

# Visit Care

Supporting visitation in long term care.

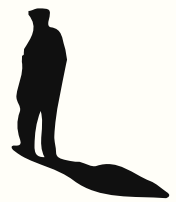
Visit | An Pham



# The Problem

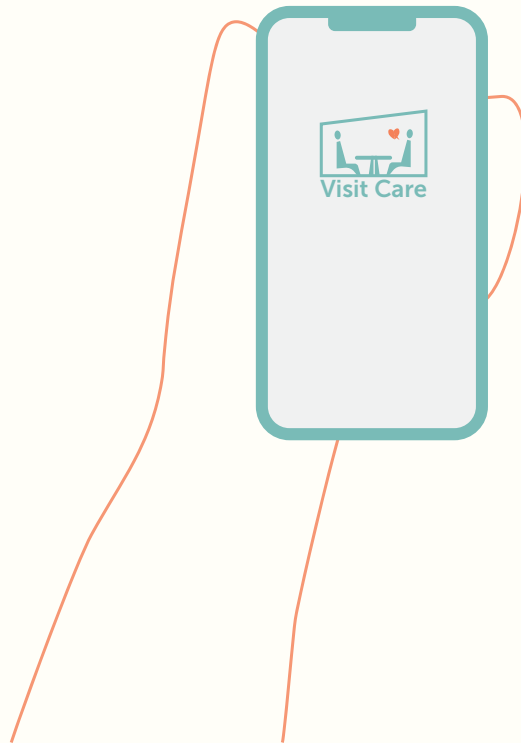
The pandemic has negatively impacted everyone but especially residents in long term care (LTC) who are feeling emotionally devastated from the isolation. To help prevent the spread of COVID-19, homes stopped visitation and while this helped keep the residents safe other problems arose. Human contact is a very important aspect of people's well-being.

Research has shown that prolonged loneliness is associated with an increased risk of premature death. People who suffer from loneliness are exposed to an elevated risk for a heart attack or stroke. In addition to physical health, isolation and loneliness can also affect mental health. Older adults who experience loneliness tend to perform worse on tests of thinking abilities especially when required to process information rapidly. Loneliness has also been found to increase the risk of dementia by as much as 20% (Harrington & Sliwinski, 2020).



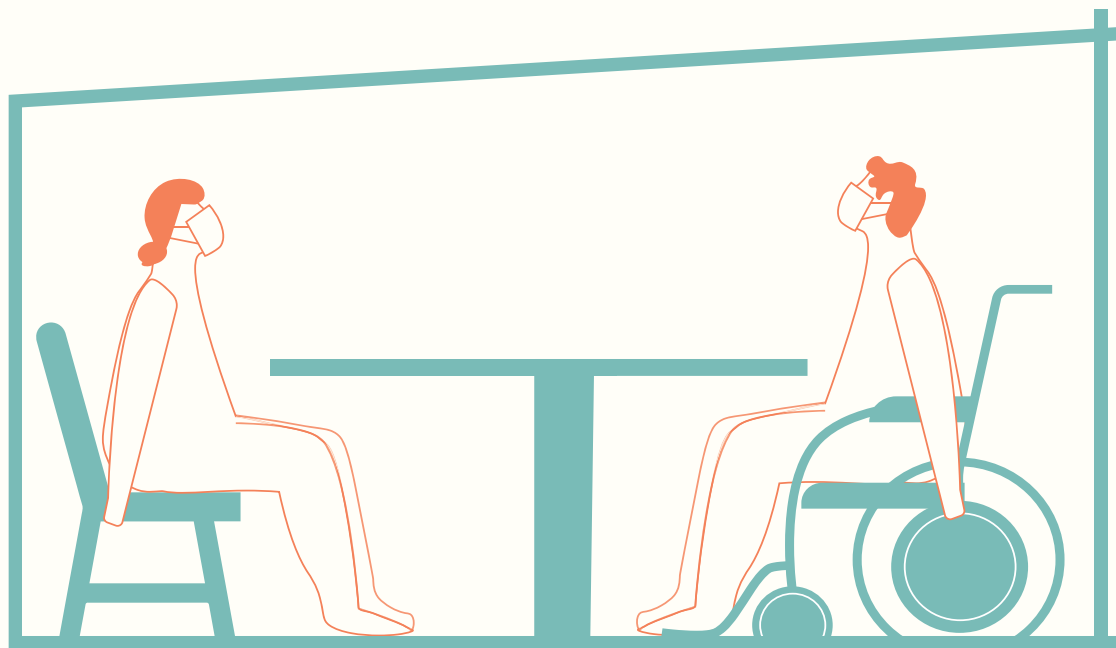
# Project Goal

The goal of my project is to safely support visitation in LTC during and in a world post-COVID-19. The product should offer a safe, comfortable and enjoyable experience for people to spend time with their loved ones.



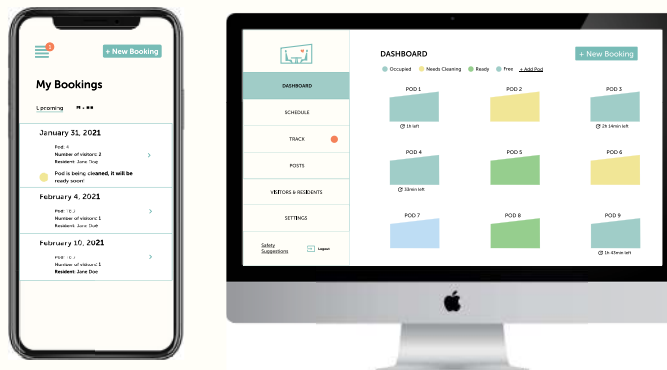
# Introducing Visit Care

Visit Care is a service that safely supports visitation in long term care that is convenient and enjoyable. The service includes a booking system app for both the visitors and the LTC home. Both apps work together to optimize safety. It offers a cleaning checklist for the homes to ensure that the space is clean for all users as well as suggestions for furniture and layout to maintain a safe environment. Visit Care also has "pods" that can be easily assembled, disassembled and cleaned to be placed within the nursing homes.

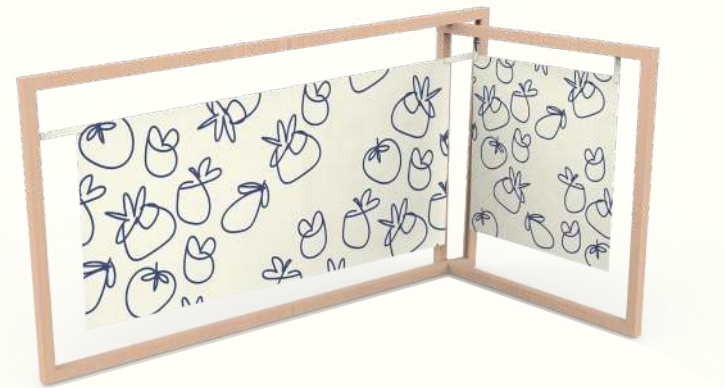


# Items Included in Visit Care

## Booking System for LTC Home & Visitors

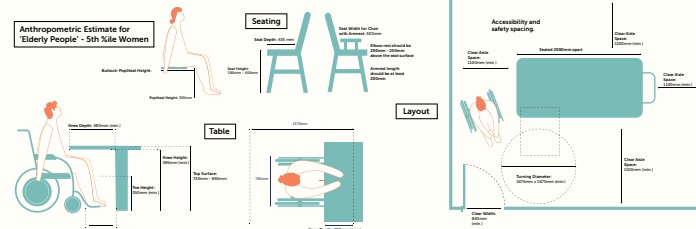


## Pods

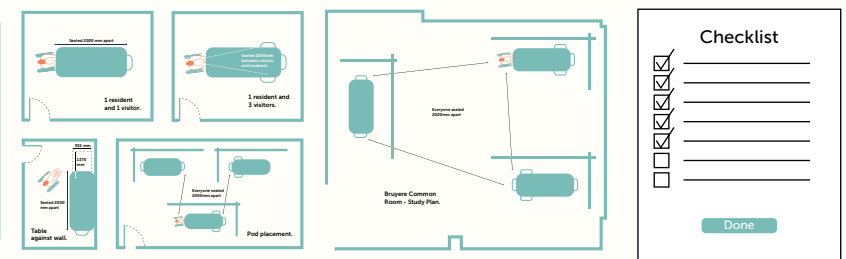


## Safety Suggestions for Furniture & Layout

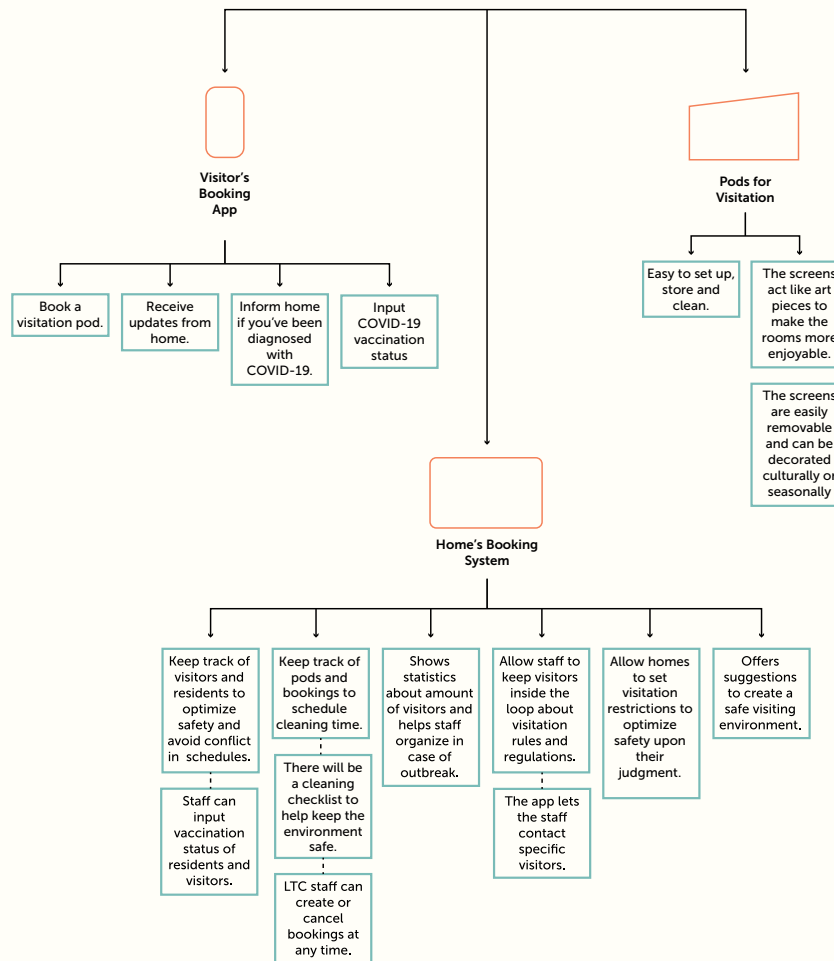
### Safety Suggestions



## Pod Cleaning Checklist



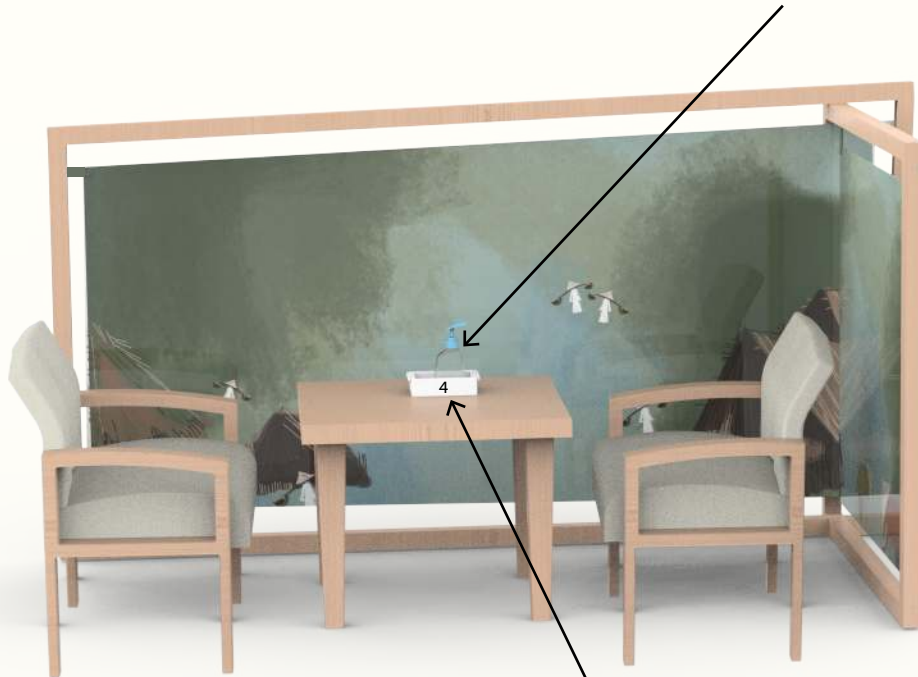
# Service Blueprint



The system was designed to retrofit in any long term care environment. Many homes already have furniture or have limited space. When consulting LTC stakeholders, one mentioned wanting to have flexibility with the pods and their placements. The pods are optional to the Visit Care service and can easily be removed and stored if the space is needed for something else.

# Visitation Environment Example

Hand sanitizer and sanitary wipes are offered on each table.



Pod number.



This is Nemschoff furniture, they are known for creating quality healthcare products.



# Background Research

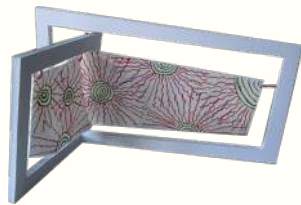
The physical environment of homes is extremely important for the well-being of staff and residents. These LTC facilities are people's homes and should feel comfortable and warm.

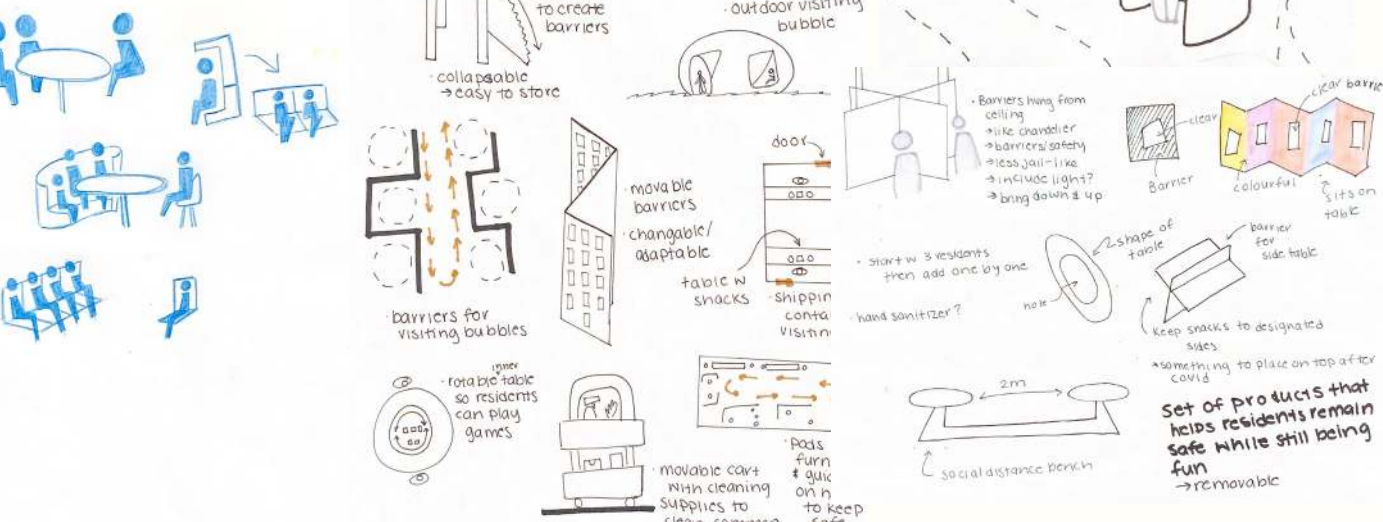
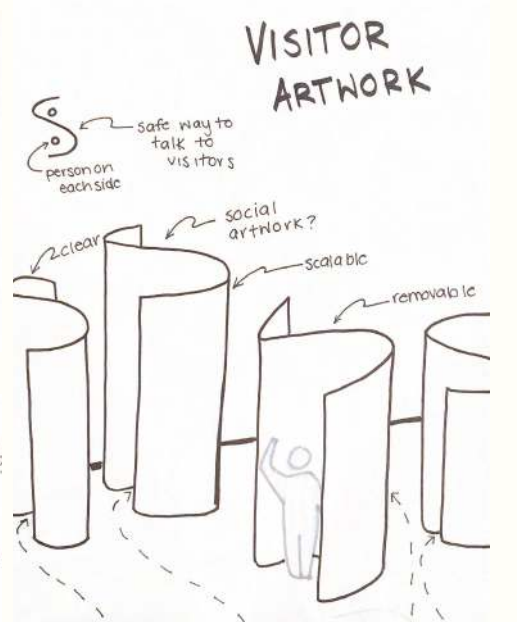
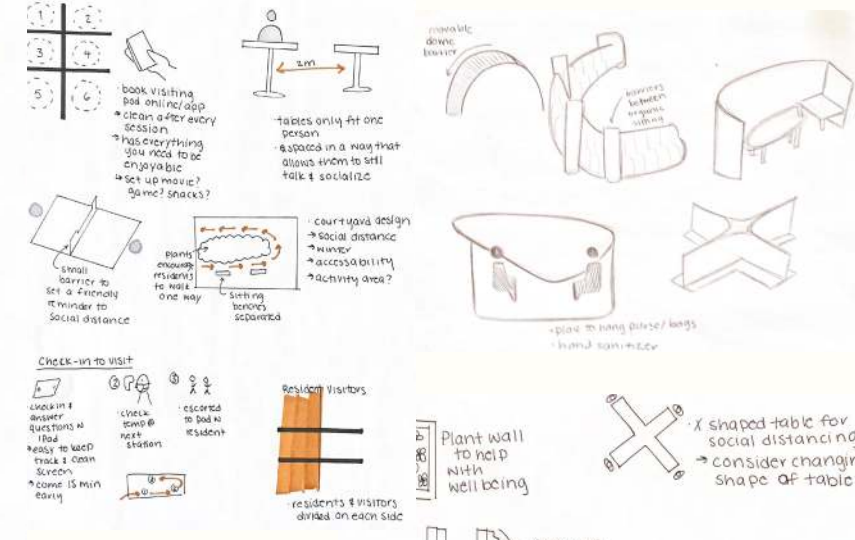
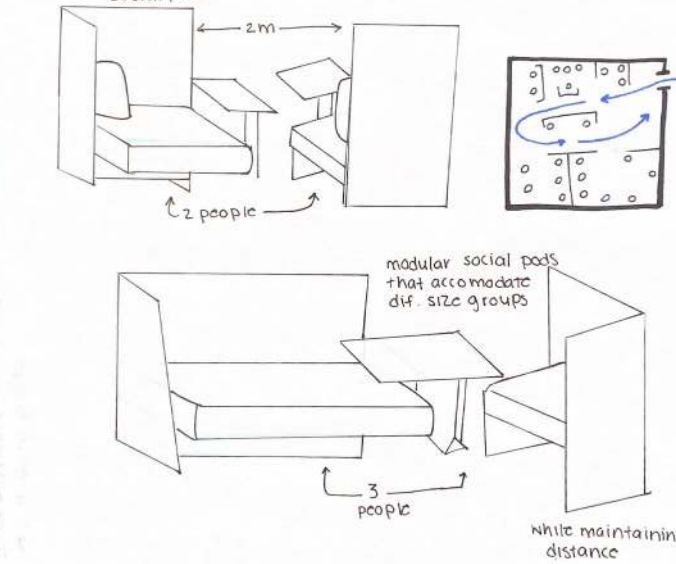
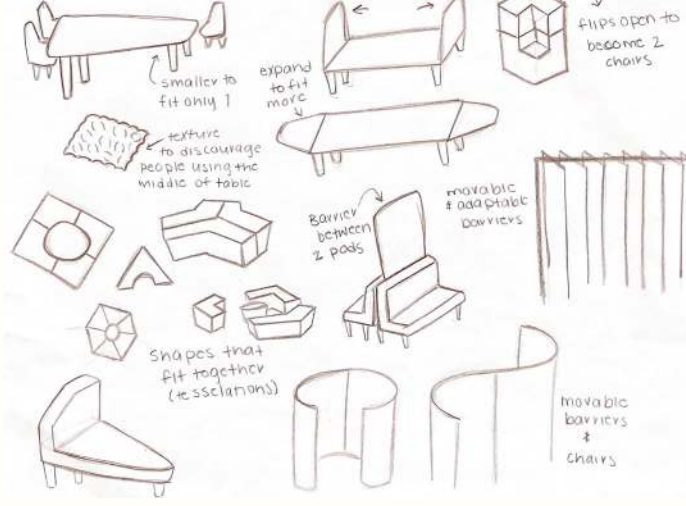
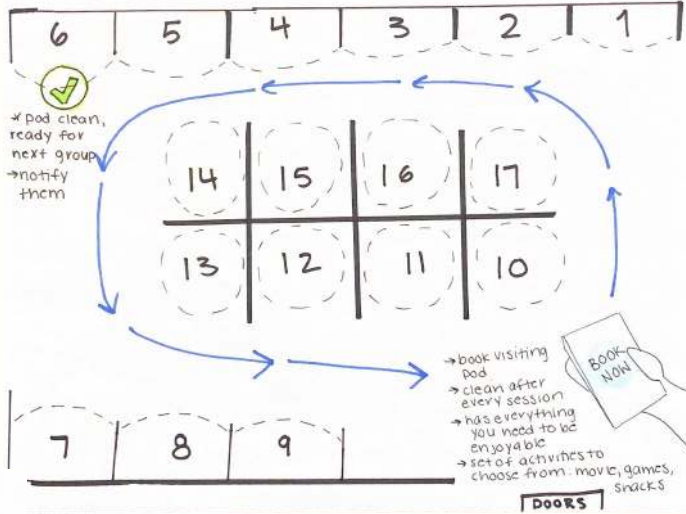
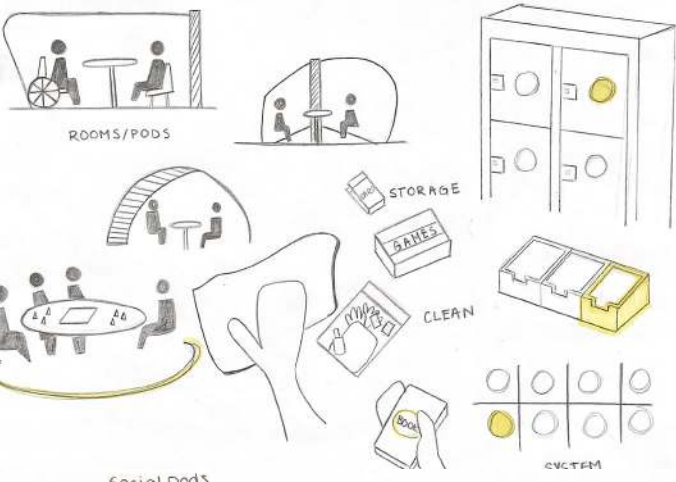
Of course, safety is a priority when designing for a pandemic but it should not compromise comfort and aesthetics. People can't enjoy themselves if the environment reminds them of COVID-19 and looks institutional.



# Process

After researching and identifying an opportunity and an area of focus, it was time to start ideating concepts and testing those concepts. User testing and prototyping were done to improve the design and ensure the product was useful, enjoyable and easy to use. Throughout the project, a lot of insight was gained by consulting LTC stakeholders and visitors.







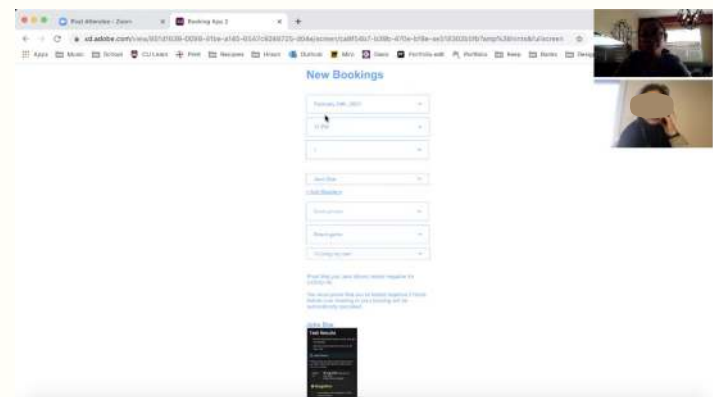
A full-scale prototype was made. This helped with figuring out the dimensions for the final design.



# Remote User Testing & Evaluation

Multiple testing methods were used to gain insight including visual surveys, interviews and user interface (UI) testing.

All of these tests were done virtually.



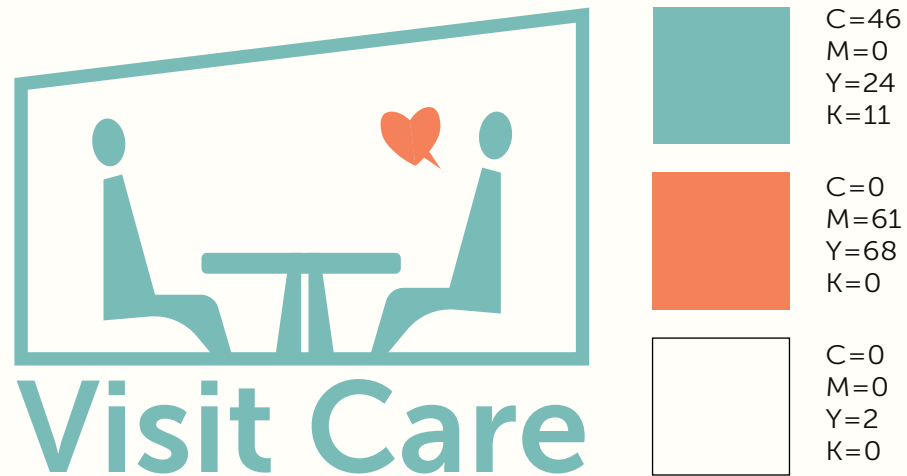
# Findings

From the user testings, a lot of insight was gained. The following bullet points are key insights that drove the final concept design:

- Users needed a way to keep track of the constantly changing rules and regulations for visiting in LTC
- Some people found it very chaotic to have to call the home to book a visit during a pandemic
- Half of the participant from the visual survey wanted a private place to meet their loved ones while the other half wanted to see foot traffic around them

# Branding

The Visit Care branding was conveyed to be welcoming and friendly to help ease people's worries about the safety of visitation during a pandemic.

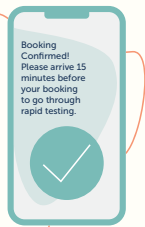


**Museo Sans, 700**

Museo Sans, 300

# Visitor's User Journey

**1** Visitors book a pod through the app.



**Notification:**

Good morning! You have a booking today at 1PM. Please arrive 15 minutes before your booking to go through rapid testing.

**2**

Visitors arrive at the home 15 minutes before their booking.

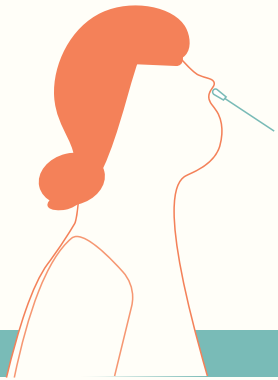


**Notification:**

Your pod is being cleaned! It will be ready soon for you to enjoy :)



3



Visitors go through rapid COVID-19 testing and receive their new mask.

**Notification:**

Pod 5 is ready!

4

Visitors spend quality time with the residents!



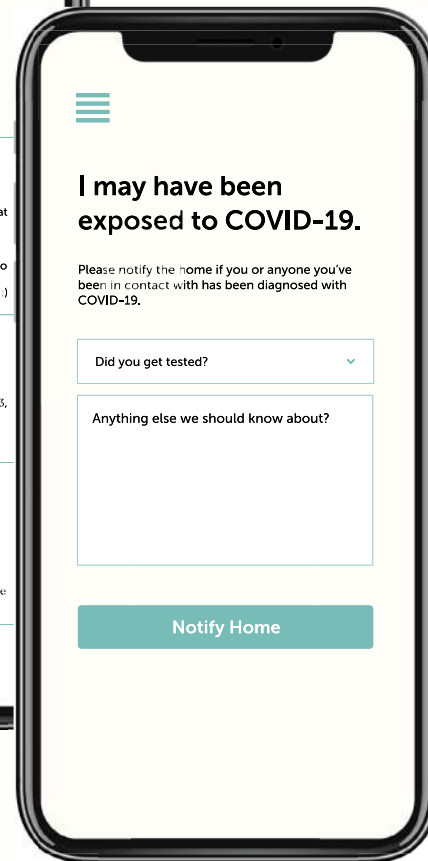
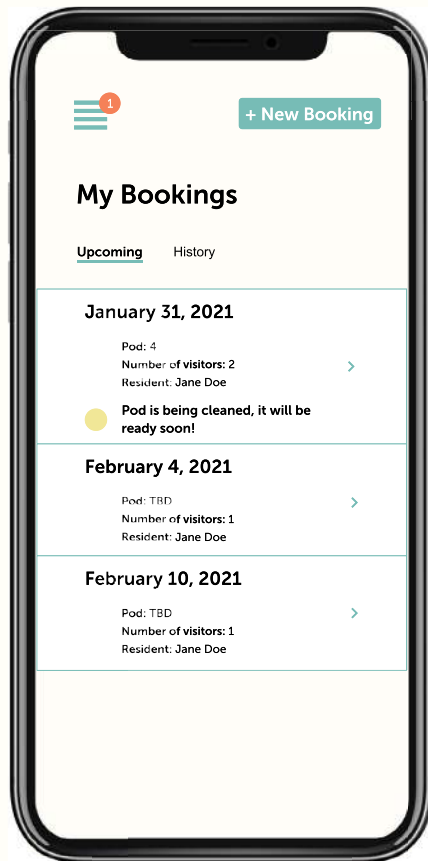
# Features of the Visitor's Booking App

- Booking a visitation pod and selecting a board game (optional)
- Receive updates from the home
- Inform the home if you've been diagnosed with COVID-19
- Input whether or not you've received the COVID-19 vaccination



## Comments from LTC stakeholders & visitors of LTC:

- "I love that this is reflecting on 1:1 engagement/game opportunities."
- "I struggle with the changing visitation rules and inconsistent messaging."
- "I haven't been able to visit which has been really hard for me and them."



# Features of the LTC Staff Dashboard App

- Show whether pods are free, needs cleaning or occupied
- Allow staff to create a new booking for visitors who prefer to call
- Show a schedule for each pod and when to clean those pods
- Allow staff to cancel all meetings
- Show statistics about the number of visitors the LTC facility receives
- Help the LTC staff keep track of visiting activities so in case of an outbreak, staff can pinpoint who to test for COVID-19 first
- Allow staff to lookup visitors and view all their upcoming and history of visits
- Allow staff to update COVID-19 vaccination information
- Allow staff to contact visitors
- Allow staff to cancel all bookings for a specific visitor
- Allow staff to look up residents and view their important informations
- Allow staff to input resident's schedule to help avoid conflict when booking a meeting
- Allow staff to keep the visitors updated about visiting rules and regulations
- Gives staff the power to set restrictions on visitation (administration module)
- Includes suggestions to create a safe and comfortable environment for residents and visitors

**DASHBOARD**

Occupied | Needs Cleaning | Ready | Free | Add Pod

POD 1: In left  
POD 2: 2h 54min left  
POD 3: 2h 54min left  
POD 4: 13min left  
POD 5: 13min left  
POD 6: 13min left  
POD 7: 13min left  
POD 8: 13min left  
POD 9: 13min left

**SCHEDULE**

Cancel All Bookings | + New Booking

February 10, 2021

9:00  
10:00  
11:00  
12:00  
13:00  
14:00

**TRACK**

Custom Numbers

Today's Number of Visitors: 32  
Total Number of Visitors: 105

Number of Visitors vs Time  
Number of Visitors vs Month

Search Visitor | Select a Date | Search

Jane Doe has notified the home that she may have been into contact with COVID-19.

**STAND HOME NEWS & UPDATES**

+ New Post

Home Update  
January 6, 2021

COVID-19 Update - Ottawa  
January 6, 2021

Home Update  
December 23, 2020

How to Properly Wash your Hands  
December 23, 2020

**TRACKING POD 2 & TABOO 1 ON FEBRUARY 4, 2021**

Everyone listed have used POD 2, Taboo 1 or have visited the home on February 4, 2021 after 1PM.

Date	List of people who visited on February 4 2021 after 1PM	List of people who used POD 2	List of people who used Taboo 1
February 4 2021	Dan Foster	Dan Foster	Dan Foster
February 5 2021	Dan Foster	Dan Foster	Dan Foster

**LIST OF VISITORS**

Visitors | Residents

- Mar Do
- Jane Doe
- Josh Kay
- Kyra Gil
- Lucas Higgins
- Dan Ip
- Jim Jam
- Robbie Reely
- Joe Liz
- Andy Moss
- Gavin Ri
- Fiona Sa
- David So
- Jan Toy

Contact All Visitors

Search Visitor

Filter:  
 Visitors who have been vaccinated  
 Visitors with upcoming visits

Jane Doe  
Resident: Notified (Down)  
Room Number: 34

Upcoming Visits:  
February 04, 2021  
POD 2 | Foster | 3pm  
February 05, 2021  
POD 2 | Foster | 3pm

Cancel All Bookings

**SETTINGS**

Current Visitation Restrictions:

Games Offered:  
+ Taboo  
+ Monopoly  
+ Clue  
+ Cards

Booking length: N/A  
Amount of bookings allowed per week: N/A  
Days with no visiting: N/A  
Catering: N/A

Edit Visiting Restrictions | Reset to Default

**SAFETY SUGGESTIONS**

The following are suggestions/guidelines to create a safe and comfortable visitation environment for residents and visitors.

Antisepotic  
Estimate for Safety People - Sit Side Women

Seating  
Use tables to create a safe and comfortable visitation environment for residents and visitors.

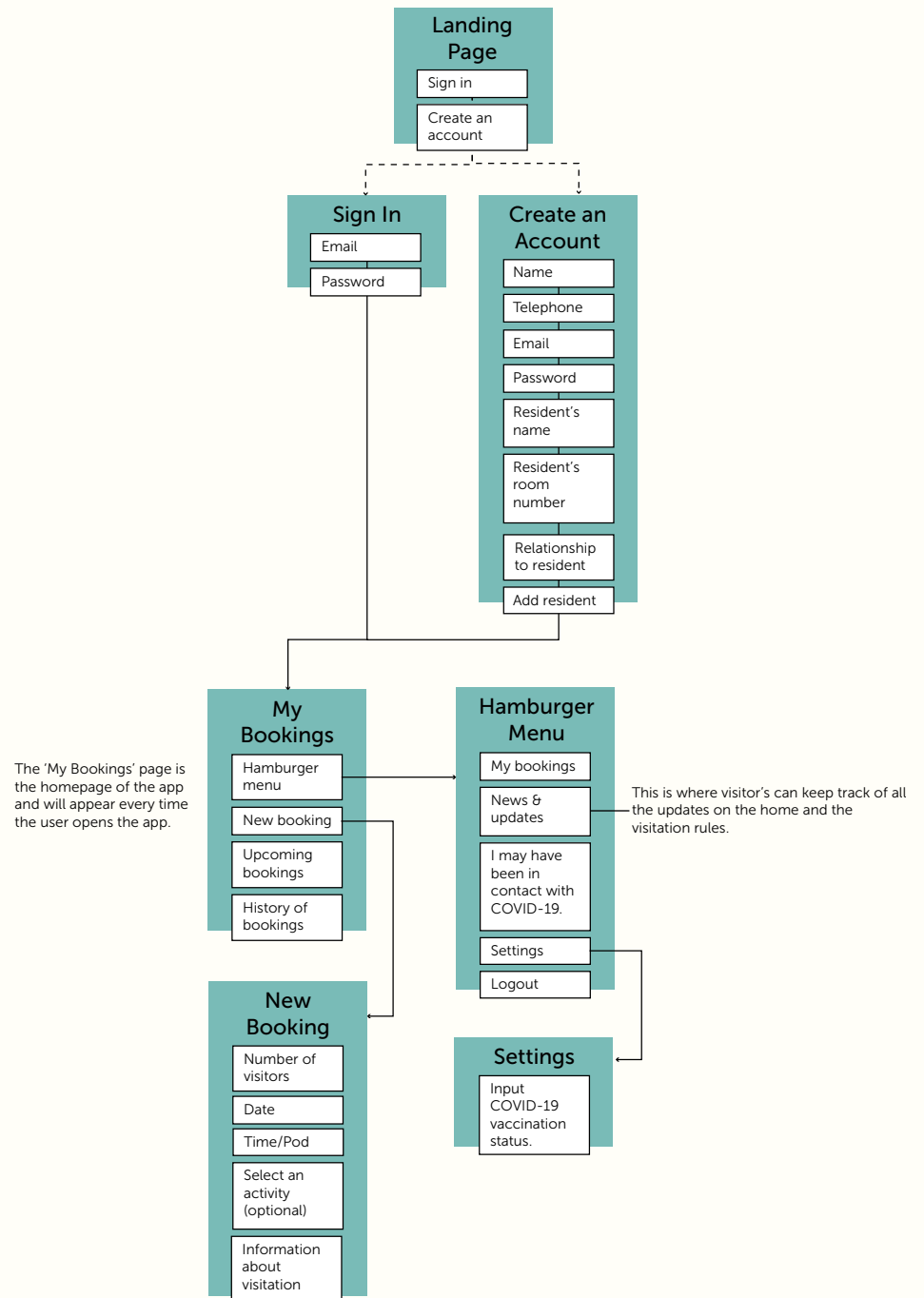
Table  
Use tables to create a safe and comfortable visitation environment for residents and visitors.

**Comments from LTC stakeholders about the dashboard app:**

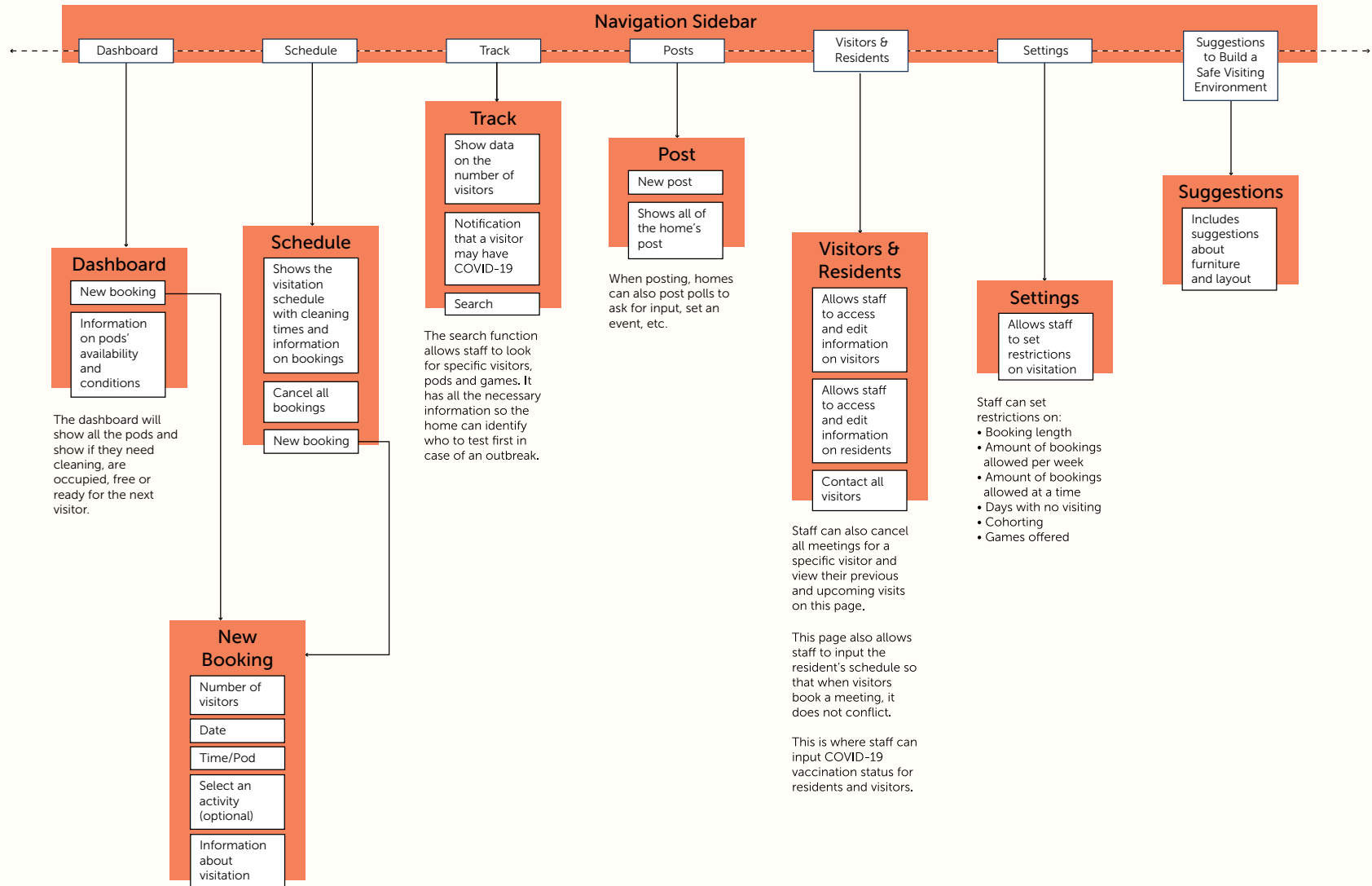
- “You should be able to input whether or not someone has been vaccinated.”
- “It is important to know the residents’ schedule so that there is no conflict when booking a meeting.”
- “What if someone doesn’t have a phone and prefers to call instead of using an app?”
- “The app should let visitors know to come 15 minutes early to go through rapid testing.”

# Information Architecture

## Visitor's Booking App



# LTC Staff Dashboard App

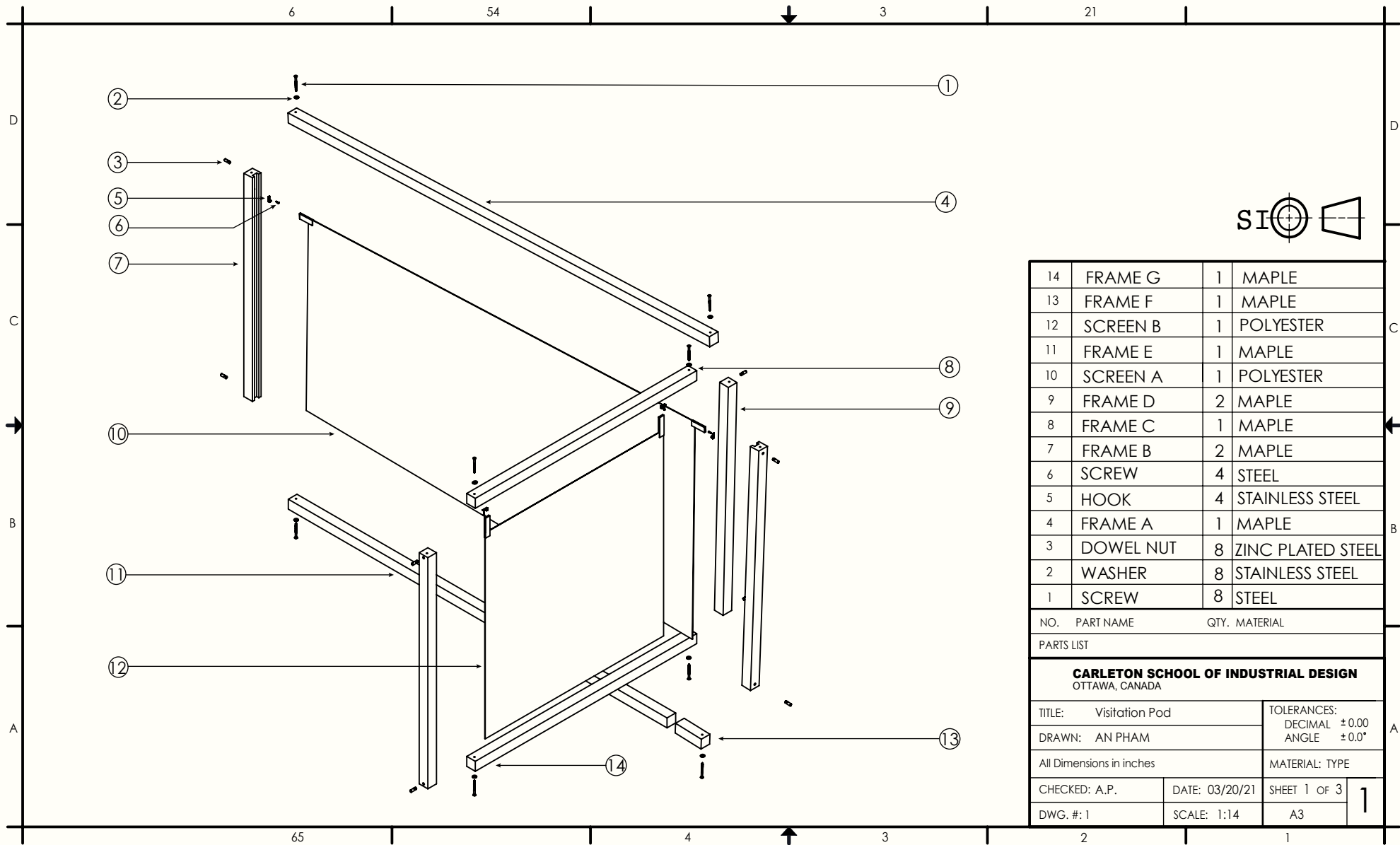


# Details & Assembly of Screen Design

The pods were designed to be easy to set up and take down, convenient to clean and contribute to an enjoyable environment. The pod's frames are made from maple wood. Wood helps create a warm and elegant environment and maple has good properties to hold nails and is often used for furniture. There would be a polyurethane-based finish on the wood to withstand heavy frequent cleaning required in the healthcare market.

The screens are attached by hooks so that they can be easily removed and cleaned. They are made from a type of polyester that can be machine washed or wiped down with a bleach solution.

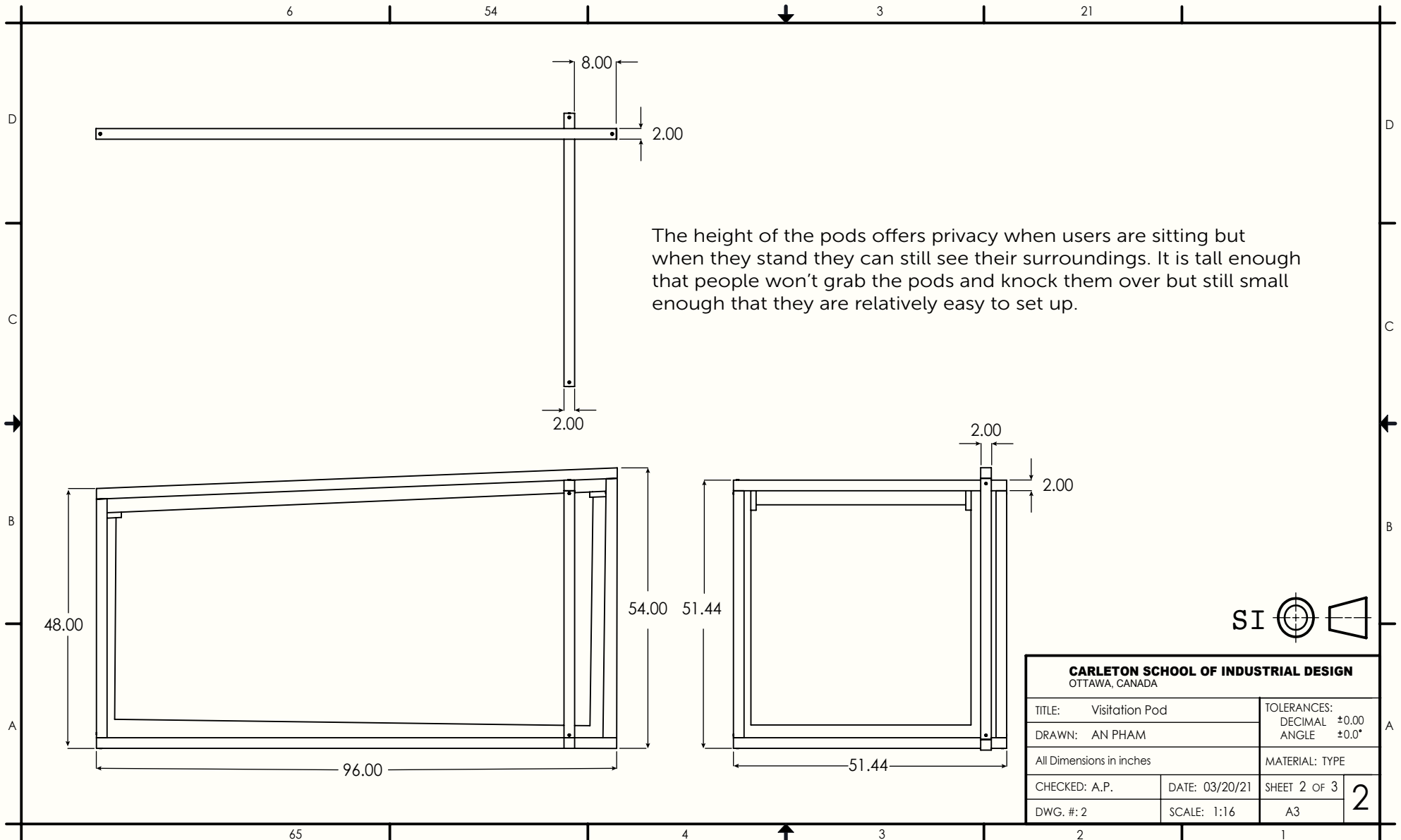




14	FRAME G	1	MAPLE
13	FRAME F	1	MAPLE
12	SCREEN B	1	POLYESTER
11	FRAME E	1	MAPLE
10	SCREEN A	1	POLYESTER
9	FRAME D	2	MAPLE
8	FRAME C	1	MAPLE
7	FRAME B	2	MAPLE
6	SCREW	4	STEEL
5	HOOK	4	STAINLESS STEEL
4	FRAME A	1	MAPLE
3	DOWEL NUT	8	ZINC PLATED STEEL
2	WASHER	8	STAINLESS STEEL
1	SCREW	8	STEEL

NO.	PART NAME	QTY.	MATERIAL
PARTS LIST			
<b>CARLETON SCHOOL OF INDUSTRIAL DESIGN</b> OTTAWA, CANADA			
TITLE: Visitation Pod		TOLERANCES: DECIMAL ±0.00 ANGLE ±0.0°	
DRAWN: AN PHAM			
All Dimensions in inches		MATERIAL: TYPE	
CHECKED: A.P.	DATE: 03/20/21	SHEET 1 OF 3	<b>1</b>
DWG. #: 1	SCALE: 1:14	A3	

Exploded view - a breakdown of the proposed assembly and materials used to construct the final design.



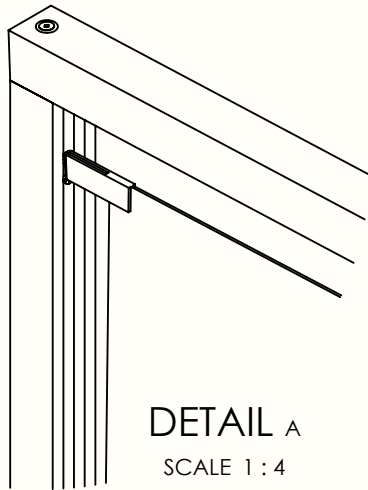
The height of the pods offers privacy when users are sitting but when they stand they can still see their surroundings. It is tall enough that people won't grab the pods and knock them over but still small enough that they are relatively easy to set up.



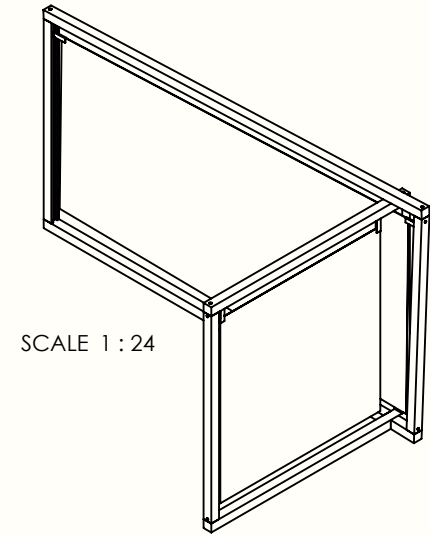
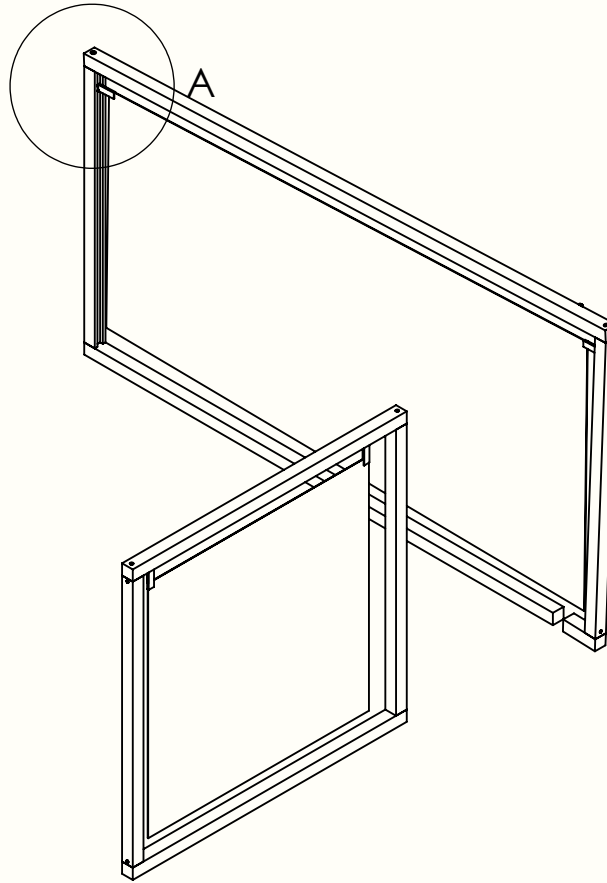
<b>CARLETON SCHOOL OF INDUSTRIAL DESIGN</b> OTTAWA, CANADA		
TITLE: Visitation Pod	TOLERANCES: DECIMAL ±0.00 ANGLE ±0.0°	
DRAWN: AN PHAM		
All Dimensions in inches		MATERIAL: TYPE
CHECKED: A.P.	DATE: 03/20/21	SHEET 2 OF 3
DWG. #: 2	SCALE: 1:16	A3

2

The two frames interlock with one another to add support while they stand. Another benefit of the interlocking frames is that they can be separated and stored flat.



DETAIL A  
SCALE 1 : 4



SCALE 1 : 24



<b>CARLETON SCHOOL OF INDUSTRIAL DESIGN</b> OTTAWA, CANADA			
TITLE: Visitation Pod		TOLERANCES: DECIMAL ±0.00 ANGLE ±0.0°	
DRAWN: AN PHAM		MATERIAL: TYPE	
All Dimensions in inches		SHEET 3 OF 3	
CHECKED: A.P.	DATE: 03/20/21	<b>3</b>	
DWG. #: 3	SCALE: 1:16		A3



There is an indent in the frames to hide the hooks.  
This is for cosmetic purposes.

The nails are flushed into the wood.



The frames are secured with dowel nuts, screws and washers.



# Screen Design

Being that the screens are easily removable, the homes can change the screens frequently to keep the home lively. They could be culturally designed for homes with a large group of residents from a certain ethnicity. These cultural screens could make those residents feel more at home and relaxed. The screens could also be changed seasonally to keep things festive. Furthermore, there could be different size and shape choices for the screens. There are many options.

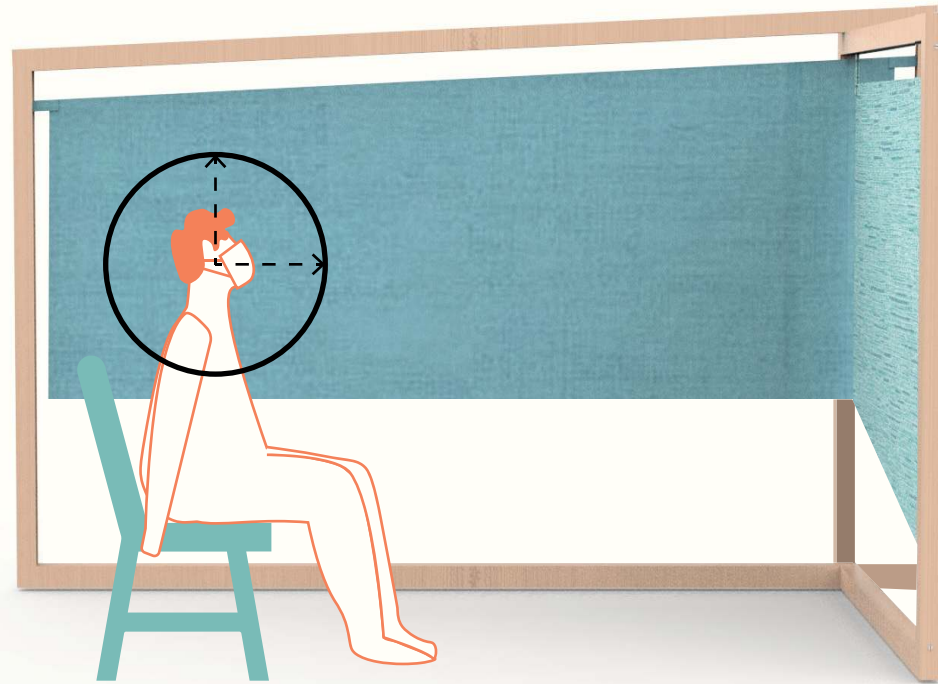


**Comments from LTC visitors  
about visitation space:**

- "I want more of a homey atmosphere."
- "Would love some coziness."
- "A bright and inviting space, that is not cluttered and clean."
- "Similar to a coffee shop with light foot traffic."







This version of the pod is a foot taller to accommodate the breathing zone of people sitting within the pods. The breathing zone is a pocket of air which a person draws breath. This breathing zone can be visualized as a bubble with a 12" radius extending the mid-point of the person's ears (Eykelbosh, 2020). This taller version of the pod helps optimize safety.



# Model

A scaled model was made in the labs to test functionality and to show how the two pieces of the frames interlock.





The model was made to a 1/8 scale.

# Conclusion

Preventing residents from having visitors caused emotional distress for the resident and their loved ones, leading to a lot of suffering due to loneliness, separation and guilt. Family and visitors were crucial to improving residents' quality of life and they offered a lot of emotional support. Without this support, there has been a huge toll on the residents and staff of LTC (Canadian Foundation for Healthcare Improvement, 2020).

This project was aimed at reducing loneliness in LTC homes by safely facilitating visitation.



## References

Eykelbosh, A. (2020, May 13). Physical barriers FOR COVID-19 infection prevention and control in commercial settings. Retrieved April 25, 2021, from <https://ncceh.ca/content/blog/physical-barriers-covid-19-infection-prevention-and-control-commercial-settings>

Harrington, K., & Sliwinski, M. J. (2020, August 04). The loneliness of social isolation can affect your brain and raise dementia risk in older adults. Retrieved December 04, 2020, from <https://theconversation.com/the-loneliness-of-social-isolation-can-affect-your-brain-and-raise-dementia-risk-in-older-adults-141752>

Reimagining Care for Older Adults (Rep.). (2020, July). Retrieved October 13, 2020, from Canadian Foundation for Healthcare Improvement website: <https://www.cfhi-fcass.ca/docs/default-source/itr/tools-and-resources/reimagining-care-for-older->

Member of project group

visit

In collaboration with

Bruyère 

 **ONTARIO**  
**CLRI** Centres for Learning,  
Research & Innovation  
in Long-Term Care  
BAYCREST • BRUYÈRE • RIA

 **McCormick  
Care Group**  
Advancing dementia care

**A project by An Pham.**