APPENDIX

Supporting the journey of recovery

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APPENDIX

Supporting the journey of recovery.
A service & systemic design diploma project, Autumn 2017.

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Sunnaas hospital

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APPENDIX

Supporting the journey of recovery

This appendix shows the design process of the diploma project **“Supporting the journey of recovery”**.

Through different visual material this appendix evidences the process of researching the rehabilitation service, the process of defining areas for intervention, and finally the prototyping process of the three interventions designed and ran at Sunnaas hospital.

Index

Researching & analyzing

In this you will find different notes, sketches, journey maps, visualizations and diagrams developed during the research phase of the project. All of them enabled the creation of a holistic picture of rehabilitation at Sunnaas.

Sketching

Sketches were used to capture observations when shadowing caregivers and patients. Together with this, it was created a system to take notes guided by time (thicker lines in the notebooks). So, the left side of each page has a timeline that indicated the hour and the activity that was being done while observing or sketching.

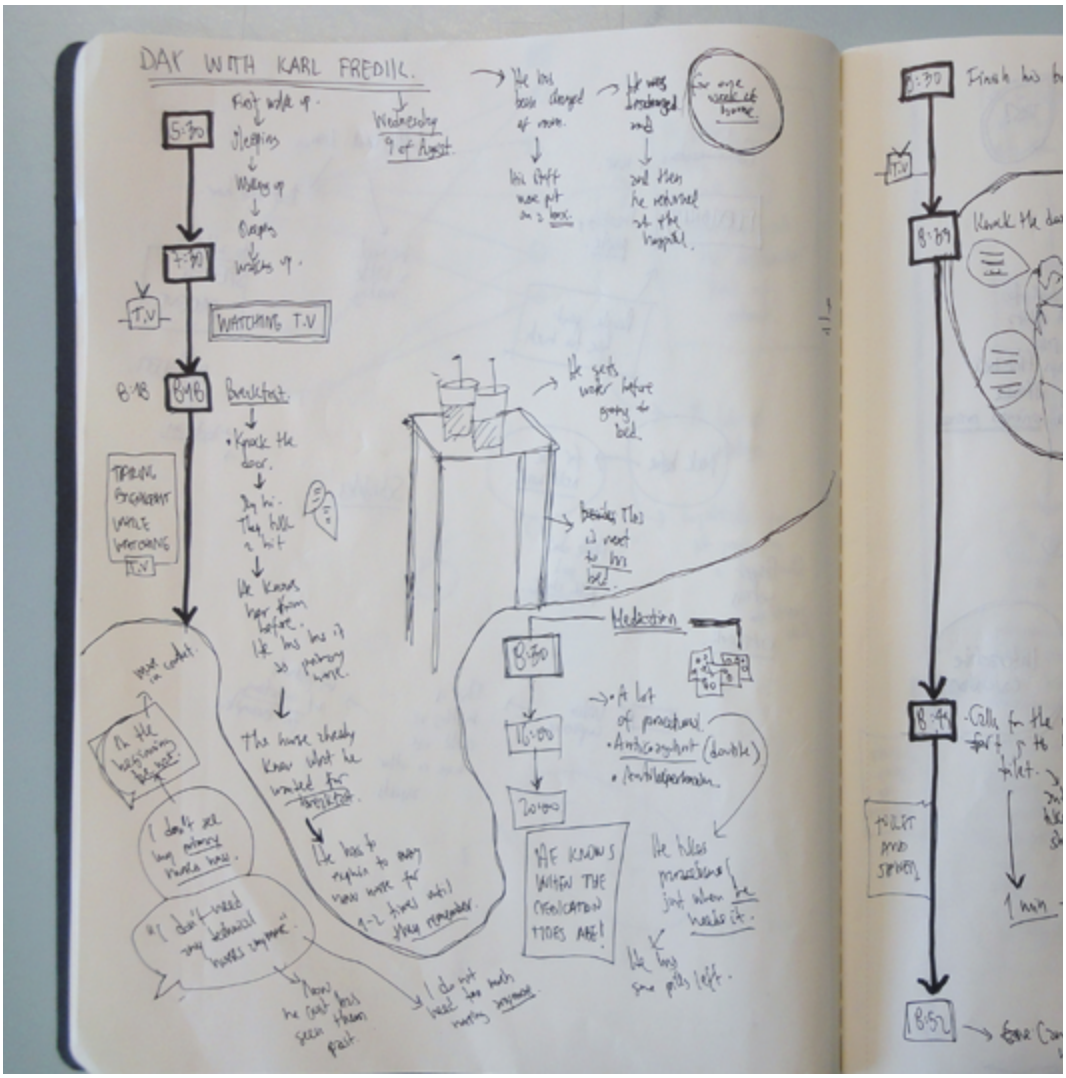


Figure 1. Taking notes on shadowing sessions [Own photo].

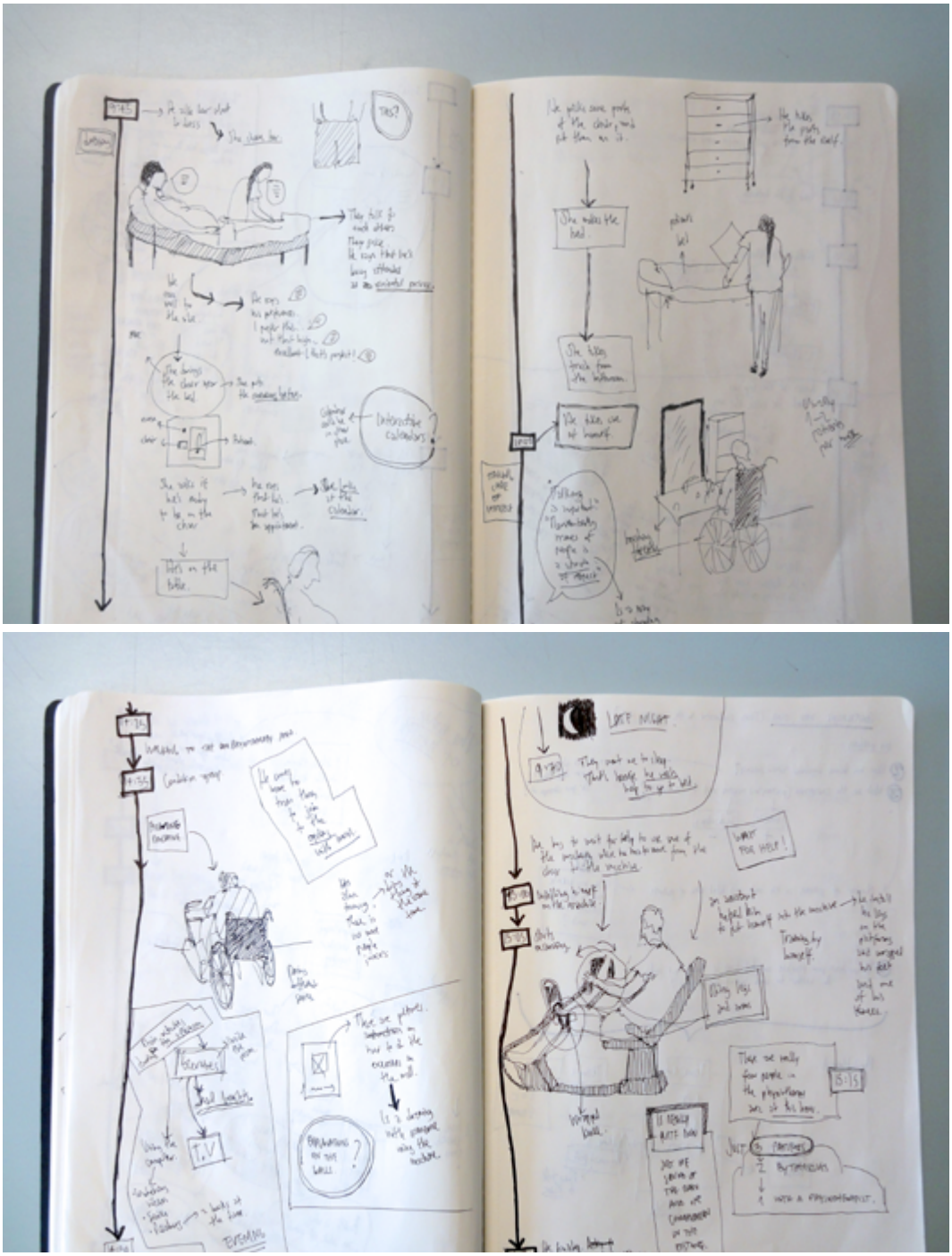
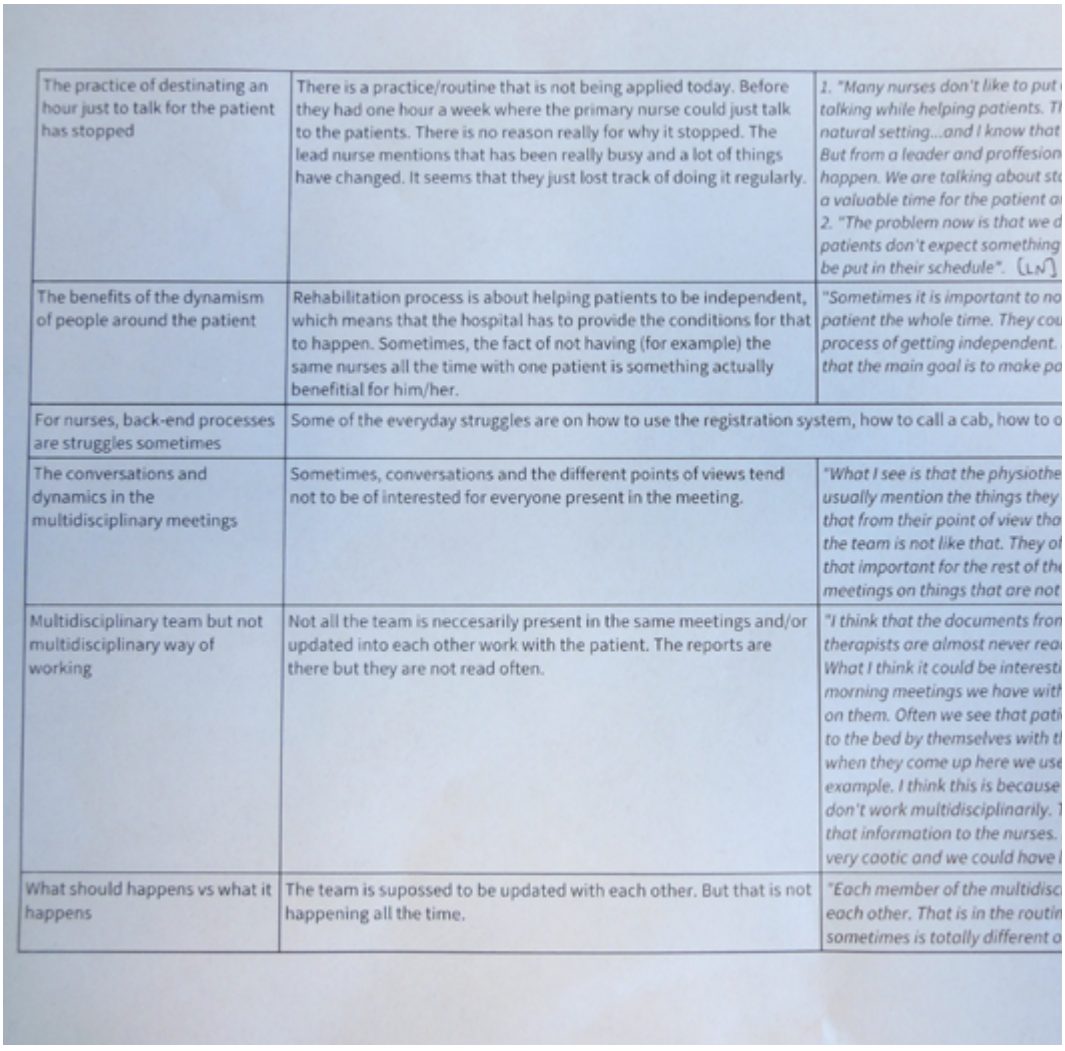


Figure 2. Taking notes on shadowing sessions [Own photos].

Analyzing conversations

It was established an structure to gather insights from the different guided conversations developed with patients and caregivers. This structure consisted on a table with 3 columns. In the first column are written the different topics addressed during the conversation, in the second one are the descriptions of what the interviewed was saying in each topic, and the third column is a space to put relevant quotes.



The practice of destinating an hour just to talk for the patient has stopped	There is a practice/routine that is not being applied today. Before they had one hour a week where the primary nurse could just talk to the patients. There is no reason really for why it stopped. The lead nurse mentions that has been really busy and a lot of things have changed. It seems that they just lost track of doing it regularly.	*1. "Many nurses don't like to put talking while helping patients. T natural setting...and I know that But from a leader and proffesion happen. We are talking about st a valuable time for the patient a 2. "The problem now is that we d patients don't expect something be put in their schedule". (LN)*
The benefits of the dynamism of people around the patient	Rehabilitation process is about helping patients to be independent, which means that the hospital has to provide the conditions for that to happen. Sometimes, the fact of not having (for example) the same nurses all the time with one patient is something actually benefitial for him/her.	*"Sometimes it is important to no patient the whole time. They cou process of getting independent. that the main goal is to make pa*
For nurses, back-end processes are struggles sometimes	Some of the everyday struggles are on how to use the registration system, how to call a cab, how to o	
The conversations and dynamics in the multidisciplinary meetings	Sometimes, conversations and the different points of views tend not to be of interested for everyone present in the meeting.	*"What I see is that the physiothe usually mention the things they that from their point of view tha the team is not like that. They o that important for the rest of th meetings on things that are not*
Multidisciplinary team but not multidisciplinary way of working	Not all the team is neccesarily present in the same meetings and/or updated into each other work with the patient. The reports are there but they are not read often.	*"I think that the documents fro therapists are almost never rea What I think it could be interest morning meetings we have wit on them. Often we see that pati to the bed by themselves with t when they come up here we us example. I think this is because don't work multidisciplinarily. that information to the nurses. very caotic and we could have*
What should happens vs what it happens	The team is supossed to be updated with each other. But that is not happening all the time.	*"Each member of the multidisc each other. That is in the routi sometimes is totally different o*

Figure 3. Table used to gather insights from guided conversations [Own photo].

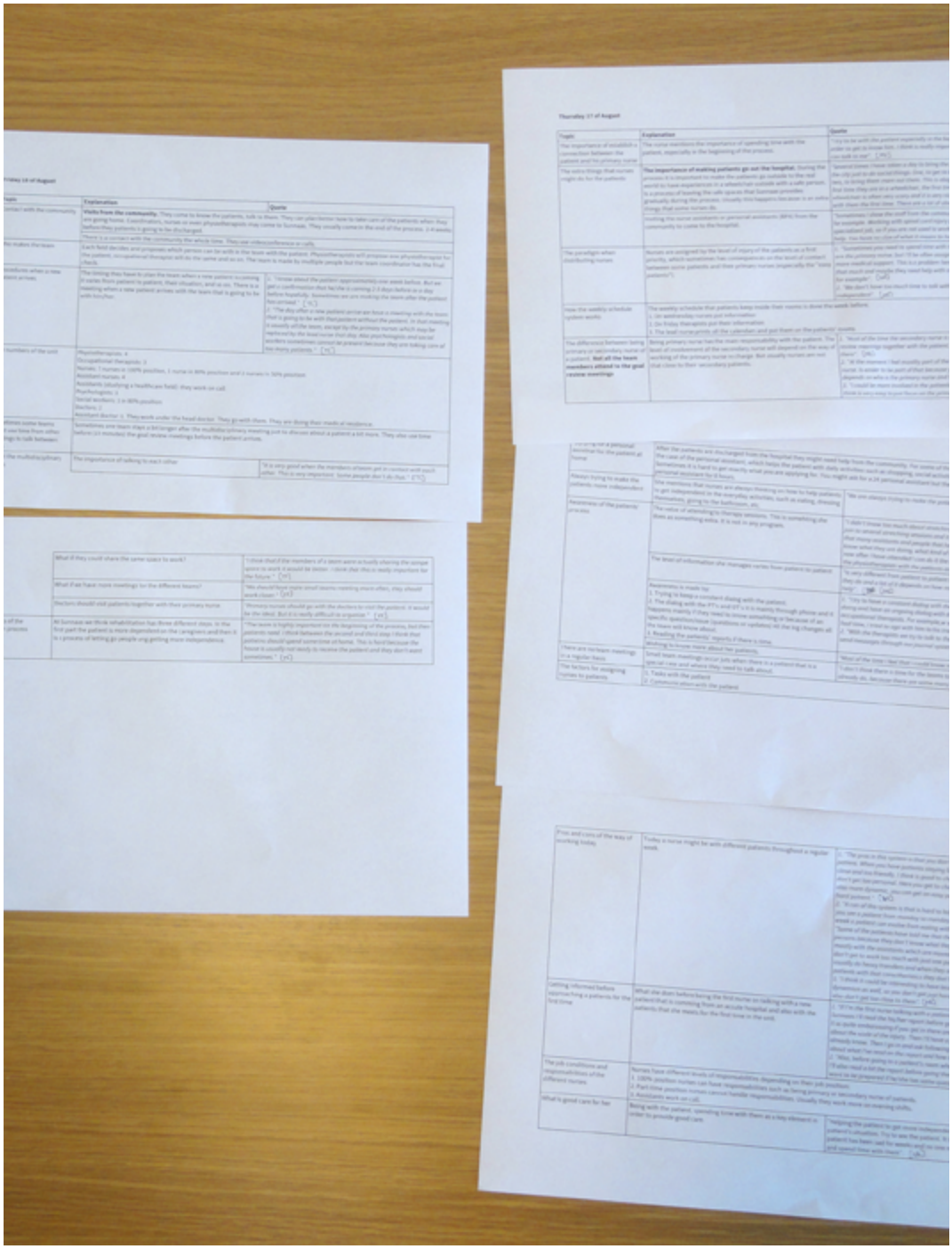


Figure 4. Tables used to gather insights from guided conversations [Own photo].

Mapping and visualizing

At the same time than information was being gathered it was being visualized through different diagrams, timelines and visual models.

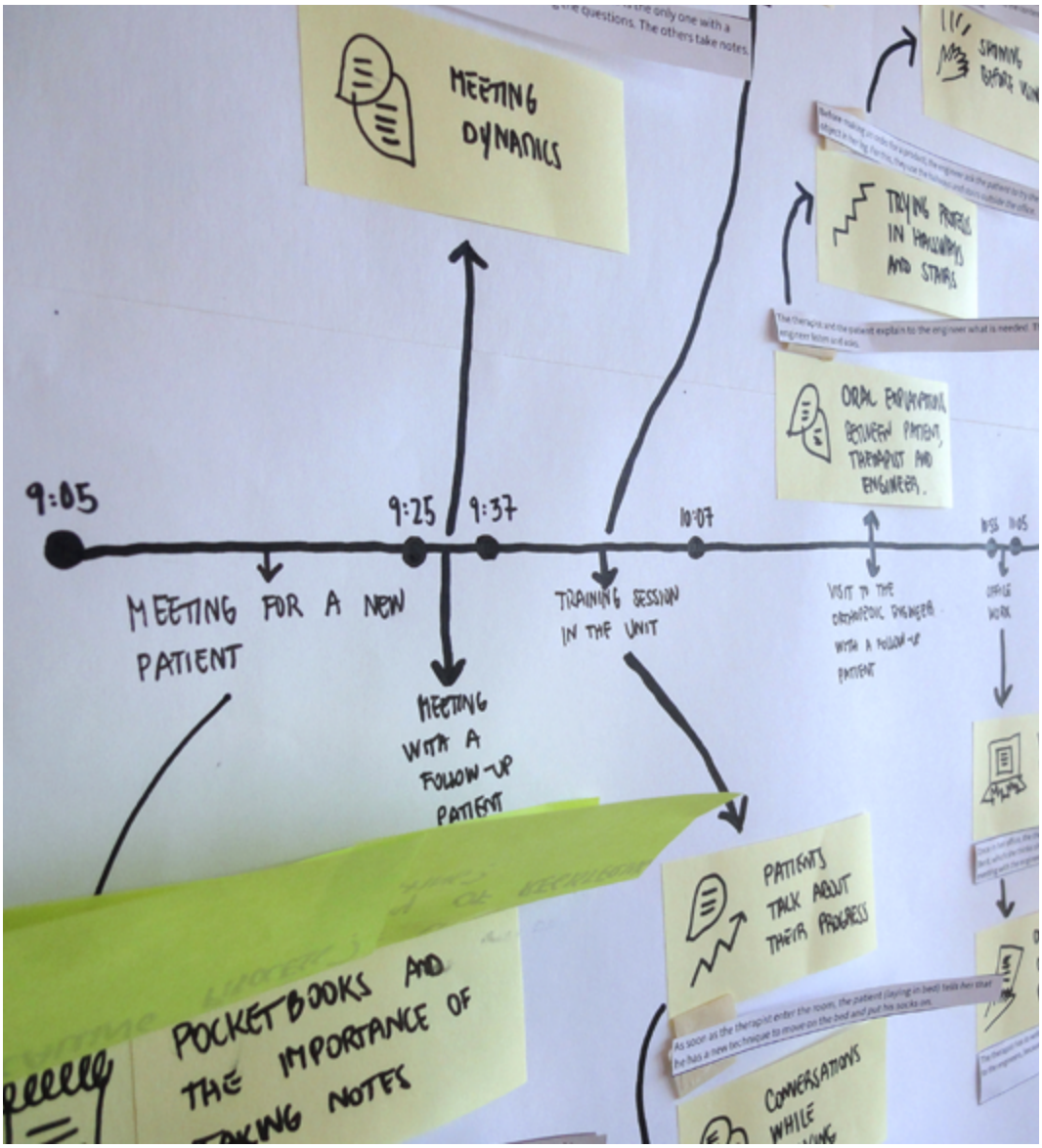


Figure 5. Visualizing a day with a physiotherapist [Own photo].

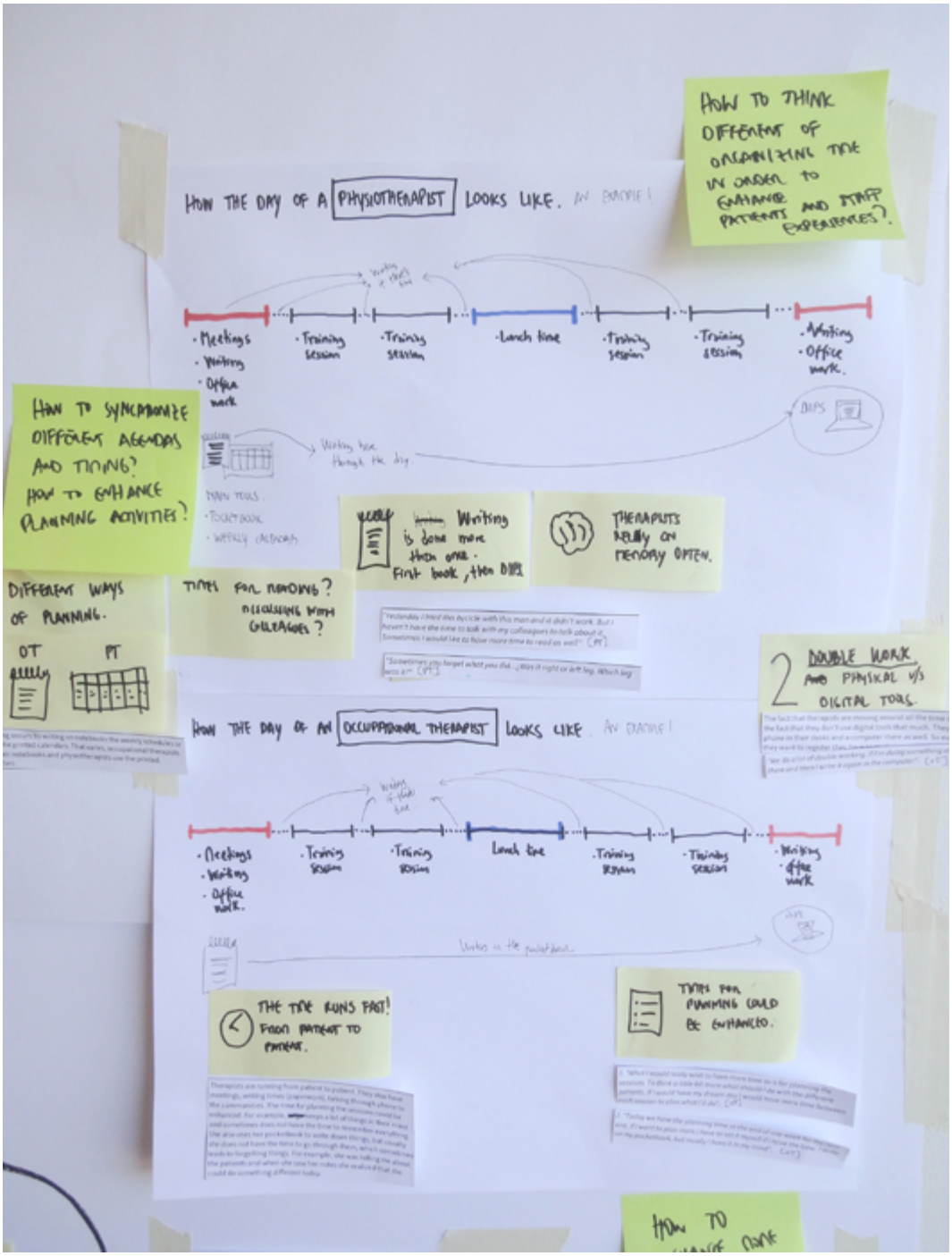


Figure 6. Visualizing how the day of a therapist look like [Own photo].

Figure 7. Making connections between different findings [Own photo].

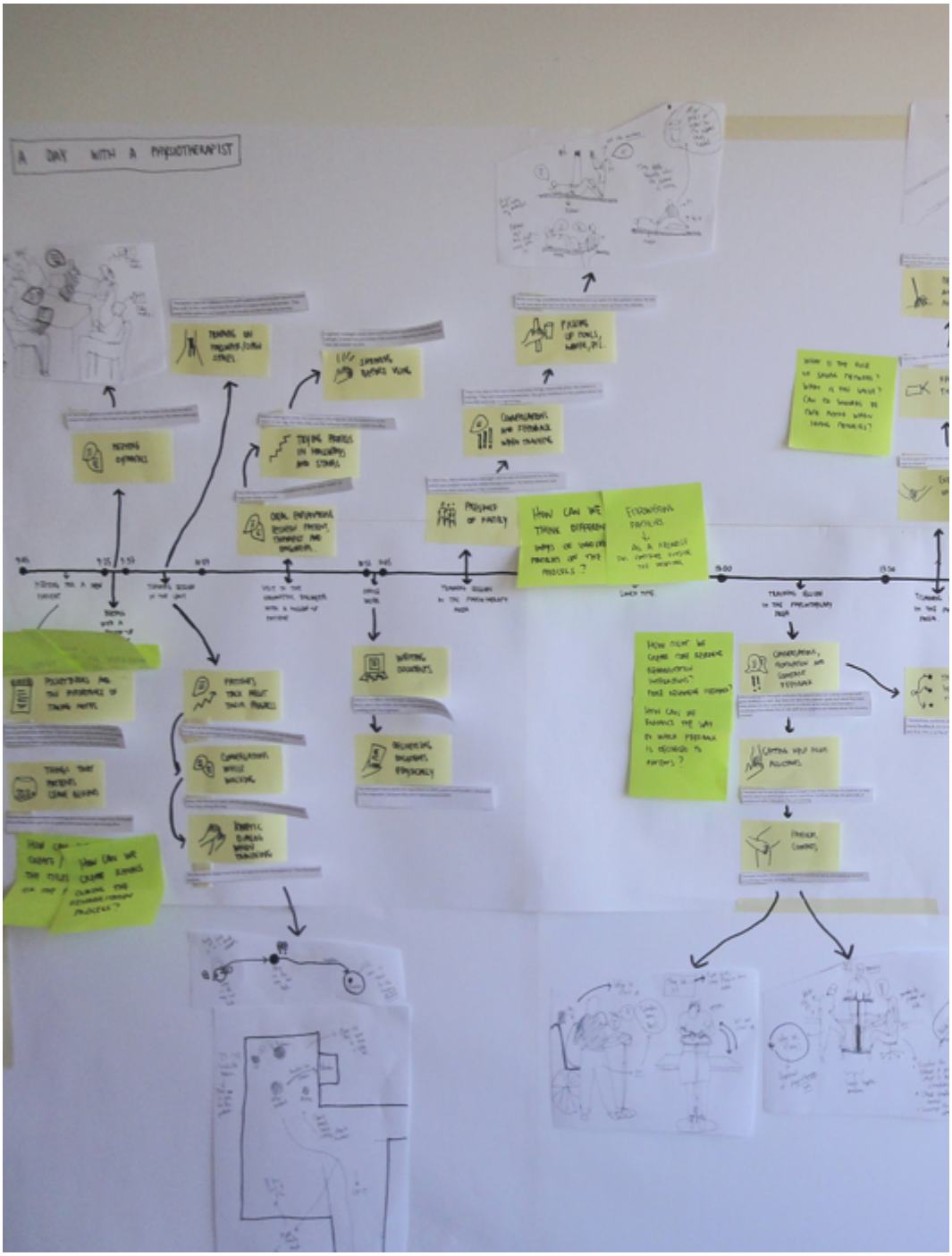


Figure 8. Connecting situations occuring in different areas of the service [Own photo].

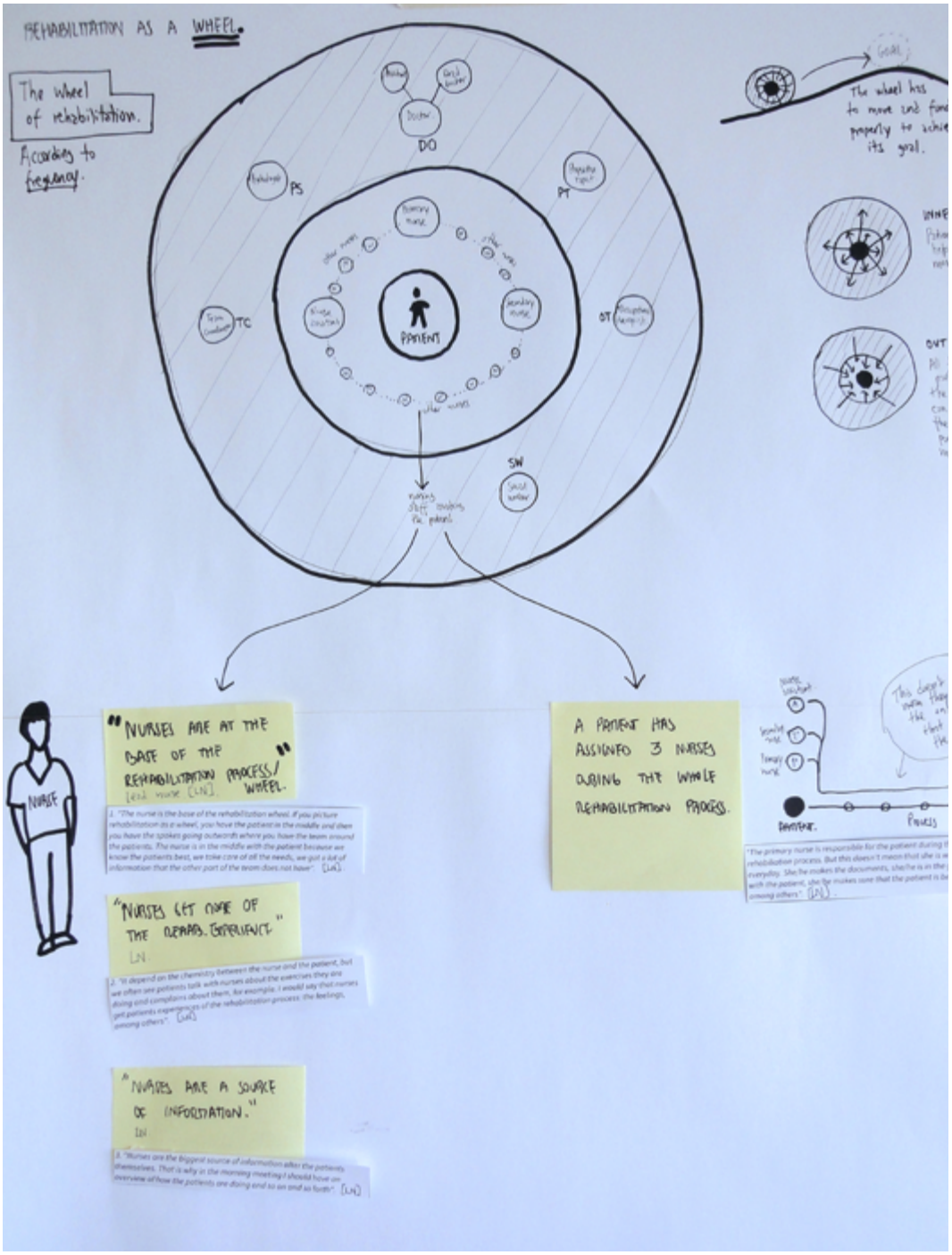


Figure 9. Visualizing insights from a conversation with the lead nurse [Own photo].

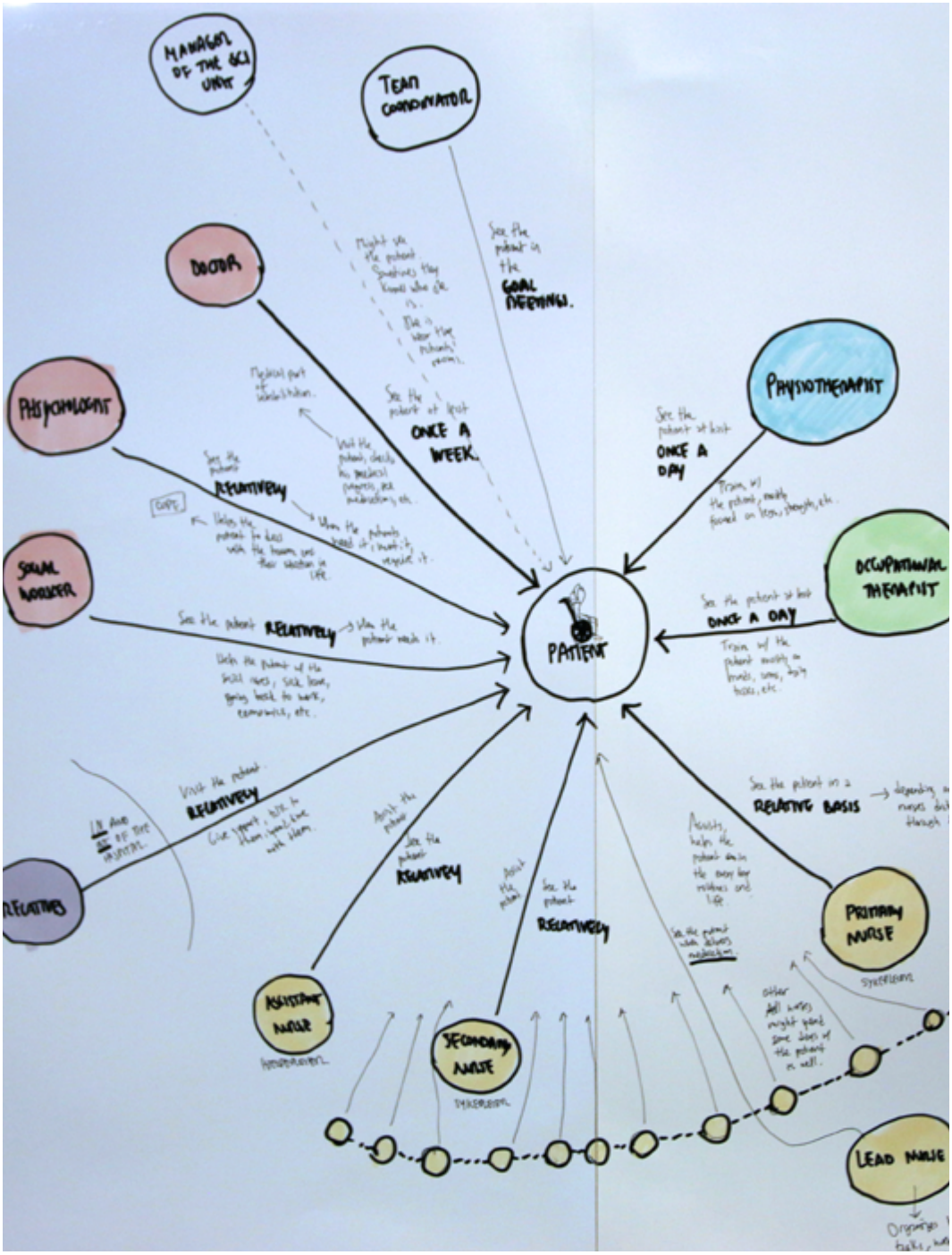


Figure 10. Mapping how the multidisciplinary team relates to the patient [Own photo].

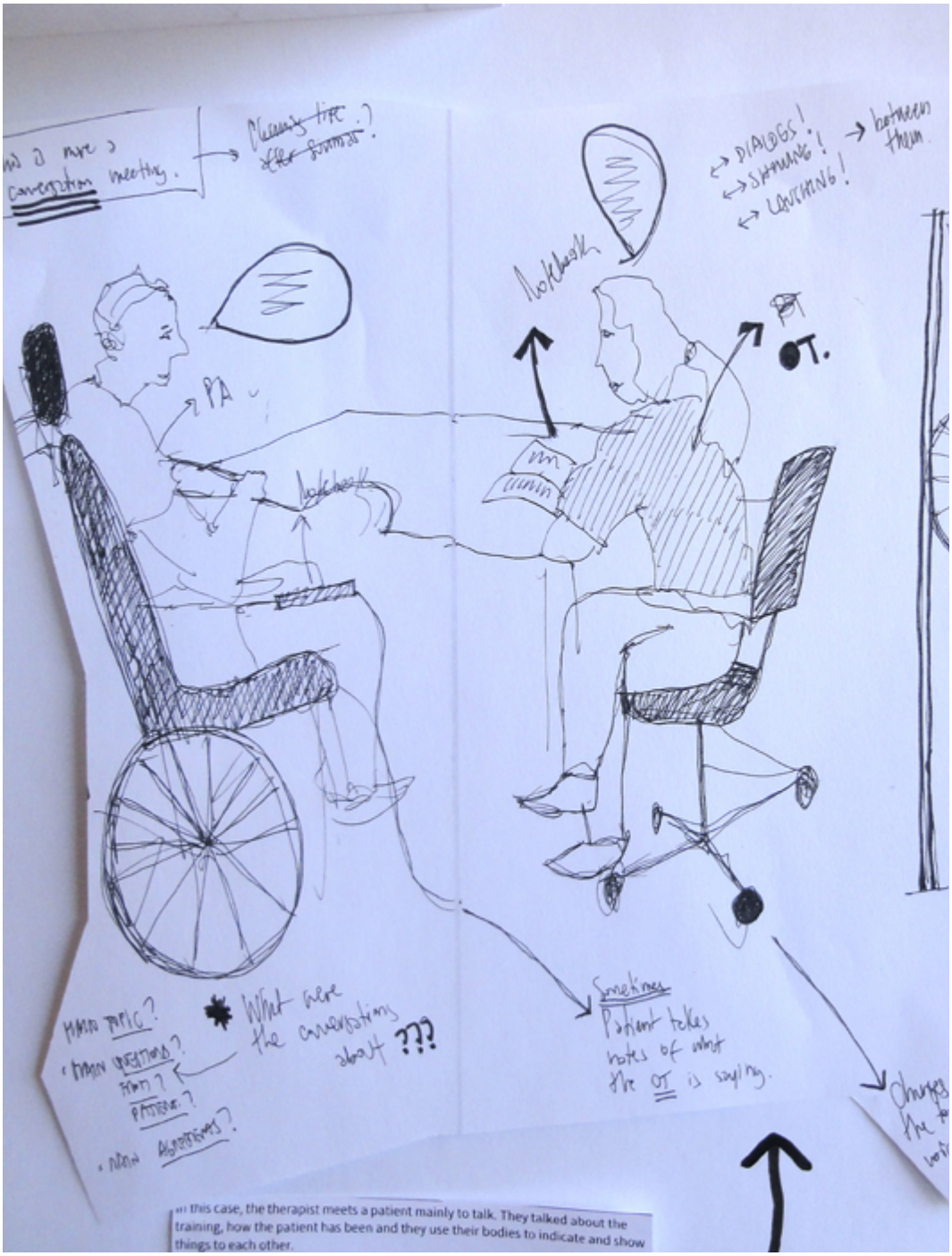


Figure 11. Sketching how the interactions in a therapy session work [Own photo].

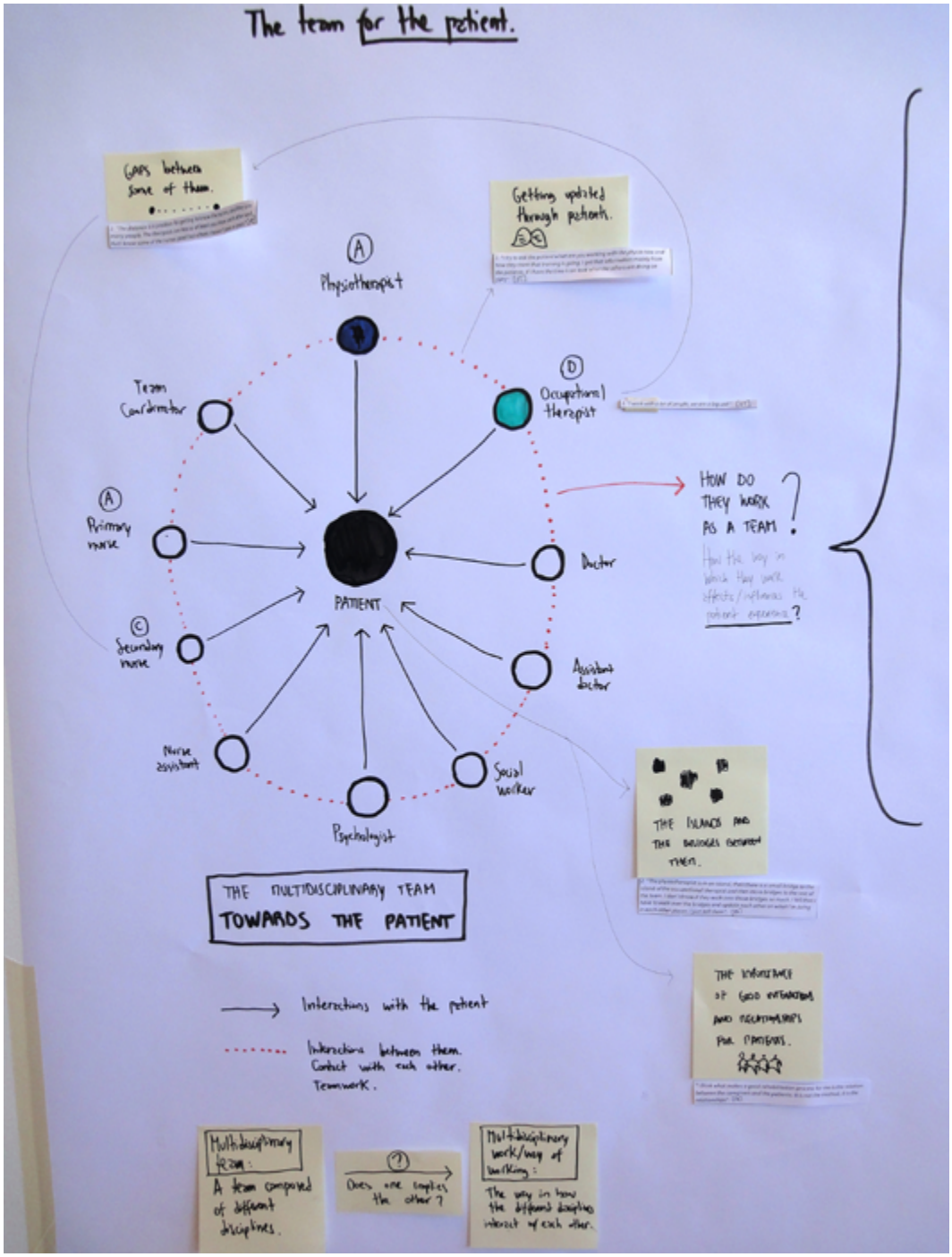


Figure 12. Mapping how the multidisciplinary teams work around patients [Own photo].

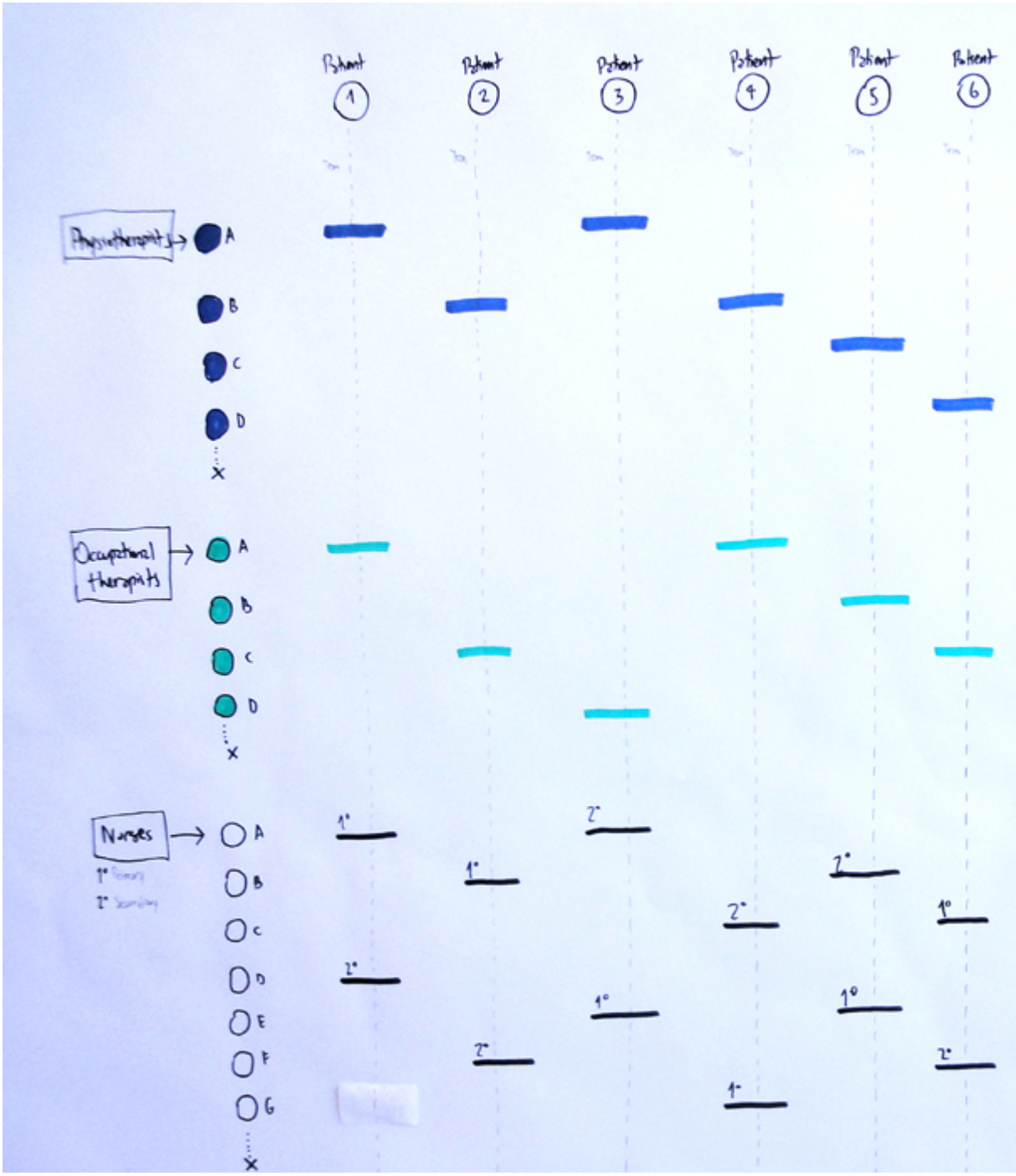
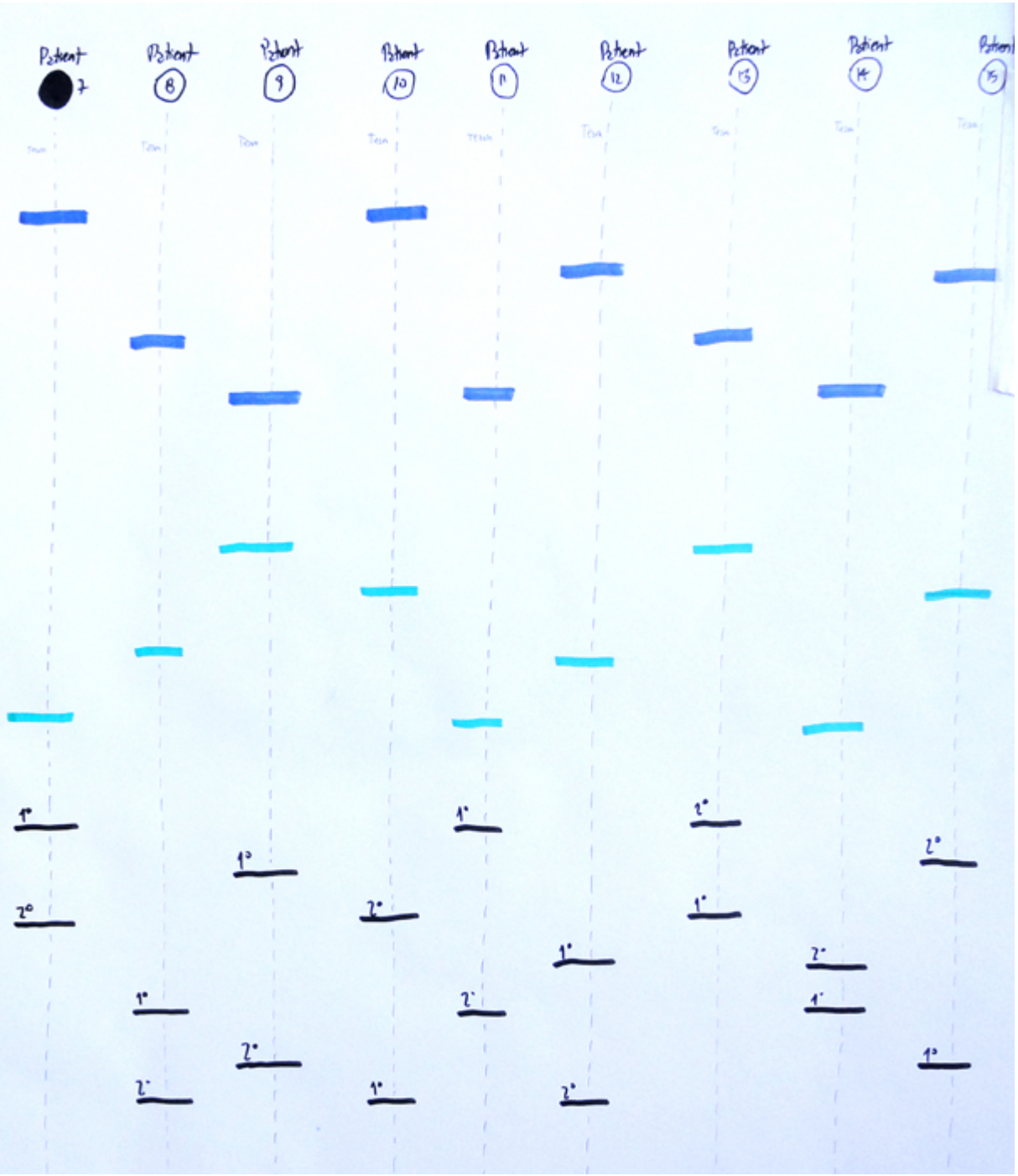


Figure 13. Visualization that shows how the multidisciplinary teams are assigned to each patient [Own photo].


Patient 7
Patient 8
Patient 9
Patient 10
Patient 11
Patient 12
Patient 13
Patient 14
Patient 15

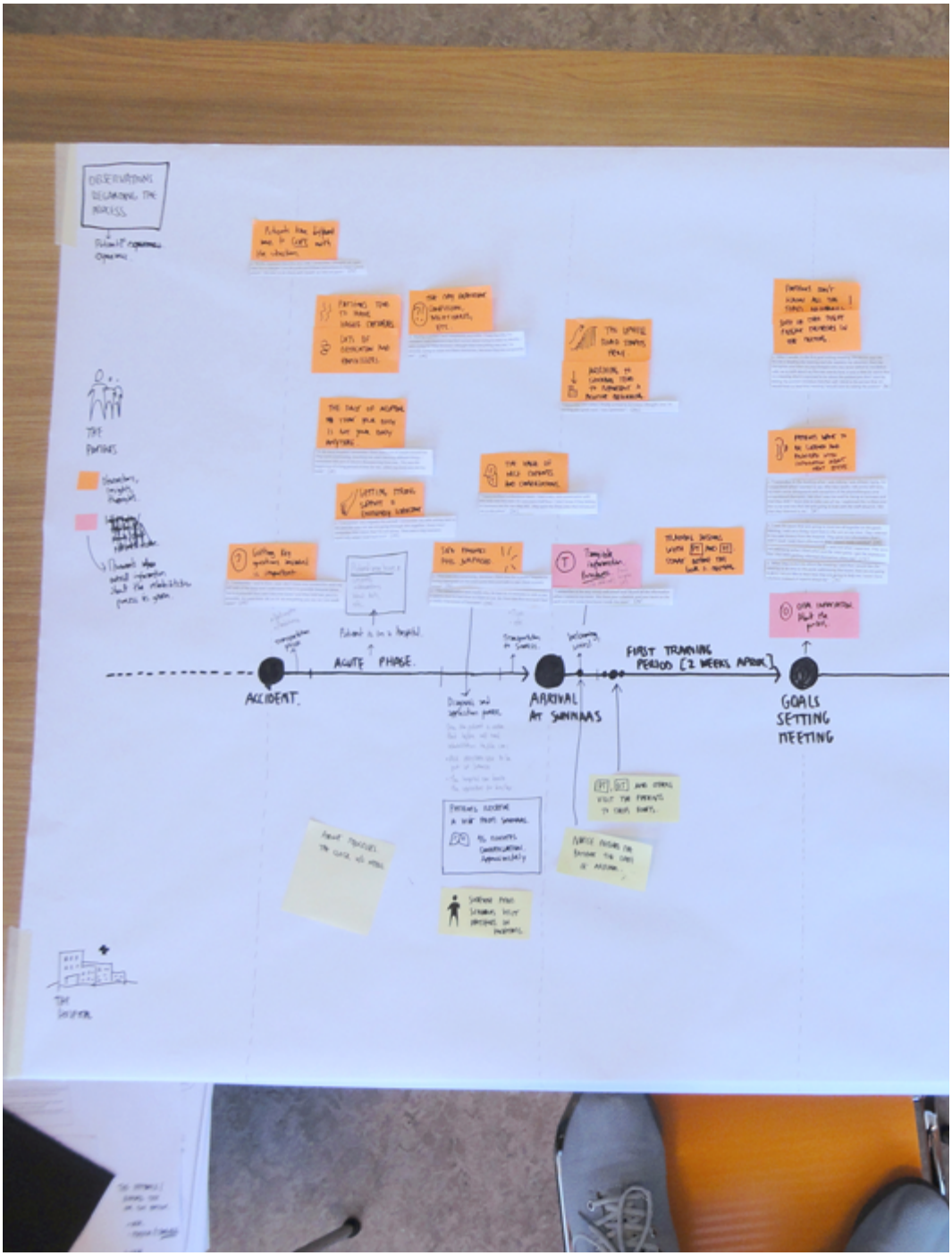


Figure 14. Mapping the rehabilitation process [Own photo].

Figure 15. Mapping the rehabilitation process [Own photo].

Figure 16. Mapping the rehabilitation service (at the bottom) and the patients' recovery journey (at the top) [Own photo].

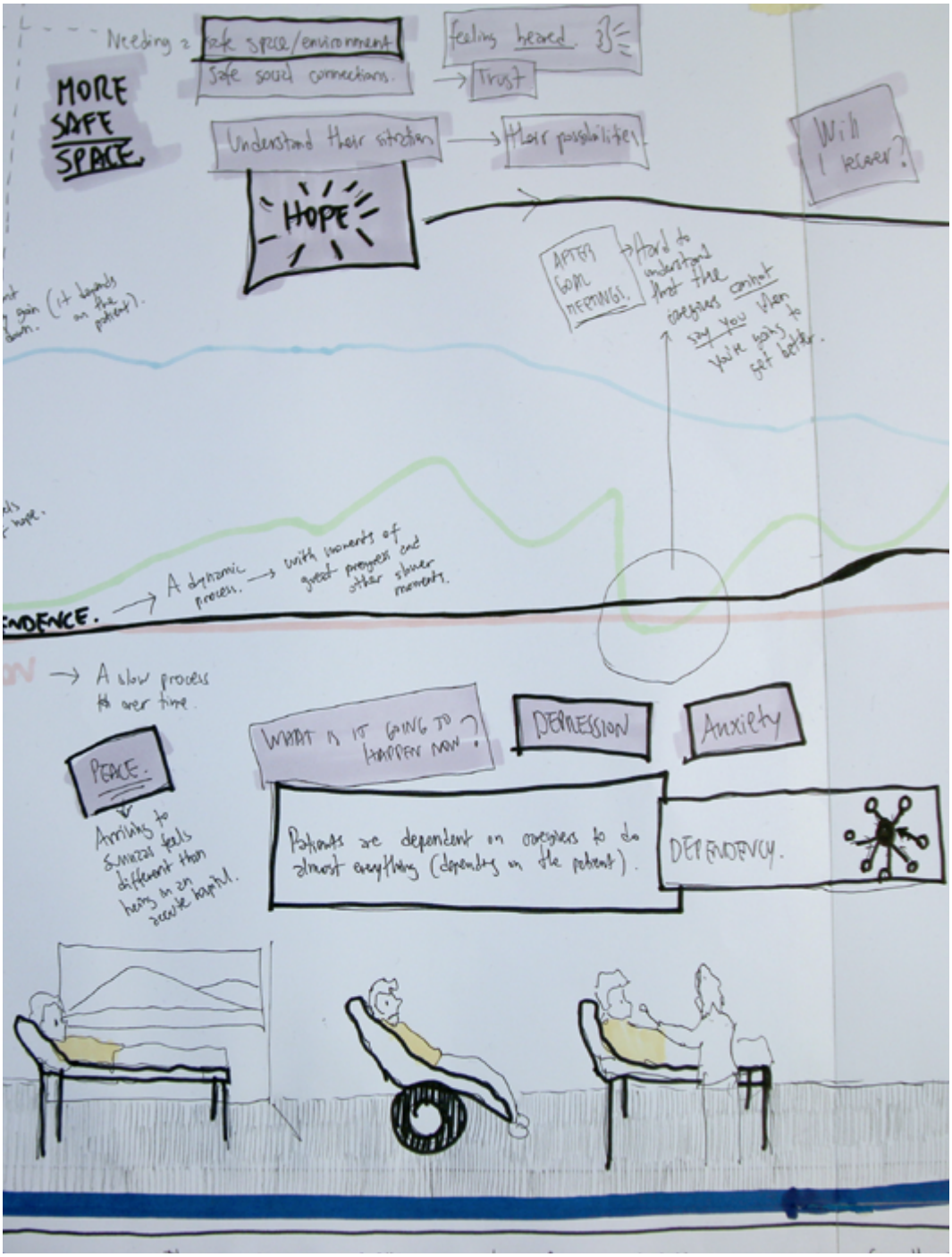


Figure 17. Mapping the patients' recovery journey [Own photo].

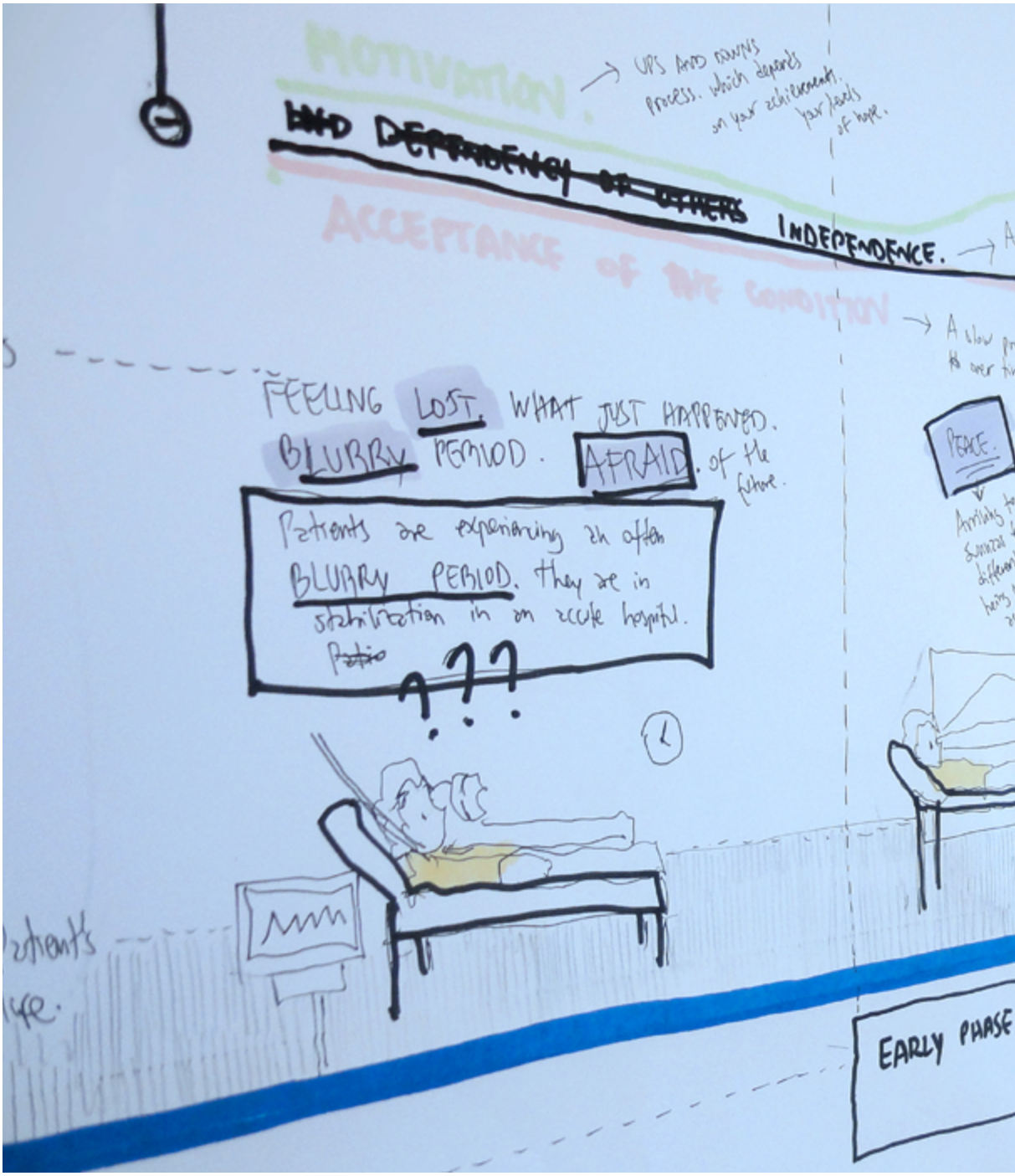
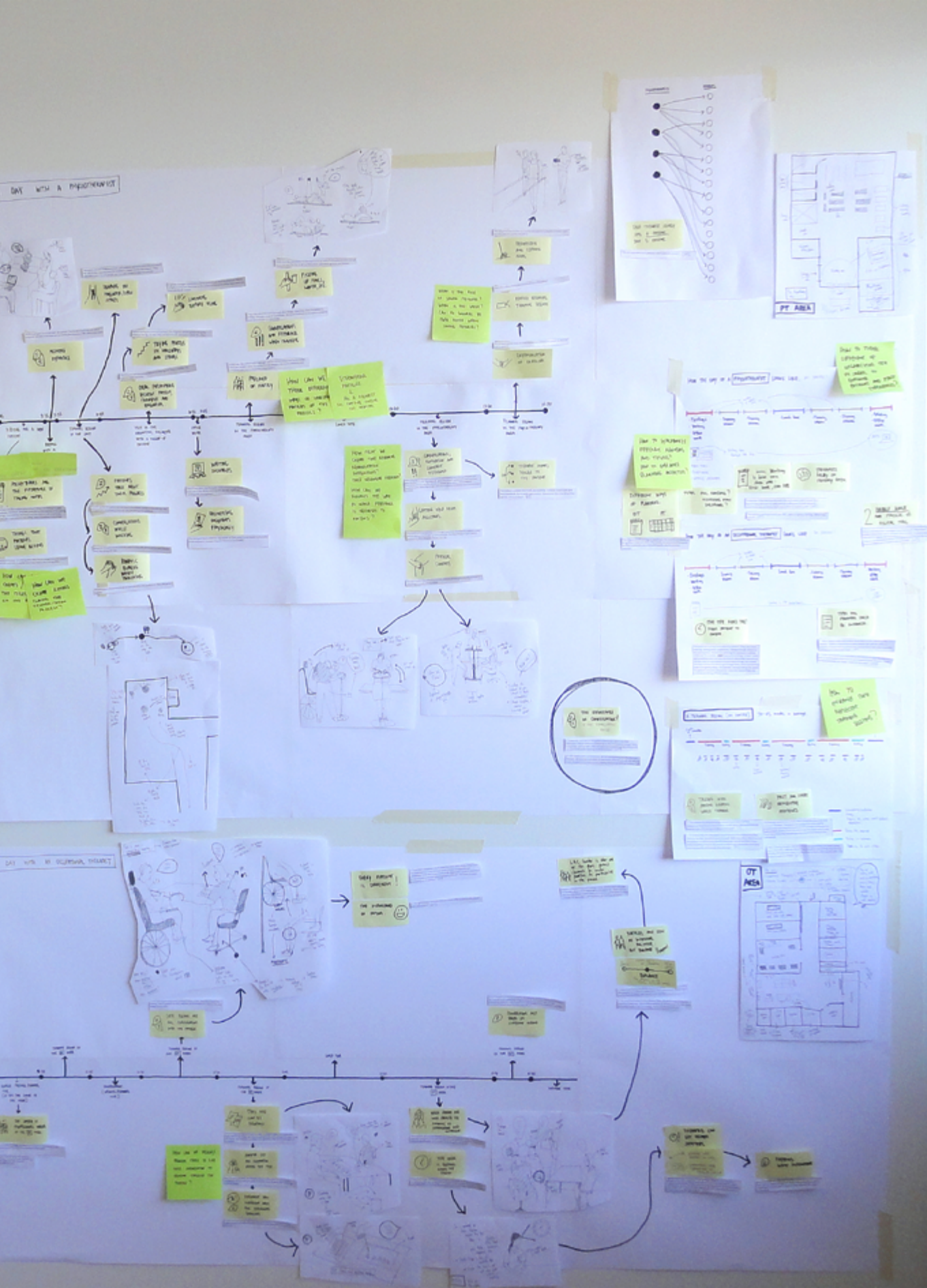


Figure 18. Mapping the patients' recovery journey [Own photo].


dynamic
process.
with moments of
great progress and
other slower
moments
WHAT IS IT GOING TO
depression
Patients are dependent on
almost everything (depending on the patient)
The main focus is on BODILY
FUNCTIONS AND STRUCTURES [ICF].

Rich design space

All the different diagrams, visualizations and sketches were put together on the same space in order to make relations between findings identified in different areas of the service.


PT AREA
OT AREA

Defining & reframing

This chapter shows the process of identifiying areas for intervention within the rehabilitation service.

Framing and clustering finginds

Mental maps were developed in order to put all the information gathered together and find ways of organizing the data.

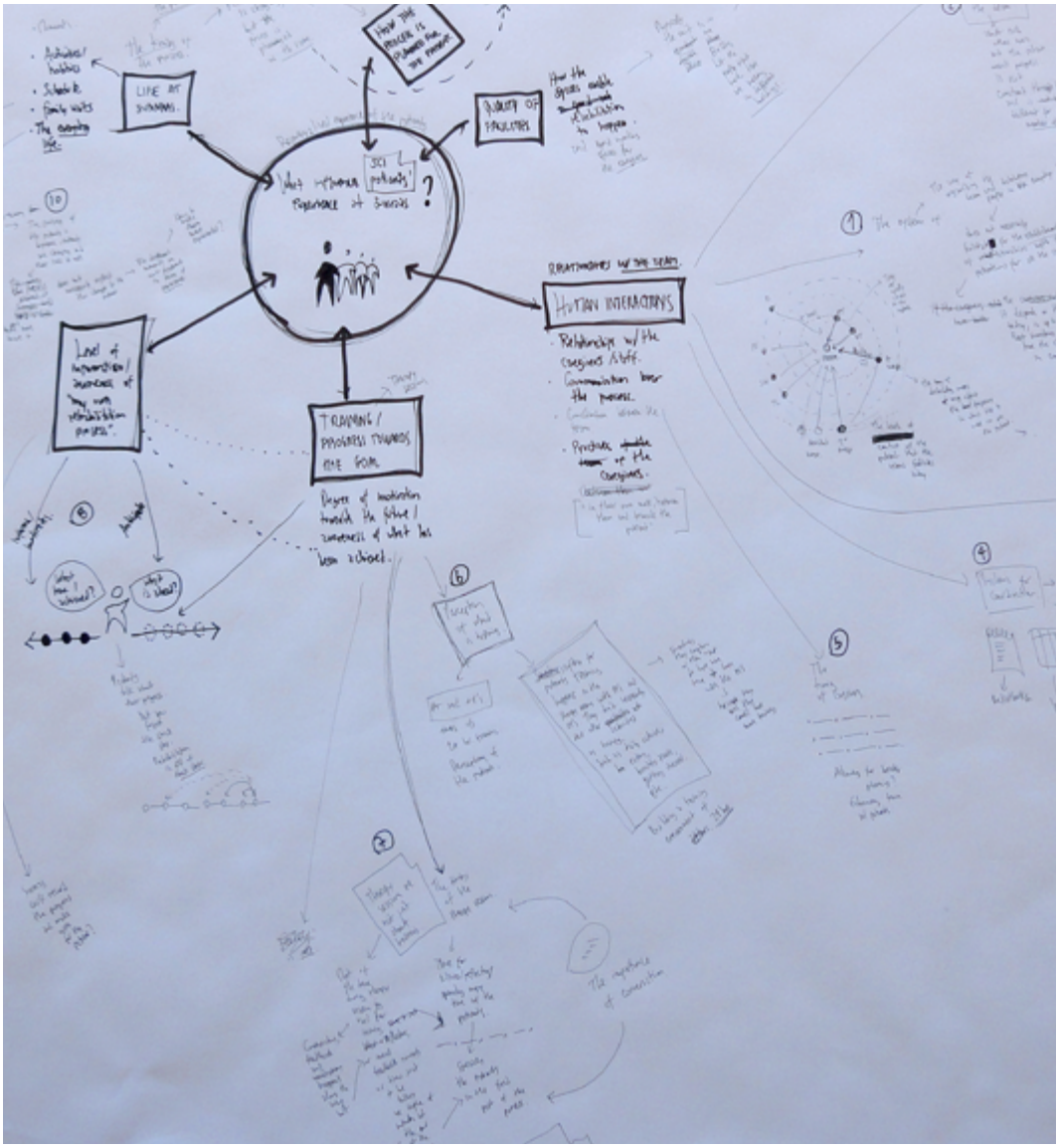


Figure 19. Mental map. Framing findings and organizing them into categories [Own photo].

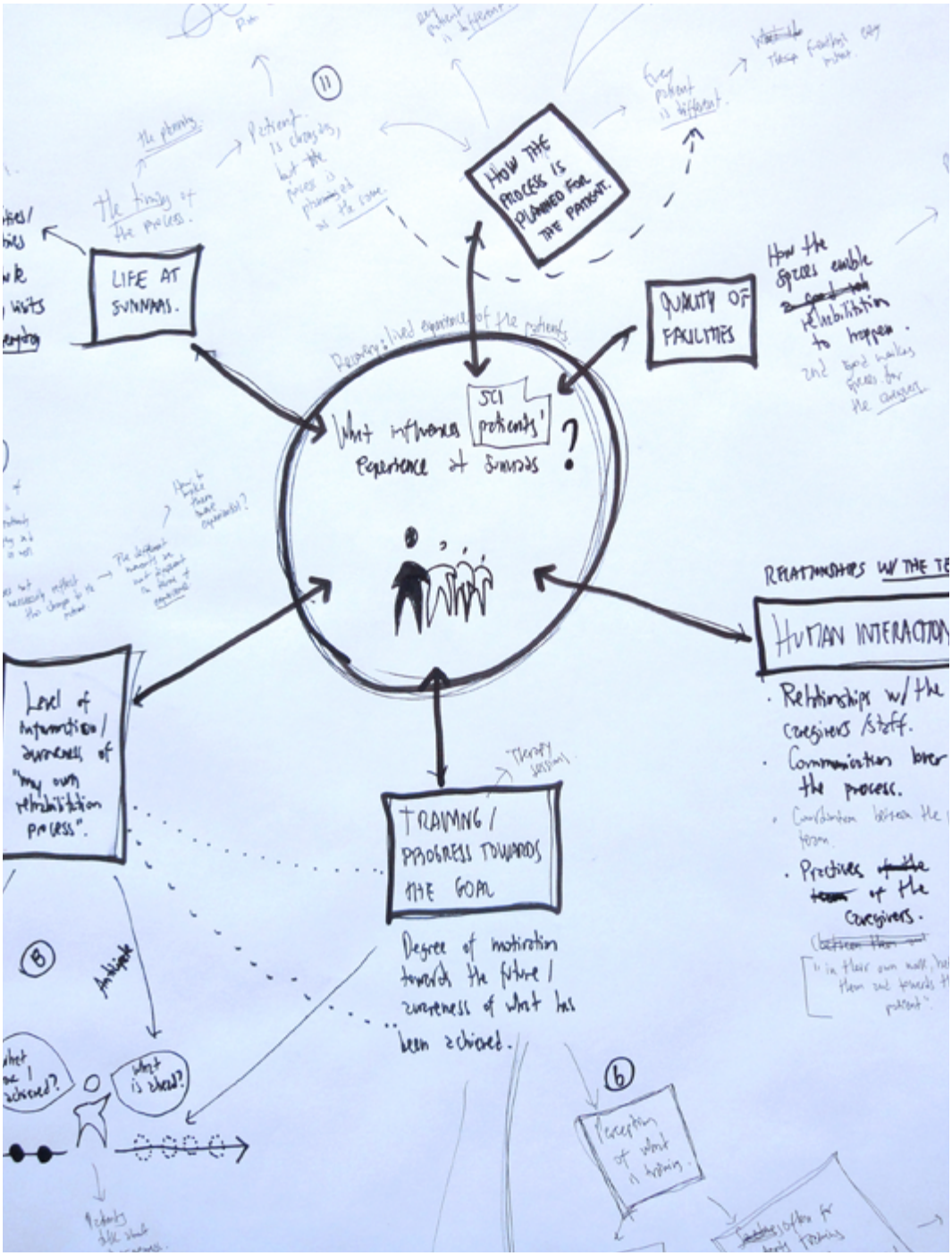


Figure 20. Mental map. Framing findings and organizing them into categories [Own photo].

The 8 main findings identified

Eight main areas within the rehabilitation service at Sunnaas were identified as aspects were the service could better support the patients' lived experience during their stay at the hospital.

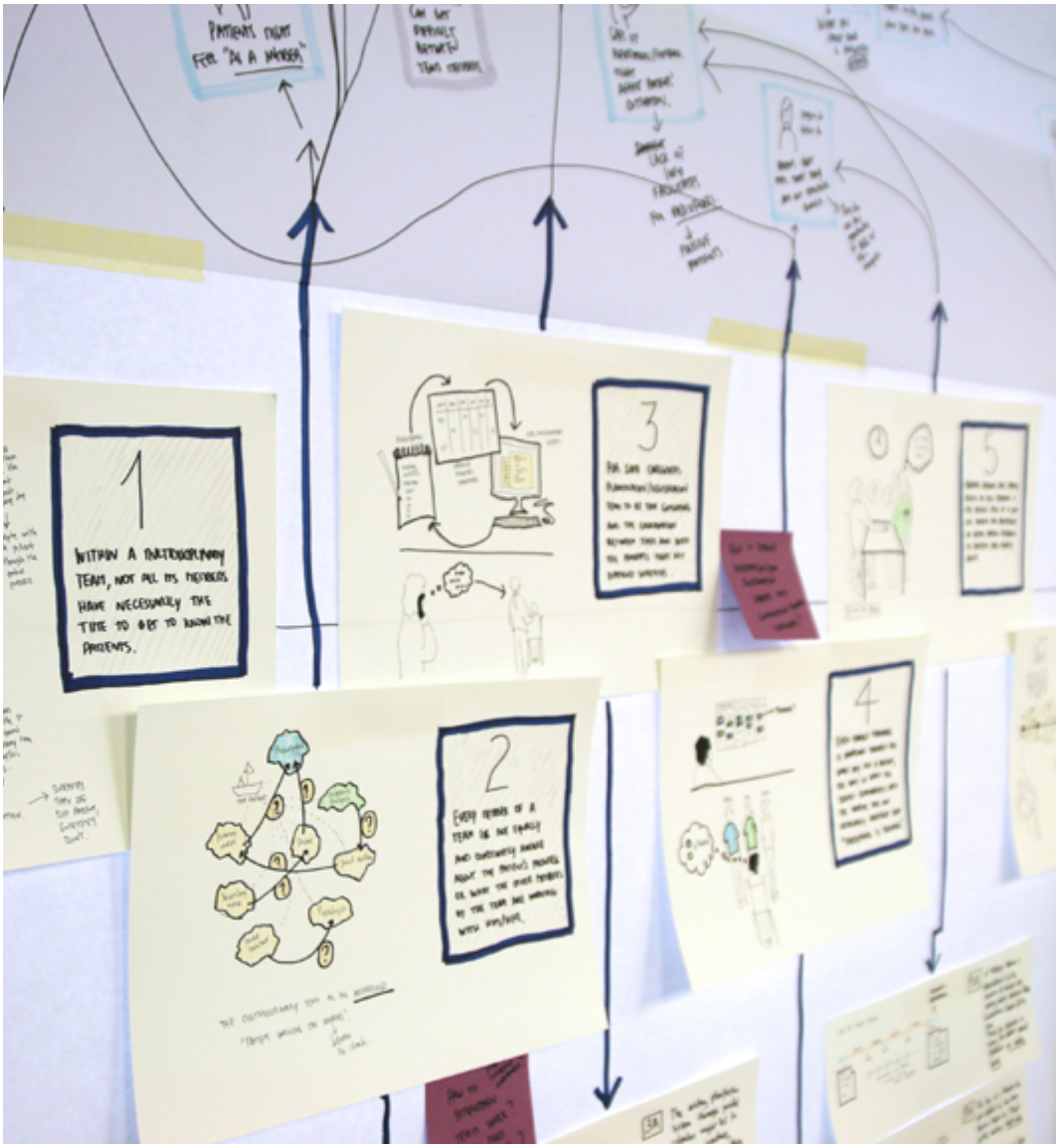


Figure 21. Findings wall [Own photo].

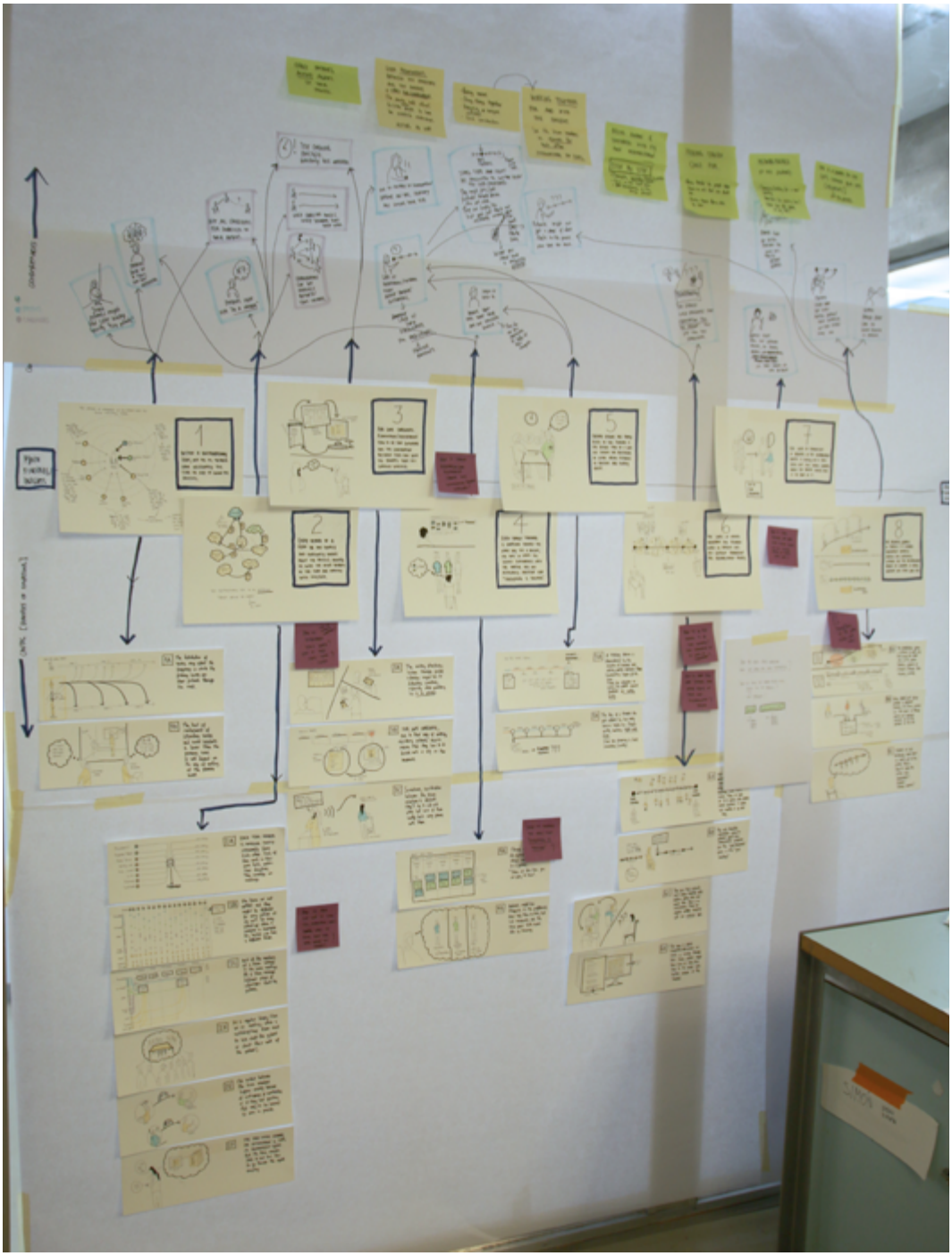


Figure 22. Findings wall. On the top are the consequences of each situation and on the bottom its causes [Own photo].

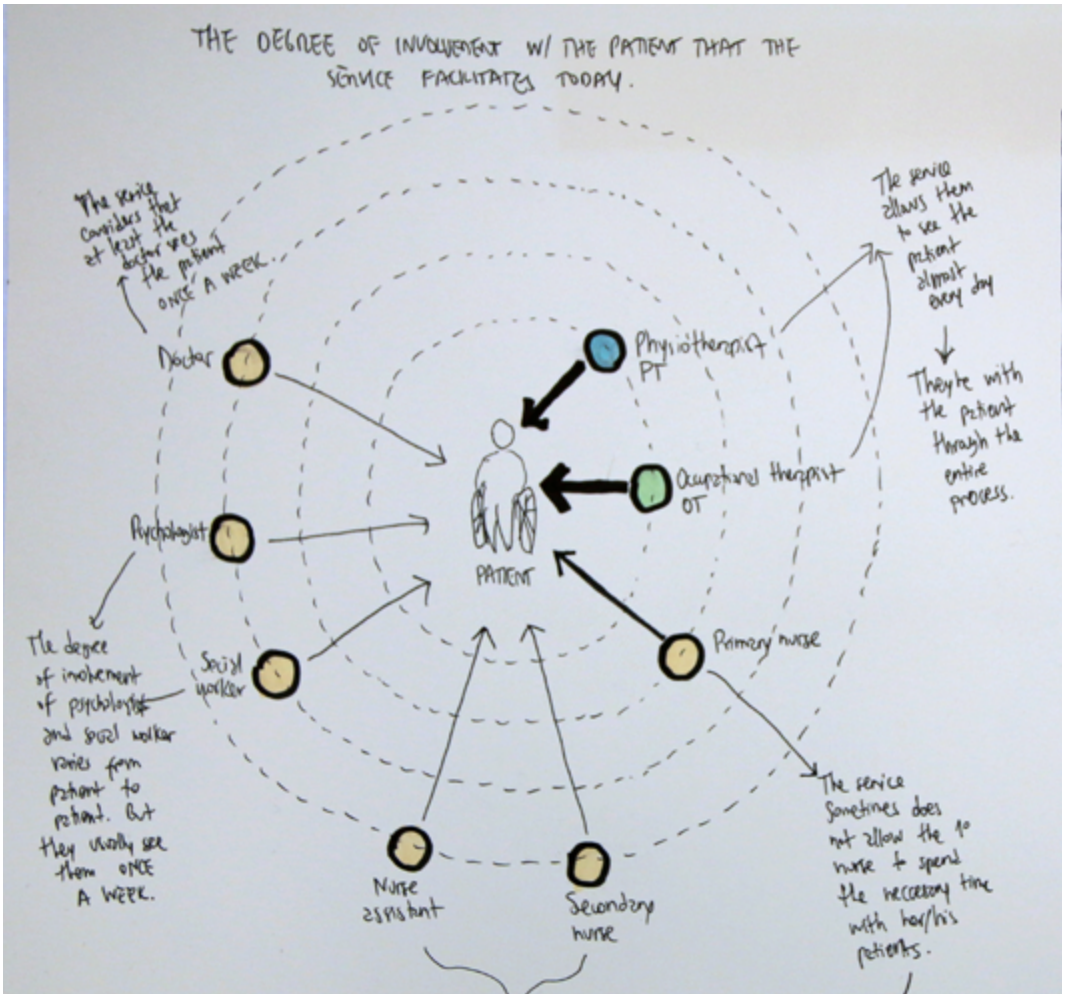


Figure 22. Finding 1 [Own photo].

1. Within a multidisciplinary team, not all its members have necessarily the time to get to know the patient.

Within a team, every caregiver establishes some degree of connection with the patient and some of them tend to be closer to the patient than others. All of them see the patient regularly, which allow them to build a relationship with them. However, nursing staff sometimes does not have the necessary time to spend time with the patients they are responsible for.

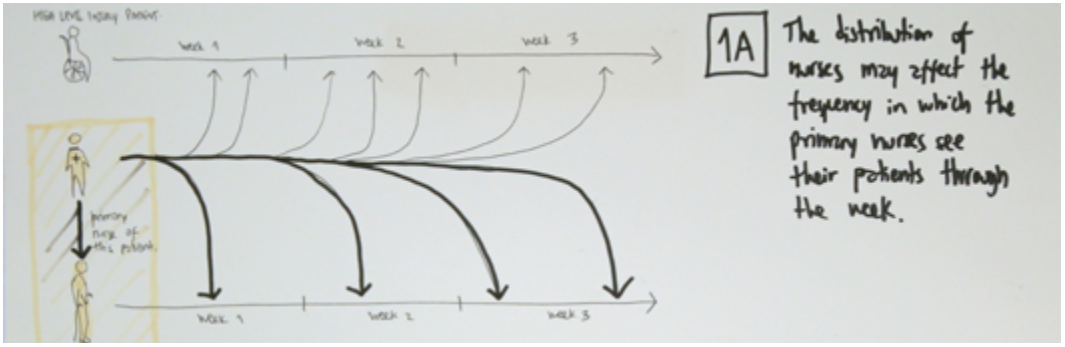


Figure 23. Finding 1A [Own photo].

1A. The distribution of nurses can affect the frequency in which the primary nurses see their patients. Nurses are assigned to patients according to the amount of staff in the shift, to the degree of injury of patients, and according to the level of responsibility that nurses have with patients.

As nurses are the only ones that can deal with patients that have levels of injury that require medical knowledge, they are often assigned more times to patients with complications than to the patients of whom the nurse is primary or secondary nurse.

Figure 24. Finding 1B [Own photo].

1B. The level of involvement of the secondary nurses and nurse assistants depends on the way of working of the primary nurse. Sometimes they know way less about the patient and they spend less time with them.

However, this situation varies from team to team and it depends mainly on the way of working of the primary nurse and how much she/he might involve the other nurses in the team.

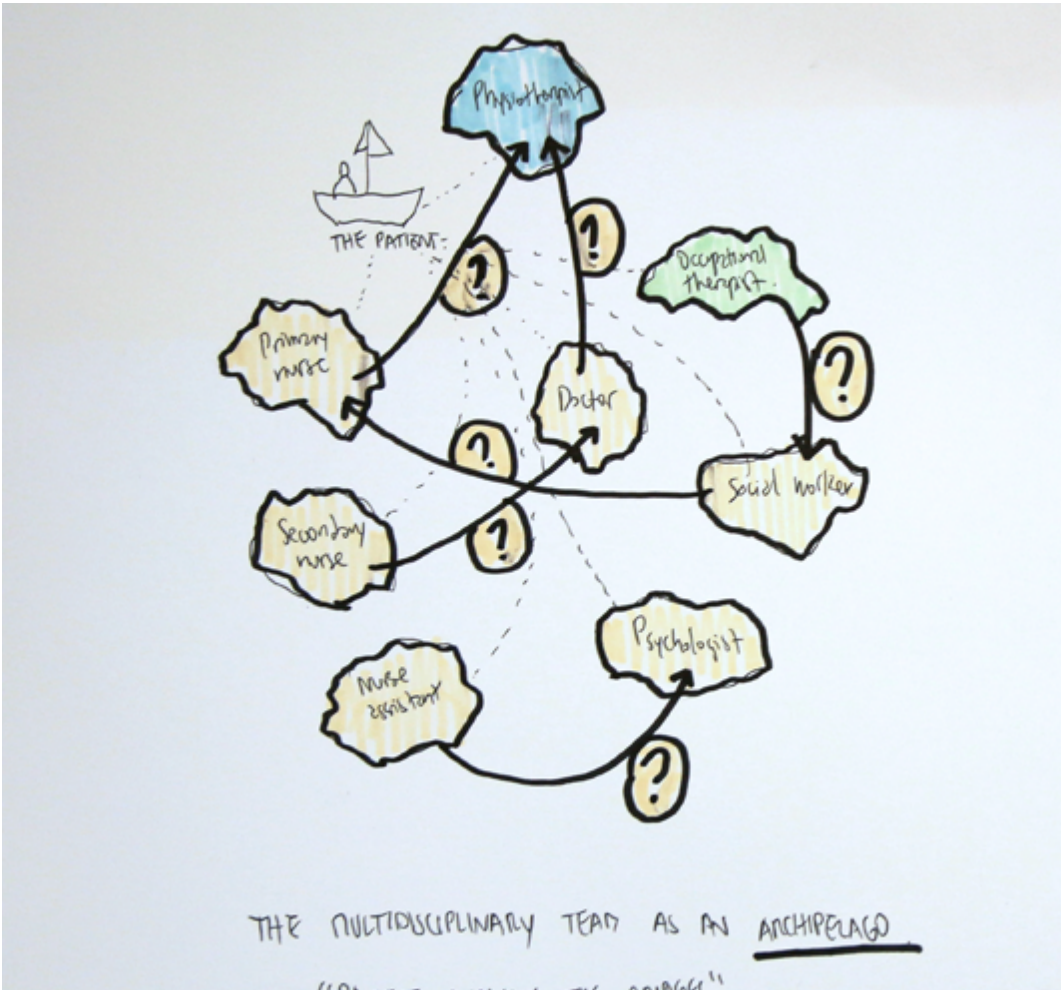


Figure 25. Finding 2 [Own photo].

2. Every member of a team is not equally and constantly aware about the patient's progress or what the other members of the team are working with him/her.

The multidisciplinary team could be seen as an archipelago where the patient is going from island to island in order to get rehabilitated.

Each member is an island but the bridges between them are not always working. There different factors that today influence the level of awareness that the team members have.

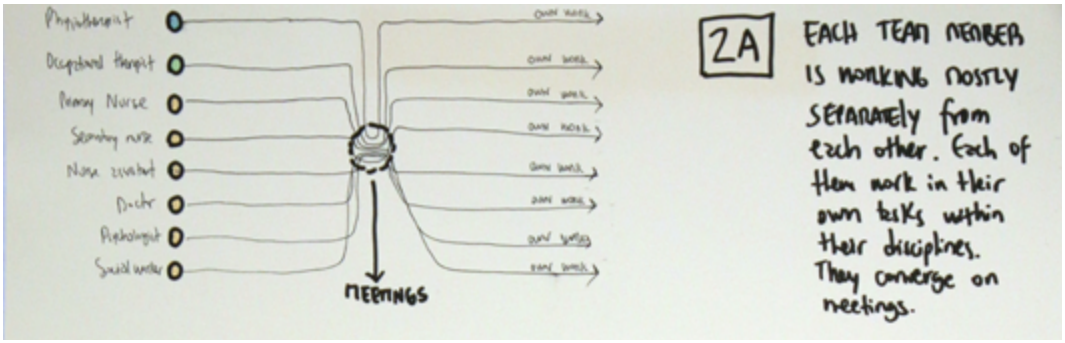


Figure 26. Finding 2A [Own photo].

2A. Even though multidisciplinary teams are established as the way of working towards the patient, on a weekly basis each member of the team is working mostly separately from each other. Each professional that belong to a team is working in his/her own tasks according to his/her discipline and physically they are working closer to their discipline peers. In a regular basis, they might encounter with each other walking through hallways and in the multidisciplinary meetings twice a week.

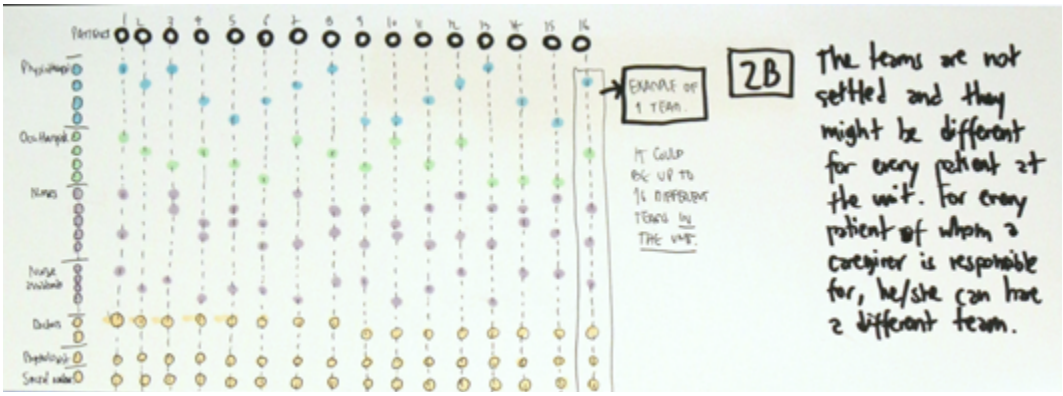


Figure 27. Finding 2B [Own photo].

2B. The teams are not settled and they might be different for every patient at the unit. Thus, if a physiotherapist is responsible for 4 patients he might have 4 different teams or in the case of the psychologist who is responsible for 16 patients might have 16 different teams. This situation might make coordination difficult or time consuming and the caregiver's sense of belonging with a team might be affected as well.

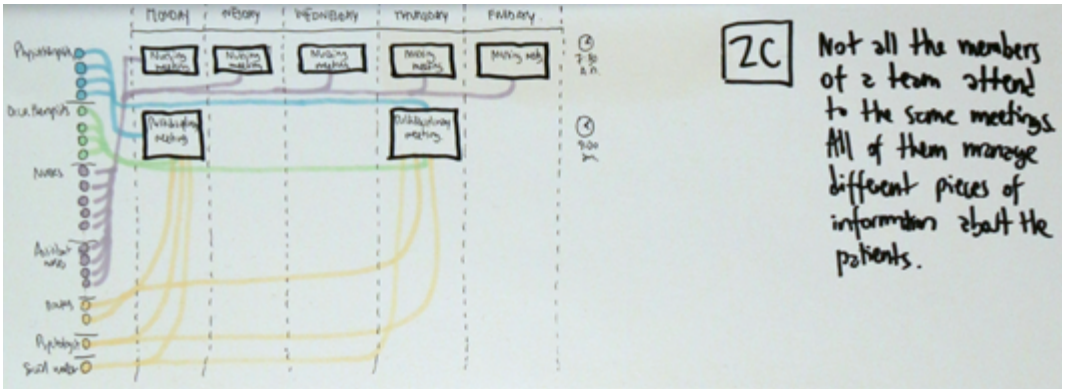


Figure 28. Finding 2C [Own photo].

2C. Not all the members of a team attend to the same meetings. All of them manage different pieces of information about patients. The nurses have every morning a meeting where they go through the 16 patients at the unit from a nursing perspective and they are not present in the multidisciplinary meetings. On the other hand, the multidisciplinary meetings (twice a week) involve all the different members in the unit except for the nurses, which are represented by the lead nurse. The lead nurse will pass information over if there is something that needs to be informed.

Figure 29. Finding 2D [Own photo].

2D. In a regular basis there are no meetings where a multidisciplinary team meet to talk about the patient or about their work. They only meet in the goal review meetings which are together with the patients every 3-5 weeks.

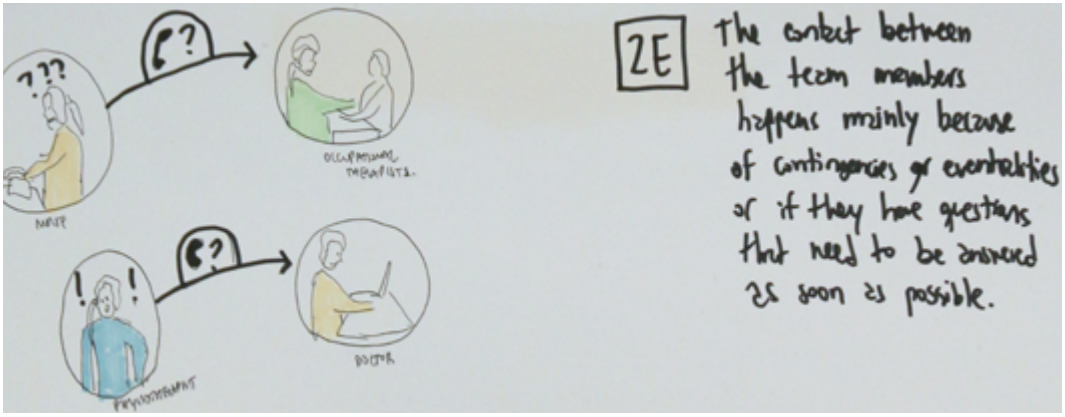


Figure 30. Finding 2E [Own photo].

2E. The contact between team members happens mainly because of contingencies, eventualities or if they have questions that need to be answered as soon as possible. There is no a constant communication between one multidisciplinary team. They will call to each other through phone or will try to find themselves throughout the building.

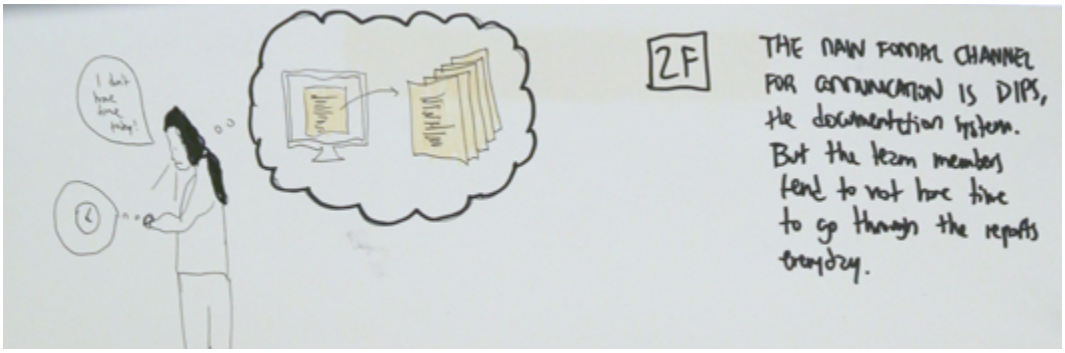


Figure 31. Finding 2F [Own photo].

2F. Within a multidisciplinary team, the main formal channel caregivers use to be updated about the patient's progress and about each other's work is DIPS, the software where they can find the digital reports that every caregiver writes when he/she spent time with the patient. However, the team members tend to not have time to go through each other's reports.

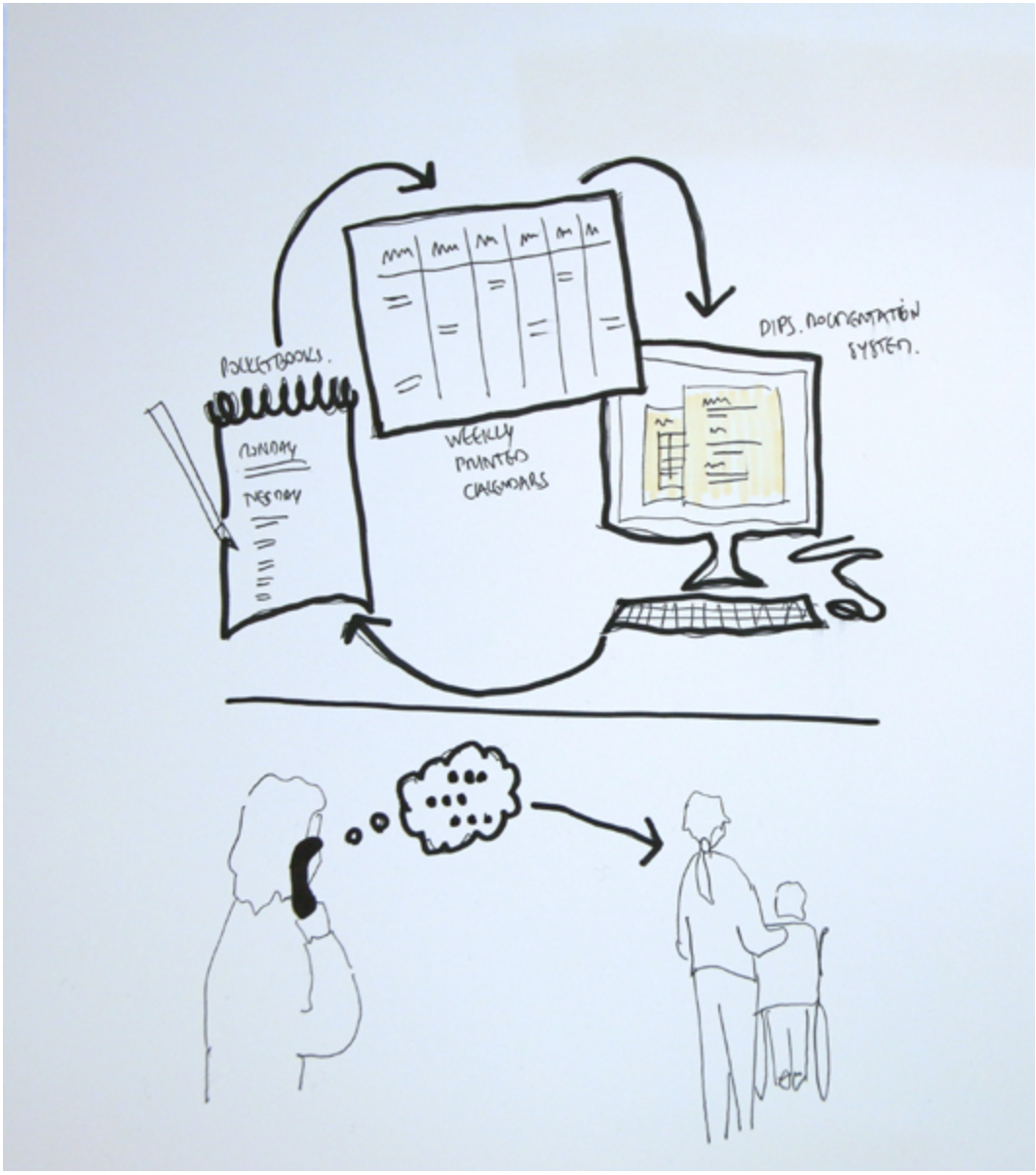


Figure 32. Finding 3 [Own photo].

3. For some caregivers planification and registration tend to be time consuming and the coordination between them and with the patients might get difficult sometimes.

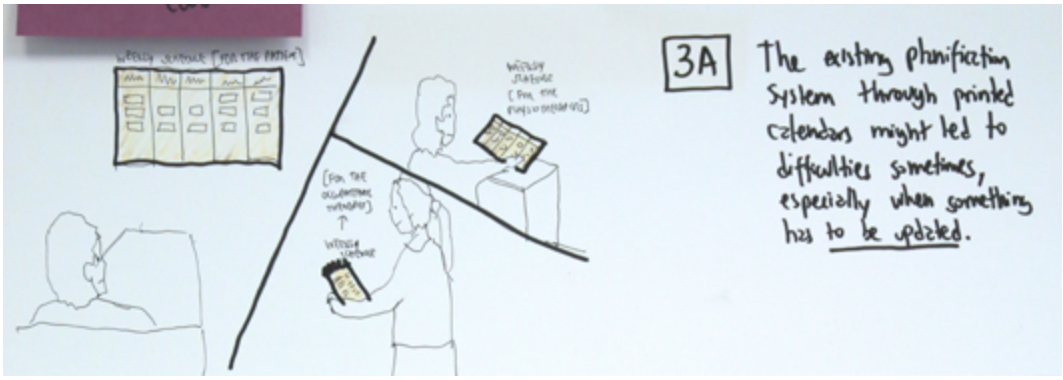


Figure 33. Finding 3A [Own photo].

3A. The existing planification system through the printed calendars might led to difficulties sometimes. Today calendars are done digitally and collaboratively from one week to the other.

Once they are ready they are printed and every patient and caregiver manage their own schedule in different ways (patients have the calendar in their rooms, physiotherapists carry it with them, occupational therapists tend to write everything in their pocket books and so on).

This means that when something have to be updated through the week sometimes can be misunderstanding or communication mistakes. A physiotherapist might forget to update a patient's calendar or might forget to update when there is a change in the location of the training session (it was in the patient's room and now is the the physiotherapy area, for example), among others.

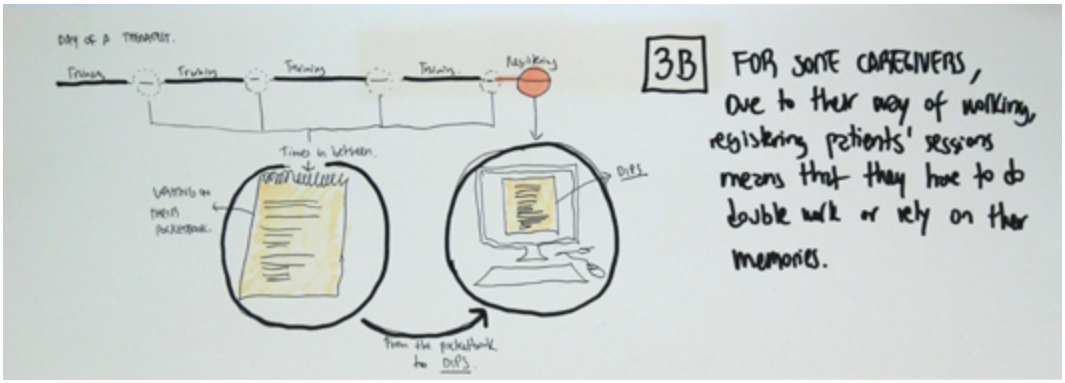


Figure 34. Finding 3B [Own photo].

3B. For some caregivers, registering patients' sessions means that they have to do double work or rely on their memories. For example, physiotherapists or occupational therapists spend few time seated in front of their computers. They are most of the time with the patients or walking around. This means that some of them will write the sessions in their pocket books, and then at the end of the day they will have to rewrite them on DIPS.

Figure 35. Finding 3C [Own photo].

3C. Sometimes, coordination between the team members is difficult. Caregivers might have doubts or want to call each other to ask questions to each other. They can try calling but people is usually not carrying phones with them, so they will try to find each other through the buildings. For example, a nurses might have a question such as: should I take the patient to the physiotherapy area or the session is going to be here?

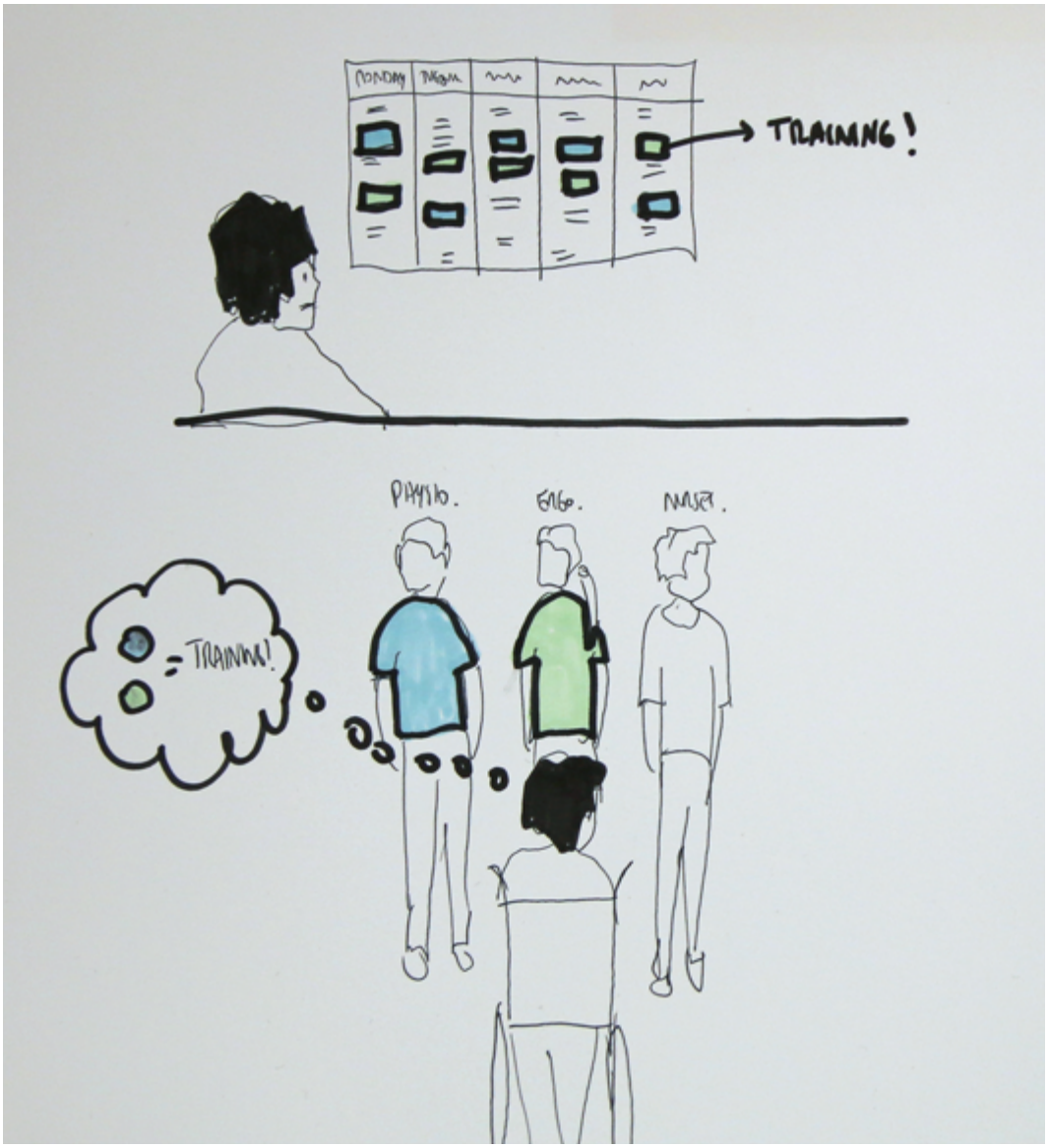


Figure 36. Finding 4 [Own photo].

4. Even though training is happening through the whole day for a patient, the way in which the service communicates with the patients does not necessarily highlight that training "everything is training".

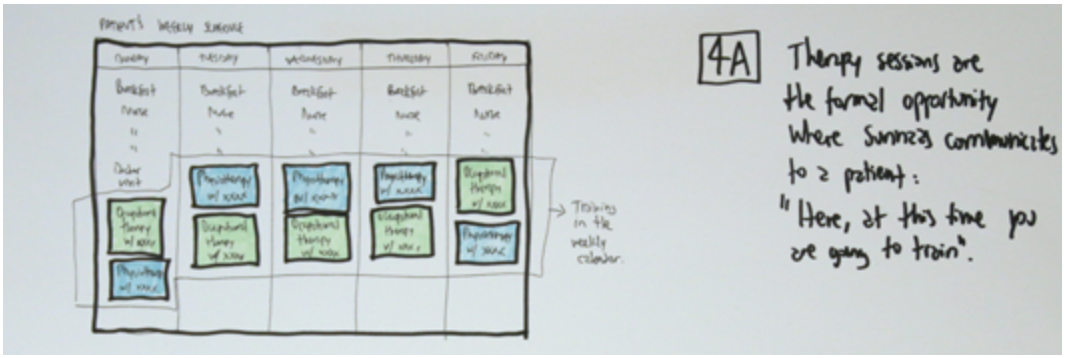


Figure 37. Finding 4A [Own photo].

4A. Therapy sessions are the formal opportunity where Sunnaas communicates to a patient: "Here, at this time you are going to train", which is mainly visible and tangible on the weekly calendars.

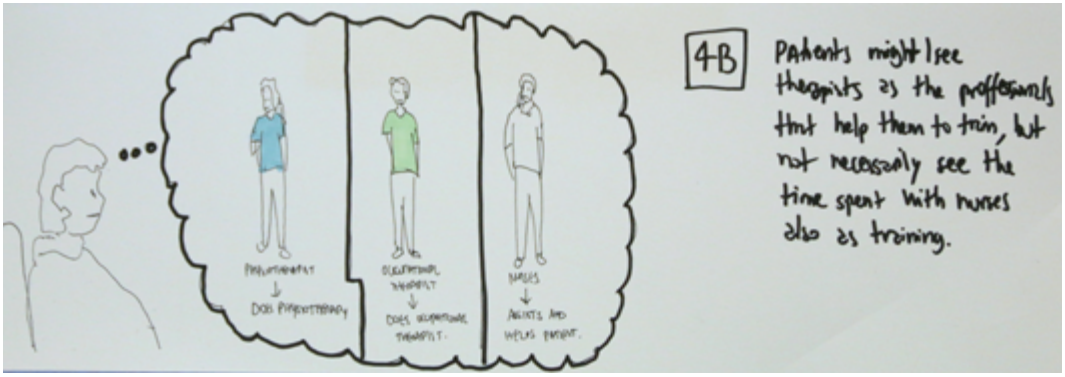


Figure 38. Finding 4B [Own photo].

4B. Patients see therapists as the professionals that help them to train, but they do not necessarily see the time spent with nurses as training. The way in which the different professionals are dressed build might build certain perceptions on patients, such as: "The physiotherapist is blue, the occupational therapist is green and they are the experts on training. Nurses are white and they will help me and assist me as in any other hospital". Together with this, the fact that patients mostly see them separately also affect their perception. There are few moments when a patient is doing an activity with a nurse and the occupational therapist at the same time, for example.

Figure 39. Finding 5 [Own photo].

5. Therapy sessions are mainly ruled by time. Training is the biggest part of it and the moments for reflections or giving overall feedback to patients are usually brief.

For therapists, time is one of the key factors they have to manage throughout their days. They have many activities to do and different patients that depend on them and that want to have their sessions at the right time and with the right duration.

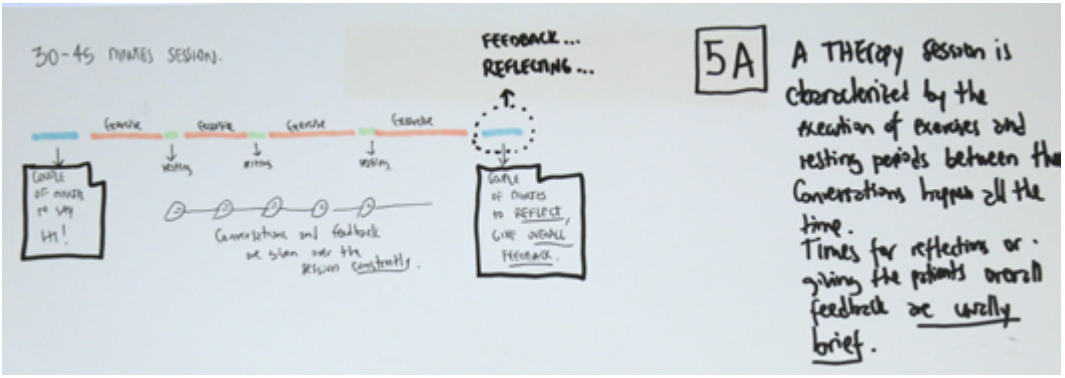


Figure 40. Finding 5A [Own photo].

5A. A therapy session is characterized by the execution of exercises and resting periods between them and where conversations are happening all the time. The sessions are not just about training, they are also about having conversations with the patients (actually, some therapists meet patients just to talk with them sometimes). However, all of this happens in a way where efficiency is key, and times for reflections or giving the patients overall feedback or just to talk about other issues are usually brief. The time between session and session is usually not giving the therapist the ability to improvise and spend more time with the patient. The margin for flexibility is short.

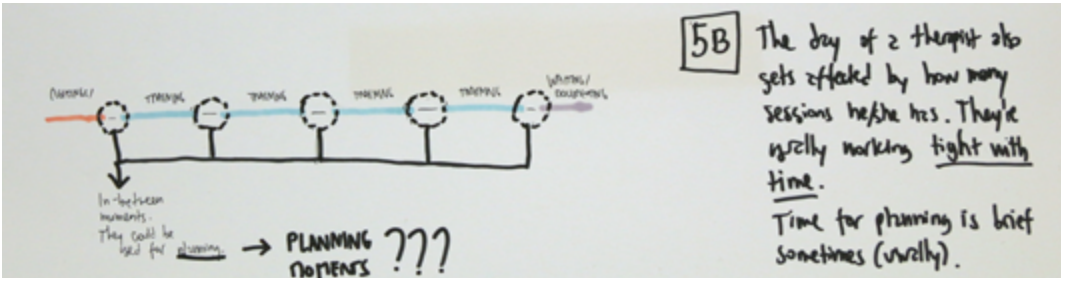


Figure 41. Finding 5B [Own photo].

5B. The day of a therapist also gets affected by how many sessions he/she has and how they are distributing throughout the day together with the other tasks they have to do, such as assisting to meetings, writing reports, among others. They are usually working tight with the time. Times for other activities such as planning the sessions with each patient are brief or sometimes there is no time to do that.

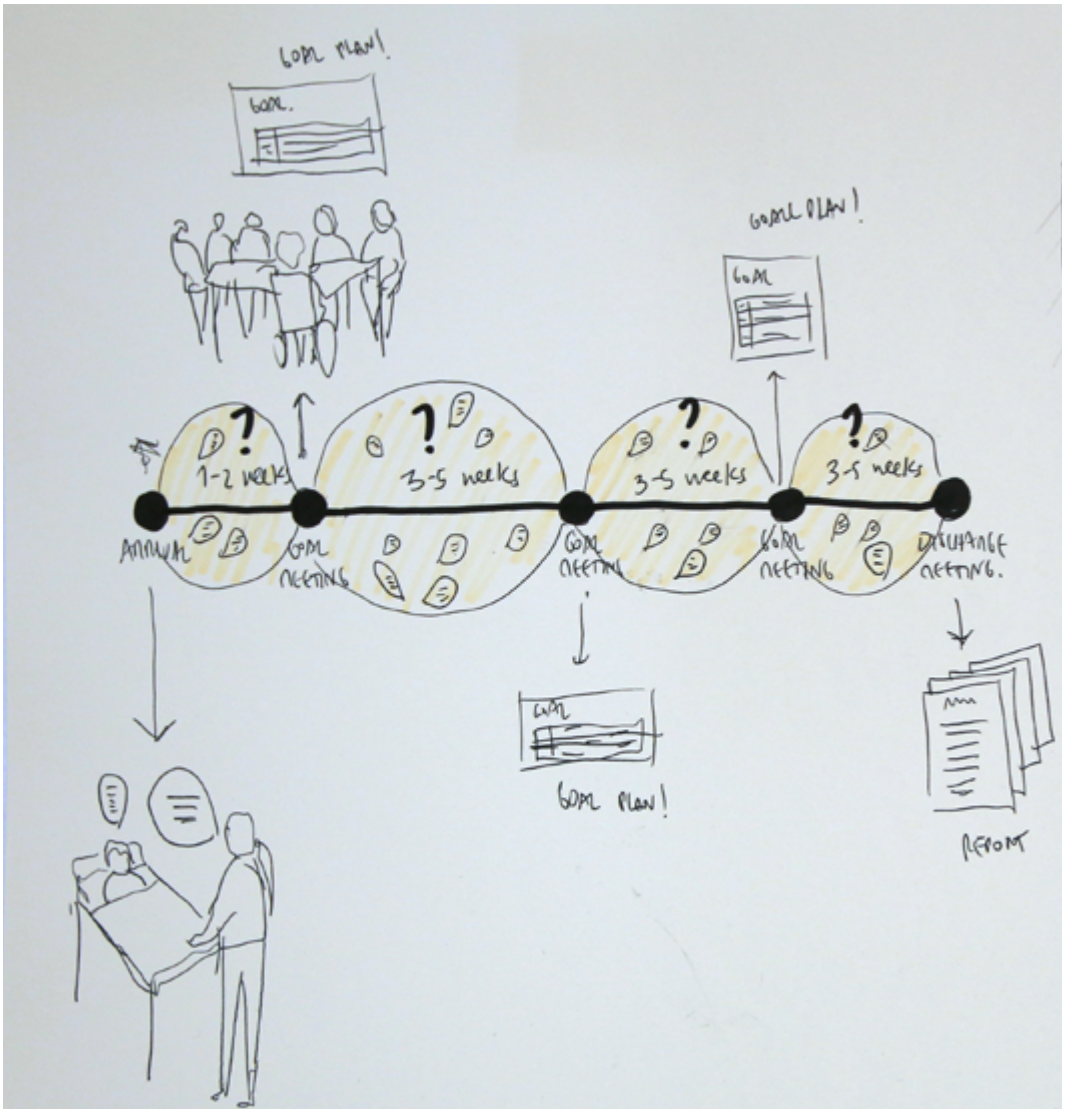


Figure 42. Finding 6 [Own photo].

6. The levels of overall information and feedback given to patients are not constant throughout the rehabilitation process.

Since patients arrive at Sunnaas until they are discharged they are receiving information in different ways and it is not delivered in the same level throughout the whole process.

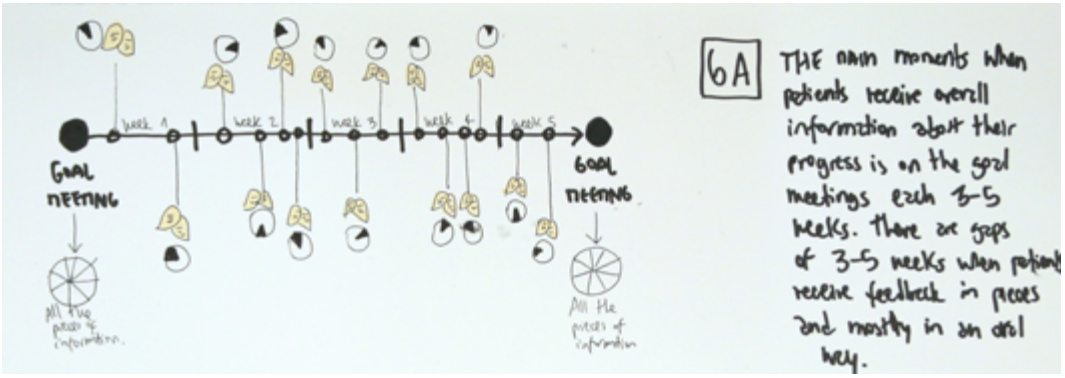


Figure 43. Finding 6A [Own photo].

6A. During the rehabilitation process patients are interacting with different caregivers and receiving information from different sources. The main moments when they receive overall information about their progress is on the goal meetings that patients have with their teams each 3-5 weeks. In this opportunities patients receive information as a whole. Is a moment where they can put all the pieces together. However, during the gap of 3-5 weeks patients are receiving information and feedback in pieces and mostly in an oral way: the feedback from therapist on the sessions, from nurses in the daily routines, and so on. This situation might make difficult for the patients to be fully aware of their progress or conscious of their little achievements.

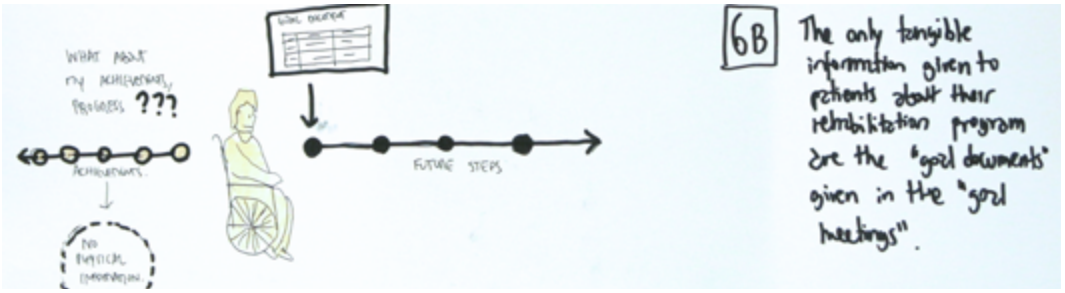


Figure 44. Finding 6B [Own photo].

6B. The only tangible information given to patients about their progress are the "goal documents" given in the goal meetings. This documents present the plan for the next weeks, but they are not about the achievements or the progress that the patients have already achieved.

Figure 45. Finding 6C [Own photo].

6C. The fact that patients do not receive tangible information so often does not mean that there is no information in the system. There are reports written by the different caregivers everyday, but they are used for internal use (between the caregivers). Patients can ask for them and get them, but the documents are written for healthcare professionals. They use healthcare terminology and concepts that might be difficult to understand for a person that is not educated on the field.

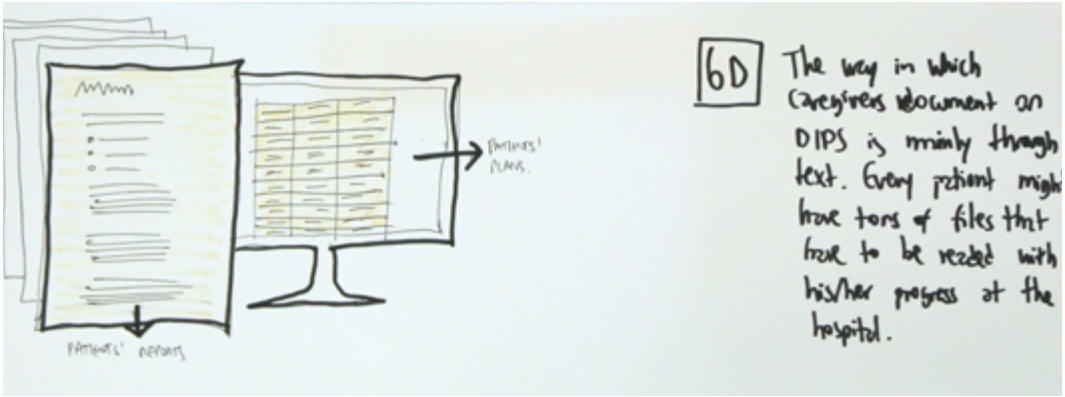


Figure 46. Finding 6D [Own photo].

6D. The way in which caregivers document on DIPS is mainly through text. They use tables to write lists of patients, tasks, nurses, among others and they use paragraphs and bullet points to write down report for patients. Every patient might have tons of files that have to be read with his/her progress at the hospital.

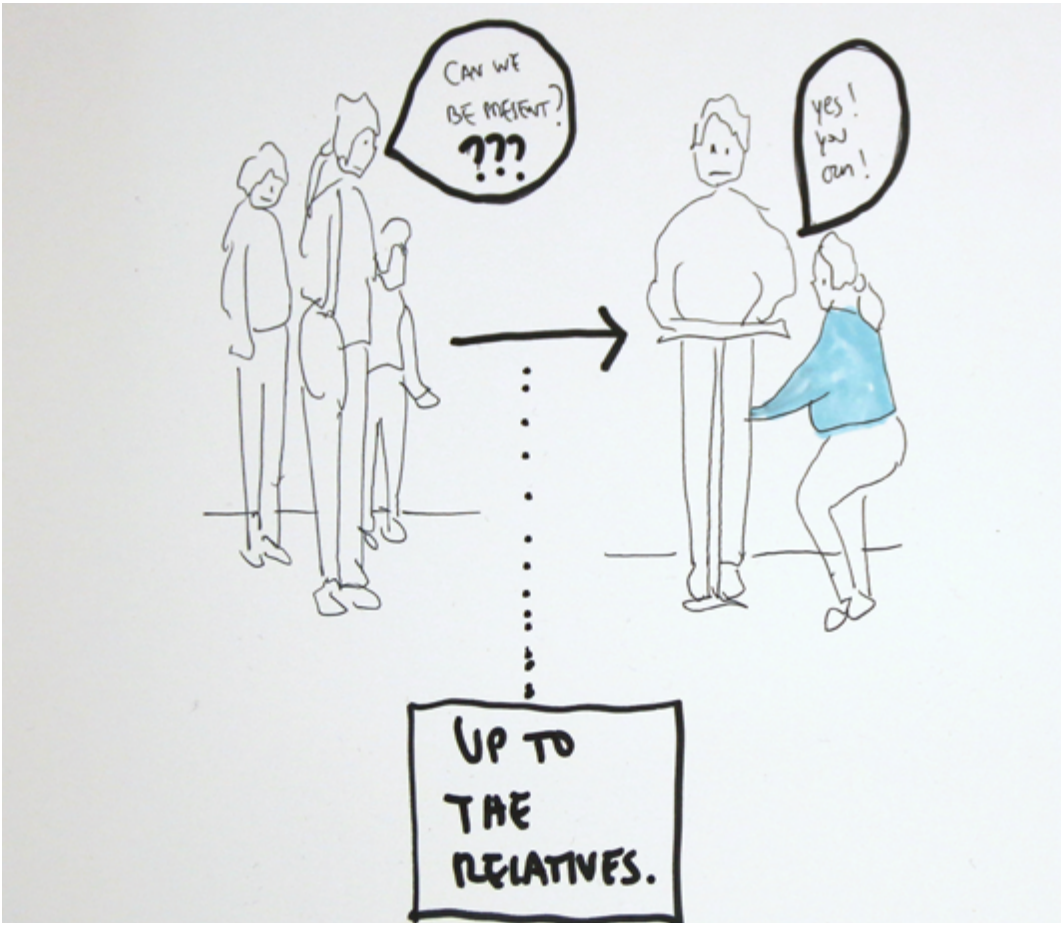


Figure 47. Finding 7 [Own photo].

7. The level of involvement of relatives in the rehabilitation process is mostly up to them. There are few formal channels where the hospital invites them to be part of it.

For many patients families are a strong resource form them. They usually visit them and support them through their stay at the hospital. Today, they can attend to therapy sessions, goal review meetings with the patients and other moments if they want but they are not invited or encouraged to do so. The main initiative of Sunnaas to involve them is through the learning and copying center, where relatives can get information about what it means to have a spinal cord injury.

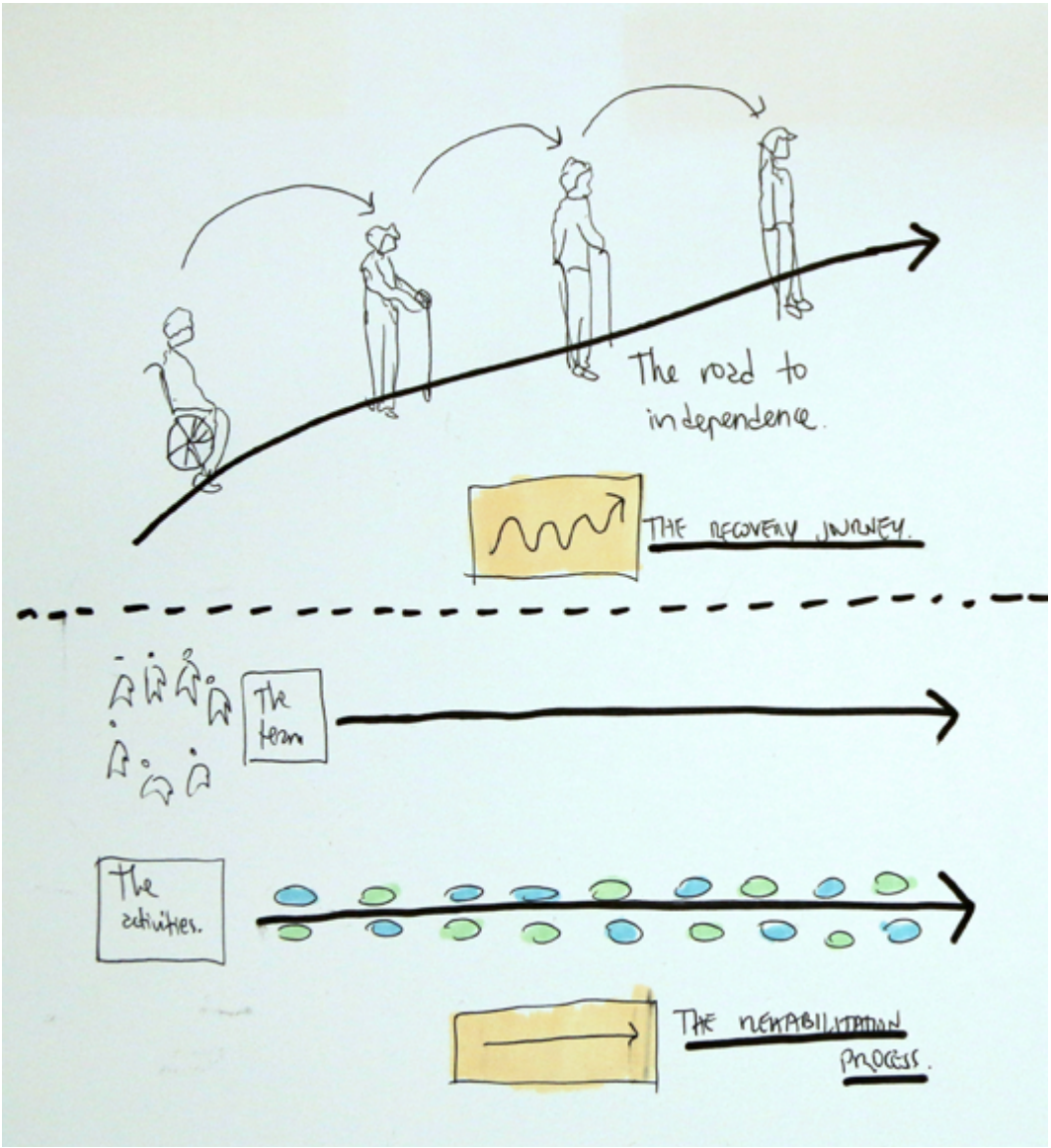


Figure 48. Finding 8 [Own photo].

8. The recovery journey of the patients is a dynamic process wherein patients are constantly changing but the rehabilitation process at Sunnaas is mostly constant and static over time.

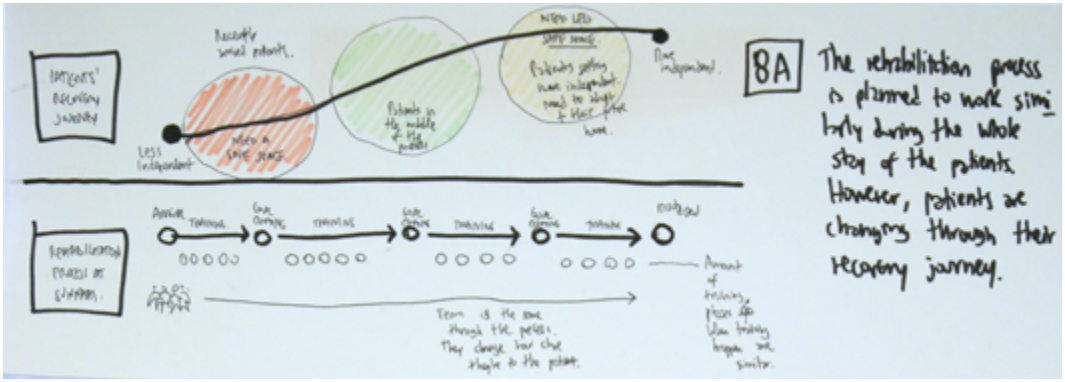


Figure 49. Finding 8A [Own photo].

8A. The rehabilitation process is planned to work similarly during the whole stay of the patients. The patient's activities distributed over time are often working in a static way. For example, the amount and duration of therapy sessions during the week might be the same through the whole process.

Together with this, the multidisciplinary team around the patient is also planned to be the same during the whole process.

However, patients are changing throughout their recovery journeys. Patients recently arrived have different needs and might need different ways of training and interacting with caregivers than the patients that are going to be discharged soon.

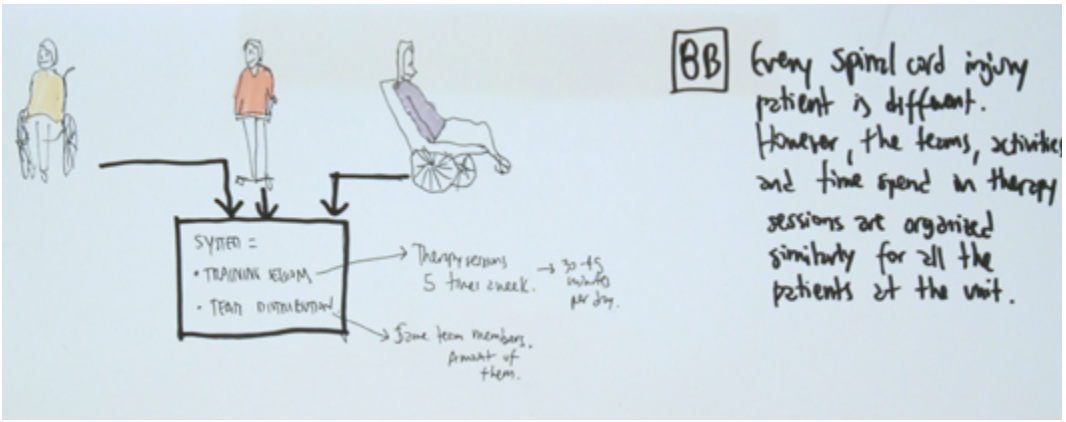


Figure 50. Finding 8B [Own photo].

8B. Every spinal cord injury patient is different. They have different levels of injury and they have different ways of coping with the situation they are experiencing. However, the multidisciplinary teams, the activities throughout their weeks and the time they spend in therapy sessions are organized similarly for all the patients at the unit.

Figure 51. Finding 8C [Own photo].

8C. Patients are not necessarily aware about in which part of the process they are. Even though goal review meetings mark milestones in the process, there are opportunities to make the journey of patients something more experiential and meaningful. How to make milestones more experiential? Can we create rituals to enhance meaning?

Presenting the findings to the leader of the spinal cord injury unit

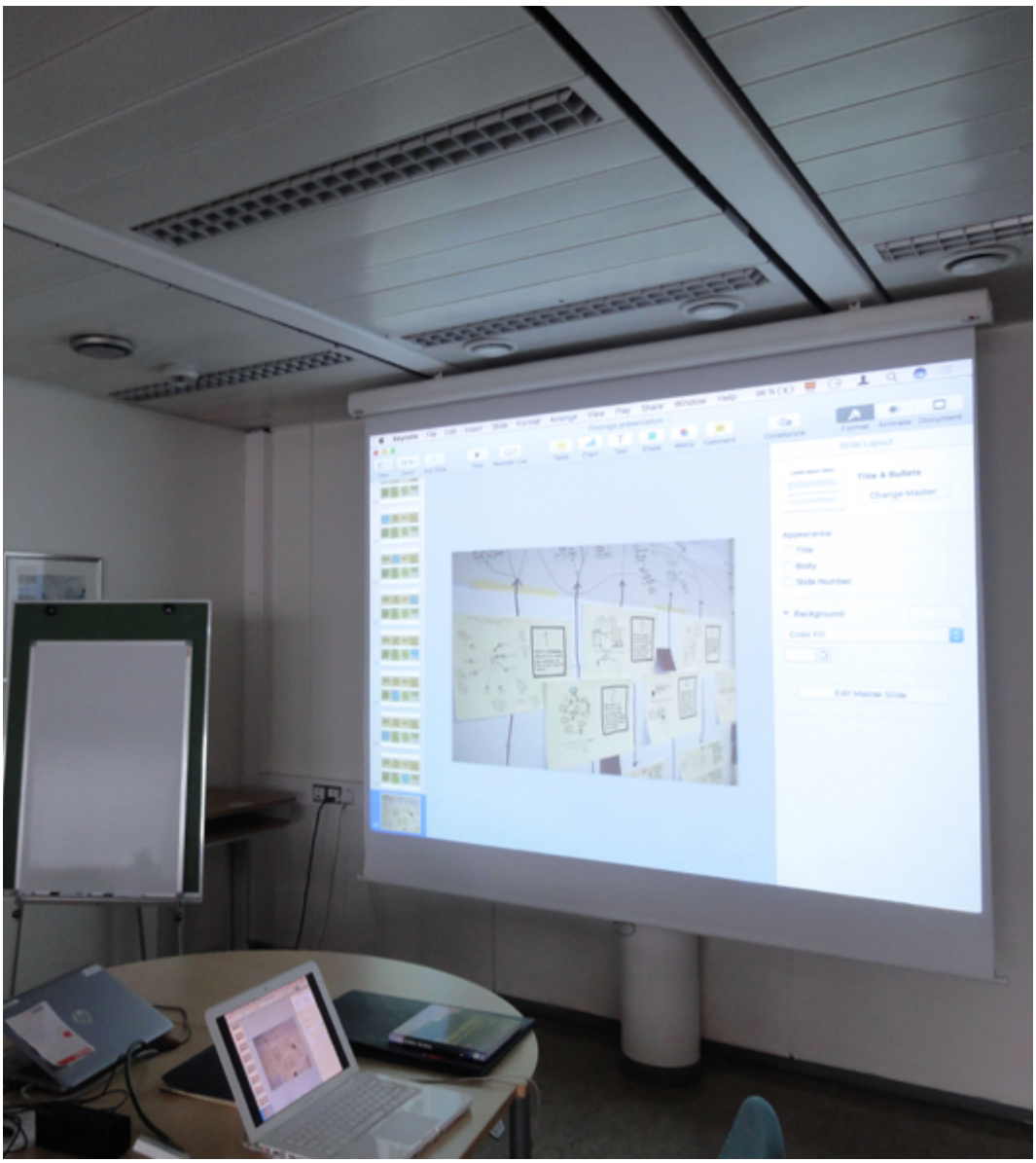


Figure 52. Findings presentation [Own photo].

Figure 53. Gathering feedback from the leaders of the spinal cord injury unit [Own photo].

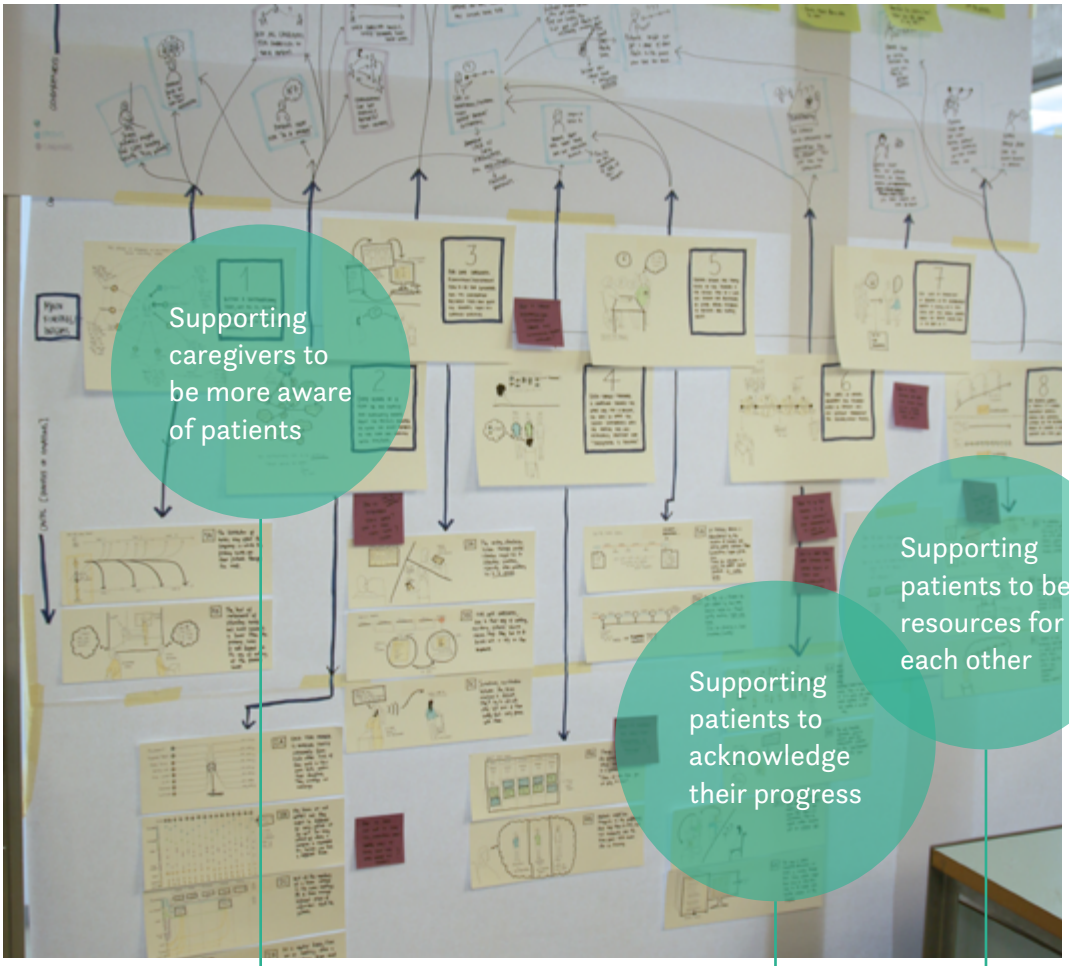
First ideation process

Different ideas were developed for the different opportunity areas identified before. By discussing this ideas with caregivers and patients at the hospital it was possible to decide on which areas were more potential to design for.

Figure 54. First ideation [Own photo].

Defining focus areas

Three focus areas were chosen as the highest potential locations within the service to intervene. Each of them led to the development of a design intervention.



Ideating, prototyping, & concept development

In this chapter you will find the prototyping process behind the three interventions designed and ran at Sunnaas hospital.

Leaving something behind

The prototyping process

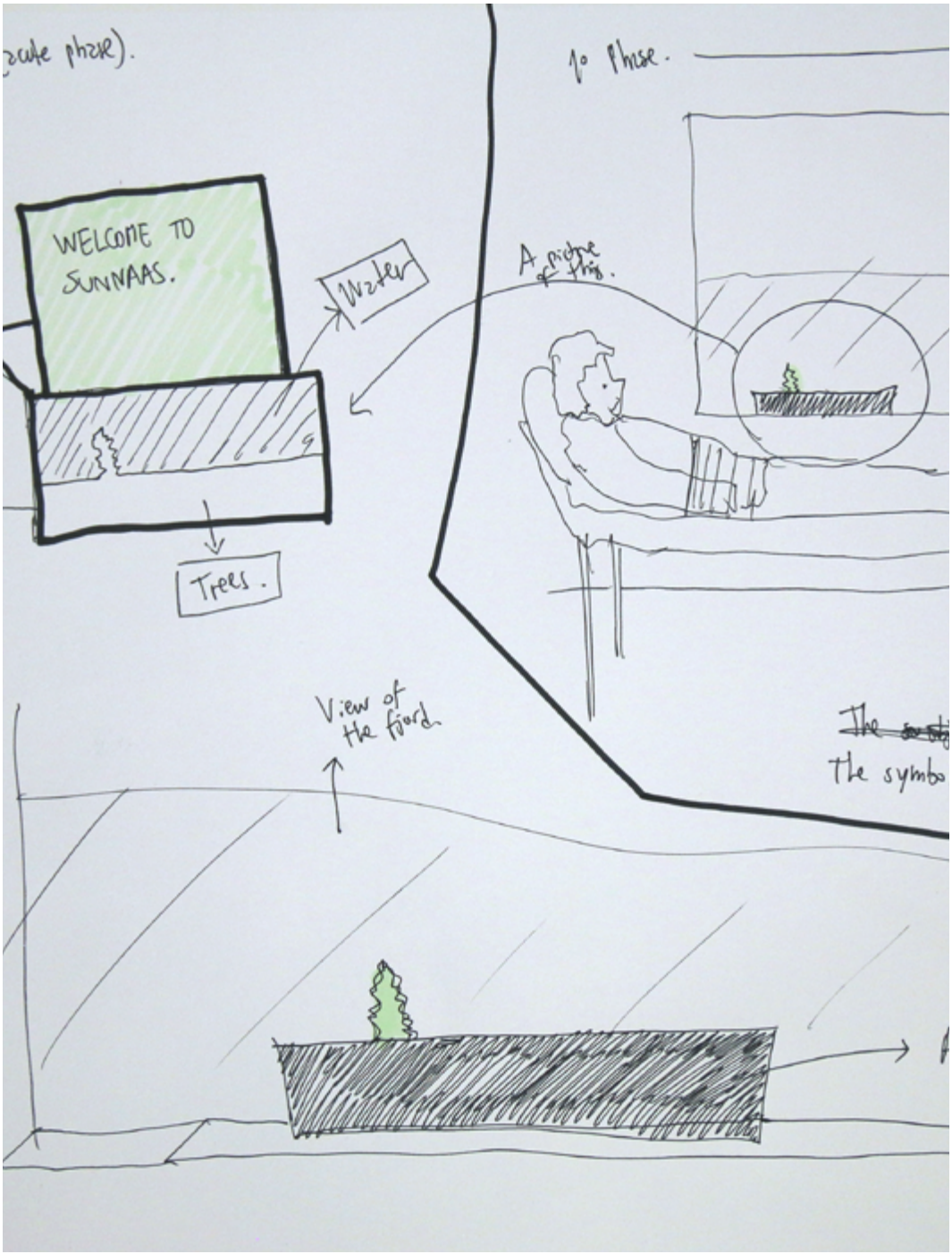


Figure 55. One of the first ideas developed to support patients to overcome the challenge of their disability. It was about enchancing the meaning of rehabilitation by using plants s a symbol [Own photo].

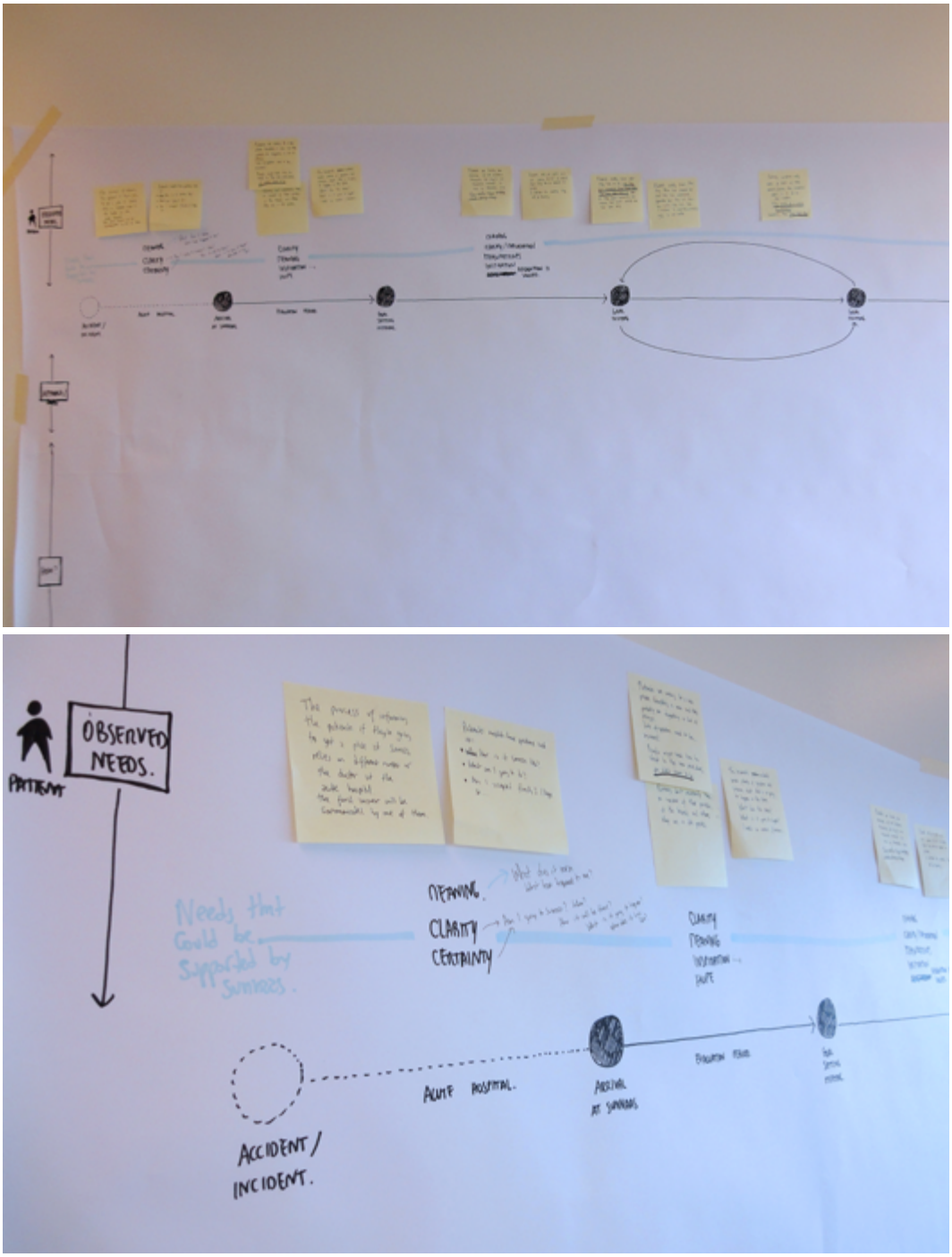


Figure 56. Exploring in depth other areas or ways of helping patients to cope with their challenge [Own photos].

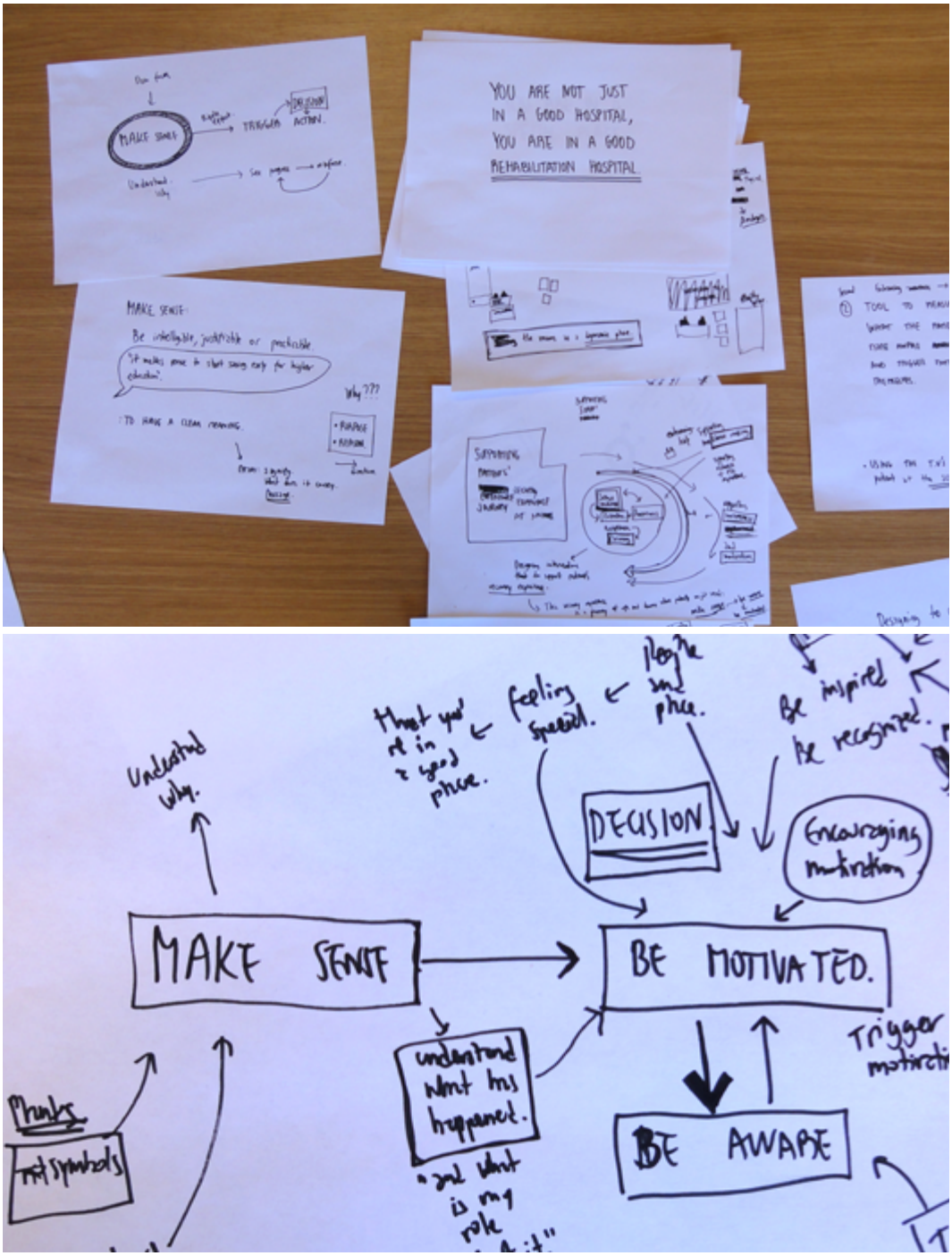


Figure 57. Mapping what could be the impact of helping patients to overcome their challenge [Own photos].

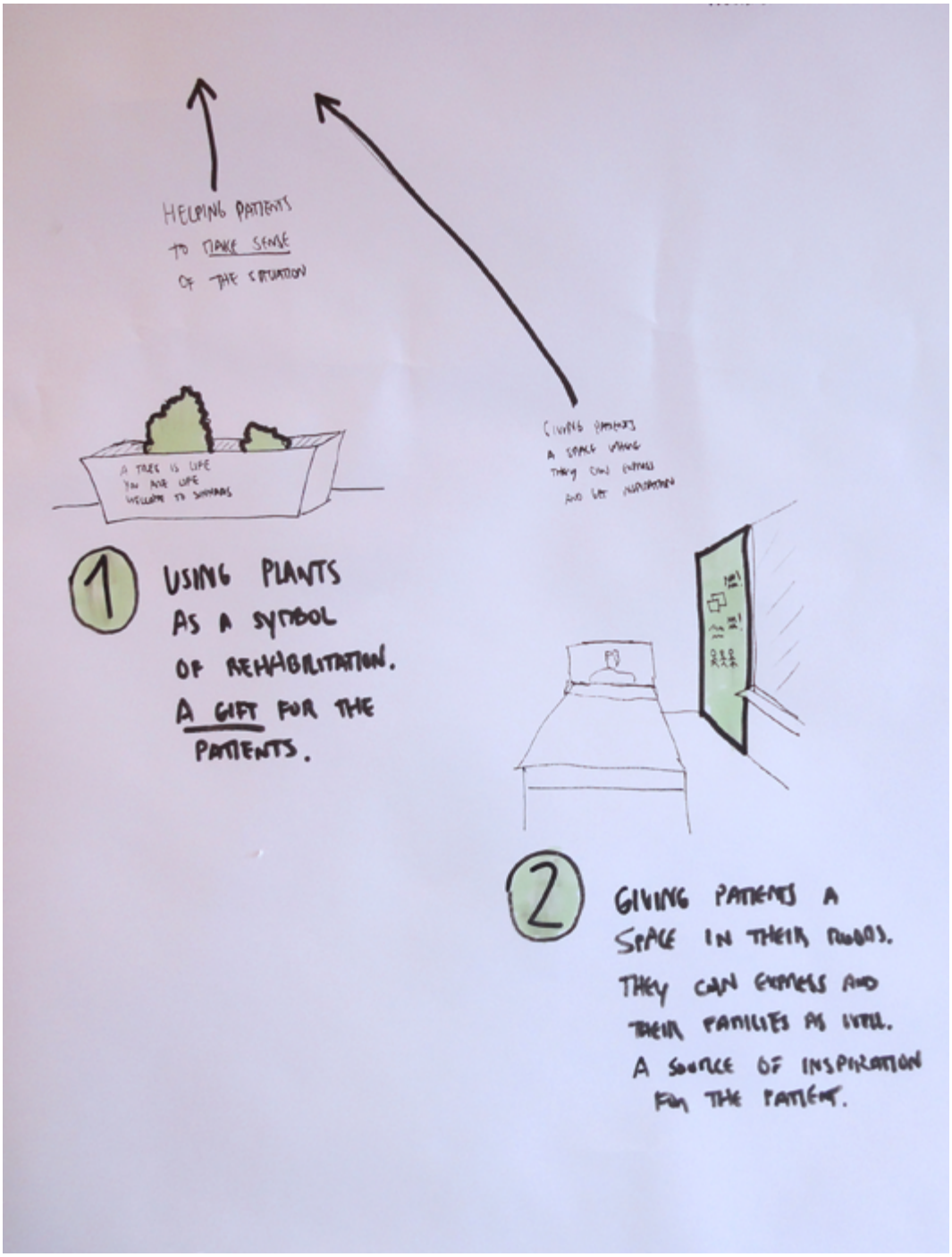


Figure 58. Presenting and discussing ideas with patients and caregivers [Own photo].

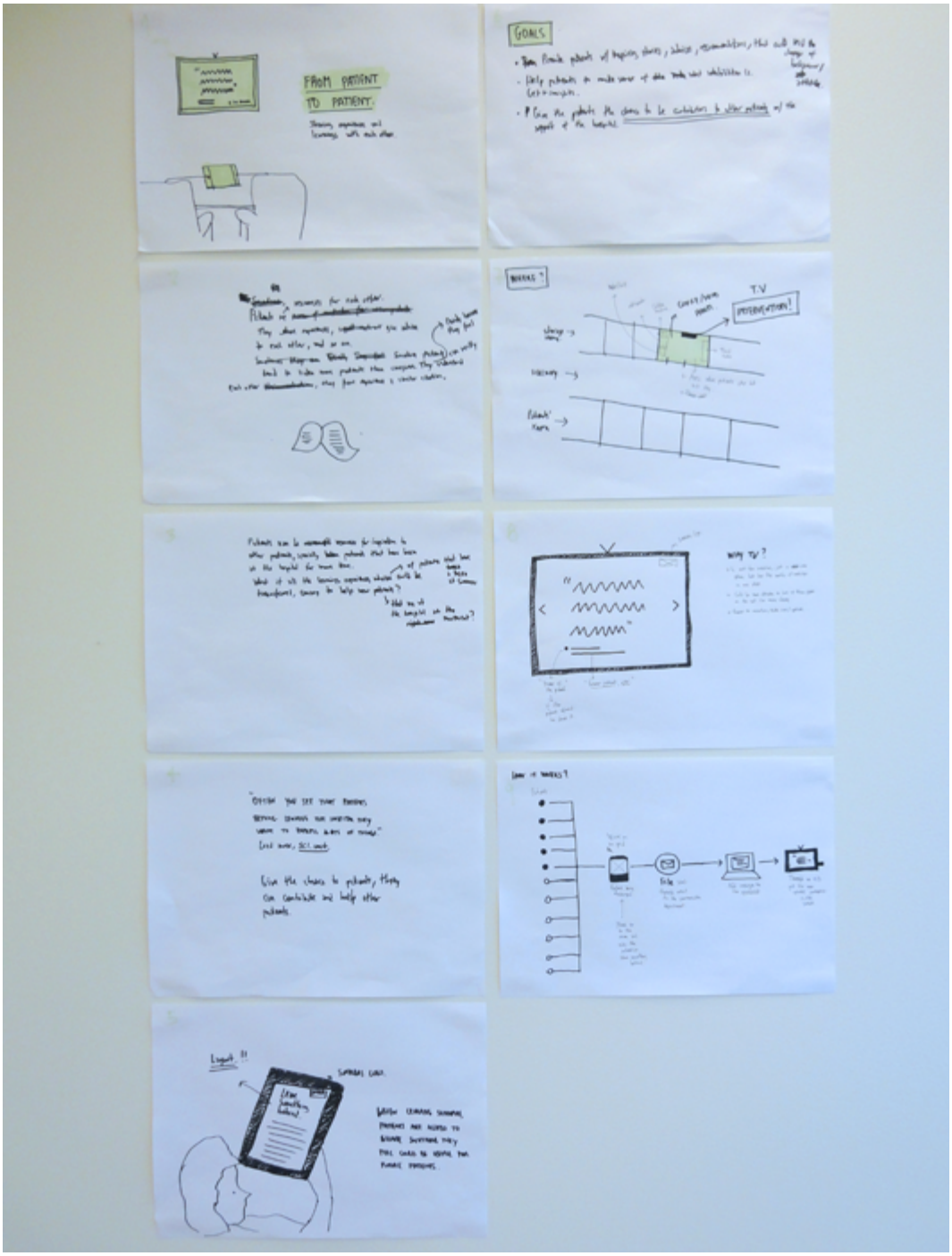


Figure 59. First draft of the final intervention. Storytelling of the concept [Own photo].

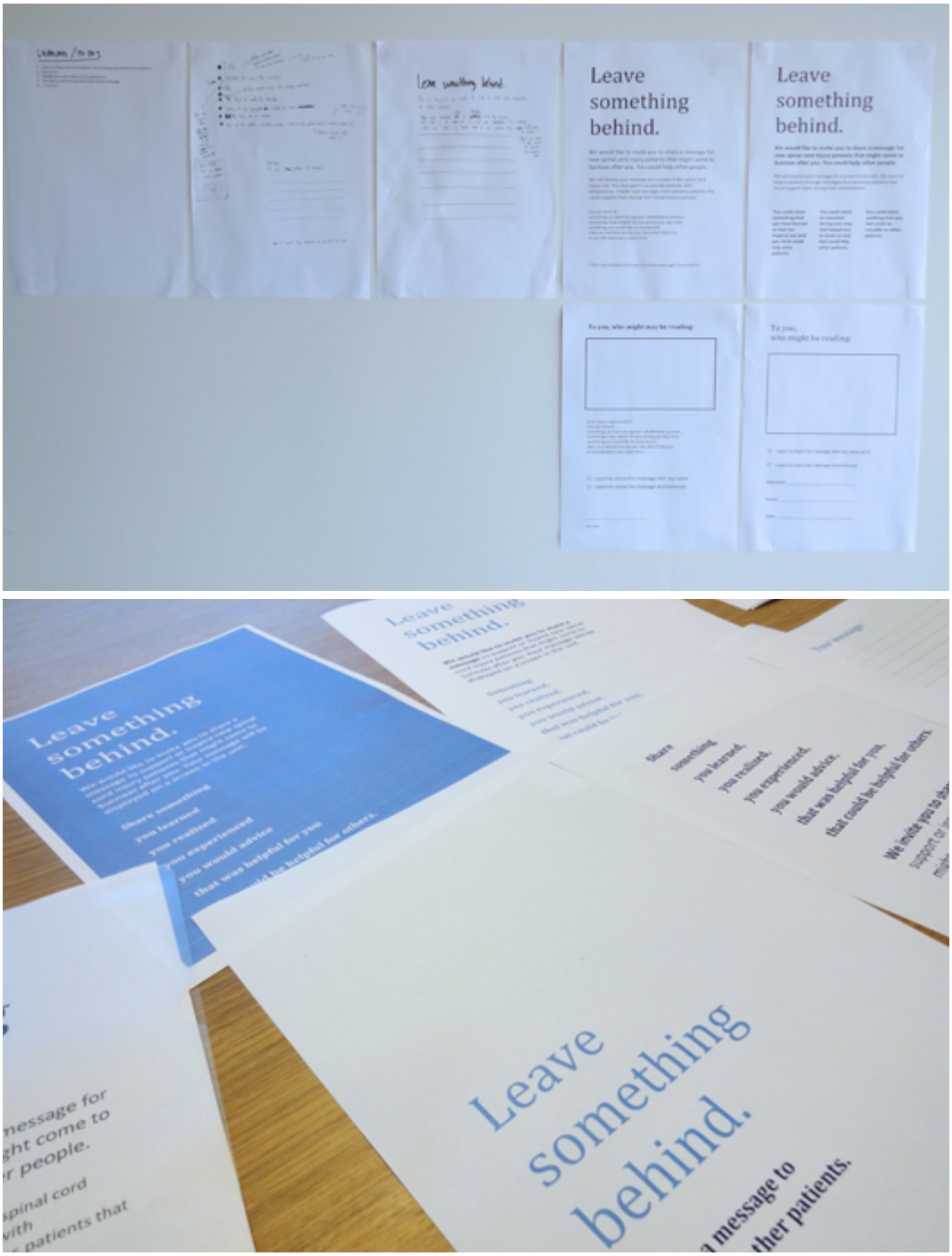


Figure 60. Iterating on the invitation that is delivered to patients [Own photos].

Figure 61. Iterating on the invitation that is delivered to patients [Own photos].

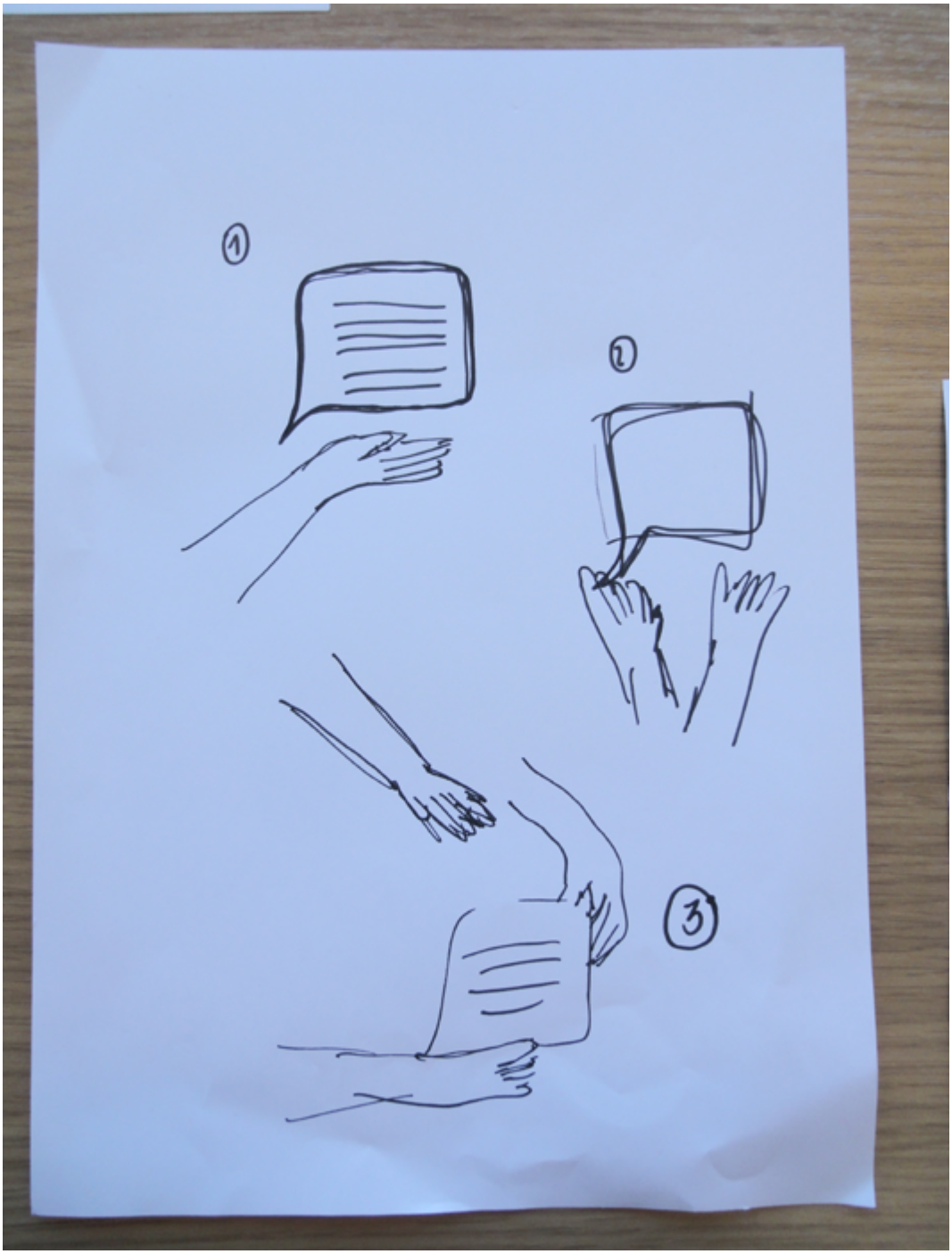


Figure 62. Sketching on ideas for illustration in the invitation [Own photo].

Figure 63. Testing different proposals for the invitation to patients [Own photo].

Figure 64. Testing different proposals for the invitation to patients [Own photos].

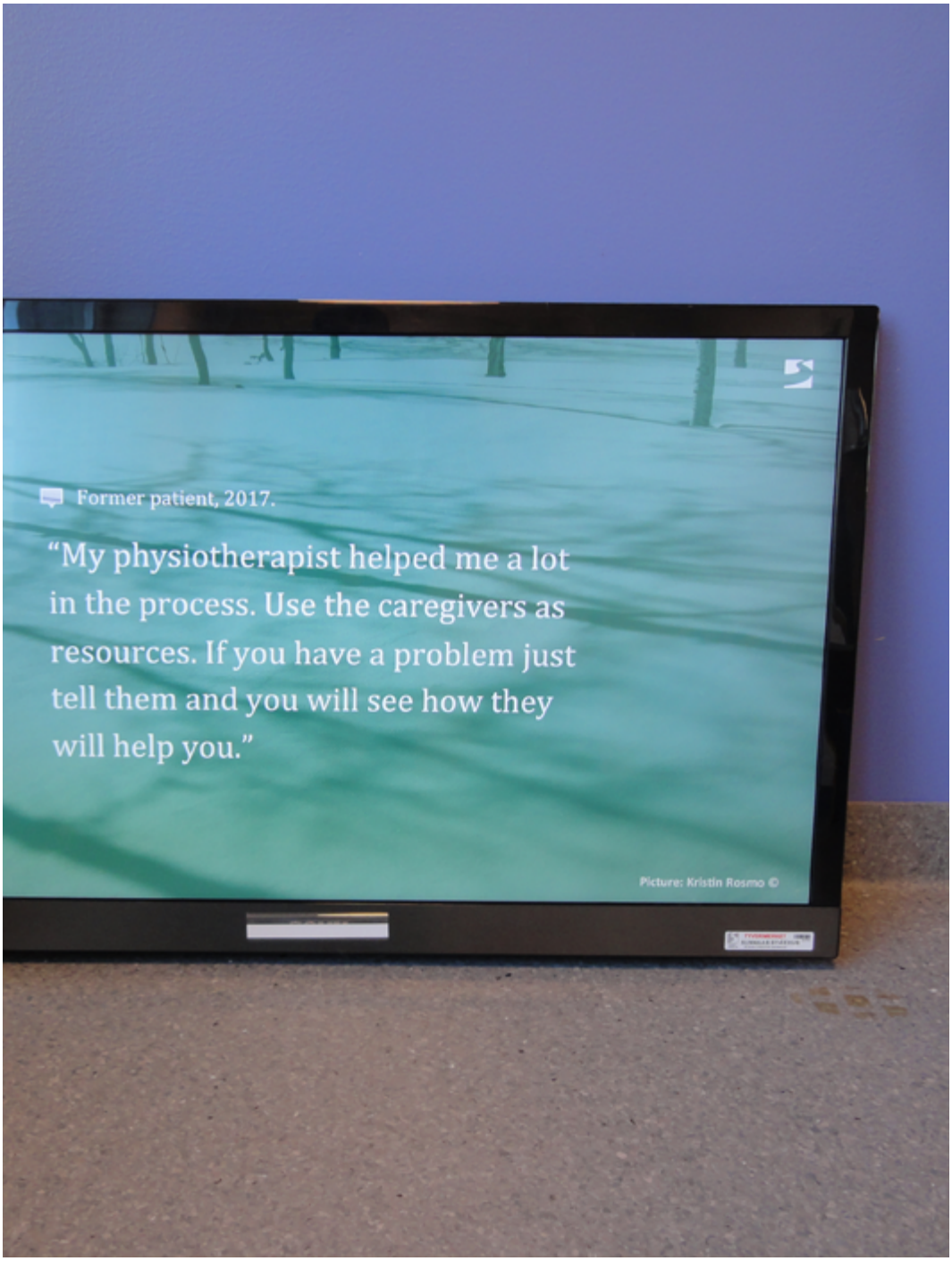


Figure 65. Testing slides: readibility, contrast and colors [Own photo].

Step by step

The prototyping process

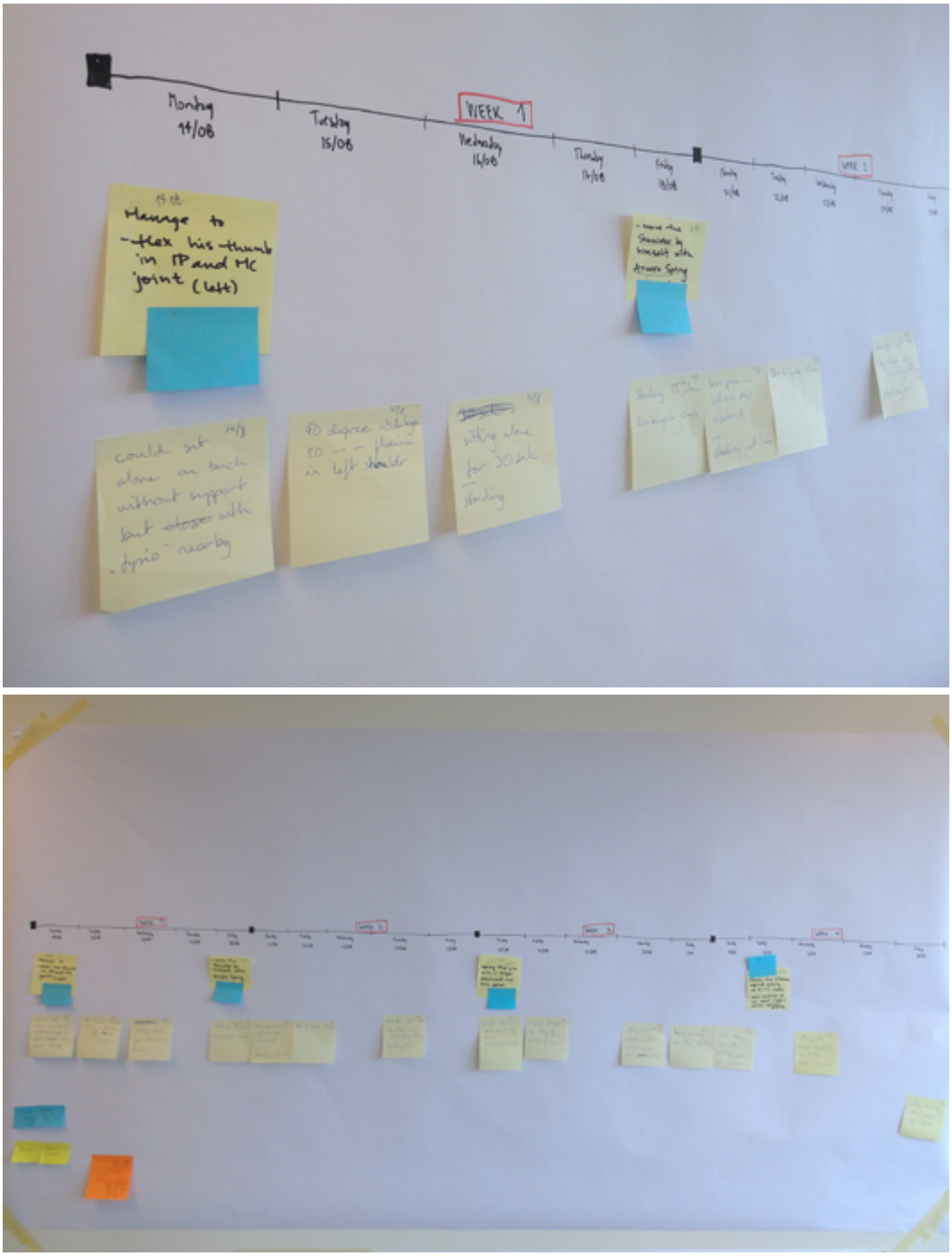


Figure 66. Understanding how therapists write their reports and what kind of information they register [Own photos].

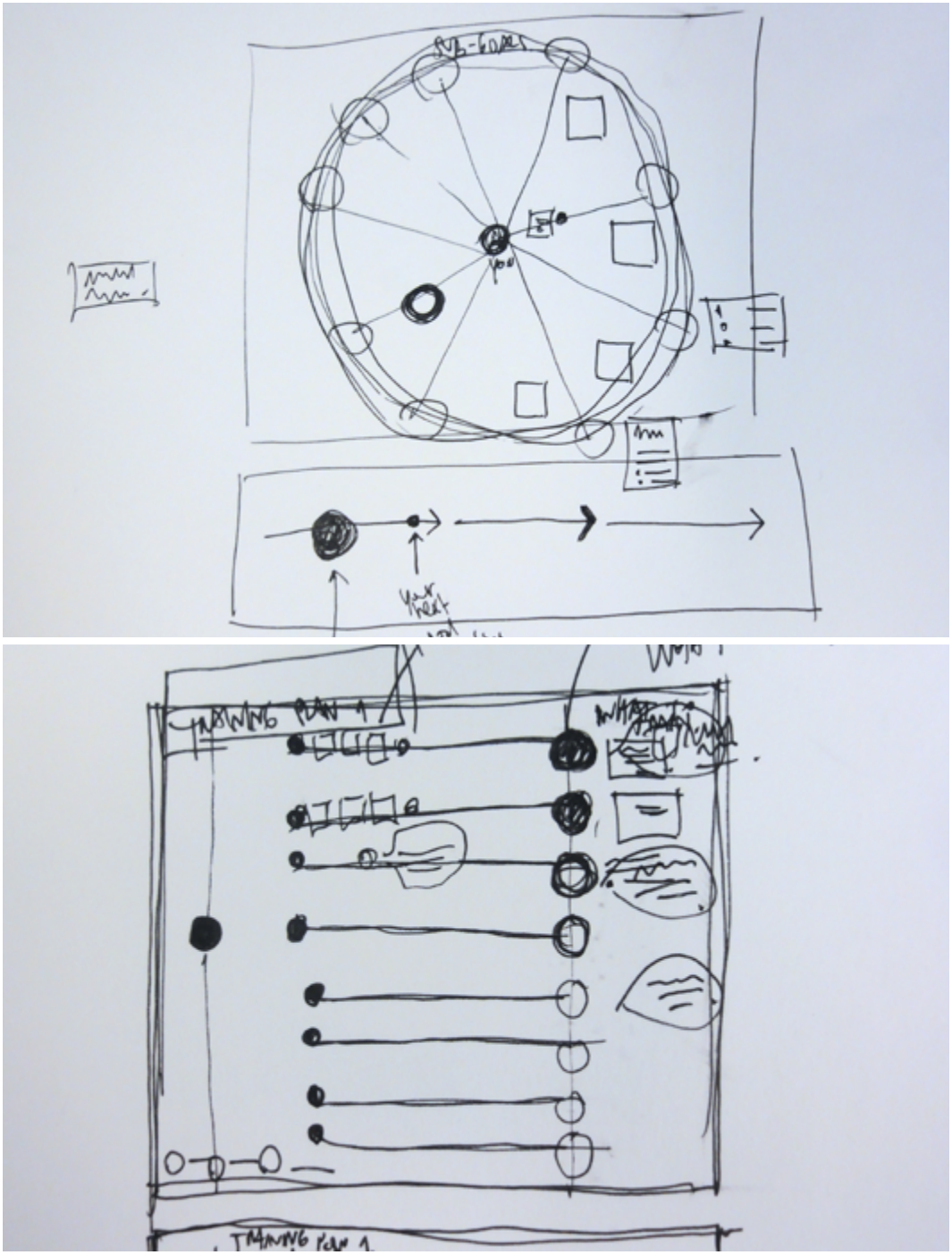


Figure 67. Sketching ideas to show to patients their progress [Own photos].

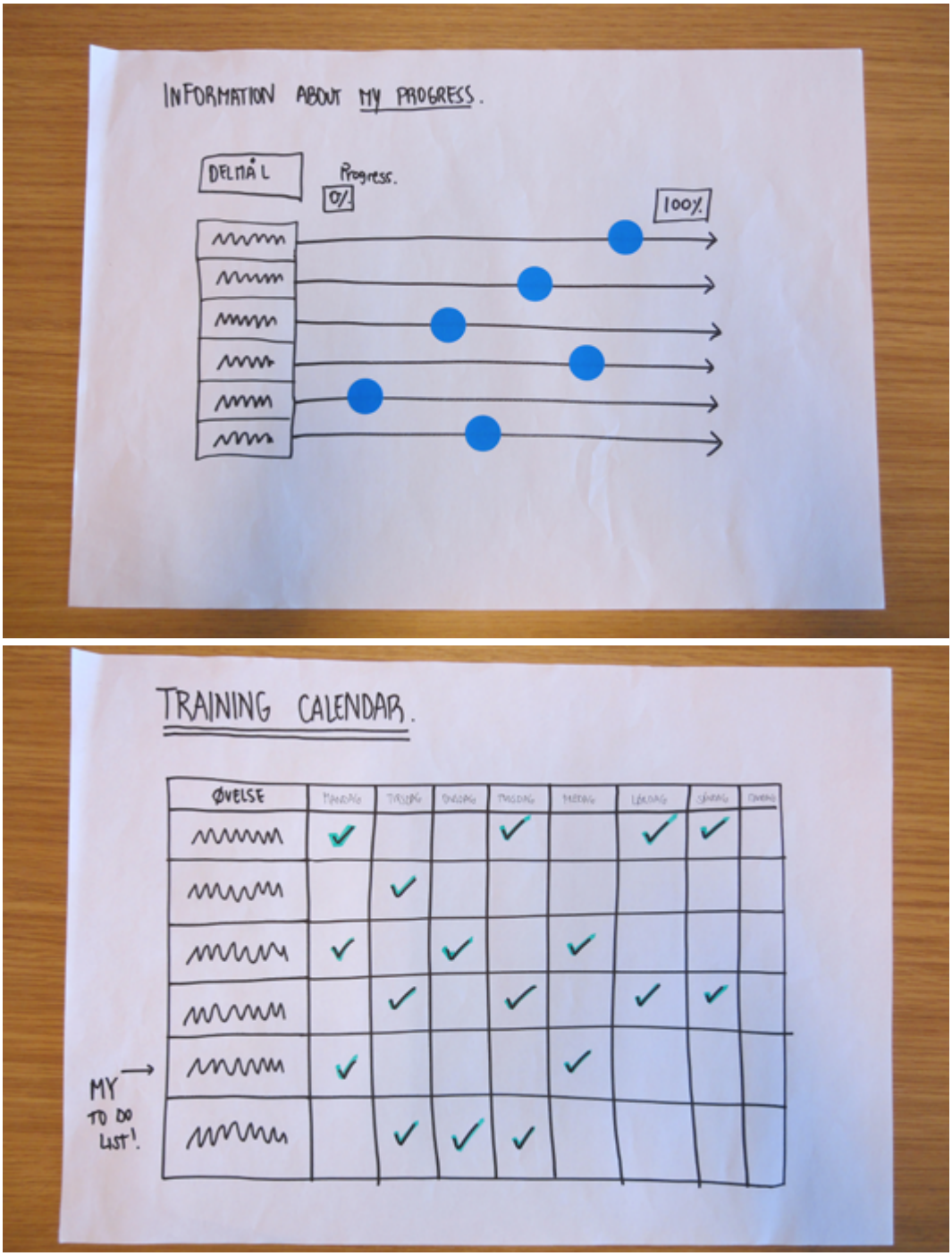


Figure 68. Developing two main ideas: a progress wall and a training calendar [Own photos].

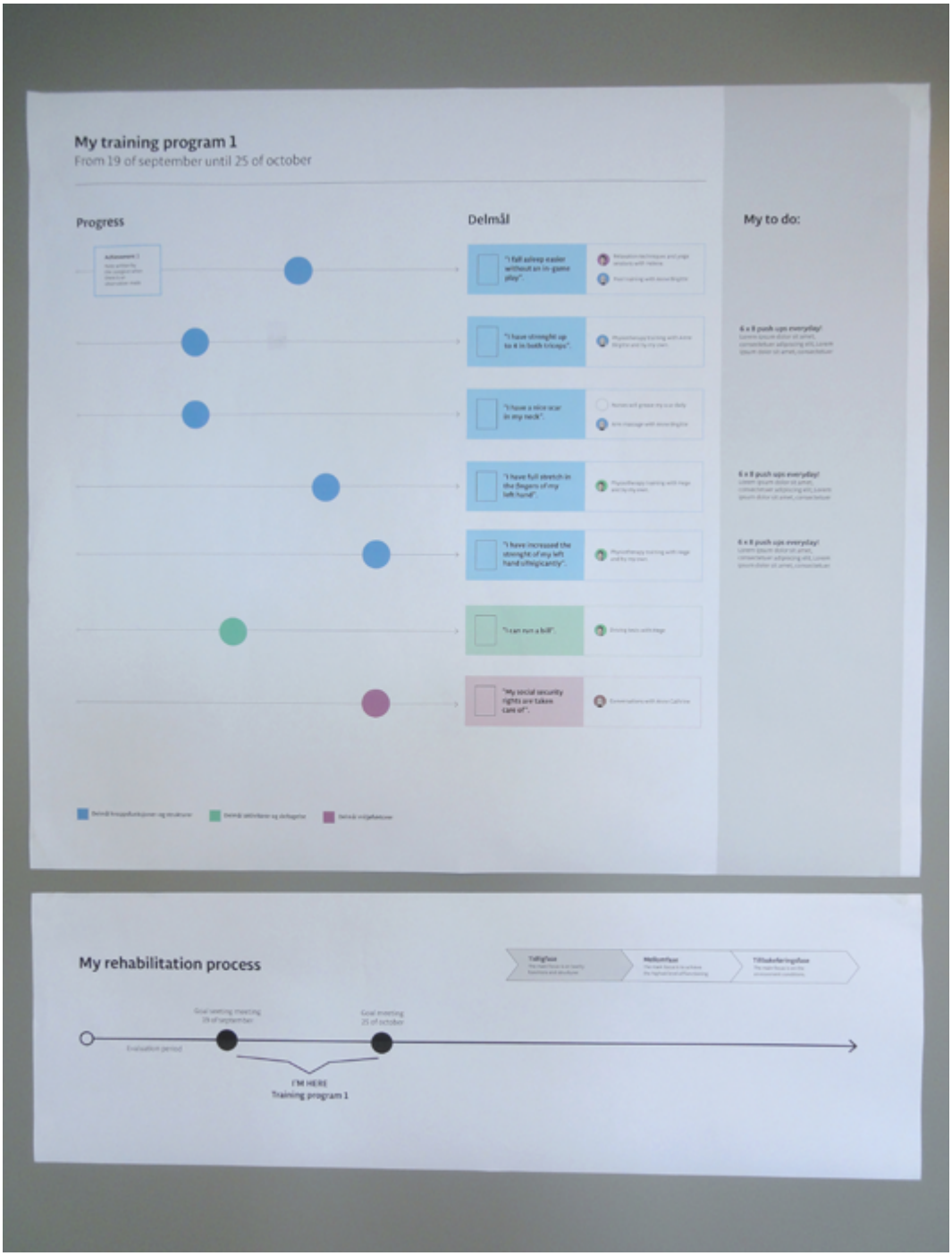


Figure 69. Testing a first proporsal for a progress wall [Own photo].

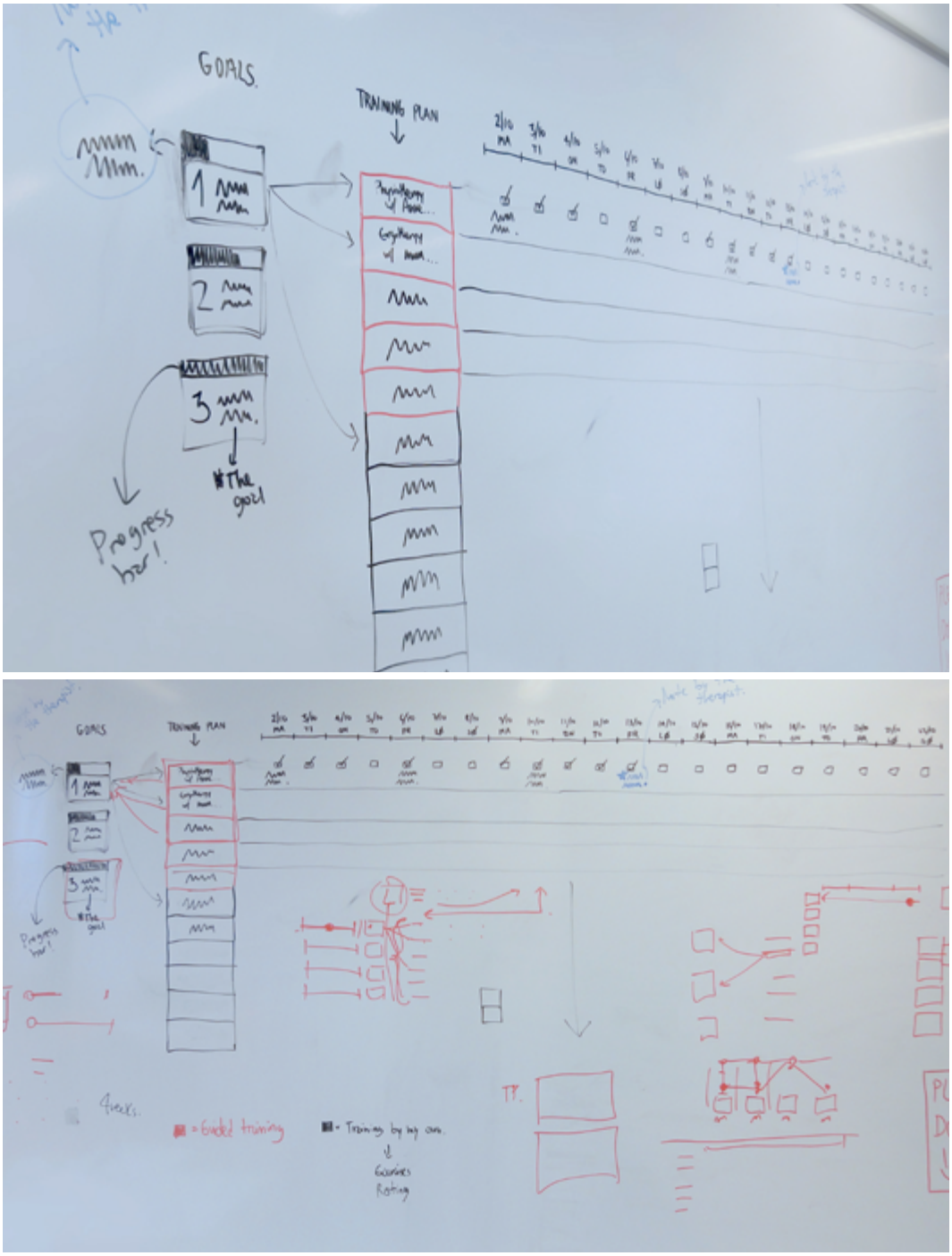


Figure 70. Sketching a training calendar for patients [Own photos].

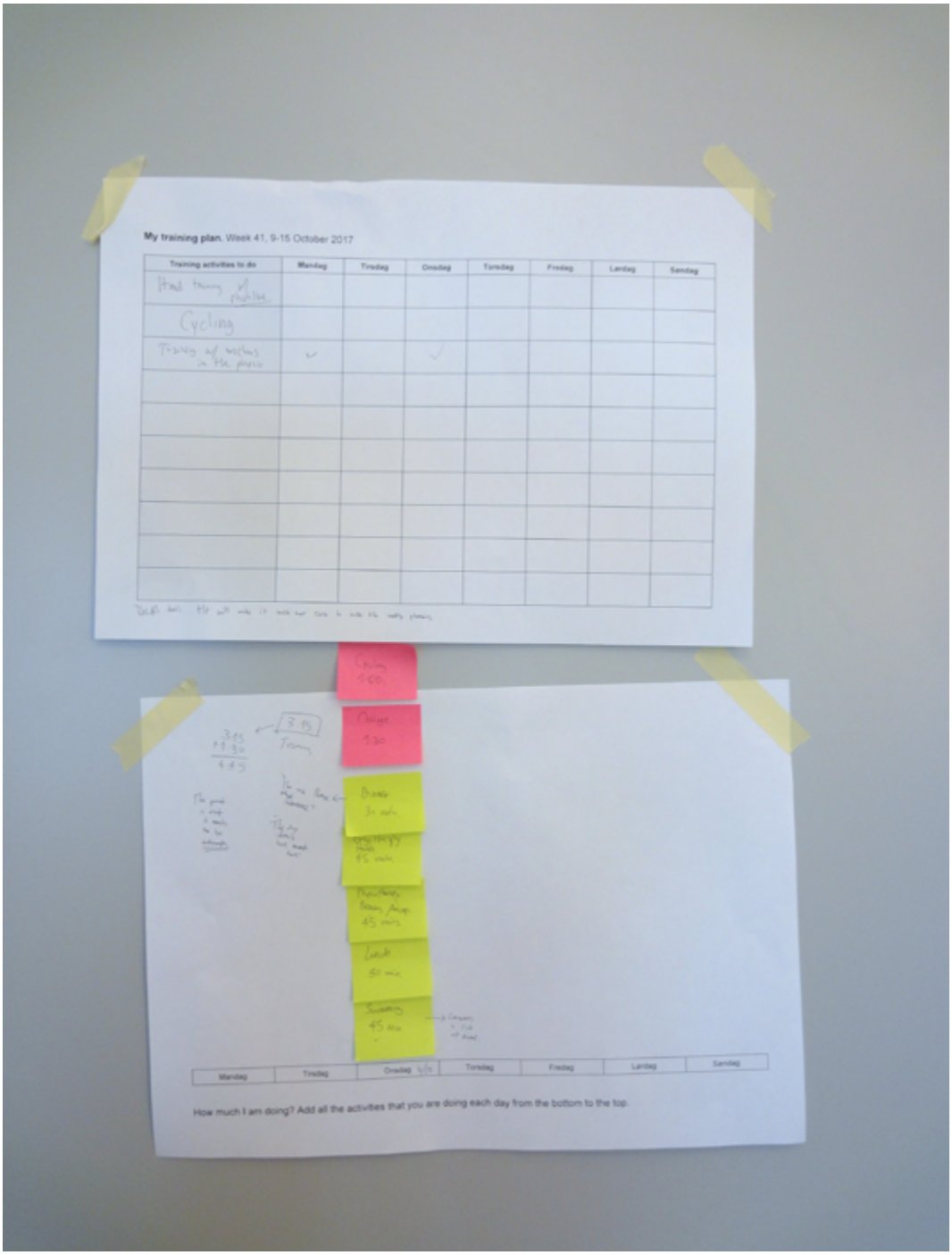


Figure 71. Testing with patients how a training calendar could be used in their daily routines [Own photo].

Figure 72. Combining the progress and the training calendar ideas into a digital tool [Own photo].

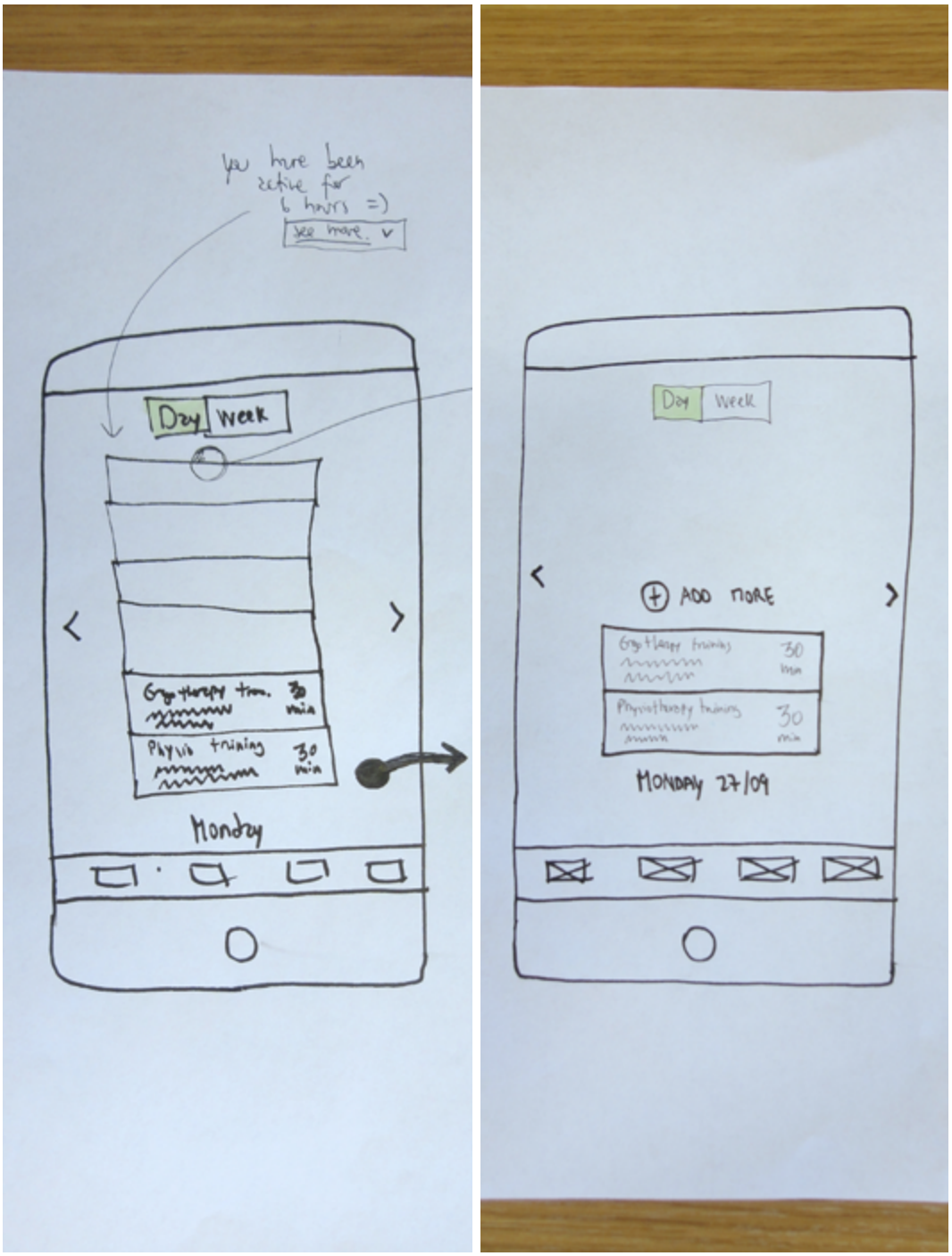


Figure 73. Combining the progress and the training calendar ideas into a digital tool [Own photos].

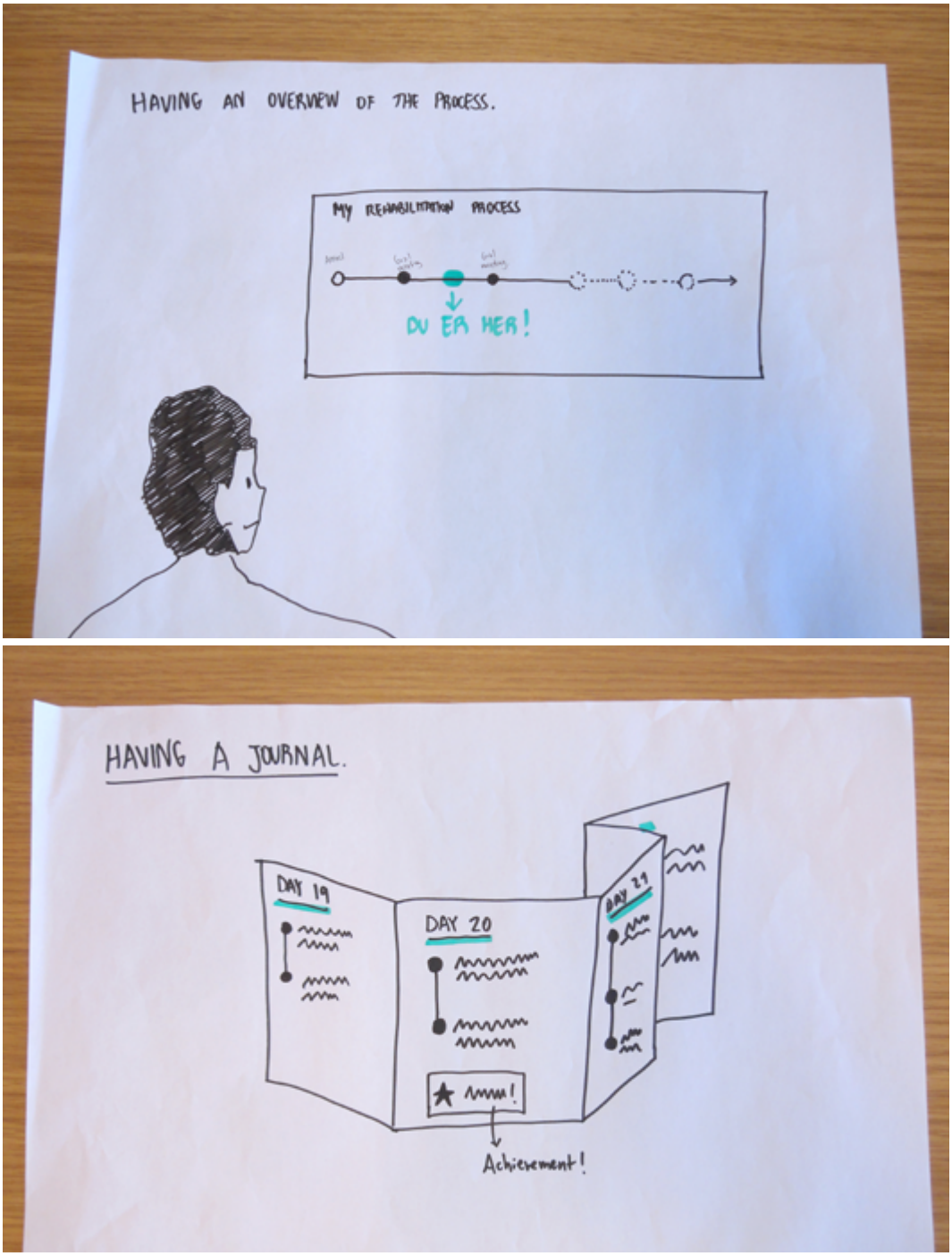


Figure 74. Exploring and discussing more ideas with patients [Own photos].

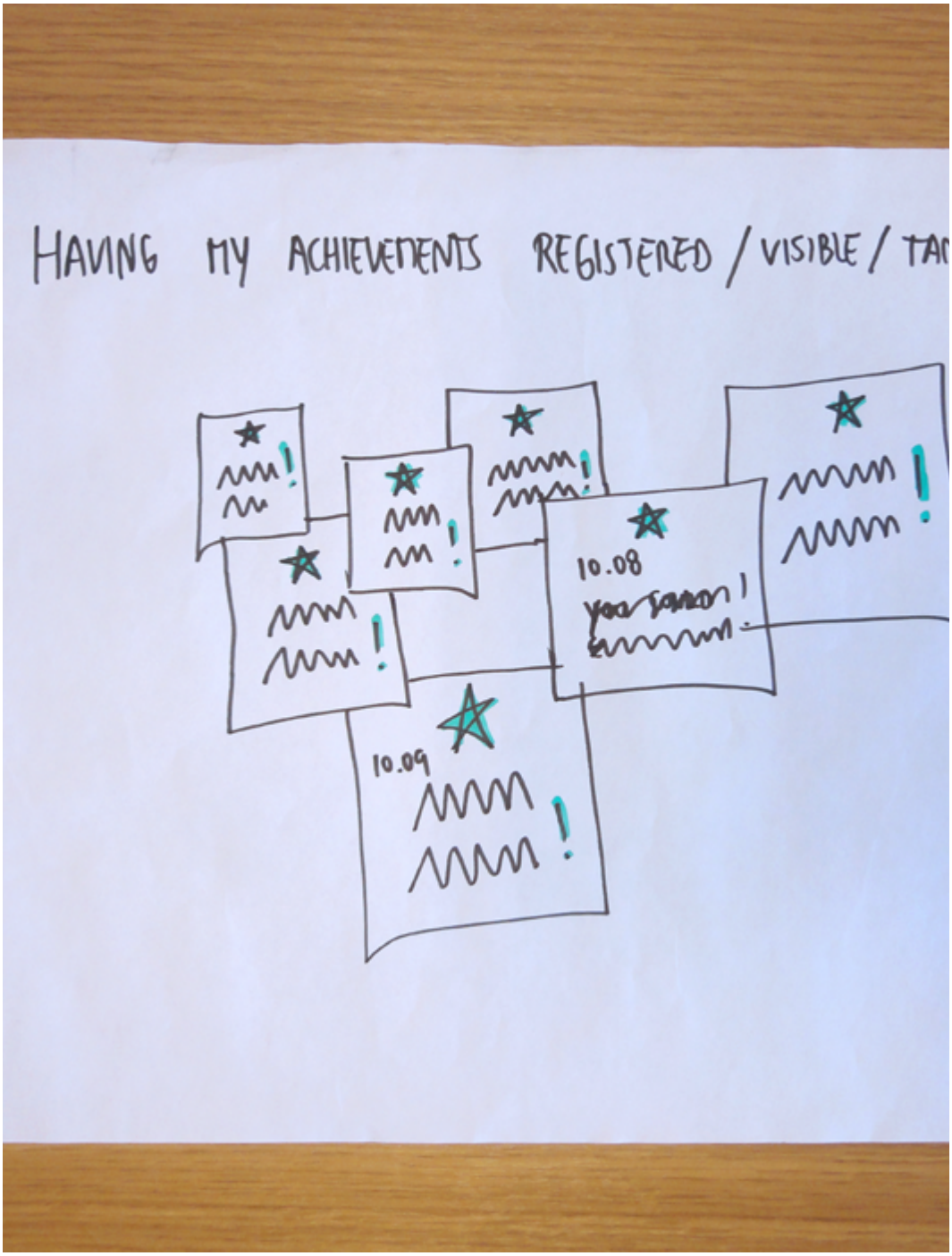


Figure 75. The idea that led to the final intervention. Focusing on patients' achievements and make them visible for patients through their process [Own photo].

Figure 76. First draft of the final intervention. Storytelling of the concept [Own photo].

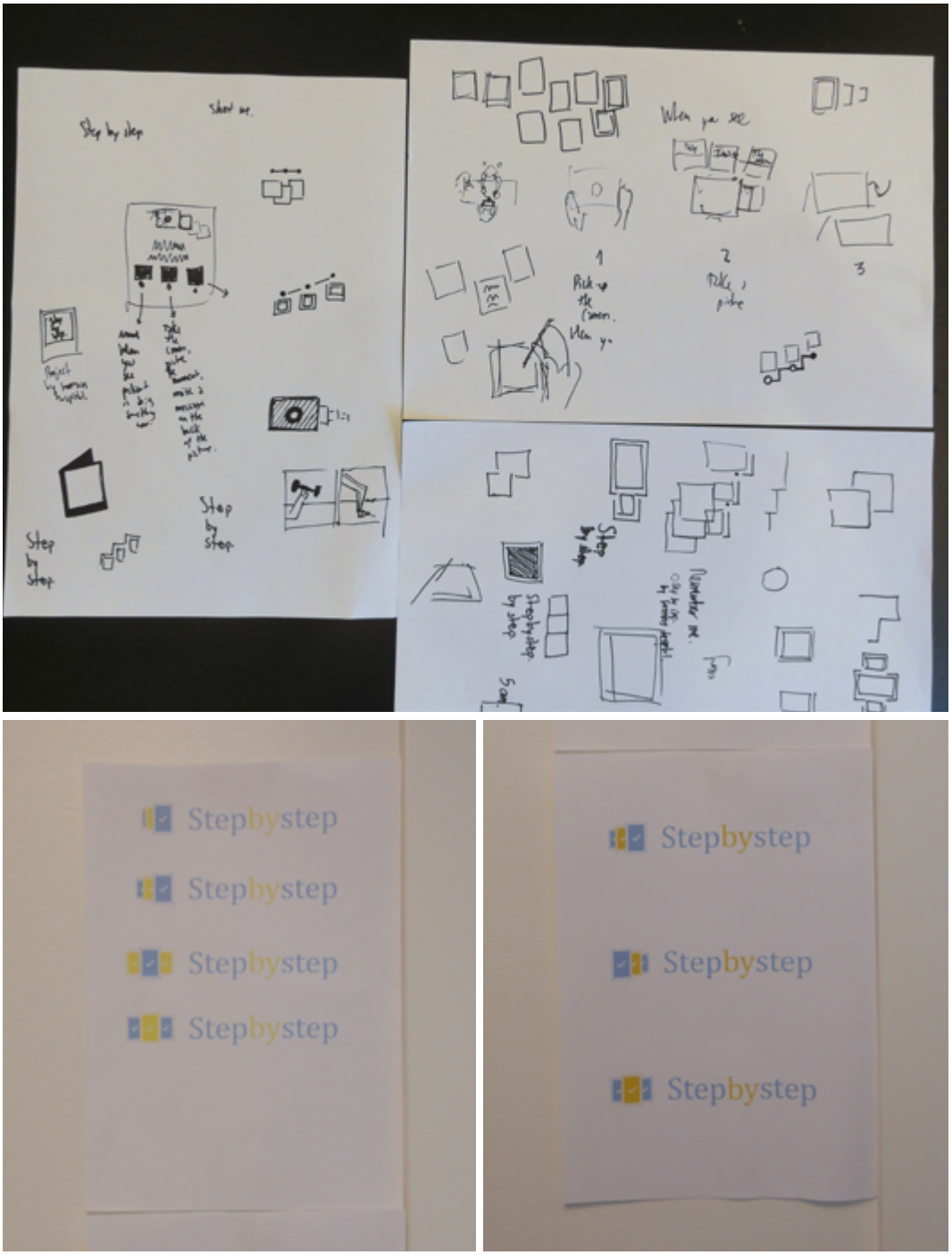


Figure 77. Sketching and testing different versions of the intervention's logo [Own photos].

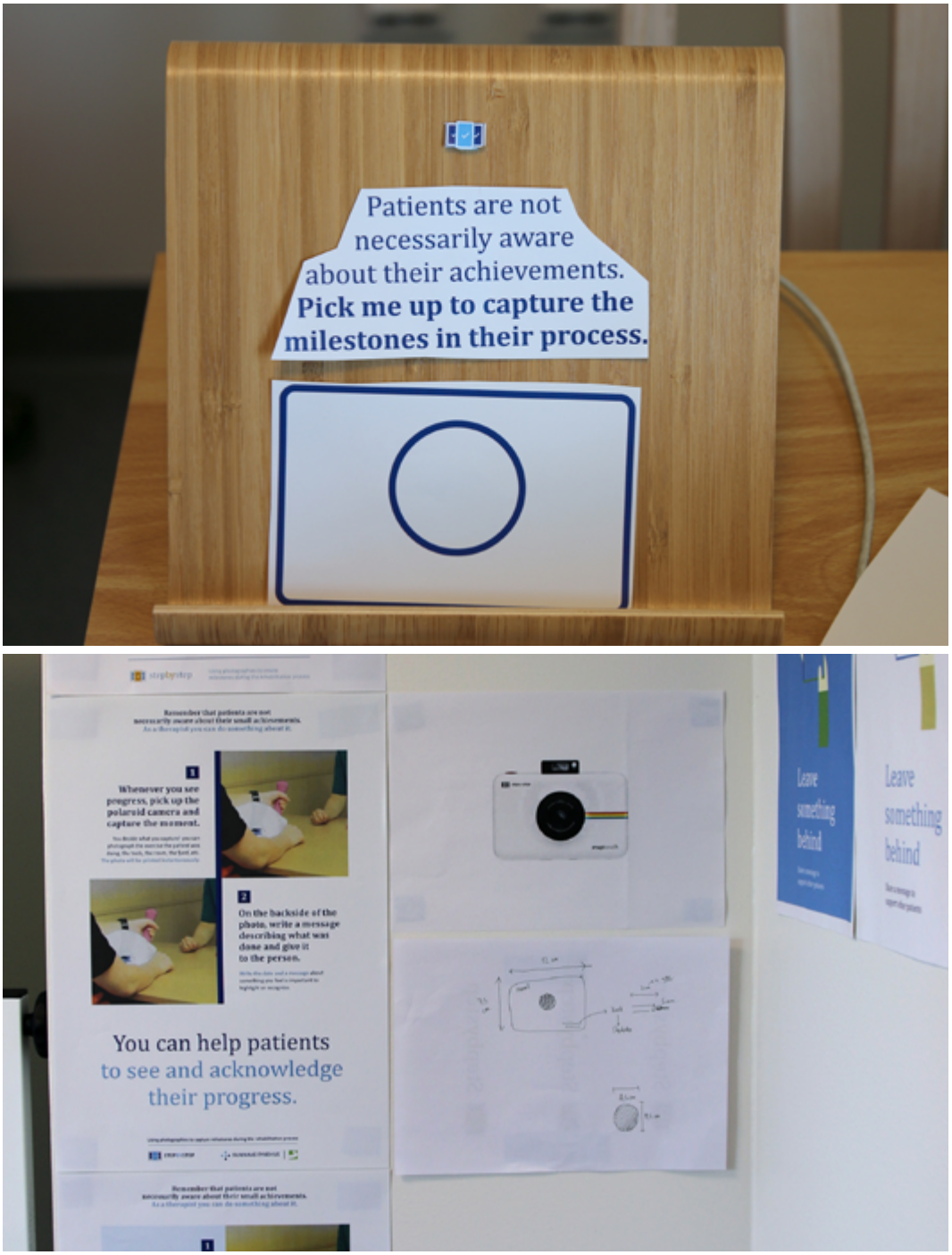


Figure 78. Iterating different versions of posters and testing readibility of the text in the camera's placeholder [Own photos].

All the pieces, in one place

The prototyping process

Figure 79. The process of this intervention started by mapping out all the multidisciplinary teams and patients at the spinal cord injury unit [Own photos].

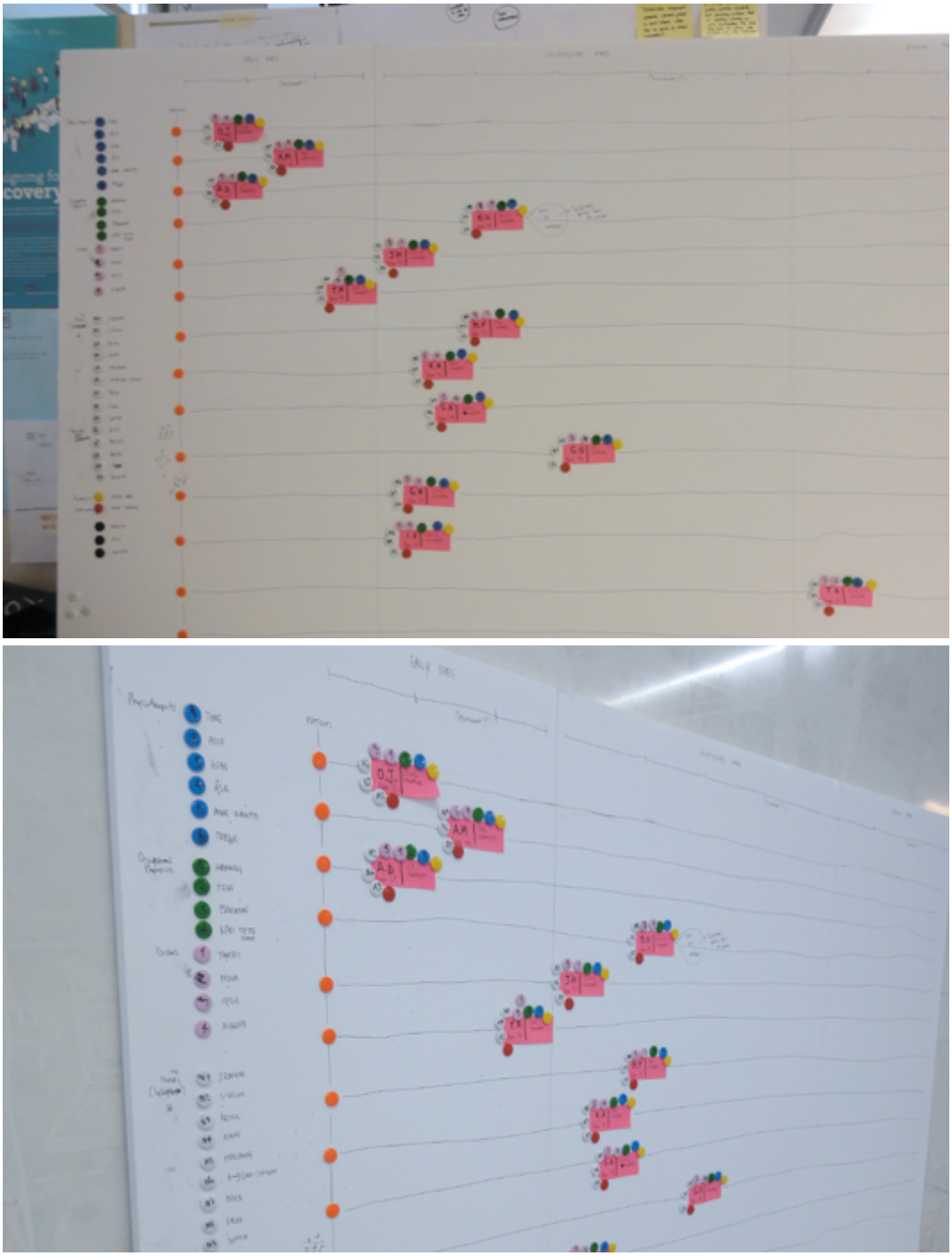


Figure 80. Visualizing patients and multidisciplinary teams [Own photo].

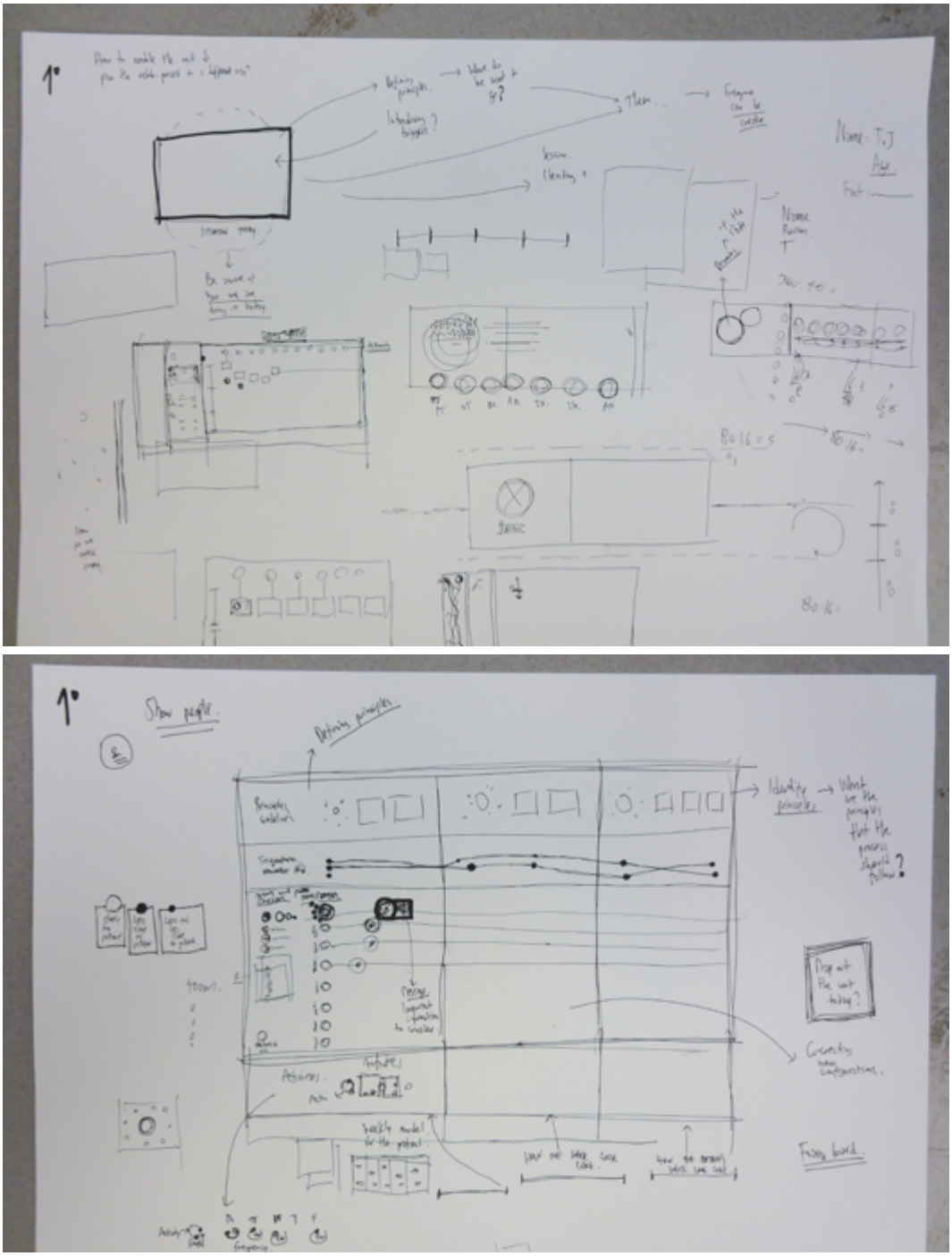


Figure 81. Sketching how to visualize patients' rehabilitation process [Own photo].

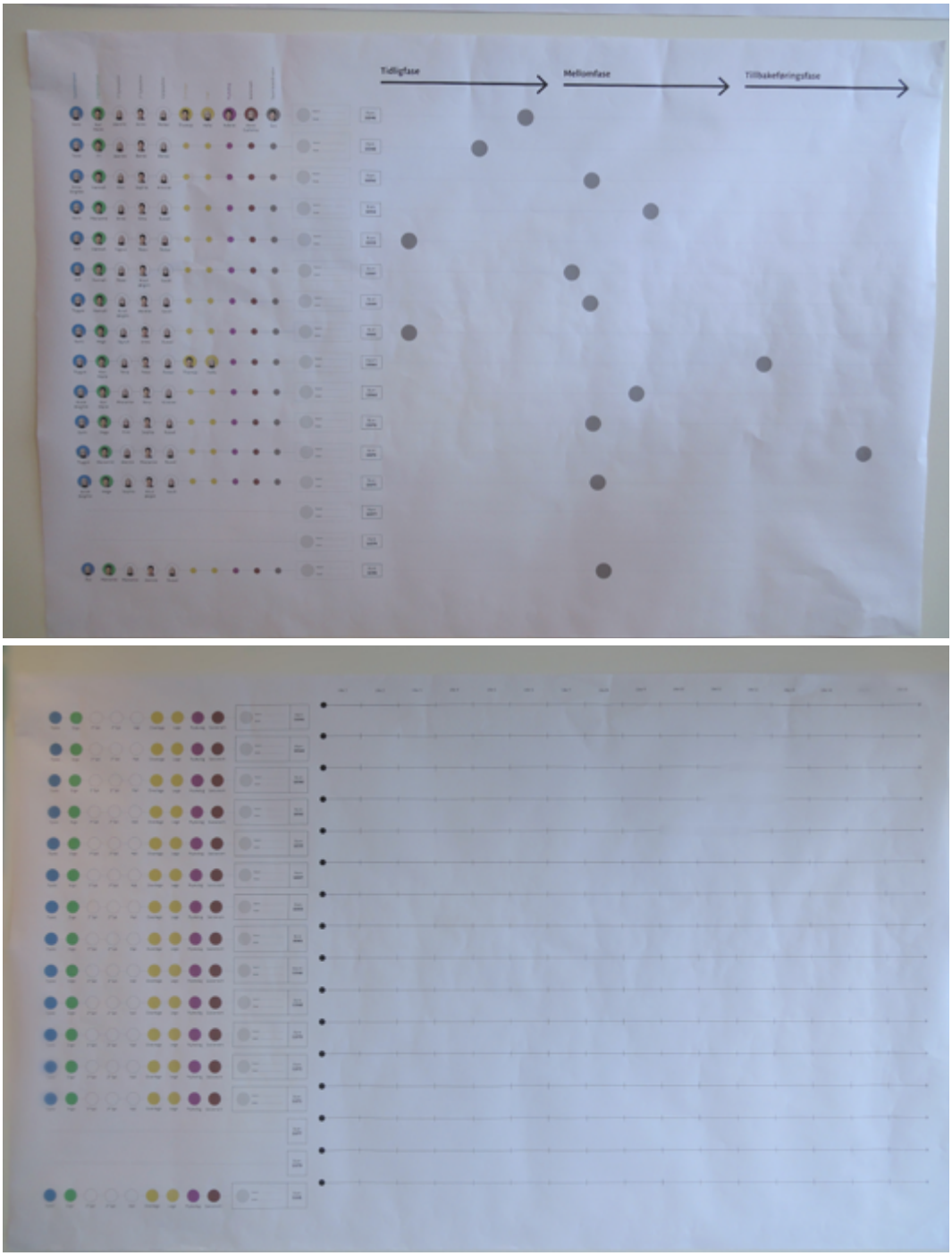


Figure 82. Visualizing patients' rehabilitation process and multidisciplinart teams. Testing two versions, one that organizes patients through the phases of rehabilitation (top) and the other through time (bottom) [Own photos].

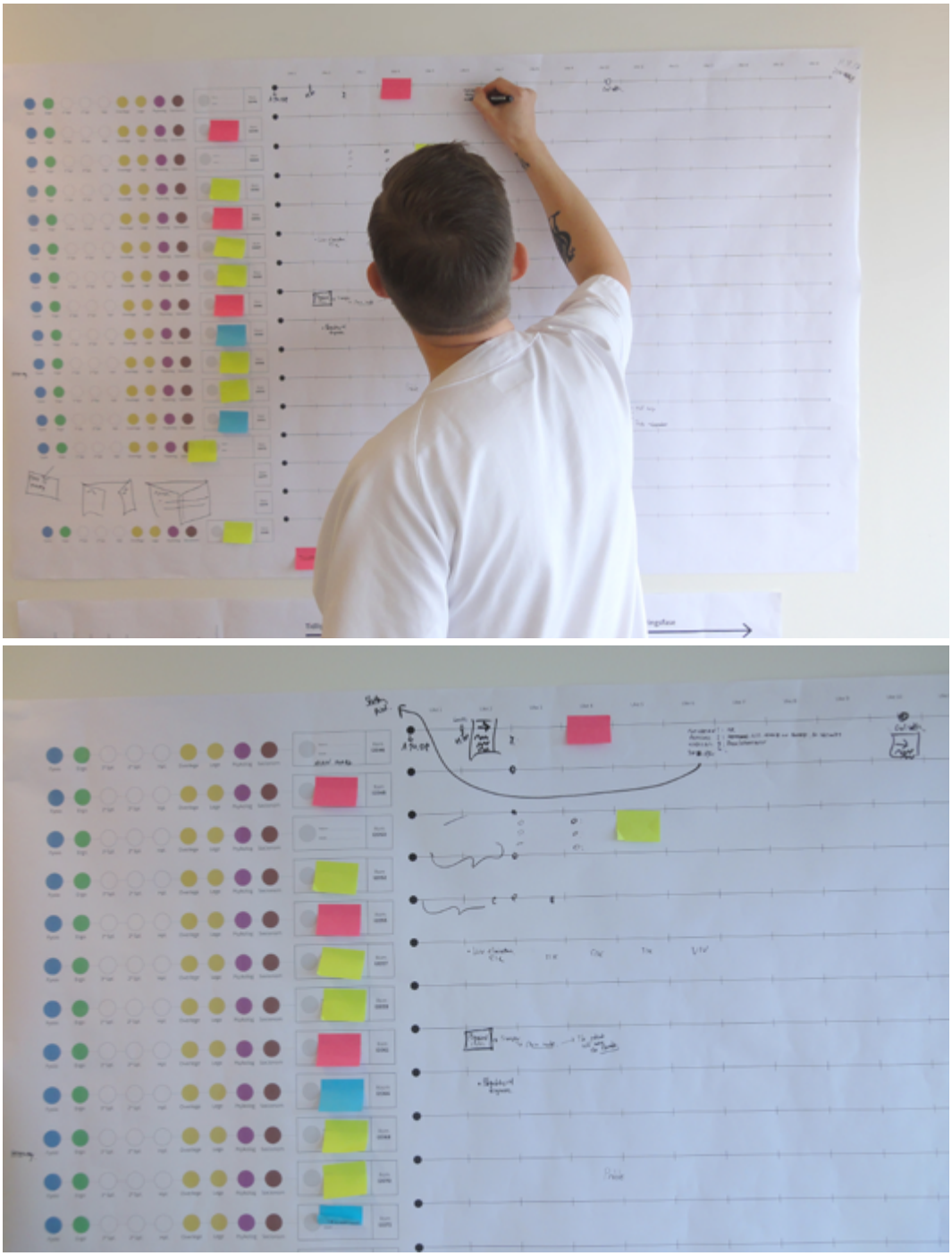


Figure 83. Co-creating with the lead nurse. Looking at how to track patients' progress over time [Own photos].

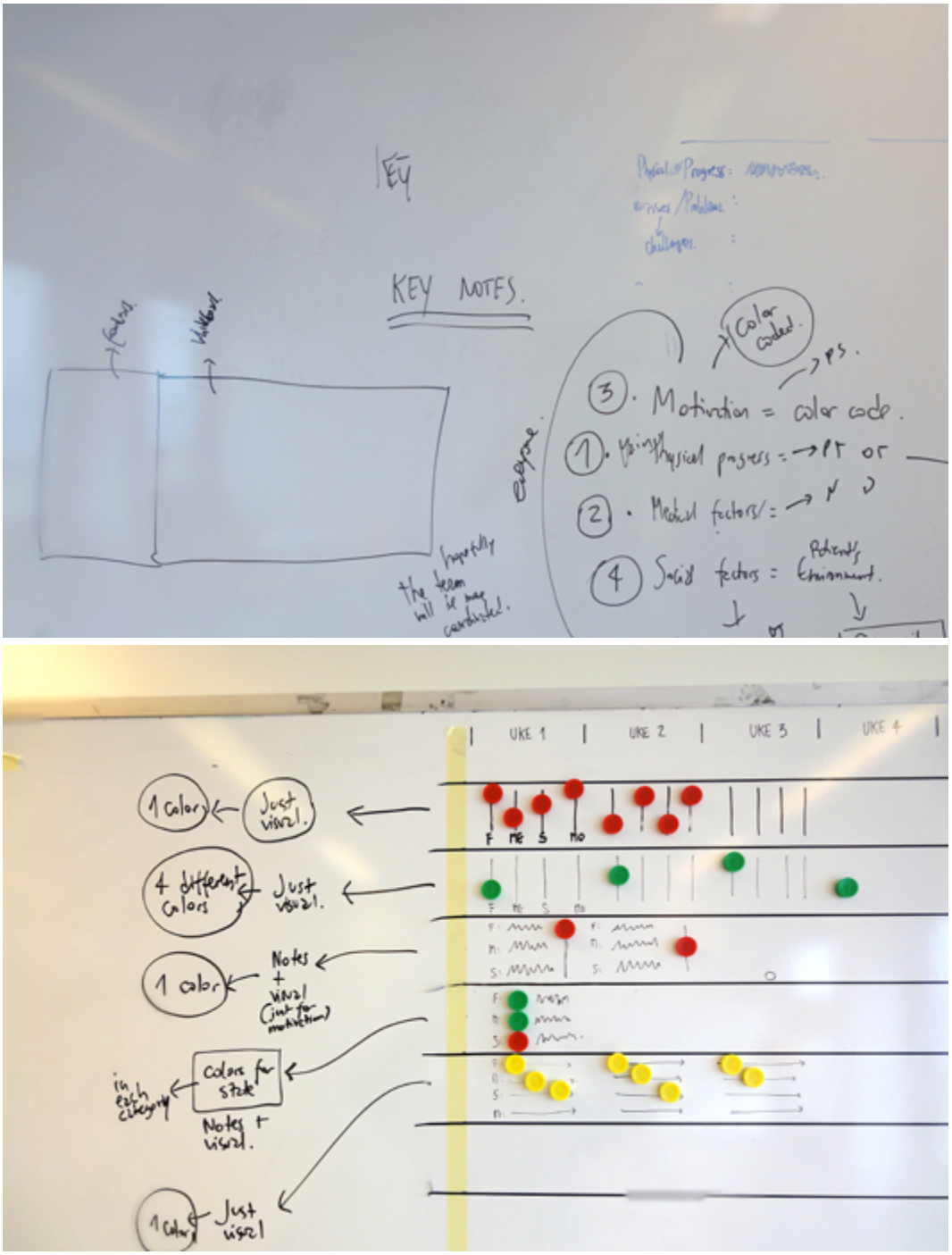


Figure 84. Understanding what kind of information could be tracked (at the top) and testing out different ways of visualizing progress over time by using color magnets [Own photos].

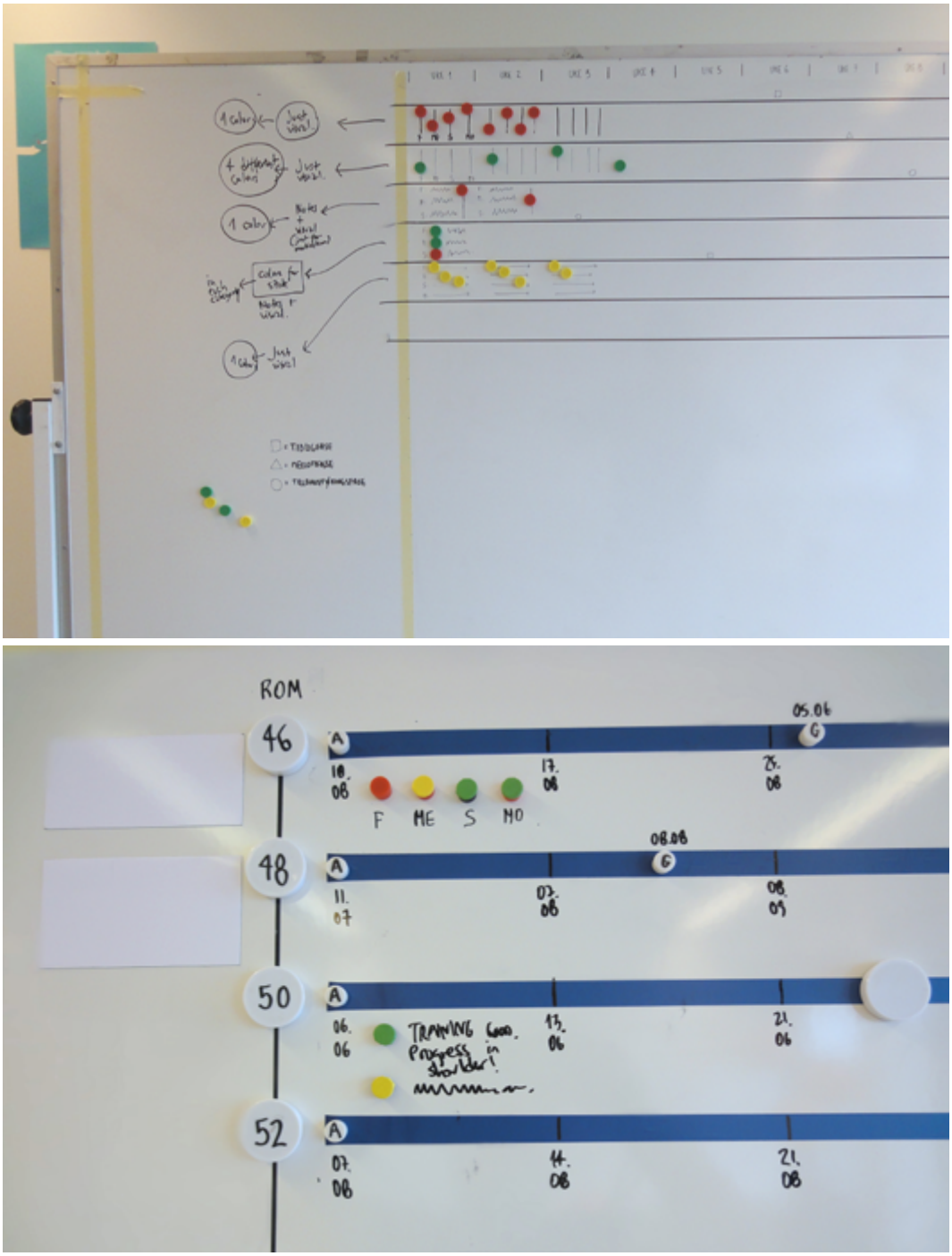


Figure 85. Testing out a new layout, materials and ways of visualizing [Own photos].

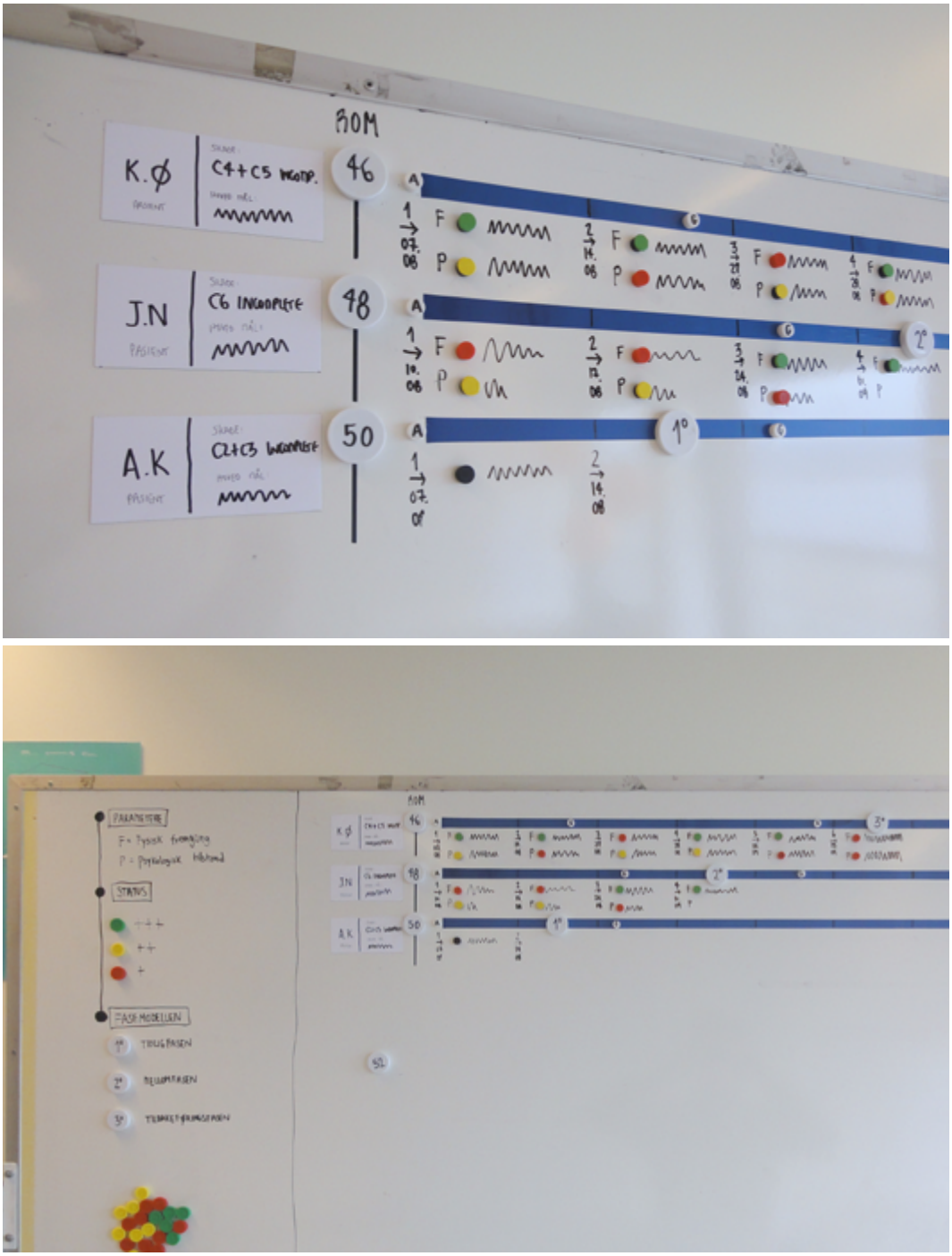


Figure 86. Testing out a new layout, materials and ways of visualizing [Own photos].

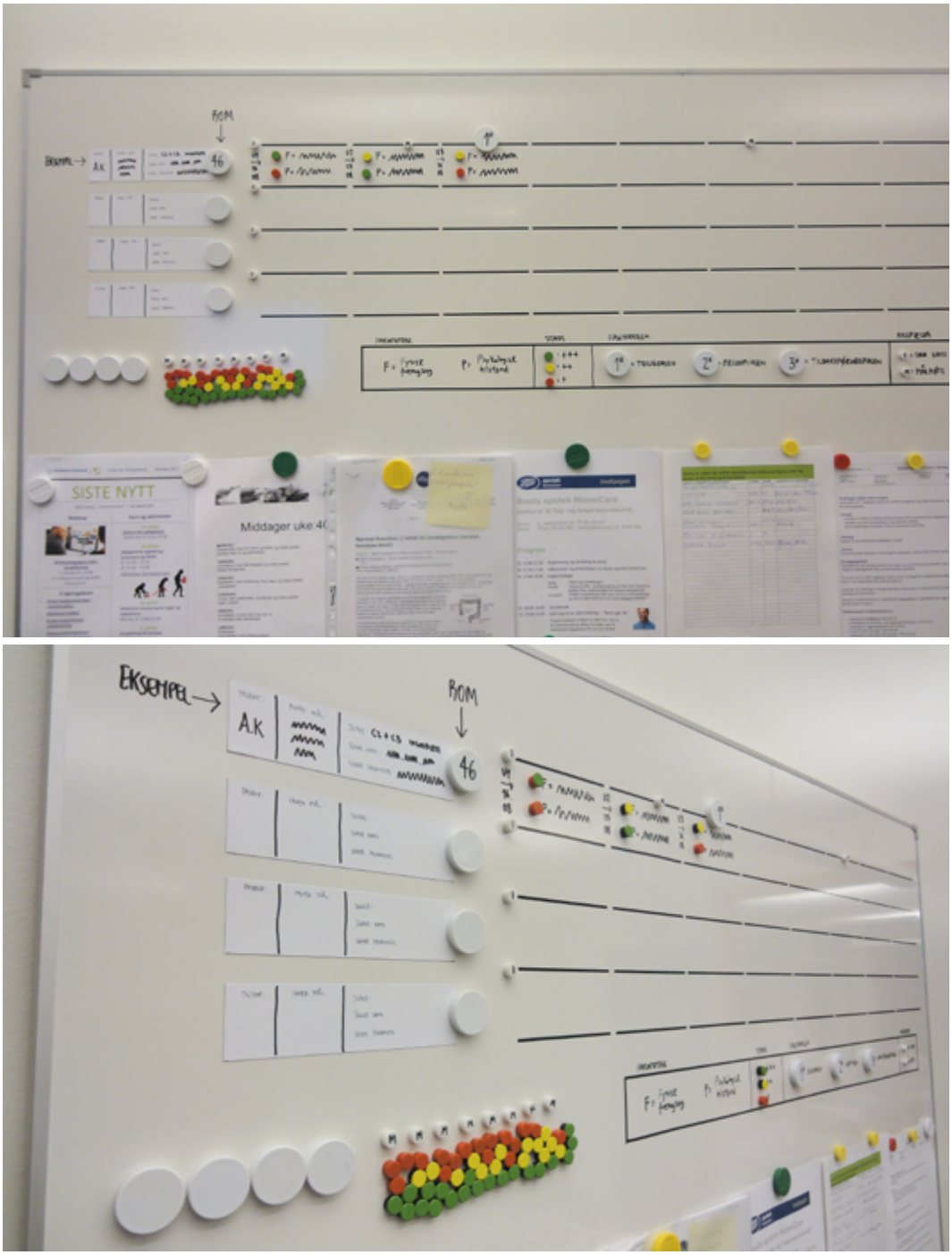


Figure 87. First prototype built in the multidisciplinary meeting room [Own photo].

Figure 88. Final prototype. It combines information from the existing whiteboard, from the previous idea about tracking patients' progress, and from the patients' goal documents [Own photos].

Figure 89. Final prototype with real data written by the lead nurse [Own photos].

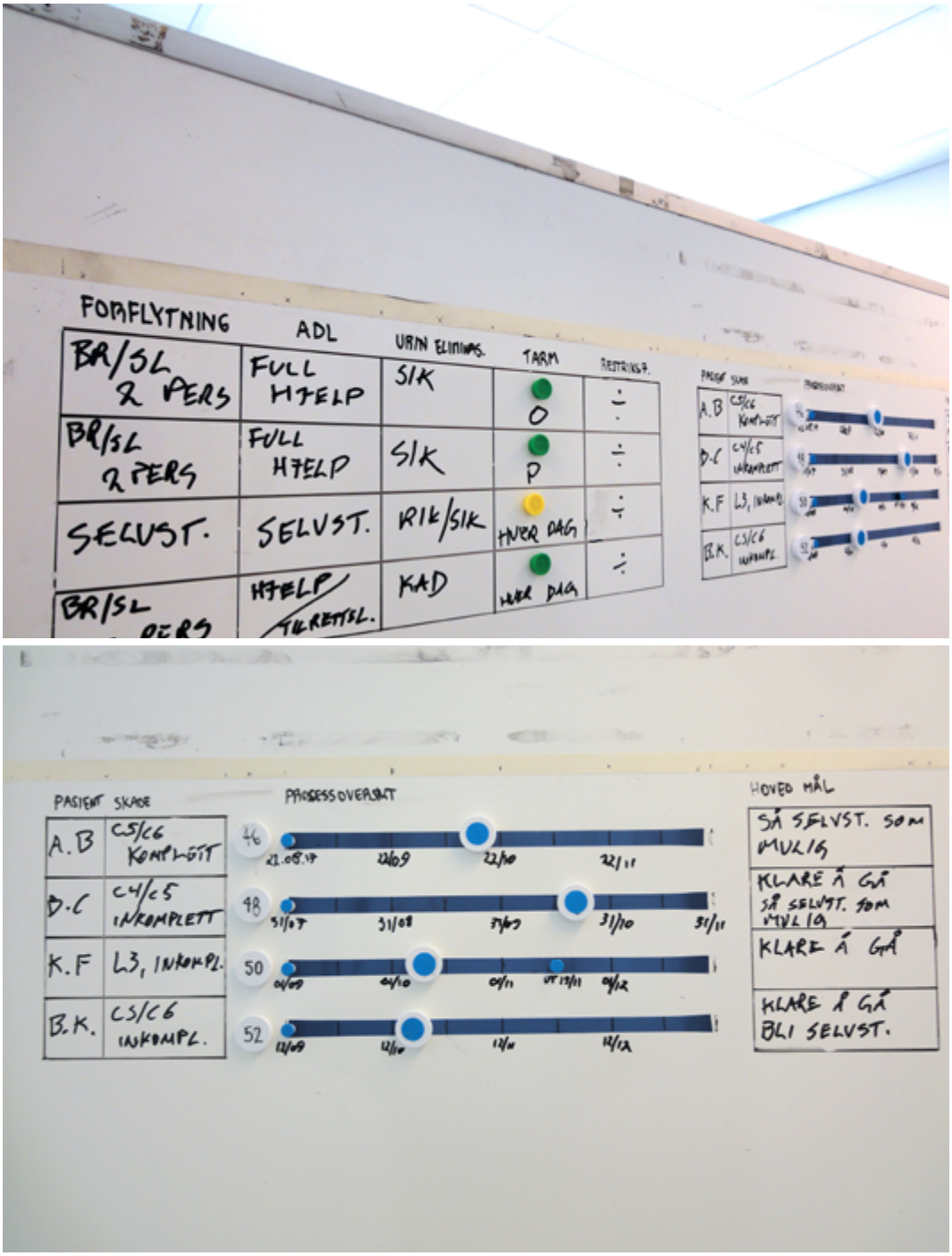


Figure 90. Final prototype with real data written by the lead nurse [Own photos].

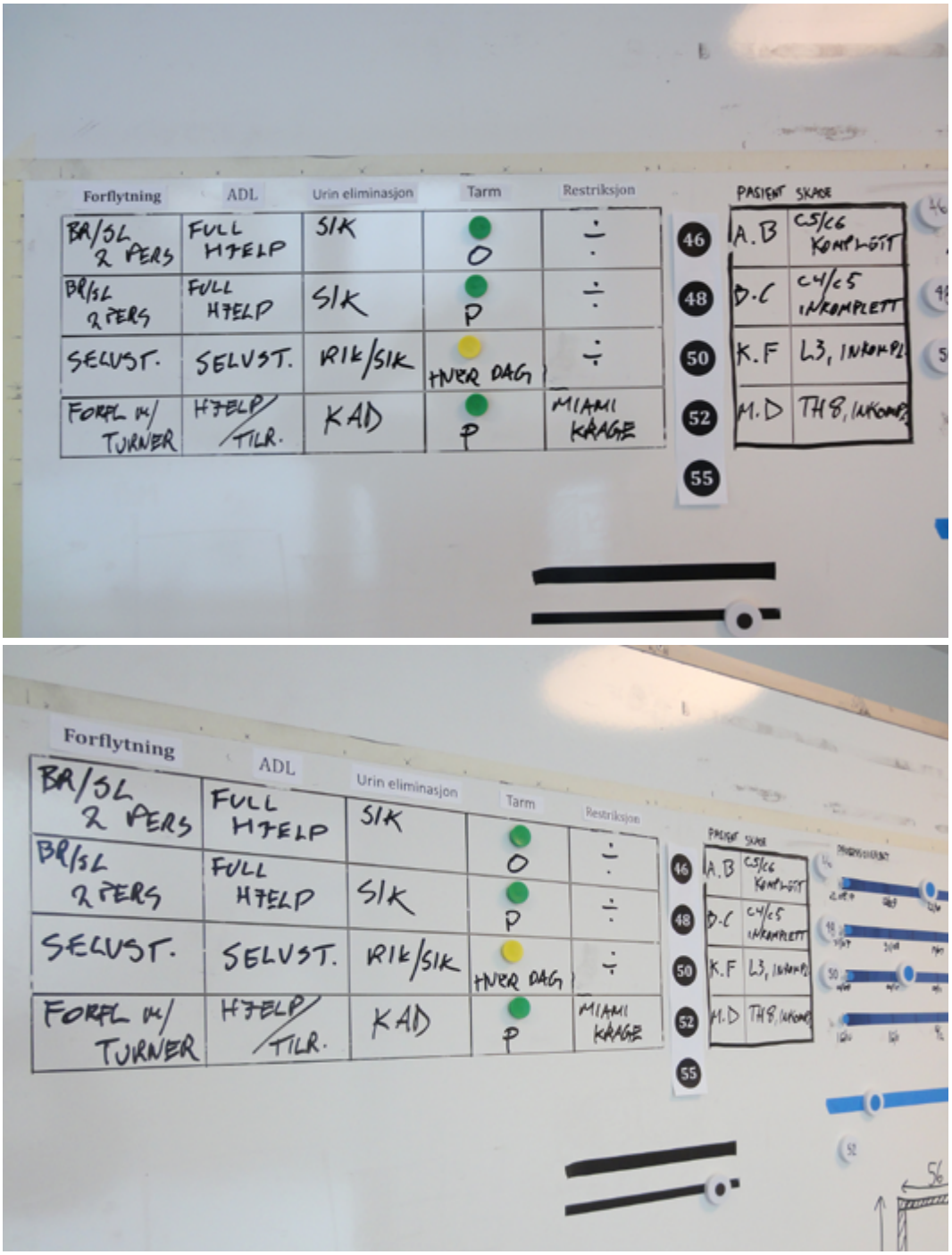


Figure 91. Testing different visual styles for the board. Printing some elements and trying materials [Own photos].

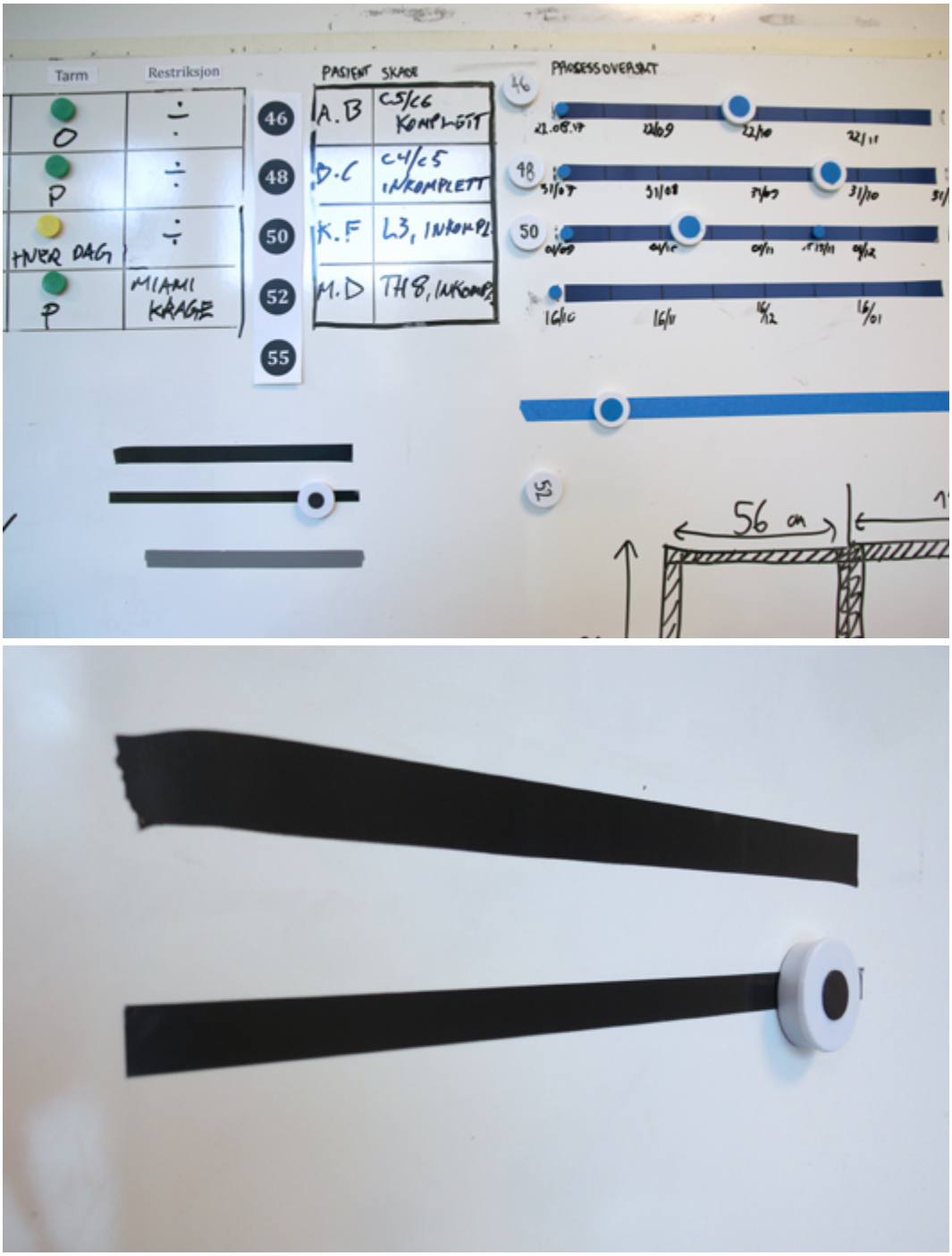


Figure 92. Testing different visual styles for the board. Printing some elements and trying materials [Own photos].

Figure 93. Testing sizes of typograhy, distances and readibility [Own photo].