

PATIENTS *first!*

Creating a Culture of Patient Safety



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« The role of the designer is to act as mediator between those who are concerned and involved in their health on a daily basis, and the service provider. »

Design Council, UK

INTRODUCING A CULTURE OF SAFETY

Emily Carr's Health Design Lab and Fraser Health collaborated on a research and design project considering patient engagement in healthcare—specifically on increasing patient safety in hospitals.

Fraser Health asked the Health Design Lab to provide a fresh perspective to help uncover and design innovative, perhaps even provocative, modes of encouraging a safety culture in their hospital settings.

PATIENTS FIRST!

Through primary research, we found that establishing a culture of safety in hospitals can be achieved through three overarching concepts: building positive partnerships, facilitating patient empowerment, and establishing rituals. These three concepts work together to increase patient safety in hospitals by making the patient an active participant in her own care. By having knowledge about their care, patients will feel more in control of their own health, thus, instigating a new culture in which hospital hierarchies are flattened and partnerships built.



PART OF THE TEAM

The three concepts of partnership, empowerment and rituals work together to increase patient safety in hospitals by making the patient an active participant in her own care.

Establishing a culture of safety in hospitals can be achieved through three overarching concepts:



PARTNERSHIP

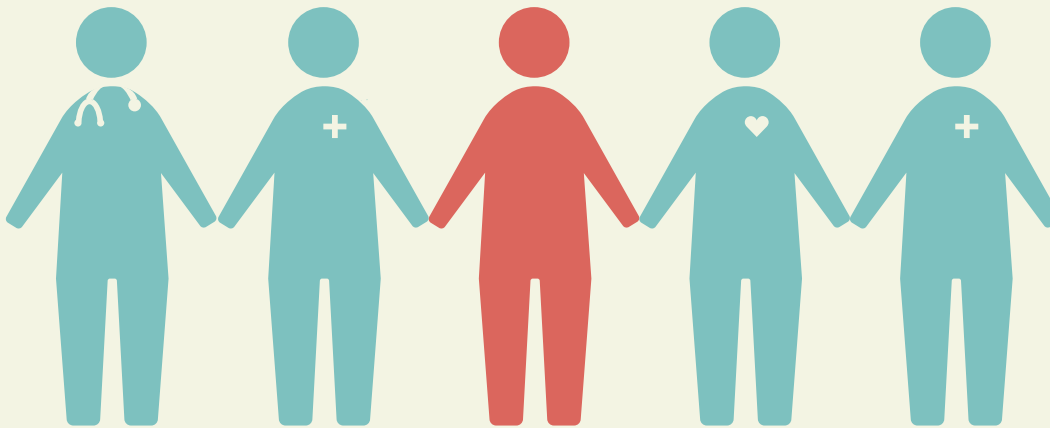


EMPOWERMENT



NEW RITUALS

PARTNERSHIP



To develop a culture of safety in hospitals, patients, family and the healthcare team must work together and trust each other to take responsibility for the patient's health and safety.

These positive partnerships need to be encouraged and worked towards as a goal, to encourage patient participation in their care.

As the basis of forming positive partnerships, we aimed to create a sense of belonging to an existing team—a team in which the patient would be an active participant at the centre of what became the “Patients First!” initiative.

CIRCLE OF TRUST

In order to communicate this sense of patient empowerment and team building with patients at the centre, we visualized a patient at the centre of an imagined *Circle of Trust*. The *Circle of Trust* illustrates a circle with the patient at the centre and with their entire care team on a level plane around them.



Allied Health
Professionals



Family &
Friends



Nurses



Doctors



EMPOWERMENT

We propose to develop a culture of trust where success is celebrated in a feedback loop among the patients, family, staff, and hospital, to show and understand the benefits of such change.

We felt the best way to facilitate patient empowerment was to begin by educating patients on their care. Patients would begin every hospital admittance with a patient briefing—which would ideally take place at the patient’s bedside. This ensures the patient is comfortable, relaxed and is hearing the briefing from one of the members of their *Circle of Trust*.



SHARING THE RESPONSIBILITY

By shifting the responsibility in hospital safety to both the patient and their care team, it allows the patient to start understanding that they are at the centre of their own care.



Belonging to the
same culture
means living and
behaving along
the same lines, the
same set of beliefs,
values and codes of
communication.

NEW RITUALS

Rituals are a powerful way to develop and implement a new culture. Because rituals are tangible and physically manifested, they support culture and are a key foundation to build upon. Once rituals are implemented and become part of everyday life, participation can be more comfortable and become the new norm of interaction and a part of the hospital policy.



HANDWASHING RITUALS

One example of the use of ritual to shift a culture is handwashing. Patients may not feel comfortable challenging healthcare providers as to whether they washed their hands after the previous patient. A collaborative approach creates a ritual of mutual handwashing, where every healthcare worker would wash their hands together with the patient at every new patient interaction.

This simple change would have three important results: the healthcare workers would wash their hands, the patients would see it being done, and show that the patients that they themselves need to take some responsibility for infection control.



GOALS

Through our compilations of analyzed notes from co-creation sessions, we separated the ideas into three categories— team building, culture, and rituals.

Emily Carr and Fraser Health engaged in qualitative, primary research to direct us in our design process. From our primary research, we created ten over-arching principals for our design solution to follow.

These ten principles served as a ‘checklist’ when designing. Our team was able to refer back to the list and be sure that the original principles had been followed.



DESIGNING FOR PATIENTS FIRST!

DESIGN OUTCOMES FOR PATIENT SAFETY

DESIGN OUTCOMES

Video Briefing

The patient briefing video offers a presentation of hospital rituals and expected patient behaviour by offering a concise and standardized brief.

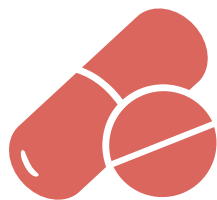
The briefing video is intended to encourage positive partnerships between the care team and patient. The video functions as an educational tool to promote patient engagement, involvement and responsibility through the animated graphics and live content.



POSITIVE INTERACTIONS

The time spent on the patient briefing between the hospital staff and patient can provide the opportunity to establish positive interactions between the patient and care team.





VIDEO OVERVIEW

The content informs the patient of various safety protocols to be aware of in order to promote a sense of empowerment and responsibility before the start of care. It offers a presentation of hospital rituals and expected patient behaviour by illustrating a concise and standardized brief.

The video begins by introducing the mandates of the Fraser Health Authority. Each of the points then briefly touches on the primary safety issues affecting patients within Fraser Health and describes possible options for the patient to individually follow to maintain a safe hospital environment.



CIRCLE OF TRUST

The patient sees herself at the centre of the care team and care initiative, while being explained on how to be involved in her care: what is expected and possibly, introducing the multiple resources available for being an involved patient in her care.

We focused on introducing the following key points of patient safety: introducing the care team, infection control, medication error, falls, ensuring patient comfort, and discharge.

DESIGN OUTCOMES

Communication Boards

An analogue whiteboard allows for immediate implementation of a communication tool for the staff, patient and family.

Hanging in the patient's room, it would include the patient's name, language, mobility, a plan for that day, and an area for messages. Staff, family and patients would be able to contribute to the whiteboard, creating a sense of partnership between all those involved in the patient's health and well-being.

In the future, the whiteboard would be transitioned into a digital solution that would pair with the app we have designed to provide greater opportunity for partnership and communication among all those involved.



NAME

LANGUAGE	MOBILITY
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CARETAKER	MESSAGE
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DIC

TODAY'S
PLAN

Smart Board System

Motivation and recognition

Hospital transparency

Immediate feedback

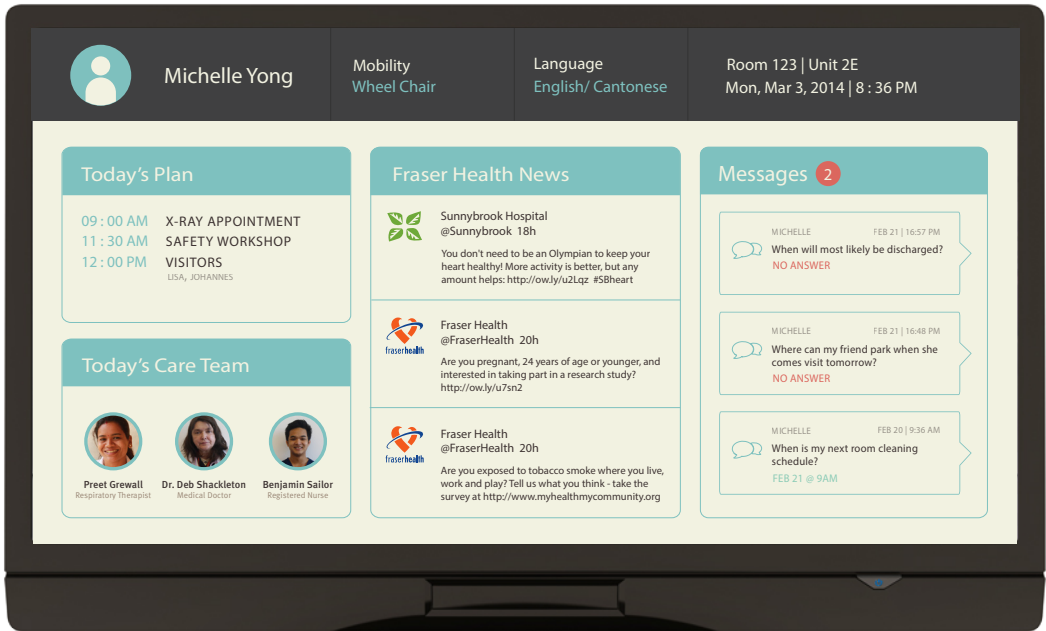
PATIENT MONITOR

Each ward would have its own networked monitor system containing its patient and general information. Each patient would have a personal, networked monitor that collects public level information such as messaging between caregiver and patient, Fraser Health-related news and updates, and today's plan from their Patients First iPad application.



EMPOWERING THE PATIENT

The patient Smart Board would be controlled using the Patients First iPad app, giving the patient a way to navigate the networked monitor and publically communicate with caregivers or friends and family.



ADMINISTRATION & MANAGEMENT

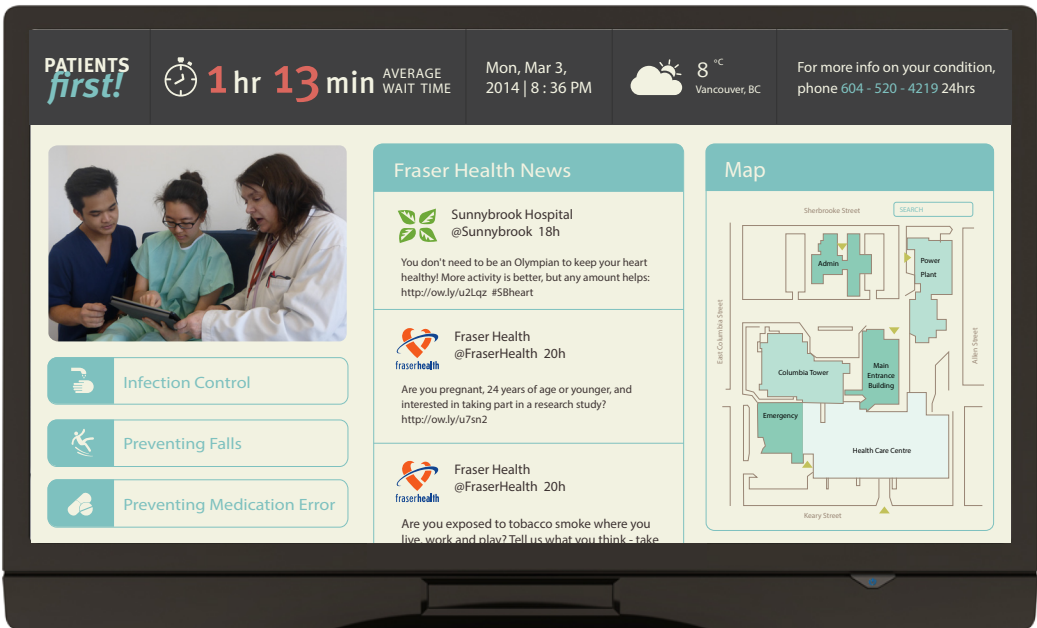
The unit supervisor would maintain the central control of a ward's monitor system. The central control would be a computer-based system with drag and drop widget technology that would aid in the organization of information, making it easily accessible for staff.

It would be used to send and divide information into public or designated patient networked monitors and receive feedback from patients. It would consist of two monitors, one for selecting content and the other to preview content. The system would be beneficial for the hospital community as it would be maintained and updated regularly.





The public Smart Boards would assist in wayfinding and provide Fraser Health-related news and updates, patient education, and waiting times.



PUBLIC MONITORS

For the public Smart Board, we revisited the project goals and selected subjects we deemed appropriate. These included subjects such as patient education, news and updates, and wayfinding to and within a hospital in the form of maps. Information that would also be displayed in the public Smart Boards would be up-votes as recognition and motivation for caregivers, achieved goals by patient as recognition and motivation for other patients or caregivers, and waiting times for patients and their friends and/or family.



KEEPIN' IT CLEAN

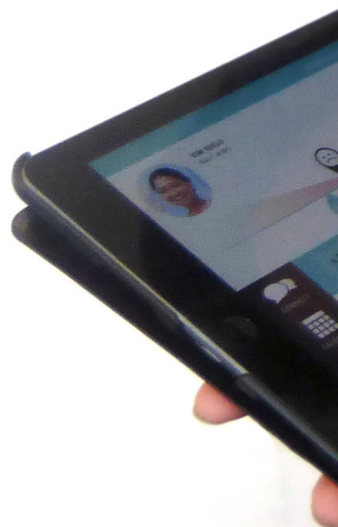
The public Smart Boards would allow touch screen interaction, so infection control can be easily maintained. The user would be prompted to sanitize his or her hands before and after use. Both public and patient screens could be easily and consistently cleaned with anti-bacterial sprays or wipes.

DESIGN OUTCOMES

Bedside App

The app is an education and communication tool designed to encourage a culture of patient-centered care.

It is designed for bedside use, as the patient becomes physically and mentally available to engage with an iPad in their hospital bed. The team sees the nurse orienting the patient to the app following their shared viewing of the patient briefing video, which can be viewed directly from the iPad. The app would be used for the length of the hospitalization.







Our goal was to make an interface so clear and simple that users of all technological skill levels would feel comfortable using it.



CIRCLE OF TRUST

The first screen the patient sees after they enter a passcode is the *Circle of Trust*. The *Circle of Trust* allows the patient to see herself at the center of her care team, and more closely engage with her health care practitioners, and connect them with their families.

The *Circle of Trust* is automatically populated utilizing the hospitals scheduling system. Background information would be provided on the team, allowing the patient to feel connected and engaged.



CELEBRATING SUCCESS

There is an opportunity to celebrate and commend the care team on their successes by “Up-Voting” someone in their circle, and show appreciation for that individual’s hard work.



CALENDAR

The Calendar section allows patients to see their day at a glance. They can see upcoming appointments, visitors, hospital events, and medication reminders. When the patient taps on a medication reminder, she is able to see a pictorial display of the medication, the quantity prescribed and a description of the pills to be taken at that time.

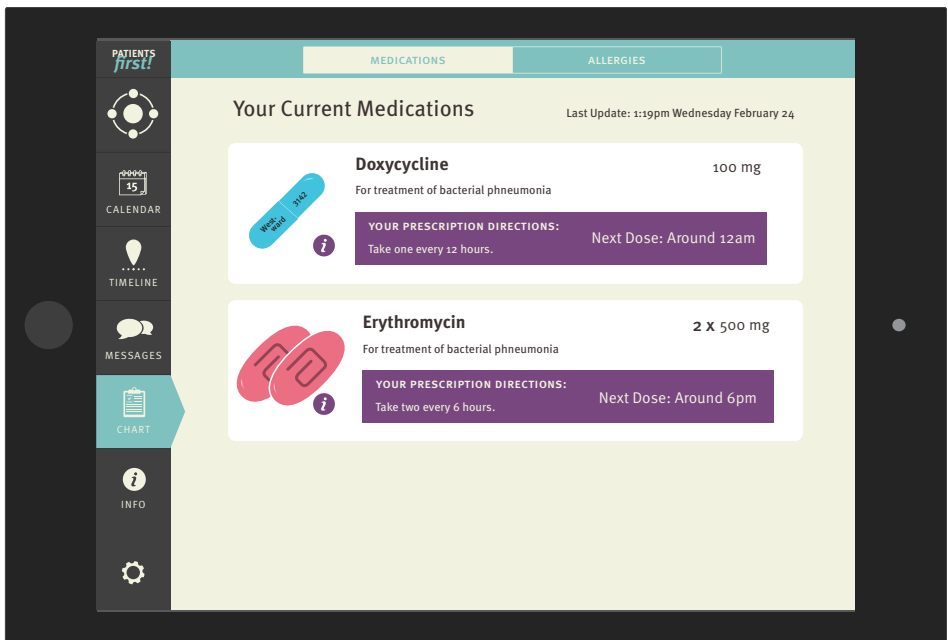
When the patient taps on an appointment, she is able to see where and when the appointment is, and look at a map of the hospital. The patient can see who their health care practitioner for that appointment is and leave notes on appointments and events. Members of that patient's *Circle of Trust* can also leave notes on appointments and events, allowing them to advocate from afar. The medical team can then refer to the notes when meeting with the patient at the appointment.



TIMELINE

The timeline section of the app allows patients to see their whole hospital stay at a glance. The patient is able to rate her mood and how well she has been sleeping, see appointments and visits on her timeline. She is also able to set goals on her timeline, to celebrate the small successes within the hospital.

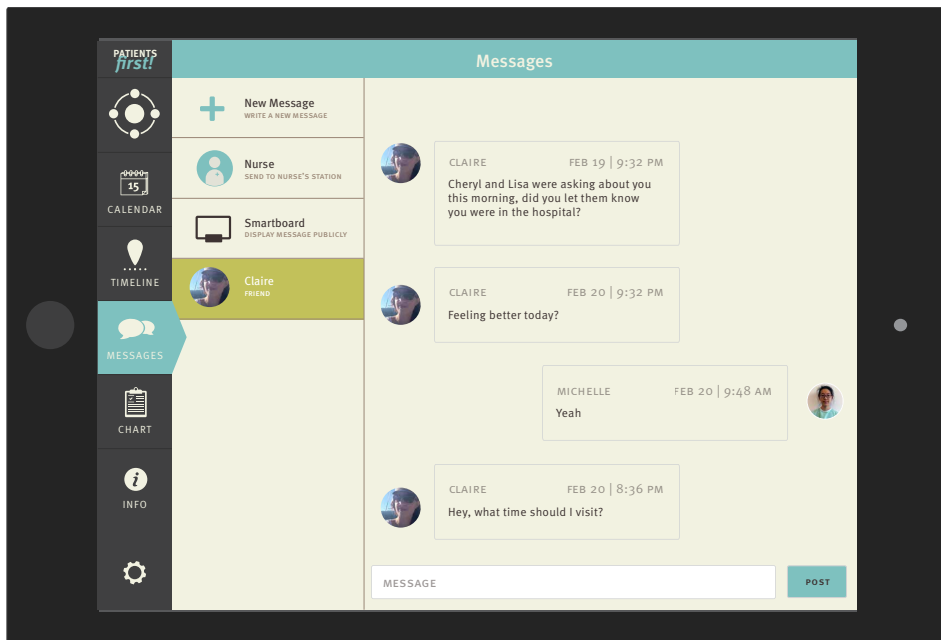
In addition, the patient is able to provide feedback to the hospital by tapping the “give feedback” icon. This function was added to the app in order to gather feedback much in the manner that the website “TripAdvisor” gathers customer feedback. Patients are able to openly express their experience in the hospital in addition to rating said experience.



CHART

The patient is able to see her current medication and allergies in the Chart. Medications would be fed through the existing pharmaceutical database, while the allergies tab provides a quick and easy way to add allergies to the patient's account. Patients can search for a specific allergy and provide notes on what type of reactions they might have.

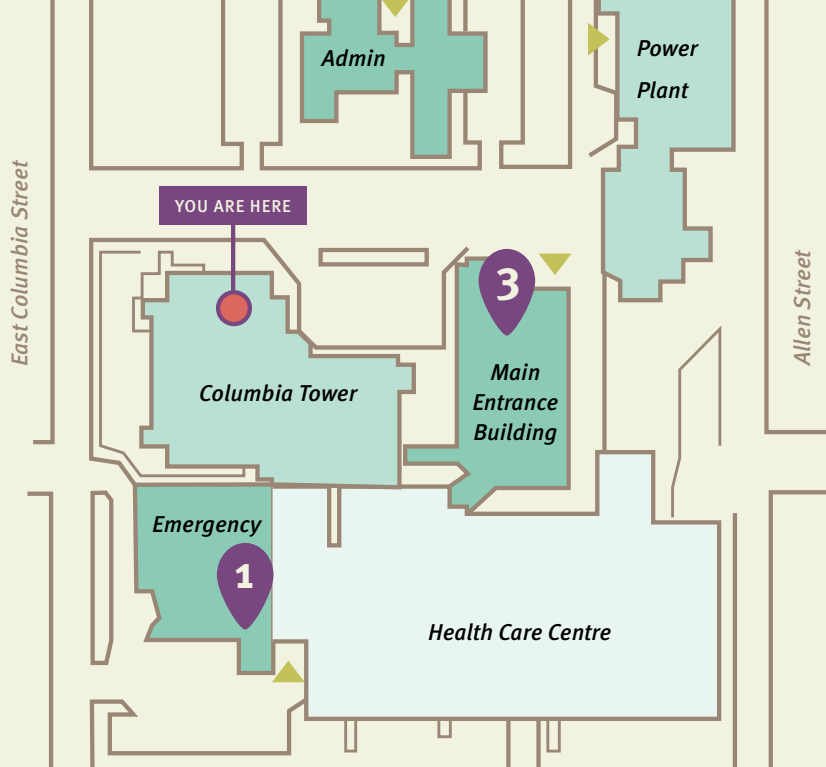
This section educates the patient on what medication she should be taking, empowering her to ask a nurse to double check the prescription if she sees a pill she does not recognize, avoiding medication error. In the future, this section would be where the patient could see their Electronic Medical Record (EMR).



MESSAGING

The patient is also able to message people in her *Circle of Trust* within the app. When creating a message, patients can select any combination of the following options: Unit Coordinator, Smart Board, in addition to all, or selected members of her friends and family.

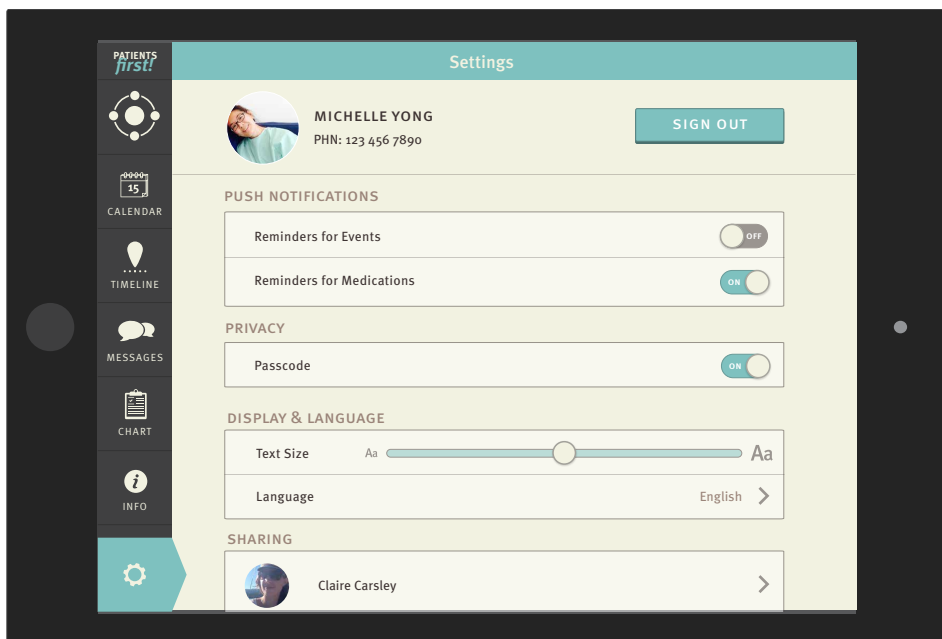
All chats within the app appear in a similar manner as iMessage, allowing users to click from a list of contacts and transitions between a chat screen with speech bubbles and a chronological list of historical chats.



INFO

The Info section provides information on hospital safety, it allows the patient to view the briefing video again, keep up to date with Fraser Health news, and find their way around the hospital.

There is an interactive map where the patient or her family can search for a location in the hospital and see where exactly it is, similar to “Google Maps”. A telephone number is also provided for patients to call for more information about their condition.



SETTINGS

The settings section allows patients to change their password, increase text size, select their language, and edit their sharing settings. This allows the patient to refine security settings that are already generalized from the initial request to add the person.

For example, the calendar may be made available however some individuals within the friends and family may only be able to see “busy” or “available” time whereas others may not be able to book appointments within the calendar.

MOVING FORWARD

There are key elements, which the Emily Carr team is keen to work towards in future iterations of the Fraser Health app.

As suggested through our research we can see how a Smart Board will easily interact with an iPad by possibly utilizing the tablet as a remote and populating communication to the Smart Board. It could also be used in broadcasting public information that relates specifically to the patient such as social events for those with a similar diagnosis, personal messages and rehabilitation activities.



EMR INTEGRATION

The integration with a possible EMR or projecting possibilities into integration with an EMR would offer significant opportunities to expand the capabilities of the app to enable wellness and advocacy. Managing medical information with the same “Patient First!” attitude could bring forward new possibilities, which may not be considered in the first Care Team focused EMR system. Much of the work here lies within making results, diagnoses and medical histories accessible while making the information readable and easy to digest for patients.



HEALTH NETWORKS

There are also interesting opportunities in making this app the central hub for dictation, diagnosis and other modes of practitioner entered data. There are also opportunities within registration with possibilities of simply entering a Patient Healthcare Number and allowing patients to validate information from within the app.

CONCLUSION

Patients First! is the result of a successful collaboration between Fraser Health and Emily Carr University. Without the involvement of Fraser Health, our primary research would have been significantly less robust; their part in this process was invaluable.

Learning from individuals in the field, both as staff and patients, was an informative and thought-provoking experience, and gave us a great level of understanding into the hospital. Patients First! is a concept centred around patient care; by acknowledging the patient as the key element of the health care interaction, we hope that the hospital can become a much safer place.

We would like to extend our gratitude to Fraser Health for their involvement in this project, and to all of our co-creation participants for their creativity and openness. We hope that our research can pave the way for similar projects in the realm of patient safety.



By acknowledging the patient as the key element of the health care interaction, we hope that the hospital can become a much safer place.