

E-Care @ Home

WP1: User Requirements and Specification

D1.1.19-Patients Needs assessments

NB. Confidential files: these assessments, though anonymized, contain actual patient interviews which are not to be distributed or reprinted in any way or for any purpose.

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| Report on user consultations conducted at In-Geest  |
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1. Overview:
This doc provides written summaries of all the need assessment interviews that have taken place with patients (N=8) in care at GGZinGeest for bipolar disorder or recurrent depression in the period from May to September 2013. It starts off with a format for the interviews that we conducted (paragraph 2.1), to illustrate the topics and questions that were addressed in the interviews (although not necessarily in this order). The remainder of chapter 2 provides anonymous summaries of eight individual 1- to 1 ½ hour need assessment interviews with patients at Ingeest, that were conducted by a clinician/researcher of the ecare@home project group working at the department for older adults at Ingeest (Josien Schuurmans). At the end of the document, chapter 3 provides a summary of our findings in the interviews and also provides a top 6 list of patient priorities for the system.
2. Assessments
	1. Format needs assessment interview

Minutes Needs assessment interview Client X dd. …

*Subject is a XX-year old male/female, first diagnosed with recurrent depression/bipolar at age X.*

1. **Intro:** Explain workshop setup, gain/record relevant information about the patient only where they are happy to supply it. Information about family and other stakeholders may be helpful.
2. **Patient’s Care**: Try to gain a general impression of their opinion of their combined health and care services – what do they need? What do they hate? Who helps them the most etc.
3. **Technology:** How computer literate are they? Have they ever used Skype? How do they feel about Video Calls compared with landline telephone calls? It is ‘free’ to video call. How does technology affect relationships with family? E.g. do they get help from grandchildren?
4. **Video Calling** – simply an easy way to get in touch with family and friends – you can share more than just audio. See grandchildren etc. Video is optional – they can just treat it like a phone call if they want. Have they ever made a video call?
5. **Sharing photos** – family can send photos that just appear on the tablet – they don’t have to worry about downloading or saving etc.
6. **Instant Messages –** Have they used text messages and/or email before? Did they find it easy/difficult? What do they think is the easiest way to send messages e.g. to organise something with friends or family if they do not answer the phone?
7. **Entertainment –** Have they ever watched tv, listened to radio etc. on the internet or a computer? Could they find anything they wanted to watch, listen to or read?
8. **Gaming –** Do they play any games? E.g. card games. Would they like to play with friends or family if they’re not in the same place? Would they like to play games e.g. chess against strangers? Do they think it would be a good way to meet people?
9. **Tracking Health –** What do they measure, if anything, regularly? What do they think about measuring something e.g. blood pressure and automatically sharing it with their GP, psychiatrist etc.? It would only be shared if they explicitly allowed it. Would they like to allow family to help track their results? Do they think their family would like to keep an eye on their health e.g. blood sugar if diabetic?
10. **Life chart –** Would they use the life chart if it was on tablet? Is there anything they would like to change about the life chart?
11. **Help in a crisis –** Do they know what to do if they need help out of hours? What do they do when they need help generally? Do they call someone? What information do they need?
12. **Psycho-education & Information –** Has the patient made use of the information available? Do they know where to go to find out more about mental health? Is there anything they want to know? Where would they like to find out extra information and in what format?
13. **Medication Tracker & Pillbox –** How do they know what to take and when? Do they keep track of what they’ve taken? Does their GP, psychiatrist etc. keep track of what they’ve taken on a day-to-day basis? Do they worry about drug-drug interactions/side effects? Have they used pillboxes? Would they use one?
14. **Pleasurable Lifestyle Support -** How much social interaction do they generally have(perhaps this overlaps with “Social Rhythm”)? Do they go to any events or join in any activities organised specifically for older people in their area? What sort of thing would they like to do increase social interaction (if it was prescribed or not) and how often? How would they most like to find out about activities?
15. **Independent Living –** Do they have any support at home from carers, local services or neighbours? Do they need help with shopping, travel etc.? Do they have access to fun or sociable things to do locally? If they did, would they go? What sort of help would they like to get from local services to help them improve their lifestyle?
16. **Role of informal carers-**what is the role of family members/partner/friends (if any) in helping them deal with their mood symptoms and consequences arising from their symptoms? Do they see a role for certain people close to them in the system that we are proposing? If yes, who and what kind of role would that be?
	1. Individual need assessment interviews

Minutes Needs assessment interview Client 1 JS0903 26-05-2013

***Subject is a 63-year old woman, diagnosed with bipolar disorder.***

1. **Intro:**

Ms. Z. uses a signal plan (a description of the signals that precede a possible manic/depression episode in three levels of severity; green, orange, red and the actions she can take at each stage to prevent worse). When she is overly active, this is a signal for her, which may mark the onset of a manic episode. When she is aware of this, she cancels appointments and takes a few days of.

1. **Patient’s Care:**

Ms Z. feels that there are a few things that could be improved in the care that she has received:

* doctors should listen more carefully to their patients (Ms Z refers to a certain type of med that she knew helped her in the past but the doctors treating her would not give it to her because of the known side effects).
* Patients admmited to a psychiatric ward should receive more incentives from the careteam to become more active.
* The communication between the client and the careteam can be improved (e.g. more time)
* Blood tests and medication should be more carefully monitored (she had to remind her therapist that she is obligated to do a bloodtest every 3 months)
* There is not a steady communication flow between the GP and the therapist/psychiatrists. She would like for the GP and psychiatrist to inform one another on a more regular basis.
1. **Technology:**

Ms. Z. is very computer smart. She has a computer and a smart phone and uses all sorts of apps and games and likes browsing the internet, it is a good way to entertain herself.

1. **Video Calling :**

She is hesitant about video-calling in a professional way, however, she realizes it is the way to communicate within the present developments in technology. She uses Skype to talk with family.

1. **Sharing photos:**

ms. Z. likes to see photo’s on Facebook and uses this a lot.

1. **Instant Messages:**

She is using email very often. It’s an easy way to get in contact.

1. **Entertainment :**

Ms. Z. is happy with the internet, it’s a good source for entertainment. She uses Facebook very often to keep up with family and friends.

1. **Gaming :**

Ms. Z. likes to play games on her smartphone. Her favorite right now is Candy Crush, which is an addictive game for her. She knows it is better for her to keep a steady day/night rhythm, but sometimes she goes to bed too late because she’s so caught up in a game, she does not want to stop playing.

1. **Tracking Health:**

She would like to keep track of her movement and measure food habits (she’s really into healthy food and sports). She wouldn’t mind to keep track of her sleep habits. It’s important for her to keep a good sleep rhythm.

1. **Life chart :**

ms. Z. used the Lifechart before but considered it useless, she points out that she was very ill in that period. Maybe she has a different opinion when she would use it now she’s feeling better. She thinks she would use it when she would be able to use it on a tablet.

1. **Help in a crisis**

no information.

1. **Psycho-education & Information**

Films about information of the medication would be very interesting and useful. She always reads the information about medication carefully. She would like an interactive quiz. A friend of her was really annoyed by the GGZinGeest logo on every page of the website (too much of a reminder of ‘sickness’). We should be aware of that in the developing progress.

1. **Medication Tracker & Pillbox :**

Ms. Z. receives medication (MAO stoppers) and needs to test her blood 4 times a year. She also needs to measure her blood pressure 3 times a week, 3 times a day, because she uses a specific type of medication.

1. **Pleasurable Lifestyle Support :**

Ms. Z. has a lot of interests and likes to remain active. She is part of a cookinggroup and works voluntarily in the catering. Sometimes she has difficulties to start with or to go to an activity, for her it is very important to be stimulated to go by a caretaker. It’s also important for her to be a part of activities that are not only organized for mental health patients. She wants to take some more distance from mental health care, and be a part of the society. She would like to do a course to be an ‘experience expert’, so she can help other people with the same difficulties as she experienced. She knows what they experience.

1. **Independent Living –**

Ms. Z. does not need or receive any support.

1. **Role of informal caregivers:**

Ms. Z. tells us that the relationships with her children and grandchildren as well as her friends, have suffered from her illness and her behavior resulting from her illness. She has tried to commit suicide several times. Those who are closest to her (such as her daughter) are very concerned that she might relapse and can be overly suspicious that she might do something to harm herself. She needs her relatives to start trusting her again and she would like to be regarded as a sane person with her own responsibility. Therefore, ms Z. does not want her relatives or her daughter to be the one who gives her advice on being too busy or too inactive. It works better for her if the advice is given by a health care professional.

Ms. Z. thinks maybe her daughter could be involved in the project. Her daughter is very aware of the signals that precede a manic or depressive episode, she recognizes them immediately. She will ask her about it. But she is not certain, maybe getting her involved is too much to ask from her daughter. The daughter often joins her to the appointments with the clinicians. It’s no problem if we want to invite her daughter, she will ask her if she’s interested and inform her about the project. She also has a close friend, who comes with her to appointments. Her friend wouldn’t be a person that she would involve in the project, because she has too many problems of her own.

Minutes Needs assessment interview Client 2 PD 2304 dd. 03072013

*Subject is a 66-year old male, first diagnosed with depression about 7 years ago.*

1. **Introduction**

Mr. C. lives together with his girlfriend and their dog. He used to work in psychiatry, as a guide in a protected living area for people with psychiatric problems. His son(38) experienced a psychotic episode when he was 20 years old and was eventually diagnosed with Schizophrenia. Because of his work he knew what this entails and it really got to him. It was hard for him to come to grips with the fact that his son suffered from the same disorder as the patients that he was counseling. Eventually, mr. C. became clinically depressed. This first depressive episode had a duration of 1 year, during this episode he started to use Fluoxetine for the first time via his GP. During the following years he kept using Fluoxetine, the amount continued to increase due to his complaints.

After ten years of periods of relative stability and relapses in depression, he visited a psychiatrist for the first time. However, mr C. did not feel that the treatment had any effect. His GP sent him to another psychiatrist and advised him to go to GGZinGeest, to see a specialist in manic episodes. Now he has an appointment at GGZinGeest twice a year.

He has experienced multiple relapses, the amount of relapses is countless. A relapse takes 5 to 6 weeks. After 2 weeks of extra medication he normally feels better.

1. **How do you feel about your health and care services?**

When mr. C. is not depressed he enjoys life, he has a lot of interests and is very active. However, this can change quite suddenly. When he relapses, he is so depressed that he’s not able to do anything. It feels like he’s a living dead person. When he is depressed he wants to stay inside, even walking the dog is too much. He doesn’t want any kind of contact with anyone and he feels that he is worthless. That’s why he needs to keep in contact with GGZinGeest. In case of emergency, when he’s feeling depressed, he needs help. The last time was in December. Now that he is stable, he sees his psychiatrist once a year, and he consults a psychiatric nurse twice a year.

At one time, years ago, when he really needed to contact his first psychiatrist he wasn’t able to reach him. He experienced a really bad episode and tried to contact him, but he wasn’t there. That made him really angry. It’s important that he receives support when he needs it.

The contact with his psychiatric nurse is not personal, there’s no connection and he feels that she is rigid. He still calls her by her last name and he experiences distance between them. Personal contact is very important to him. It’s also important that a clinician shows empathy.

1. **What do you think about computers, tablets and mobile phones?**

He has a tablet at home, but he has never used it. It’s difficult and takes some time, during the holidays he will spend some time figuring this out.

He doesn’t want to use a smartphone. When he’s seeing everyone in the tram or metro with their smartphones he thinks ‘this is dreadful’. He uses a computer for email, browsing, ordering online, and playing the game Patience. He checks his email two times a day. So he’s able to use a computer.

Being able to contact his psychiatrist at any time, and make an appointment, would be very handy. That would be very useful.

1. **Video Calling**

He never used Skype and doesn’t know how that works. He doesn’t know if it’s impersonal. Videoconferencing by clicking on a photo (like the system we are going to use) would be really useful. It’s important to establish contact in an easy way. It shouldn’t be difficult. He often forgets how things work if he only tries it once without regular follow-up.

When he is experiencing a relapse, he calls GGZinGeest and makes an appointment. It would be really nice to be able to use videoconferencing for this purpose. Twice a year he has an appointment at GGZinGeest, he understands that it’s important to see each other now and then. When he’s not depressed, this feels like an unnecessary exercise. But he lives nearby, so he does not feel it is a burden. However, if these visits could be replaced with videoconferencing sessions, this would be an option for him that he would like to try.

Videoconferencing with his son would be fun, especially because of his condition. His health is very intertwined with his son’s health. If his son is okay, so is he. But in general he feels that skyping with his own children would be complicated and unnecessary (over the top). He adds that he also feels this way because he’s afraid that it might be too complicated for him. Maybe if it’s easy to start, he would be prone to use it.

1. **Sharing photos**

We did not discuss this topic.

**Instant messages**

He checks his email twice a day and uses this frequently.

1. **Entertainment**

He wouldn’t like to read a newspaper on a tablet, he likes to hold the paper in his hands. Listening music is something for the radio, not something he would do on a tablet.

1. **Social gaming**

He likes to play Scrabble online and he would like to play a game like Wordfeud. He feels like he’s having memory problems, they may be caused by his medication. Therefore he would like to play memory games as part of the program.

1. **Tracking your health**

He is experiencing a lot of difficulty sleeping, he is constantly awake at night. He also experiences really weird dreams, both problems can be a side effect of Fluoxetine. It’s important for him to rest, for example he is not able to clean the whole house in one day. It’s also important to have structure in his life. Every week has the same structure, that gives him a grip on life.

Mr C. thinks it’s a good idea to track his sleeping rhythm and send alert messages when his sleep rhythm is going of track. But he’s not sure about how he will respond to that. He thinks that most people are not very aware of such things. Because tracking his mood and other aspects of his health is important due to his condition, he is more aware of his own functioning than most other people. When mr. C. feels that he’s about to slip into a depressive episode, he tries hard to fight it. Then suddenly he can’t fight it anymore, the depression overwhelmes him and he thinks: ‘all right, here we go again’.

It would be great to be able to prevent an episode.

Feedback on his movement/activity levels would be interesting, he would like to use that.

1. **Life chart**

He used the Lifechart once. It gives an impression on his status, it can be important for his sleep rhythm. He doesn’t feel the importance of tracking everything because he knows how he is doing.

1. **Psycho-education and information**

Because the long-term effects of Fluoxetine are unknown, he feels that he is ‘sort of laboratory animal who is testing it’. He knows what to do when his psychiatrist is not around, he can call to GGZinGeest and ask the stand in psychiatrist for Seroquel. This has not really been explained to him, but he’s familiar in the working field. When he’s on a holiday he takes extra Seroquel with him. If it’s necessary he can go to the local pharmacist and ask his GP to send the recipe of his medication to them.

He has read a lot about depression and he is a member of the depression association. Once monthly they have a meeting, where he can share his problems. He followed a lot of courses for depression. He feels like he has read everything there is to know on depression.

1. **Pleasurable lifestyle events**

He likes to walk, bicycle and he enjoys doing a weekly work out routine for people aged 55 and over. He is often in pain so he isn’t always able to walk and bicycle. He likes to read (he owns an e-reader, very handy for traveling), draw, walk with the dog en search for things on the internet.

He likes to travel but after a long trip he often gets depressed. For example when he went to South Africa, he came back and got depressed. It’s a pattern in his holidays. He thinks maybe his head is not able to cope with the change in his daily routine. He finds it difficult to accept this, because he really enjoys travelling.

It’s impossible for him to watch more than one movie in one evening, that’s too much info for his head to deal with. He feels that his life is less dynamic than the lives of his peers, but this works for him.

1. **Medication tracker and pillbox**

He uses the maximum amount of Fluoxetine. In the past, when he felt bad, he just used an extra half tabletl. Since he’s been on the maximally allowed dose this is no longer an option. So he received Seroquel in addition. When he’s having a bad episode he can use Seroquel, which usually has an effect on his mood within a couple of days. Seroquel also helps him sleep better, that’s a positive side effect.

Now he has a few extra Seroquel at home, and he has an agreement with his psychiatrist that he can use them when he feels a new episode coming up. In the past, he often tried to reduce the amount of his medication. When he has done this, he felt ok for a few days, but eventually it inevitably resulted in another relapse. Therefore, mr. C. has come to accept that he needs the medication. He doesn’t need medication reminders, it’s in his system and he never forgets his medication, so he does not feel that reminders would be useful for him. He uses fluoxetine and something to protect his stomach.

1. **Pleasurable lifestyle support**

He would be open to new activities, you never know what it can bring.

1. **Independent living**

He doesn’t receive any help and lives independently.

1. **Role of informal caregivers**

2 years ago his son experienced another psychotic episode, quite soon afterwards, mr. C. experienced a relapse in depression. They keep in touch during his depressive episodes, they are like fellow sufferers. At this moment he isn’t worried about his son, he used to be. It’s very hard for him to see his own son that sick, in those periods he’s totally crazy. Every time when his son is upset, he gets upset. It’s a trigger for him. Now and then he visits him and they get to spend some time together. This way he can also see if he’s looking ok and his house is clean etc.

His partner recognizes when he isn’t well by looking at his eyes. She also mentions to him when she feels that he’s hyperactive. This helps him to recognize an upcoming episode. He always seeks help by himself, because up till now, he’s always still able to do that during his relapses. If there would ever be a time when he would be so depressed that he wouldn’t be able to seek help, his partner will do so. His partner refuses to walk the dog in the morning when he’s depressed. This is a good thing because it means he needs to get out of bed, even on difficult days.

His daughter (42) experiences some burnt out complaints. She finds it difficult to handle her dad when he is depressed, he does not want to talk to her through the phone when he is in a depressed mood. It’s scary for his daughter and she tends to get upset if he shares too much information with her. The overall contact is fine.

During his depressive episodes he also experiences suicidal thoughts, but he knows it’s very difficult for children in general to lose a parent. So he wouldn’t do that.

A lot of people in his environment are informed about his depressive episodes.

Minutes Needs assessment interview Client 3 DD1707 dd. 10072013

*Subject is a 67 year old female, first diagnosed with bipolar disorder in the seventies.*

1. **Introduction**

She has a relationship but does not live together with her partner. The first time she experienced a manic episode it was very intense and it had a lot of impact on her. It happed when she was in college. She started to question herself ; who she was and what was happening to her. She had a lot of sleeping problems during that time and used Valium. The first episode had a duration of 1 year. After a few years she had her first relapse. After that her mood kept fluctuating. She already received intensive help for anorexia. Eventually she was referred to GGZinGeest and got diagnosed with bipolar disorder.

Her symptoms are very irregular. She is not able to prevent them yet but she is able to handle her symptoms in the right way. This shortens the depressive episode.

1. **How do you feel about your health and care services?**

It took a lot of time before she was diagnosed with bipolar disorder, although she was already treated for anorexia in a mental health care facility. She thinks that it would have been helpful if she would have been aware of her diagnosis at an earlier stage.

She found it difficult to have to change psychiatrists every year [comment; probably she was being treated by a psychiatrist in training, they switch places every year; RED]. She now has a regular psychiatrist but she thinks that she is too young. She would like to have one permanent (preferably middle-aged or older) psychiatrist with a lot of experience.

She doesn’t really lean on the care system and doesn’t experience a lot of support from the care system. She needs to handle her problems herself.

1. **What do you think about computers, tablets and mobile phones?**

She feels it’s all rubbish, we need to throw all that information and communication technology out the window. It gives her too much stimuli, and she gets disarrayed by it. She is very old fashioned and only uses her partner’s computer sometimes. She had a personal computer at her home but it made her restless. There is so much information on the internet. Sometimes she was longer on the internet than necessary and that was too much for her. So she got rid of it.

She’s aware of the fact that internet is a part of this society. Ordering, dealing with your bank statements. It is almost impossible to live without the Internet. She’s wondering if it’s all going to work out with the internet.

A program for this target group should be very simple, also the language that’s used should be really easy to understand. References and clickthroughs should be avoided or kept to an absolute minimum. It should not contain too much information. She gets upset very easily when something is not working.

1. **Video Calling**

She never used Skype. She would like to try it. She would use it if it would enable her to stay home and use videoconferencing instead of visiting GGZinGeest, that sounds good. It would be great if it would enable her to access a health care professional at any time of the day/night through videoconferencing.

1. **Sharing photos**

We did not discuss this topic.

1. **Instant messages**

She never used e-mail, although she can imagine the benefits of email. The amount of regular mail is decreasing. She can see herself using e-mail for cancelling or shifting an appointment.

1. **Entertainment**

She wouldn’t use a newspaper on the tablet, that’s too complicated. Music is also no option for her on a tablet, that’s also too complicated. Her old fashioned recorder player works fine.

1. **Social gaming**

She is not a gaming person and doesn’t like to play games.

1. **Tracking your health**

She checks her weight on a weekly basis. Eating goes well, it’s not necessary for her to monitor that very closely. When she is having a depressive episode she has no appetite. It would be interesting to track her health. She can get annoyed by receiving too many messages.

1. **Life chart**

She used it but it is not very useful for her. She doesn’t know why.

She would be prone to use a mood measurement but only on a weekly basis. It would be unnecessary and maybe annoying to track it every day when she is feeling well.

1. **Psycho-education and information**

She is well informed about bipolar disorder. She has a subscription on a magazine that’s focused on bipolar disorder. She also visits lectures from an association for people with a bipolar disorder and people in their surroundings. She doesn’t know how her meds affect her physically; what are the direct and indirect consequences. There are a lot of different types of medication, she wonders what’s the difference between them and how do they work?

She doesn’t know where to go or who to call when she feels she needs immediate help during weekends. She cannot recall receiving any information on this topic.

She received a lot of support from fellow sufferers in her first years when she received the diagnose. She recognized a lot of herself in them. Now she does not really feel the need for contact with other patients.

1. **Pleasurable lifestyle events**

She swims three times a week and also joins a walking group.

1. **Medication tracker and pillbox**

She has no problem with taking her medication on a fixed time every day. She can imagine that it would be convenient to receive reminders for taking medication. She doesn’t need this because taking medication is part of her life.

She makes the appointments for checking her blood herself. It would be handy to receive a reminder for this. She doesn’t need more information about the results from the blood test so she can interpret this herself, that’s the task of professionals.

1. **Pleasurable lifestyle support**

Information about social activities on the tablet would be handy, she thinks she will at least check the possibilities. She’s not sure if she would use it in the end.

1. **Independent living**

She doesn’t receive any help and lives independently.

1. **Role of informal caregivers**

When she’s having a very severe relapse, she stays with her sister for a couple of weeks or longer. Her partner also takes care of her when she is having a depressive episode. Both her partner and her sister often tell her when she is recovered that she had been a bit overactive the week before her relapse. That does not really help her, because then it is too late and the damage has already been done. [Comment: although from what she tells us, both sister and partner do have a significant role in helping her when she has a relapse, she seems reluctant to admit it. (‘in the end, it comes down to me. Nobody can really help me’). It is important for her to feel that she is in control of her own life].

Minutes Needs assessment interview Client 4 AN0907 dd. 14082013

*Subject is a 67-year old male, first diagnosed with bipolar disorder in his early fourties.*

1. **Introduction**

Subject is 67 years old. He is gay and has been with the same partner for over 40 years. They are married but have been living separately for several years. According to mr A this has only improved their relationship. He can recommend it to anyone who is married. He used to have a shop in men’s clothing in a prestigious part of Amsterdam. He no longer works there, his partner still owns and runs the store. He has had several manic episodes but has been stable now for quite some time. He has summoned a court order which states that his husband and psychiatrist both have the power of attorney to have him committed (even against his will) when they feel that he is manic and needs inpatient treatment.

1. **How do you feel about your health and care services?**

Mr A has been stable for quite some time. He has infrequent contact (every 3 months) with his psychiatrist and he has a conversation with his nurse practitioner every 6 weeks. Sometimes he feels that these appointments are pointless, he feels that it is not getting him anywhere. On the other hand, he is adamant that it is necessary for him to have regular contact with a mental health care practitioner, because of the fact that he has ‘derailed’ quite a few times. On most of these occasions, he does not realize what is happening and/or he has no way of warning others that he is derailing until it is too late. He needs someone to check up on him now and again. He dislikes the fact that he has to take medication to keep his mental health in check, but he knows from experience that he is worse off without it.

1. **What do you think about computers, tablets and mobile phones?**

Mr A thinks computers, smart phones and tablets are fantastic. He is a big apple fan. He owns an iphone, an ipad, and a mac. He used to have an ipod as well but it is malfunctioning. He feels other brands of computers are simply too complicated for older adults and that they often malfunction. However, his use of the computer and tablet are mainly restricted to e-mailing and surfing the web. He also reads the newspaper on the tablet.

1. **Video Calling**

Mr A has installed skype but has only used it once to call his sister when she was abroad. He feels no need to use video calling for his social contacts. Mr A does not have a large social circle. Besides his partner, he only has some nice neighbours near a boat that he owns in the suburbs of Amsterdam that he has some social chats with, but that’s it. However, when probed if he would like to talk to his mental health care practitioner through a video conference, he is quite interested. He feels that maybe it would be a bit awkward at first, and that it is vital that the connection is stable so that you do not lose contact. But he also feels that especially in times when he is stable, it might be easier and less time consuming than having to visit the clinic, which is quite a distance from his home.

He is also interested in having the possibility of more frequent but shorter sessions this way.

1. **Sharing photos**

Because mr A became quite restless and expressed the desire to end the conversation after talking for 70 minutes, we did not get round to discussing this topic.

1. **Instant messages**

Mr A uses e-mailing. He does not use text messages on his phone because he has a substantial tremor. This can also be a problem when he is required to use a mouse. He has no problems on the tablet, because the buttons are bigger. He would like to be able to contact his mental health practitioner through email to ask specific short questions, such as asking for repeat prescriptions for his meds, and to receive lab outcome forms via e-mail (or directly pushed to the tablet). Now he asks his nurse practitioner for prescriptions, she then has to e-mail his psychiatrist or he has to go to the desk and ask the secretary if she can ask the psychiatrist for a prescription.

1. **Entertainment**

Mr A uses his Ipad to read the newspaper. He has trouble reading books due to a lack of concentration. He can only read short columns. He prefers actual books to books in a digital format, although he does feel that the digital format is easy to read and access.

He has no interest in listening to music, or watch TV on the tablet. He does have about 800 songs on his ipad, but he only listens to music when he is driving.

1. **Social gaming**

Mr A has never used any kind of digital social gaming. He feels that he probably would not use this option, although when he was younger he did enjoy playing games, such as chess, monopoly and backgammon. He would rather play chess against a chess computer or an actual ‘live’ person than to be able to play chess with a friend from a distance through the tablet.

1. **Tracking your health/sleep tracker**

Mr A would like to lose weight and is trying to diet. He uses a scale every day. Sometimes he writes down what he weighs. He has joined a fitness club once a week. However, he has a chronic bursitis in his left shoulder and hip which makes it hard for him to exercise, or even walk a flight of stairs. He is taking quite heavy pain meds at the moment. Mr A also admits to a tendency to drink too much but he does not feel that this is problematic, as long as he does not drink and drive. On the other hand, he admits that alcohol use may have played a part in triggering previous manic episodes. He would be open-minded to having a health tracking device to monitor his weight and give him nutritional advice, such as ‘eat strawberries, they contain… which is good for….’.

Mr A has had some recent trouble sleeping due to pain arising from his bursitis. He acknowledges that disturbed sleep patterns, if this lasted for more than a week or a few weeks, have preceded manic episodes in the past. He would be willing to use a sleep tracking device which might also alert him or his husband when his sleep patterns get too disturbed.

1. **Life chart**

Mr A has never used a life chart and is unfamiliar with the instrument. He does feel that tracking his mood, sleep and alcohol use might be beneficial and might provide him and his clinician with extra clues to certain patterns. He would like to have an overview of previous manic episodes and the times when he was committed. He would even like to be able to access his patient records through the tablet. He is disappointed with the fact that this is not possible due to legislative restrictions (privacy concerns) in the NL.

1. **Psycho-education and information**

Mr A feels that he has very little knowledge and information with regard to his diagnosis and meds. He has received information leaflets when he first had a manic episode, but he explains that at that time, he was not open to any kind of info on what was happening to him. It was bad enough that he was hospitalized. He did not want to deal with anything else. Now, he would like all the info he could get and he would like to have the opportunity to read it several times. What is bipolar disorder? How does it work in the brain? How do the meds work? What happens if you drink whilst or after using lithium, depakine and zyprexa (three meds that he is currently using)? Can you drink milk with your meds? And so on. He feels that simple written info would be best, although he would also fancy video’s or books on bipolar disorder (such as the Stephen Fry video).

1. **Medication tracker and pillbox**

Mr A rarely forgets to take his meds. They are layed out on the kitchen table and this reminds him to take them twice a day. He does not feel the need for a medication tracking device or for reminders to take his meds.

1. **Pleasurable lifestyle support**

Mr A does not feel the need to interact with others much. His nurse practitioner and psychiatrist seem to think that it would be better for him to engage in more (social) activities, but he does not agree. He is doing fine this way. He walks his dog three times a day, he has a good relationship with his spouse and sometimes when he sleeps on the boat he shares with his husband, he talks to the neighbours. He has no contact with his neighbours in the city. He is not depressed and has never been depressed. He used to talk to customers all through the day. He found this entertaining, but sometimes he got fed-up with them as well. He no longer has any interest in his former job. He sometimes visits the store, but that’s it. He used to attend a group of gay patients, but he did not feel that it did him much good. They just sat there chatting and drinking beers.

Even still, he would like to have easy access to information on for example, where he might go to play chess with someone.

1. **Independent living**

Someone comes in once a week to clean his house. Other than that, mr A has no help with anything and he does not need any. He never cooks, he orders take out or buys a pre-cooked meal in the grocery store.

1. **Role of informal caregivers**

Mr A’s partner has the power of attorney to alert his mental health care practitioner and to have him committed in case of a manic episode. He is the first person to realize when he is derailing and needs help. His neighbours at the boat do know a little about his previous manic episodes, but only in the broadest sense. They might be able to alert his partner if they saw suspicious behaviour, but this has never happened before. Mr A feels that his partner would agree to participate in our study and he has no problem with us contacting him, although he feels that he might not have much time, because he still owns and runs the men’s clothing store.

Minutes Needs assessment interview Client 5 dd. 14082013

*Subject is a 65-year old female, who was diagnosed with bipolar disorder two years ago.*

**1. Introduction**

Mrs T. Is a 65-year female, who lives in Amsterdam with her husband. She has a son and a grandchild, who live nearby. She works as a healthcare professional (social worker) with people with tinnitus (hearing humming or beeping sounds without actual external stimuli). Two years ago, after a long period of heavy workload, she was admitted to the clinic of inGeest with severe mental health problems. She was diagnosed with bipolar disorder, and stayed in the clinic for three months. Currently, Mrs T. is on medication (lithium) and pays regular visits to her psychiatrist. She feels stable and does not expect severe symptoms to recur ("this was one time only"), although she admits having depressive episodes, especially during the winter.

**2. How do you feel about your health and care services?**

Mrs T. expresses negative feelings with regard to her stay in the clinic. She experienced a lack of information about the treatment, a lack of warmth from the nurses, and comments on the rigid, implicit behavioral regime in the clinic. With regard to her current regular consultations with her psychiatrist, she is positive, although she still would like to be informed more, especially with regard to her medication. She still wonders how it could have come to this. She has a lot of questions, and express an urge to discuss more issues with her psychiatrist. She realizes that these visits have to be brief, and does her best to bring up only the most relevant issues within the given timeframe.

**3. What do you think about computers, tablets and mobile phones?**

Mrs. T has experience with desktop computers. She learned that skill from her son, who urged her to buy and use the computer and who helped her a lot in the process. She has no experience with tablets and smartphones. She learns the meaning of the word 'swipe' during the session.

She owns a simple Nokia phone. Soon, she will switch to a Galaxy smartphone, which she will receive for her birthday. She is looking forward to that. Her husband already owns one, and on a recent holiday, she noticed that such phones can be handy (she mentions contact with people at home, emailed photo's, Internet searches on the go, and weather updates). Again, her son, who she refers to as 'my webmaster', has offered to help her.

**4. Video Calling**

Mrs T. used skype some time ago, but not at this moment. If her family would be distant, she would perhaps use it, but she does not feel a need for it right now. In treatment, she expects video calling to be useful for short, neutral, information exchanges, but not for personal, therapeutic conversations. In the latter case, she prefers face-to-face contact. Video calling 'feels' impersonal and there is too much focus on the face (feels awkward).  On the other hand she knows that online therapy can be quite effective. A pilot should be run, she says. If video calling would be introduced, she would like to be given the option to choose for either video calling or face to face contact per individual session .

**5. Sharing photos**

Mrs. T. mentioned  photo sharing during the discussion as one of the benefits of mobile smartphones. During the preview of the AAL tablet, she does not react much on the "photo-page".

**6. Instant messages**

Mrs. T does not like e-mail. She feels it takes too much time and it is complicated. She uses gmail, but since the last update, it does not work for her. E-mail has to be more user-friendly and less complex, she says.

**7. Entertainment**

Mrs T. does not feel the need to look for digital entertainment. She is too busy with other things as it is. She simply does not have the time for it.

**8. Social gaming**

See above, under 7.

**9. Tracking your health/sleep tracker**

Tracking sleep, mood and activity interests mrs T. She recognizes the value of recording these aspects in order to gain insight, both retrospectively as prospectively. Especially the latter, she adds. "I don't look back, but I plan a lot". She does not sleep well, and wants to exercise more. She strives for balance. It would be great if the system would help her with that. Again, she adds, this system should be extremely easy to use.

**10. Life chart**

She briefly used the paper-based life chart a year ago. She thought it was a horrible instrument, although she cannot remember exactly why. She felt it was artificial and irrelevant. At times, she just  entered random data. She does not want to discuss it much. During discussion of the lifechart, she is clearly agitated.

**11. Psycho-education and information**

Mrs. T. is a clear proponent of psychoeducation. She has many unanswered questions, especially with regard to her medication and the workings of the brain. If the system will provide psychoeducation, however, it is crucial that the information is correct. "There is a lot of faulty information on the internet". In her work, she noticed how people became anxious from online misinformation. She mentions the importance of text formatting. Font size should be big enough for older people. When we showed her the current tablet, she judges the font size to be somewhat too small.

**12. Medication tracker and pillbox**

Mrs. T. relies on medication reminders. Her son programmed one on her mobile phone, which is always in her bag. Every night at 11pm, she is reminded by a Liszt tune to take her medication. She absolutely loves it and she needs it. Without it, she says, she would regularly forget to take her medication."When I come home from choir rehearsals, I really am too tired to think about the medication." She mentions how a little note from her physical therapist, which she keeps on her table at home, helps her to complete daily excercises. Something similar might help her in her depression treatment.

**13. Pleasurable lifestyle support**

Mrs T. is an active citizen. She has a lot of friends, babysits for her son every week, and sings in a choir. Her goal is to do less, not more. She would nevertheless appreciate a simple listing of "things to do".

She does not see a lot of value in reading the newspaper on the tablet. She is content with the paper version. She would try the digital paper, if it would be available, but does not expect to switch permanently.

**14. Independent living**

Mrs. T. does not feel the need for a lot of guidance in this respect. She would appreciate some alerts for activities, but feels "in control" in daily life right now.

**15. Role of informal caregivers**

Mrs. T. has no interest in peer support. She has her own life, and does not want to listen to the stories of other patients. Her husband is supportive. He helps her to maintain balance. Her son is a great help in the digital realm.

**Other remarks during Tablet preview:**

Mrs. T appreciates the global look-and-feel of the demo app. The word that comes up to her is "clear". The calendar would be more user friendly when it would display items on the current day and time automatically (i.e, without swiping). She would prefer a tablet with a somewhat bigger screen.

Minutes Needs assessment interview Client 6 28082013

*Subject is a 66-year old female, who was diagnosed with recurrent depression.*

**1. Introduction**

Mrs Z Is a 66-year female, who lives in Amsterdam and has been single for a long time. She divorced her husband when she was 27 years old. She used to do administrative work for KLM at first and later she worked as a waitress in bars. Together they had three children, two daughters and one son. She is fond of her grandchildren and occasionally babysits for them. Her ex-husband and her had not had any contact for years on end, and neither did her children. He has passed away a year ago and has made her and her children responsible for his affairs, and handling the funeral arrangements. This came as quite a shock to the family and for ms Z., it set off a relapse into depression. Ms. Z has no pension and only receives a social security check for older adults. She finds it difficult to get by financially.

**2. How do you feel about your health and care services?**

Ms Z. is content with the way that she is being treated by her clinicians. However, she would like for the antidepressants to have more of an effect. Although she does feel better when she is on meds, she feels that it is still quite a struggle and that they do not work as straightforward as her meds for hypertension. As long as she takes them, her tension is okay. The same does not apply to her mood. Her social worker would like her to be a little more active, because it would benefit her mood and she has gained a lot of weight, which is not beneficial for her health. She suffers from arthritis. Ms Z. feels that her antidepressants are the cause of her weight gain. She used to have a normal slim figure. Her arthritis makes it painful for her to walk around or take the stairs. She feels that the pain also makes her depressed and therefore she is ambivalent towards her social worker’s advice to be more physically active. She has recently applied for and has received a scoot mobile and is very enthusiastic about this. Now she can move around and do her groceries without pain. This has made it possible for her to go out more, and she does feel that her mood has improved, although she is not sure whether this is the reason. She does acknowledge that it would benefit her mood to go out more and meet other people, but she feels that everything she would like to do costs money. She stays indoors more than she would like because she feels she can not afford to go somewhere.

**3. What do you think about computers, tablets and mobile phones?**

Ms Z has no experience with computers whatsoever and is very ambivalent towards them. She is convinced that it would be too difficult for her. She has trouble concentrating. She failed to get used to the new digitalised public transport card and does not use public transport anymore. She uses a special senior taxi service (connexion). She finds it difficult to even use her senior cell phone, which she only uses to call people. She often forgets to take it with her, it’s just not in her system. She has never sent or received text messages or e-mail. She is not easily motivated to use a tablet, although she would be willing to try it for the study. She mentions that she has tried to use a computer mouse once and that she failed to be able to move the cursor on the screen in the direction she wanted. When I show her the tablet and encourage her to try and push a few of the apps, she just sits there silently but seems to be afraid to actually do something with it. She responds mainly to suggestions that the tablet might facilitate contact with others.

**4. Video Calling**

Ms. Z. is ambivalent. Although she understands that video calling can be great for people who can not see each other in real life due to distance, she prefers actual contact. She does not feel that it would really be an addition to her current treatment at first, although later on in the conversation she rephrases and states that it might be good to be able to contact someone quickly in case of a sudden lapse in her mood (crisis). Her sister lives in the east of the Netherlands. They see each other on a regular basis, because her sister visits her. Ms Z. does not travel much due to her arthritis. However, her sister has recently been diagnosed with lung cancer and she is worried that she might not be able to see her as much. Perhaps in that case it would be nice to be able to see each other when they are calling on the phone.

**5. Sharing photos**

Ms Z finds it interesting that the tablet might also show pictures of her children and grandchildren.

**6. Instant messages**

Ms Z finds it a bit strange that her daughter always seems to be busy working, even though she is home and she is visiting her. She is always doing something on a tablet. Her grandchildren will sit in a row on the couch and will also be behind a screen of some kind. They do not look like they are amusing themselves when they do this. They all look so serious. However, she does feel that it might be nice to be able to receive short messages from her children and grandchildren, even when they are busy working.

**7. Entertainment**

Ms Z has no idea whether she would be prone to read the paper on the tablet. She hardly reads at all, it is too difficult for her to focus.

**8. Social gaming**

Ms Z does not like to play games and has no interest in this. Her younger sister is very enthusiastic about gaming on the tablet with others and plays wordfeud and other things and sometimes she is jealous that her sister gets so much enjoyment out of this. But she feels it would not be her thing. Her grandchildren have tried to get her to play some kind of computer game on a tablet, but this ended up with her being the laughing stock because she had no idea how to work the controls.

**9. Tracking your health/sleep tracker**

Ms Z feels that her weight gain is caused by her meds, although she does state that her eating pattern is not healthy. She hardly eats at all during the day up to about three in the afternoon, and then when she does eat she tends to eat unhealthy food (snacks, cake). She does not feel that anything would help her change this. It is just the way it is.

**10. Life chart**

Ms Z initially does not respond at all to the suggestion that it might be beneficial for her to keep track of her mood, or any other aspects (such as sleep or activities) that might affect her mood. It is just the way it is, ms Z does not seem to believe that anything she might do will have a significant effect on her symptoms. When prompted that her daughter in law or her sister might receive an alert to call her or visit her when she has several bad days, she does seem to react a bit more positively.

**11. Psycho-education and information**

Ms Z feels that she knows just about everything she needs to with regard to her symptoms and her meds. She does not like to seek out information on the internet, because she might also read things that would upset her. She likes to watch medical Tv programmes however. This is also how she learned about ECT and that the treatment is much less invasive than it used to be.

**12. Medication tracker and pillbox**

Ms Z has a drawer in her cabinet that has her meds all neatly in a row. She uses nine different drugs, but has no trouble in keeping track of when and what she has to use.

**13. Pleasurable lifestyle support**

Ms Z likes the idea that she would be able to look up info on activities in the area on the tablet. Because of her financial situation, it would be important for her to know the costs. She is interested in meeting other people. She has been single for a very long time and likes to drink coffee at a nearby terrace, but it’s not as much fun on your own. She heard about people dining together at certain institutions for only 3 euros. She would be interested to know where she might find such a place.

**14. Independent living**

Ms Z has home care to clean her apartment. She uses a senior taxi service (connexion) and her scoot mobile if she wants to go somewhere. With connexion she can travel for up to 25 km from her house, which is just enough to visit her daughter in Purmerend. She also has a valys subscription, with which she can take a taxi at very low cost to travel longer distances (up to 400 km a year). She also has someone from the catholic association for the elderly to help her with her tax forms. She has no trouble arranging all these things on her own and does not feel that having these kinds of things pre-installed on the tablet would help her.

**15. Role of informal caregivers**

Her children and her always used to be very close. However, her older daughter also sees a psychiatrist and has some mental health problems of her own. Both her son and older daughter tend to react quite strongly when she is having a relapse and she has had a few consultations with her daughter and her social worker in order to create a bit more emotional distance between them. Her son has also expressed a need for more distance. Ms Z. understands that both her daughter and son get upset when she is not doing well and accepts the fact that they are a little less involved . Her younger daughter, who lives in Purmerend, is less emotional and does not seem to have this problem. Ms Z has moved a few years ago to be able to see them more often and now lives close by to both of them. She used to see them quite frequently. However, since a couple of months, her children have fallen out with each other and as a consequence do not visit her as much because they worry that they will run into each other at their mom’s house. This was very difficult for her at first but lately, she’s been able to handle the situation better, although she still feels it’s a shame and that they should make up.

Her daughter in law works at a nursing home and is the one who usually arranges things for her when she needs something. She is less emotionally involved and so it is easier for her to help her than one of her kids. Ms Z also likes to talk to her older sister, because she has the same condition, is also on antidepressants and understands where she is coming from.

Minutes Needs assessment interview Client X dd. …17092013

*Subject is a 66-year old female, first diagnosed with recurrent depression at age 46.*

**Intro:** mrs K. used to be a high school teacher. She is married and has three children (two daughters and a son). She is very fond of her family. Her children are all out on their own now, she lives with her husband, who takes good care of her. She works as a volunteer at a gardening center.

Mrs K. has no idea what set off her depressive episodes. She did suffer a traumatic experience, but she is not sure whether this triggered her first depression. About a year after this experience she was first hospitalized at the inpatient clinic at Ingeest with a severe depressive episode. After that she was ok for 5 years, but then she experienced another depressive episode. The second episode was more severe than the first and did not respond to antidepressants. She received Electro Convulsive Therapy (ECT), which was quite scary for her at first, but it did help her recover. A disadvantage of this kind of therapy is the memory loss. She has gaps in her autobiographical memory. For example, she can’t remember where she went during her holidays a few years ago. Sometimes the memories come back when she sees pictures (reminders),but this isn’t always the case. She knows that people who are severely depressed don’t always remember things that happened during their depressive episode. That can also be a reason for her memory loss. Mrs. K. had a lot of relapses and for every episode, she received ECT and she recovered quite quickly. Her last depressive episode was in April, since then she’s been feeling better.

1. **Patient’s Care**: Due to the fact that mrs. K. relapsed quite often, the psychiatrist advised her to have a continuing monthly ECT treatment. She has been on monthly ECT treatment for over a year. mrs. K. has been doing well for nearly 6 months and told her psychiatrist she would really like to discontinue the treatment. She knows that this is a risk but right now, the ECT treatment takes up so much of her life, it makes her feel like a patient almost continuously. Her clinician insisted that according to the protocol she should continue the treatment. She felt like she had to fight for a change in the treatment. She thinks that treatment protocols can be a basis, but not everyone is the same, the care system should look at every person individually for a treatment plan. The patient should also have a substantial say in their treatment.
2. **Technology:** Mrs. K. uses the computer. She likes to use e-mail and computer games. She’s also on facebook, but as a silent member. She does not post anything but likes to be able to watch photos from her children on facebook. Her daughters probably have tablets, they are up to date with the latest innovations in the ICT area. All her children are really good with technology. She receives support over the phone from them when she has any questions while she’s using the computer. She doesn’t own a smartphone. Mrs. K. feels it’s a shame everyone is so busy with his/her phone, she thinks it shouldn’t replace real life social contact. People should just visit each other and have a chat, nowadays everyone is on some kind of device. She thinks that we can’t ignore the innovations but we need to find a good balance. She has a mobile phone, but only for emergencies like a flat tire. Other people always complain that they can’t reach her, but she considers this a good thing. Most of the time her phone is off. Texting is pretty difficult for her, working on such a small thing (keypad) isn’t easy. She owns an e-reader and enjoys using it, especially when she’s reading in bed because she doesn’t have to lift a heavy book.
3. **Video Calling** – When one of her children was in another country for a long time, mrs. K. used Skype to keep in contact. She really likes this option and used it a lot. However, she doesn’t feel the need to use this for her treatment. She has never experienced going to GGZinGeest for an appointment as a burden. When her mood drops, she calls inGeest for an appopintment. She’s not sure if having a video call in stead of a regular call will add anything.
4. **Sharing photos** – Mrs. K. likes to use Facebook to see pictures of her children and grandchildren. Personally she never adds photos or comments. It’s a possibility to be up to date about the lives of her family. She hasn’t learned yet how to send photo’s herself, she would like to learn this and use this option. She has asked her children for assistance.
5. **Instant Messages:** mrs. K. thinkse-mail is an easy way to keep in contact, and it’s very fast. When her child was far away she also used MSN messenger a lot. Emailing your clinician would be easy, she would probably use this.
6. **Entertainment :** She likes the paper version of the newspaper and wouldn’t use this on the tablet.
7. **Gaming –**She likes to play patience on her pc. She does not really feel that she would like to play social games online.
8. **Tracking Health :** mrs. K. feels that her depressive episodes come up out of the blue, it just happens. Her mood drops and she has difficulty sleeping. She tries to live in a healthy way with healthy food and exercise. Even when she’s depressed she’s really strict with her diet: never skip a breakfast, always eat a certain amount. When she’s depressed, it is so overwhelming that it can be an impossible task to do even the simplest things, let alone exercise. Maybe a reminder to keep exercising would work, she doesn’t know.
9. **Life chart –** She doesn’t know the lifechart, but she doesn’t want to keep track of her mood or other aspects of her mental health, because it would make her feel like a patient, when she’s finally feeling better. She would like to have more insight in previous episodes. She does not remember how many times she has been hospitalized or how many episodes she has had and when. Maybe using a Lifechart retrospectively would help her but she’s not sure, she would have to try it first.
10. **Help in a crisis :** When she feels bad, she calls GGZinGeest and makes an appointment. She has no idea who to call when she is in a crisis and it’s out of office hours. She has never had to before.
11. **Psycho-education & Information :** She would like to receive information about the important aspects of her treatment. But overall she has read a lot of information, and she thinks it’s enough. She is trying to accept her condition in stead of constantly wondering why this has happened to her.
12. **Medication Tracker & Pillbox –** She receives medication for her depression and her sleeping problems. She takes this in the morning and evening and almost never forgets this. She doesn’t feel that she needs a reminder for her medication.
13. **Pleasurable Lifestyle Support :** She likes todo fun things and reads a specific newspaper that includes information about things to do. She also uses the internet for this purpose. She would not need any info on the tablet for this purpose, she is quite capable of looking up the info that she wants on her own.
14. **Independent Living –** mrs. K. does not need or receive any support in this area.
15. **Role of informal caregivers;** mrs. K. does not burden her children when she is depressed. Her husband is very supportive and will also tell her if he feels that she needs help. However, overall, mrs K. knows when she needs help and will take action on her own. Her children are helpful when she has trouble with her computer.

Minutes Needs assessment interview Client X 19092013

*Subject is an 81-year old woman, diagnosed with recurrent depression.*

1. **Intro:** In 1992 ms. B. experienced a severe depression and was hospitalized for a year. She felt the therapy she received was not helpful. After hospitalization she felt better for a while but she relapsed. Now she is been treatment at GGZinGeest for a long time and can’t really remember when this started. She has received treatment from various psychiatrists over the years. Now she sees her psychiatrist every 2-3 months. Since her psychiatrist was on a vacation she has been having conversations with another caregiver, a psychiatric nurse. She never felt the need before, but now that she has been seeing someone who has the time to discuss how she’s doing, she does find this very pleasant. She really likes to have some more time to talk, her visits to the psychiatrist are always quite brief. She experienced a very difficult youth and she would like to talk about this sometimes. On the other hand, perhaps it is better not too dwell on the past, she is not sure. She lives together with a female friend. We visit the client at her home because she’s not very mobile. She doesn’t really know how her what has triggered or caused her depression, maybe the fact that she does not have a partner makes her feel lonely sometimes.
2. **Patient’s Care**: Her psychiatrist never has a lot of time for the consultations, sometimes that’s disappointing. If she would be able to continue seeing the psychiatric nurse, that would be good.
3. **Technology:** ms. B. owns a laptop. Her ‘roommate’ has an ipad, but she has never used this. Ms. B. looks for things on the internet and uses e-mail. Sometimes she experiences problems and the computer or the Internet doesn’t work. Her brother helps her out, he taught her how to work with it and he has installed all the programs on the laptop. She is able to use the mouse correctly. She doesn’t know if a touchscreen would be easier, she is used to her own laptop (without a touchscreen) and feels that it would be difficult for her to have to adjust to another kind of device.
4. **Video Calling** : ms. B. knew that is was possible to call someone via the computer but didn’t know that you were able to see each other during the whole conversation simultaneously. She thinks that’s a nice idea, but she thinks she would have to use another computer. When we tell her that it is also possible to install this on her laptop, she mentions that she wouldn’t know how to work with that. She needs a lot of explanation before she will be able to use those functions. She does not know if she would use videocalling for social contacts. She thinks picking up the phone is easier and is sufficient to stay in touch with her friends. Videocalling with her psychiatrist would be useful, since it is difficult for ms. B. to visit the clinic.
5. **Sharing photos** – no info
6. **Instant Messages :** emailing with her psychiatrist (e.g. for prescriptions) would be useful. However, ms. B. wonders whether her psychiatrist would have time to answer those messages. We explain that this is a valid point and that we will have to make clear appointments on when the doctor has time to respond (not continuously). Ms. B. often experiences that telephone calls asking for a renewed prescription for her meds are not always followed up correctly and this is unfortunate. She then finds out from the pharmacy that the prescription has not been sent.
7. **Entertainment –** The newspaper on the tablet would be handy because it’s difficult to hold the paper in her hands. She visits certain websites to watch the art of some artists. She listens to music, but is not so interested in it as she was before in her early years.
8. **Gaming :** She doesn’t play games on her pc now but would like to try it on a tablet.
9. **Tracking Health –** Her psychiatrist keeps track of her appointments for testing her blood. Tracking her health is not something she has thought about, she doesn’t know if she would use this. Her sleeping rhythm is ok, she uses medication for this when this is necessary.
10. **Life chart :** She has never heard of it and doesn’t know if she would use this.
11. **Help in a crisis:** When she’s feeling bad she just calls to GGZinGeest and makes an appointment Crisis situations do not really occur. Her symptoms are not that severe or sudden that she needs instant access to care. It would be nice to get some information about where to go in a crisis, just in case.
12. **Psycho-education & Information :** She received information about her medication, that was interesting to read. She would like to discuss this information because some parts were difficult to understand. She would like to be able to find information somewhere.
13. **Medication Tracker & Pillbox –** Ms. B. uses medication for her depression, for her sleep and for her heart. Sometimes she wonders if she really took the medication, therefore she now uses a pillbox with different compartments for each day. She distributes her medication for a week over the different compartments, and this way she can always check if she took it. A reminder for the medication would be handy. The sleeping pills help her sleep well, but make her drowsy.
14. **Pleasurable Lifestyle Support :** Ms. B. likes to walk, look at ducks, go to musea, work in the garden. She never gets bored. Her family visits now and then. She doesn’t really join a lot of activities, because she tends to think of all the hassle that it takes her to go somewhere, and then she will say; oh, I’d better stay in. Maybe she would make more use of this, if it was less complicated to go out (to find where what is, subscribe etc). She is a member of a Jewish association. This enables her to go to a gymnastic class, and she has joined a course in Jiddish. Friends have prompted her to join these activities. Sometimes this association also organizes a dinner for all the members. They send an email and give notes about the upcoming events.
15. **Independent Living :** ms. B. has a help who comes in twice a week to clean the house. She also assists ms. B. in getting the groceries, ms. B. goes with her to the shops. Ms. B. does not need or receive help in showering, getting dressed, or cooking.
16. **Role of informal carers:** Her friend, who lives with ms. B., is very close and sometimes she even joins ms. B. when she has an appointment at Ingeest. Her brother helps her out with her computer.

Remarks: overall, we get the impression from the interview that ms. B. would not like to have more responsibility or control in keeping tabs on her health, whether it be by looking up info on her meds or condition or by tracking her mood. She is more prone to consult Ingeest or others to advice her on what to do.3) Conclusion: summary and priorities

Summary of our findings

* Overall, the interviewed clients are enthusiastic about the general idea of the system and are open to most of our suggestions.
* Spouse and children and other relatives often play an important role in monitoring the patient’s health and may alert them when they feel the patient is hyperactive or not sleeping well, but in general when it comes to more specific advice on how to handle their illness, patients would rather rely on a health care professional because otherwise the relationship with family and friends may become too belittling. Also, clients do not wish to be a burden on relatives/friends(especially towards their children).
* Up to now, clients interviewed are relatively young (60-70 years old), well educated and computer smart to a certain degree. They do not all use a smart phone or tablet, but most can google info and use e-mail. We are trying to also reach the older old for a new round of assessments during the development process, to see if there is a part of the target group that may need more assistance in this area.
* Video calling might serve as an alternative to face to face contacts when people are doing relatively well and only need to speak to their doctor for a short time, eg. check-up, prescription, lab work, general questions regarding meds/symptoms. Clients would not prefer to just use video calling for every appointment. Clients are open to try video calling, but some say they have no idea whether they would like to contact their clinician in this way or not; they would have to try it first.
* Most clients have not filled in a life chart for a long time. They do feel that if we came up with a smarter version that would integrate different health domains and provide easy-to-read user feedback and perhaps set off alerts (directed towards the client) they would be more prone to use it.
* Clients have a need for more information on their illness, their meds (side effects/interaction effects, and specifically, how does it work in the brain) and would like to access this info on the tablet. The preferred format varies, but most are prone to use written information.
* Clients often do not know where to go and who to call in case of crisis when their own clinician is unavailable. This information is provided at different occasions, but sometimes, the info provided may be insufficient or people are unable to remember, especially if they are upset. Therefore, it is important that the system provide easy access to this information.
* Some clients like to have med reminders, some do not feel that they need them.
* Overall, about half the clients we interviewed prefer to read actual paper newspapers and books rather than be able to access these in a digital format. Same goes for music. Some do like to read the newspaper on a tablet but already use a tablet or smartphone for this purpose.
* all clients feel that it would be useful to be able to look into social/ pleasurable activities offered by nearby institutions.
* Most clients feel that some kind of health tracking device (motion tracker, diet advice) would be useful.
* Perhaps also due to the fact that the clients we interviewed were relatively young and healthy, clients did not express a need for added services such as meals on wheels, transportation services, etc.
* Clients have different opinions on whether they would like to use social gaming options on the tablet.

***Top 6 patient priorities for functionalities of the ecare@home system***

1. **Usability** The system should be easy to use for people who have little or no experience with tablets, swiping, etc. For example, video-calling should be easily accessed by clicking a photo with a picture of a camera or something similar. The system should also be easy to use for people with visual or hearing difficulties, tremors, etc.
2. **Flexibility** In light of the great heterogeneity of opinions we encountered in the assessments, the system should be flexible; patients should be able to switch certain parts of the system on or off (for example not everyone may be happy with automatic med reminders since they have their own system and this may be perceived as belittling).
3. **Information** relevant to your mental health: encompassing psycho-education, info on meds, information on what happens in the brain when people are manic or depressed, how the meds link in to this, how ECT works, etc. Info on where to turn at what time of the day/week in case of crisis (Desirable: short-cuts to information on courses, social activities offered by nearby institutions for older adults, options for patient groups or forums).
4. **Contact with care**: encompassing video conferencing to the health care portal, instant messaging to the health care portal, a crisis app
5. **Contact with others**: encompassing video conferencing to friends and family portal, instant messaging to the friends and family portal. (optional; social gaming with social contacts).
6. **Life chart** to aid self-management: smarter version of the current life chart that would integrate both mood and a limited set (e.g. max 4-5) of other health domains (e.g. sleep, activity) and provide easy-to-read user feedback and perhaps set off alerts (directed towards the client). Most clients would like to try using sensors to monitor sleep patterns and/or activity levels as long as the sensor itself is unintrusive (for example a bracelet).