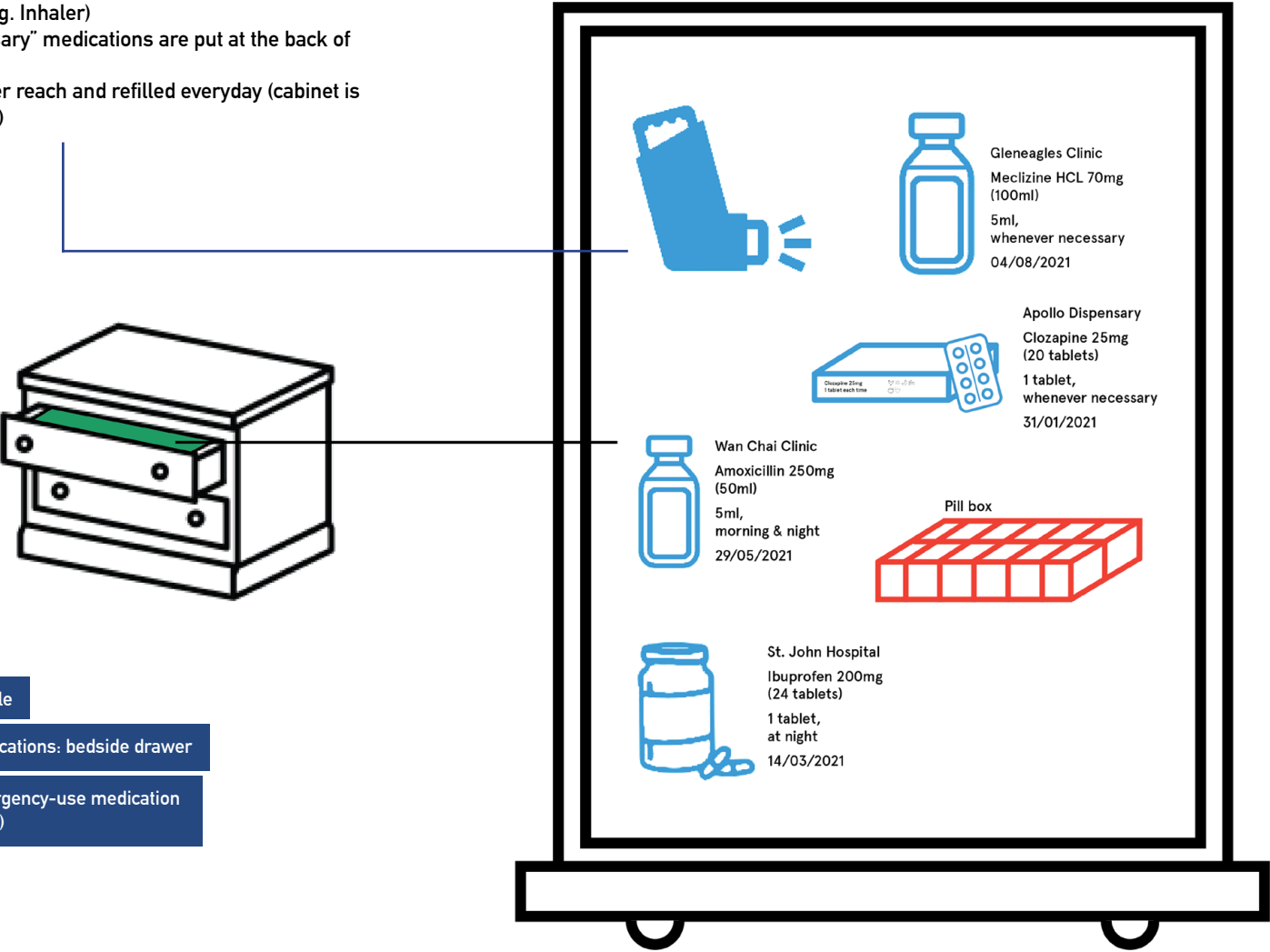(50ml)
5ml AFTER meal,
3 times a day
12/09/2021

### Insights

- Sort by shape
- Easy reach levels
- Semi-open space
- Out of reach for children & pets
- Placement order within a shelf: by issue date

## Amy 🟠

### Bedside Drawer

1. For emergency (e.g. Inhaler)
2. "Whenever necessary" medications are put at the back of the drawers.
3. Pill box is an easier reach and refilled everyday (cabinet is mostly for storage)

Gleneagles Clinic
Meclizine HCL 70mg
(100ml)
5ml,
whenever necessary
04/08/2021

Apollo Dispensary
Clozapine 25mg
(20 tablets)
1 tablet,
whenever necessary
31/01/2021

Wan Chai Clinic
Amoxicillin 250mg
(50ml)
5ml,
morning & night
29/05/2021

Pill box

St. John Hospital
Ibuprofen 200mg
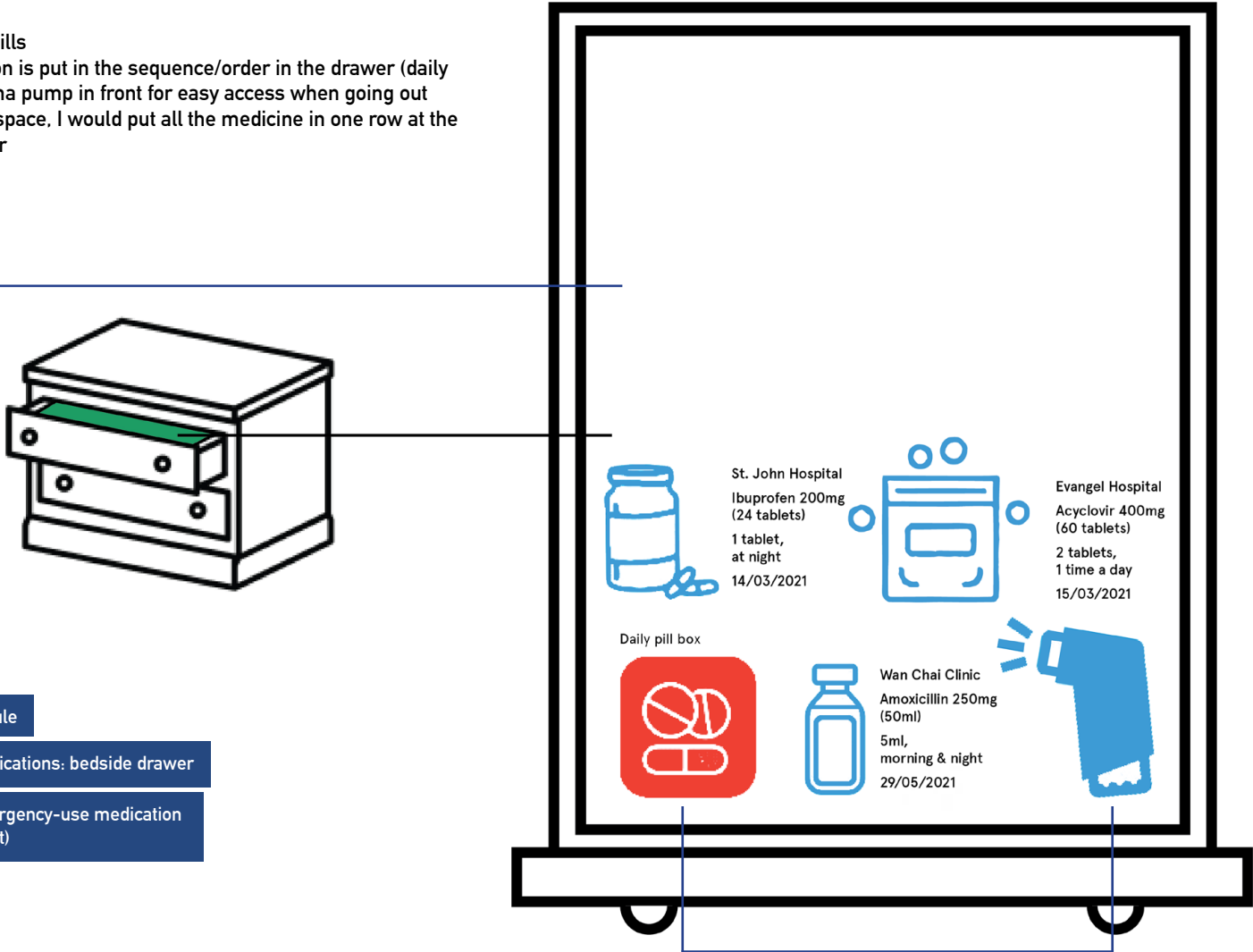(24 tablets)
1 tablet,
at night
14/03/2021

### Insights

- Sort by intake schedule
- Morning & night medications: bedside drawer
- Convenience for emergency-use medication (e.g. inhaler, ointment)

## Aarón ●

### Bedside Drawer

1. Morning & night pills
2. Extra consideration is put in the sequence/order in the drawer (daily pill box and asthma pump in front for easy access when going out
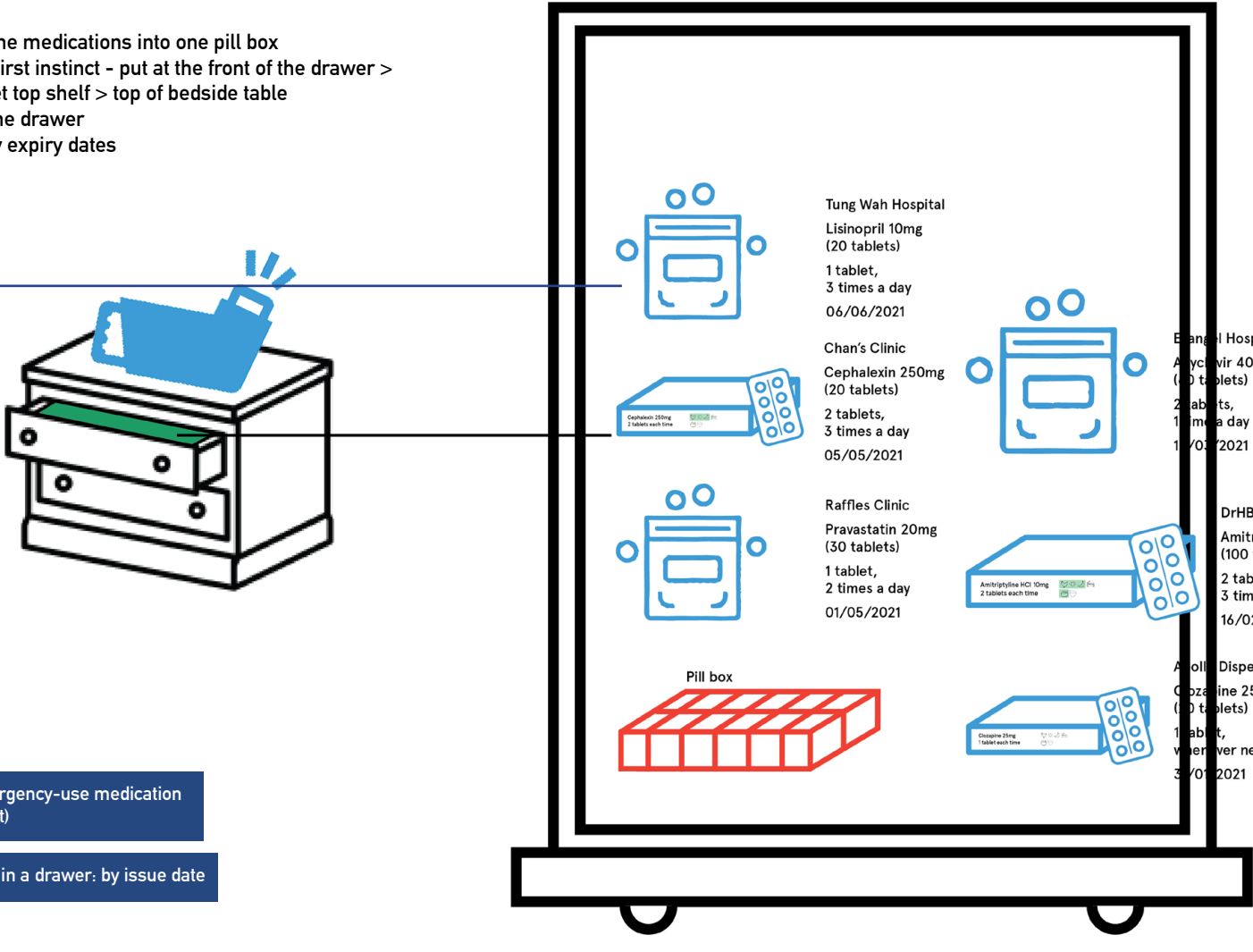3. If there are extra space, I would put all the medicine in one row at the front of the drawer



St. John Hospital
Ibuprofen 200mg
(24 tablets)

1 tablet,
at night
14/03/2021

Evangel Hospital
Acyclovir 400mg
(60 tablets)

2 tablets,
1 time a day
15/03/2021

Daily pill box

Wan Chai Clinic
Amoxicillin 250mg
(50ml)

5ml,
morning & night
29/05/2021

**Insights**

Sort by intake schedule

Morning & night medications: bedside drawer

Convenience for emergency-use medication (e.g. inhaler, ointment)

Front row for carry-out medication (daily pill box, inhaler)

"Before I go out, I will come to the drawer and pick up the pill box and the inhaler."

---

## Michael ●

### Bedside Drawer

1. Prefer to repack the medications into one pill box
2. Asthma inhaler: First instinct - put at the front of the drawer > changed to cabinet top shelf > top of bedside table
3. Daily intakes: in the drawer
4. Sort placement by expiry dates



Tung Wah Hospital
Lisinopril 10mg
(20 tablets)

1 tablet,
3 times a day
06/06/2021

Chan's Clinic
Cephalexin 250mg
(20 tablets)

2 tablets,
3 times a day
05/05/2021

Raffles Clinic
Pravastatin 20mg
(30 tablets)

1 tablet,
2 times a day
01/05/2021

Evangel Hospital
Acyclovir 400mg
(60 tablets)

2 tablets,
1 time a day
15/03/2021

DrHB Clinic
Amitriptyline HCl 10mg
(100 tablets)

2 tablets BEFORE meal,
3 times a day
16/02/2021

Apollo Dispensary
Clozapine 25mg
(10 tablets)

1 tablet,
whenever necessary
31/01/2021

Pill box

**Insights**

Sort by shape

Convenience for emergency-use medication (e.g. inhaler, ointment)

Placement order within a drawer: by issue date

"I will have the later expired ones at the back"

## Medicine Storage Pattern
## ANALYSIS

### Sorting Method

It was found that users would sort the medications both by the intake schedule and the shape of the packaging. This indicates an importance for the packaging of the medicine to be flexible enough to be organized in any way possible, while important information are still easily seen in any position. Issue dates are less emphasized as for daily medications, the rate of consuming and finishing it up is usually shorter and controlled.

### Location

Users have indicated their preference in storing medication in a semi-open space if possible, and easily reached (e.g. eye level or slightly lower for easy reach). Convenience is also highly emphasized. For example, putting morning and night pills in the bedside drawer for easy intake and like mentioned in the 1st round, asthma inhalers would always be placed in the front row in their bedside tables for emergency usages. As it was also found that users usually have the habit of picking up the medicine simply by recognizing the bottles instead of looking at the names on the labels, this may indicate that clear recognition needs to be done on the bottle directly instead of just the labels, which is another thing to put into consideration for the experimental design.

---

## Languages

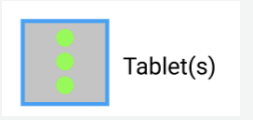Collect the pills according to the instructions
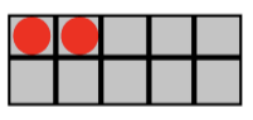
### Amy ●



A: "This one is quite good, cause then you don't need to read, you can just look at the colours. So two in the morning, so you can also put a sun next to it."

**No reading required**

white pills:
Take seven tablet(s) everyday

A: "I think this is better, but still, it's a number."

**May cause trouble because the pills gather on the hand in a irregular shape that makes it even harder to count**
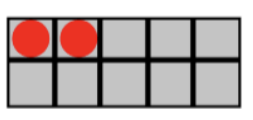
Yellow pills:
Take <3> tablet(s) everyday

A: "I think this is better, but still, it's a number. And people may git confuse, so is it three pills a day, three times a day or three pills in one?"

**Need a space to differentiate the pills, though they are already in different colours**

Tablet(s)

A: "This one is confusing to me, because it shows three pills, but the wording is "tablets"."

**Colour-coding**

### Aarón ●



May I know which presentation you prefer?

A: "1&4, they are very simple, very straight-forward."

Do you think the colour coding system is helpful or not?"

A: "Yes."

**Prefer icons**   **Colour-coding**

Tablet(s)

Yellow pills:
Take <3> tablet(s) everyday

A:" The second one is better than the third one, the number i think is better to use a real number than a latin word, it is more recognisable."

white pills:
Take seven tablet(s) everyday

1. Open the bottle and pour two pills out, drop the two pills on the table

2. Close the lib and line up all the bottles

### Michael ●
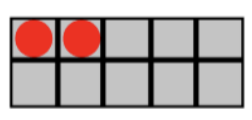


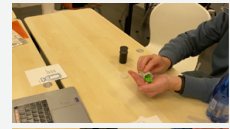M: "The green one is also good, I like both, it's just simple, the colours matches very well."

"That is actually very clear, you don't even have to think about it."

**Prefer icons**   **Colour-coding**

Tablet(s)

Yellow pills:
Take <3> tablet(s) everyday

M: "They are just OK, I mean you just read it, but you have to just read it carefully. 1&4 are good for me even without my reading glasses."

white pills:
Take seven tablet(s) everyday

M: "Supplements usually comes with very vibrant colours. It helps me the differentiate them better."

1. Open and hold the bottle with different hands

2. Close the lib and line up all the bottles

3. Put the pills on the table

How much you relate yourself to the following identities? (1 least related- 5 most related) Write the number and your name near the option(s)

## Amy ●

Elderly
=
Patient
=
User
=
Amy
∨
You
=
Client

A: "I don't mind being called as elderly or patient. If you have conditions, why not? It is a fact, a reality."

**Don't avoid being called as elderly or patient**

"User, yes, I am the user of this medication and the service."

"You is a very rude way of saying."

**Perfer more human and polite treatments**

"Yeah, you can also be client, but for medication, client is not the best."

## Aarón ●

Aarón
∨
Patient
=
User
∨
Client
∨
Elderly
=
You

A: ": I prefer to see your name before every sentence, like Aaron needs to take _____."

A: "These are too impersonal and cold."

**Prefer to be more human**

A: "I don't consider myself as elderly."

Is there any reason for that? Just the definition or the impression of elderlies you received from the society is negative?

A: "It is due to my personal perceiving, I perceived myself no an elderly, and I don't like others calling me elderly."

A: "You is too personal."

**Reaching a middle point between personal and impersonal**

## Michael ●

Michael
∨
You
∨
User
=
Client
∨
Patient
∨
Elderly

M: "It is more personal and I can make sure that it's specially for me."

**Highlight personal identity**

M: "You can be anybody."

M: "To me it's more like a business kind of relationship...it's not related, the medication should be a more personal thing instead of a business relationship."

M: "I wanna feel good about myself."

M: "I don't like that (elderlies), and we try to stay young, the way we think."

**High self-awareness**

---

**Language Use: ANALYSIS**

### Pills-Counting

Observing users' pill counting behaviour, it was seen that a flat surface is required for them to count, check and consume the pills, whether if it is their hands or the table. They also stated that the system of using corresponding colours to match the pills and numbers was extremely helpful in calculating quickly, as supposed to reading which takes up more time. In addition, it is also noticed that there was a risk of knocking over the container during the process due to the lack of stability of the bottles — which is something we can put into consideration for the experimental design.

### Identity Relation

Ratings from users have shown an emphasis in highlighting personal identity, in that they would avoid being called as an elderly and would prefer to be called as an individual instead of being categorized as a group of people. In addition, similar to the results in 1st round, the use of "user" or "client" is very abstract and unrelated from the users' point of view. While some users emphasized on the matter of accuracy (of the choice of identity), some also preferred more "human" ways of calling themselves. This indicates the need to acheive a middle point between accuracy and humanity.

## Follow-Up Questions: Medicine-Taking Experience

### Have you ever mistaken a medication?

**Amy** 🟠

No, it has become a habit and names are clearly stated.

> Importance of clear identity indication

**Aarón** 🟢

No, it has become a habit and the medications I take are not vital.

> Highly cognitive users

**Michael** 🟣

Very similar packets & instructions confuse me sometimes.

> Importance of distinguishable packaging & language use

### Do you use any reminders for your medication?

**Amy** 🟠

My husband uses a medical watch.

**Aarón** 🟢

"Would be nice if an 'intelligent pill box' can be used to remind by sounds/ colours.

**Michael** 🟣

By my doctor sometimes, but would be nice to have something easily seen as a reminder.

> Open to digital aid

### Have you ever misread or ignored the precautions/intake methods?

**Amy** 🟠

Yes, it's important to have these bolded or capitalized. Wordings like 'every _ hours' can also be confusing.

**Aarón** 🟢

Need to focus a lot for the first few times.

> Unclear instructions and design

**Michael** 🟣

Yes, like 'don't drink alcohol'.

> Insufficient explaination on labels?

## CONCLUSION & FINAL DIRECTION

### DIRECTIONS:

**Storage**
- Considerations of other family members/pets and possible visitors
- Able to stored in semi-open space with other medical supplies
- Flexible enough to be organised by intake schedule or appearance of pills
- Can be kept in one place

**Icons**
- Intake time
- Frequency of consumption

**Language**
- Highlight of individuality
- Colour coding for better calculation
- Visualisation of numbers

**Text & information**
- Information of Supplements > functions
- No patient information

### Storage — Packaging Design

Most of our users agree to store their medicines/medical supplies in a semi-open place where it is still easy to approach but not directly open—preferably in a cabinet with doors—to avoid children or pets reaching. Most of them prefer to keep the medicines in restricted areas like the kitchen or bathroom.

The majority organises the medicines according to the intake dates or the frequency of consumption, the others arrange them by shapes of the medical containers. They also emphasised the importance to able to view all medicines at one glance when reaching, overlapping of the containers is not encouraged.

All of them has extra pillboxes with different organisation systems (by the appearance of pills/by days), they are able and willing to package their medicines independently.

### Language Use

Nearly all the users expressed dissatisfaction towards the labels of "elderlies" and "patient", they do not identify themselves as "elderlies", and associate it with negative meanings. The subjects "you", "user" and "client" are not welcomed that users claimed these subjects are too impersonal and rude, they believed the medical experiences should not be related to business. They are more likely to be identified with their own names.

Regarding the numbering system, two users prefer written words and the remaining prefer visuals. They claimed that the visuals (dots) are simple and straightforward enough to understand, but some reported that the grey boxes will cause confusion, as well as the extra "(s)" used at the end of the text. They also highlighted that the colour coding system is being helpful when collecting pills. Meanwhile, they are also concerned about the written texts may sometimes be hard to understand when it comes to intake time.

**FINAL LABELS**

**VISUAL STYLE GUIDE**

**USERS**

**KEYWORDS**

New generation of elderlies                    SELF-SUSTAINABLE

Independent individuals                    EFFICIENT

Highly educated                    SELF-AWARE

Accessibilitty to online media                    INDEPENDENT

Private pharmacy over hosiptals                    MEDICAL EXPERIENCE

Avoid being labelled as elderlies/patients                    MODERN

Take supplements over vital medicine                    RECOGNIZABLE

## INDIVIDUAL DESIGNS FOR DIFFERENT SUPPLEMENTARIES

**VITAMIN C**
Support your immune system

tablet, daily     120 Tablets

Serving size: 1.005g/ tablet     CURE-X

**VITAMIN C**
*Expiration date: 7/12/2021*

If in special condition, please consult a doctor before taking this supplement.

Please scan the QR code for more information.

**Q10** COENZYME

If in special condition, please consult a doctor before taking this supplement.

Please scan the QR code for more information.

**Q10** COENZYME
Ease the muscle weakness and pain

caps, daily

Serving size: 5ml/ cap
120 tablets

CURE-X

**OMEGA-3**
Reduce risk for heart disease and stroke.

tablets, daily

Serving size: 200mg/ tablet
120 Tablets

CURE-X

**OMEGA-3**

If in special condition, please consult a doctor before taking this supplement.

Please scan the QR code for more information.

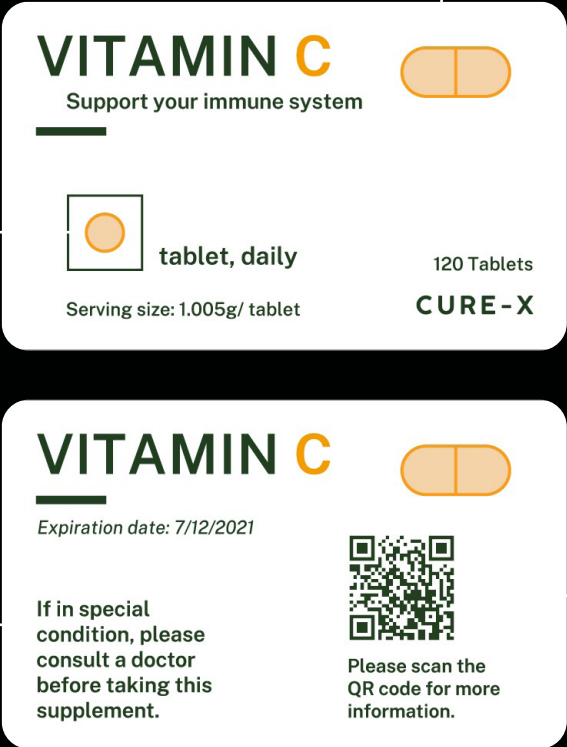*Expiration date: 7/12/2021*     CURE-X

## Design Direction

Most of the users we have interviewed just entered their 60s, in which they showcased great sense of independency and individuality. They are highly educated, with access to most online medias and are able to take care of themselves. This new generation of elderlies require less assistance or accompany of other people, but concern more about the efficiency and flexibility. In terms of medicine-taking experience, seldom do they obtain medication from hospitals/clinics; instead, they prefer getting from independent pharmacies for cheaper choices and supplements.

Thus, our design focuses on providing a self-sustainable and effecient experience by playing around different shapes, patterns and colours of the container to make it more recognizable. The overall style is modern and subtle, some of the major medicine bottle features are elimated, making it more modern and less like a pill bottle, since our users expressed their dissatisfaction towards being called as elderly or patient.

Font Style & Size

**Public Sans Semi Bold**    18pt, 8pt, 7pt
Public Sans Light    8pt, 7pt
*Public Sans Italic*    6pt

Icons

Highlight of appearance of pills

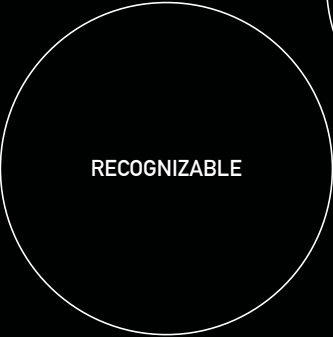• Recognition of appearance of pills over the name/functions of pills

Intake amount

• Unconventional numbering system
• Visual sense of numbers > reading sense of numbers
• Reduce risk of misreading

Pill Appearance:
*Users associate pills with the bottles more than the label.

Numbers Visualization

**VITAMIN C**
Support your immune system

tablet, daily     120 Tablets

Serving size: 1.005g/ tablet     CURE-X

Avoid Subjects

**VITAMIN C**
*Expiration date: 7/12/2021*

If in special condition, please consult a doctor before taking this supplement.

Please scan the QR code for more information.

QR Code for detailed information

## EXPERIMENTAL DESIGN:
## KEYWORDS

SELF-SUSTAINABLE

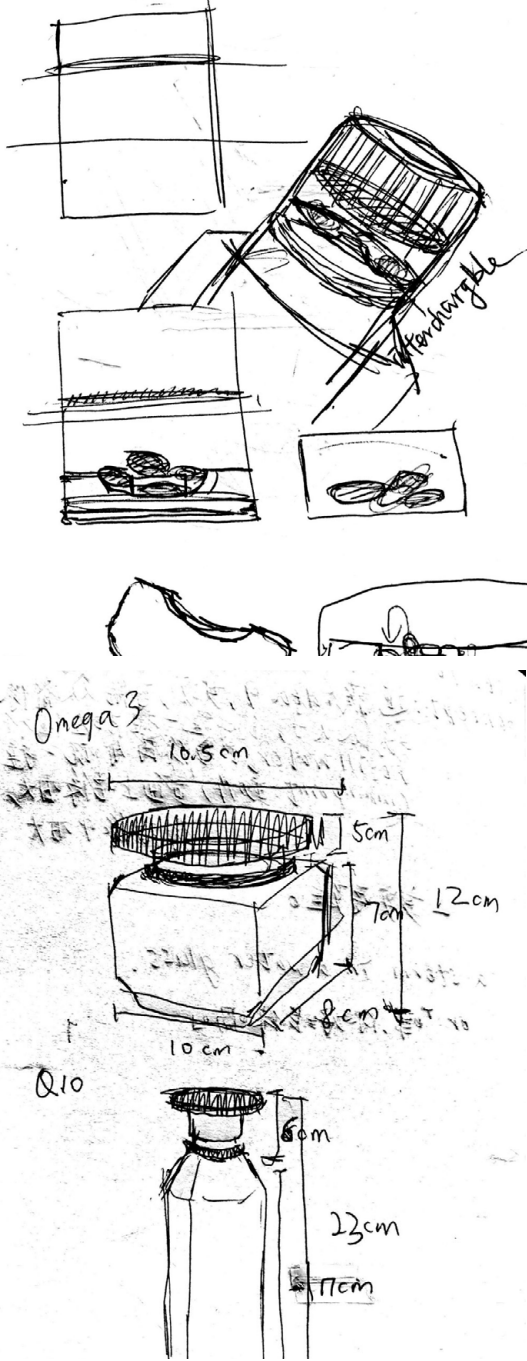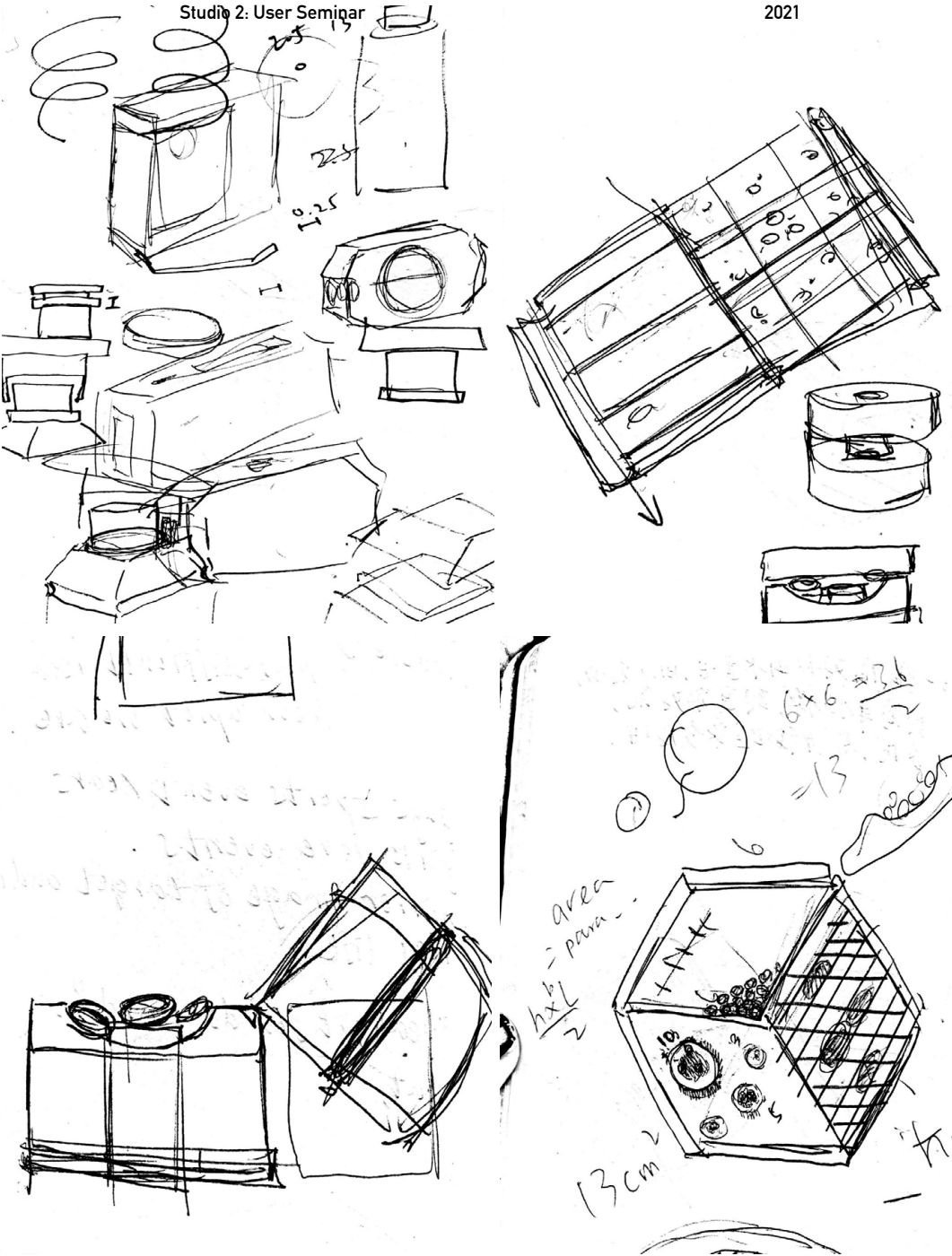REINTRODUCE MEDICAL EXPERIENCE

RECOGNIZABLE

The users we have been interviewing just enter their 60s, in which they showcase a great sense of independency and individuality. They are high-educated, with access to most of the online medias and able to take care of themselves. This new generation of elderlies requires less assistance or accompany of other people, but concerns more about efficiency and flexibility.
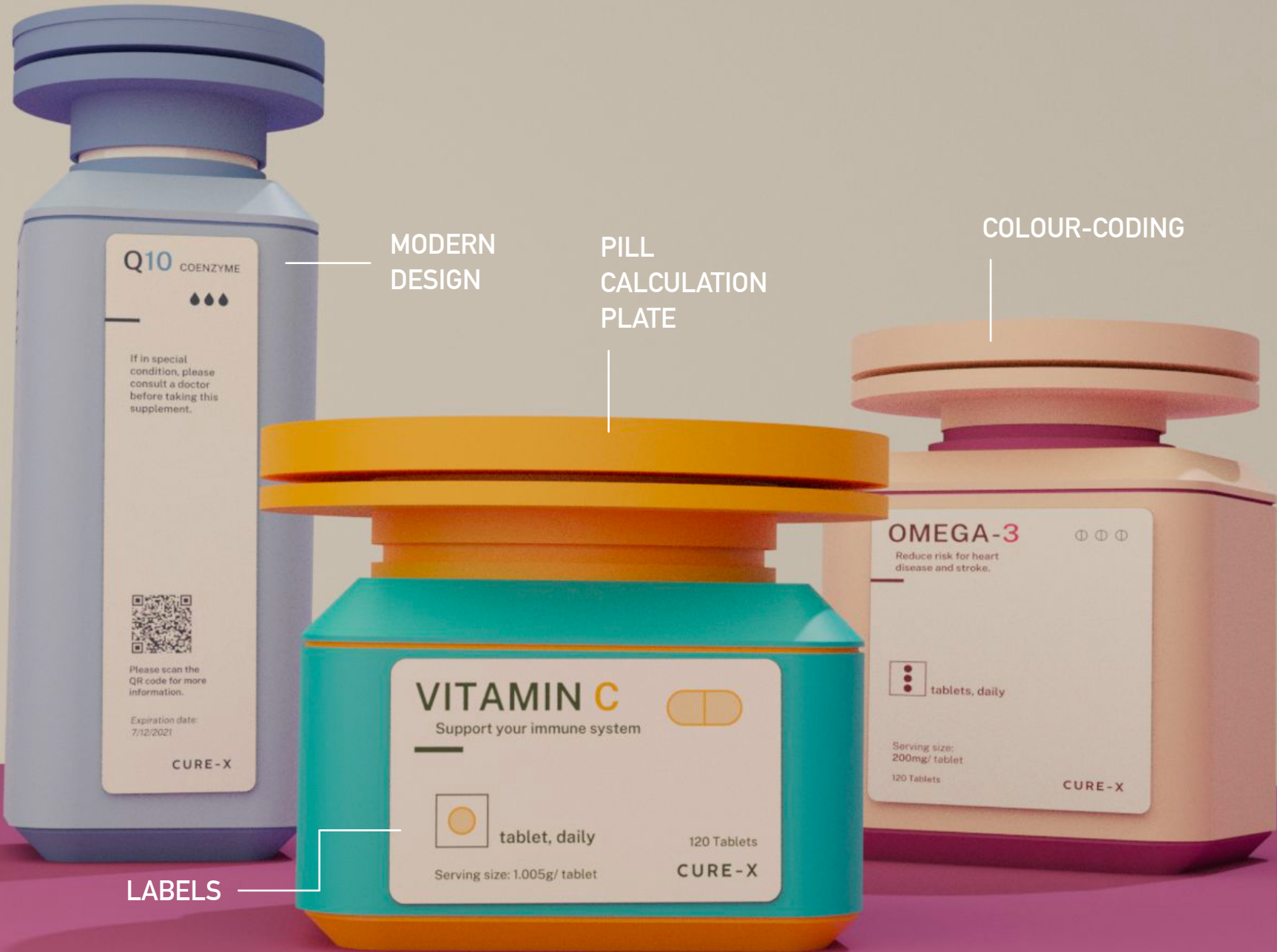
In terms of medicine taking experience, seldom do they obtain medicines from clinics or hospitals; instead, they may get the medicines from independent pharmacies for cheaper choices and supplements. The majority has a wide range of collection of supplements in their house which are produced by different brands, these supplements are stored in restricted places that are semi-open. Some users emphasised the importance of having a highly recognisable container design which allows them to pinpoint the bottles in one glance, since the containers are stored in one place and may overlap each other. We also noticed that the user associate the appearance of pills with the design of containers more than with the name of the medicine.

Thus, our design focuses on providing self-sustainable and efficient medicine taking experience, we played around with different shapes, patterns and colours of the container to make it more recognisable. The overall style is modern and settle, some of the major medicine bottles features are eliminated, making it more like a home-decor than a pill bottle, since our users expressed their dissatisfaction towards being called elders and patients.

The lid of the bottles can be used to count the numbers of pills easily, since our users prefer to pack their pills in an individual pill box with different kind of system—we hope to provide flexibility instead of solid rules to the users; meanwhile, the different patterns can also act as a navigation for the user to pick up the right bottles without reading the labels.
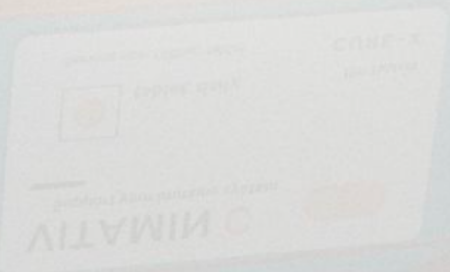
MODERN
DESIGN

PILL
CALCULATION
PLATE

COLOUR-CODING

Q10 COENZYME

If in special
condition, please
consult a doctor
before taking this
supplement.

Please scan the
QR code for more
information.

Expiration date:
7/12/2021

CURE-X

VITAMIN C

Support your immune system

tablet, daily

120 Tablets

Serving size: 1.005g/ tablet

CURE-X

OMEGA-3

Reduce risk for heart
disease and stroke.

tablets, daily

Serving size:
200mg/ tablet

120 Tablets

CURE-X

LABELS

MODERN DESIGN:
REINTRODUCING THE
MEDICINE-TAKING
EXPERIENCE

RECOGNIZABLE

CALCULATION:
CAN HOLD
EXACTLY 10 PILLS

VITAMIN C
Support your immune system

tablet, daily

120 Tablets

Serving size: 1,005g/ tablet

CURE-X

NAME ON THE SIDE
TO AVOID
OVERLAPPING LABELS

OMEGA-3

OMEGA-3

CURE-X

EASIER CALCULATION:
SHAKE TO ALIGN THE
PILLS IN LINES

OMEGA-3
Reduce risk for heart
disease and stroke.

tablets, daily

Serving size:
200mg/ tablet
120 Tablets

CURE-X

SELF-
SUSTAINABLE

RECOGNIZABLE

Omega-3

Vitamin C

Q10

DIFFERENT PATTERNS:
EASY IDENTIFICATION

*Users associate pills with the bottles more than the label. As seen from May and Aaron, where they would look at the lids for recognition.

*Users associate pills with the bottles more than the label. As seen from May and Aaron, where they would look at the lids for recognition.



Aarón & May

May

Would look at the lid first for recognition

Where medications are stored.

Would look at the lid first for recognition
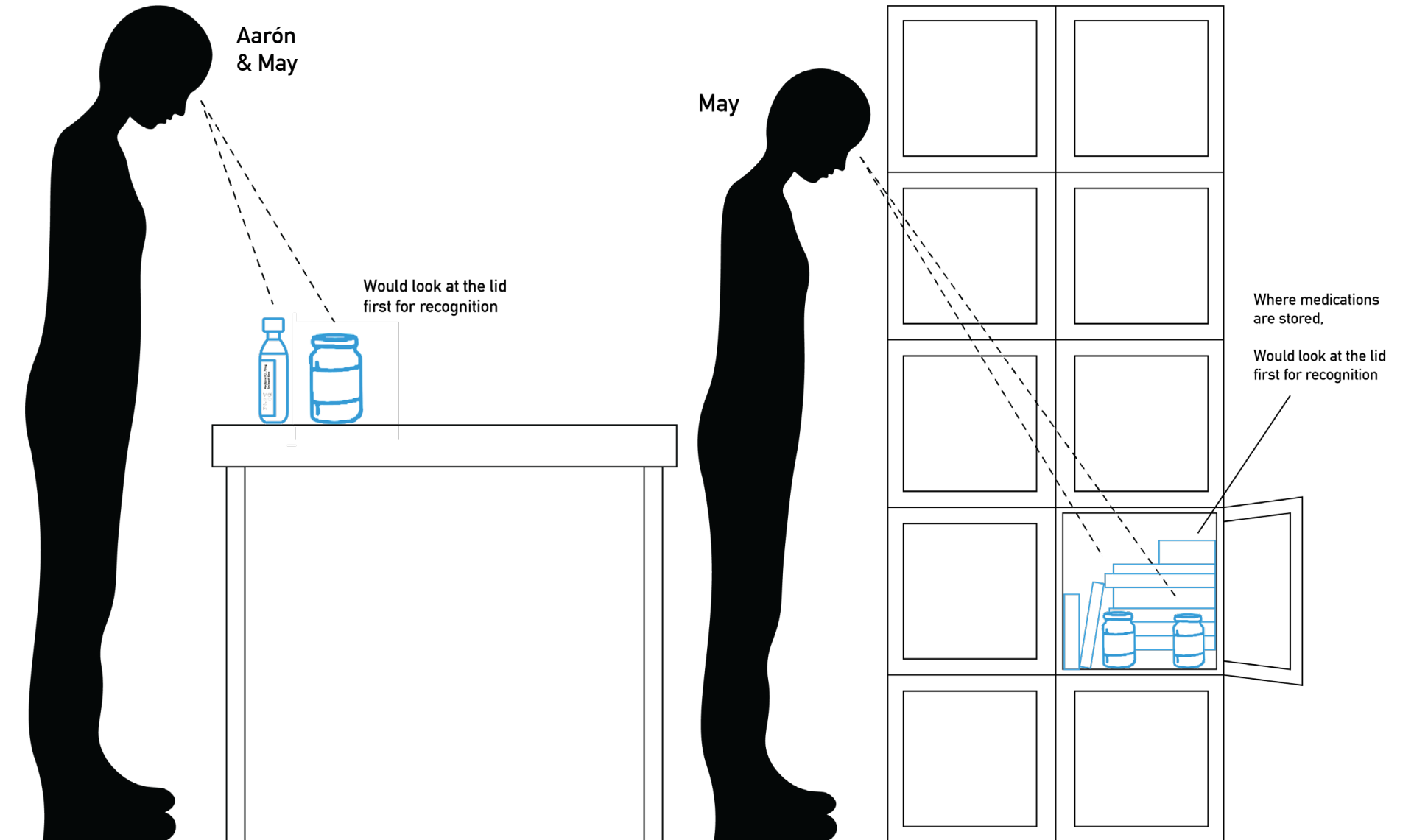
SD2263
STUDIO 2: INFORMATION

REDESIGNING EFFECTIVE
MEDICAL ADMINISTRATION

Tutor: Brian Kwok

Lena Brake 21021418X
Chan Ka Man Carmen 18013814D
Sun Jaehee 18079778D
Wong Ching Tung Kelly 18052859D