

IPS AS A TOOL FOR DESIGNING TO IMPROVE THE CARE FOR PEOPLE WITH DEMENTIA

TU Delft Graduation Thesis

Appendix

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Designing a new system for the nursing home

Master thesis

Strategic Product Design
Industrial Design Engineering
Delft University of Technology

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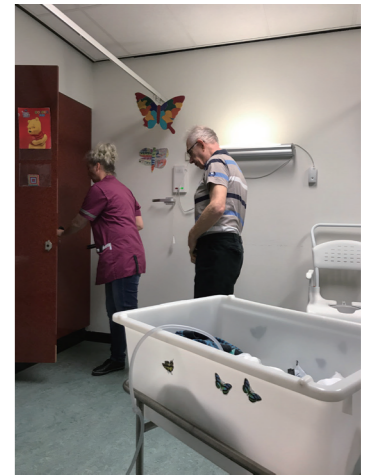
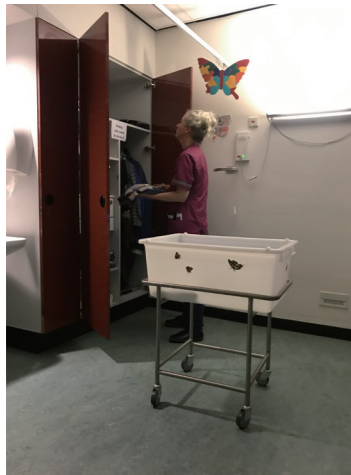
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First field study

Observation for Maartje



First field study

Observation for Amanda



First field study

Interview guide

The interview question:

The barriers when you taking care of people with dementia.

Hi, I am Haotian, today I'd like to ask you a few questions about the difficulties you have when you taking care of people with dementia, this interview will take around 30 minutes.

Before we start just to clarify, the comments you make is for research only. We will not assess your performance based on your answers, we want to know how to help you to work better.

Do you mind if I take an audio recording? This is just so that I don't miss anything. Thanks.

Opening question:

How is shift today so far?

Subtopic 1:

Understand people with dementia

Following question:

- May you recall a moment during your shift today when one person with dementia get tense (caregivers use "tense" instead of "BPSD")? When is it and where is the person?

Action: play the animation given the time and place provided by the caregiver (if the animation is working)

- Is this the moment you are recalling from? (check with caregivers)

- What do you think could have triggered the person to get tense?
- Let's look at what happened 30 minutes before this person get tense, if you find anything you think could have triggered the person to get tense please point it out.

Action: play back 30 minutes of the animation

- What do you think could have triggered the person to get tense? (by comparing with the answers in the last question, we can see if the animation has any added values in helping caregivers recalling event)
- Do you find it is difficult sometimes to understand the words and behaviors of people with dementia? Why?
- How long it will take for caregivers to understand a new resident?

Subtopic 2:

Caregivers' need

Following question:

- May you recall a moment during your shift today when you are very busy with your work? For example, you are doing a few tasks at the same time, or you might need your colleague to help you. When is it and where are you?

Action: play the animation given the time and place provided by the caregiver (if the animation is working)

- Is this the moment you are recalling from? (check with caregivers)
- What do you think should be improved to make you less busy next time?

First field study

Interview guide

- Let's look at your workflow over your shift, if you find anything interesting please point it out.

Action: play back the animation quickly which covers the whole workflow of the caregiver

- What do you think should be improved to make you less busy next time? (by comparing with the answers in the last question, we can see if the animation has any added values in helping caregivers recalling event)

Subtopic 3:

Indoor positioning system

Following question:

- What do you think about this indoor positioning system?
- What do you think IPS can help you?
- In what way, do you want to use IPS?

Subtopic 4:

Technologies involved in daily work

Following question:

- Are there any technologies you are currently using during your daily work?
- Are they benefit? In what way do these technologies help you?
- What do you think should be improved through technology during your daily work? and can you give me some examples?

End:

Thank you – those were all the questions I have for you. If anything else occurs to you after today, please don't hesitate to let me know. Do you have any questions? Thanks again!

First field study

Transcript

Caregiver (kitchen shift)

I started work from 1pm,
and then I give people drinks.
Two or three o'clock I went for a walk with PwD in Room1.
Then I started dinner.
After that, I watch TV with PwD (Room 6).

Nice busy.
I think kitchen shift is more relaxed,
you have more time for people, you be there for them, that is nice.
In the kitchen shift, you have to take care of the living room too,
make sure there is always a caregiver there.
I do not have to go to the bedrooms, so I heard people get agitated but I did not see them.

Q: Any negative moments that you have noticed today?

A: (I noticed) a PwD (Room 9) was shouting in the living room.
Every time he wants something to be done quickly he will shout.
He cannot wait.
He shouted about: I want to go to bed, I want to have dinner.
I think this is the trigger for his agitation.

Q: Any positive moments that you have noticed today?

A: The PwD in Room 1 laughs and talks.
The PwD in Room 6 is relaxed.
The PwD can feel that you are being there for them.

Watching the animations

Q: is this Mr.A (Room 3)?

A: no, it is not Mr.A, he was not in the kitchen this afternoon.
[Possibly, a tag is not returned in time when Mr.A goes to bed,
a caregiver kept the tag of Mr.A, and after a while the tag is returned]

Q: What were you doing at this time?

A: Making soup

Q: Were you the only caregiver in the living room with three PwD?

A: Yes

Q: any more information that you would like to know from the animation?

A: you want to show me where people are and what I do,
and how many times people go around.
Now we do not have Mr. B (a PwD who has already moved wards),
he is the guy who is walking around,
the other clients just sit in the living room.

Watching the graphs

Q: now let's have a look at your travel distance.

A: is that me!?(laugh)

Q: you have a quiet a long walk from 6:30pm to 7pm.

A: oh I went to get medicine downstairs.

Q: this system can only cover the ward, so are there any other walks that you did in this period of time?

A: I had a walk with PwD (Room 10)

Q: do you want to monitor your walking speed?

A: sometimes, but not for kitchen shift,
I do not walk very fast, because I have time.
I do not need to deliver medicine today.
Sometimes it is necessary to walk fast.
For some PwD, you have to (walk fast) to come and get him or her.

Q: who are in charge of distributing medicine today?

A: the other two caregivers.
Each time when they prepare for medication, they have to check with each other to make sure no mistake is made.

Q: do you have to collect medicine every day?

A: no, three times per week.

Q: who is responsible for the report?

A: the person who has the longest shift.

Q: do you find the current reporting system is good enough?

A: Yes

Q: what kind of information will the colleague tell you?

A: when someone is sick, angry, need a shower in the evening, happy or not happy.
If you know the current situation in the ward, you will know what to do immediately.
For PwD (Room 2), if she is unhappy and I have connection with her, I can take over my colleague in interacting with her.

Q: how do you find the idea of recording direct client time and indirect client time?

A: I think it is important that you find a balance.
The indirect and direct times are both important.
I am a people person, so I put contacting with clients first.
This is why I take this job.

If I see a colleague always sitting after a computer, I will tell her,
come on, you have to help me with client, and do the paper work later.

Q: do you think it is helpful if you can compare your data with the data of your colleagues?

A: but every caregiver is different.
I talk a lot, but some people prefer to sit in the office.
For me, it is not helpful, because tomorrow I might do it a different way.
As the clients behave different each day.

Q: do you mind your colleagues to see your data?

A: no, not at all.

Q: now, you can see the data of you and the data of your colleague

A: it is different.

Q: do you think this technology could detect the time when a person gets agitated?

A: the clients behave different each day.

Today he (Room 3) sits still, the next day he could move around.

He is the most difficult, you have to observe him all the time.

Q: do you think it is helpful for the technology to monitor him over a long period of time, and alert you if something abnormal happens?

A: He (Room 3) is confused, do not know how to eat and get angry quickly last week, he got diagnosed with urinary infection last weekends, but over the last week we saw his behaviour change but did not thought about bring him for a urinal check. I think to myself why did not I examine that?

Q: is the living environment in the ward largely affected by who are living in the ward?

A: Yes. After the PwD (Room 5) has moved to another ward, our ward becomes much quieter now.

You (researchers) are adding influence to the ward as well.

Q: do you prefer animations or graphs?

A: I prefer graphs, you can see the summary.

Q: what do you think about recording the sum of direct client time of the whole care team?

A: I don't know, you have to do what you have to do. Every day is different.

You have to read the behaviours of people and make corresponding actions.

Caregiver (nursing shift - dressing)

When and where do clients get tense today?

Room 2

The PwD gets agitated in the living room after lunch.

The PwD gets angry when I ask her do you want to go to the bedroom, she asked: do you want to put me in bed?!

I said: ok, if you do not want to go to the toilet, it is ok.

Then the PwD says bad words towards her (HG) because of her black hair.

Room 1

The PwD was woken up bit early by me than usual in his own bedroom around 8am.

He was bit agitated, so I think I will come back later.

And when I come back, he has already dressed up and had his breakfast by himself.

Room 3

PwD got agitated after lunch.

When we see his face, and his ways of talking and doing things, we know he is about to get agitated.

We took him with us to his room to let him have a rest in his bed.

This is about 1pm.

Handover meeting

We talked about what happened during the night, after that we chitchat a bit.

That is important too.

We use Qic (computer system), you can find the daily reports there.

Most of the time what we talked about in the handover are reported in Qic.

Q: Is there more information that you would like to know during handover?

Hmmm, no.

watch the animation

Q: here is you

A: I walked a lot here! (laugh)

Q: now this is Mr.A (Room 3)

A: yes, he sat all morning in the living room

Q: are there any moments of the day that you need help from your colleagues and you cannot find them?

A: no

Q: and how do you find about the animation? Does it provide you with useful information?

A: Ya, it is funny to see.

There is one time that I did lots of unnecessary walk.

Q: when did it happen?

A: when I was caring for PwD (Room 6)

Q: So from 8:30 -9:00 you was walking in the corridor a lot, and you go to the kitchen once. What were you doing at that time?

A: It was for PwD (Room 6).

I was getting the elevator for her to stand up, and give her the medication, what did I do more?

And then I forget something, so I have to walk again.

Q: are there more information you would like to know from this system?

A: no, I think it is clear.

Q: how about walking speed?

A: Oh can you show me?

I think it is always good to observe something like it.

People work differently,

so it is good to look at the animation, and look about it and talk about it.

Q: So what were you doing at this time? (pointing to the animation)

A: I was checking something, I don't know,

Maybe I am giving the food to Room 9 and Room 1.

Q: when were you busy today?

A: when I was busy with PwD in Room 6, I did not do it all at once,

when I am caring for her, I forget this, I forget that, so yeah.

Q: I have a question about ordering the supply.

A: is it about 10?

Q: I think it is from 9:30 to 10:30

A: I thought it was later than that, but ok.

Q: yes, and in between you went to the toilet with one client

A: oh yeah, PwD (Room 9)

Q: so now you are very close to PwD (Room 3), what interactions did you have with him?

A: he was sitting on the coach and I brought him some coffee, he was quite relaxed, that is nice to see.

Oh no, at that time, he did not play with the dog, I brought him coffee because he just woke up.

Q: then you stayed in the living room?

A: yes, we have a new system for ordering food, and I was teaching them (the other caregivers). We use a tablet.

(AS's signal is missing in the living room from 9:30 to 10:30) [need to double check with animation]

Q: what did E (caregiver) and FJ (Room 9) doing in the living room?

A: they are sitting together.

FJ likes E to care for him. She put his hand on her hand, so he stays calm so he will go shouting or something.

Q: how can this technology be integrated into your working routine? Will you look at this animation in your work?

A: I don't know.

The clients can be different every day, so I cannot for sure say I will do something different after I watch the animation, because I could do different things on different days.

Q: do you think you can do something better next time after watching this animation?

A: you work with people, every day is different.

You can have a structure for the day, but not too much.

Q: what are the activities that you were doing? (showing animations)

A: then we are busy with lunch, and take clients back to their rooms

Watching the graphs

A: so I spent a lot of time in the corridor, what was I doing?

Q: were you walking in the living room during the meeting?

A: No

Q: it is interesting to see that you did some walking during your meeting in the living room.

A: maybe that is because I was bringing coffee to my colleagues.

Q: do you prefer the graphs or animations?

A: this (animations) is easier to see, you can see the rooms and you can see you are walking there and here. This animation is clearer.

Q: how often do you communicate with your colleagues about the clients during the day?

A: when I finished a client, and then I see a colleague, I will update him/her, who is awake, shall we do it together, shall I do it alone.

Q: so every time when the client get agitated you will let your colleague know?

A: sometimes. when my colleagues are in the room.

But when I am in the room by myself, I will react first.

Or if I need help, I will go and find them.

Q: what kind of things do you write in the agenda?

A: if I need to go to a course, I have to write in the agenda I am absent because of this and that.

Q: how often do you check agenda?

A: at the beginning of the shift or when we get a phone call.

Q: do you have to check the client is in the room when you bring food to them?

A: usually you have already brought the client back to the room, so you know they are in the room or not.

Q: how do you arrange with your colleagues who to bring the food?

A: we communicate do you stay in the kitchen or bring food to the bedrooms.

Q: are there any mistakes made during food delivery?

A: that was the problem today, client (Room 6) has her dessert first and then the main meal. I thought all clients had the main meal.

I saw her (Room 6) is in the corridor with her wheelchair so I thought she has finished with her lunch, and I give dessert to her and bring her to her room, then I did not saw the plate when I am in her room.

Then I realized (laugh).

Q: do you dress up PwD (Room 1) later?

A: he did it himself.

normally each caregiver finish the job that he or she begins.

So there should be no other caregivers help him.

Q: how do you decide when to order more food?

A: the caregivers with the kitchen shift do the grocery, so I normally do not interfere.

Caregiver (nursing shift – medicine)

Q: What is the busiest time of your shift?

A: It was not very busy.

Watching the animation

Q: How do you find about your workflow?

A: I walked a lot, I see it.

I think it is important to know where my colleagues are.

I thought they are in the living room, but they were not there, so I went and searched them in the hallway.

We give medication for one client at a time, so we walk in and out of the office a lot.

Q: Do you feel tired physically?

A: No, but it is a bit annoying to open and lock doors so many times.

Q: Do you have problems finding PwD when you want to give them medicine?

A: Sometimes you have to search, but I am used to that.

It would be good if we can see where our clients are.

Yes, that is the medication part (recognize what she is doing when looking at the animation)

Q: Is there any more information you would like to know from the animation?

A: Can I know how many kilometers (I travelled) and the speed?

People say I walk too fast. I have to slow down, and it has a negative influence on people with dementia when they see you are rushing.

Q: Why were you in the kitchen at that time (with the animation)?

A: I don't know.

Q: I think it is for the dinner. You went back to the kitchen two times; the first time is to talk to your colleagues and the second time is to have dinner with your colleagues.

A: Ah I think the first time is to ask my colleagues when shall we have dinner.

Q: After you have looked at the animations, do you want to say something more about your

shift?

A: I didn't remember what happened between me and PwD (Room 2) until I see it (on the animation),

I remembered PwD (Room 2) scratched me today.

Q: Why are you standing here (in the corridor) for a while?

A: Maybe I am discussing with my colleagues.

Q: you are moving the table

A: Yes, we removed the table for the safety of the client (Room 8), I remembered now,

I stood there to watch my colleague, she was nearby the PwD (Room 8), and

I watched because I want to check if she will be safe.

Q: now you are doing the computer work.

A: yes I did it for one hour.

Watching the graphs

Q: are these information helpful for your work?

A: I think it helps me to be aware of what I did,
and I think I should be less with computer and more with people,
I think it could be helpful for (recording the behaviours of) PwD,
then you can look back with your team and see and come up explanations.

Q: do you prefer the animations or the graphs?

A: I prefer the animations, I find the animations are clearer.

Q: do you find knowing exactly how long you have travelled is helpful?

A: I still prefer the animation, at least according to me.

The graphs need more thinking (to understand them).

For example, you have to understand what each line means, I find it is difficult.

If I see I was walking back and forth, then I will ask myself, why I came back?

It can be useful to know when you did unnecessary walk, because you can reflect next time.

I should take all the medicine and food in one walk.

Then I do not have to walk that much.

Q: did you notice if you did any unnecessary walk today?

A: yes, (when I was) in Room 10, I have to bring her pyjamas and then I go to the kitchen to get the drink, and then I go to get medicine,

I walked three times but I could have taken all three items with me when I went to her.

Q: do you think a reminder to remind you "you can take the medicine with you as well" during your work?

A: yes, I think it could be handy.

When you walk into her room, and you get a reminder that she should have her medication in half an hour, then you can take the medicine with you.

Q: do you think it would be helpful before you filling the report, you can look at the animations and recall what time should be reported?

A: it is good, because I have to remember everything, so it helped.

Q: in that case, what kind of data would you like to know?

A: for example, if I see a PwD is agitated at 6pm, I do not know what happened, then in the computer if I can see which of my colleagues are close to this PwD, then I can ask my colleague what has happened to the PwD and what did my colleague do.

Q: do you think it will cost you lots of time to watch the animations?

A: if I just select the PwD I need to report, then I don't think it is too long.

If I see all people moving around, then I think it is too busy (for me to understand).

The PwD of interest will be in bold, and I can also see the other people,

because there are interactions between PwD themselves for example.

Second field study

Interview guide -- with caregiver

The opening:

Hi, I am Haotian, today I'd like to ask you a few questions about the more detailed information of people with dementia's daily life, and also your daily work routine. This interview will take around 30 minutes.

Before we start just to clarify, the comments you make are for research only. We will not assess your performance based on your answers, we want to know how to help you to work better.

Do you mind if I take an audio recording? This is just so that I don't miss anything. Thanks.

Subtopic 1—about PwD

Following question:

• EXERCISE

1. How often do you take PwD to do exercise?
2. Are you aware of how much exercise does each PwD need per week?
3. What is your strategy to stimulate PwD to actively do physical activities?
4. If someone does much/ little exercise, what will you do?

• DIET

1. How often does their diet plan change?
2. Do you know each person's food preference?
3. What are the factors you will consider to judge the dietary consumption of each patient?

• MEDICATION

1. How often does each PwD take body checkup?
2. How do you record each person's medication schedule?
3. How do you know if the person is sick or his physical condition has changed?

• SLEEPING

1. Will you check the room when PwD is sleeping during the night?
2. How often will you check the room?
3. What do you mainly check?
4. Has there been a situation that someone wakes up while you are checking the room? If so, what was the reaction of the patient, and how did you deal with it?

• SOCIAL ACTIVITY

1. Are there any social activities for PwD? What are they?
2. How often will they join a social activity? Will they all participate?
3. Who is going to arrange those activities? And how does he/she decide the content and form of the activities?

Subtopic 2—about caregiver's work

Following question:

1. What are the annoying parts of your daily work?
2. In order to make your work more fluently, do you think there is any need for improvement in your work?

Second field study

Interview guide -- with dietitian

The interview question:

How do you make diet plan for PwD?

Hi, I am Haotian, today I'd like to ask you a few questions about how you make diet plan people with dementia, this interview will take around 15 minutes.

Before we start just to clarify, the comments you make is for research only. We will not assess your performance based on your answers, we want to know how to help you to work better.

Do you mind if I take an audio recording? This is just so that I don't miss anything. Thanks.

Following question:

1. How many PwD are you responsible for?
2. Do you make a full diet plan for each person? Or you only charge one part?
3. How often will you change the plan?
4. When making the plan, what kind of elements will you consider? You can consider from different aspects, such as PwD, food delivery company or finance?
5. When making the plan, can you do it all by yourself? Or will you discuss with caregivers, doctors or their family members?
6. Will you check the plan to see if it is suitable for PwD? And how do you check that?

7. can you think about some improvements to make your work more efficiently as well as provide better diet plan for PwD?
8. If it is possible that I can see one example for your diet plan?

Second field study

Interview guide -- with manager

The interview question:

The improvements on managing the nursing home

Hi, I am Haotian, today I'd like to ask you a few questions about the management of the nursing home, and your expectations on how my design can help you. This interview will take around 15 minutes.

Do you mind if I take an audio recording? This is just so that I don't miss anything. Thanks.

Following question:

1. Can you briefly introduce to me the organization structure of the nursing home?
2. Will you evaluate the caregivers work during a certain period time? And how?
3. Do you have any quantitative method to record each world's working results?
4. Will you report the caring results to the family members? What are they most concerned about?
5. Who are the relevant stakeholders when caring PwD in your opinion?
6. What are the difficult parts when you manage the nursing home, relate to PwD?
7. What are the most concerned issues for you manage the nursing home?
8. Can you think about some improvements for your future work?

Second field study

Interview guide -- with doctor/psychologist

The interview question:

How do you make medication plan for PwD?

Hi, I am Haotian, today I'd like to ask you a few questions about how you make medication plan for people with dementia, this interview will take around 15 minutes.

Before we start just to clarify, the comments you make is for research only. We will not assess your performance based on your answers, we want to know how to help you to work better.

Do you mind if I take an audio recording? This is just so that I don't miss anything. Thanks.

Following question:

1. How many PwD are you responsible for?
2. How often will you do the body check for PwD?
3. When making a medication plan for a PwD, what are the stakeholders you will consider?
4. Who is responsible to make the medication schedule?
5. When making the medication schedule, what kind of elements will you consider?
6. Will you check the plan to see if it is suitable for PwD? And how do you check that?
7. can you think about some improvements to make your work more efficiently as well as provide better diet plan for PwD?
8. If it is possible that I can see one example for your medication plan?

Second field study

Transcript -- caregiver

Anita

Mindmap

Physical health

Let people do what they want to do

Social environment

Some people ask for contact, some people do not want to contact

Relaxed environment, with not too much stimuli

Kamer 3 before used to sit in the living room, but he prefers to stay at his own room today, we do not know why, maybe he find the stimuli in the living room is too much

Physical environment

Relaxed environment with not too many people walking around

Anders

For some clients, we avoid letting them sit together, for example, with mrs. A and mrs.B, we normally let them sit on two ends of the living room, so they do not react to each other

Positive & Negative interactions

Kamer 9 was not tense when taking the blood. This is need for a medication research. The last time he resisted it, but today it went quite good.

Kamer 10 accept care today.

There are no negative interactions today.

IPS

Oh Sjannie walked a lot in the corridor

Feedback

I find it is interested to know how long you have walked, where you walked to, and when and where you are busy with the client. you can also notice if you have done unnecessary walk. If you walk too much, the clients could get agitated. I want to know if I walk too fast or too much.

I would spend 15 maximum to look at this system per day.

During the shift, I only verbally communicate with the caregiver.

I find it is difficult for me to understand all the information, it is better if it is in Dutch.

Sjannie

Mindmap

Physical health

Movement freedom: if you want to move but you are tied by a band, thus your movement will be limited

Medication: if you have lots of medicine today, you will feel the side effects of the medicine, you might feel dizzy, thus your movement will be limited

Of course, enough sleep.

Social environment

Contact

Sometimes you just sit beside the client is enough, you do not need to talk, they can feel the attention

The family can also have an influence

Physical environment

Noise

Too many people

Temperature

Anders

None

Positive & Negative interactions

Kamer 9 is quite relaxed today.

IPS

I have walked in the corridor a lot. I was with Kamer 3.

You spent quite a lot of time in the living room around 9am.

I stayed with Kamer 9, he is quite relaxed with taking out blood. I sit beside him to provide accompany.

You stayed in the kitchen for a while around 11:30.

Yes, I was cleaning the kitchen and doing the washing up.

Feedback

When a client get agitated, we can think about why is it, where and when does it happen, what can you do about it, is it because he wants to go home, or he still think he needs to pick up his kids?

Does he walk as usual or does he walk too fast? Then you can think how to prevent this, for example, if we should accompany him or give him medicine

Everyday is different, then you can observe the behaviour change day by day

I will first look at the overview (graphs), which is fast; and then I will watch the animation to locate where the agitation happened, and ask myself why the agitation happens there all the time?

This is only helpful for people who walk a lot.

Second field study

Transcript -- caregiver

Lucas

--- So imagine that this is the beginning of your shift. You want to look at what are the information are there for you client. So you click on the client, and you can get an overview about direct client time. Do you know the direct client time?

--- Yes! It's the time that I am being with a client, or that was a contact with a client.

--- You can see how this time is divided and how the time changes over the day for one client.

---Okay!

---Do you think this information will be helpful for you?

--- Yes! I do. For different reasons I think. Because it can be a monitoring, we can see how much time we spend with a client at what cause. That's one reason for me. Also I can see how long I've been with one client together, maybe more restful. We'll see those fundacts of these things.

--- In the second page, you can look at how far the person has traveled per day. For example, today Mr. M has traveled 6.4 km, and normally he travels about 9.0 km. and duration of the traveling is about 3 hours 31minuts, and you can get his speed and calories and food intake.

--- And the speed is during...during... all the speed together as a level?

--- Yes! So this is kind of like the average speed.

--- okay! Yes! I understand. Quite interesting.

--- How would you use this data? (speed and calories and food in-take)

--- Food energy, so I can know how much my client has to eat. So that's what I would use it for. And the duration, I think it's quite difficult to use. I don't what exactly I have to do with the duration of the time that my clients is walking or doing something, you know?

--- Yes, I see. So you think the duration is not as important.

--- Yes! But it's only for me.

--- Yes, it's your opinion. And now, it becomes to be the end of your shift. And you will watch the animation of the ward. It looks like there are some people here and they are walking around. So you can look at the whole animation during your shift. Do you think it's goanna be useful for you?

--- Sometime yes, I do. To give some look on what we have done during the day at what time that we can look back in our shift. But also maybe when the client is restless, for example he is walking around in the living room. And there are ten people more in the living room, then he is restless all the day. And there are three people in the living room, and he isn't restless. So in that way, I think it would be useful to look this (animation) after my shift or if we want to know something about our client.

--- I see. And how often do you think you will use this system?

--- I think it depends on the user-friendliness of the system. It's what I am thinking. Because we also have our daily notes that we write about our clients. we have another thing we have to do in our shift. We will do it within the background of the client. Maybe we can choose to use it ten minutes a day to give some insights about what our clients are doing. So this would be really helpful to us.

--- Okay, ten minutes per day is the maximum.

--- Yes. But this is what I am thinking right now. I don't know how do you want to implement this in the future.

--- And Haotian made a scale, so you can rate about how do you find about this system. So the first one is how useful do you think it is.

--- How useful... I think it's plus. Because it's just concept, I think you are learning from introducing the system down here, and I think in the end you are two plus. So I think I would be useful as plus right now.

--- And what are the improvements we should do to make it two plus?

--- Improvements... make it friendly for our clients and make it user-friendly to us, so it's easy for us to work with. I think that's the important thing. And that's why we want to have the technology that you are working and implementing here.

--- The second it about how understandable you think these graphs are?

--- I am thinking about the time pie charts that you have in the system would be useful. This is also very helpful, not only that we can know how much he is working today or another day, because if someone is really stressful, then the

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Transcript -- caregiver

walking can be more than someone is more relax. So I think also the kilometers can be useful, the speed and the duration in that case and also the energy is also very useful. And the animation, the notes we can make to our daily recording of our clients is also useful.

--- And do you understand the meaning of those graphs? Like if it's confusing?

--- No, I think it's understandable. What's important for me is that how the graph is working, what are these graphs telling. That would be important to us to know.

--- You find it very important to know the movement of the lines, how it changes over the day.

--- I think we have to know what lines we need, or what these lines is telling us. so in the final system, if you tell us how it works, that would be very important. So the system itself is also plus, I think you are in a good direction.

--- The third question is about the information. If it is clear or not clear.

--- Yes, I think it's clear. To people of my age, it would be clear. Maybe to someone is older, you have to tell them more about the graphs or what does "AVG" means, and how we can do with the data you are presenting to us.

--- May I ask how long you have been working as a caregiver?

--- Almost three years. I think it's quite much related to my work, also we can do something with it. Waste time or save time. I think it possibly can be a time-saver, if we have enough data and we really can get information on what we want to have. If we know that he is quite restful today, and we do not need to give him medication. But if we know he already walks 5.0 km in the morning, then we have to give him medication for his restlessness.

Sigrid

--- The system can track the movement of people to generate some data about the movement. So it's able to generate the distance that you walk per day. so you can see that you walked quite a lot today in the corridor at 3:30 pm, between 3 and 4. Why?

--- I think it was that I brought the drinks. So I need to go back to the kitchen and back to the room, and it's quite a long hall. I think that's the reason why. It

was half past three, and I think that was the movement to bring soups and drinks.

--- Yeah, I see. And can you recall any positive or negative moment today? Positive interactions.

--- Okay. Well, I had negative interactions with Ms. P. Today she was in the mood that she does like some people and she does not like some people, and I was in the group which she does not like for today, so she was screaming at me, yelling at me. So that was a negative interaction. And positive with Mr. F when I was feeding him, he was very happy and he smiled a lot, that was very nice to see.

--- What are the things that is your strategy to make people happy?

--- I always listen to the families what they say, for example, his mother told he likes when you make sound like a chicken. So sometimes I will do that because I know that his mother told me. And sometimes I read the report. We have a program to write a report at end of our shift, so the next shift can see what happened yesterday. Sometimes I will read the report to find out that they (caregivers) did this, and he (PwD) liked very much; and they (caregivers) did this, and he(PwD) didn't like it. That's a way to know what he/she likes.

--- The other data we have is that how long you stayed at each room, so you spend quite a long time in the dining room, and it's because you were having dinner. And di you do any computer work today in the dining room?

--- Not yet. But I think it was because that helping with others with the meal and after that I eat my own meal.

--- And who is in charging of the kitchen today?

--- Henry, and she is leaving right now.

--- So we can see that the time you spent in the dining room is like first high, and decreased and high again and decreased.

--- Normally, I started my shift 2 o'clock. The first thing we do is to talk to each other, so that's what I did here in the dining room. And after that, I am going to help the clients with the food and cleaning.

--- So based on the information gathered, are there any more positive or negative interactions with clients?

--- The first interaction moment with Mr. M was good, because I started my shift, and I walked to her and said "Hi, good afternoon." And she said hi, and

Second field study

Transcript -- caregiver

she was very positive, but after that, I had a very negative interaction with her. And since then, it was only negative.

And with Mr. P, I had only positive interactions. I think it was because he was that kind of person. For me, it's easier to make him laugh.

And for Mr. M, it's more difficult for me because this is a specific way that you need to interact with her, but I am not good at it I think.

And with Mr. F, I had some positive interactions. I helped her with taking her clothes on, and everything went well. And she is laughing and smiling, and she thanked me for helping her.

--- What do you think are the factors that make her happy?

--- Because every time I am going to do something, I will tell her that I am going to do this. So she knows what are the expectations from me. And my face, if I always put my face like this (sad face), I don't think people will smile me back. So when I smile, they will smile back. And I think the way how you talk, in a soft way, don't talk too hard and talk very slow and soft. And I think that's also very important. And use not too many words, with some people, that's very important. It also depends on the client. But I think almost every client in here, they prefer short sentences, not too many words.

--- So based on what you said, we have a little game for you. In this game, you can think about what are the factors can affect complex behavior of PwD. You can think from different aspects.

--- So this is eating. Because everyone needs food, if you want to be in a good health, you need to eat the right thing, for example, dinner or drinks.

--- And are there any times that PwD are thirsty or hungry that you (did not notice)?

--- Well, we do have times that we serve dinner or breakfast, but sometimes we don't use these times. Because when PwD is hungry, then we will give them something to eat. If someone is hungry, this can be a factor that trigger their agitation, and they can behave badly. If someone is hungry and they cannot say it, we can observe how they move or what kind of sounds they make, maybe if we give them something to eat, they will be more quiet. So that's eating.

Movement. So for some people, it's very important to walk for a short distance. Because for their legs. It's not good for their legs to just sit for a whole day in the wheel chair. So I think it's very important.

--- But it's important because that it's good for their health, or if they don't go outside, they will get agitated?

--- I don't know. I think for some people, it's for their health. Because some people get very thick legs (for long-time sitting). But some people very enjoy the sun. I think I've been one time with one client to go outside during my internship. And it's not a lot. Because sometimes it's not very good to take them outside, they are not in the mood. But it's depends on the situation, for some people, it's helpful to take them outside, and they will get in a good mood because of that. But sometimes it will be in the other way. For me, I worked here for three months, so I don't know the clients that much. I always ask my colleagues if it's good to take the client outside. I always seek for advice.

Medicine. Because some people need them.

--- What type of medicines do they have? Do they have the medicines for pain?

--- They get medicines every day at times. 8 o'clock in the morning, 12 o'clock and 9 o'clock in the evening. And some medicine, we give them when they are not in a good mood or restless. But we always discuss within a team. So it's not that I think I should give them medicine, we always discuss.

--- So normally, it's two person check the medicine?

--- Yeah. We have medicine list. For example, if I give the medicine at 12 o'clock in the middle of the day, I will check it within my own eyes, and after that, my colleagues will check that if it was the right time and the right medicine. Sleep. Because some people need sleep in the afternoon, like in the middle of the day.

--- What are the cases that they cannot get enough sleep? What could trigger them to lack sleep?

--- I think the environment. And maybe the restlessness, that could be another reason I think.

Toilet. Because some people act very restless. When they got to the toilet, everything goes okay. I think these are the most important things.

Sounds. Because today there were some technical men, they were busy with something. And I think that's also a very important thing, because some people will react on that.

Furniture.

--- So you think the furniture is a positive one or negative one?

--- I think it's positive if everything stands the same way as the yesterday. That's important. When we put the table in another side of the room, for some

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Transcript -- caregiver

people, it will be (negative). But I never tried it. Some people will remember how it was yesterday. Because, for example, for Ms. P, she always asked why is this chair here, this doesn't need to stand here. So that could make her restless.

--- So sometimes, change can make people restless.

--- Yeah. Maybe the weather. But it's not inside, it's outside. Maybe when it's raining outside, some people will react in a negative way.

--- Do they mention about rain? We wonder maybe it's because it's the low level light that they cannot see.

--- I don't know. Nobody told me that it was bad weather outside. But I think it will be more positive for the client when the sun is shining and it's a blue sky instead of the rain and grey and darkness.

--- And with the furniture, do you find that the style of the furniture (could influence PwD)?

--- Yes! I think so. Because it's now very neutral style, if you make it very colorful with a lot of pink, I don't think this will match with the clients.

--- and I also see that some clients they have more furniture in their rooms.

---Yes, it's true. I think it because of their families. They will decide that this is clients' stuff, it will stand in their rooms. I don't think it was decided by their own (PwD). But some people will break it, so that's why they don't have much furniture in their rooms.

Contact with XXX (21:50).

--- Will you give us some details about the contacts?

--- Eye contact, or just say "hello" or say "good bye". Make conversation, or touching each other, or make a sound. And this includes the families as well, the visitors.

--- Is the family always positive?

--- At the moment they visit the client, I think it's very positive. But sometimes after that, the client can be very restless, because of a lot of energy they put in the family. It can be very exhausting. At the moment they family visiting, I think

it can be very positive.

--- With PwD themselves, do they also interact?

--- Yes! I see a lot.

--- What are the factors can trigger their negative complex behavior?

--- When they are touching each other. Because when someone is walking very fast in the hall very quick, and someone is walking very slow. And the client might think that "oh, he is walking very fast, I am walking very slow. It's not like the same level." And I think it's very important. And some people make a lot of sound in the hall or in the living room, for example, Mr. F, he makes a lot sounds, and I think it will trigger negative interactions with other clients.

Contact with family, with other clients, and also with us.

Maybe animal. Once I saw it when one of my colleague brought her puppy in the living room, and they react very positive.

--- With the animal is always positive?

--- From my observation, yes. But I think it can be negative, if someone hates a dog or is bitten by a dog, it can be negative. And these are what I can think about right now.

--- Thank you. And the last part of the interview is to let you reflect on the interface of the new system. So the system we just saw before, roughly visualized information. And we would like to put this system into your working routine. So this is the interface of the system (explain the system).

Do you think it will be helpful for you to write the report?

--- I don't know if it's gonna be helpful. Because when I make a report at the end of the shift, I will think about what are the important things to report today. And I will think room 1, I didn't notice anything important, room 2... So I will go through all the rooms from 1 to 10. But maybe it will be helpful so that you don't forget anything.

--- So for how long do you think you will watch the animation?

--- I am an extra employee, so I have a lot of time. So I can spend much time on that like half an hour. But another people, they are not extra, they don't have a lot of time. So I think it will take them a long time to look at this animation.

--- But if you want to know the situation on a specific time, for example, on 9:00 am, you want to what happened to Mr. F?

--- Oh, that's could be a smart way. If I want to know what happened to him

Second field study

Transcript -- caregiver

last half an hour, I can see the animation. And I can know at that time, he was with Mr. P, and I know that Mr. P might be the reason that Mr. F was agitated. Maybe in that way, it can be helpful.

--- So the longest time you would like to spend on the animation if you are a fully employee here?

--- Maybe ten minutes.

--- So at end, we want you to rate how do you think about the system.

--- I think the animation, if the animation is one line, it will be more clearly for me, instead of only the dots.

I think this (the interface of the system) is very clear.

--- We would like to know if it's useful for you to use this system.

--- Sometimes, but not all the time. I don't think it should be a daily routine, like you have to do it every day. But sometimes, if you need extra help, you can look at this system. And for caregivers, it's related to the work. and I don't think it can save time, because it's an extra work to do. But I don't think it's a waste of time. So I will put it in the middle. Because it can be useful.

--- We wonder if it can help you work more effectively for example if we identify the reason why, like a long-term effect.

--- Yeah. But I think you need to spend time to do this, but after one month or few months, you can get information out of the reports. After that, it's not a waste of time. And I think heart rate can be useful.

--- So will you measure the heart rate for your clients?

--- Oh, I never did it here. But I think if you want to know the movement of the client, and if you see that at this moment, his heart rate is very high, maybe because that he had some contact with other clients.

Second field study

Transcript -- dietitian

--- how many people with dementia are you responsible for?

--- I did count it. If you mean how many beds, we have in the location I am having contact with is 119. But I have 40 clients.

--- So you have 40 clients that you make plan for them.

--- Yes. The other clients I don't know, but I can help them if the doctor is asking.

--- Yes, I see. And do you make food diet plan for each person?

--- No. I only change what needs to be changed. So I don't give them strictly what to eat what not to eat most of the time. I usually only ask what do the clients eat, and look what are the mainly problem or the things I can change easy. Sometime the client doesn't eat that much, but likes to drink a lot, then I will change the drinks into lots of calories, lots of protein. So they get their energy at a easy way. But most of the time, I don't change the whole plan, I don't write down everything they have to eat. I only do that when there is a major problem, or someone has a really strange habit of eating so that the caregivers want to have a full diet plan. Then I will make it, but I think it's only 10% of the time I make full diet plan.

--- Okay, I see. And with another 90% of your work (how do you work?)

--- I just change something. Most of the time, I add between meals something. So if someone likes drink, I give them milk or chocolate milk. When they like to eat dessert between the meals, or sometimes enriched food, we have power stick, we call it. It's a little piece of pie, and it's very rich of protein. People like it a lot of time, so they can get it.

--- And you also talked about that you look at the habit of people with dementia, sometimes will you change or update the diet plan?

--- Most of the time, once a month.

--- And when making the plan, what kind of elements you will consider? Like you talked about the drink.

--- I don't understand the word elements.

--- Oh, yeah. For example, what aspects or what ingredients?

Second field study

Transcript -- dietitian

I can look at the vitamin and minerals, but I can tell that in this building nobody is taking the right amount of the vitamins. So I don't look at that, because I can deliver enough in normal food.

--- And when you make these diet plan, will you consider from different aspects such as the food company or the finance?

--- Yes. There is a tablet that we can order food, so I have to choose what in shop, and I can't say anything that is not in the shop because we cannot get it. But there are a lot of things in the shop, so I can almost order anything I think of. So that's easy. And finance, I don't look at the finance that much. Because the good food is always expensive. When you don't have enough good food that you can give nutritious, (we can choose) medical nutrition. There are little bottles with high nutrition high protein and high vitamin and minerals, but they are really expensive. So I try not to use it that much, and I choose normal food, and normal food is not that expensive. So that's not a problem.

--- And you mentioned about the protein, and I wonder that calories is something you are looking at?

--- Yes! Calories and protein are both very important. Because if you don't get enough calories, you use your protein as fuel instead of making your body regain again.

--- So will you calculate those calories or protein when you are making the plans?

--- Not always, I don't have the time for it. I would like to calculate everything, but I have only 6 hours I work here. But there are more than 100 normal patients, and then I have about 8 or 10 (people who are here for short term, they come from the hospital, and they need to come home, and this costs them lot of time). And 100 normal patients and 8 to 10 patients costs a lot of time, and I only have 6 hours.

--- So you make those decisions based on your experience?

--- Most of the time, yes! I would like to calculate it, but it's impossible.

--- And when you making the plan, do you do it all by yourself, or will you consult someone?

--- I consult the nurses. Especially, all the clients have one nurse that is responsible for them. So I like to have to have that nurse who is responsible for that client, and then I will ask how is the eating going, does the person like or what doesn't he like; what goes good and what he doesn't eat. Then I get a little bit more information, and according to this I will make my advice. But when I give my advice, I always ask them do you think you will manage to give that to the patient. Because if the nurse says that "no, he won't eat that", then I can't advice it, and it will never happen.

--- And how often do you talk to the caregiver or the nurses about this?

--- I tried once a month, but not always possible, because I am very busy. I would like to do it once four weeks, but most of the time, five or six weeks I evaluate it.

--- Yeah, I got it. And the way you check if the plan is suitable for people with dementia is to talk to the nurses, are there any other ways?

--- Sometimes, I call the relatives. But my experience from the past is that the relatives don't know what the person like to eat. When it's a wife or husband, (s)he probably knows. But when I call the children, they don't know what the parents are eating at the moment. Sometimes, I will call to ask what the person likes and I often ask the nurses to ask the relatives when they visit.

--- And the meeting with family members, how long are they?

--- I usually call, so it's a short call like 5 to 10 minutes.

--- And with caregivers?

--- Depends on complex it is, but usually 10 to 15 minutes when it's a simple question. But if it's a lot need to be change, I think will be half an hour. But before I go there, I always read the files of the clients, and I always know a lot before I come here. And I have to ask what isn't in the computer.

--- Oh, nice. And can you think about some improvements to make your work more efficiently, as to make better diet plan for people with dementia?

--- I think it's useful to have somebody responsible for the food for the whole day. At moment at all our locations, there is most of the time, in the morning, somebody who is in the kitchen only taking care of the food. But I think it's useful to have all day somebody is responsible for the food. So there is always somebody checking and giving out food. So the nurses can focus on what's

Second field study

Transcript -- dietitian

important for them instead of thinking “oh, my clients have to eat”. Sometimes, nurses will forget. On this ward, most of the time it’s good. They have a lot of time; they give clients a lot of attention on the food they eat. But not all locations are that good.

--- Based on our interview, we would like you to evaluate if this is gonna helpful for your work. So with the information we collected from the indoor positioning system, we are able to quantify. For example, how long the person has been in direct contact with caregivers, and we presented in this diagram (explain the system). When you look at these interfaces, do you have any questions?

--- I think it’s nice to see how many miles they walk. Because sometimes I heard that at one moment they are very busy, and at other moment they are not busy. It’s nice to see how many calories (they consume) or miles (they walk), perhaps there is a way to change if they walk too much or too little.

--- so we could measure the amount of distance a person walks each day, in this scenario (explain the system). With these information, will they inform you with your care plan?

--- not exactly, if it’s about a day. but if it’s about a week or a month, and I can see how active a person is that always have relation with the food in-take. So a day doesn’t mean anything to me, but if it’s a week or a month report will be interesting.

--- With the calories, would you like to see the calories here, or do you want to calculate by yourself?

--- I think I would like to calculate by myself or I want to know what the formula is. Because you have to wait for a person to see what the formula is, I want to make sure the calculation is right.

--- And would you also like to know the food energy a person has each day?

--- I would love to know that. But I don’t think we can get that information. Because it takes a lot of work from the caregivers. We have nutrition list, I give caregivers to write down what they eat, and the list is very simple, (in the list) it already has the bread, drink and so on, so they only need to fill in the numbers.

But even that, it doesn’t get filled in right. So I don’t think they will write down the information that good so I can say that’s interesting.

--- We would like to know that if there is more information you would like to know from the system?

--- I don’t need to know more about the movement, because I already know a lot about how active the person is.

--- I would like to rate the interface in five criteria, so if in the future the system is developed, will you use it?

--- I would check it when I do my monthly checkup, then I will look at it. For example, if I see they walk less than last month, then I will look more details in weeks to see if there is any difference. Or if there are three weeks’ normal movements and one week no movements, then they may have some illness. So I will check it, and it gives me some insight to talk about.

--- in terms of usefulness, how would you like to rate the interface?

--- If it’s not more work for the nurses, I would say it’s useful. And this one is very easy to understand. And the information is clear except the calories, because I don’t have the calculation. It’s related to my work, because movement is energy. I don’t think it’s saving time or wasting my time, I think it’s just give me some questions to ask, it gives me some (prove). If someone tells that one client is getting slimmer over time, then I only have some information. But I look something like this, I have real data. And this one gives me real data, not only some opinions that moving more or moving less.

--- We want you to think about that are there any other factors will influence people with dementia to have complex behavior?

--- Not understanding, I think it’s a big problem. And when they at home, they forget to eat or just remember all the day they want to eat, so they stop eating because they thought they have eaten already. But here they get the same time their food, most of the time it helps a lot. I usually get a person here they are malnutrition (21:33), and one month later you see their weight go up and we didn’t change anything just we offer them food at the right time. So that means that the planning of the day is very important for people with dementia.

--- And do you think a wrong diet can trigger agitation behavior?

--- Yes! I think it’s possible. When your stomach hurts, you are not happy and

Second field study

Transcript -- dietitian

you are getting to be grumpy. So I think it will affect the person. When they over eat, they will feel full. Or when they are hungry, they are not very nice. And I think it's normal, not only for people with dementia.

--- Are there any cases that a person with dementia is hungry, but he thinks he has eat food? So he didn't eat the food, if its's possible?

--- I think it's possible, I don't have any data or prove for that. But I think it's possible. I think that with dementia, they also listen to their bodies. So when they are hungry, they are more likely to eat than they are not hungry. But if there is no signal coming from their body when the stomach is empty, then they will not eat.

--- if the food is provided to them?

--- So there is a chance they will eat. Sometimes it works, I hear form the nurses that they ask the client "do you want to eat?" and they always say "no.", and they stop asking, just putting a plate in front of them. And most of the time, the clients are going to eat. Because there is food, and when you see food, you have to eat it. So sometimes they stop asking and just give food.

--- Pain, I heard from people that they don't want to eat, because they have pain. That' also something what has influence in food in-take. Sometimes I heard that they don't like the way other people are eating at the same table, some people have very strict eating habits that they need to use knife and folk, they eat very tidy. But there are also people don't do that, they just take the plate. So I think this is more social environment. The eating habits of other clients.

and we have a documents about how to work with your clients, and the protocol we have one page about the environment.

And knowing what food they get is also very important, they have old eating habits, they eat potatoes, vegetables and the meat. Not the spagatte, or the Chinese food. The new generations they all eat the food around the world, but the old people only eat the old traditions. So this is also very important that you give food that they can recognize. If they don't know, they are not going to eat

it.

--- I saw some of the food they are mixed up into very fine taste, so people cannot tell what they are eating.

--- That' s horrible. Sometimes it's needed. I called it soup. Because it looks like you are eating soup with a spoon. Perhaps people will eat it, but it also changes the taste, because you don't have to chew, it's not very nice. But sometimes you need to do that for safety.

Second field study

Transcript -- manager

Mindmap

Physical health

Pain

Movement is also important

Diet is not very important

Enough sleep – if they do not sleep enough, they will be tired

The other clients (because their brains are so damaged, the client becomes very sensitive to the environment)

Medication – not only pain killers, but also sedative drugs

Physical environment

Noise

Movement of other people surrounding the client could overstimulate the client

Light (too little or too much), most clients prefer stronger light, because their eyesight is getting worse, they can see better under stronger light

Social environment

Interaction with family, sometimes could be negative, the wife of the client comes every day, and she causes agitation on her husband, because she makes a lot of rules for him, she talks a lot, such as he must have do this and that, but he cannot do that anymore, like, he has to say thank you a few times to the nurses, and have to eat banana, and drink chocolate, he is happier without his wife

Interaction with caregivers, doctor, physiotherapist, IT people, delivery people. These interactions could be negative, technicians always use tools when they are in the ward, the sounds that these tools make can influence on client

Feedback

The wake time is not important for my work, but direct and indirect client time are helpful.

When a client comes in, at first, we have a multidisciplinary meeting, then I evaluate the work of caregivers each week, and they report the burden of work

I evaluate the burden of work by asking the caregiver a few times each week, if the burden is increasing, then I follow the case more closely

we will solve the burden of work by changing shifts for caregivers.

I am working on quantitative evaluation methods, it is really hard, I had a meeting with Jef and finance manager, now the care office has a template, and we have to fill it in.

We report the state of the clients to the family members per week even per day, at least per

week, the nurses do these meetings, not me.

Could you specify over 24 hours? [direct and indirect client time mock-up]

We organize the shifts of the caregivers to make it more fit to the clients, if we know when are the times the clients need direct contact, and when they are resting.

The indirect time, I do not care when a person started writing a report, the timing is not important, but we want to know how much time a person spend on writing a report.

It is not important to know who had direct contact with the client, we want to know how much time the client has direct contact with others.

The indirect time I want to know for each caregiver, and the specifications on what tasks they are doing

Second field study

Transcript -- doctor and psychologist

--- Based on the IPS, we developed an interface of the system. And we can let you have an overall about what are the direct and the indirect contact time that people with dementia is having per day, and this contact is more physical contact. (explain the system)

--- (D) if I look at that, I think that's interesting. When you want to look at the moment that people are less active, it says something about their health. And when you have a delirium (right word), people walk less; they have an increased falling risk and limited walking, so maybe that would be interesting to use it to see whether there is a change as a marker. But you have to discuss about the cut-off point or something, and that's quite difficult. Maybe in the early indicating? As for the dietitian, in my population, I am not really interested in that whether they meet the calories. Yes, I want them to be well, but the food is more in a comfort and quality life idea than dietitian (planning). These people are in their last stage of their life, they are at the risk of dying earlier than other people, I think. So that's why I am thinking that "oh, dietitian, how useful is that?" for this stage of people. But I think it's more interesting for people in the early stage of dementia, then you have other goals. We have, in our ward, we discuss with their family "is this a life you want to focus on quality or quantity?". And normally, we focus on quality, and quantity of life is often not focus, but also often in the Netherlands, it's not even a wish to live longer. This is not a life that wish to live long.

--- So (you want) a higher life quality. And like you mentioned about when you do a medication plan, do you find this information helpful or not? As also for phycologist, do you find this information helpful or not? So we have this questionnaire for you.

--- (D) I think it's a very promising thing to be able to see where people are walking, maybe for the patients, sometimes even the interaction. And also what the temperature is in that room, you know those data can be collected. But I think it needs another step to make these data useful to be connected. It would be interested to know, for the agitated people, how much interaction is

there. For example, before an escalation (13:07), is there more interaction every time before the escalation or not. So we can provide the data that when the nurses say "no, we leave him alone" and then we see the data that its quite busy, or busy with other clients, but we don't know. Those are the thing that nurses look at or observe that people have too much contact with others. It would be useful, but you need more data, and you need to have no sequences in collecting or saying something about it. Or maybe just record the agitation behavior, and this would be useful to know our people walk more or less before the delirium (14:41), those can be scientific data that are very interesting.

--- Yeah. And we find with some agitations we can measure with IPS, but with some vocalization, it's difficult to measure. So we wonder if it's possible for the caregivers to note down the time when the person escalates. And I tried before, but different caregivers have different opinion about people with dementia. So one caregiver thinks that he is agitated and he needs to go to his bedroom, and another caregiver thinks it's not. And I wonder how should we collected data?

--- (P) So we have the signaling plan, thus the definition for the escalation (for each person). But you say sometimes it's not helping enough.

--- So I bring the signaling plan to the caregiver, because sometimes they cannot remember everything, but they can give different scores to the same person. Because maybe one caregiver is busy in the kitchen, and he doesn't know much about this residence in the bedroom, he only sees how he behaves in the kitchen.

--- (P) When the plan is good, you only have objective things, but in practice, it doesn't look like that.

--- Yes, it doesn't look like that.

--- (D) Okay, so the internal observer is not so great. (let caregivers give scores to the behaviors of each PwD is not so great)

--- (D) I also think that it might be interesting to know that where the preference is for certain patients.

--- So like the location?

--- (D) Yes! Where do they go to at what time, to have some data about the location, that could be interesting.

Second field study

Transcript -- doctor and psychologist

--- (P) To see what the purpose they go to the place.

--- (D) Where are they going to, and how much time do they spend in certain place.

--- We have the data for that, but it will take some time for people to watch the whole animation. So I wonder how long you would like to spend in using this system per week?

--- (D) I think you can make a diagram to see who XXXXX (20:36, I cannot hear this paragraph very clear—me neither, do you understand the drawing?). --- Drawing her idea.

I think it would be helpful to see what are the similarities and what are the privileges. And I think it could be interesting for patients, and we have more data to say “ok, when he is XXX (22:20-me neither) with us, he needs these”.

--- We are able to present a table about the duration of the time they spend in the living room and the corridor. (showing the table) And we wonder if this information will be insightful?

(24:00-27:00 Talking about Frank’s data)

--- (D) I think it’s interesting to see how much he switches from places. And I know that time he is agitated, because he is vocalizing at that time, because he wants to have food and he can’t wait. But this (the data) is very interesting, I know it, but I think what interesting about this data is that he is also very restless. And in a way, (his problem) is not solving, maybe. He is going from one place to another, so he is not finding what he wants, he is still searching. Maybe he is searching to do some activities, go for a walk with somebody around, and that helps.

--- (P) He is moving, but (nobody) is helping.

--- (D) No! and I know that from the vocalization, but I didn’t know that from how many meters he moves. That’s interesting.

--- And similarly, we can look at another patient. (describing the data)

--- (D) I would find it interesting that if we see in the whole day. Because he is time-consuming, he cannot be alone. And you have his data over couple of

days, and to see which time he is agitated, he needs observation. This is interesting, because the caregivers can adjust their time table to him. If I want to have an appointment with family members, I know I can’t do it at 11:00 because then we have four people in our team and one needs to do this (related to client’s agitation time). So maybe we can use this to plan, because this is a quite challenging thing that we need some flexibility. (30:00 I miss one sentence here – me neither) But sometimes if the things are more variable, then it shouldn’t be, maybe we don’t have the knowledge, the knowledge of how the schedules come together.

--- (P) If it’s possible to put them in one?

--- (D) Yeah! If you put the data over each other, the you see maybe why patient x is calling because everybody is walking at high range at certain time, (s)he gets a lot of movement, a lot of agitation. And we know for the caregivers that they know those are the busy times, they can plan on that. (Drawing her idea) This is your data on how busy your work is, and when you can say who we have in our team, and how do we do all the tasks. So they can together say “ok, these are the peak hours, and how do we that, how do we plan our timetable this day”. I don’t know about the team, maybe they say they know that, but I think maybe it’s more difficult to know that, then I can check this data.

--- And in our previous interviews, or interviewee said that every day is different.

--- (D) I think not; I think it’s not that different as they think. And it’s more plannable, that could be interesting. That could be a research study, and the hypothesis is that we can predict more or less the intensity of work (for caregivers). (34:44 I could not hear the following sentences)

--- And speaking about the intensity (35:00 I am not sure if this is the right word – as in how much work the caregiver needs to do) of the work, we have a small exercise for you.

--- (D) 70% XXXXXX (37:20), but I only get more about the agitation, so probably about 70% I don’t see.

--- But you also want to know these information, right? Not only the agitation?

--- (D) Yes! Because of the quality of life thing, but also because sometimes person has XXXX (38:10) delirium, and then he has an agitated delirium that

Second field study

Transcript -- doctor and psychologist

switches. So if I know it earlier, maybe I can do something about it. (I couldn't hear what she said after this)

Because those are very basic stimuli they don't know what to do with them, but (if) they fail it, they (patients) get agitated.

Limitation, for example, if you cannot walk anymore, how can you lose your energy. Get stuck inside, everything is hurting. We tried to sit in the chairs for 24 hours or only 8 hours, it'd very difficult. You can't do it. But they have to, therefore...

---And this is?

--- (D) The help before they get dementia, you see sometimes people, mostly women, they have done gymnastics, they are really very flexible. And you can see this helps them to be healthier. I can't say that they don't have complex behavior, but they are healthier than others.

--- (P) Too much stimuli, related to the sensory. When you don't see or hear anything, most of the time you will get agitated. I think some people are afraid of others, or the behavior of others, for example, when they are shouting. I guess the fear is the environment, if it's uncomfortable. And also how people approach the clients. And when people meet have met the caregiver (43:40), they often don't understand what other people (want to do). For example, clients often don't understand why the (caregivers) coming with a cold towel. Or they don't want to put the clothes, because they don't think they need help, or they think they can do it by themselves, but actually they can't. and maybe too silent, often in the sleeping room. And other things like temperature, the light.

--- (D) I think the other factors are psychological, personality, the memories, the trauma, the life version that you always think you want to be independent.

--- (P) You have these things, because all the things are coming from this (the picture).

--- (D) I think also the smell. It's a XXX (46:40) function, but we don't do anything about that.

--- (P) No, because it's difficult to measure, and maybe the smell is often not good.

--- (D) The sound, but also the echo. This is also about how you feel about the room.

--- So is it better that the sound can be absorbed?

--- (D) I think it depends on the person. Everybody has a preference. Someone like the space more open, someone prefer more comfortable.

--- (P) But it might be more difficult to work with noises if there is an echo (in

noises come with the same density in the head, and people can't discriminate the noises. (For normal people), when people are talking to me, I can discriminate other noises, but for people with dementia, they often can't do that.

--- (D) the family members, but also family member of others. Sometimes, they are helping, but most of the time they are annoying. They are learning something about their spouses, and how they act in dementia. To also know who is other and what they need is too much ask. It's a pity that it's too much ask. Because they can be shouted or they need to act nicely to somebody else. But it's totally wrong. They don't know the others, it's difficult for them. And also the other patients, and patients from other wards.

--- They last activity is for you guys to rate the interface.

--- (D) I don't think it's saving time, but it gonna add to the information.

(The last part of the interview, I can't hear it clearly – me neither, next time we can do the interview one by one so the voices will not overlap)

--- How often do you want to use it?

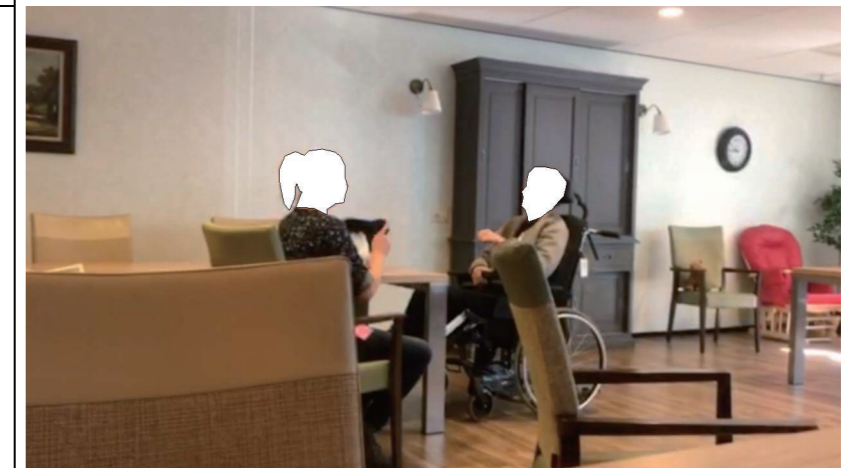
--- (D) it depends on what are the final data we get, because if I get these data is easy for the whole ward, then we can see it every week. It's always the question about if it's easy for us to link to (our work). and really more detail information, and I think we are only going to see it when the client is in the abnormal situation. So it depends on how easy is to get the data and how link it is to each other.

--- So if the system can show you two phases, like one phase is very easy understand and very general basic information, so you will check it regularly.

Second field study

Observation for interaction

TIME	INTERACTION	CODE	VERBAL/NON	BETWEEN
9:39	The PwD was shouting aloud, then the activity nurse M walked to him, and moved a chair sitting beside him. When nurse M held PwD's hand, he became quiet. Then M Leant on PwD's shoulder pretending to fall asleep, simultaneous snoring. At the same time, PwD used his arm to hold M	+	Non-verbal	room 9 & Marlon
9:44	First, nurse M sat on the table in front of PwD, while looking at his face and talking to him. Then she walked away to pick up the toy cat while singing. She moved the chair slightly to sit in front of PwD, and also slightly put the toy cat on the table to near him. She looked at him and nodded her head. At this time PwD reached out and M also reached out and responded, saying "oh". Then, nurse M slightly stood up, put the chair in the original place and moved the toy cat away.	+	Verbal	room 7 & Marlon



Second field study

Observation for interaction

9:50	<p>M looked at PwD and made a gesture of drinking water at a distance of about two meters from him. Then she approached PwD, sat in the chair in front of him and asked him "What do you want to drink?". Then PwD said "chocolate milk". And M nodded her head, moving away to get the drink for him. M feed the PwD drink with a plastic pipette. When PwD finished drinking, M asked him "Do you like it?", PwD responded "yeah". Then M looked at the cup and said, "There are still some left." Then she handed over the cup to PwD, he finished the remaining drink. M put an empty cup on the table and gave a thumbs up to PwD. Then, M is close to PwD and pats his arm and tells him: "F, you need to draw blood today.", then M repeated the words, while pointing to her own mouth, PwD replied: "OK." When PwD finished speaking, M patted his shoulder.</p>	+	Verbal	room 9 & Marlon
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Second field study

Observation for interaction

9:53	A walked into PwD, put her hand on PwD's hand, and asked him: "yeah?". Then A showed to PwD the checklist on her hand and ask him: "Can you come with me?". PwD replied: "Yeah." Then A went behind his wheelchair and pushed him away.	+	Verbal	room 9 & Anita
10:31	PwD 7 and PwD 9 sat together with nurse S. S put one hand on PwD 9's hand and used her another hand to turn the newspaper. At the same time, PwD 7 pointed at PwD 9 and smiled.	+	Non-verbal	room 9 & room 7 & Sjannie



Second field study

Observation for interaction

10:45	Nurse M took the tablet and walked to PwD 7 and sat down. At the same time, he turned the PwD 9's wheelchair over and asked him: "Would you like to sit with us?" and nurse M smiled at PwD 9, saying: "how are you?". And then he turned to PwD 7 and put his hands on PwD's knees. Nurse M started whistling with the music, and PwD 7 looked at him and smiled. Nurse M sat closer to PwD 7, and asked him: " did you hear this song before? and PwD answered: "yeah". Then nurse taps the thigh of PwD with the beat of the music.	+	Verbal "Did you hear this song before?" "Do you know it?"	room 9 & room 7 & Marcel
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Second field study






Observation for interaction

10:52	PwD was shouting, then nurse M went to him and knelt down in front of him. She looked at his face, and asked him: "do you want to go outside?", but PwD did not respond. Then nurse pointed at her own ear and said: "F, listen to me. Do you want to go outside?", and she used her finger to touch PwD's hand, asking again: "do you want to go outside?". then PwD answered: " yeah". "good.", said by nurse M, and she stood up, walked to the back side of his wheelchair, and moved him.	+	Verbal "Do you want to go outside?" "Can you hear me?" point her ear "Good!"	room 9 & Marlon
11:10	nurse M used one hand to control PwD's wheelchair and walked beside the wheelchair. And she would sometimes bend down and looked at PwD's face and asked him, "Are you all right?". And sometimes she would walk behind his wheelchair, and out another hand on PwD's neck to do a small massage for his tight neck	+	Verbal	room 9 & Marlon



Second field study

Observation for interaction

13:00	Nurse G leaned against the table and looked at PwD's face to talk to her. Then she started cutting nails for PwD	+	Verbal	room 2 & Gerry		
13:48	PwD walked in the corridor, and he said: " It's beautiful.", and nurse M stood in front of him, answered: "yes, it's beautiful". Then nurse M extended his left hand and invited PwD to go to his own room.	+	Verbal "Yes, it's beautiful."	room 3 & Marcel		
14:39	Nurse P hold PwD's hand and walked with him in the corridor. PwD whispered something, and nurse P nodded from time to time, watching him answer: "Yes."	Neutral	Non-verbal	room 8 & Peggy		
11:00	Nurse E holds PwD 10's both hands in her one hand, and use the other hand lick her waist, and walked slowly in the corridor with her. At the same time, nurse M used one hand to hold PwD 3's one hand also walked in the corridor. At first, they were behind PwD 10, then nurse M smiled at PwD 3, and surpassed the two people in front	+	Non-verbal	room 3 & Maartje room 10 & Elvera		

Second field study

Observation for interaction

11:13	PwD 10 was lying down on the couch in the living room, while nurse E was using some tool to do head massage for her. And another nurse S sat on a chair near PwD 10, she removed the glasses from PwD's head, and prepared medicine for her	+	Non-verbal	room 10 & Elvera & Sigrid
11:17	Nurse E gently lifted PwD up, let her lean on her shoulder, and then use a spoon to help PwD feed food little by little.	+	Non-verbal	room 10 & Elvera
10:12	Four caregivers sat together with four PwD with gentle music in the living room. Caregivers talked to each other, and PwD just sat beside the caregivers quietly and peacefully.	+	Verbal	room 3, room 7, room 9, room 6 & Lucas, Sjannie, Elvera, Marianne



Thematic analysis

Coding

Anita

Mindmap

Physical health

Let people do what they want to do

Social environment

Some people ask for contact, some people do not want to contact

Relaxed environment, with not too much stimuli

Kamer 3 before used to sit in the living room, but he prefers to stay at his own room today, we do not know why, maybe he find the stimuli in the living room is too much

Physical environment

Relaxed environment with not too many people walking around

Anders

For some clients, we avoid letting them sit together, for example, with Mrs. A and Mrs. B, we normally let them sit on two ends of the living room, so they do not react to each other

Positive & Negative interactions

Kamer 9 was not tense when taking the blood. This is need for a medication research. The last time he resisted it, but today it went quite good.

Kamer 10 accept care today.

There are no negative interactions today.

IPS

Oh Sjannie walked a lot in the corridor

Feedback

I find it is interested to know how long you have walked, where you walked to, and when and where you are busy with the client. you can also notice if you have done unnecessary walk. If you walk too much, the clients could get agitated. I want to know if I walk too fast or too much.

I would spend 15 maximum to look at this system per day.

During the shift, I only verbally communicate with the caregiver.

I find it is difficult for me to understand all the information, it is better if it is in Dutch.

Sjannie

Mindmap

Physical health

Movement freedom: if you want to move but you are tied by a band, thus your movement will be limited

Medication: if you have lots of medicine today, you will feel the side effects of the medicine, you might feel dizzy, thus your movement will be limited

Of course, enough sleep.

Social environment

Contact

Sometimes you just sit beside the client is enough, you do not need to talk, they can feel the attention

The family can also have an influence

Physical environment

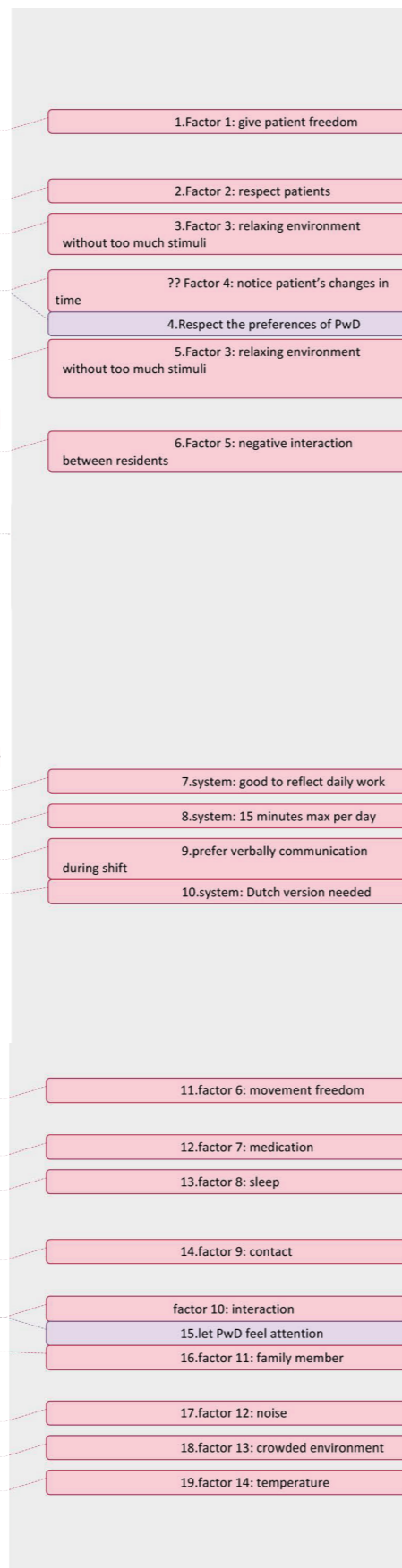
Noise

Too many people

Temperature

Anders

None



Positive & Negative interactions

Kamer 9 is quite relaxed today.

IPS

I have walked in the corridor a lot. I was with Kamer 3.

You spent quite a lot of time in the living room around 9am.

I stayed with Kamer 9, he is quite relaxed with taking out blood. I sit beside him to provide accompany.

You stayed in the kitchen for a while around 11:30.

Yes, I was cleaning the kitchen and doing the washing up.

Feedback

When a client get agitated, we can think about why is it, where and when does it happen, what can you do about it, is it because he wants to go home, or he still think he needs to pick up his kids?

Does he walk as usual or does he walk too fast? Then you can think how to prevent this, for example, if we should accompany him or give him medicine

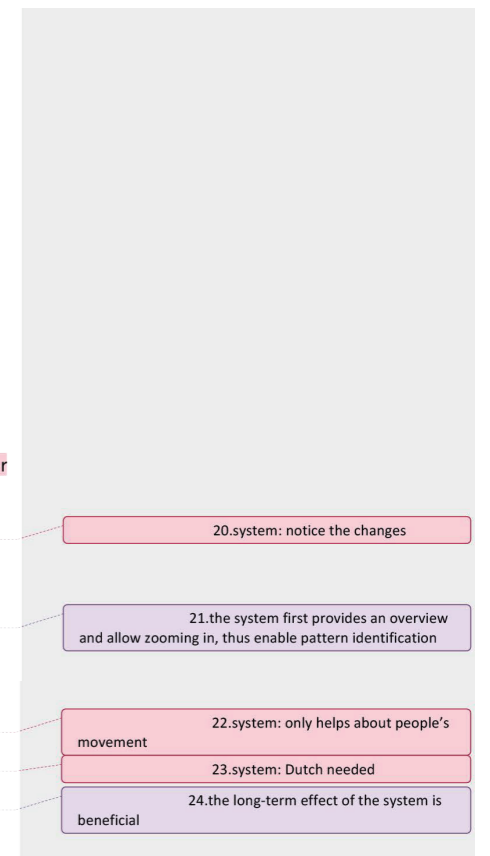
Everyday is different, then you can observe the behaviour change day by day

I will first look at the overview (graphs), which is fast; and then I will watch the animation to locate where the agitation happened, and ask myself why the agitation happens there all the time?

This is only helpful for people who walk a lot.

If the system is in Dutch, then it is better.

At the beginning it might cost time but in the long term it will save time.



INTERVIEW WITH DIETITIAN

--- how many people with dementia are you responsible for?

--- I did count it. If you mean how many beds, we have in the location I am having contact with is 119. But I have 40 clients.

--- So you have 40 clients that you make plan for them.

--- Yes. The other clients I don't know, but I can help them if the doctor is asking.

--- Yes, I see. And do you make food diet plan for each person?

--- No. I only change what needs to be changed. So I don't give them strictly what to eat what not to eat most of the time. I usually only ask what do the clients eat, and look what are the mainly problem or the things I can change easy. Sometime the client doesn't eat that much, but likes to drink a lot, then I will change the drinks into lots of calories, lots of protein. So they get their energy at a easy way. But most of the time, I don't change the whole plan, I don't write down everything they have to eat. I only do that when there is a major problem, or someone has a really strange habit of eating so that the caregivers want to have a full diet plan. Then I will make it, but I think it's only 10% of the time I make full diet plan.

--- Okay, I see. And with another 90% of your work (how do you work?)

--- I just change something. Most of the time, I add between meals something. So if someone likes drink, I give them milk or chocolate milk. When they like to eat dessert between the meals, or sometimes enriched food, we have power stick, we call it. It's a little piece of pie, and it's very rich of protein. People like it a lot of time, so they can get it.

--- And you also talked about that you look at the habit of people with dementia, sometimes will you change or update the diet plan?

--- Most of the time, once a month.

--- And when making the plan, what kind of elements you will consider? Like you talked about the drink.

--- I don't understand the word elements.

--- Oh, yeah. For example, what aspects or what ingredients?

--- What's important in the food to have. I look at the energy and I look at the protein most of the time. These are the most important ingredients to have. And

I can look at the vitamin and minerals, but I can tell that in this building nobody is taking the right amount of the vitamins. So I don't look at that, because I can deliver enough in normal food.

--- And when you make these diet plan, will you consider from different aspects such as the food company or the finance?

--- Yes. There is a tablet that we can order food, so I have to choose what in shop, and I can't say anything that is not in the shop because we cannot get it. But there are a lot of things in the shop, so I can almost order anything I think of. So that's easy. And finance, I don't look at the finance that much. Because the good food is always expensive. When you don't have enough good food that you can give nutritious, (we can choose) medical nutrition. There are little bottles with high nutrition high protein and high vitamin and minerals, but they are really expensive. So I try not to use it that much, and I choose normal food, and normal food is not that expensive. So that's not a problem.

--- And you mentioned about the protein, and I wonder that calories is

25. One dietitian is responsible for 40 clients

26. Dietitian gets extra work if doctor ask

27. dietitian won't make strict plan for each patient

28. only look at the main problem

29. help patients get their energy in a preferable way

30. dietitian won't make whole plan for each patient

31. do full plan under special occasions

32. 10% change to make full plan

33. usually change something for diet

34. fulfill patients' need and preference

35. update diet plan once a month

36. protein and energy are most important

37. no strictly look at vitamin and minerals

38. online order system is convenient

something you are looking at?

--- Yes! Calories and protein are both very important. Because if you don't get enough calories, you use your protein as fuel instead of making your body regain again.

--- So will you calculate those calories or protein when you are making the plans?

--- Not always, I don't have the time for it. I would like to calculate everything, but I have only 6 hours I work here. But there are more than 100 normal patients, and then I have about 8 or 10 (people who are here for short term, they come from the hospital, and they need to come home, and this costs them lot of time). And 100 normal patients and 8 to 10 patients costs a lot of time, and I only have 6 hours.

--- So you make those decisions based on your experience?

--- Most of the time, yes! I would like to calculate it, but it's impossible.

--- And when you making the plan, do you do it all by yourself, or will you consult someone?

--- I consult the nurses. Especially, all the clients have one nurse that is responsible for them. So I like to have to have that nurse who is responsible for that client, and then I will ask how is the eating going, does the person like or

what doesn't he like; what goes good and what he doesn't eat. Then I get a little bit more information, and according to this I will make my advice. But when I give my advice, I always ask them do you think you will manage to give that to the patient. Because if the nurse says that "no, he won't eat that", then I can't advice it, and it will never happen.

--- And how often do you talk to the caregiver or the nurses about this?

--- I tried once a month, but not always possible, because I am very busy. I would like to do it once four weeks, but most of the time, five or six weeks I evaluate it.

--- Yeah, I got it. And the way you check if the plan is suitable for people with dementia is to talk to the nurses, are there any other ways?

--- Sometimes, I call the relatives. But my experience from the past is that the relatives don't know what the person like to eat. When it's a wife or husband, (s)he probably knows. But when I call the children, they don't know what the parents are eating at the moment. Sometimes, I will call to ask what the person likes and I often ask the nurses to ask the relatives when they visit.

--- And the meeting with family members, how long are they?

--- I usually call, so it's a short call like 5 to 10 minutes.

--- And with caregivers?

--- Depends on complex it is, but usually 10 to 15 minutes when it's a simple question. But if it's a lot need to be change, I think will be half an hour. But before I go there, I always read the files of the clients, and I always know a lot before I come here. And I have to ask what isn't in the computer.

--- Oh, nice. And can you think about some improvements to make your work more efficiently, as to make better diet plan for people with dementia?

--- I think it's useful to have somebody responsible for the food for the whole day. At moment at all our locations, there is most of the time, in the morning, somebody who is in the kitchen only taking care of the food. But I think it's useful to have all day somebody is responsible for the food. So there is always somebody checking and giving out food. So the nurses can focus on what's important for them instead of thinking "oh, my clients have to eat". Sometimes,

41. calculation is good, but don't have time to do it

42. only work a few hours, while responsible for many patients

43. make diet plan based on experience

44. impossible for dietitian to calculate

45. consult the responsible nurses when making plan

46. need the previous situation to make diet plan

47. combined with nurses' execution

48. too busy to talk to nurses regularly

49. always a delay on the evaluation

50. relatives can be a way to know patient's diet preference

51. relatives barely know the patient's food preference except the spouse

52. caregivers' meeting depends on the complexity of the problem

be familiar with patient is important

focus on information outside the computer

55. someone responsible for the food for whole day

nurses will forget. On this ward, most of the time it's good. They have a lot of time; they give clients a lot of attention on the food they eat. But not all locations are that good.

--- Based on our interview, we would like you to evaluate if this is gonna helpful for your work. So with the information we collected from the indoor positioning system, we are able to quantify. For example, how long the person has been in direct contact with caregivers, and we presented in this diagram (explain the system). When you look at these interfaces, do you have any questions?

--- I think it's nice to see how many miles they walk. Because sometimes I heard that at one moment they are very busy, and at other moment they are not busy. It's nice to see how many calories (they consume) or miles (they walk), perhaps there is a way to change if they walk too much or too little.

--- so we could measure the amount of distance a person walks each day, in this scenario (explain the system). With these information, will they inform you with your care plan?

--- not exactly, if it's about a day, but if it's about a week or a month, and I can see how active a person is that always have relation with the food in-take. So a day doesn't mean anything to me, but if it's a week or a month report will be interesting.

--- With the calories, would you like to see the calories here, or do you want to calculate by yourself?

--- I think I would like to calculate by myself or I want to know what the formula is. Because you have to wait for a person to see what the formula is, I want to make sure the calculation is right.

--- And would you also like to know the food energy a person has each day?

--- I would love to know that. But I don't think we can get that information.

Because it takes a lot of work from the caregivers. We have nutrition list, I give caregivers to write down what they eat, and the list is very simple, (in the list) it already has the bread, drink and so on, so they only need to fill in the numbers. But even that, it doesn't get filled in right. So I don't think they will write down the information that good so I can say that's interesting.

--- We would like to know that if there is more information you would like to know from the system?

--- I don't need to know more about the movement, because I already know a lot about how active the person is.

--- I would like to rate the interface in five criteria, so if in the future the system is developed, will you use it?

--- I would check it when I do my monthly checkup, then I will look at it. For example, if I see they walk less than last month, then I will look more details in weeks to see if there is any difference. Or if there are three weeks' normal movements and one week no movements, then they may have some illness. So I will check it, and it gives me some insight to talk about.

--- in terms of usefulness, how would you like to rate the interface?

--- If it's not more work for the nurses, I would say it's useful. And this one is very easy to understand. And the information is clear except the calories, because I don't have the calculation. It's related to my work, because movement is energy. I don't think it's saving time or wasting my time, I think it's just give me some questions to ask, it gives me some (prove). If someone tells that one client is getting slimmer over time, then I only have some information.

56. it's good to separate the caregivers from the food

57. food can be time-consuming and requires lots of attention

58. change can be noticed with the walking miles data

59. daily data is not insightful for dietitian

60. activeness is related to food in-take
62. weekly or monthly data reveal the activeness of patients

61. calories calculation requires accuracy

63. wish to know the daily food energy for each patient

requires no more extra work for caregivers

65. monthly check-up for the (potential) system

the system gives more insight about the patient's change

67. system requires no extra work for nurses

But I look something like this, I have real data. And this one gives me real data, not only some opinions that moving more or moving less.

--- We want you to think about that are there any other factors will influence people with dementia to have complex behavior?

--- Not understanding, I think it's a big problem. And when they at home, they forget to eat or just remember all the day they want to eat, so they stop eating because they thought they have eaten already. But here they get the same time their food, most of the time it helps a lot. I usually get a person here they are malnutrition (21:33), and one month later you see their weight go up and we didn't change anything just we offer them food at the right time. So that means that the planning of the day is very important for people with dementia.

--- And do you think a wrong diet can trigger agitation behavior?

--- Yes! I think it's possible. When your stomach hurts, you are not happy and you are getting to be grumpy. So I think it will affect the person. When they over eat, they will feel full. Or when they are hungry, they are not very nice. And I think it's normal, not only for people with dementia.

--- Are there any cases that a person with dementia is hungry, but he thinks he has eat food? So he didn't eat the food, if its's possible?

--- I think it's possible, I don't have any data or prove for that. But I think it's possible. I think that with dementia, they also listen to their bodies. So when they are hungry, they are more likely to eat than they are not hungry. But if there is no signal coming from their body when the stomach is empty, then they will not eat.

--- if the food is provided to them?

--- So there is a chance they will eat. Sometimes it works, I hear form the nurses that they ask the client "do you want to eat?" and they always say "no.", and they stop asking, just putting a plate in front of them. And most of the time, the clients are going to eat. Because there is food, and when you see food, you have to eat it. So sometimes they stop asking and just give food.

--- Pain, I heard from people that they don't want to eat, because they have pain. That's also something what has influence in food in-take. Sometimes I heard that they don't like the way other people are eating at the same table, some people have very strict eating habits that they need to use knife and folk, they eat very tidy. But there are also people don't do that, they just take the plate. So I think this is more social environment. The eating habits of other clients.

and we have a documents about how to work with your clients, and the protocol we have one page about the environment.

And knowing what food they get is also very important, they have old eating habits, they eat potatoes, vegetables and the meat. Not the spagatte, or the Chinese food. The new generations they all eat the food around the world, but the old people only eat the old traditions. So this is also very important that you give food that they can recognize. If they don't know, they are not going to eat it.

--- I saw some of the food they are mixed up into very fine taste, so people cannot tell what they are eating.

--- That's horrible. Sometimes it's needed. I called it soup. Because it looks like you are eating soup with a spoon. Perhaps people will eat it, but it also changes the taste, because you don't have to chew, it's not very nice. But sometimes you need to do that for safety.

69. real data gives prove

70. personal factor-physiological need states//factor 1: cognitive system cannot handle physiological requirements

71. daily eating schedule improves patient's health

?? personal factor-emotion// factor 2: wrong diet plan

74. people with dementia follow their body signals

75. patients tend to eat when food provided

76. people with dementia can act oppositely with their words

78. background-health status//factor 3: pain

79. social environment- fellow residents//factor 4: different eating habits of others

80. personal factor-emotion//factor 5: bonding with the recognizable food

INTERVIEW WITH DOCTOR

--- Based on the IPS, we developed an interface of the system. And we can let you have an overall about what are the direct and the indirect contact time that people with dementia is having per day, and this contact is more physical contact. (explain the system)

--- (D) if I look at that, I think that's interesting. When you want to look at the moment that people are less active, it says something about their health. And when you have a delirium (right word), people walk less; they have an increased falling risk and limited walking, so maybe that would be interesting to use it to see whether there is a change as a marker. But you have to discuss about the cut-off point or something, and that's quite difficult. Maybe in the early indicating? As for the dietitian, in my population, I am not really interested in that whether they meet the calories. Yes, I want them to be well, but the food is more in a comfort and quality life idea than dietitian (planning). These people are in their last stage of their life, they are at the risk of dying earlier than other people, I think. So that's why I am thinking that "oh, dietitian, how useful is that?" for this stage of people. But I think it's more interesting for people in the early stage of dementia, then you have other goals. We have, in our ward, we discuss with their family "is this a life you want to focus on quality or quantity?". And normally, we focus on quality, and quantity of life is often not focus, but also often in the Netherlands, it's not even a wish to live longer. This is not a life that wish to live long.

--- So (you want) a higher life quality. And like you mentioned about when you do a medication plan, do you find this information helpful or not? As also for phycologist, do you find this information helpful or not? So we have this questionnaire for you.

--- (D) I think it's a very promising thing to be able to see where people are walking, maybe for the patients, sometimes even the interaction. And also what the temperature is in that room, you know those data can be collected. But I think it needs another step to make these data useful to be connected. It would be interested to know, for the agitated people, how much interaction is there. For example, before an escalation (13:07), is there more interaction every time before the escalation or not. So we can provide the data that when the

nurses say "no, we leave him alone" and then we see the data that its quite busy, or busy with other clients, but we don't know. Those are the thing that nurses look at or observe that people have too much contact with others. It would be useful, but you need more data, and you need to have no sequences in collecting or saying something about it. Or maybe just record the agitation behavior, and this would be useful to know our people walk more or less before the delirium (14:41), those can be scientific data that are very interesting.

--- Yeah. And we find with some agitations we can measure with IPS, but with some vocalization, it's difficult to measure. So we wonder if it's possible for the caregivers to note down the time when the person escalates. And I tried before, but different caregivers have different opinion about people with dementia. So one caregiver thinks that he is agitated and he needs to go to his bedroom, and another caregiver thinks it's not. And I wonder how should we collected data?

--- (P) So we have the signaling plan, thus the definition for the escalation (for each person). But you say sometimes it's not helping enough.

81. Patients' activeness is related to their health
82. Delirium limits patients' movement

83. The system can be a marker of changes in early indicating
84. Quality of life is more important than quantity of life

85. Dietitian planning is not very useful for last stage dementia
86. Dietitian planning is more useful for early stage dementia

87. Quality of life is more important than quantity of life

88. New system is a very promising thing
89. Data need to be connected
90. If interaction time is related with stress

91. System can provide prove
92. No sequences of those data

93. Vocalization is difficult to measure

94. Different caregivers have different judgement on agitation behavior

--- So I bring the signaling plan to the caregiver, because sometimes they cannot remember everything, but they can give different scores to the same person. Because maybe one caregiver is busy in the kitchen, and he doesn't know much about this residence in the bedroom, he only sees how he behaves in the kitchen.

--- (P) When the plan is good, you only have objective things, but in practice, it doesn't look like that.

--- Yes, it doesn't look like that.

--- (D) Okay, so the internal observer is not so great. (let caregivers give scores to the behaviors of each PwD is not so great)

--- (D) I also think that it might be interesting to know that where the preference is for certain patients.

--- So like the location?

--- (D) Yes! Where do they go to at what time, to have some data about the location, that could be interesting.

--- (P) To see what the purpose they go to the place.

--- (D) Where are they going to, and how much time do they spend in certain place.

--- We have the data for that, but it will take some time for people to watch the whole animation. So I wonder how long you would like to spend in using this system per week?

--- (D) I think you can make a diagram to see who XXXXX (20:36, I cannot hear this paragraph very clear—me neither, do you understand the drawing?). --- Drawing her idea.

I think it would be helpful to see what are the similarities and what are the privileges. And I think it could be interesting for patients, and we have more data to say "ok, when he is XXX (22:20-me neither) with us, he needs these".

--- We are able to present a table about the duration of the time they spend in the living room and the corridor. (showing the table) And we wonder if this information will be insightful?

(24:00-27:00 Talking about Frank's data)

--- (D) I think it's interesting to see how much he switches from places. And I know that time he is agitated, because he is vocalizing at that time, because he wants to have food and he can't wait. But this (the data) is very interesting, I know it, but I think what interesting about this data is that he is also very restless. And in a way, (his problem) is not solving, maybe. He is going from one place to another, so he is not finding what he wants, he is still searching. Maybe he is searching to do some activities, go for a walk with somebody around, and that helps.

--- (P) He is moving, but (nobody) is helping.

--- (D) No! and I know that from the vocalization, but I didn't know that from how many meters he moves. That's interesting.

--- And similarly, we can look at another patient. (describing the data)

--- (D) I would find it interesting that if we see in the whole day. Because he is time-consuming, he cannot be alone. And you have his data over couple of days, and to see which time he is agitated, he needs observation. This is interesting, because the caregivers can adjust their time table to him. If I want to have an appointment with family members, I know I can't do it at 11:00 because then we have four people in our team and one needs to do this (related to client's agitation time). So maybe we can use this to plan, because

95. Caregivers give different scores for same person on signaling plan

96. Caregivers can't aware all the situation during a day

97. Signaling planning is not very useful in practice

98. Interesting to know patient's location preference

99. Similarity and privilege can be helpful

100. The times patient switches from places can be interesting

101. Notice the vocalization

102. Patient is restless in searching for help

103. The travel distance can describe patient's agitation

104. Caregivers can adjust their time schedule to each patient based on the data

this is a quite challenging thing that we need some flexibility. (30:00 I miss one sentence here – me neither) But sometimes if the things are more variable, then it shouldn't be, maybe we don't have the knowledge, the knowledge of how the schedules come together.

--- (P) If it's possible to put them in one?

--- (D) Yeah! If you put the data over each other, the you see maybe why patient x is calling because everybody is walking at high range at certain time, (s)he gets a lot of movement, a lot of agitation. And we know for the caregivers that they know those are the busy times, they can plan on that. (Drawing her idea) This is your data on how busy your work is, and when you can say who we have in our team, and how do we do all the tasks. So they can together say "ok, these are the peak hours, and how do we that, how do we plan our timetable this day". I don't know about the team, maybe they say they know that, but I think maybe it's more difficult to know that, then I can check this data.

--- And in our previous interviews, or interviewee said that every day is different.

--- (D) I think not; I think it's not that different as they think. And it's more plannable, that could be interesting. That could be a research study, and the hypothesis is that we can predict more or less the intensity of work (for caregivers). (34:44 I could not hear the following sentences)

--- And speaking about the intensity (35:00 I am not sure if this is the right word – as in how much work the caregiver needs to do) of the work, we have a small exercise for you.

--- (D) 70% XXXXXX (37:20), but I only get more about the agitation, so probably about 70% I don't see.

--- But you also want to know these information, right? Not only the agitation?

--- (D) Yes! Because of the quality of life thing, but also because sometimes person has XXXX (38:10) delirium, and then he has an agitated delirium that switches. So if I know it earlier, maybe I can do something about it. (I couldn't hear what she said after this)

Because those are very basic stimuli they don't know what to do with them, but (if) they fail it, they (patients) get agitated.

Limitation, for example, if you cannot walk anymore, how can you lose your energy. Get stuck inside, everything is hurting. We tried to sit in the chairs for 24 hours or only 8 hours, it'd very difficult. You can't do it. But they have to, therefore...

---And this is?

--- (D) The help before they get dementia, you see sometimes people, mostly women, they have done gymnastics, they are really very flexible. And you can see this helps them to be healthier. I can't say that they don't have complex behavior, but they are healthier than others.

--- (P) Too much stimuli, related to the sensory. When you don't see or hear anything, most of the time you will get agitated. I think some people are afraid of others, or the behavior of others, for example, when they are shouting. I guess the fear is the environment, if it's uncomfortable. And also how people approach the clients. And when people meet have met the caregiver (43:40), they often don't understand what other people (want to do). For example, clients often don't understand why the (caregivers) coming with a cold towel. Or they don't want to put the clothes, because they don't think they need help,

105. Use the data to make their planning more flexible

106. Currently lack the knowledge of schedule coming together

Factor 1: Busy movement/ tense schedule can trigger agitation

107. Negative behaviors of PwD could be inter-related

108. Putting data together to make team schedule

109. Hard to know the schedule without real data (quantitative data)

110. The intensity of caregiver's work is predictable

111. Doctor only knows 30% of patients' daily life

112. The information besides delirium is also important for doctor

113. Physical limitation (sit all day long) is a trigger for agitation

114. Factor 2: the health status before getting dementia

115. Factor 3: sensory damage

116. Factor 4: uncomfortable environment caused by other people

117. Factor 5: serve patients without informing them

or they think they can do it by themselves, but actually they can't. and maybe too silent, often in the sleeping room. And other things like temperature, the light.

--- (D) I think the other factors are psychological, personality, the memories, the trauma, the life version that you always think you want to be independent.

--- (P) You have these things, because all the things are coming from this (the picture).

--- (D) I think also the smell. It's a XXX (46:40) function, but we don't do anything about that.

--- (P) No, because it's difficult to measure, and maybe the smell is often not good.

--- (D) The sound, but also the echo. This is also about how you feel about the room.

--- So is it better that the sound can be absorbed?

--- (D) I think it depends on the person. Everybody has a preference. Someone like the space more open, someone prefer more comfortable.

--- (P) But it might be more difficult to work with noises if there is an echo (in the room), the noises are longer. The discrimination of all the noises, all the noises come with the same density in the head, and people can't discriminate the noises. (For normal people), when people are talking to me, I can discriminate other noises, but for people with dementia, they often can't do that.

--- (D) the family members, but also family member of others. Sometimes, they are helping, but most of the time they are annoying. They are learning something about their spouses, and how they act in dementia. To also know who is other and what they need is too much ask. It's a pity that it's too much ask. Because they can be shouted or they need to act nicely to somebody else. But it's totally wrong. They don't know the others, it's difficult for them. And also the other patients, and patients from other wards.

--- They last activity is for you guys to rate the interface.

--- (D) I don't think it's saving time, but it gonna add to the information.

(The last part of the interview, I can't hear it clearly – me neither, next time we can do the interview one by one so the voices will not overlap)

--- How often do you want to use it?

--- (D) it dependents on what are the final data we get, because if I get these data is easy for the whole ward, then we can see it every week. It's always the question about if it's easy for us to link to (our work). and really more detail information, and I think we are only going to see it when the client is in the abnormal situation. So it dependents on how easy is to get the data and how link it is to each other.

--- So if the system can show you two phases, like one phase is very easy understand and very general basic information, so you will check it regularly. But if there is an abnormal situation happens for a client, you will go to look at more detailed information, right?

--- (D/P) Yes!

118. Factor 6: patients don't get independency

119. Background factor

120. factor 8: noise level—too silent

121. factor 9: temperature

122. factor 10: light level

123. factor 11: bad smell

124. factor 12: echo of the room causes noise longer

125. factor 13: patients lack of discrimination of noise

126. Family members could give extra rules to PwD and it can trigger agitation

127. The system will add more information for their work

Easy-understanding and data-connection are important

128. Relevance to work is also important

129. Two phases of the system work better: one is general, another is detailed

INTERVIEW WITH LUCAS / SIGRID

Lucas

--- So imagine that this is the beginning of your shift. You want to look at what are the information are there for you client. So you click on the client, and you can get an overview about direct client time. Do you know the direct client time?

--- Yes! It's the time that I am being with a client, or that was a contact with a client.

--- You can see how this time is divided and how the time changes over the day for one client.

---Okay!

---Do you think this information will be helpful for you?

--- Yes! I do. For different reasons I think. Because it can be a moniting, we can see how much time we spend with a client at what cause. That's one reason for me. Also I can see how long I've been with one client together, maybe more restful. We'll see those fundacts of these things.

--- In the second page, you can look at how far the person has traveled per day. For example, today Mr. M has traveled 6.4 km, and normally he travels about 9.0 km. and duration of the traveling is about 3 hours 31minuts, and you can get his speed and calories and food intake.

--- And the speed is during...during... all the speed together as a level?

--- Yes! So this is kind of like the average speed.

--- okay! Yes! I understand. Quite interesting.

--- How would you use this data? (speed and calories and food in-take)

--- Food energy, so I can know how much my client has to eat. So that's what I would use it for. And the duration, I think it's quite difficult to use. I don't what exactly I have to do with the duration of the time that my clients is walking or doing something, you know?

--- Yes, I see. So you think the duration is not as important.

--- Yes! But it's only for me.

--- Yes, it's your opinion. And now, it becomes to be the end of your shift. And you will watch the animation of the ward. It looks like there are some people here and they are walking around. So you can look at the whole animation during your shift. Do you think it's goanna be useful for you?

--- Sometime yes, I do. To give some look on what we have done during the day at what time that we can look back in our shift. But also maybe when the client is restless, for example he is walking around in the living room. And there are ten people more in the living room, then he is restless all the day. And there are three people in the living room, and he isn't restless. So in that way, I think it would be useful to look this (animation) after my shift or if we want to know something about our client.

--- I see. And how often do you think you will use this system?

--- I think it depends on the user-friendliness of the system. It's what I am thinking. Because we also have our daily notes that we write about our clients. we have another thing we have to do in our shift. We will do it within the background of the client. Maybe we can choose to use it ten minutes a day to give some insights about what our clients are doing. So this would be really helpful to us.

--- Okay, ten minutes per day is the maximum.

--- Yes. But this is what I am thinking right now. I don't know how do you want to implement this in the future.

130. Monitoring the reason why nurses are with patients

131. Monitoring the time nurse spends with patients

132. Use data to predict the amount of requiring food

Duration is not useful

133. Duration of walking is not useful

134. Useful for nurses to reflect their one-day work

Animation is insightful to know the reason why patients get restless

135. Restless might relate to number of people in the room

136. User-friendliness decides how often nurses will use this system

137. 10 minutes per day maximum

--- And Haotian made a scale, so you can rate about how do you find about this system. So the first one is how useful do you think it is.

--- How useful... I think it's plus. Because it's just concept, I think you are learning from introducing the system down here, and I think in the end you are two plus. So I think I would be useful as plus right now.

--- And what are the improvements we should do to make it two plus?

--- Improvements... make it friendly for our clients and make it user-friendly to us, so it's easy for us to work with. I think that's the important thing. And that's why we want to have the technology that you are working and implementing here.

--- The second it about how understandable you think these graphs are?

--- I am thinking about the time pie charts that you have in the system would be useful. This is also very helpful, not only that we can know how much he is walking today or another day, because if someone is really stressful, then the walking can be more than someone is more relax. So I think also the kilometers can be useful, the speed and the duration in that case and also the energy is also very useful. And the animation, the notes we can make to our daily

recording of our clients is also useful.

--- And do you understand the meaning of those graphs? Like if it's confusing?

--- No, I think it's understandable. What's important for me is that how the graph is working, what are these graphs telling. That would be important to us to know.

--- You find it very important to know the movement of the lines, how it changes over the day.

--- I think we have to know what lines we need, or what these lines is telling us. so in the final system, if you tell us how it works, that would be very important. So the system itself is also plus. I think you are in a good direction.

--- The third question is about the information. If it is clear or not clear.

--- Yes, I think it's clear. To people of my age, it would be clear. Maybe to someone is older, you have to tell them more about the graphs or what does "AVG" means, and how we can do with the data you are presenting to us.

--- May I ask how long you have been working as a caregiver?

--- Almost three years. I think it's quite much related to my work, also we can do something with it. Waste time or save time. I think it possibly can be a time-saver, if we have enough data and we really can get information on what we want to have. If we know that he is quite restful today, and we do not need to give him medication. But if we know he already walks 5.0 km in the morning, then we have to give him medication for his restlessness.

Sigrid

--- The system can track the movement of people to generate some data about the movement. So it's able to generate the distance that you walk per day. so you can see that you walked quite a lot today in the corridor at 3:30 pm, between 3 and 4. Why?

--- I think it was that I brought the drinks. So I need to go back to the kitchen and back to the room, and it's quite a long hall. I think that's the reason why. It was half past three, and I think that was the movement to bring soups and drinks.

--- Yeah, I see. And can you recall any positive or negative moment today? Positive interactions.

--- Okay. Well, I had negative interactions with Ms. P. Today she was in the

138. user-friendly of the system for both nurse and patients is important

139. technology is to helping nurses and patients

140. pie chart is usefual

one patient' s working changes is helpful

141. stress is related with amount of walking

142. useful: kilometers, speed, energy, notes on the animation

143. important to know the meaning of the graphs

144. instructions of using the graphs is important

145. clear instruction needed

146. rich data to give instruction/suggestion

the system can help nurse to judge the situation

147. the system can help nurse to judge the situation and take action

mood that she does like some people and she does not like some people, and I was in the group which she does not like for today, so she was screaming at me, yelling at me. So that was a negative interaction. And positive with Mr. F when I was feeding him, he was very happy and he smiled a lot, that was very nice to see.

--- What are the things that is your strategy to make people happy?

--- I always listen to the families what they say, for example, his mother told he likes when you make sound like a chicken. So sometimes I will do that because I know that his mother told me. And sometimes I read the report. We have a program to write a report at end of our shift, so the next shift can see what happened yesterday. Sometimes I will read the report to find out that they (caregivers) did this, and he (PwD) liked very much; and they (caregivers) did this, and he(PwD) didn't like it. That's a way to know what he/she likes.

--- The other data we have is that how long you stayed at each room, so you spend quite a long time in the dining room, and it's because you were having dinner. And di you do any computer work today in the dining room?

--- Not yet. But I think it was because that helping with others with the meal and after that I eat my own meal.

--- And who is in charging of the kitchen today?

--- Henry, and she is leaving right now.

--- So we can see that the time you spent in the dining room is like first high, and decreased and high again and decreased.

--- Normally, I started my shift 2 o'clock. The first thing we do is to talk to each other, so that's what I did here in the dining room. And after that, I am going to help the clients with the food and cleaning.

--- So based on the information gathered, are there any more positive or negative interactions with clients?

--- The first interaction moment with Mr. M was good, because I started my shift, and I walked to her and said "Hi, good afternoon." And she said hi, and she was very positive, but after that, I had a very negative interaction with her. And since then, it was only negative. And with Mr. P, I had only positive interactions. I think it was because he was that kind of person. For me, it's easier to make him laugh. And for Mr. M, it's more difficult for me because this is a specific way that you need to interact with her, but I am not good at it I think. And with Mr. F, I had some positive interactions. I helped her with taking her

clothes on, and everything went well. And she is laughing and smiling, and she thanked me for helping her.

--- What do you think are the factors that make her happy?

--- Because every time I am going to do something, I will tell her that I am going to do this. So she knows what are the expectations from me. And my face, if I always put my face like this (sad face), I don't think people will smile me back. So when I smile, they will smile back. And I think the way how you talk, in a soft way, don't talk too hard and talk very slow and soft. And I think that's also very important. And use not too many words, with some people, that's very important. It also depends on the client. But I think almost every client in here, they prefer short sentences, not too many words.

--- So based on what you said, we have a little game for you. In this game, you can think about what are the factors can affect complex behavior of PwD. You can think from different aspects.

--- So this is eating. Because everyone needs food, if you want to be in a good health, you need to eat the right thing, for example, dinner or drinks.

--- And are there any times that PwD are thirsty or hungry that you (did not notice)?

a patient will make her own list of preferable nurses

148. patient will make her own list of preferable and disliked nurses

149. smile is considered as positive

150. strategy 1: ask family members' opinion

151. strategy 2: read report from colleagues

152. normally begin the shift with a talk to colleagues

153. response to greeting is considered as positive

154. certain PwD and caregivers get along well

155. some patients require specific way of interaction

156. corporation is considered as positive

157. strategy 3: tell patients before doing something and fulfill their expectation

158. strategy 4: always smile to patients

159. strategy 5: talk slowly and softly

160. strategy 6: use not too many words

161. personal factor-physiological need states//factor 1: wrong eating influence patients' health

--- Well, we do have times that we serve dinner or breakfast, but sometimes we don't use these times. Because when PwD is hungry, then we will give them something to eat. If someone is hungry, this can be a factor that trigger their agitation, and they can behave badly. If someone is hungry and they cannot say it, we can observe how they move or what kind of sounds they make, maybe if we give them something to eat, they will be more quiet. So that's eating.

Movement. So for some people, it's very important to walk for a short distance. Because for their legs. It's not good for their legs to just sit for a whole day in the wheel chair. So I think it's very important.

--- But it's important because that it's good for their health, or if they don't go outside, they will get agitated?

--- I don't know. I think for some people, it's for their health. Because some people get very thick legs (for long-time sitting). But some people very enjoy the sun. I think I've been one time with one client to go outside during my internship. And it's not a lot. Because sometimes it's not very good to take them outside, they are not in the mood. But it's depends on the situation, for some people, it's helpful to take them outside, and they will get in a good mood because of that. But sometimes it will be in the other way. For me, I worked here for three months, so I don't know the clients that much. I always ask my

colleagues if it's good to take the client outside. I always seek for advice.

Medicine. Because some people need them.

--- What type of medicines do they have? Do they have the medicines for pain?

--- They get medicines every day at times. 8 o'clock in the morning, 12 o'clock and 9 o'clock in the evening. And some medicine, we give them when they are not in a good mood or restless. But we always discuss within a team. So it's not that I think I should give them medicine, we always discuss.

--- So normally, it's two person check the medicine?

--- Yeah. We have medicine list. For example, if I give the medicine at 12 o'clock in the middle of the day, I will check it within my own eyes, and after that, my colleagues will check that if it was the right time and the right medicine. Sleep. Because some people need sleep in the afternoon, like in the middle of the day.

--- What are the cases that they cannot get enough sleep? What could trigger them to lack sleep?

--- I think the environment. And maybe the restlessness, that could be another reason I think.

Toilet. Because some people act very restless. When they got to the toilet, everything goes okay. I think these are the most important things.

Sounds. Because today there were some technical men, they were busy with something. And I think that's also a very important thing, because some people will react on that.

Furniture.

--- So you think the furniture is a positive one or negative one?

--- I think it's positive if everything stands the same way as the yesterday. That's important. When we put the table in another side of the room, for some people, it will be (negative). But I never tried it. Some people will remember how it was yesterday. Because, for example, for Ms. P, she always asked why is this chair here, this doesn't need to stand here. So that could make her restless.

--- So sometimes, change can make people restless.

--- Yeah. Maybe the weather. But it's not inside, it's outside. Maybe when it's raining outside, some people will react in a negative way.

--- Do they mention about rain? We wonder maybe it's because it's the low

162. personal factor-physiological need states//factor 2: hunger trigger their agitation

notice patients 'changes if they are not able to express their hunger

163. give some food to see if behavior changes is due to hunger

164. personal factor-physiological need states//factor 3: regularly movement for good health

165. personal factor-emotion//factor 4: patients enjoy the sun

166. patients can react differently on walking outside

167. for new nurses, it is hard to distinguish the situation

168. personal factor-physiological need states//factor 5: medicine

169. strict medicine plan

170. medicine for their bad mood

171. deliver mood medicine after team discussion

172. double check for the medicine delivery

173. personal factor-physiological need states//factor 6: sleep

174. restless or environment can trigger them lack sleep

175. personal factor-physiological need states//factor 7: toilet

176. physical environment-noise level//factor 7: a lot of sound

177. personal factor-emotion//factor 8: changes of their surrounding can make patients restless

level light that they cannot see.

--- I don't know. Nobody told me that it was bad weather outside. But I think it will be more positive for the client when the sun is shining and it's a blue sky instead of the rain and grey and darkness.

--- And with the furniture, do you find that the style of the furniture (could influence PwD)?

--- Yes! I think so. Because it's now very neutral style, if you make it very colorful with a lot of pink, I don't think this will match with the clients.

--- and I also see that some clients they have more furniture in their rooms.

---Yes, it's true. I think it because of their families. They will decide that this is clients' stuff, it will stand in their rooms. I don't think it was decided by their own (PwD). But some people will break it, so that's why they don't have much furniture in their rooms.

Contact with XXX (21:50).

--- Will you give us some details about the contacts?

--- Eye contact, or just say "hello" or say "good bye". Make conversation, or touching each other, or make a sound. And this includes the families as well, the visitors.

--- Is the family always positive?

--- At the moment they visit the client, I think it's very positive. But sometimes after that, the client can be very restless, because of a lot of energy they put in the family. It can be very exhausting. At the moment they family visiting, I think it can be very positive.

--- With PwD themselves, do they also interact?

--- Yes! I see a lot.

--- What are the factors can trigger their negative complex behavior?

--- When they are touching each other. Because when someone is walking very fast in the hall very quick, and someone is walking very slow. And the client might think that "oh, he is walking very fast, I am walking very slow. It's not like the same level." And I think it's very important. And some people make a lot of sound in the hall or in the living room, for example, Mr. F, he makes a lot sounds, and I think it will trigger negative interactions with other clients. Contact with family, with other clients, and also with us.

Maybe animal. Once I saw it when one of my colleague brought her puppy in the living room, and they react very positive.

--- With the animal is always positive?

--- From my observation, yes. But I think it can be negative, if someone hates a dog or is bitten by a dog, it can be negative. And these are what I can think about right now.

--- Thank you. And the last part of the interview is to let you reflect on the interface of the new system. So the system we just saw before, roughly visualized information. And we would like to put this system into your working routine. So this is the interface of the system (explain the system). Do you think it will be helpful for you to write the report?

--- I don't know if it's gonna be helpful. Because when I make a report at the end of the shift, I will think about what are the important things to report today. And I will think room 1, I didn't notice anything important, room 2... So I will go through all the rooms from 1 to 10. But maybe it will be helpful so that you don't forget anything.

--- So for how long do you think you will watch the animation?

178. physical environment-
weather//factor 9: bad weather can make patient restless

179. physical environment-
decoration//factor 10: when the room decoration does not match with patients' identity, they may be restless

180. the decoration of their room is decided by their family members

181. the decoration of their room is decided by their damaging behavior

182. social environment-
connection//factor 10: physical contact with caregivers

183. social environment-
connection//factor 11: family visiting can be positive at the beginning

184. personal factor-emotion or
physiological need states//factor 12: patients feel empty /patients are tired because consume a lot of energy

185. PwD interact a lot among themselves

186. social environment-fellow
residents//factor 13: touching each other

187. social environment-fellow
residents//factor 14: other patients act differently

188. physical environment-noise
level//factor 15: noise from other residents

189. social environment-
connection//factor 16: contact with caregivers or family members

190. personal factor-emotion//factor
17: interaction with animals

191. interaction with animal can be both positive and negative

192. system can be a reminder in case nurses forget anything

--- I am an extra employee, so I have a lot of time. So I can spend much time on that like half an hour. But another people, they are not extra, they don't have a lot of time. So I think it will take them a long time to look at this animation.

--- But if you want to know the situation on a specific time, for example, on 9:00 am, you want to what happened to Mr. F?

--- Oh, that's could be a smart way. If I want to know what happened to him last half an hour, I can see the animation. And I can know at that time, he was with Mr. P, and I know that Mr. P might be the reason that Mr. F was agitated. Maybe in that way, it can be helpful.

--- So the longest time you would like to spend on the animation if you are a fully employee here?

--- Maybe ten minutes.

--- So at end, we want you to rate how do you think about the system.

--- I think the animation, if the animation is one line, it will be more clearly for me, instead of only the dots.

I think this (the interface of the system) is very clear.

--- We would like to know if it's useful for you to use this system.

--- Sometimes, but not all the time. I don't think it should be a daily routine, like you have to do it every day. But sometimes, if you need extra help, you can look at this system. And for caregivers, it's related to the work. and I don't think it can save time, because it's an extra work to do. But I don't think it's a waste of time. So I will put it in the middle. Because it can be useful.

--- We wonder if it can help you work more effectively for example if we identify the reason why, like a long-term effect.

--- Yeah. But I think you need to spend time to do this, but after one month or few months, you can get information out of the reports. After that, it's not a waste of time. And I think heart rate can be useful.

--- So will you measure the heart rate for your clients?

--- Oh, I never did it here. But I think if you want to know the movement of the client, and if you see that at this moment, his heart rate is very high, maybe because that he had some contact with other clients.

193. full-time nurses do not have much time on the animation

194. smart to check the animation if nurses want to know what happened before

195. 10 minutes per day on the animation

196. line is better than dots

197. system should not be a daily routine

198. system can provide extra help

199. system is neither waste time nor save time

200. identify long-term effect can save time

201. heart rate of patient is important

Mindmap

Physical health

Pain

Movement is also important

Diet is not very important

Enough sleep – if they do not sleep enough, they will be tired

The other clients (because their brains are so damaged, the client becomes very sensitive to the environment)

Medication – not only pain killers, but also sedative drugs

Physical environment

Noise

Movement of other people surrounding the client could overstimulate the client

Light (too little or too much), most clients prefer stronger light, because their eyesight is getting worse, they can see better under stronger light

Social environment

Interaction with family, sometimes could be negative, the wife of the client comes every day, and she causes agitation on her husband, because she makes a lot of rules for him, she talks a lot, such as he must have do this and that, but he cannot do that anymore, like, he has to say thank you a few times to the nurses, and have to eat banana, and drink chocolate, he is happier without his wife

Interaction with caregivers, doctor, physiotherapist, IT people, delivery people. These interactions could be negative, technicians always use tools when they are in the ward, the sounds that these tools make can influence on client

Feedback

The wake time is not important for my work, but direct and indirect client time are helpful.

When a client comes in, at first, we have a multidisciplinary meeting, then I evaluate the work of caregivers each week, and they report the burden of work

I evaluate the burden of work by asking the caregiver a few times each week, if the burden is increasing, then I follow the case more closely

we will solve the burden of work by changing shifts for caregivers.

I am working on quantitative evaluation methods, it is really hard, I had a meeting with Jef and finance manager, now the care office has a template, and we have to fill it in.

We report the state of the clients to the family members per week even per day, at least per week, the nurses do these meetings, not me.

Could you specify over 24 hours? [direct and indirect client time mock-up]

We organize the shifts of the caregivers to make it more fit to the clients, if we know when are the times the clients need direct contact, and when they are resting.

The indirect time, I do not care when a person started writing a report, the timing is not important, but we want to know how much time a person spend on writing a report.

It is not important to know who had direct contact with the client, we want to know how much time the client has direct contact with others.

The indirect time I want to know for each caregiver, and the specifications on what tasks they are doing

[behaviours]
(inferred information)

The topic “the contact with caregivers” should be expanded into more details.

for this kind of people, when talking to them, it is like you are talking in Chinese to me, they cannot understand it anymore.

You can say “give me your hand”, but it is more effective if you reach your hand to them and invite them to give their hand to you in this non-verbal way.

For everything I want to tell them, I have to use my body language, it is the only thing they can still understand.

The most effective body language should fit in with their emotion

Most of the time, I step in their world, because when someone is really sad, the first thing most people want to do is comfort them, such as, would you like a cup of

202. Factor 1: pain

203. Factor 2: patient own movement

204. Factor 3: sleep

205. Factor 4: fellow residents

206. Factor 5: medication

207. Factor 6: noise

208. Factor 7: movement of the environment

209. Factor 8: light level—most prefer strong light

210. Factor 9: negative interaction with family members

211. Factor 10: interaction with relevant people

212. Factor 6: noise

213. System: direct/indirect time is helpful

214. Management: evaluate nurses' work each week

215. Management: burden of the nurses is important to consider

216. Management: changing shift to solve the burden problem

217. System: specify 24 hours

218. System: The schedule of nurses should fit to the clients

219. System: know the time length of each indirect client task

220. System: only want to know the total direct time received for each client

221. System: indirect time for each nurse and each task

222. PwD cannot understand verbal conversation

223. Interaction strategy 1: prefer non-verbal way, such as body gesture

224. Body language is more understandable for patients

225. Interaction strategy 2: use body language which fit patient's emotion

coffee, because in our mind, we want to fix everything. But I will say [look into the person's eyes]: oh yes, I understand you. Then I will wait if they want to tell me something or not. It is their choice.

They lead the direction of the communication. They make the first step and I follow them.

I saw a lot of positive interactions today, Kamer 9, we went outside and it really worked. He was really quiet in the afternoon. Most of the time, he is shouting about I want this and I want that. It is not only being outside, but also in the living room, we see each other all the time.

Being outside is in his schedule, sometimes I don't have time, then some colleagues will try in the afternoon. We try (to bring him outside) everyday, but sometimes we are very busy so it does not work out.

You (the researcher) are having a negative influence in the ward, there is one client talking to me: she is filming, she is taking pictures, she does not tell me who she is. I think it looks like the person is sitting like this (not paying attention to the researcher), but the person can see and feel a lot.

There are some technicians for fixing the doors today, they also create a lot of negative influence in the ward.

Now, Kamer 9 is quiet because I have put lots of my energy into him (today), but now there are quite a lot people in their rooms, and that is negative.

I do not feel tired at the end of my shift.

The clients staying in their bedrooms is something natural they do, because there are lots of energy and noise outside, I do not think they are lonely. Sometimes I also go into their bedroom and talk to them, but if they behave like this [some body language], then I know it is enough and I exit the room.

It is not healthy for them to stay all day in the bedroom.

I observe all the clients to see how they react to tell if they are upset or not

For some clients, when their family members come for a visit, they speak properly and sit up straight, but when they are alone here, they would not accept that they have to stay here.

They think accepting contact from us means they are alright with staying here, so sometimes when we make contact, they are like no no no no.

I take one step but not the first step, I always search if I am allowed in her space, for me, the behaviours of people with dementia are predictable

For new clients, we need some time, I do not know what type of dementia he has. He used to be very cooperative, but now he started to resist care, it is like two completely different person. I think he think the environment is not safe to him, he was in a hospital before and then another location, and the people there think he does not belong to here, so now he is in our ward. There are lots of things happened to him.

The most difficult part of work is morale. For example, a grown-up man, who could be your dad, do not know how to go the bathroom. When you think about that, it is difficult.

So when we care the person, we only focus on the now. He was a capable man, used to be a director of a company, we do not think about that.

When I interact with Kamer 10, this is the first time that I feel powerless. We first tried the contact methods we used in here, but it was difficult, she is still very unhappy, so we decide on another medication, we want as less medication as possible, but sometimes we have to use it. Now she is getting more rest, so you can come closer, then I can have more contact with her now.

This is the last stadium for her, it would be a shame that her husband cannot hug her, or her grandchildren cannot come closer. She can now hug, she is better, I can sometimes see her smile.

I am the type of person who really like to come closer to people, before I cannot come close to her, and I think that is the reason why interacting with her was difficult for me.

Interaction strategy 3: step into patients' world and accept (or respect?) their feelings

226. Make PwD feel being understood and let them decide to express more or not

227. Interaction strategy 4: let patients lead the interaction, and follow them

228. Stop vocalization is considered as positive

229. Factor 1: unfamiliar people have negative influence

230. Factor 2: noise has negative influence

231. Factor 3: crowd environment has negative influence

232. Patients staying in their rooms is a natural way, they are not lonely

233. Interaction strategy 5: read the signal to stop

234. Staying all day alone is not healthy

235. Interaction strategy 6: observe their reaction to predict their mood

236. Factor 4: family visiting has positive influence at that moment

237. Factor 5: after visiting, patients get negative influence

238. Emotion factor 6: patients do not accept nurses' contact because they don't accept staying in nursing home

239. Interaction strategy 7: patients take the first step

240. Patients' behavior is predictable

241. Interaction strategy 8: focus on the present status of the patients

Factor 7: social connection with relatives has positive influence

242. Quality of life is more important than the length of life

Thematic analysis

Cluster-- factor influencing complex behavior of PwD

personal factor		physical environment	social environment	Background factor
emotion		noise level	fellow residents	medication
personal factor-emotion//factor 5: bonding with the recognizable food		noise level—too silent	negative interaction between residents	background-health status//factor 3: pain
patients don't get independency		noise	social environment- fellow residents//factor 4: different eating habits of others	sensory damage
personal factor-emotion//factor 4: patients enjoy the sun		physical environment-noise level//factor 7: a lot of sound	uncomfortable environment caused by other people	Background factor
personal factor-emotion//factor 8: changes of their surrounding can make patients restless		noise has negative influence	social environment-fellow residents//factor 13: touching each other	patients lack of discrimination of noise
personal factor-emotion or physiological need states//factor 12: patients feel empty /patients are tired because consume a lot of energy		echo of the room causes noise longer	social environment-fellow residents//factor 14: other patients act differently	the health status before getting dementia
personal factor-emotion//factor 17: interaction with animals		physical environment-noise level//factor 15: noise from other residents	fellow residents	Physical limitation (sit all day long) is a trigger for agitation
patients do not accept nurses' contact because they don't accept staying in nursing home after visiting, patients get negative influence		light level	family	
serve patients without informing them		light level—most prefer strong light	family member	
		light level	Family members could give extra rules to PwD and it can trigger agitation	
physiological needs		crowdness (write a scenario for readers to understand)	social environment-connection//factor 11: family visiting can be positive at the beginning	
personal factor-physiological need states//factor 1: cognitive system cannot handle physiological requirements		movement of the environment	negative interaction with family members	
personal factor-physiological need states//factor 1: wrong eating influence patients' health		relaxing environment without too much stimuli	family visiting has positive influence at the visiting moment	
personal factor-physiological need states//factor 2: hunger trigger their agitation		crowd environment has negative influence	staff	
personal factor-physiological need states//factor 3: regularly movement for good health		crowded environment	social environment-connection//factor 16: contact with caregivers or family members	
personal factor-physiological need states//factor 6: sleep		temperature	interaction with relevant people	
restless or environment can trigger them lack sleep		temperature	social environment-connection//factor 10: physical contact with caregivers	
personal factor-physiological need states//factor 7: toilet		smell	other	
physiological needs		bad smell	interaction with animal can be both positive and negative	
functional performance		weather	unfamiliar people have negative influence	
patient own movement		physical environment-weather//factor 9: bad weather can make patient restless	Restless might relate to number of people in the room	
stress is related with amount of walking		interior		
movement freedom		physical environment-decoration//factor 10: when the room decoration does not match with patients' identity, they may be restless		

Thematic analysis

Cluster-- PwD's behavior

Two types	Characteristics		
poitive behavior	changeable	predictable	preference
smile of PwD is considered as positive	people with dementia can act oppositely with their words	patients tend to eat when food provided	patient will make her own list of preferable and disliked nurses
response to greeting is considered as positive	people with dementia follow their body signals	PwD eat when they see food	certain PwD and caregivers get along well
corporation is considered as positive	patients can react differently on walking outside		some patients require specific way of interaction
PwD interact a lot among themselves			
Stop vocalization is considered as positive			
Patients staying in their rooms is a natural way, they are not lonely			
PwD's positive interaction performance			
PwD's positive interaction feedback			
negative behaviors			
PwD can miss meals			
Patient is restless in searching for help			
Negative behaviors of PwD could be inter-related			
PwD cannot understand verbal conversation			
patient's agitation behavior through movement, facial expression and words			

Thematic analysis

Cluster-- Caregiver's strategy

with PwD					without PwD		
physical environment	prevention			personal needs	solution	prevention	solution
	engage	self-esteem	belonging			ask family members' opinion	medicine for their bad mood
avoid negative interaction between PwD by giving a different schedule				Music makes PwD happy	Control PwD's agitation behavior and comfort her	read report from colleagues	Doing massage to make PwD relax
	Singing makes PwD feel that the nurse is still around	respect	A feeling of small group	use body language which fit patient's emotion	Agitation strategy: wait and come back later		
	personalized non-verbal way to attract PwD's attention	give patient freedom	Stand beside to show PwD the companionship	Check if PwD wants to drink water through body gesture	Agitation strategy: take him back to his room and leave him alone		
	Use physical contact to enhance PwD's feeling of the music	respect patients	A feeling of community/ normal life/ previous life	prefer non-verbal way, such as body gesture	Lead PwD		
	personalized non-verbal way to attract PwD's attention	Respect the preferences of PwD	Hold hands for companionship	Body language is more understandable for patients	Show a strict attitude		
	Remind PwD with body posture	let PwD feel attention	Use "let us" to show companionship	Physical contact can calm PwD down	Caregivers predict the agitation behavior through patient's movement, facial expression and words		
	use body posture to remind PwD	tell patients before doing something and fulfill their expectation	Ask PwD about his previous experience	Physical contact to calm PwD down			
	Movement to attract attention from PwD	Make PwD feel being understood and let them decide to express more or not		Physical contact			
	Distraction – combined with shadowing	let patients lead the interaction, and follow them					
		read the signal to stop					
		patients take the first step					
		Follow PwD's behavior					
		Ask for PwD's opinion and give him choice					
		Gently inform PwD					
		Discuss with PwD					
		Inform PwD what will happen					
		Ask for PwD's permission					
		Ask PwD's opinion					
		Keep the sight level same makes PwD feel more equal and relax					
		Check feeling of PwD					
		positive feedback					
		Give PwD positive feedback and compliment					
		Give PwD positive feedback					
		Give a feedback to PwD					
		Repeat PwD's words to give him a positive feedback					
		Give PwD a positive feedback					
		Smile as positive response					
		polite					
		always smile to patients					
		talk slowly and softly					
		use not too many words					
		Do slow and quiet movement					
		Show a nice attitude to PwD					
		Show PwD a polite attitude					
		Gentle movement and patience					
		Invite PwD by positive words					

Thematic analysis

Cluster-- IPS

benefit	improvements	interface	limitation
good to reflect daily work	wish to know the daily food energy for each patient	10 minutes per day maximum	only helps about people's movement
notice the changes	the long-term effect of the system is beneficial	pie chart is useful	Vocalization is difficult to measure
change can be noticed with the walking miles' data	system requires no extra work for nurses	useful: kilometers, speed, energy, notes on the animation	
weekly or monthly data reveal the activeness of patients	Data need to be connected	full-time nurses do not have much time on the animation	
the system first provides an overview and allow zooming in, thus enable pattern identification	No sequences of those data	10 minutes per day on the animation	
the system indicates the patient's change in activity	Interesting to know patient's location preference	line is better than dots	
the system inspires more questions	Similarity and privilege can be helpful	direct/indirect time is helpful	
real data gives prove	The times patient switches from places can be interesting	Dutch version needed	
Patients' activeness is related to their health	Putting data together to make team schedule	daily data is not insightful for dietitian	
The system can be a marker of changes in early indicating	Easy-understanding, data-connection and relevance to work are also important	calories calculation requires accuracy	
New system is a very promising thing	Two phases of the system work better: one is general, another is detailed	monthly check-up for the (potential) system	
System can provide prove	User-friendliness decides how often nurses will use this system	Duration of walking is not useful	
If interaction time is related with stress	user-friendly of the system for both nurse and patients is important		
The travel distance can describe patient's agitation	clear instruction needed		
Caregivers can adjust their time schedule to each patient based on the data	instructions of using the graphs is important		
The system will add more information for their work	important to know the meaning of the graphs		
Monitoring the reason why nurses are with patients	system should not be a daily routine		
Monitoring the time nurse spends with patients	identify long-term effect can save time		
Use data to predict the amount of requiring food	specify 24 hours		
Useful for nurses to reflect their one-day work	only want to know the total direct time received for each client		
rich data to give instruction/suggestion	indirect time for each nurse and each task		
the system can help nurse to judge the situation and take action			
system can be a reminder in case nurses forget anything			
smart to check the animation if nurses want to know what happened before			
system can provide extra help			
Use the data to make their planning more flexible			

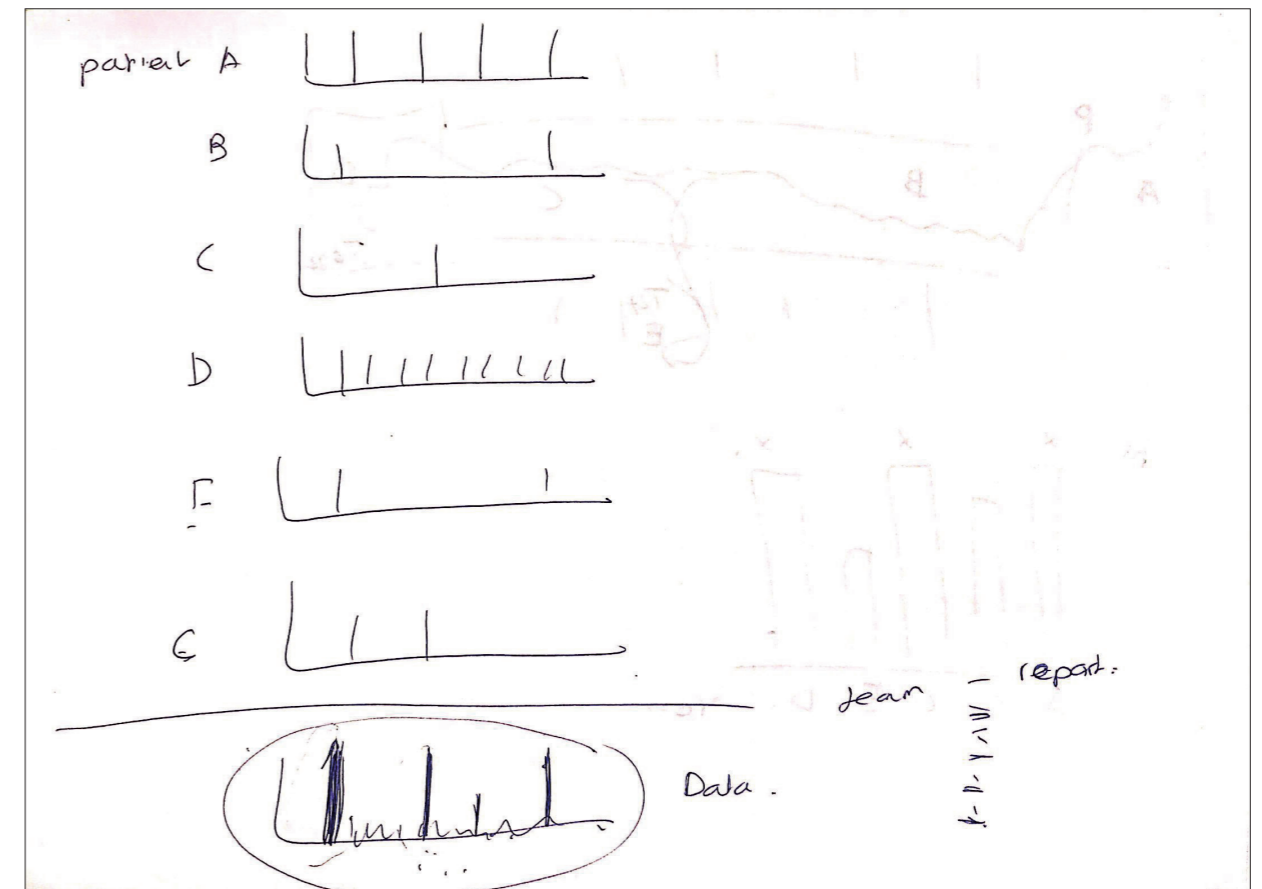
Prototype development

Brainstorming results

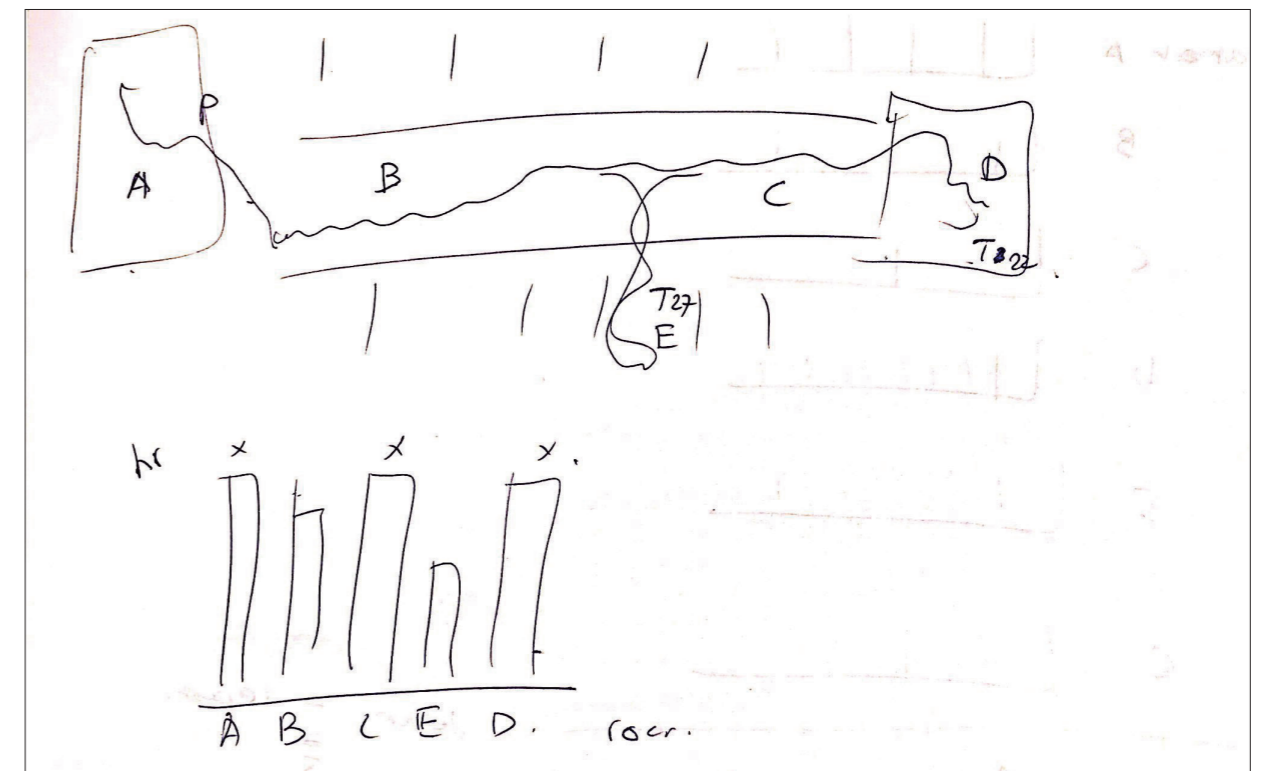
A brainstorming session with staff to know what kind of information they want to know about PwD and how they want to visualize that information.



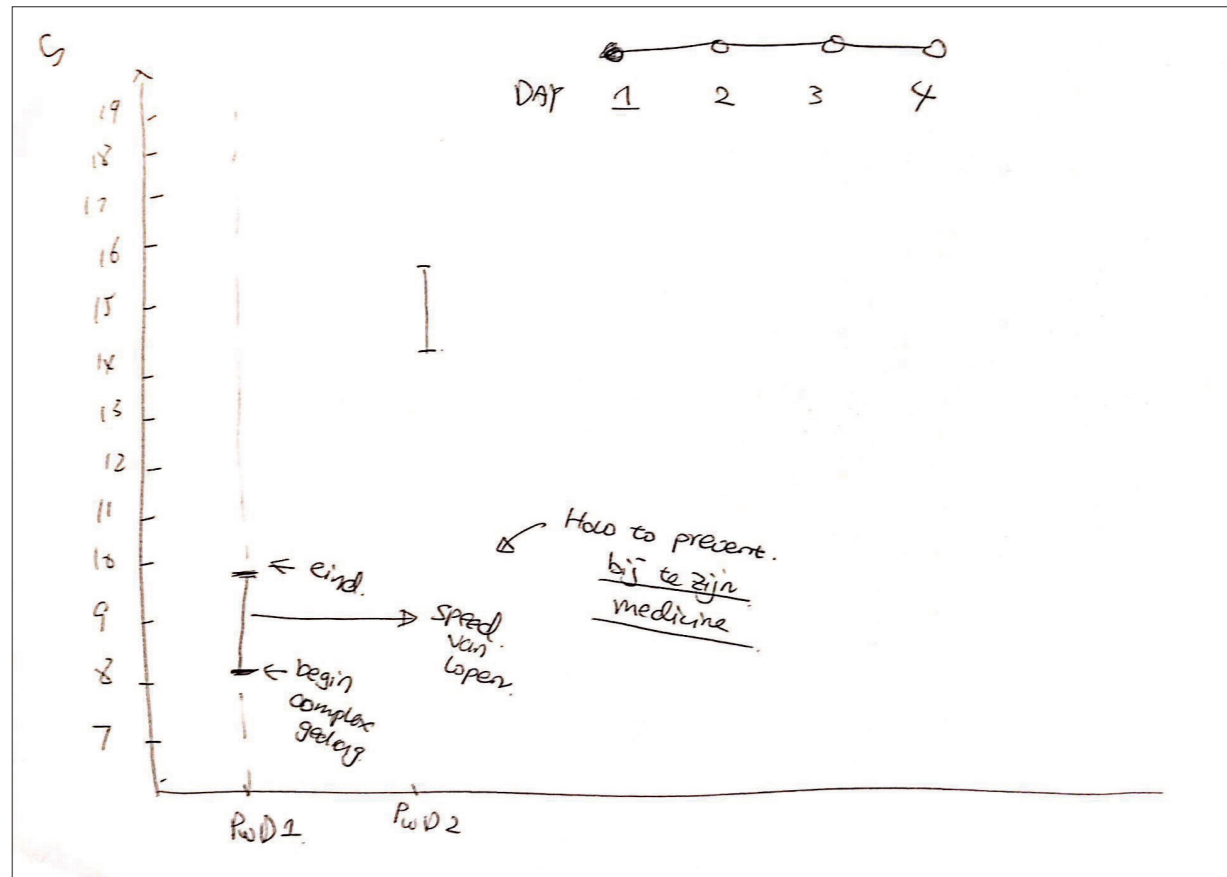
Idea 1



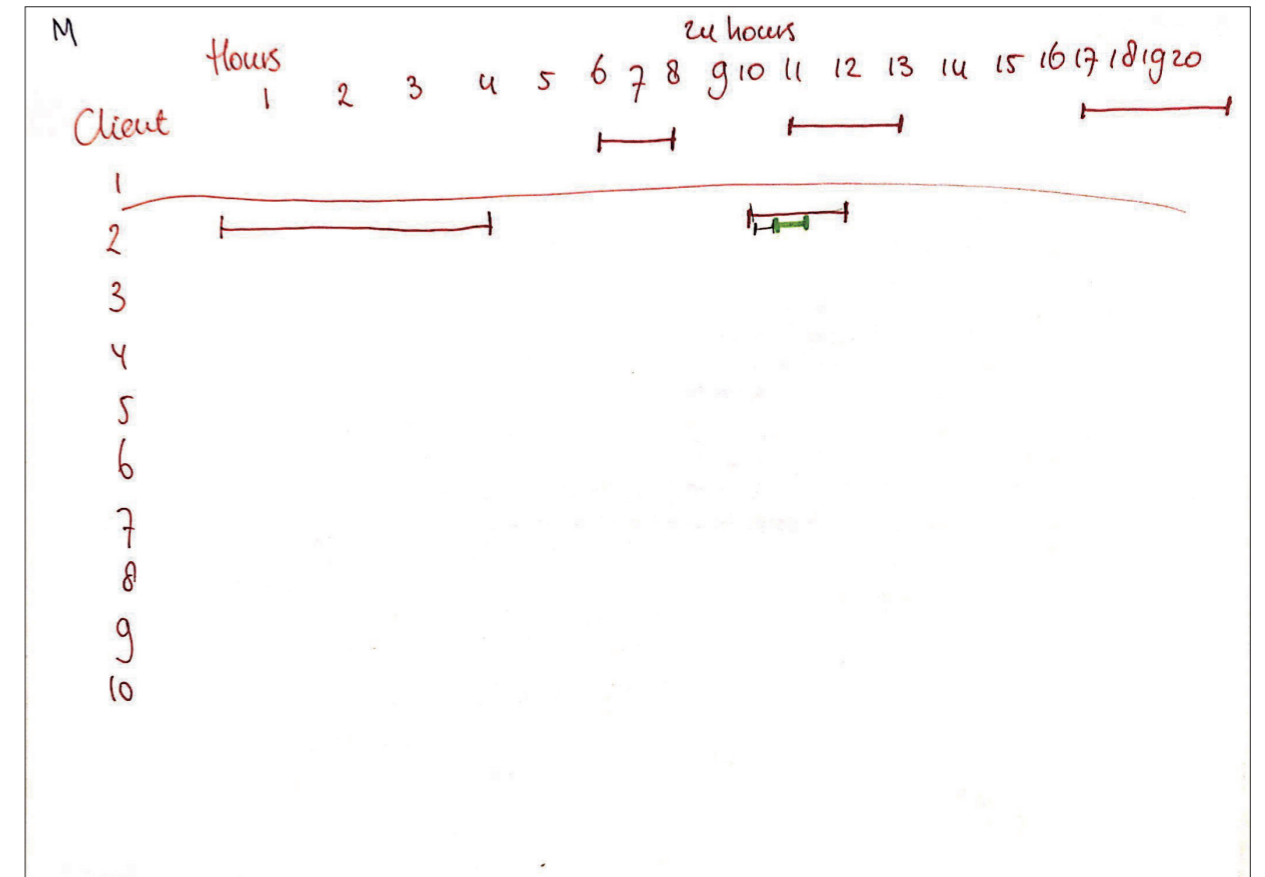
Idea 2



Idea 3



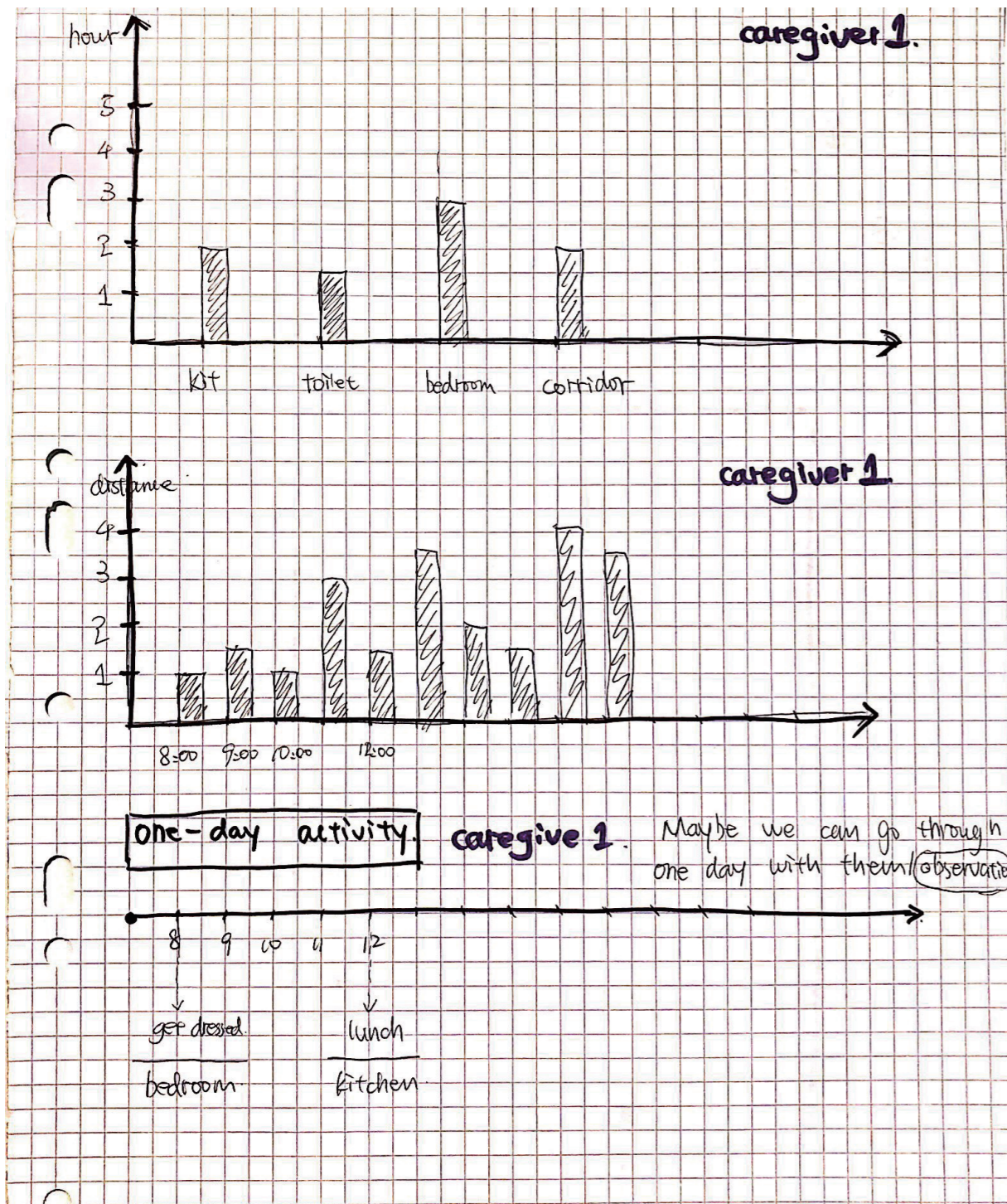
Idea 5



Idea 4



Idea 6



Prototype development

Prototype evaluation

Signid

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here? _____

draw yourself here!

What do you think of this mock-up? Are you willing to use it in your future work?

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful → SOMS
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

If you have any other suggestions or thoughts, Please feel free to write down :)

Dietician - 5/16

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here? _____

draw yourself here!

What do you think of this mock-up? Are you willing to use it in your future work?

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

↑
give prove

If you have any other suggestions or thoughts, Please feel free to write down :)

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here?

draw yourself here!

**What do you think of this mock-up?
 Are you willing to use it in your future work?**

draw yourself here!

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

in combination with other parameters

I don't know if it will save time but I think it will have benefits for the people with dementia

If you have any other suggestions or thoughts, Please feel free to write down :)

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here?

draw yourself here!

**What do you think of this mock-up?
 Are you willing to use it in your future work?**

draw yourself here!

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

If you have any other suggestions or thoughts, Please feel free to write down :)

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here?

draw yourself here!

**What do you think of this mock-up?
 Are you willing to use it in your future work?**

draw yourself here!

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

big reads application

If you have any other suggestions or thoughts, Please feel free to write down :)

WELCOME :)
 Thanks for joining the mock-up test. This is a quick evaluation for this test. Hope you enjoy it!

Name: _____
 Age: _____ Gender: _____
 How you've been working here?

draw yourself here!

**What do you think of this mock-up?
 Are you willing to use it in your future work?**

draw yourself here!

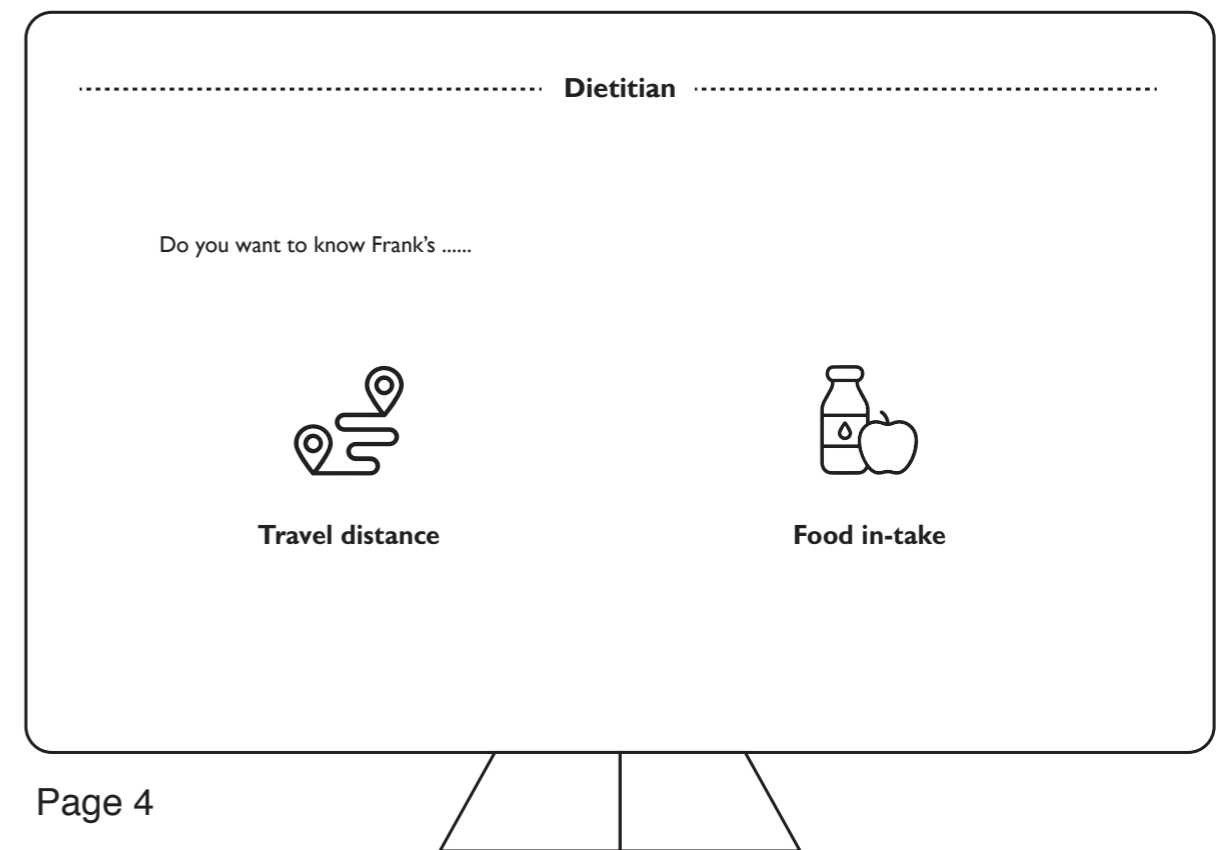
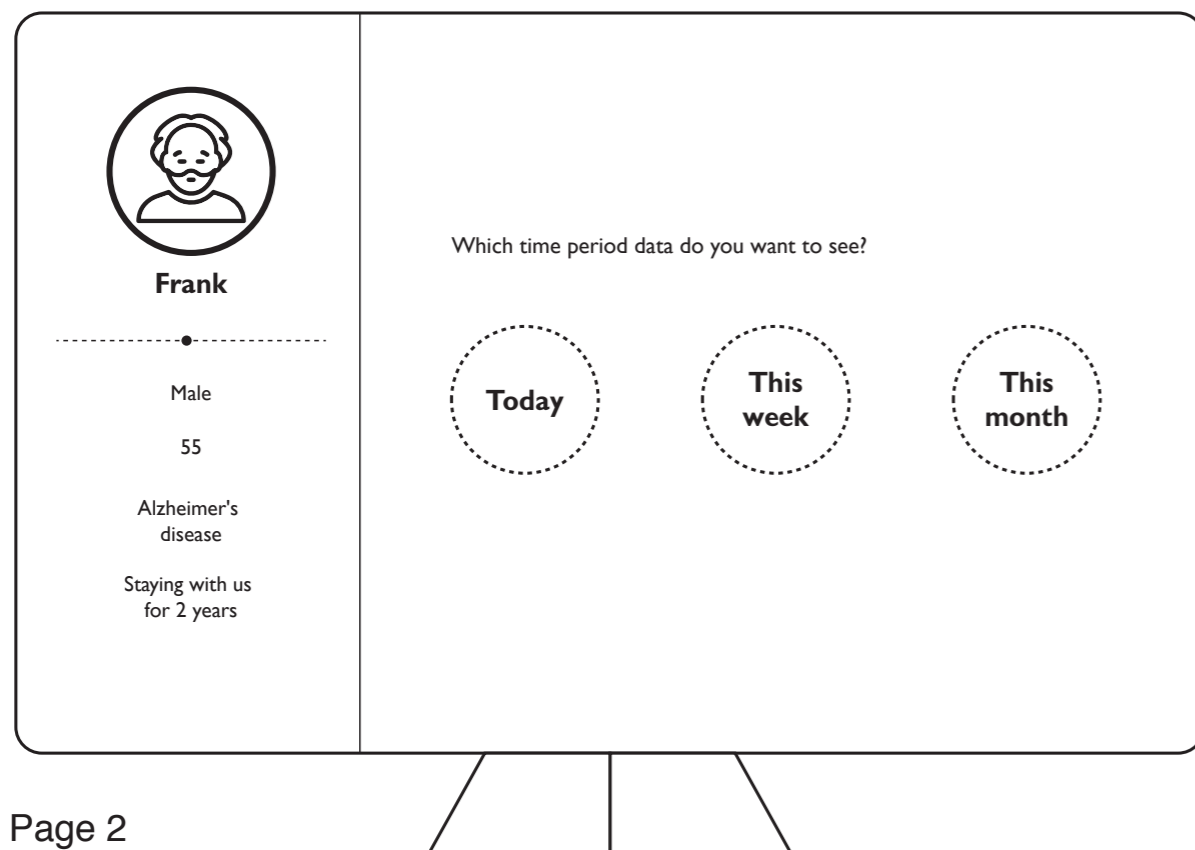
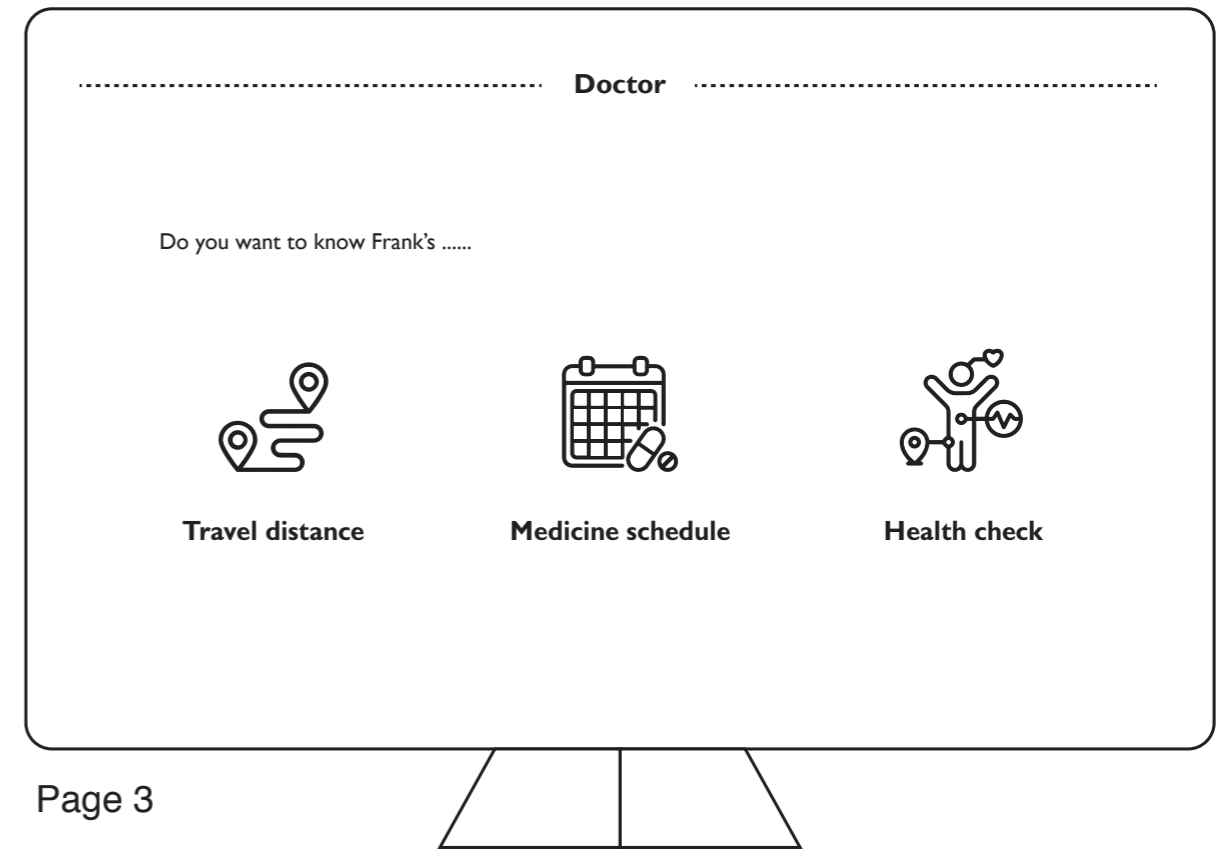
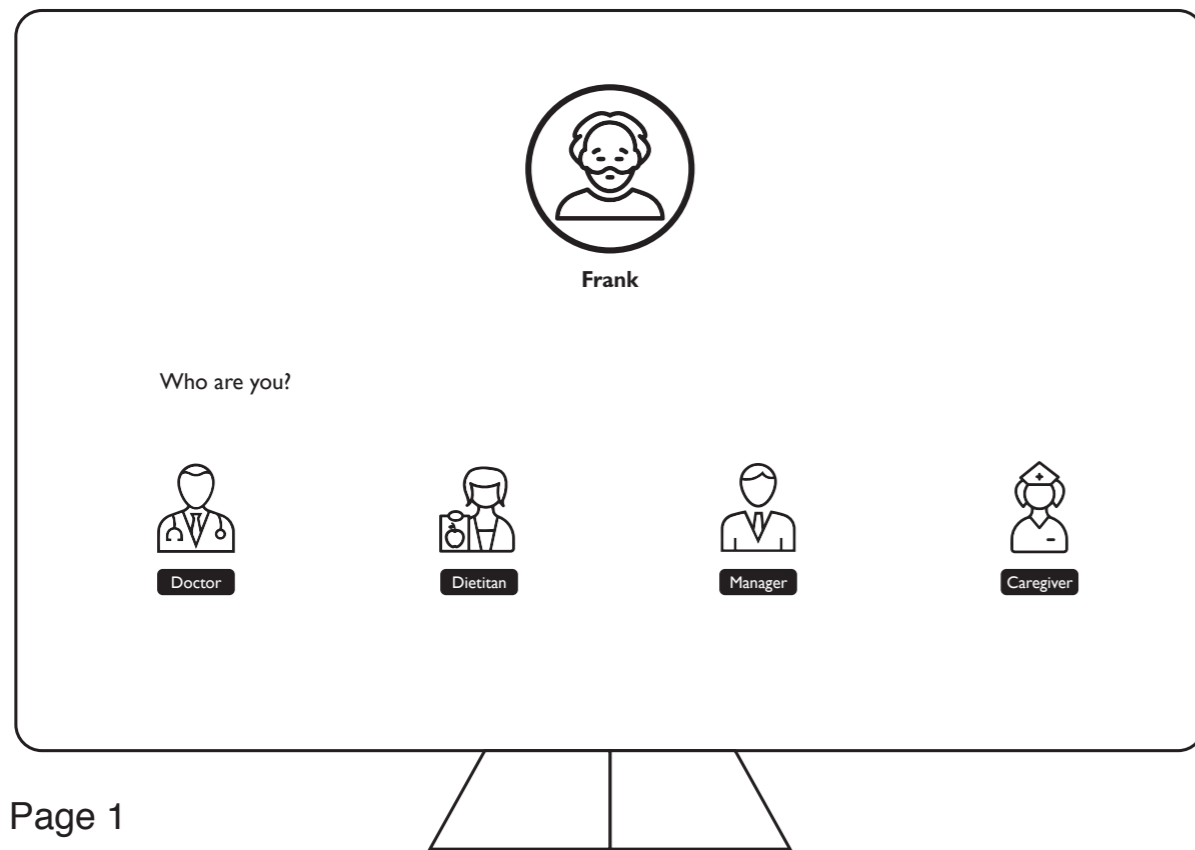
Please rate the mock-up according to the following aspect.

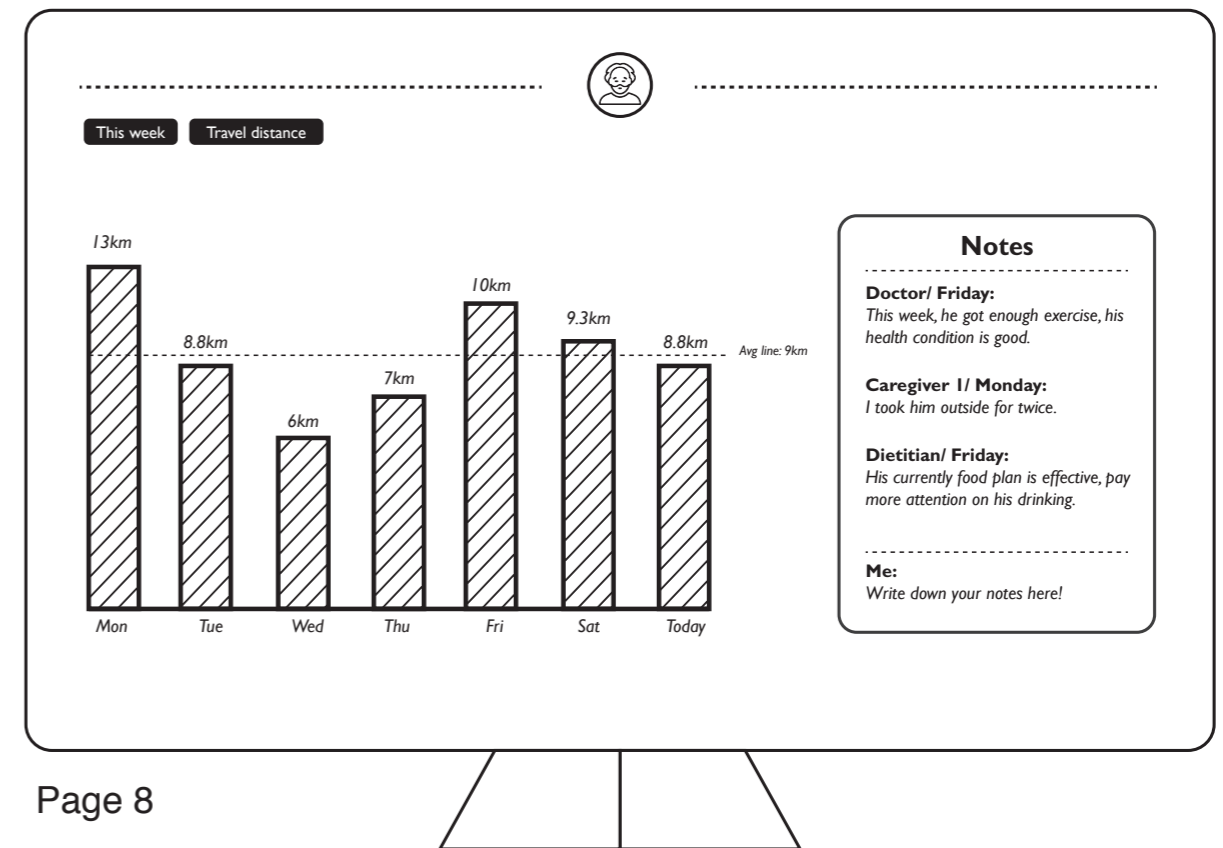
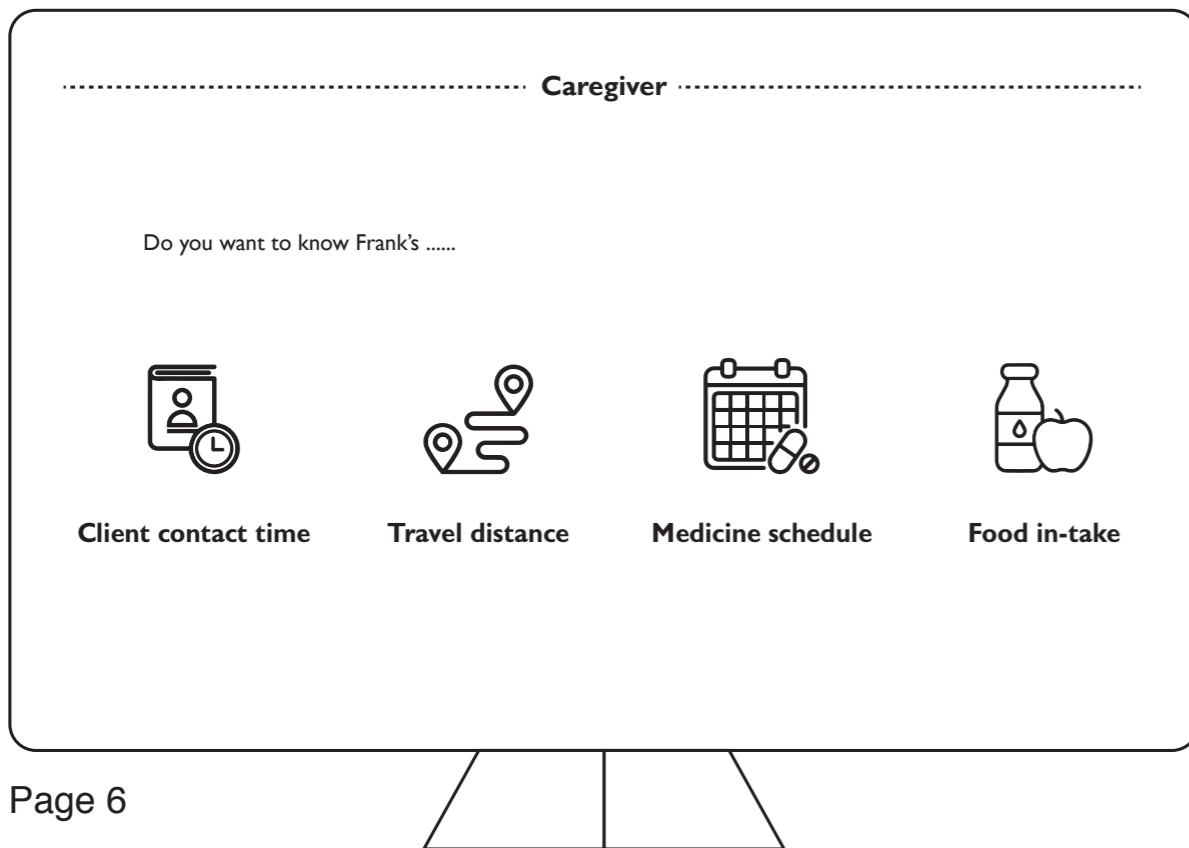
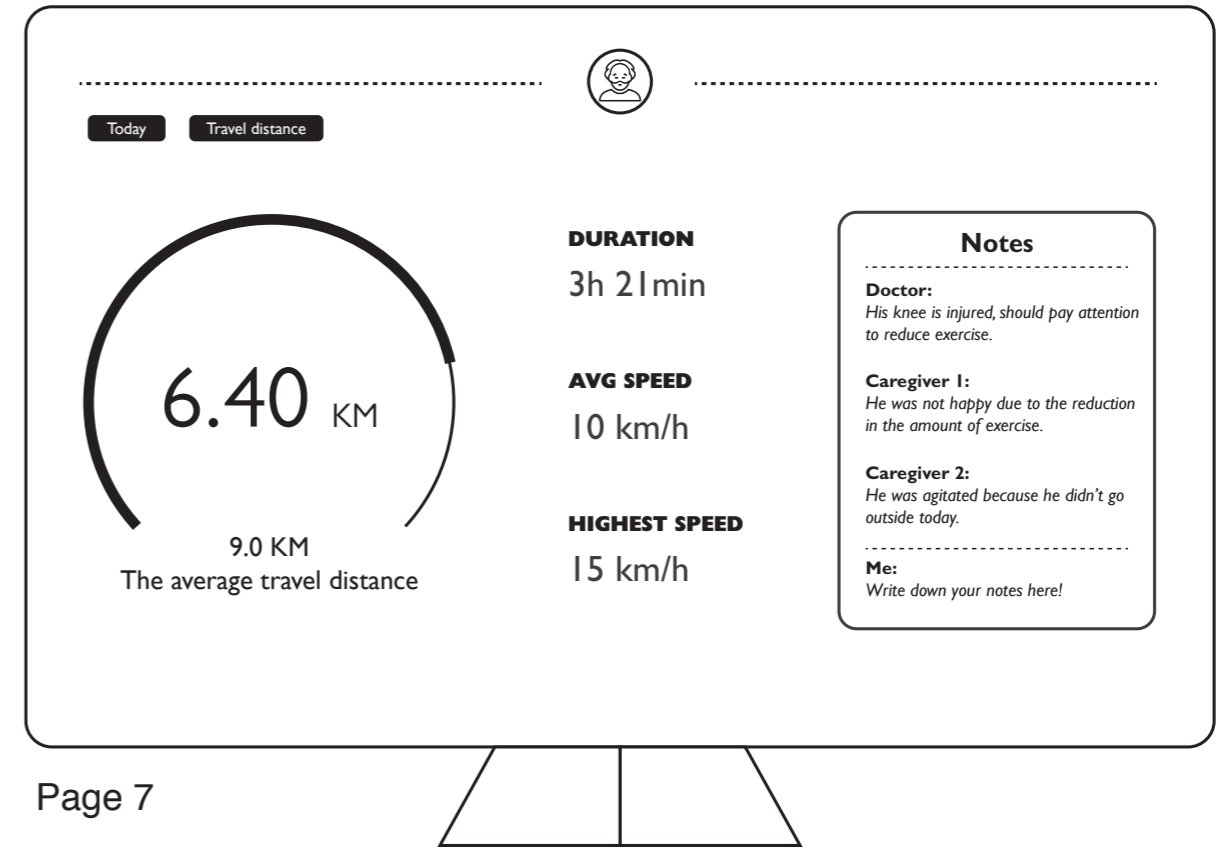
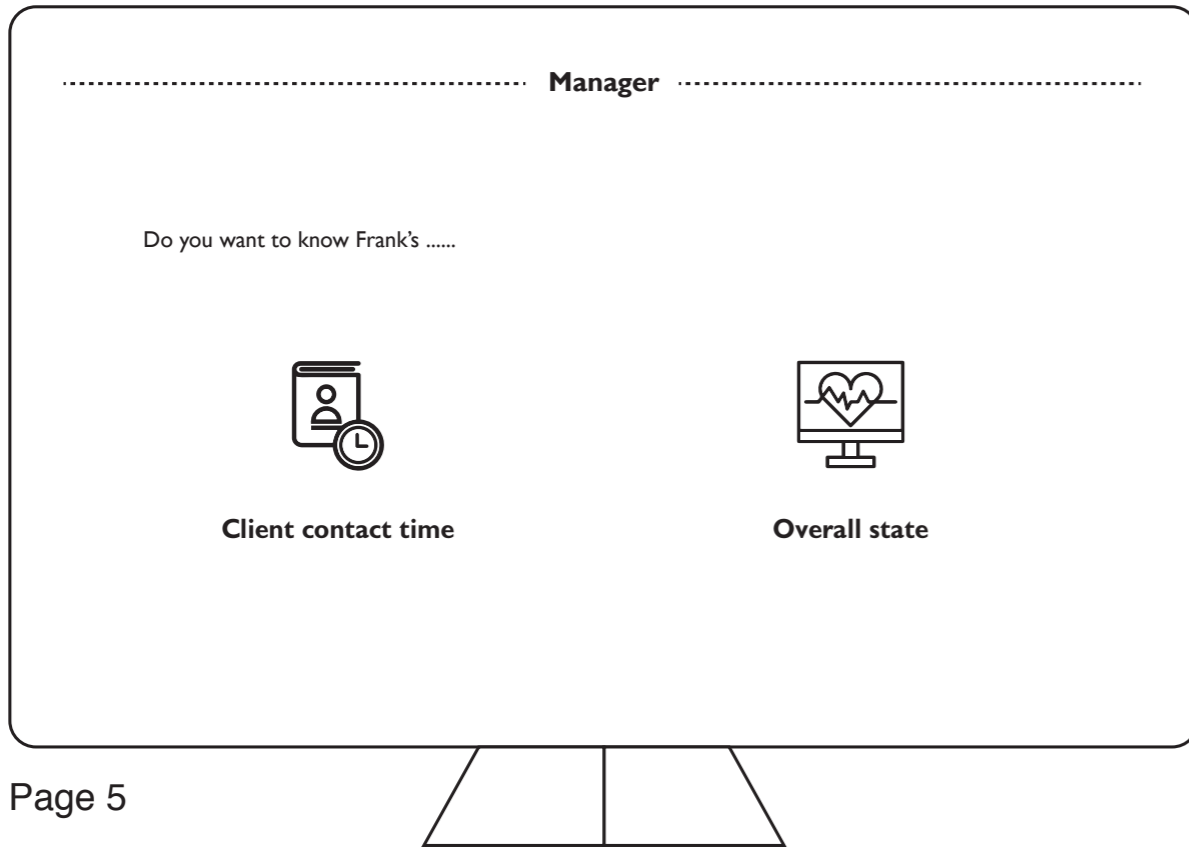
	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

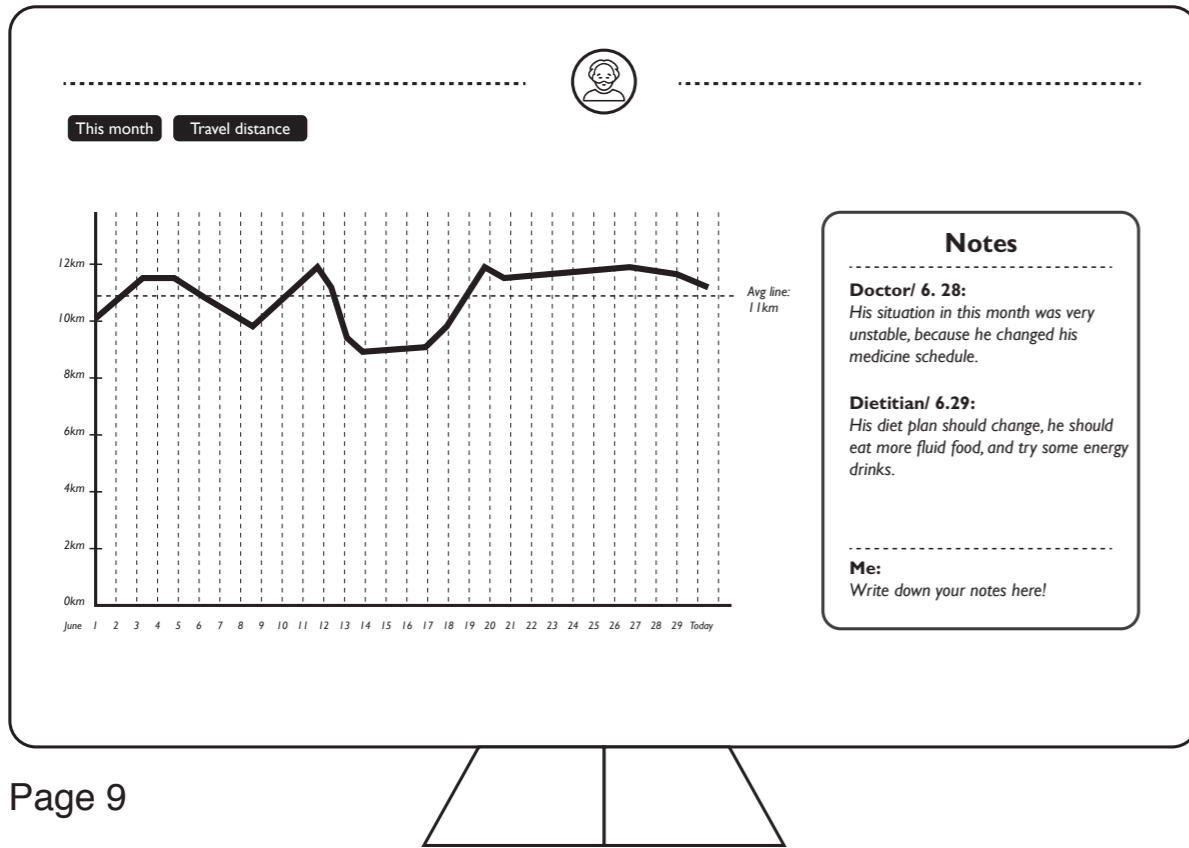
If you have any other suggestions or thoughts, Please feel free to write down :)

Prototype development

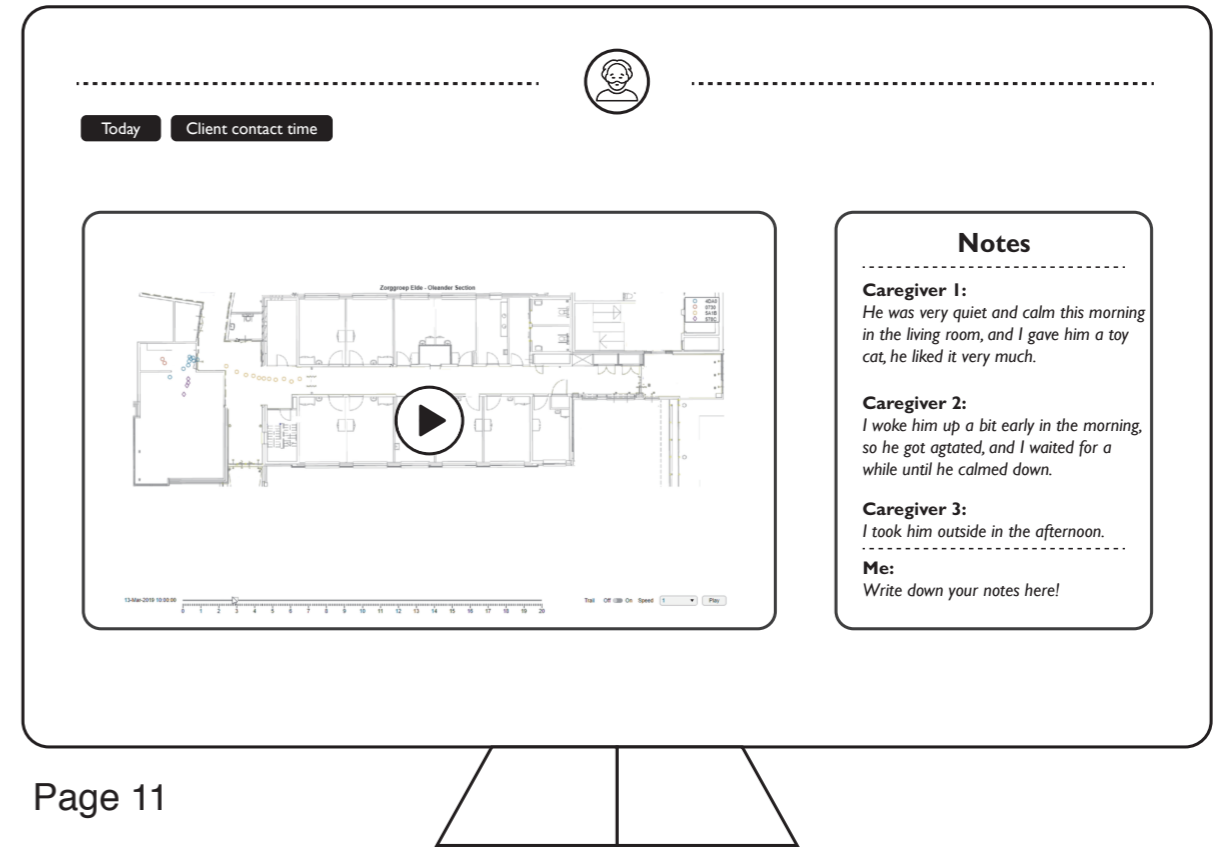
Second prototype



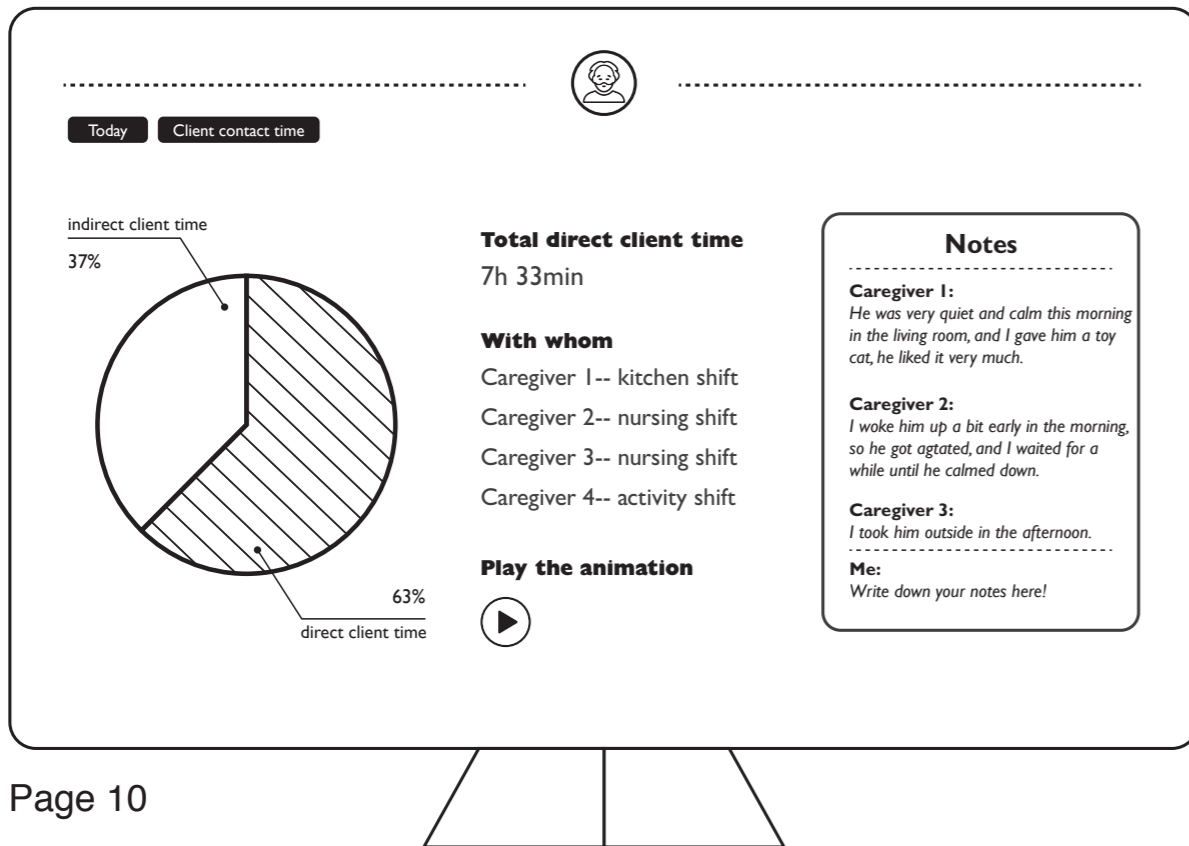




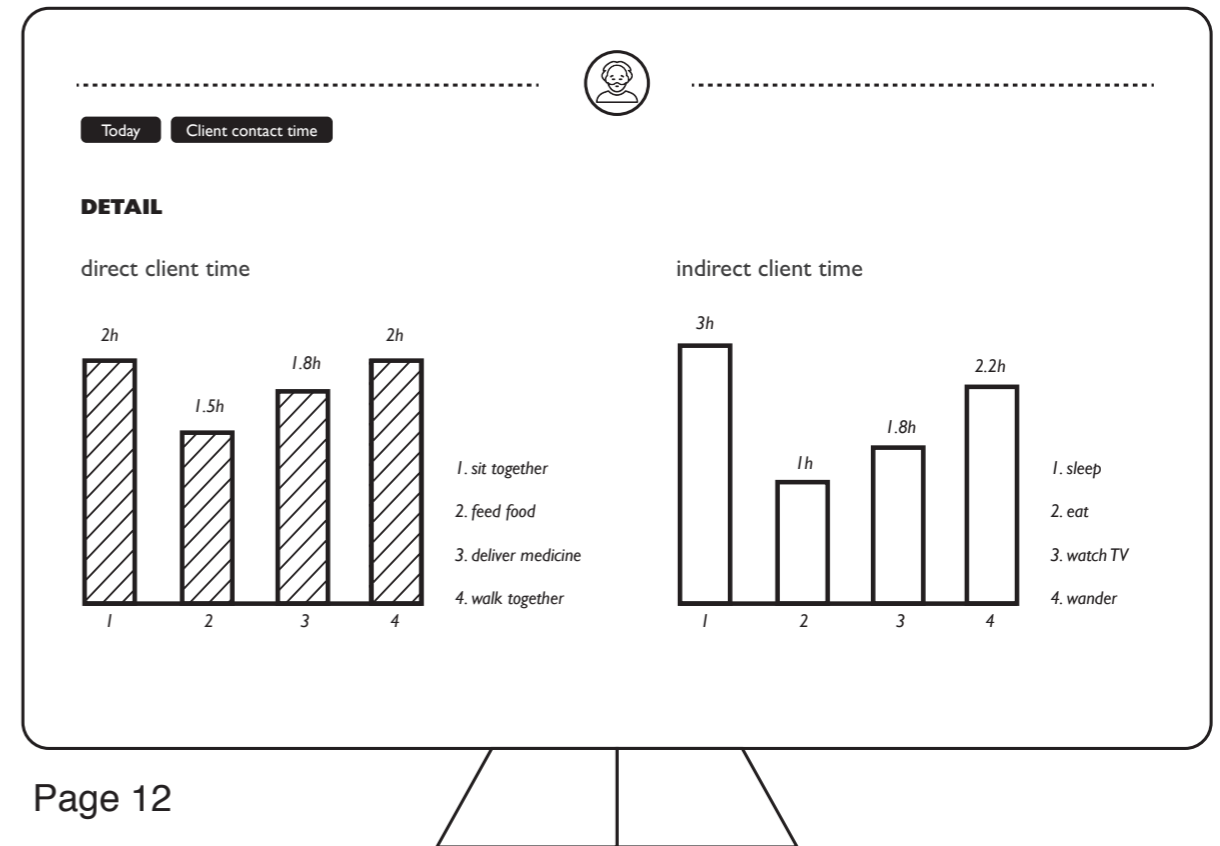
Page 9



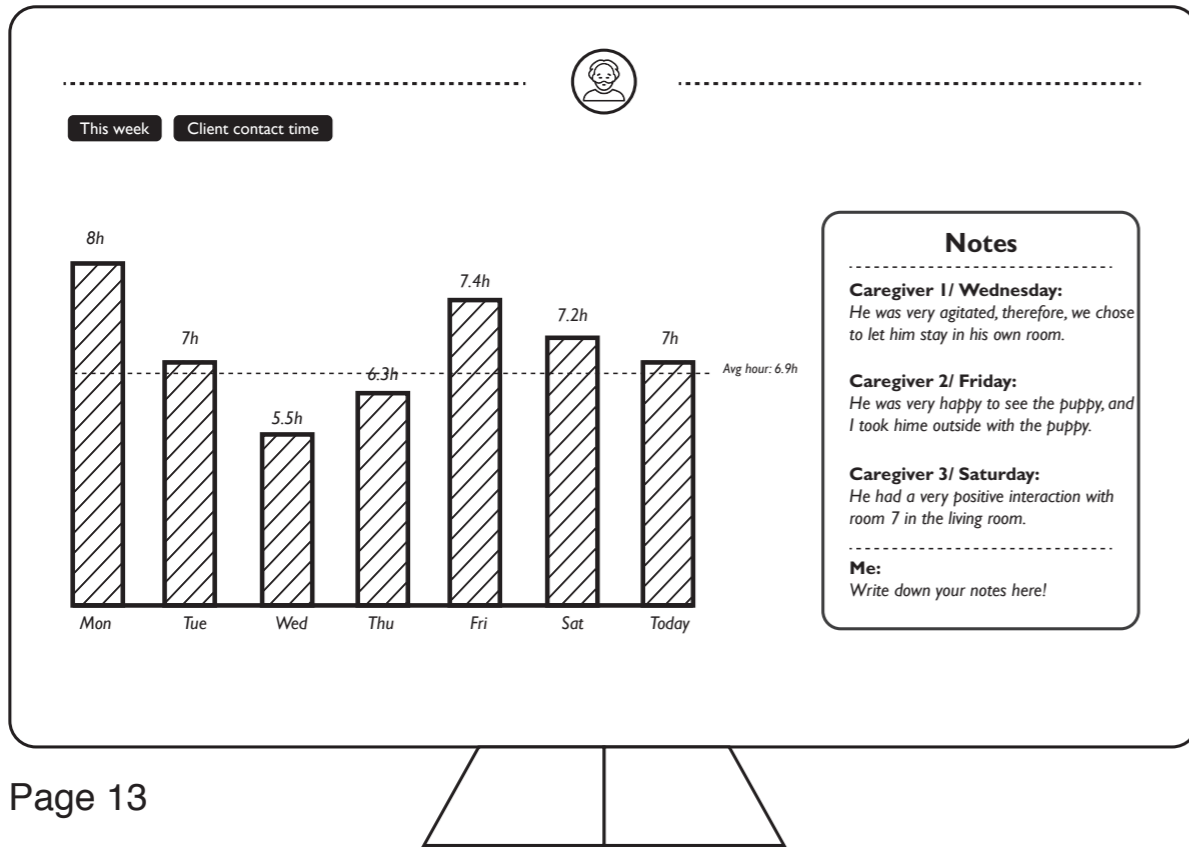
Page 11



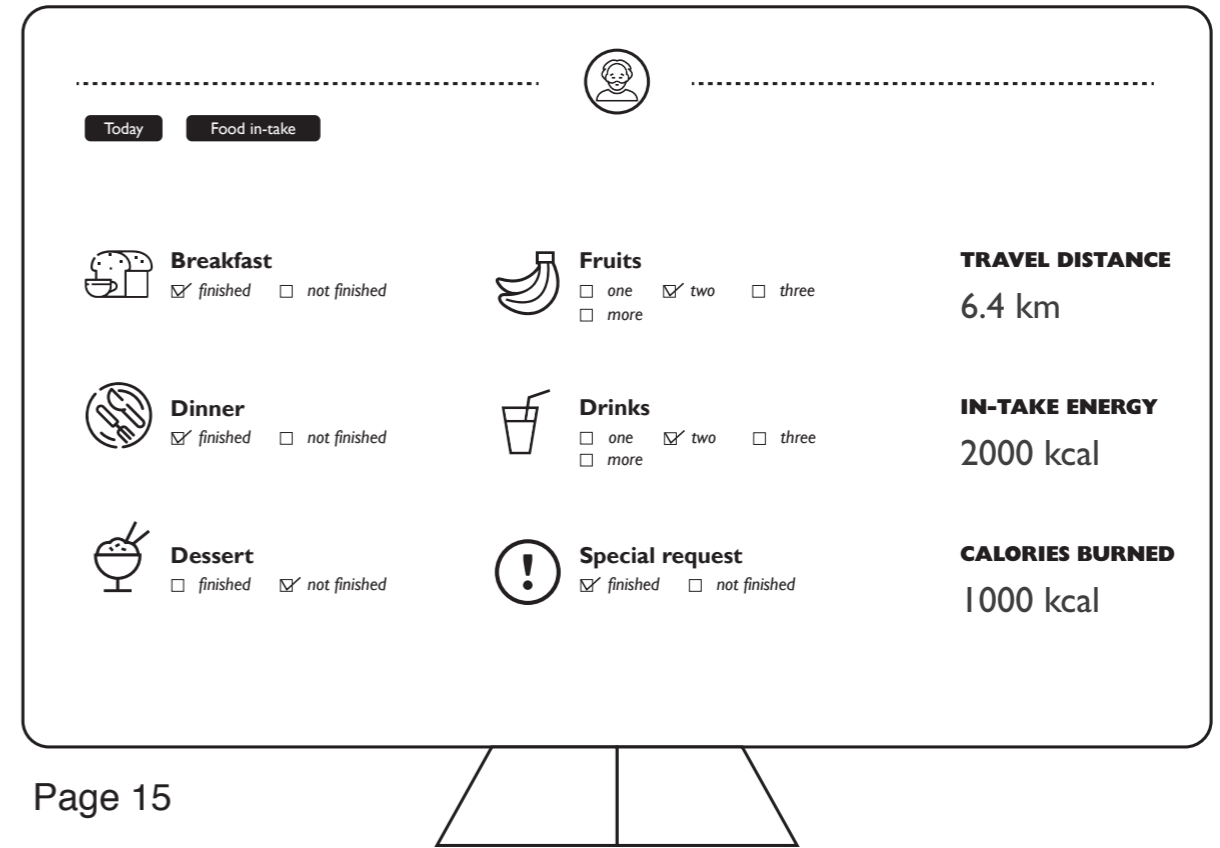
Page 10



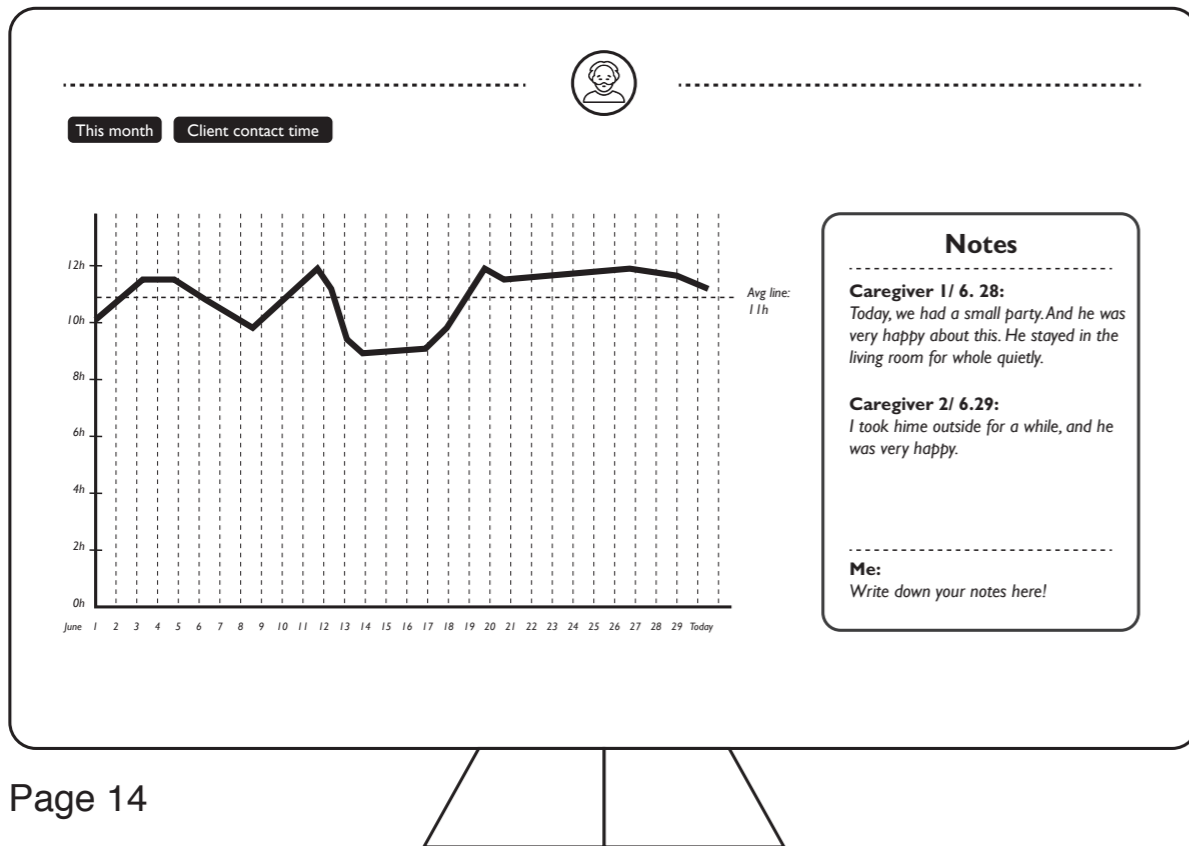
Page 12



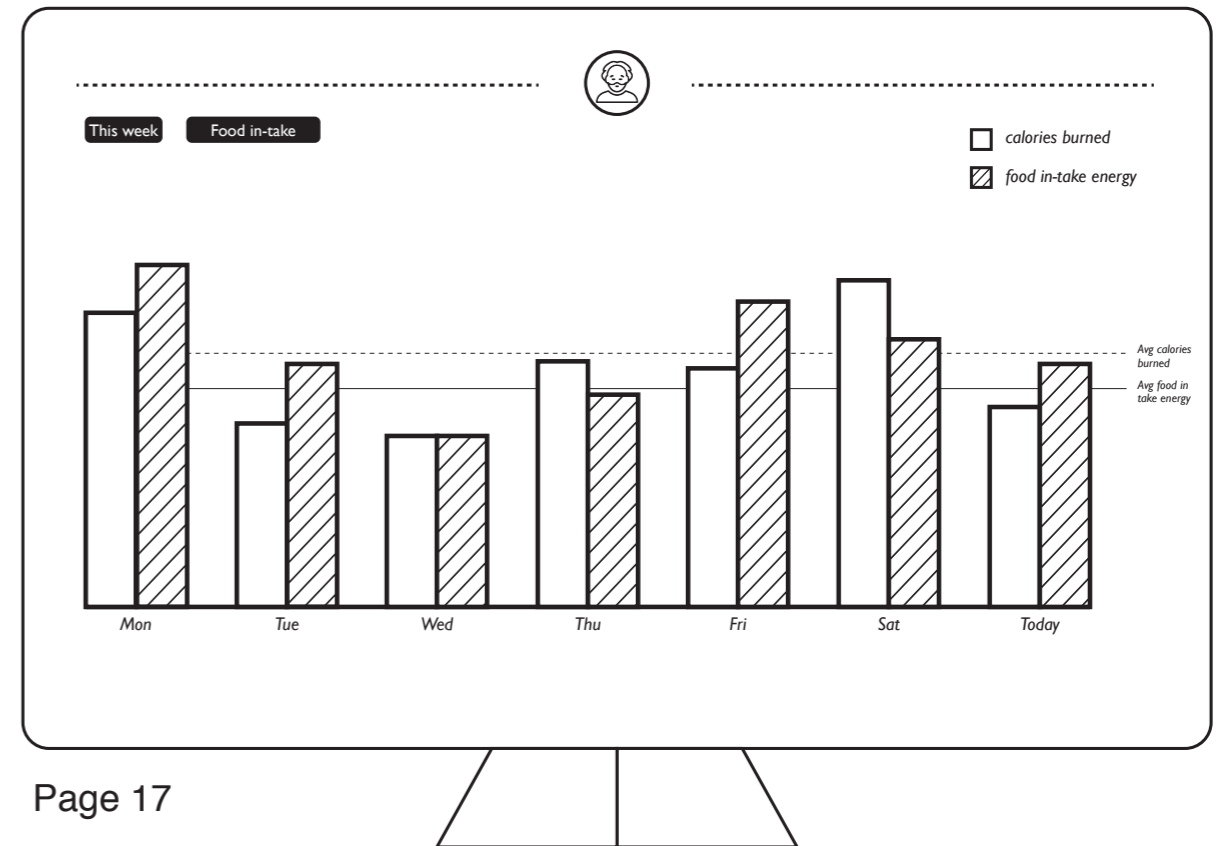
Page 13



Page 15



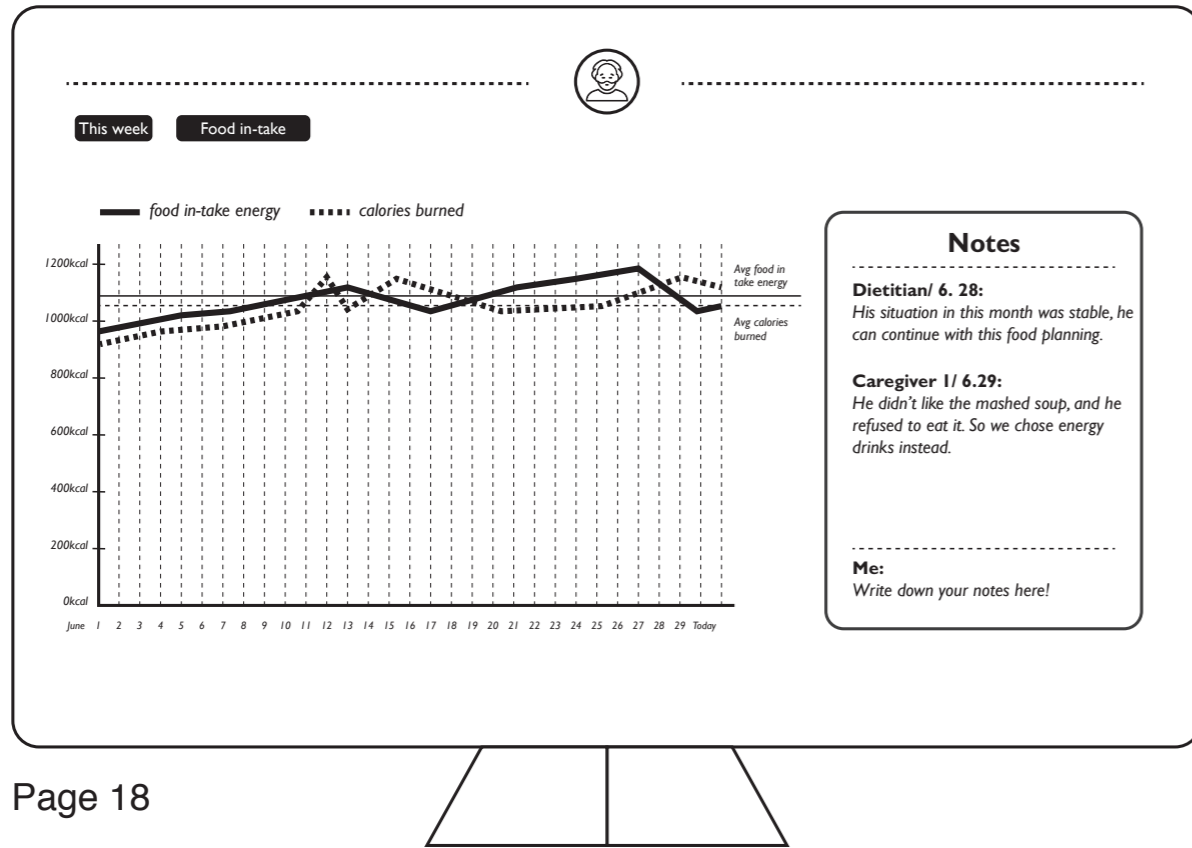
Page 14



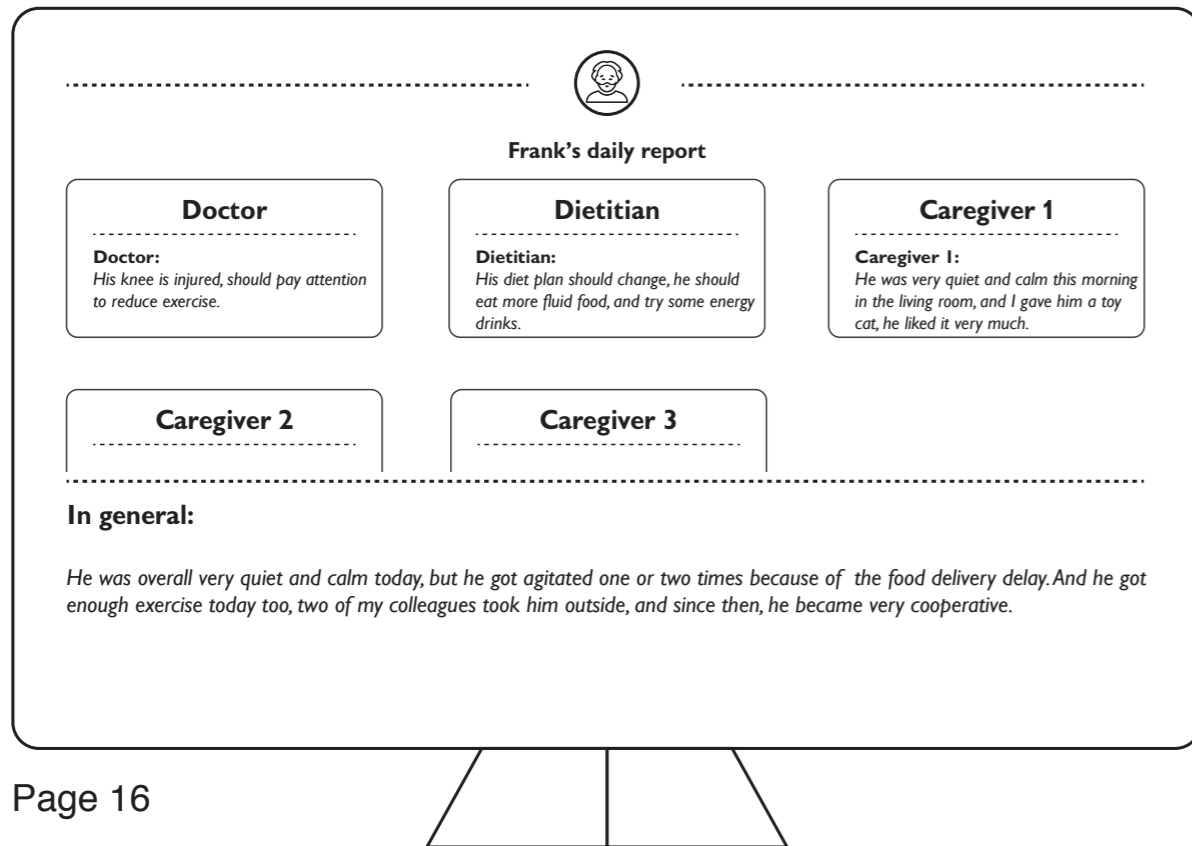
Page 17

Prototype development

Second iteration



Page 18



Page 16

Pevoonacke
WELCOME :)

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Save time

Sherrie
WELCOME :)

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

WELCOME :) Anita

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

WELCOME :) Dietitian

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Save time

WELCOME :) Amanda

Please rate the mock-up according to the following aspect.

	-	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

Prototype development

Second iteration

Amanda

Page number	Your comments / suggestion / ideas
1	maybe add physiotherapeut + psycholog (a(stad) (contractmomenten))
2	
3	
4	
5	
6	add location
7	average speed is not useful. The graph is not very clear. highest speed is more usefull
8	average travel distance of the month. / specify the time period.
9	how to use this monthly data.
10	with whom is not very usefull.
11	it's better to select the time. period.
12	
13	Same as Page 8.
14	
15	How do you know the energy? it depends wick client. hard remember details
16	
17	How to know the food-in-take energy.
18	

Psychologist

Page number	Your comments / suggestion / ideas
1	
2	
3	PwD's behavior / agitation - apathy. (someone stays in the same place for a long time)
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

Doctor

Page number	Your comments / suggestion / ideas
1	
2	
3	track PwD's emotion changes accepting duration of staying each room, room temperature
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	
16	
17	
18	

Prototype development

Second iteration

Dietitian

Page number	Your comments / suggestion / ideas
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	How much time people sit on the table eating.
12	
13	
14	
15	only useful when PwD's situation is abnormal. Don't need regular check.
16	
17	the numbers of this two categories is not very insightful. but the gap changes between those two categories are useful
18	body weight on monthly base can be useful.

Manager

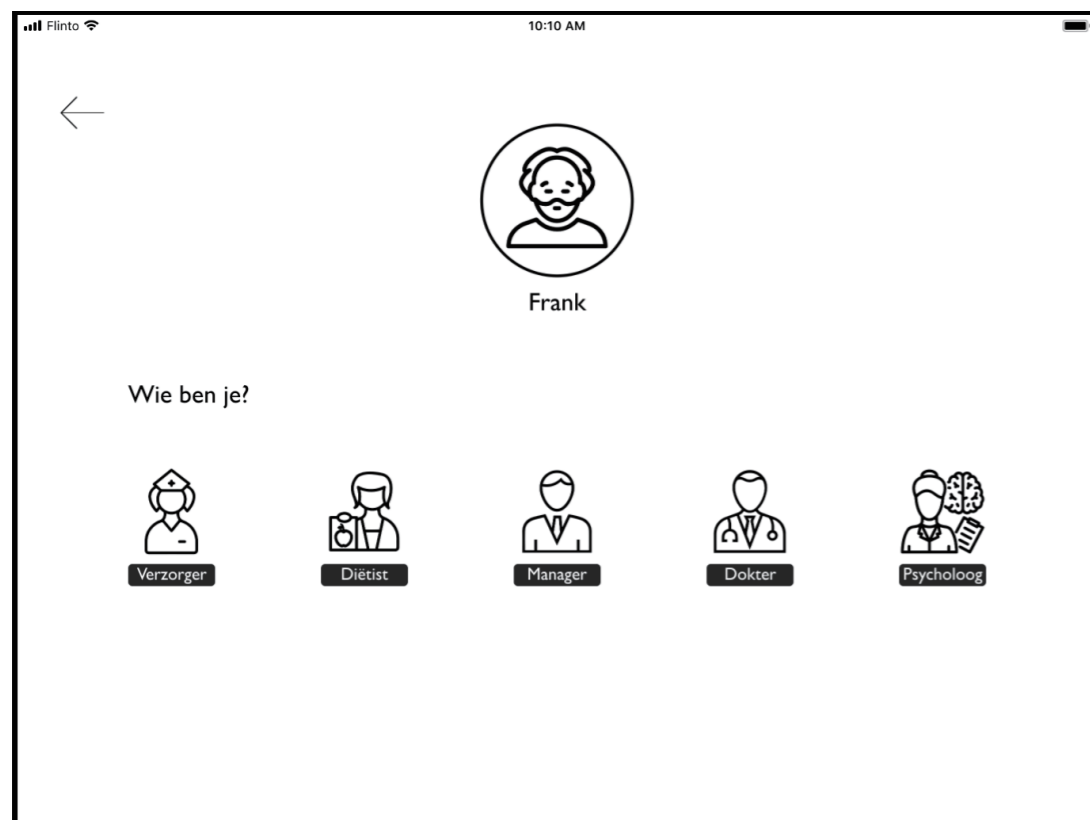
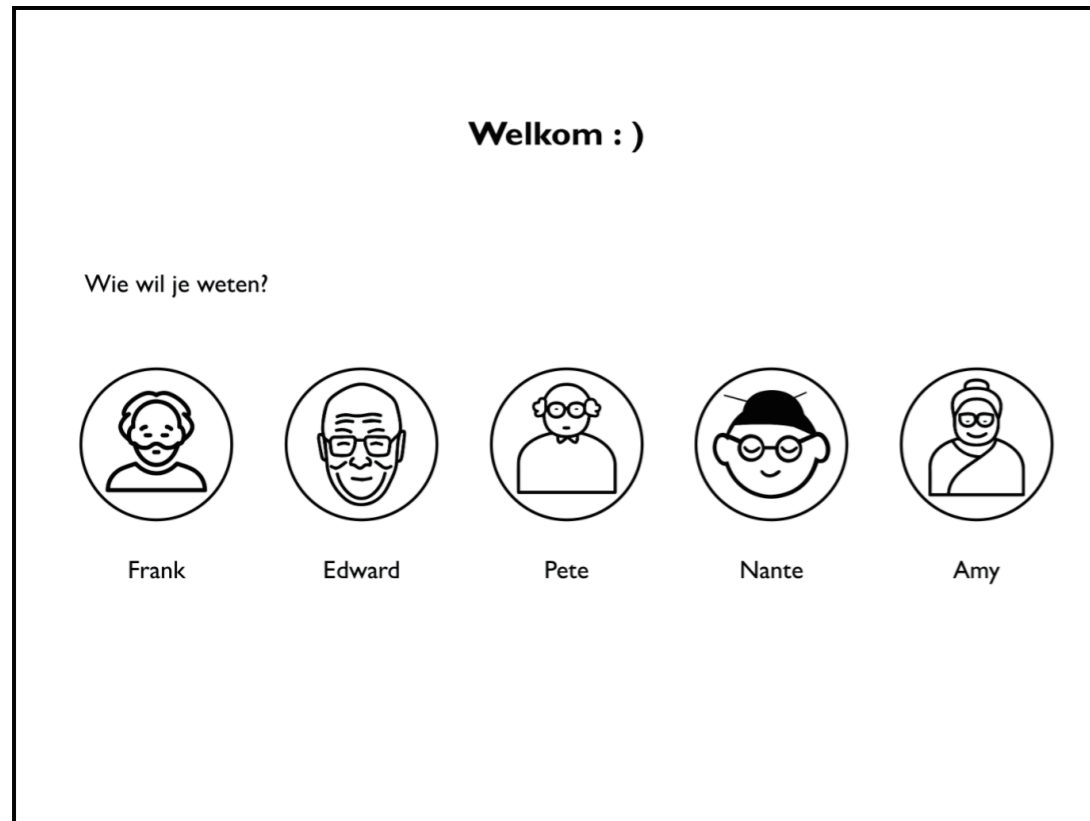
Page number	Your comments / suggestion / ideas
1	
2	
3	
4	
5	Quality of life / Monthly or longer period of data
6	
7	
8	
9	
10	cooperate with signaling plan, it would be more useful. (notes) / pie chart divided into different parts
11	
12	
13	
14	
15	
16	
17	
18	

related to signaling plan.

Prototype development

Third prototype

Home page



caregiver



Vandaag

Ontbijt
 klaar niet klaar

Fruit
 een twee
 drie meer

REISAFSTAND
6.40 km

Diner
 klaar niet klaar

Drankjes
 een twee
 drie meer

CALORIEËN VERBRAND
1000 kcal

Toetje
 klaar niet klaar

Speciale aanvraag
 gedaan niet gedaan

← vorige dag
vogende dag →

Gisteren

Ontbijt
 klaar niet klaar

Fruit
 een twee
 drie meer

REISAFSTAND
7.30 km

Diner
 klaar niet klaar

Drankjes
 een twee
 drie meer

CALORIEËN VERBRAND
1350 kcal

Toetje
 klaar niet klaar

Speciale aanvraag
 gedaan niet gedaan

← vorige dag
vogende dag →

Het dagelijkse rapport van Frank

<p>dokter</p> <p>Zijn knie is gevonden, moet opletten te bewegen doen verminderen.</p>	<p>diëtist</p> <p>Zijn dieetplan zou moeten veranderen, zou hij moeten eet meer vloeibaar eten geven en probeer wat energie drankjes.</p>	<p>Verzorger 1</p> <p>Hij was vanmorgen erg rustig en kalm in de woonkamer, en ik gaf hem een speeltje Kat, hij vond het erg leuk.</p>
<p>Verzorger 2</p>	<p>Verzorger 3</p>	

In het algemeen:
Hij was zeer rustig en kalm vandaag, maar hij kreeg een of twee keer onrustig vanwege de eten geven levering vertraging. En hij kreeg voldoende lichaamsbeweging ook vandaag, twee van mijn collega's nam hem mee naar buiten, en sindsdien werd hij zeer cooperatief.

diëtician

Diëtist

Wil je Frank weten over hij

Reisafstand **speciaal record**

Welke tijdsperiode gegevens wilt u zien?

Deze week **Deze maand** **Half jaar**

Frank

Male

55

Alzheimer ziekte

Bij ons blijven voor 2 jaar

Reisafstand

Day	Distance (km)
Mon	1.3
Tue	8.8
Wed	6
Thu	7
Fri	10
Sat	9.3
Sunday	8.8

Notes

Dokter / vrijdag:
Doez week kreeg hij genoeg beweging, de zijne gezondheidstoestand is goed.

Verzorger 1 / maandag:
Ik heb hem twee keer naar buiten gebracht.

Diëtist / vrijdag:
Zijn huidige voedingsplan is effectief, betalen meer aandacht voor zijn drinken.

Reisafstand

Notes

Dokter / 6.28:
Zijn situatie in deze maand was erg onstabiel, omdat hij de zijne veranderende medicatie nam.

Diëtist / 6.29:
Zijn dieetplan zou moeten veranderen, zou hij moeten eet meer vloeibaar voedsel en probeer wat energie drankjes.

Ik: Noteer hier uw notities!

Reisafstand

Vandaag

Ontbijt
 klaar niet klaar

Fruit
 een twee
 drie meer

REISAFSTAND
6.40 km

Diner
 klaar niet klaar

Drankjes
 een twee
 drie meer

CALORIEËN VERBRAND
1000 kcal

Toetje
 klaar niet klaar

Speciale aanvraag
 gedaan niet gedaan

← vorige dag
vogende dag →

Gisteren

Ontbijt
 klaar niet klaar

Fruit
 een twee
 drie meer

REISAFSTAND
7.30 km

Diner
 klaar niet klaar

Drankjes
 een twee
 drie meer

CALORIEËN VERBRAND
1350 kcal

Toetje
 klaar niet klaar

Speciale aanvraag
 gedaan niet gedaan

← vorige dag
vogende dag →

Manager

Wil je Frank weten over hij

Client contacttijd

Frank

Male
55
Alzheimer ziekte
Bij ons blijven voor 2 jaar

Welke tijdsperiode gegevens wilt u zien?

Vandaag Deze week Deze maand

Indirecte cliententijd: 37%

Total directe cliententijd: 7 h 30 min

Start de animatie

Directe cliententijd: 63%

Notes
 Verzorger 1: Hij was voornamelijk erg rustig en kalm in de woonkamer, en ik gaf hem een speeltje. Kat, hij vond het erg leuk.
 Verzorger 2: Ik heb hem 's morgens vroeg wakker gemaakt, dus hij werd geïmponeerd en ik wachtte op een terwijf tot hij kalmeerde.
 Verzorger 3: Ik nam hem 's middags mee naar buiten.
 Ik: Noteer hier uw notities!

Detail info

Directe cliententijd

Day	Time	Activity
1	2h	1. samen zitten
2	1.5h	2. voer eten geven
3	1.8h	3. geef medicijnen
4	2h	4. samen lopen

Indirecte cliententijd

Day	Time	Activity
1	3h	1. slaap
2	1h	2. selfeten
3	1.8h	3. tv kijken
4	2.2h	4. loopt alleen

Directe cliententijd

Notes
 Verzorger 1: Hij was voornamelijk erg rustig en kalm in de woonkamer, en ik gaf hem een speeltje. Kat, hij vond het erg leuk.
 Verzorger 2: Ik heb hem 's morgens vroeg wakker gemaakt, dus hij werd geïmponeerd en ik wachtte op een terwijf tot hij kalmeerde.
 Verzorger 3: Ik nam hem 's middags mee naar buiten.
 Ik: Noteer hier uw notities!

Directe cliententijd

Day	Time
Mon	8h
Tue	7h
Wed	5.5h
Thu	6.3h
Fri	7.4h
Sat	7.2h
Vandag	7h

Notes
 Verzorger 1/ woensdag: Hij was erg opgewonden, daarom hebben we gekozen om hem in zijn eigen kamer te laten blijven.
 Verzorger 2/ vrijdag: Hij was erg blij om de pup te zien, en ik nam hem mee naar buiten met de puppy.
 Verzorger 3/ zaterdag: Hij had een zeer positieve interactie met kamer 7 in de woonkamer.
 Ik: Noteer hier uw notities!

Directe cliententijd

Notes
 Verzorger 1/ 6.28: Vandaag hadden we een klein feestje. En hij was erg blij hiervoor. Hij bleef in de woonkamer voor de hele dag rustig.
 Verzorger 2/ 6.29: Ik heb hem een tijdje naar buiten gebracht en hij was erg blij.
 Ik: Noteer hier uw notities!

Directe cliententijd

Day	Time
Mon	4h
Tue	3.8h
Wed	4h
Thu	4h
Fri	4h
Sat	4h
Vandag	3.8h

Dokter

Wil je Frank weten over hij

Reisafstand

Plaats

Frank

Male
55
Alzheimer ziekte
Bij ons blijven voor 2 jaar

Welke tijdsperiode gegevens wilt u zien?

Vandaag Deze week

Vandaag

6.40 km

De gemiddelde reisafstand/week

9.0 km

Looptijd

3h 21 min

Hoogste snelheid

15 km/h

Notes
 Dokter: Zijn knie is gewond, moet opletten om bewegen te verminderen.
 Verzorger 1: Hij was niet bij te wijten aan de verandering in de hoeveelheid oefening.
 Verzorger 2: Hij was geïmponeerd omdat hij niet ging buiten vandaag.
 Ik: Noteer hier uw notities!

Reisafstand

Day	Distance
Mon	7.3km
Tue	8.8km
Wed	6km
Thu	7km
Fri	10km
Sat	9.3km
Vandag	8.8km

Notes
 Dokter / vrijdag: Deze week kreeg hij genoeg beweging, de zijne gezondheidstoestand is goed.
 Verzorger 1/ maandag: Ik heb hem twee keer naar buiten gebracht.
 Diëtist / vrijdag: Zijn huidige voedingsplan is effectief, betalen meer aandacht voor zijn drinken.

Reisafstand

Notes
 Dokter / 6.28: Zijn situatie in deze maand was erg onstabiel, omdat hij de zijne veranderde medicijnrecepten.
 Diëtist / 6.29: Zijn dieetplan zou moeten veranderen, zou hij moeten eet meer vloeibaar voedsel en probeer wat energie drankjes.
 Ik: Noteer hier uw notities!

Gang: totale verblijftijd: 1 uur schakelaar frequentie: 10

Woonkamer: totale verblijftijd: 4 uur schakelaar frequentie: 9

Slaapkamer: totale verblijftijd: 5 uur schakelaar frequentie: 6

Toilet: totale verblijftijd: 30 minuten schakelaar frequentie: 11

Buiten: totale verblijftijd: 20 minuten schakelaar frequentie: 2

Directe cliententijd

Day	Time
Mon	1.5h
Tue	1.4h
Wed	1.5h
Thu	1.5h
Fri	1.5h
Sat	1.5h
Vandag	1.4h

Directe cliententijd

Day	Time
Mon	4h
Tue	3.8h
Wed	4h
Thu	4h
Fri	4h
Sat	4h
Vandag	3.8h

Prototype development

Evaluation

Monique

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

Amalia

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Save time

Nina

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

Zlevara

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

Marianne

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

Lucas

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

Prototype development

Evaluation

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Save time

ryer

Please rate the mock-up according to the following aspect.

	--	-	0	+	++	
Useless	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Useful
Hard to understand	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Easy to understand
Information unclear	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Information clear
Unrelated to your work	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	Related to your work
Waste time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	Save time

Not sure.

Comments

+ we can bring the tablet to the room of client, because we cannot remember everything from the computer.
+ especially for new client.

! the privacy & security are important. (fingerprint).
if we ~~click~~ look through 'daglijkse report', we can click on the section of text that we find are important. and this text will be copied straightly into 'Emergency Review'.

caregiver

— Emergency Review.
When someone comes back from vacation, s/he can have an overview of the dangerous things happened for all clients over a week.

— A good overview

caregiver

Content.

- 1) food intake - more specific.
- 2) daily report - integrate with the report system now.
- 3) Only the daily report is shown to the family member.
- 4) voedsel - Eten gewen Eten - zelf eten. interface.
- 1) swipe back - back button.

caregiver

Prototype development

Comments

Concept.

connect with the current system.

copy the report from the main system to here.

and copy ~~the~~ what the caregivers written to the new system.

the types of bread are not important, how many breads are more important.

click on ipad is easier than ~~completing~~ completing a form with pen.

+ All the data are objective. measurable.

+ help to get to know about the clients that she has not have the time to interact with today.

caregiver