

Safety for Home Care



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Intro

According to statistics, the number of elderly in the age group 80 and above will increase by 50% until 2028. In light of this, we had the opportunity to collaborate with Innovation Skåne to work for Osby municipality and its home care service. Our goal was to develop a service the municipality can use for the patient and the close relatives to feel safe with the care in their own accommodation.

This report summarizes our design process and important aspects we discovered and took into consideration when coming up with a viable service design solution.

Methods

In this research, we worked within the frames of interaction design practices and service design processes. We also incorporated co-design methods to involve all related stakeholders and work collaboratively to explore more about “person-centred care”.

Interviews

Contextual inquiry and semi-structured interviews with 3 patients, 1 care-assistant, 1 MAS

Brainstorming

Mind map, Relational diagrams, Design Thinking

Secondary Research

Current Home Care System

Elderly patients within home care often face limitations for their medical conditions and need long-term health and medical support. For an elderly to receive home care, the person needs to be at least 65 years old and have multiple chronic diseases or hardship to move. Thus home care is offered to elderly patients who are in need of continuous care in their own accommodations. This means being able to stay in their own accommodation and receiving various forms of support, such as security measures efforts, help with practical tasks, and medical support. The nursing staff works with patient's health being the first priority.

Area Manager

Various people are involved in providing home care service to the patients. First, an area manager makes sure good quality, cost-efficient care is given to the patients. Within this framework, the area managers responsibilities involve business development, determining and documenting routines for how quality work must be carried out, and do follow-ups and develop the business.

Medically responsible nurse

A medically responsible nurse, MAS, shares the responsibilities of an area manager to some degree, like planning, directing, documenting and reporting the work on the quality of the business and security. Yet MAS faces challenges of patient's safety and medical care at the municipality level. In that manner the responsibility of the MAS includes ensuring that constitutional regulations and other rules are met and enforced.

Nurses (District nurses and Nurses)

District nurse and nurse in home care are responsible for the health of the individual patient: to meet the patient's basic and specific nursing needs and to organize or participate in teamwork regarding the patient. The district nurse or nurse is also responsible for leading, prioritizing, distributing and coordinating the nursing work in the team. The responsibility also includes informing and, if necessary, educating patients or relatives both individually and in groups. Nurses also perform or participate in examinations and treatments if necessary.

Nurses staff (care-assistant and sub nurse)

The nursing staff are often the closest to interacting with patient. The nursing staff should regularly observe the patient's state and report it to the nurse if necessary. A nurse shall then inform the doctor about signs of ill health if needed.

Care-assistants in Osby use TES schedule app to learn about which patients to visit when to visit them, and what support to provide to them throughout their day at work.

Safety

With our research question being how to help patients feel safe in their own accommodations, we conducted research on the definition of safety in context of home care.

'Safety' is a term often used in elderly care but is rarely discussed or defined. Related case studies underline approaches of how close-care contributes to a feeling of safety for the elderly (Larsén, 2016). From our understanding, for home care to be safe in its definition by the patients, the patients need to be involved, have influence in their care, be self-determined and have choices. Within home care, it is important that the elderly are treated without coercion.

Equally as important, is the accommodations of the elderly patients, and its connection to safety is emphasized (Larsén, 2016). One's accommodation means feeling safe and is associated with a sense of freedom and a welcoming and warm atmosphere. It is something meaningful, but also a source of both independence and retention of identity for the patients. The municipality of Osby's attempt at a person-centred care approach would mean self-determination for the patient, individual adaptation and participation; to ensure participation and improved safety.

According to statistics, the amount of elderly in the age group 80 and above will increase by 50% until 2028. In light of this, we seek to unfold design opportunities for services the municipality use for the user/close relatives to feel safe with the care in their own accommodation. We collaborated with Innovation Skåne to work for Osby municipality and its home care service.

This fieldwork report concerns the municipality of Osby. The municipality is dedicated to ensuring safety for the elderly with home care by exchanging experiences with other municipalities, as well as educating today's and tomorrow's organisational nursing chain to fulfil their ongoing and future goals. For the patient, person-centred care means to involve all parties in the care and work collaboratively to achieve the feeling of safety and well-being.

Safety for Patients

We further explored the definition of safety for patients through mind mapping. Our understanding of safety for patients were categorized into four factors: proximity, confirmation, having routine, and individuality.

Proximity

Closeness in physical space, time, or relationship. Patients with relatives living close by may feel safe, as close proximity could mean a reaching hand in unexpected occurrences. For patients without living relatives, home care service might be the only close contact that they receive.

Confirmation

Patient's knowledge of knowing what care they are receiving, how it is effective, who is coming to give the care, and when. We believe there should be more transparency in patient's knowledge of these informations for them to feel assured receiving home care.

Routine

Being able to plan ahead, the patient may feel they. Order in routines could lead to less confusion, making them prepared for the unexpected. It is to our belief that anticipation and proper scheduling may lead to less anxiety.

Individuality

Home care acknowledging the patient's individual characteristics and preferences. It could vary from health-related tasks as which medicine to receive to knowing one's favourite brand of groceries.

Interviews

As part of qualitative research, we interviewed 3 patients (two from Malmö and one from Lönsboda), 1 care-assistant, and 1 MAS.

When interviewing the patients, we observed the environment of patient's homes in Osby and Lönsboda, a small town belonging to the municipality of Osby. We also took the opportunity to interview patient from Malmö to compare the situations between living in a rural area and urban city.

All the interviewees signed a consent form containing information regarding complete anonymity, as well as expectations and a brief on the project. The interviews lasted from one to two hours and were audio recorded to later be transcribed, which enabled the transcriptionist to generate body language and other observations.

Interview with a MAS

We conducted a semi-structured interview with a MAS/area manager in Osby to gain knowledge regarding her position, responsibilities, and current safety measures in motion. Accordingly, we established her daily schedule and learn about what challenges she faces in her profession. These insights were also used to validate and confirm the secondary research. The interview was conducted at the Osby municipality office where she is situated with five facilitators present.

Interview with care-assistant

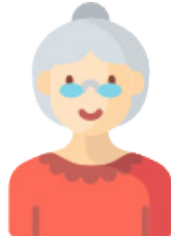
After interviewing her, we interviewed a substitute care-assistant. The interviewee had experience with working different shifts in different areas of Malmö. This interview was important to understand our target audience, as the care-assistant is assumed to be the closest person giving care to the patient. The interview took place at a café and was semi-structured, focusing on the relationship between a care-assistant and the patient, investigating the experience of being a temporary substitute care-assistant.

Interview with patients

With insights from the previous interviews, we set out to do a series of interviews with elderly patients receiving home care services. Again, we used a semi-structured method. With an in-depth interview protocol in the participants own accommodation (see Fig. X), we were able to create a comfortable atmosphere for the participant to speak freely. The participants were ranging between 70-90 years of age living in both Malmö- and Osby municipality.



User Profile



Agda
Patient A

Agda is a 78-year-old patient living in Malmö, who has been receiving home care for 18 years. She believes that she can do more in her own care. But she often encounters disrespectful treatments from her care assistants who ignore her ways of handling tasks. Her frustration is mostly about the blunt attitude of the heavily rotating staff. Despite needing assistance to leave her house, she plays bridge every Thursday with her friends and loves gatherings with family and friends. Additionally, she is very active on Facebook.

"I appreciate the small things in life, i'm thankful."

"The boy said that he would not feed my cat, saying that was not his job. I told him to think about his answer. From that point on, he was not so blunt anymore."

"Thursdays are holy for me."



Kristina
Patient B

Kristina is almost 80 years old and lives in a house in Malmö near her family. She starts every morning with a cup of black coffee and a piece of bread and later takes her morning medication. After an injury due to her seizure, she has trouble walking but that doesn't stop her from going outside of her house. She supports a sustainable lifestyle and walks frequently to the trash station to sort the trash by herself. She has two sisters and meets them every Saturday for brunch and a gossip.

"Home care is life. Without it, I would not be able to live in the house where I had my children grow up."

"I can't predict when I have a seizure so I don't know when to press the alarm. This worries me, especially at night."



Karin
Patient C

Karin is 76 years old and lives outside Lönsboda with her husband. She used to grow her own crops, but nowadays when she is wheelchair bound, she knits instead to keep her joints mobile. Her legs are very fragile after an accident where she fell in the shower but she does everything she can by herself. For her, being able to do small chores is therapeutic.

"I love when the girls (care-assistants) sit down and gossip with me."

"One guy pushed me around in my wheelchair so hard, I was so scared. Luckily he quit."

"It makes me anxious when I know new staff is coming. I'm worried that they don't know about my condition."

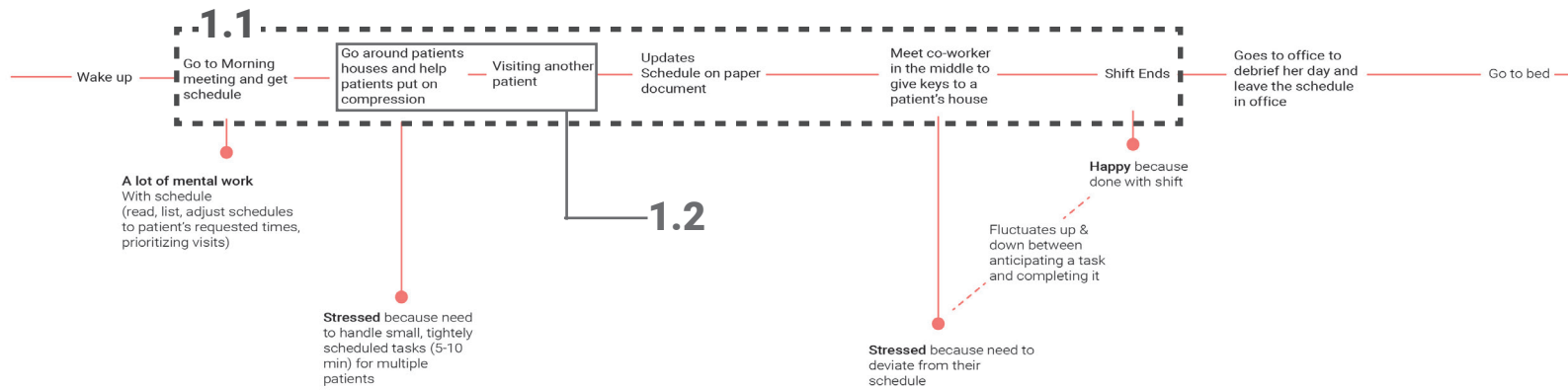


Thomas
Care-Assistant

Thomas is a 24 years old care-assistant substitute living in Osby. His prioritizes the concerns of the patient, but he is worried about the heavy workload.

"A smile can solve almost everything"

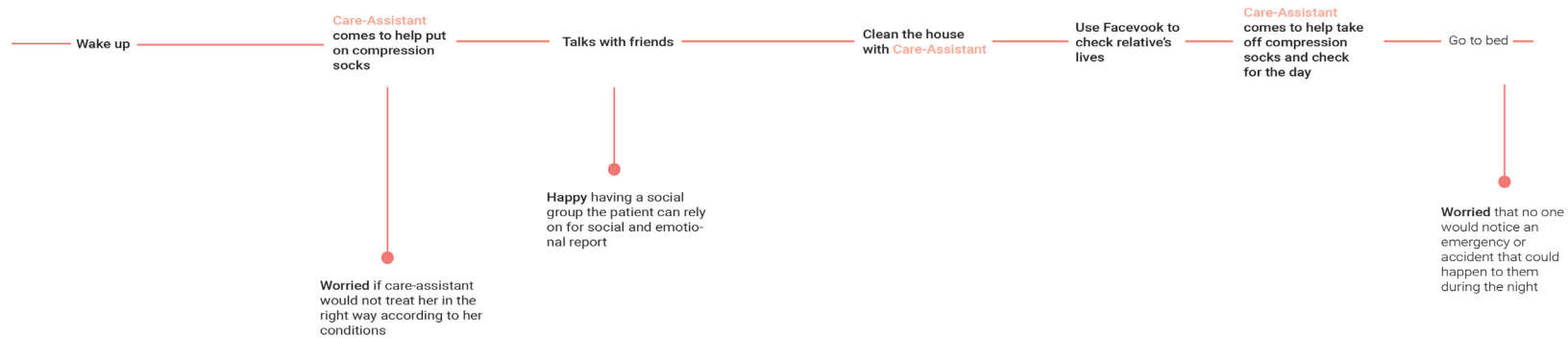
"It takes time to get to know patients routines and that's hard when you're a substitute".



Insights

Having an organized schedule influences care-assistant's work day

Stressed due to high demand



Insights

Has limitatuibs due to medical conditions and specific ways to handle it

Has social group who are not care-assistants

Familiarity with using technology

Fig. 1: Patient Journey Map

Based on our interview findings, we made a user journey of the patient's day and the patient's interaction with the care-assistant.

We sought to understand what feeling safe in their own homes meant to the patients cover specific touchpoints and interactions with care-assistants which made patients feel safe or unsafe.

Insights

Respect patient's lifestyle and routines

One patient said that without home care, living in their own accommodations would not have been a viable option. As home care allows them to live in their homes, patients also expect home care to allow them to retain their unique lifestyle in their homes. For patients, it was important that care-assistants respected and followed their daily routines and own ways of handling tasks in their housings. However, there were instances where the nursing staff disregarded the patient's routines and demands.

- Agda was upset when a care-assistant refused to feed her cat, which was an important task for her day.
- Kristina said "Home care is life. Without it, I would not be able to live in the house where I saw my children grow up."

Information distortion and reset

Often information was orally communicated between the patients and the nursing staff as it is less time consuming compared to using print materials. However, when information gets passed orally, there is a possibility for misinterpretation since spoken words do not leave tangible evidence to use as a reference. There also exists a possibility of information not being communicated or new information not being updated, which can lead to frustrations.

- Agda was upset when a care-assistant refused to feed her cat, which was an important task for her day.

Another pain point is the information "reset". When a new care-assistant visited them, the patients had to "reset" information about themselves to the new staff. Patients felt less safe and nervous receiving medical support, even putting on compression socks, from a new care-assistant because the personnel would not know the specifics of their conditions and thus had a higher chance of treating them incorrectly.

High Workload of Care-Assistants

As shown on the patient journey map (Figure 1, box 1.1), a typical day at work for a care-assistant includes visiting multiple patients, doing chores, giving medical support like putting on compression socks, and keeping track of the schedule and observation notes. This combination of high mental and physical workload leads to not only high-stress level but also in a risk of handling their tasks in a rushed, blunt manner as they would focus on completing the tasks needed to be done.

According to our interviews with patients, patients found this goal-oriented approach and qualities inconsiderate and undesirable, a sign that their wants are not met.

- Thomas finds his job as a care-assistant fulfilling but is concerned of the heavy workload.
- Karin said that her sub nurse had a blunt, aggressive attitude when the sub nurse pushed her around her wheelchair too fast. This made her feel anxious and nervous every time the sub nurse would visit her.

Respect patient's lifestyle and routines

Care-assistants use the TES app learn about which patients to visit when to visit them, and what support to provide. However, the schedule does not reveal how the patient wants to be treated or wants the tasks to be done unless the care-assistant views the patient's detailed information on another tab in the app.

Although small, this extra navigation of having to open another tab to view information can be deemed as cumbersome to care-assistants who need to keep track of multiple patients throughout the day. Yet the perception of not understanding the patient's specific, exact wants is high as it can lead to patient's low satisfaction level and even medical injuries.

- Karin was anxious when the care-assistants lifted her legs sideways to help her get out of bed when they needed to be lifted up to prevent from dislocating her hip replacement.

Lack of structure for relationship building

As shown in the patient journey map (Figure 1, box 1.2), the nursing staff are responsible for taking care of several patients on a daily basis, and the patients are left with a range of different nursing staff members in a day. Also, care-assistant's TES app indicates exactly how much time the assistant can spend at the patient's house to complete the given task. The short, interactions make it difficult for the patient and the individual nursing staff member to familiarize with one another and build a relationship.

Patients more engaged with their life

Patients came up with their own ways to deal with their medical conditions, which showed that they are willing to stay engaged in their lives.

- Agda was knitting to keep her joints flexible rheumatism
- Karin, who supports a sustainable lifestyle, walks frequently to the trash station to sort her trash properly.

Design Opportunity

1. Are there other ways than orally communicating information?

One issue identified was the lack of support for more accurate, transparent communication. Relying mostly on oral communication to share information from patients to home care and vice versa is risky as oral communications are liable to misinterpretations, failure of retaining information, and forgetting to share the information.

Thus we wished to explore different means of communication other than oral communication, like written or visual communications, which could yield physical evidence of the information.

2. How can we promote a better understanding between patient and care-assistant?

Another issue we noticed was a lack of understanding of patient's needs to the care-assistants. This issue led to consequences including patient's low satisfaction level of the service. Yet more importantly, it led to patients feeling anxious and nervous from receiving medical support from assistant who did not know the specifics of their conditions, and thus potential medical accidents. One patient mentioned how the care-assistant almost dislocated her hip replacement by lifting her legs sideways and not up.

Therefore we wished to extend this opportunity to make sure care-assistants understand and know these small, detailed, and specific needs of the patient's without adding more workload to their already heavy work schedule.

3. Can we help patients feel more engaged in their lives through home care?

One goal of co-design and participatory design approach is to include the patient's insight and coping mechanisms of their conditions as part of the service. This design opportunity could support patients maintain their lifestyle at their own accommodations.

Bearing that in mind, we suggest incorporating self-care approaches and strategies from the patients. We aimed to explore what patients can do or are willing to do by themselves. We also explored whether the patients saw themselves playing an active role in their own care, health, and wellbeing.

Concept Development

Concept 1: Schedule Change Confirmation

Our first concept was a confirmation system, a mobile application the patients could use to send schedule change requests to the home care system and receive confirmations. This concept extends from the first design opportunity of exploring other communication methods than oral communication.

From our research, we found that there exists inconsistency in orally communicated information between patients and nursing staff, in particular to the patient's schedule. The current home care service offers patients to ask for schedule changes through the phone. This information was verbally communicated without physical evidence of communication, so the patients were left to having to ask again whether the changes were made or not.

Therefore, with the app concept, the content on the app would act as the physical evidence of information sharing as it contains the information written on the app screen.

Concept 2: Daily Fact Board

To improve the understanding and relationship between patients and care-assistants we came up with a Daily Fact Board concept. On a physical board in the patient's home would the daily facts about the patients - their preferences, routine, and interests-the care-assistant could read. The board could be filled by the care-assistant and patient together.

Having the information more accessible would help care-assistants learn about the patient's specific wants without forcing the care-assistants to learn about the patients. It would also help patients feel less anxious that the care-assistants know about their conditions, as there would be this accessible, open reference point the patient can always point to if they deem the care-assistants do not know about their conditions well. This underlines one concern brought up by the patient who said she was worried the care-assistant would not know the details of her condition well enough.



Concept Development Brainstorming

In the end, we decided to move forward with the schedule change confirmation app concept as having trouble in schedule changing was already an existing issue brought up by a patient. Furthermore it was also a good opportunity to explore different communication methods as the content on the app would act as the physical evidence of the written and visual information shared between the patient and the nursing staff. Finally, to approach this issue, we would need to learn about the patients' daily schedules, a chance to gather deeper insight to patients lifestyle not covered by home care.

Co-Design

The purpose of the co-design was to understand how patients interact with our lo-fi paper app prototype. The prototype was an A3 paper size and replicated a calendar app interface whose time slots could be swapped, removed or pushed (see Fig. X). We conducted an individual session with a patient who lived in Malmö. The session was proceeded to observe the user how the patient perceives the digital schedule and interacts with their own home care schedule. We provided printed calendar page, a daily timeline, cutouts of service measures, post-its, and a printed confirmation popup dialogue.

Insights

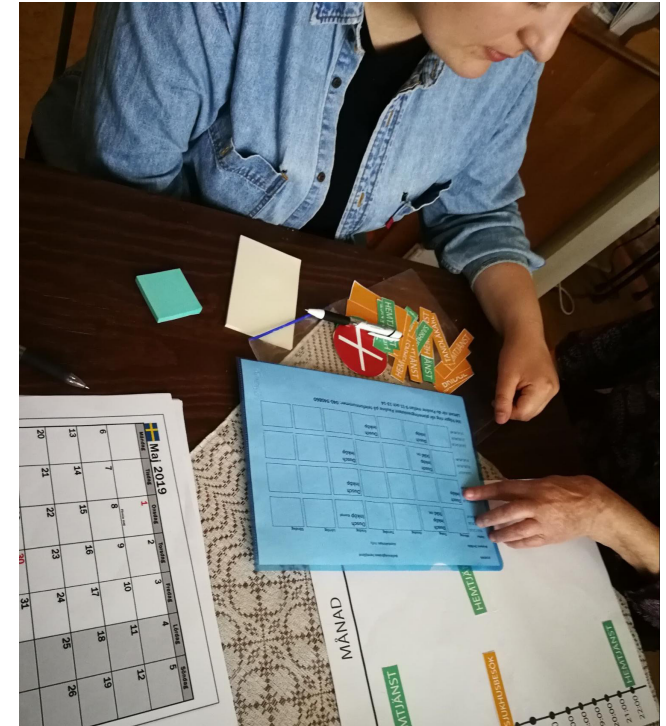
Co-design allowed us to gain a deeper level of understanding to user's behavior and thought process while interacting with the prototype. We observed the user would rearrange any events that are not arranged with the home care. This was because for the current home care system, adding additional and moving scheduled visits to different times might be difficult and require at least three days notice. Furthermore, removing a visit can although be easily done by informing the morning staff, this current solution is catered to only short notice attempts. Removing visits with short notice can create a miscorrelation with the staff's schedule from different shifts.

We also found that for the patient, it was not comfortable enough to interact with her small smartphone screen; she preferred to use a computer or a tablet. Thus we decided to make our service available on devices with bigger screens like a desktop or a tablet.

On top of that, we began to consider non-technical solutions to ensure our service is accessible to users who are not familiar with using technology. Although the patient we conducted co-design with felt comfortable using mobile application, the applications she used were limited to social media applications. Also she has been relying on on paper schedule provided by the home care to process the schedule information and calling to request schedule changes.

This further inspired us to develop service concepts according to different types of users by familiarity with technology and mobility (Figure 2). From this brainstorming, we decided to include patients calling the home care and a form the patients can fill out their schedule change request on and give it to the care-assistant as the non-digital portion of our service.

Finally, we also considered how the patient would be introduced to our service. Thus we decided to create an introduction brochure that introduced what our service offers.



Co-design session with patient

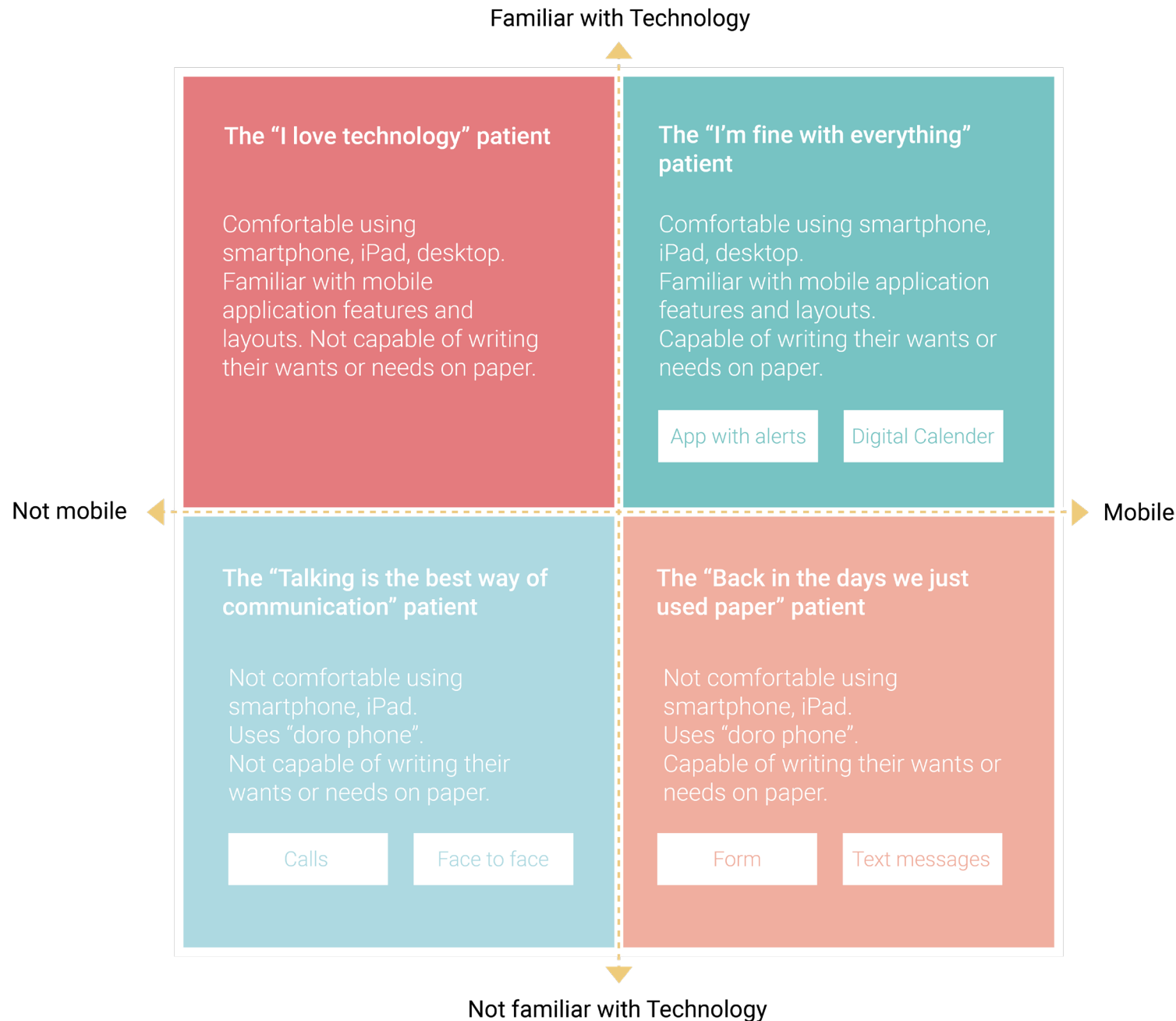


Fig. 2: User Categorization

We categorized patient's types according to their level of familiarity with technology and mobility. Our goal was to come up with additional solutions that would cover a wider range of types of patients.

User Testing

The purpose of the user testing was to observe how the user interacted with all the components of our service prototype: introduction brochure, hi-fi app prototype, and the form. We encouraged the user to think-aloud her interaction experience.

First, the user was provided with an introduction brochure that explained what our service offers. The user was then presented with an interactive app prototype on a tablet and was asked to perform specific scenario tasks like moving a morning schedule slot to a later time and confirming and receiving the schedule change confirmation. She was partially instructed to complete this part of the session.

Finally, she was presented with the schedule request form.

Insights

Regarding the interaction with the app, the patient said that she could recognize that the main screen of the app looked like a calendar. She was unsure whether the mailbox, at that time appearing as a bell, was an emergency button or alarm. When she had to confirm or cancel a schedule change, she said that she could tell what the buttons meant by the colors as confirm button was in green and cancel button was in red. We noticed that for the patient, as the application was in English, the visual icons and colors were important indicators.

Thus we took this into consideration and replaced the mailbox icon from a bell to a message to make sure the what it indicated was clear and unambiguous. The buttons were big enough for the patient to press and drag, especially for her being used to a smartphone.

Regarding the navigation and the function of the app, she said that it was simple to use. She added that an instruction manual would be sufficient to learn how to use the app on her own. For this reason, we designed an app tutorial.

She was also positive towards receiving confirmation email letter and that she could access it at any time as it was saved in her inbox. She stated the email was:

"It's a reassuring evidence, just like a physical letter".

She also added she would prefer using the app due to her bad hearing. She recalled:

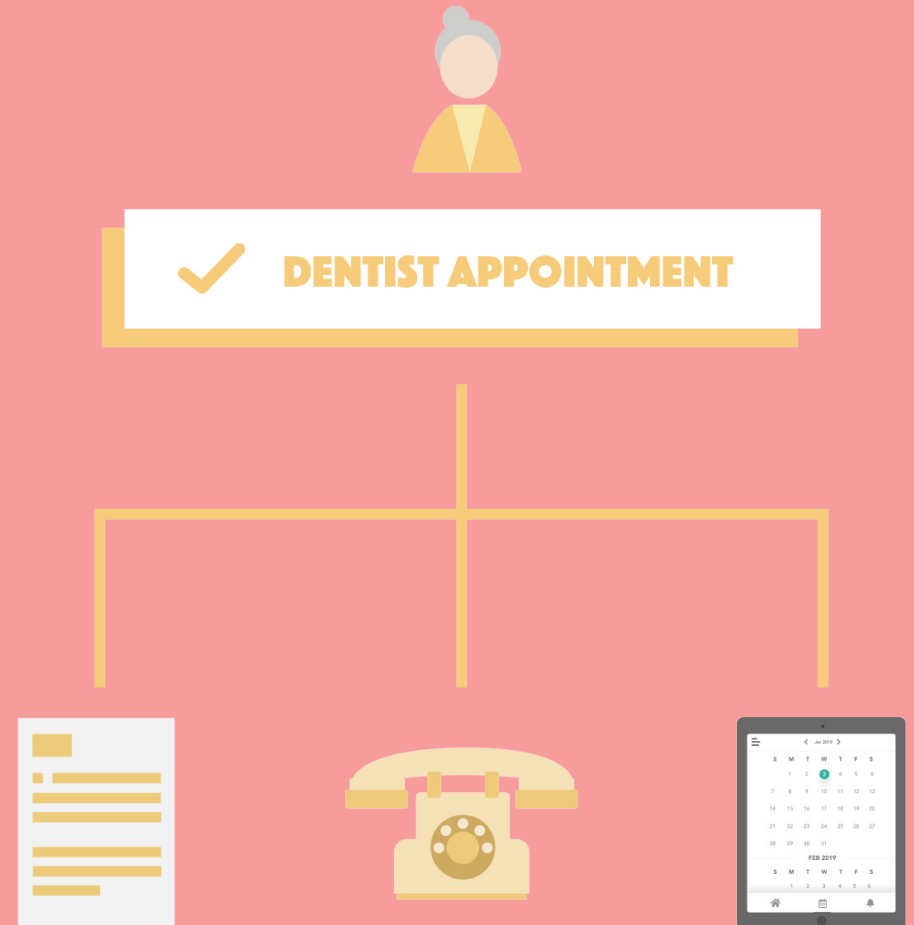
"People sometimes get frustrated over the phone when I can't hear them, and then I get irritated back at them. I'm 87 years old, cut me some slack".

The paper form was easy to comprehend for the patient. She added that her sister, whom does not understand technology at all, could use the form because reaching the office through calling was sometimes difficult.

Service Proposal

Our service proposal is Kaländra, a multi-channel service which provides patients three ways of requesting schedule change and receiving schedule change confirmations. These options involve the using of Kaländra mobile application, calling home care staff, or filling out a schedule request change form. The schedule change requests are handled by the office as well as the support process by TES database, a database that supports patient's schedule information. Once the request has been received and processed, the consumer will get a confirmation by a messages in the app, updated form, automatic calls or messages, or verbally from the care-assistant.

Through this muti-channel approach, we seek to cover patients with both technical and non-technical backgrounds. The goal of Kaländra is giving patients the freedom to choose a schedule change request method that is most convenient for them and help them making schedule changes less burdensome.



1. Introduction Brochure & App Tutorial

Kaländra service is to be introduced in the service when the patient signs up for home care, and the introduction brochure is the first way through which the patient is introduced to our service. It is a manual, introducing an overview of the Kaländra and its three components.

The brochure comes with a tutorial flyer for with detailed descriptions on how to use the application if the patient chooses to use the app.

Value

The critical touch point of the brochure and the tutorial brochure is that it is the initial service-patient interaction point common throughout three service experience, as seen in all three blueprints (Figure 3, Figure 4, Figure 5 at 1). By reading the the information provided by the brochure, the patient can decide whether to use the service or not. For the home care system, the brochure acts as a convenient mean for nursing staff to share information about the service to the patient.

Implementation

The brochure and the app brochure can be printed and brought to meeting with patient and relatives to sign up for home care.



Introduction Brochure



App Tutorial

2. Kaländra App

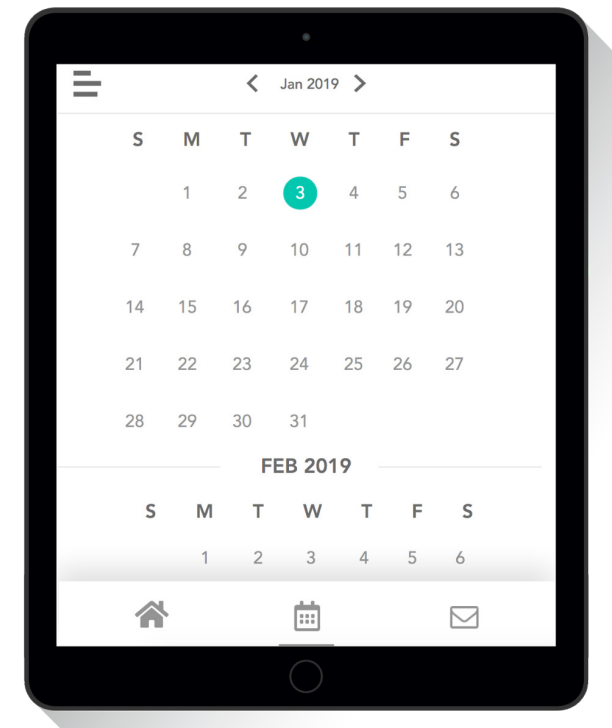
The application is meant for consumers with technical backgrounds. It allows for instant schedule change requests as a faster way to communicate patient's needs for schedule change. Through the app, the patient can send schedule change requests using the calendar interface and receive confirmation emails in their inbox. At the backstage, there exists the process of home care office confirming the schedule changes in terms of approving or declining, which is same across the app, form, and the call components of Kaländra service.

Value

For patients, the value is the capability of requesting schedule changes at any desired location and time. Using the app requires no other parties to be involved, and engages the patient directly in the schedule change service portion of home care system. Furthermore, the application works as a physical evidence as the patient to not only view the current schedule but also view schedule change process and confirmation emails that are saved in their inbox (Figure 4 at 2a). For the home care staff, it relieves the responsibility of carrying verbally said requests and reduces the risk of information getting lost as they will receive the request on the desktop (Figure 4 at 2b).

Implementation

To help patients who wishes to use the application, the care-assistants or substitutes could receive brief Kaländra app tutorial before meeting the patient for the first time. The first task they could do as nursing staff is to walk through the app with the patient, which can also work as an ice breaker for the patient and the new staff.



Kaländra App

2-1. Schedule View

Through the 'Schedule view', the consumer has the ability to view his/her daily schedule with home care.

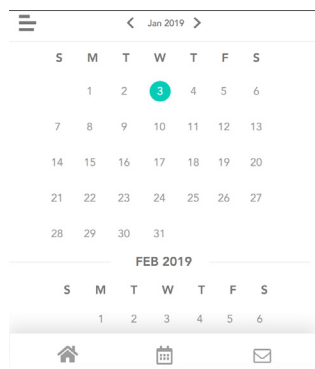
0) The patient may access the date they wish to view by clicking the date on the calendar.

1) On the schedule, event tab is stacked by the timeline on the left and each tab has a time and a description of the event.

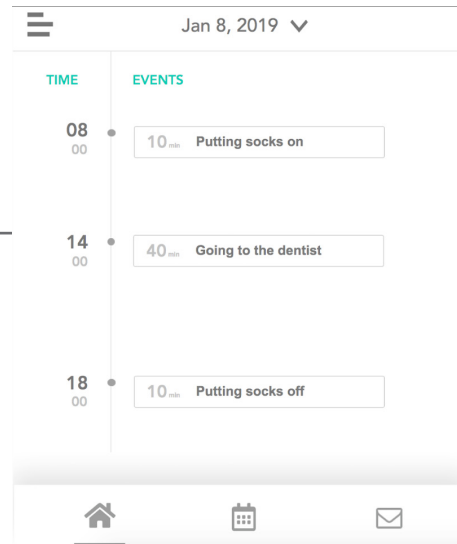
2) Each tab is draggable that the patient can drag it and place it at the desired time.

3) Once a tab is dropped, the patient may either continue altering the schedule, or send the request for that change by pressing the light blue arrow button that appears when the relocated tab turns blue.

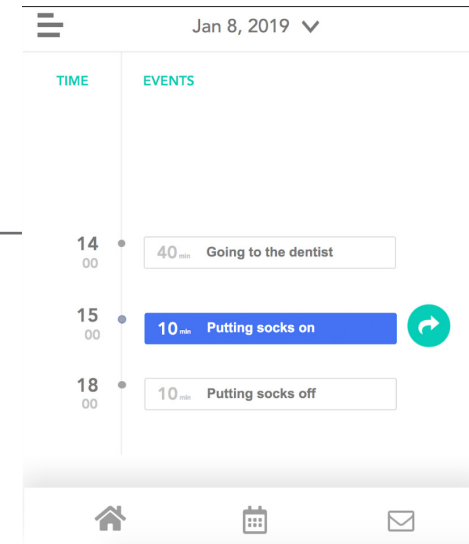
4) Once the request has been sent, the tab is turns orange for 'pending'.



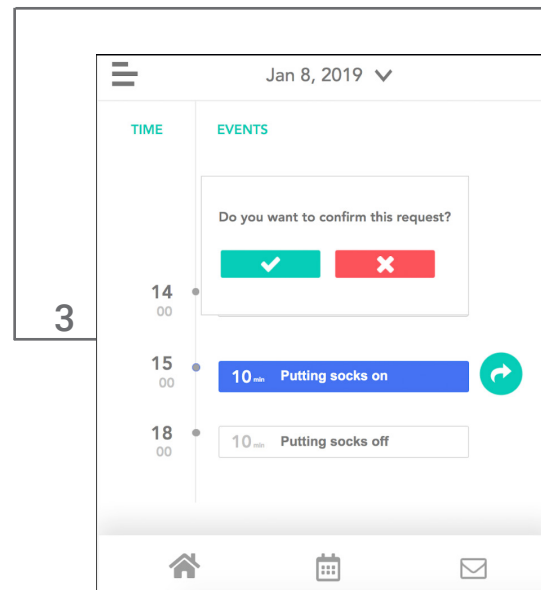
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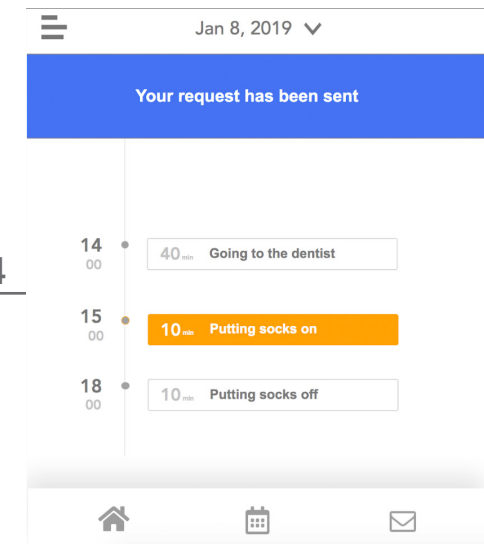
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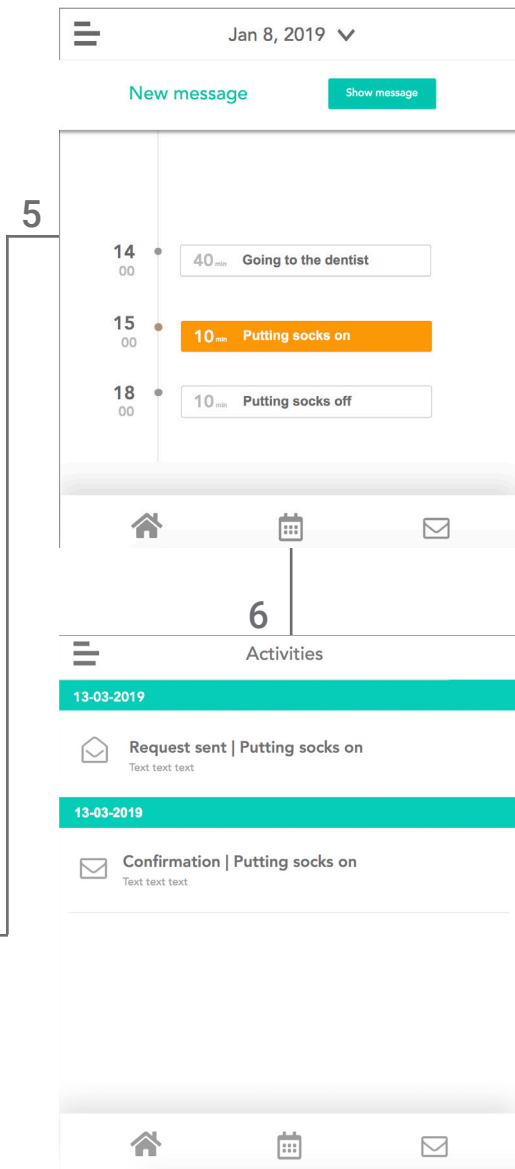
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4



2-2. Activities View

The activities view allows patients to check sent and confirmed request messages.

5) The patient will get an alert from the app when they get a new message.

6) These messages are ordered by date and indicates they are read or unread by the open or closed message icons to the left.

7) In the case of the content of the message, it can be either the approval or the denial of the patient's requests decided by the home care office (Figure 4, 2.2a) with an electronic signature of the home care office staff who reviewed the request.

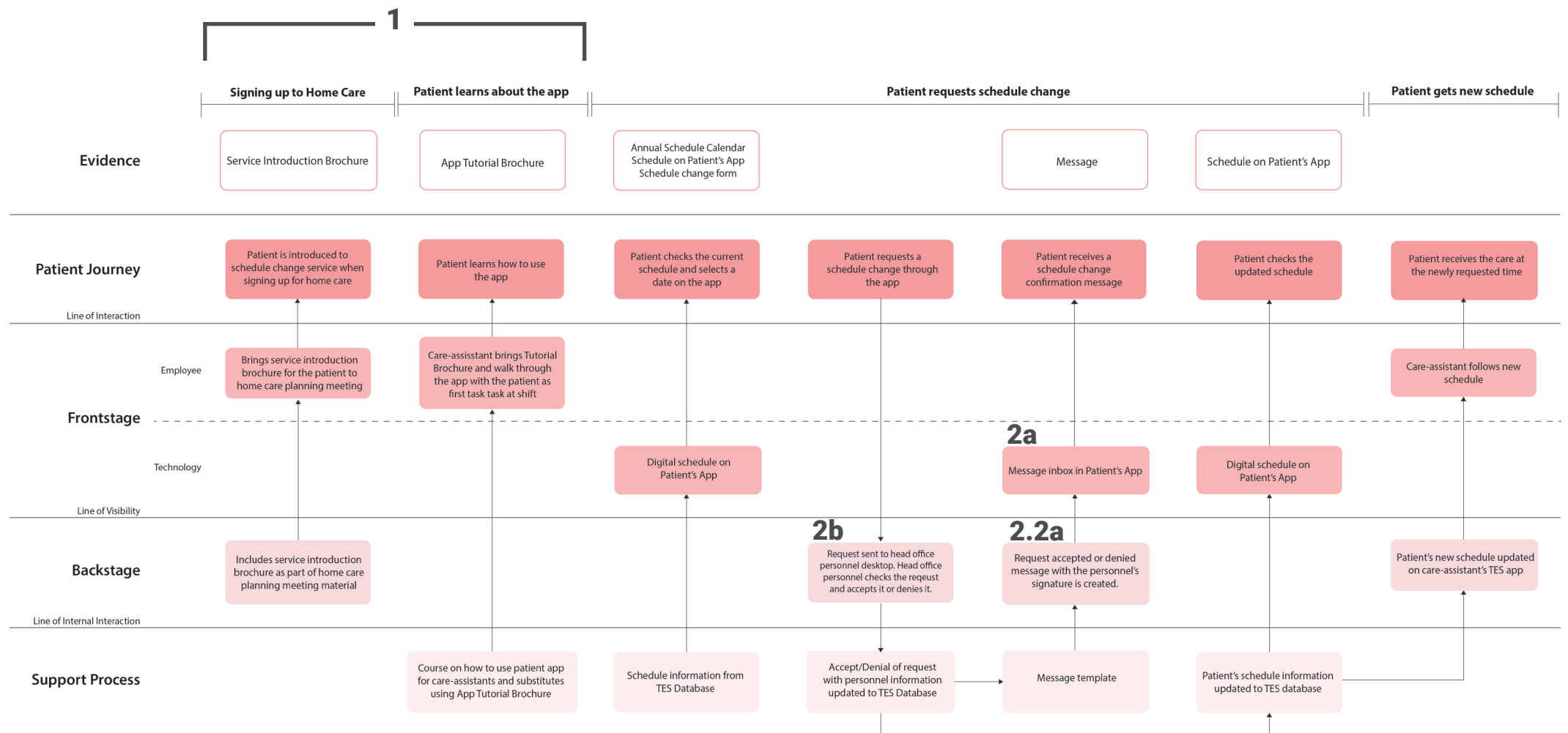


Fig. 4: App Service Blueprint

3. Calls

Patients calling home care staff to change schedule by their telephones exist in the current home care service. However, our service proposal is not to eliminate existing options. Our service proposal takes a step further and allows the patients to receive confirmations of schedule change request through automatic calls or text messages to their phones.

Value

Calling is commonly used but a call back to the patients to keep them updated with schedule change process or confirmation does not exist or is often neglected. Our service ensures the patient's who are satisfied with calls to still receive confirmations of their schedule change. For the home care staff, they would need not worry about having to make these calls or messages as the automatic call or message system will make the calls or send the messages to the patients with contact information from the TES database (Figure 5, 3a).

Implementation

To implement automatic calls and messages, there might need a third party software that reads the patient contact information from the database, format the calls and messages, and makes the calls and sends the messages to the patient.



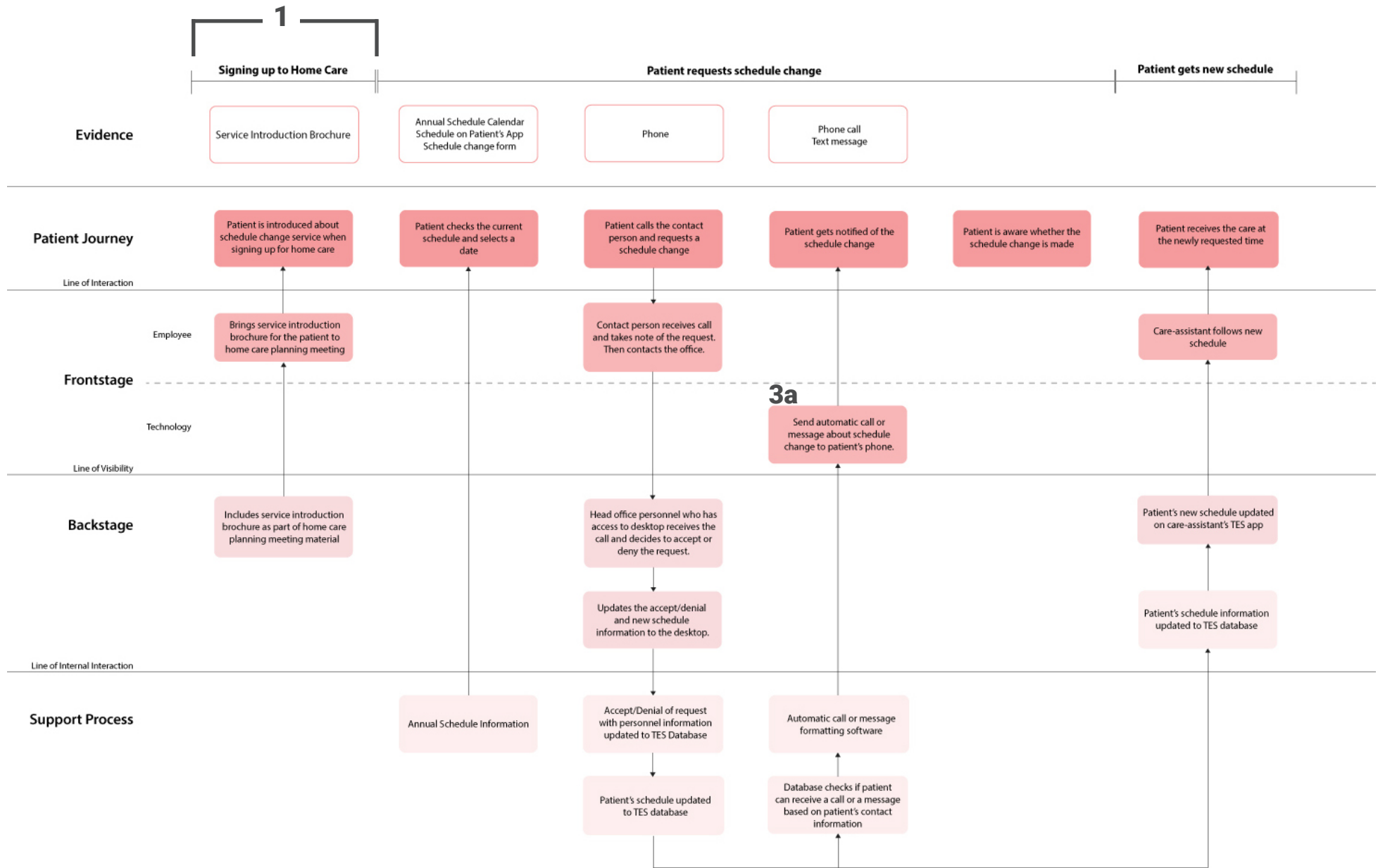


Fig. 5: Call Service Blueprint

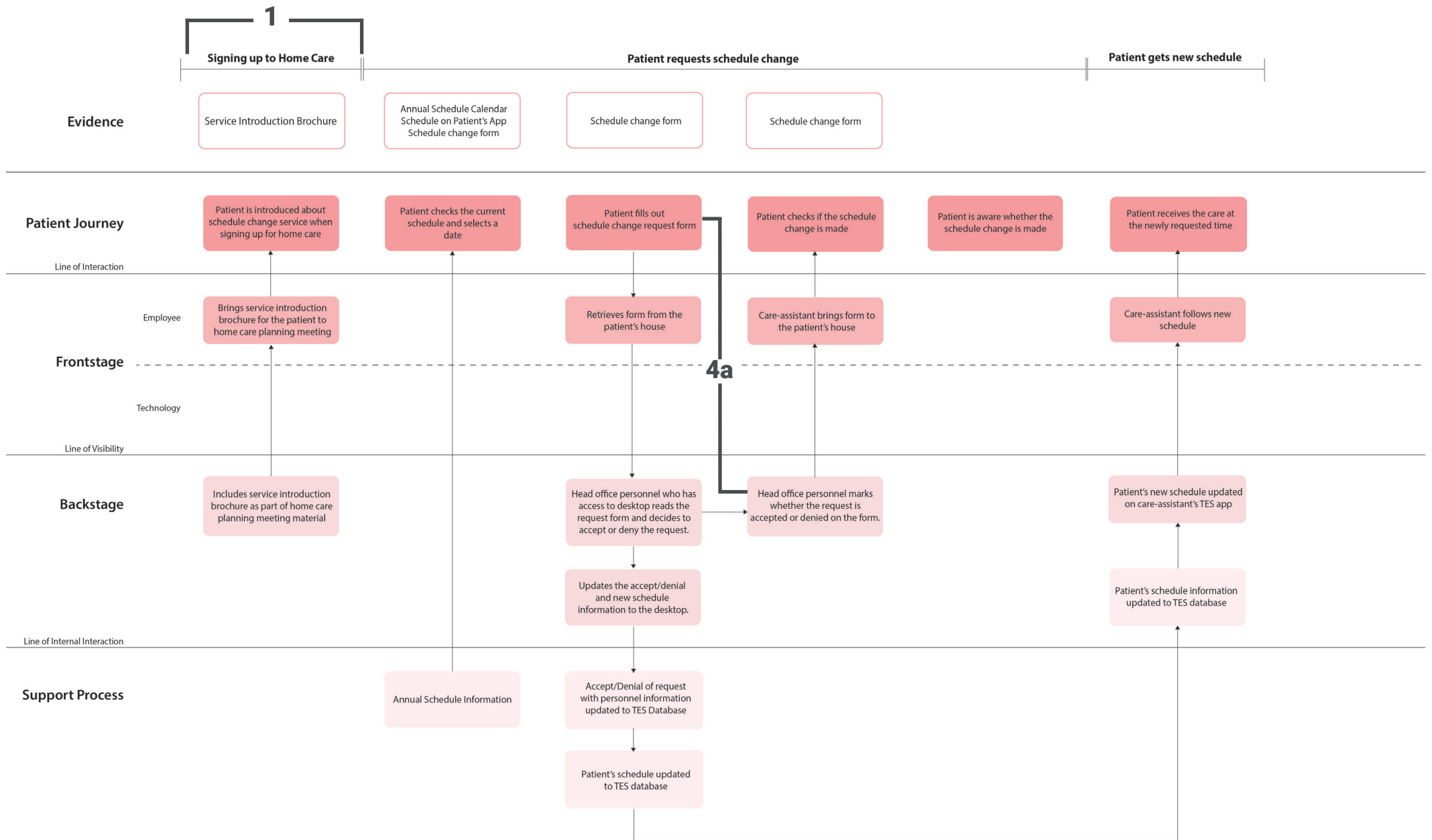


Fig. 6: Form Service Blueprint

Storyboard

Scenario 1: Patient Changing Schedule using Kaländra App

1: The patient's application to home care gets accepted. In the introductory meeting, where the patient is introduced to Kaländra with a brochure.

2: By reading the brochure the patient learns that they can change their own schedule either through the app, by filling out the form, or calling the home care. They also have the app tutorial brochure with instructions on how to use the app if they wish. The patient can also get a walkthrough of the app with the care-assistants if requested.

3: The patient receives a call from the dentist if she could schedule an appointment at 13:00 on Monday. The patient remembers that home care usually visits her at 13:00 but still says yes to the time for the appointment.

4: The patient uses the Kaländra app to switch her home care time to another time. She confirms her change.

5: The planner receives the request from the patient's app and confirms that it is processed and accepts the request.

6: The patient receives the confirmation from the planner's desktop and sees that the schedule is updated correctly to her calendar in the app. She meets the dentist without worrying about any schedule conflicts.



**Scenario 2:
Patient Changing Schedule using Form**

1: The patient receives a call from the doctor about a visit that will occur next month. She remembers that she would need to cancel home care visit for that day.

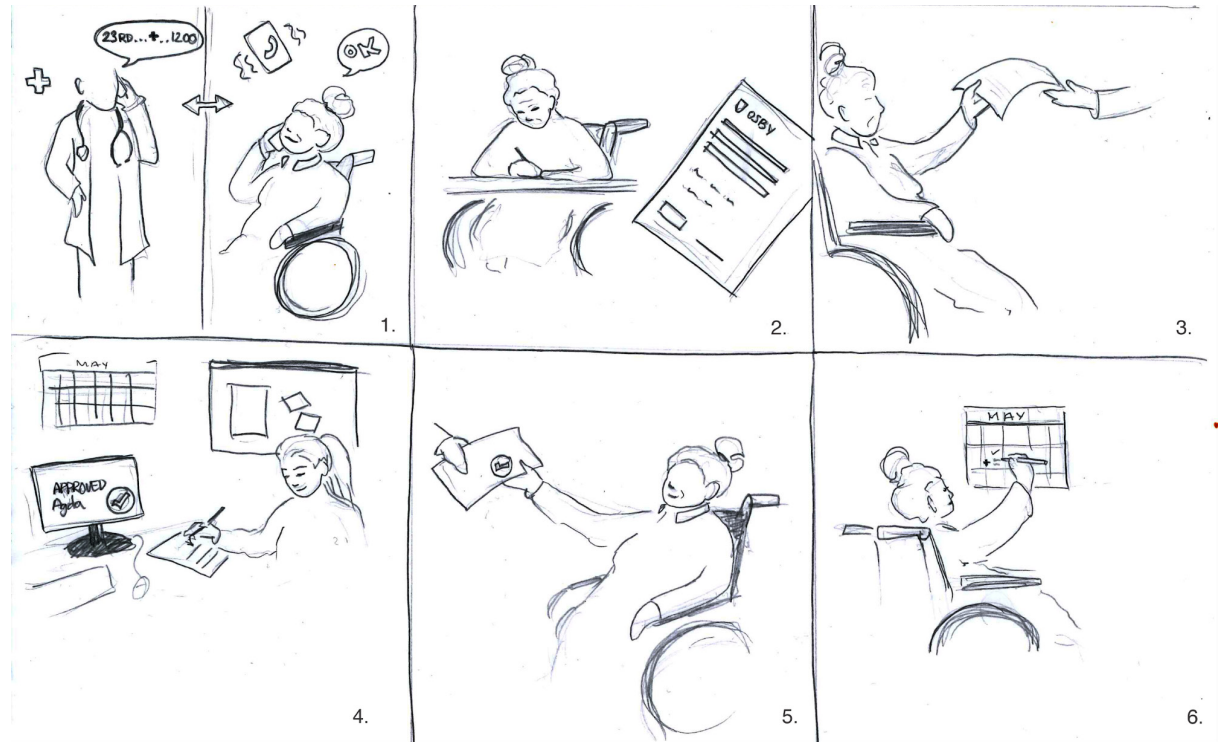
2: The patient isn't too comfortable with using her smartphone, so she chooses to fill out the schedule change request form. She writes the desired time she wants to remove or change.

3: That day she hands the form to the care-assistant who came to visit her.

4: The care-assistants give the form to the planner back at the office. The planner reviews the request and accepts it. She updates the schedule change on the database using her desktop and indicates the request is confirmed on the form.

5: The form is handed over to the care-assistant when possible, then handed back to the patient next time they meet.

6: The patient can now comfortably fill in the visit at the doctor's into her calendar, knowing that all parties are informed and without worrying about any schedule conflicts.



Discussion

Overall Value

The value of our service proposal is in the multiple entries the patients can take to use our service. This adds into giving patients a more sense of ownership of the home care service by given the freedom to reach out to home care. It should be emphasized that the different components of our service proposal - the app, form, and the call- is chosen by the patient and not enforced.

In addition, having multiple approaches for requesting a schedule change allows patients to use it flexibly for their circumstance and situations. For example, the user scenarios show how the patient who felt comfortable using mobile application used the app to make changes, while the patient who did not feel comfortable using technology chose to use the app. Likewise, the patient could use the app to change regular events but can still call the home care directly for imminent changes.

Most importantly, the issue of safety for the patients has been addressed by providing a more transparent and less inconsistent communication method. By focusing on providing physical evidence of information communicated between the patients and the home care system, it supports transparent and clear communication of patient information and opinions.

Critic

The first issue is that in case of the form, there would be additional paper document processing workload to the nursing staff.

Second, there is a possible issue of factoring in educating the patients of using the application. We can also not forget that the app requires constant Internet connection, which is not a guaranteed environment for all patients.

There are also ethical concerns raised by of misusing the service proposal, especially the app. The accessibility of the application may not only cause anxiety in terms of not receiving enough confirmation, but also misusing the application in such a way that patients remove events they need for medical support.

References

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