University of Twente

Mapping Care Together

Co-Designing Patient Journeys with Older Adults

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Introduction

Healthcare systems can be intricate and interconnected, often involving many professionals, settings and decisions that patients must navigate. For many, this journey can feel fragmented, confusing, and emotionally demanding. In recent years, researchers and clinicians have increasingly recognised the importance of understanding healthcare experience from the patient's perspective to ensure equitable and effective healthcare delivery (Davies et al., 2023).

One method to understand these experiences is Patient Journey Mapping (PJM), a visual and narrative approach that represents a patient's experience across different stages of care (Bulto et al., 2024; Davies et al., 2023). PJM has its origins in service design and experience mapping, where visualising user touchpoints and interactions helps reveal how people move through and make sense of complex services. Journey maps not only illustrate individual care pathways by capturing patients' emotions, pain points, actions, and interactions with care providers (Lagura et al., 2023; Voorheis et al., 2025), but also serve as tools for analysing relationships and interactions within the wider healthcare system.

PJM visualises how patients, care providers, and organisations connect, highlighting insights that can inform improvements in service delivery and patient outcomes (Joseph et al., 2023). In this sense, patient journey mapping contributes both to understanding the personal dimension of care and to advancing learning health systems that continuously adapt and evolve based on patient experiences. By translating these experiences into a shared visual format, journey maps can foster dialogue between patients, professionals, researchers, and other stakeholders, ultimately supporting more coordinated and patient-centred care (Bulto et al., 2024).

Patient journey maps are often created as general representations of care experiences, which can overlook the unique and personal needs of individual patients. As Borycki et al. (2020) note, maps developed from case reports or limited samples may fail to represent the diversity and complexity of real patient journeys, underscoring the need for approaches that better capture patients' individual goals and experiences. This limitation becomes particularly relevant for groups whose perspectives are often less visible in healthcare research and design. Older adults, for instance, represent a growing population that frequently interacts with healthcare services, yet their experiences are rarely prioritised in the development or evaluation of care processes. Many traditional journey mapping activities also assume a high level of digital literacy, visual familiarity, and rapid cognitive processing, which can present barriers for some older participants.

Building on this understanding, this report explores how patient journey mapping can be adapted to better represent the experiences of different patient groups, focusing on capturing the unique experiences of older adults within healthcare. Older adults, defined here as individuals aged 65 and above, are the target group of this project because they represent a growing segment of the population that frequently engages with healthcare services and often faces distinct challenges related to communication, accessibility, and participation in healthcare design. To address this, the following research questions and sub-questions are explored:

- **How can patient journey mapping workshops be effectively adapted to meet the unique needs of older adults?**
    - What specific challenges do older adults encounter when participating in traditional patient journey mapping workshops?
    - What modifications in sensory, cognitive, and technological aspects are necessary to enhance older adults' engagement?
    - Which methods and tools are most effective in helping older adults articulate their patient experiences?
    - How do stakeholders perceive the effectiveness and practicality of adapted patient journey mapping workshops?

The project is conducted in collaboration with a postdoctoral researcher from the University of Twente's Interaction Design group, whose expertise in healthcare innovation and ageing in place supports the facilitation of participant sessions. Their background in social studies and experience engaging with older adults complements the design and methodological aspects of the project.

The report begins with an overview of the concept and methodology of patient journey mapping, drawing on relevant literature to outline its purpose, key principles, and related themes such as communication, empowerment, and inclusion, and then it considers how this method can be tailored for older adults, addressing issues such as accessibility, communication and engagement. The report further presents insight from the ideation phase and final design and co-design workshop implementation for a patient journey mapping with older participants. Finally, it discusses key findings, reflections and recommendations for future applications of patient journey mapping in elderly care contexts.

Literature Review

Understanding Patient Journey Mapping

Patient Journey Mapping (PJM) is an emerging method for understanding and improving healthcare experience by visually representing how patients navigate services, interact with healthcare professionals and experience care (Bulto et al., 2024; Davies et al., 2023). Through this comprehensive perspective, PJM reveals how individuals experience healthcare as an ongoing, interconnected process rather than a sequence of isolated clinical encounters. It highlights that patient care extends beyond medical procedures, highlighting the emotional, social, informational, and practical dimensions of patients' experience (Roustán et al., 2024). This perspective identifies where bottlenecks, delays, and breakdowns in communication occur, but also where positive experiences, support, and resilience emerge (Benson et al., 2022; Kushniruk & Borycki, 2020).

Beyond identifying gaps in care, PJM is also valued for translating complex healthcare experiences into actionable insights. It creates a shared visual language among different stakeholders to discuss problems and solutions from a common perspective (Davies et al., 2023). However, the usefulness of the PJM lies in its adaptability to different patient populations and contexts. Each patient group faces unique challenges, requiring the mapping process to be adjusted to reflect their specific experiences, needs, and communication styles. For instance, mapping can emphasise cultural safety and mutual understanding when working with Indigenous communities (Cormick et al., 2024) or focus on accessibility and usability when involving vulnerable groups with low digital literacy or sensory limitations (Kujala et al., 2025). For instance, mapping can emphasise cultural safety and mutual understanding when working with Indigenous communities (Cormick et al., 2024), while lessons from inclusive design research highlight the need to prioritise accessibility and usability for vulnerable groups with low digital literacy or sensory limitations (Kujala et al., 2025).

This adaptability is especially relevant for older adults, whose healthcare journeys often involve multiple providers and frequent transitions between services. Their experiences are shaped by complex coordination needs and changing levels of independence, which can make communication and continuity of care challenging. The next sections explore how to make the mapping process more engaging, comprehensible, and meaningful for older adults.

Communication

Effective communication is essential in all healthcare interactions. For older adults, it holds particular importance, as they are often perceived as a vulnerable group, even though their experiences and abilities are highly diverse.

Studies show that ineffective communication remains one of the most persistent barriers to quality care. Patients often encounter medical jargon, inconsistent information, or limited opportunities to ask questions, which can lead to confusion and feelings of exclusion (Benson et al., 2022; Roustán et al., 2024). In Patient Journey Mapping, communication must be clear and supportive to capture participants' experiences accurately and make the resulting map a useful tool for reflection and improvement. Thus, the communication during mapping should be clear, accessible, and participatory (Bulto et al., 2024; Cormick et al., 2024; Klompstra et al., 2025), allowing patients to describe events in their own words and at their own pace.

Effective communication also depends on how information is shared. Kushniruk & Borycki (2020) emphasise that timely and transparent communication enables patients to participate actively in describing their care experiences. Moreover, Klompstra et al. (2025) recommend using plain language and multiple formats, such as visuals, examples, or simplified text, to accommodate different literacy and language levels. Also, maintaining an open and respectful dialogue throughout the process helps participants feel heard and understood, strengthening both the accuracy and inclusiveness of the resulting journey map.

Emotional and psychological experiences are also closely linked to communication in healthcare. Patient Journey Mapping creates space to recognise emotional and psychological experiences that are often excluded from clinical evaluation. It helps surface patients' feelings and perceptions, offering a fuller understanding of their journey beyond medical procedures.

Empowerment

Encouraging patients to express both the events of their care and the emotions attached to them transforms communication into a means of empowerment. Through articulating their experiences, patients gain recognition as active participants rather than passive recipients of care. Lagura et al. (2023) further emphasise that mapping becomes empowering when patients are actively involved in interpreting their own experiences, rather than having them represented solely by professionals. Seeing their input visualised in this way helps patients make sense of their journey and fosters a sense of ownership and confidence in the care process (Bulto et al., 2024; Kushniruk & Borycki, 2020).

To conclude, empowering patients through PJM extends beyond communication to the active participation of patients in shaping and reflecting on their journeys. Active participation transforms mapping into a collaborative process that values patients' knowledge and perspectives as integral to understanding care. Co-design makes this collaboration tangible, positioning patients as equal partners in creating and interpreting their journey maps. At the same time, the approach also empowers designers by giving them new ways to explore and interpret care experiences directly with the people who live them, rather than relying on assumptions or secondary accounts. The next section explores how co-design enhances this collaboration by directly involving patients in creating their own journey maps.

Co-design and Inclusion

Although patient journey mapping centres on patient experience, in practice, the visualisation and interpretation of the map is usually created by researchers or health professionals based on information collected from patients through interviews or case reports (Voorheis et al., 2025). Consequently, the maps may translate lived experiences into research-driven interpretations, losing some of the patient's personal voice and expression.

To address this, recent studies highlight the importance of involving patients in the creation of their journey maps. Actively engaging patients in this process allows their experiences, goals, and values to shape how care is represented and understood. Bulto et al. (2024) highlight that patient journey mapping is most effective when used as a collaborative process that enhances communication, supports co-design, and empowers patients to reflect on and share their experiences more deeply.

Similarly, Borycki et al. (2020) argue that maps developed solely from case reports or secondary data risk overlooking the complexity and individuality of patients' journeys. They advocate for iterative, co-designed mapping processes in which patients, caregivers, and professionals work together to identify gaps, address challenges, and reveal new pathways of care.

Furthermore, Lukka et al. (2025) note that the characteristics and context of each case study or service are important to consider when interpreting such results, as they inevitably shape both the process and its outcomes. To address these considerations, co-design can be integrated into Patient Journey Mapping to actively involve patients in creating and interpreting their experience maps. Co-design reframes journey mapping as a collaborative practice that positions patients as partners in meaning-making rather than subjects of analysis.

In the context of this project, co-design is particularly valuable for involving older adults, as it encourages open dialogue and shared interpretation. Working collaboratively helps capture participants' experiences more authentically and uncover their needs and expectations, while enabling mutual learning between patients and professionals. The next section explains how this approach is applied and adapted in this project.

Inclusivity, Accessibility and Co-designing with Older Adults

Adapting PJM for older adults requires attention to multiple, interconnected dimensions of communication, empowerment, accessibility and co-design. The literature highlights that patients engage with healthcare in varied ways, shaped by their familiarity with technology, communication styles and access to support. The following paragraphs discuss how each of these dimensions can be adapted to better engage and support older adults within the mapping process.

Effective communication with older adults requires clarity, simplicity, and empathy. Hence, all communications should be clear, timely, and responsive, helping participants stay engaged and confident in sharing their experiences. Information must be presented openly and unbiasedly to allow participants to express preferences and make informed decisions (Kushniruk & Borycki, 2020).

Equally important, communication should be empathetic, creating a safe and supportive environment in which participants feel respected and comfortable sharing their stories (Weldon et al., 2017). Moreover, Klompstra et al. (2025) state that some older adults may find technical or formal language difficult to interpret. Moreover, using participants’ native language supports comfort, clarity, and trust. Therefore, all communication, whether written or verbal, should use plain, comprehensible language supported by visual aids such as diagrams, pictorial examples, and self-explanatory text and be provided in their first language.

Empowerment is vital for helping older adults feel ownership over their care experiences and contributions to the mapping process. Drawing on the principles of Value Sensitive Design (VSD), empowerment is achieved by recognising and incorporating patients’ values, preferences, and lived experiences throughout the design process (Bui et al., 2023). Asking participants early in the process to share what matters most to them, and revisiting these reflections later, encourages ongoing involvement and helps them see how their input directly shapes outcomes. This ensures that participants actively define how their needs and priorities are represented, turning participation into a meaningful and empowering experience. Empowerment also requires space for active listening, where facilitators acknowledge participants’ emotions and perspectives throughout the workshop (Roustán et al., 2024).

Co-designing with older adults, just like with any other target group, is grounded in partnership and positions them as co-creators of understanding rather than research subjects. Kujala et al. (2025) highlight that designers often make assumptions about user groups when they lack direct interaction. To avoid this, older adults should be involved throughout all stages, from preparation to mapping and reflection, ensuring that the process reflects real experiences rather than assumptions. Workshops can include visual tools such as journey maps, storyboards, and prompt cards, which help participants communicate ideas, challenges, and opportunities for improvement in accessible and engaging ways (Roustán et al., 2024). These collaborative methods allow older adults to explore their experiences through storytelling and visualisation, even when verbal communication may be limited.

In terms of accessibility, designing for older adults extends beyond addressing physical needs to include cognitive, sensory, and emotional aspects of participation. Adapting co-designing PJM for this group means creating environments and materials that are easy to navigate, visually clear, and paced appropriately. Clear explanations of expectations, time commitments, and workshop structure enable participants to make informed choices about their involvement (Klompstra et al., 2025).

Also, providing multiple ways to contribute, through speech, writing, or visual expression, accommodates the diverse abilities and comfort levels of participants. Allowing sufficient time for reflection and incorporating pauses or breaks prevents fatigue and maintains concentration. These adjustments make participation more inclusive and comfortable, helping older adults feel confident and supported throughout the mapping process while ensuring that communication and participation remain simple, flexible, and empowering rather than burdensome (Bui et al., 2023).

In the next section, these insights are translated into practical design guidelines to inform the development of tools and workshop methods tailored for older adults.

Design Principles

Most studies map patient journeys from patients' own perspectives using qualitative methods such as interviews (Davies et al., 2023). However, there is currently no standard framework for how Patient Journey Mapping should be conducted or adapted for specific groups. Building on this gap and informed by both the reviewed literature and synthesis of insights, a set of design principles is developed to guide the next phases of this project. Where relevant, each principle is informed by findings identified in the literature. The outlined considerations are listed in Table 1.

	Design Principle	Supporting Literature
1	Use plain and simple language and explain unfamiliar or technical terms clearly.	Klompstra et al. (2025); Roustán et al. (2024); Benson et al. (2022)
2	Provide information and materials in multiple formats, such as visual, textual and verbal, to support comprehension and engagement.	Klompstra et al. (2025); Bui et al. (2023); Roustán et al. (2024)
3	Offer translation or communication in participants' preferred language where possible.	Klompstra et al. (2025); Cormick et al. (2024)
4	Create an atmosphere of empathy, safety and mutual respect that encourages honest sharing and emotional comfort.	Weldon et al. (2017); Cormick et al. (2024); Roustán et al. (2024)
5	Be transparent about who is involved, the purpose of the mapping and how the process and results will be used.	Davies et al. (2023); Joseph et al. (2023)
6	Clearly communicate participants' roles and describe the methods, tools and visuals in accessible and understandable terms.	Davies et al. (2023); Voorheis et al. (2025)
7	Involve participants in reviewing and interpreting findings to ensure authenticity and shared understanding.	Borycki et al. (2020); Bulto et al. (2024)
8	Encourage active participation and co-creation by inviting participants to share their stories, reflections and lived experiences.	Bui et al. (2023); Kushniruk & Borycki (2020); Benson et al. (2022)
9	Respect participants' time and energy by keeping sessions well-structured, purposeful and flexible.	Klompstra et al. (2025); Bui et al. (2023)
10	Avoid overburdening participants by allowing breaks, adjusting pacing and adapting activities to individual comfort levels.	Bui et al. (2023); Kujala et al. (2025)

Table 1 Design Principles and Their Supporting Literature

These principles serve as general guidelines that form the foundation for the next phase of the project, where they will be further explored and translated into concrete ideas during the ideation process.

Ideation and Design Development

The ideation phase translates the design principles into a practical approach for creating a patient journey mapping workshop adapted for co-designing with older adults. Following the three-phase structure proposed by Bui et al. (2023), the process is organised into preparation, co-design workshop, and processing phases. Details about each stage are explained below. Throughout these sections, it is indicated which elements of the design are informed by specific principles to show how the literature-based guidelines were applied in practice. Details about each stage are explained below.

Preparation Phase

The preparation phase focuses on creating the right conditions for participation and builds directly on the design principles of clarity, transparency, and comfort. Participants receive a Participation Box containing a handbook that explains the workshop process in simple terms (Principle 1), includes the informed consent form (Principle 5), and provides an introductory questionnaire. This questionnaire helps facilitators understand participants' backgrounds and needs while also prompting them to begin reflecting on their care experiences before the workshop (Principle 8).

The box also includes a glossary of terms (Principle 1), an example patient journey map (Principle 6), information about the study (Principle 5), and the workshop agenda (Principle 6). All documents are provided in Dutch and English to accommodate participants' language preferences, reflecting the principle of accessibility and clear communication (Principle 3). These materials, presented in both visual and textual formats, align with the principle of offering information in multiple formats to support comprehension and engagement (Principle 2). A small incentive acknowledges participants' time and contribution, reinforcing respect and appreciation for their involvement (Principle 9).

Co-Design Workshop Phase

This phase forms the core of the process and draws on the design principles of empathy, safety, clarity, and active participation (Principles 1, 4, 8). It can be understood through two dimensions: the general atmosphere of the session and the design-related aspects that shape how participants interact with the map and materials.

General Atmosphere

Following the principles of empathy, safety, and mutual respect (Principle 4), the session begins with trust-building activities where participants and facilitators greet one another, introduce themselves, and discuss the purpose of the workshop (Principle 5). It is emphasised that there are no right or wrong answers and that everything shared remains confidential (Principle 4). Together, the group develops a short list of workshop rules such as “we listen to each other”, “we speak from our own experience”, “we can take a break anytime”, and “we do not need to agree on everything” (Principles 4, 10).

Moreover, the atmosphere shall be informal and welcoming, with drinks and snacks provided to create a relaxed setting (Principle 4). Participants are encouraged to take breaks whenever needed, ensuring a well-paced and flexible session that accommodates individual comfort (Principle 10). Discussion between participants is actively fostered to build connections and allow experiences to unfold naturally through shared dialogue (Principle 8). To strengthen collaboration and shared understanding, all participants work together on the same patient journey map, mapping their experiences collectively rather than individually (Principle 8).

Design Material

The materials and tools used in the co-design workshop include presentations, handouts, tactile tools, and the patient journey map layout that guides discussion and mapping (Principles 1, 2). Initially, the idea of using an interactive digital table for the patient journey map was considered. However, after inquiry, this option proved technically difficult to provide for this project. It was also expected that older participants might feel less comfortable working with a fully digital setup (Principle 10). While newer generations, such as Gen Z, often create patient or user journey maps digitally, this project chose a tangible, paper-based format to make the process more accessible and engaging for older adults (Principles 2, 3).

The session begins with a short presentation introducing the purpose, structure, and flow of activities (Principles 1, 6). As part of this introduction, participants are told how the research may support their own understanding of their care experiences and contribute to improving care for others (Principles 5, 8). Participants also receive printed handouts with key information about the study, the workshop plan, and how to use the mapping tools (Principles 1, 2).

To facilitate participation and help participants recall and express their experiences, a variety of tactile tools such as sticky notes, markers, value cards, prompt cards, and stickers are also provided (Principles 2, 8). These materials make it easier to share memories, highlight important moments, and translate stories into visible elements on the map (Principles 2, 8). They support active participation and help keep discussions flowing in a natural and engaging way (Principle 8). The physical format also allows flexibility, as notes can be moved, removed, or added easily, making the mapping process dynamic and collaborative (Principle 10).

The patient journey map layout is the main co-design tool, serving as the foundation onto which other layers of experience are added during the workshop (Principle 6). While existing studies often use several and more detailed journey phases, such as symptom awareness, diagnosis, treatment, and recovery (Benson et al., 2022; Geraidine & Silva, 2025; Kushniruk & Borycki, 2020), this project adopts a simpler approach to make the mapping activity low-effort and easy to follow (Principles 1, 10).

Thus, the map is structured into three main stages: before, during, and after hospital care, to keep the process simple and user-friendly.

Following the approach outlined by Voorheis et al. (2025), the layout uses a rows-and-columns structure to organise information clearly (Principle 6). The columns represent the different phases of the journey while the rows capture distinct layers of experience, such as actions, thoughts, feelings, and touchpoints. This grid-like structure helps participants navigate the map easily and see how different aspects of their journey connect across time (Principles 1, 6).

Similar designs and ideas were reviewed to inform the choices made in finalising the design of the layout; examples are shown in Appendix 1: Visual and Ideation Examples.

Processing Phase

The processing phase focuses on reviewing, refining, and sharing the outcomes of the co-design workshop. Its purpose is to close the loop with participants to ensure their contributions are accurately represented and meaningfully used (Principles 5, 7).

After the workshop, facilitators review the created maps, clarify unclear notes, and add any missing information before digitising the final versions (Principles 6, 7). Participants then receive a follow-up email containing photos from the workshop and a copy of their completed patient journey map. This step allows participants to reflect and validate the information, confirming that the maps accurately represent their experiences (Principle 7).

Following the principles of shared understanding and transparency (Principles 5, 7), participants are encouraged to use their maps as personal tools for reflection or communication with family members, caregivers, or healthcare professionals. Sharing the maps helps participants reflect on their experiences and communicate them with others, reinforcing the value of patient journey mapping as described by Bulto et al. (2024) and Kushniruk & Borycki, (2020) (Principles 8, 9).

At a broader level, the workshop outputs provide a foundation for reflection and improvement across both practice and system levels (Principles 5, 7). Insights from the maps reveal patterns in patient experiences that can highlight gaps, inform service redesign, and guide more coordinated and empathetic care (Principles 4, 8). In this way, the maps act as catalysts for organisational learning and continuous improvement, aligning with the aims outlined by Weldon et al. (2017) and Joseph et al. (2023).

Final Design and Workshop Implementation

This section presents the final outcomes developed and used in this project. It follows the same three phases of the process: Preparation, Co-design Workshop, and Processing, and describes the final materials, their design, and how they were used in practice. Each section explains the content and how it is applied during this project.

Phase 1: Preparation

The main purpose of this phase is to inform participants and help them feel comfortable and ready to join the workshop. This is done by providing them with information about the workshop beforehand.

Participant Registration

Participant registration was completed online through a website. After signing up, participants received an information package containing the information letter, consent form, and pre-workshop questionnaire (online). The study focused on older adults who had recent experience with hospital care. The questionnaire (Appendix 2: Participant Questionnaire) gathered background information such as age, living situation, and the type of hospital experience participants wished to share. It also encouraged reflection on what they remembered from before, during, and after hospital care, helping facilitators prepare and connect the session to participants' experiences.

The study was reviewed and approved by the university's ethics committee. Before taking part, each person received clear information about the aims of the project, what their involvement would include and how their data would be handled. Everyone signed an informed consent form as part of the registration process.

Participant Handbook

Each participant received a printed handbook (Appendix 3: Participant Handbook) during the workshop, explaining the aim of the study, the patient journey mapping method, and what would happen during the session. It included the time, location, and agenda, plus a bilingual glossary of terms explaining key concepts such as touchpoints, challenges, and wishes.

Workshop Setup and Logistics

A small thank-you gift was prepared in advance to acknowledge participants' time and contribution. The workshop took place at the University of Twente's Design Lab, and a map with directions to the location was shared with participants beforehand. All physical materials (markers, sticky notes, and printouts) were arranged before the session so that the environment felt organised, welcoming, and ready for the workshop.

Phase 2: Co-Design Workshop

The co-design workshop formed the core of the process, lasting two hours (14:00–16:00). It was conducted in a roundtable setting at the University of Twente's DesignLab.

The session was multilingual (Dutch and English) and shifted between languages as needed to support participants. This had not been planned or communicated beforehand, but the facilitation was adjusted on the spot based on participants' preferences.

Facilitation

The workshop followed a detailed facilitation script (Appendix 4) that guided the session step by step. The script outlined the introduction, mapping activities, break, and closing reflection, helping facilitators manage timing and maintain structure.

Three facilitators were present during the session. The main facilitator was the postdoctoral researcher, who was fluent in Dutch and took the lead in explaining the session and interacting with participants. The supervisor supported the flow of the workshop and stepped in where needed. The designer (the main researcher for this project) took a more observational role, focusing on following the process, taking notes, and gathering insights while remaining available when needed.

The session began with a short presentation introducing the workshop's purpose, structure, and flow. During the welcome, participants received their thank-you gift and were reminded that there were no right or wrong answers. A brief round of introductions helped build familiarity and trust among participants.

Throughout the workshop, facilitators encouraged open discussion and ensured that everyone's voice was heard. The atmosphere was kept relaxed and conversational, supported by light refreshments.

Materials and Tools

To keep the session simple and easy to follow, only a few materials were used. The main tools were sticky notes, pens and whiteboard markers, so participants can add, remove, and move notes freely on the map. Each participant had their own colour set, making individual contributions easy to recognise. Sticky notes came in different shapes to represent aspects of the experience (see Table 2).

Shape Icon	**Shape Name**	**Represents**
♥	Hearts	Feelings
💬	Speech bubbles	Thoughts
★	Stars	Touchpoints
➡	Arrows	Actions
■	Rectangles	Other notes or reflections

Table 2 Sticky note shapes and their meanings

Patient Journey Map Layout

The patient journey map was the main co-design tool used during the workshop. It was printed on a laminated A0 sheet, allowing participants to write directly with whiteboard markers and easily erase or move notes as the discussion developed. The large format made it easy for everyone around the table to see and contribute.

The layout followed a rows-and-columns grid. The columns represented the three main phases of the journey (Before / Voor het bezoek, During / Tijdens het bezoek, and After / Na het bezoek), each shown in a distinct colour for clear visual separation.

The rows were initially planned to include several layers of information such as steps, actions, thoughts, emotional experience, description of experience, touchpoints, challenges, wishes and values. However, this structure proved too complex for a single session, so it was simplified in the final version to make the activity easier and more intuitive for participants.

The revised layout focuses on the most essential layers. At the top, an emotional experience, with positive and negative emotional state places, where participants place their shaped sticky notes to express their experiences across the timeline. Beneath this are the simplified sections for Steps / Stappen, Challenges / Uitdagingen, Wishes / Wensen, and Keep for Later / Bewaren voor later, which allow participants to describe what happened, identify obstacles, and share suggestions for improvement. Figure 1 shows the final outline of the map.

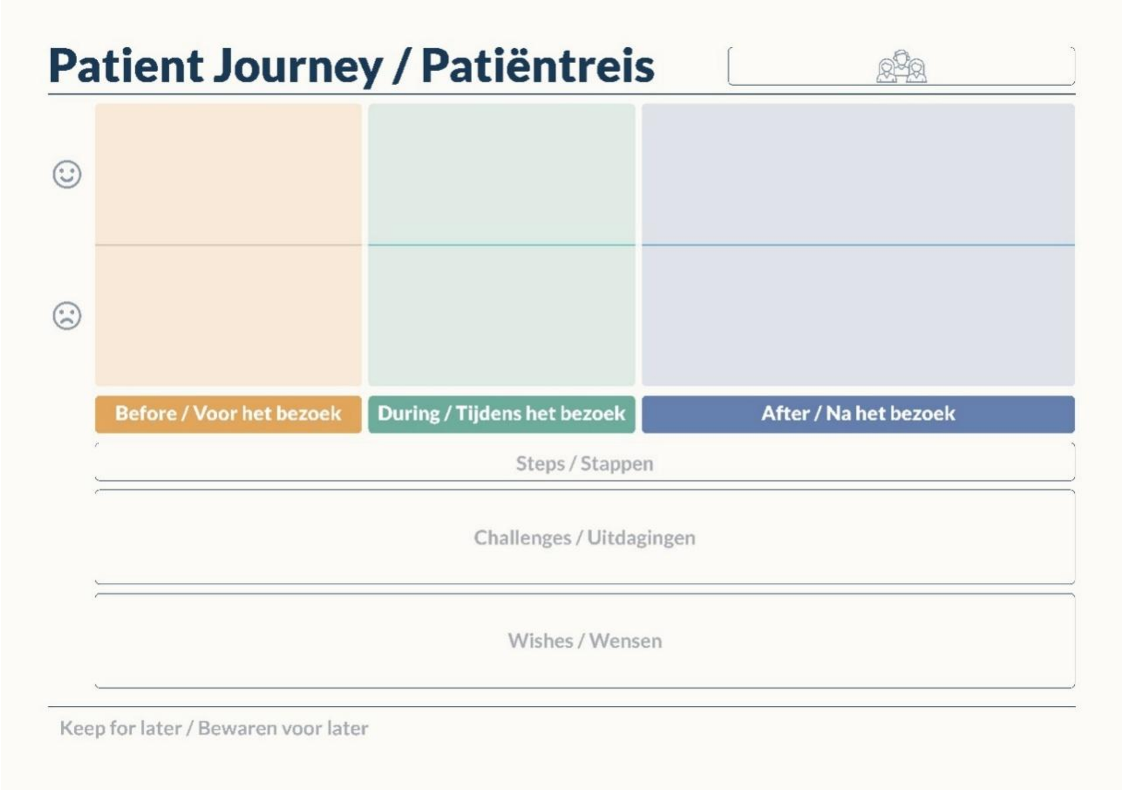

Figure 1 Patient Journey Map Layout

Participants

Participants were recruited through an online call on a website. Three participants signed up workshop, all were older adults with recent or past experiences of hospital care. Their information is as follows:

- **Participant 1 (76),** who lives independently and has recently experienced a hospital admission for surgery.
- **Participant 2 (69),** who lives independently and has been hospitalised for a planned surgical procedure.
- **Participant 3** participated on behalf of her old mother, who had been hospitalised several times and was unable to attend due to dementia.

Workshop Implementation

Participants were welcomed into the room and seated together around a round table, creating an open and equal setting. The session began with brief introductions, then participants were thanked for attending and received their incentive gift as a token of appreciation. At the same time, tea and coffee were offered to create a relaxed atmosphere before starting the activity. Once everyone had settled in, participants were asked to sign the consent form, confirming their voluntary participation. The session was then audio-recorded to support later analysis, and participants were informed through the consent form that all recordings would remain confidential and deleted after use.

The patient journey map sheet was placed at the centre of the table. Using coloured sticky notes and whiteboard markers, participants collaboratively filled in the map while reflecting on their experiences before, during, and after hospital care. Facilitators guided the process, encouraging participants to explain their notes, share emotions, and discuss key challenges and wishes. Throughout the session, participants often conversed with one another, shared reflections, and complimented each other's contributions, turning the mapping into a collective and social experience.

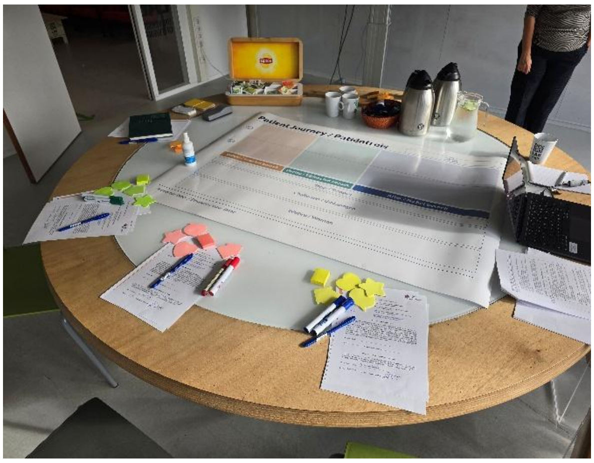

Figure 2 Workshop setup before the session

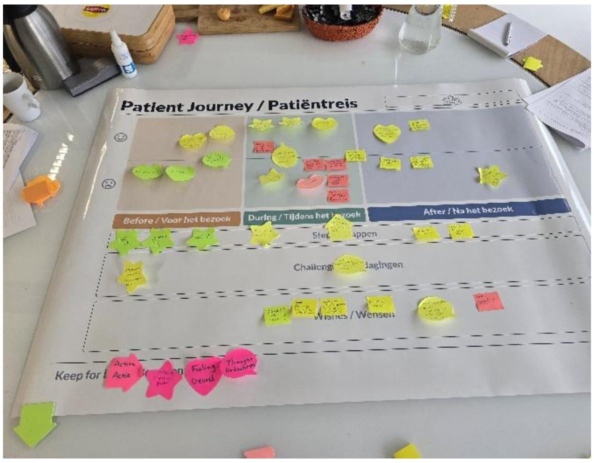

Figure 3: Completed patient journey map after the workshop

Photos were taken before (Figure 2) and after (Figure 3) the workshop to document the setup and the completed map. The session concluded with a short group reflection, where participants shared feedback about both the activity and the mapping method.

Phase 3: Processing

After the workshop, the completed patient journey maps were reviewed and finalised. Facilitators checked for missing details, clarified unclear notes, and ensured that all contributions were accurately represented. The maps were then digitised to preserve their structure and visual content.

As seen in Figure 4, the digitised version includes four colours, three representing the participants and one used for facilitator notes added afterwards based on the session recording. Unlike the initial layout, no separate line for emotional experience was drawn; instead, all sticky notes were placed freely across the timeline. This arrangement was maintained in the digital version to keep the visual layout familiar and recognisable for participants.

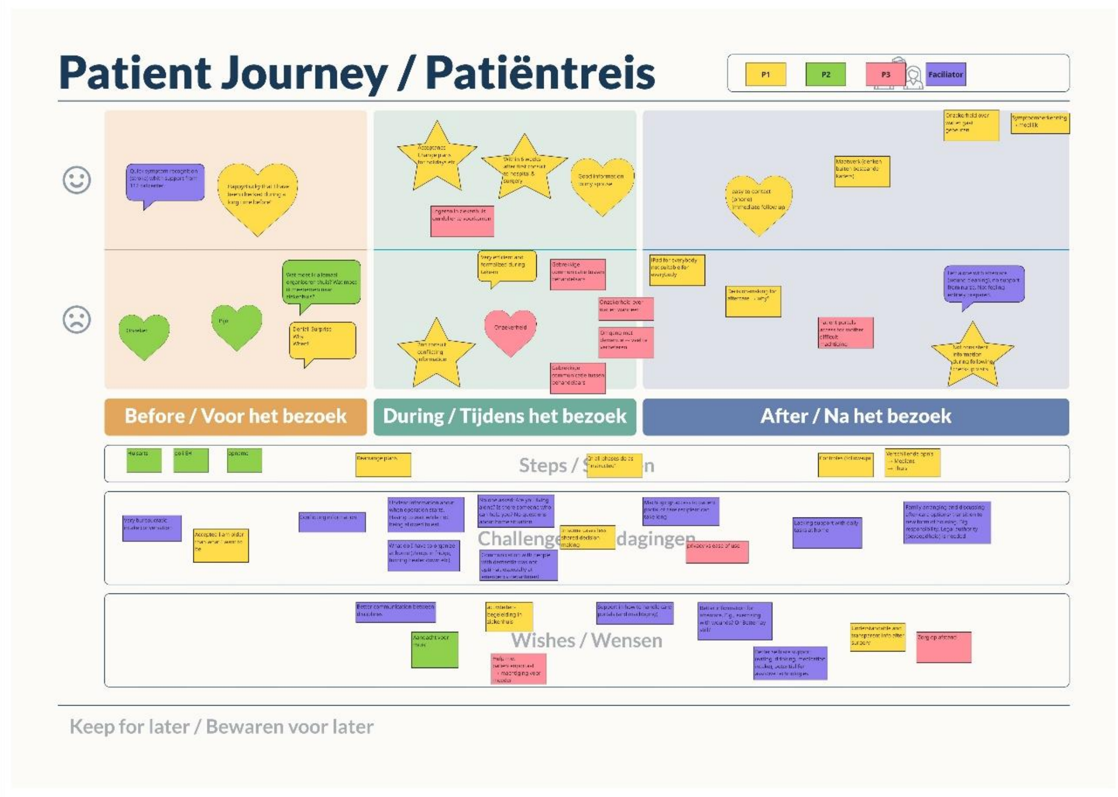

Figure 4 Digitised patient journey map

The next step is sharing the finalised copy of the PJM with participants to allow them to review and validate their input and also encourage them to keep or use their maps as personal tools for reflection or to share their experiences with family members, caregivers, or healthcare professionals. However, by the time this report was written, participants had not yet been re-approached, so their feedback on the final design is not yet available

Discussion and Reflection

The workshop showed that older adults can meaningfully engage in co-designing PJM when methods are structured, supportive and easy to follow. Although only three people participated, the quality of insight was high, and listening to the recordings later confirmed that much of the value came through conversation rather than written notes during the workshop. This also highlighted the importance of the analysis step: revisiting the recordings made it possible to validate what was captured visually and to add missing ideas afterwards. Using a different colour for these additions can help to make clear what participants wrote during the session and what was added later from the audio review. Below are the main reflections and detailed observations drawn from participant feedback, recordings and facilitator notes.

Participant response and engagement

Participants appreciated the intimate group setting and the chance to share thoughts with others who had gone through similar experiences. They described the process as interesting and emotionally validating, noting that it encouraged reflection and recognition. Following the journey in a structured way, through the before, during and after timeline, was seen as a good and intuitive idea.

Reflecting on the co-created journey maps afterwards was also well received. Participants saw them as personal tools to understand their own experiences and as something that could improve hospital evaluation forms, which often focus only on the period of hospitalisation. Returning the maps to participants after the session was considered valuable both for personal insight and for helping hospitals better understand the full care experience.

At the same time, participants identified several challenges. The most common issue was cognitive load, specifically remembering the meaning of sticky notes. The visual layout, while engaging, sometimes appeared to be the cognitive load. Simplifying the design and using only a few consistent elements, such as one sticky note shape, would make it more manageable. Participants also suggested keeping questions asked during the workshop simple, for example, “What went well?” and “What did not go well and why?”, rather than relying on multiple abstract layers of the PJM, such as steps, touchpoints, feelings and thoughts.

Overall, participants described the session as engaging and worthwhile, mainly because it gave them the chance to contribute to improving their own and their peers' healthcare experience and to feel heard. Additional quotes from participants can be found in Appendix 5: Participant Quotes.

Methodological and facilitation insights

Participants valued receiving information about the workshop process, though their preferences differed. Two said that getting a short handbook or overview beforehand would have helped them prepare, while another felt that advanced reading could become a barrier. If materials are shared ahead of time, they should be concise and available in different formats such as text, image or short video, and ideally distributed at least two weeks before the session.

Accessibility of the venue also emerged as important. The workshop location was difficult to find and involved some walking, which limited convenience for older participants. Future sessions should prioritise spaces that are easy to reach by car or public transport and offer nearby parking.

From the facilitator's point of view, keeping track of several storylines across different phases was demanding. It was also necessary to remind participants to write their reflections down during the discussions, as they often became absorbed in talking and forgot to note their ideas. Observing the session also showed that the "experience line" on the map was sometimes assumed rather than explicitly discussed. Clarifying this at the beginning of the activity can help ensure that all participants share the same understanding before mapping starts.

Individual or dyad sessions, for example, with an older adult and a family carer, could help achieve greater depth and be easier to moderate. Reviewing audio recordings after the session proved essential, revealing insights that were not captured visually. Adding facilitator notes later in a different colour could help distinguish participant input from researcher interpretation while maintaining transparency.

The reflections further emphasised that inclusive design should remove all barriers to participation, not only physical or linguistic ones. Simplifying both the materials and the facilitation style can make the method more welcoming for older adults with diverse educational and technological backgrounds. It was also noted that balancing the structure of phases, for example, making them the same size and reordering them to flow from steps to challenges and then wishes, could make the process more intuitive.

Furthermore, participants naturally switched between English and Dutch throughout the session. Using both languages helped them express their experiences more clearly and comfortably. This bilingual facilitation should be maintained in future workshops. If the method is to be used in other regions, such as Scandinavia or the Middle East, cultural and linguistic adjustments may be needed to reflect local expectations and communication styles.

Limitations

The project faced several practical constraints. The limited timeframe restricted opportunities to iterate and refine the design. The participant handbook was provided during the session rather than beforehand, and the complex visual layout placed some cognitive stress on participants. Although three facilitators were present, the main facilitation responsibility rested with the Dutch-speaking postdoctoral researcher, which made it more demanding to manage the group and follow several storylines at once while maintaining the flow of the activities. The venue itself was also not ideally accessible. Despite these limitations, the pilot workshop offered valuable insights on how to make participatory mapping more inclusive and manageable. Despite these limitations, the pilot workshop offered valuable insights on how to make participatory mapping more inclusive and manageable.

Implications and Future Directions

The workshop confirmed that patient journey mapping can be an effective and reflective process for older adults when adapted thoughtfully. The before, during and after timeline remains a strong structure, but simplicity in both visual design and facilitation is key. Participants' suggestion to use journey maps for improving hospital evaluation forms highlights how the method could extend beyond research into practice, offering a fuller view of care that includes the often overlooked before and after phases.

Future workshops should focus on clearer visuals, better preparation materials and easily accessible locations. A mixed format could be tested, beginning with a group workshop followed by individual validation sessions to gather more detailed perspectives. Using recordings and facilitator reflections as complementary data sources can further strengthen the analysis and help identify recurring themes across journeys. Future mapping could also include the healthcare provider's point of view to allow comparison between patient and professional experiences.

With these refinements, the approach has the potential to become a scalable and inclusive tool for involving older adults in healthcare design and evaluation, while making participation accessible to a wider range of individuals and cultural contexts.

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Conclusion

This project set out to explore how patient journey mapping can be adapted to better engage older adults in reflecting on and improving their healthcare experiences. Through a literature review, iterative design, and a co-design workshop, it became clear that the method's value lies not only in the visual outcome but also in the act of participation itself. When the process is inclusive, clear, and flexible, it helps participants feel heard and recognised while generating insights that can guide more patient-centred care.

The workshop demonstrated that older adults are eager to contribute when the environment is welcoming and the tools are accessible. Using plain language, visual aids, and structured prompts encouraged storytelling and reflection, while group discussion allowed participants to compare experiences and learn from one another. Feedback highlighted the sense of motivation that came from being part of something meaningful and collaborative. Participants' comments and reflections show how much they valued both the process and the opportunity to influence healthcare design.

From a design perspective, the project showed that simplifying materials, balancing the phases of the mapping process, and allowing space for reflection make the activity more intuitive. The resulting maps captured not only the steps and challenges of care but also the emotions, expectations, and wishes that shape each journey. The digitised versions, validated by participants, serve as both a record of lived experience and a potential tool for communication between patients, caregivers, and professionals.

Looking ahead, the next step is to test how this adapted mapping method can be integrated into real healthcare improvement initiatives. As the method is still being co-created, it will continue to evolve through feedback from the people who use it. Future sessions could include healthcare professionals alongside patients to encourage shared understanding and identify points for system-level change. The digital format could also be refined to make it easier to use, allow for translation, and support continued collaboration beyond a single workshop.

In the end, this project reinforces the idea that design for health is most powerful when it is participatory. Patient journey mapping, when done inclusively, becomes more than a research tool; it becomes a way of recognising lived experience as expertise, shaping healthcare systems that are not only more effective but also more humane.

Disclaimer

During the preparation of this work, I used ChatGPT to enhance the structure and vocabulary, Grammarly to check the grammar, and Zotero to compile the reference list. After utilising these tools and services, the content was thoroughly reviewed and edited as needed, taking full responsibility for the outcome.

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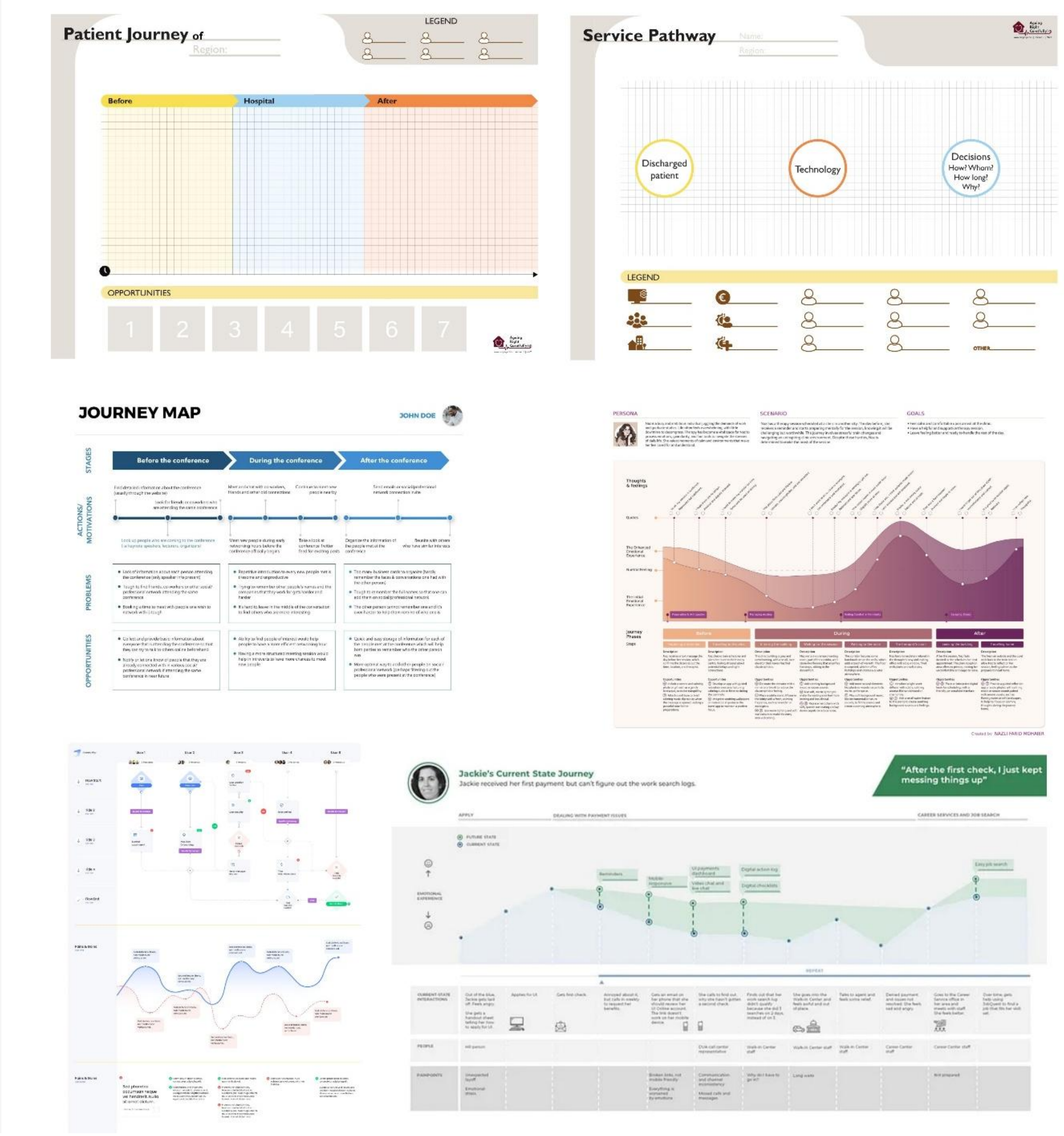
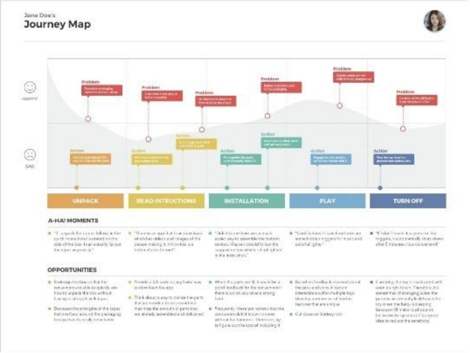
Appendices

Appendix 1: Visual and Ideation Examples

This appendix presents examples of early visual concepts and ideation sketches developed during the design phase. These materials illustrate how different forms, layouts, and interaction ideas were explored to shape the patient journey mapping tool before the final version was created.




Jane Doe's
Journey Map
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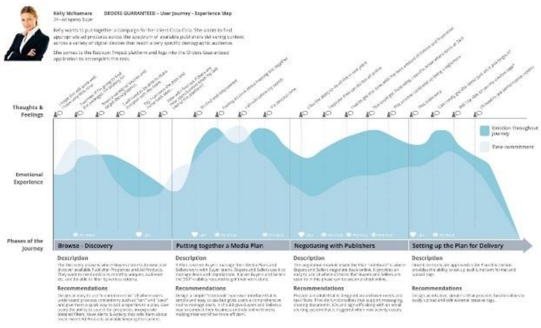
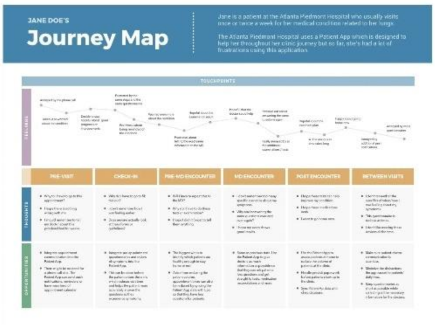
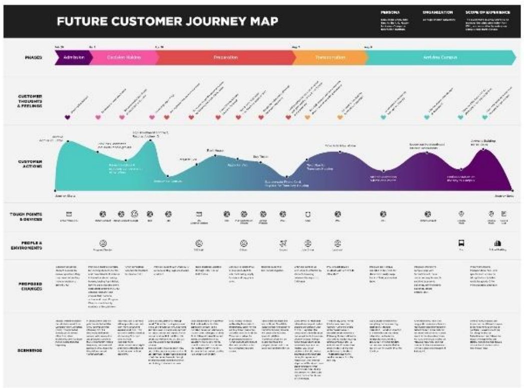
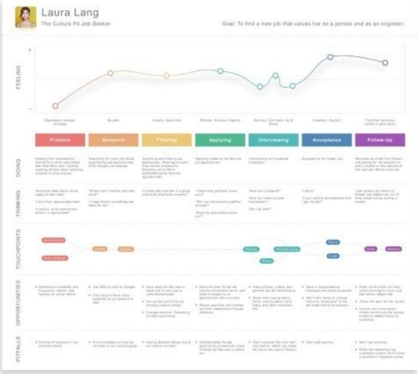
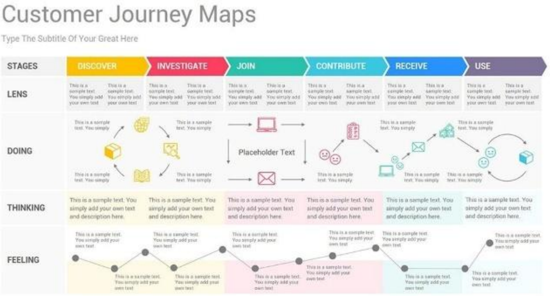
SAD
Problem
Action
UNPACK
READ INSTRUCTIONS
INSTALLATION
PLAY
TURN OFF
A-HA! MOMENTS
OPPORTUNITIES


Kelly McNamara
ORDERS GUARANTEED - User Journey - Experience Map
Thoughts & Feelings
Emotional Experience
Phases of the Journey
Emotion throughout journey
Time commitment
Browse - Discovery
Putting together a Media Plan
Negotiating with Publishers
Setting up the Plan for Delivery
Description
Recommendations

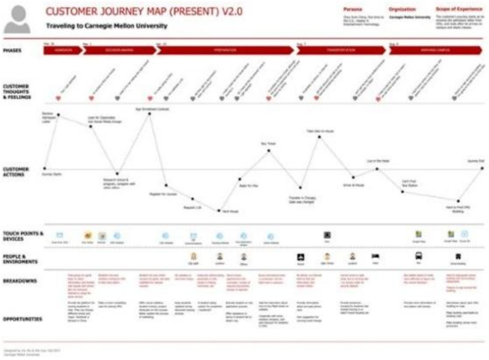

JANE DOE'S
Journey Map
TOUCHPOINTS
PRE-VISIT
CHECK-IN
PRE-MD ENCOUNTER
MD ENCOUNTER
POST ENCOUNTER
BETWEEN VISITS

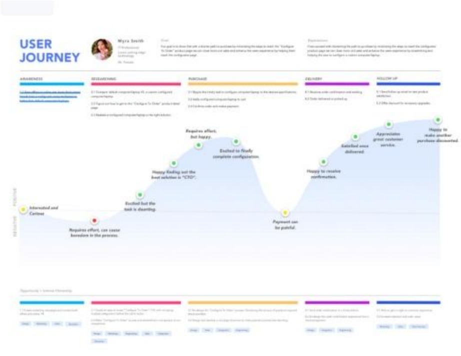

FUTURE CUSTOMER JOURNEY MAP
PERSONA
ORGANIZATION
SCOPE OF EXPERIENCE
PHASES
CUSTOMER THOUGHTS & FEELINGS
CUSTOMER ACTIONS
TOUCH POINTS & DEVICES
PEOPLE & ENVIRONMENTS
PROPOSED CHANGES
SCENARIOS

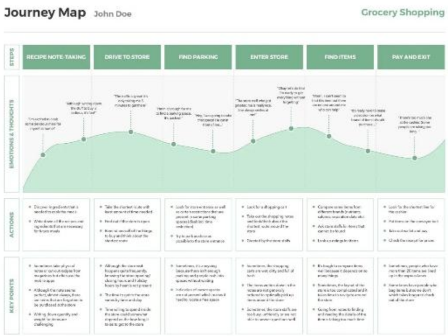

Laura Lang
The Culture Fit Job-Seeker
Goal: To find a new job that values her as a person and as an engineer.
FEELING
DOING
THINKING
TOUCHPOINTS
OPPORTUNITIES
PITFALLS
Problem
Research
Filtering
Applying
Interviewing
Acceptance
Follow-Up


Customer Journey Maps
Type The Subtitle Of Your Great Here
STAGES
DISCOVER
INVESTIGATE
JOIN
CONTRIBUTE
RECEIVE
USE
LENS
DOING
THINKING
FEELING
Placeholder Text
This is a sample text. You simply add your own text and description here.


Define
The Optimizer
Groups of friends travelling together
The Planner
2. PROBLEMS / PAINS
Which problems do you solve for your customer?
TOO MANY POINTS FOR COMPARISON (FI
Hard to coordinate booking for a group.
TOO MANY TABS
Understand RC


CUSTOMER JOURNEY MAP (PRESENT) V2.0
Traveling to Carnegie Mellon University
Persona
Organization
Scope of Experience
PHASES
CUSTOMER THOUGHTS & FEELINGS
CUSTOMER ACTIONS
TOUCH POINTS & DEVICES
PEOPLE & ENVIRONMENTS
BREAKDOWNS
OPPORTUNITIES





Appendix 2: Participant Questionnaire

This appendix includes the questionnaire distributed to participants during the preparation phase. It was designed to gather background information, understand participants' previous hospital experiences, and identify key themes and expectations to inform the co-design workshop. The questionnaire was provided in two versions, in English and Dutch.

English Version

Study title:
Study on the Patient Journey of Older Adults

Responsible researchers:
Dr. Jodi Sturge, Assistant Professor, University of Twente
Nazli Farid Mohajer, Student, University of Twente
Christian Wrede, Postdoctoral Researcher, University of Twente

Informed consent
I declare that I have been informed in a clear manner about the nature, method, and purpose of the study. I understand that the data and results of the study will only be shared anonymously and confidentially with third parties. My questions have been answered satisfactorily. I understand that my responses will be used solely for analysis and/or scientific presentations, and that data will never be traceable to individual persons. During the workshop, photos may be taken, but I will not be identifiable in these photos. To facilitate analysis, the workshop may be recorded with an audio recorder. These recordings will be destroyed after analysis. I voluntarily agree to participate in this study. I reserve the right to withdraw from the study at any time without giving a reason.

a. Yes
b. No

Some questions in advance

To help the researchers prepare the workshop, we would like to ask you a few questions in advance

1. What is your age? _____________

2. What is your living situation?

a. Living independently at home in my own (rental) home
b. Service apartment / senior housing
c. Nursing home or care home
d. Other, namely: ___________

3. What type of hospital experience would you like to share with us during the workshop?
   a. Outpatient visit (an appointment or test where you went home the same day)
   b. Day treatment (you came for a treatment but did not stay overnight)
   c. Hospital stay (you were admitted and stayed at least one night in the hospital)
   d. Emergency visit (an unexpected visit to the emergency department)
   e. Other, namely: ___________

4. When did this hospital experience take place?
   a. The treatment is still ongoing
   b. Recently (in the past few months)
   c. In the past year
   d. More than 1 year ago
   e. More than 5 years ago

5. When you think back on this hospital experience, what mattered most to you at the time — both things that helped and things that were challenging? (You can write a few words or 2–3 short sentences)

6. Have you ever participated in a workshop like this before?
   a. Yes
   b. No

7. What made you decide to sign up for this workshop? (short answer)

8. Take a moment to think about your hospital experience…

- What do you remember from before going to the hospital? (e.g., first symptoms, GP, referral)
- What do you remember from your time at the hospital? (e.g., tests, diagnosis, treatment)
- What do you remember from after leaving the hospital? (e.g., recovery at home, support, learning to live with it)

You don’t need to write anything down here, just think about it. We will discuss these points together in the workshop.

Thank you for completing this questionnaire. We look forward to the workshop!

Dutch Version

Titel onderzoek:
Studie naar de patiëntenreis van ouderen

Verantwoordelijke onderzoekers:
Dr. Jodi Sturge, universitair docent Universiteit
Twente Nazli Farid Mohajer, student Universiteit
Twente Christian Wrede, postdoctoraal onderzoeker
Universiteit Twente

Toestemmingsverklaring
Ik verklaar op een voor mij duidelijke wijze te zijn ingelicht over de aard, methode en het doel van het onderzoek. Ik weet dat de gegevens en resultaten van het onderzoek alleen anoniem en vertrouwelijk aan derden bekend gemaakt zullen worden. Mijn vragen zijn naar tevredenheid beantwoord.
Ik begrijp dat mijn antwoorden uitsluitend voor analyse en/of wetenschappelijke presentaties zullen worden gebruikt, waarbij gegevens nooit te herleiden zullen zijn naar individuele personen.
Tijdens de workshop kunnen foto's gemaakt worden, maar ik zal niet identificeerbaar zijn op deze foto's. Om de analyse te vermakkelijken kan de workshop met een audio-recorder worden opgenomen. Deze opnames zullen na de analyse worden vernietigd.
Ik stem geheel vrijwillig in met deelname aan dit onderzoek. Ik behoud me daarbij het recht voor om op elk moment zonder opgaaf van redenen mijn deelname aan dit onderzoek te beëindigen.

a. Ja
b. Nee

Enkele vragen vooraf

Zodat de onderzoekers de workshop goed kunnen voorbereiden, willen wij u graag alvast een aantal vragen stellen.

1. Wat is uw leeftijd? _____________

2. Wat is uw woonsituatie?
   a. Zelfstandig thuis in eigen (huur)woning
   b. Serviceflat/ aanleunwoning/ seniorenwoning
   c. Woonzorgcentrum of verpleeghuis
   d. Anders, namelijk: ____________

3. Over welk soort ziekenhuiscontact zou u tijdens de workshop graag uw ervaring met ons delen?
   a. Polikliniekbezoek (een afspraak of onderzoek waarbij u dezelfde dag weer naar huis ging)
   b. Dagbehandeling (U kwam voor een behandeling, maar bleef niet overnachten)
   c. Opname (U werd opgenomen en bleef ten minste één nacht in het ziekenhuis)
   d. Spoedeisende hulp (een onverwacht bezoek aan de eerste hulp)
   e. Anders, namelijk: ____________

4. Wanneer was deze ziekenhuiservaring?
    a. De behandeling loopt op dit moment nog
    b. Recent (in de afgelopen paar maanden)
    c. In het afgelopen jaar
    d. Langer dan 1 jaar geleden
    e. Langer 1 dan 5 jaar geleden

5. Als u terugdenkt aan deze ziekenhuiservaring, wat was toen voor u het belangrijkst – zowel de dingen die hielpen als de dingen die lastig waren? (U kunt een paar woorden of 2-3 korte zinnen opschrijven)

6. Heeft u eerder aan een workshop of groepsbijeenkomst zoals deze meegedaan?
    a. Ja
    b. Nee

7. Wat heeft u doen besluiten om zich aan te melden voor deze workshop? (kort antwoord)

8. Denk kort na over uw ziekenhuiservaring…
    - Wat herinnert u zich van vóór het ziekenhuis? (bijv. eerste klachten, huisarts, doorverwijzing)
    - Wat herinnert u zich van het verblijf in het ziekenhuis? (bijv. onderzoeken, diagnose, behandeling)
    - Wat herinnert u zich van na het ziekenhuis? (bijv. herstel thuis, ondersteuning, ermee leren leven)

U hoeft hier niets op te schrijven, denk er alleen even over na. We zullen deze punten samen in de workshop bespreken.

Bedankt voor het invullen van deze vragenlijst. Wij kijken uit naar de workshop!

Appendix 3: Participant Handbook

This appendix contains the participant handbook shared before the workshop. It introduced the study, outlined the workshop structure, and explained how to take part in the co-design activities. The handbook also summarised key information about patient journey mapping and included practical details such as schedule, location, and contact information. Due to time constraints, the handbook was prepared only in English.

Patient Journey Mapping Workshop

PARTICIPANT HANDBOOK

OCTOBER 22, 2025
UNIVERSITY OF TWENTE

Welcome

Thank you for joining this workshop. We want to learn about your experiences with hospital care to understand what works well and what can be improved.

In this workshop, we will **co-design a patient journey map together** to show your experiences before, during, and after hospital care. A patient journey map is important because it makes experiences visible in a clear and simple way. It helps us understand what patients go through, find what works well, and see where care or communication could be improved. This workshop helps us see how well this way of mapping works and what it reveals about how people feel, think, and experience their care.

This is not a test or interview. It is a relaxed session where we listen, talk, and think together.

If you have any questions before or after the workshop, you can contact:

Christian Wrede, E-mail: c.wrede@utwente.nl

Contents

Introduction

Thank you for joining this workshop. We want to learn about your experiences with hospital care to understand what works well and what can be improved.

The goal of this workshop is to map your experience to and to see whether this way of mapping works well. A patient journey map is a tool that helps us understand how people feel, think, and experience important events; in this case, visiting the hospital and recovering at home.

It shows the steps, emotions, challenges, and wishes you experienced during care. Together, we will make a large visual map of your journey before, during, and after hospital care. This helps us see what matters most to you and where care can be improved.

This is not a test or interview. It is a relaxed session where we listen, talk, and think together.

Workshop Information

Date: 22 October 2025
Time: 14:00 - 16:00
Location: Design Lab, University of Twente

How We Will Work

We will work together on one large, laminated sheet that shows three parts of the patient journey: Before the hospital visit, During the hospital visit, and After the hospital visit.

You will use coloured sticky notes and markers to fill in your experiences, thoughts, and feelings. Everyone has their own colour so we can see who added what. You can erase, move, or change things at any time.

We, as facilitators, are here to guide and support you. You are the expert on your own experience. There are no right or wrong answers. What matters most is what feels true to you.

Also, a timer will help us keep track of time, so we finish within two hours.

Agenda

Time	Activity	Description
14:00 – 14:15	**Warm-up and introduction**	Meet each other and prepare for the workshop.
14:15 – 14:35	**Mapping – Before hospital phase**	Talk about what happened before going to the hospital, such as first symptoms or first contact with doctors.
14:35 – 14:55	**Mapping – During hospital phase**	Discuss what happened during your hospital visit or stay.
14:55 – 15:05	**Break**	Short coffee or tea break.
15:05 – 15:45	**Mapping – At home phase**	Reflect on what happens after going home, such as recovery or follow-up care.
15:45 – 16:00	**Wrap-up and feedback**	Look back at what we made and share short reflections.

Materials

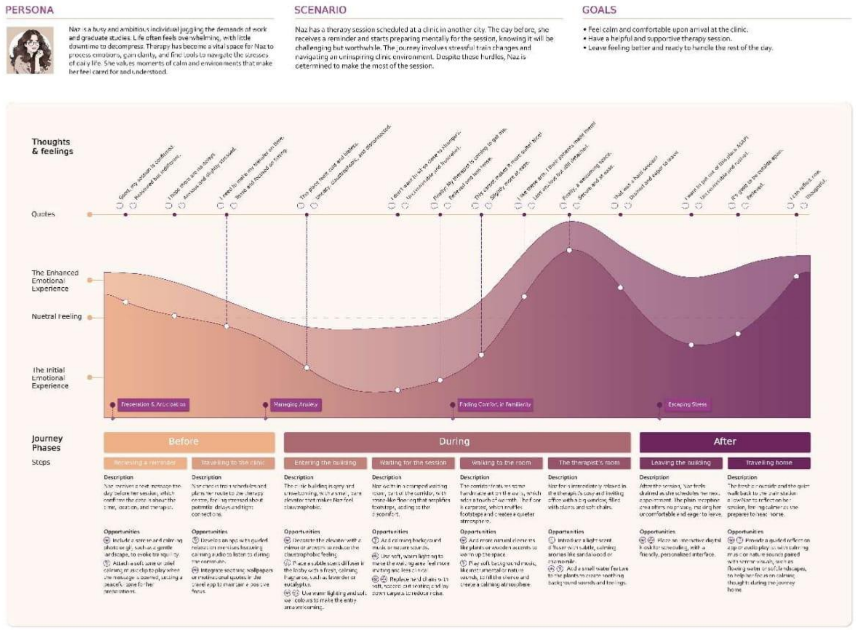
Item	Description
Patient Journey Sheet	The main sheet we will work on together. It has three coloured areas: Before, During, and After the hospital visit. Along the top, there is space to **draw or mark your emotional experience;** how positive or negative you felt during each part of the journey. Below the coloured boxes are places to write your **Steps**, **Challenges**, and **Wishes**. At the bottom is a **Keep for later** area for ideas or notes we can return to later. See *Figure 1*.
Whiteboard Marker	Whiteboard markers for writing directly on the laminated sheet. You can erase and change things easily. Each person has their own colour.
Sticky Notes (Post-its)	Small coloured papers for adding your thoughts, feelings, or experiences. Each person has their own colour. Sticky notes in different shapes, each for one element of patient journey map: • A **heart** for feelings, • A **star** for touchpoints, • An **arrow** for actions, and • A **bubble** for thoughts.

Figure 2 Patient Journey Sheet

After the Workshop

At the end of the session, we will take a short moment to reflect on what we made together. We will ask you a few short questions to help you think about your experience and how the session felt for you.

After the workshop is completed, we will finalize the results, and you will also receive a copy or photo of your own map so you can see how your input helped. An example of a patient journey map is presented below.



PERSONA

Naz is a busy and ambitious individual juggling the demands of work and graduate studies. Life often feels overwhelming, with little downtime to decompress. Therapy has become a vital space for Naz to process emotions, gain clarity, and find tools to navigate the stresses of daily life. She values moments of calm and environments that make her feel cared for and understood.

SCENARIO

Naz has a therapy session scheduled at a clinic in another city. The day before, she receives a reminder and starts preparing mentally for the session, knowing it will be challenging but worthwhile. The journey involves stressful train changes and navigating an uninspiring clinic environment. Despite these hurdles, Naz is determined to make the most of the session.

GOALS

- Feel calm and comfortable upon arrival at the clinic.
- Have a helpful and supportive therapy session.
- Leave feeling better and ready to handle the rest of the day.

Figure 3 Example of Patient Journey Map

Glossary

General Terms

Term	Definition
Citizen Science	Citizen science actively involves citizens and societal organizations in research that is relevant to them.
Patient Journey Map	A visual overview of what a person goes through before, during, and after healthcare. It shows what happens, how they feel, and what could be better.
Co-design	Designing something together with the people who will use it. Everyone can share ideas and help shape the result.
Facilitator	The person who guides the workshop, explains the steps, and supports the group.
Participant	The person sharing experiences and ideas in the workshop.

Journey Map Details

Term	Definition
Phases	The main parts of the journey: Before, During, and After the hospital visit.
Before Visit	When you notice symptoms, prepare, or contact healthcare.
During Visit	When you are at the hospital or talking with healthcare staff.
After Visit	When you return home, recover, or continue care.
Steps	Individual actions or moments that happen in your healthcare experience (for example, making an appointment or having a test).
Actions	Things you or others did at each step (for example, making a call, booking an appointment, or following instructions).
Touchpoints	Moments when you interact with someone or something in the healthcare system (for example, a phone call, waiting room, or website).
Feelings	How you felt during a certain moment.
Thoughts	What you were thinking or remembering during certain moments of your journey.
Challenges	Things that were difficult or frustrating during your experience.
Wishes	Things you would like to see improved.
Keep for Later	A place on the map to note thoughts or ideas that we can return to later.

Appendix 4: Facilitator's Script

This appendix presents the facilitator's script used during the co-design workshop. It outlines the planned sequence of activities, timing, and key prompts used to guide discussion and interaction among participants. The script was in both English and Dutch.

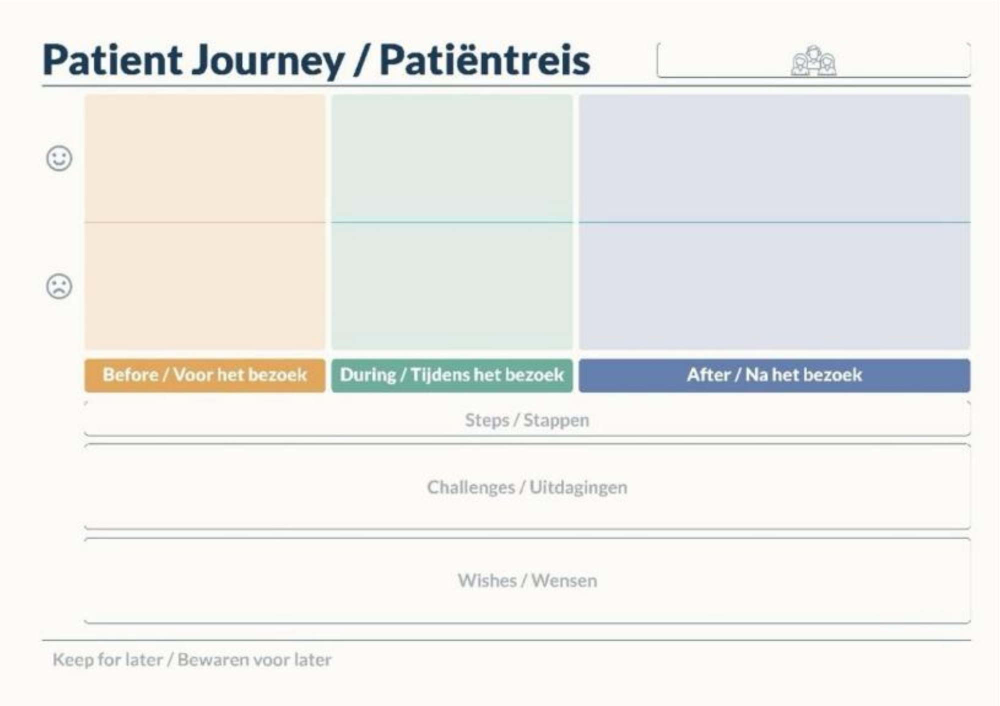
English Version

Script patient journey workshop

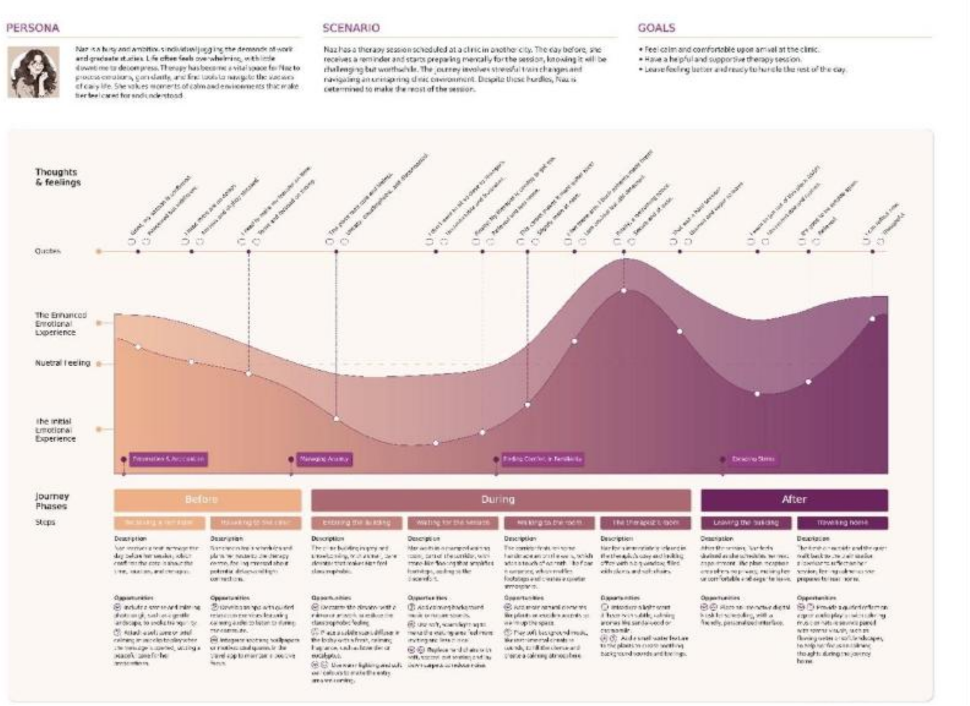
Date	
Time	
Location	
Participants	
Researchers	

Introduction (15 min)

Topic	**Instructions/ questions**
Introduction researchers	Welcome to this workshop about hospital experiences. It's nice to meet you all!
Background workshop	**Purpose** • The aim of this workshop is to gain a deeper understanding of hospital experiences among people aged 65 and older. • This may include any kind of hospital encounter, such as an admission, day treatment, outpatient visit, or visit to the emergency department. We are interested in which professionals and parts of the healthcare system you interact with, and what makes these experiences positive or challenging. • During the workshop, we will test a new visual method — patient journey mapping — which helps to reflect together on what went well and what could be improved. Since this is a test workshop, we are also particularly interested in your feedback on this approach. • Ultimately, this project aims to improve existing care concepts, specifically from the perspective of older adults. **Overall project** • This workshop is part of a larger initiative, the Ageing Right Care(fully) project. This is an international, future-oriented research project that investigates care pathways between independent living at home and hospital admission among older adults. In other words, how can we optimise non-acute hospital care at home for this group? • The project is carried out in several countries with the shared goal of learning from each other and improving hospital-at-home care for older adults.
Content workshop	What are we going to do? We are going to try out a new method for mapping hospital experiences, which we call patient journey mapping. Patient journey mapping is a way to visually capture and understand experiences — in this case, experiences related to hospital care.

	We will use a map that we will fill in together during the workshop. This map will show the different steps, emotions, challenges, and wishes you encountered during your care experience. It helps to identify what matters most to you and where care could be improved.
Patient journey map	This is the map we will fill in together. The map consists of several parts, divided into three phases: • **Before:** What happened before your hospital visit? (For example: when the first symptoms appeared, when appointments were made, who you were in contact with.) • **During:** What happened during your hospital visit? • **After:** What happened after your hospital visit? (This may include recovery at home, follow-up care, who you were in contact with afterwards, or communication with your health insurer.) In addition, we can fill in different elements on this map to better understand your hospital experience: • **Emotions:** How did you feel at certain moments (both positive and negative)? • **Steps:** What steps or contact points with the healthcare system were important? • **Challenges:** Were there any challenges you encountered? • **Wishes:** What could be improved? • **Save for later:** Things that fall outside the map but that we can come back to later. 

	How will we work?
	- Everyone will receive a whiteboard marker, which you can use to write directly on the map. Each person will have their own colour.
	- You can also write things on sticky notes and place them on the map. We have different types of sticky notes:
	  ○ **Heart:** Emotions
	  ○ **Star:** Points of contact with the healthcare system (this can also include, for example, a phone call or visiting a website)
	  ○ **Arrow:** Actions (things you or others have done)
	  ○ **Bubble:** Thoughts

Envisioned result	The outcome of patient journey mapping can look like this — a map that visually presents the main insights. The idea is also to eventually give such a map back to the participant. 
Agenda	- Introduction round - Before phase - During phase - Break - After phase - Feedback
Practicalities	Practical matters - To make sure we don’t miss any comments and to make the analysis easier afterwards, we would like to audio-record this session. The recordings will be deleted immediately after the analysis. - If we publish the results of this session, this will always be done in a way that ensures your anonymity. - Consent form: You have already given your consent online for this study, but we would also like to ask you to sign the paper consent form before we begin.

Introduction round	We'll start with a quick round of introductions — just tell us in one or two sentences who you are.

Mapping before (20 min)

Topic	Instructions/ questions

Dutch Version

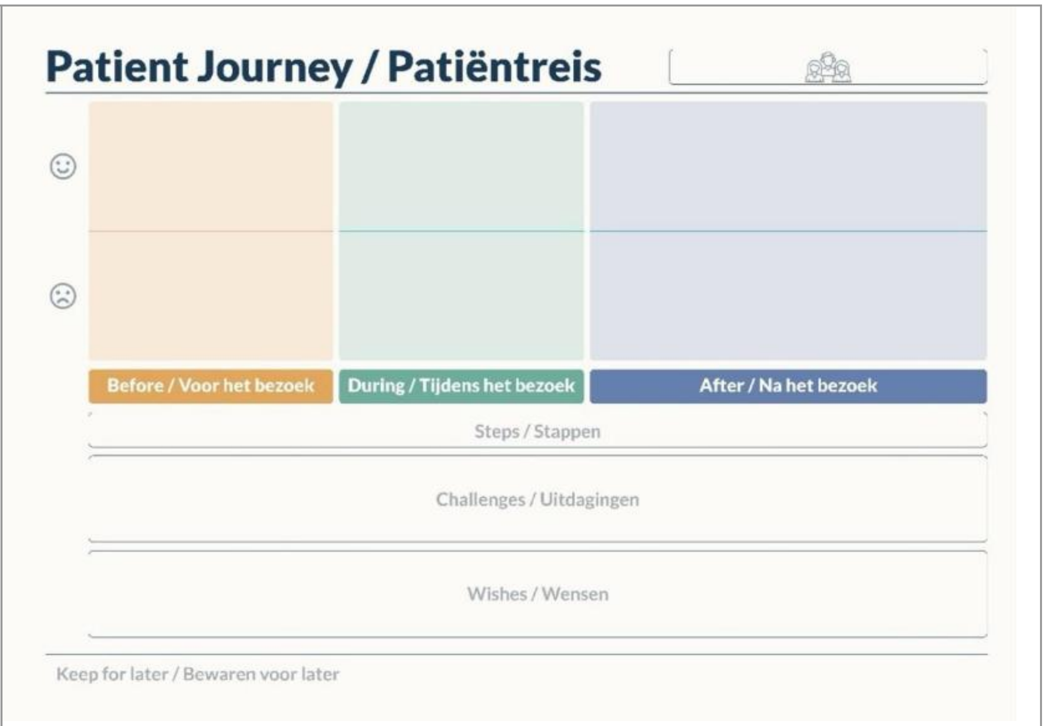
Script patient journey workshop

Date	22.10.2025
Time	14:00 – 16:00
Location	Universiteit Twente, Design Lab, De Achterhorst/ Pinetumweg
Participants	See participant list
Researchers	Jodi Sturge Christian Wrede Nazli Farid Mohajer

Introduction (15 min; 14:00 – 14:15)

Topic	Instructions/ questions
Introduction researchers	Welkom bij deze kleine workshop rondom ziekenhuiservaringen. Leuk om met jullie kennis te maken!
Background workshop	**Doel** • Het doel van deze workshop is om meer inzicht te krijgen in de ziekenhuiservaringen van personen vanaf 65 jaar. • Het kan hierbij gaan om een behandeling of afspraak in het ziekenhuis (bv. Opname, dagbehandeling, polikliniekbezoek, of bezoek aan de spoedeisende hulp). Met welke professionals en elementen van het zorgsysteem kom je bv. in aanraking en wat maakt dit een goede of lastige ervaring? • Tijdens de workshop zullen wij een nieuwe, visuele methode testen (patient journey mapping) die helpt om samen stil te staan bij wat goed ging en wat beter kan. Dit is een test workshop, dus wij zijn achteraf ook vooral geïnteresseerd wat u vond van deze manier. • Uiteindelijk doen wij dit project om huidige zorgconcepten te verbeteren, specifiek vanuit het perspectief van ouderen. **Overkoepelend project** • Dit project is onderdeel van een overkoepelend project, namelijk Ageing Right Care(fully) project. • Dit is een transnationaal, toekomstgericht onderzoeksproject dat de zorgpaden tussen zelfstandig thuis wonen en ziekenhuisopname van ouderen

	onderzoekt. Dus hoe kunnen wij niet-akute ziekenhuiszorg in de thuisomgeving optimaliseren voor deze doelgroep? • Het project wordt uitgevoerd in meerdere landen met als doel van elkaar te leren en ziekenhuiszorg thuis voor ouderen te verbeteren.
Content workshop	Wat gaan we straks doen? Wij gaan een nieuwe methode uitproberen voor het in kaart brengen van ziekenhuiservaringen. Wij noemen dit patient journey mapping. Patient journey mapping is een manier om ervaringen (in dit geval ziekenhuiservaringen) visueel in kaart te kunnen brengen. Wij gebruiken hiervoor een map die wij straks gezamenlijk zullen invullen. Deze map laat uiteindelijk de stappen, emoties, uitdagingen en wensen zien die je tijdens de zorg hebt meegemaakt. Dit helpt uiteindelijk om te zoen wat voor jou het meest belangrijk is en waar de zorg verbeterd kan worden.
Patient journey map	Dit is de map die wij straks gezamenlijk zullen invullen. De map bevat meerdere onderdelen: Opgedeeld in 3 fases: • **Voor:** Wat gebeurde er voor uw ziekenhuisbezoek? (kan beginnen bij eerste symptomen, afspraken make, met wie hebt u contact gehad?) • **Tijdens:** Wat gebeurde er allemaal tijdens uw ziekenhuisbezoek? • **Na:** Wat gebeurde er na uw ziekenhuisbezoek? (dit kan gaan over herstel thuis, nazorg, met wie hebt u nog contact gehad, kan ook gaan over contact met de verzekeraar) Verder kunnen wij verschillende dingen in deze map invullen die meer inzicht geven in uw ziekenhuiservaring zelf: • **Emoties:** Hoe hebt u zich gevoeld op een bepaald moment (positief en negatief)? • **Stappen:** Welke stappen of aanrakingsmomenten met het zorgsysteem waren belangrijk? • **Uitdagingen:** Zijn er bepaalde uitdagingen geweest die u tegen bent gekomen? • **Wensen:** Wat zou beter kunnen? • **Bewaren voor later:** Dingen die buiten deze map vallen waar wij later op terug kunnen komen

	 Hoe gaan wij te werk? • Iedereen krijgt straks een whitebord pen waarmee jullie direct op de map kunnen schrijven. Iedereen krijgt een eigen kleur. • Daarnaast kunnen jullie dingen op sticky notes opschrijven en deze op de map plaatsen. Wij hebben verschillende sticky notes: ○ **Hart:** Emoties ○ **Ster:** Aanrakingsmomenten met het zorgsysteem (kan bv ook gaan over een telefoongesprek of bezoek van een website) ○ **Pijl:** Acties (dingen die u of anderen hebben gedaan) ○ **Bubbel:** Gedachtes
Envisioned result	Het eindresultaat van patient journey mapping kan er uiteindelijk zo uitzien. Een map die het belangrijkste inzicht op een visuele manier weergeeft. Het idee is ook om zo'n map uiteindelijk weer terug te geven aan de deelnemer.
Agenda	• Voorstelronde • Voor-fase • Tijdens-fase • Pauze • Na-fase • Feedback
Practicalities	Praktische zaken: • Om geen enkele opmerking te missen en ook de analyse achteraf makkelijker te maken zouden wij deze sessie graag met een audio recorder willen opnemen. De audio opnames zullen wij na de analyse direct vernietigen. • Als we de resultaten van deze sessie publiceren, dan gebeurt dat op een manier dat u altijd anoniem blijft.

	• Toestemmingsverklaring: Jullie hebben al online toestemming gegeven voor dit onderzoek, maar wij willen toch vragen om ook nog even het toestemmingsverklaringsformulier op papier te ondertekenen.
Voorstel-ronde	Dan beginnen wij nu met een korte voorstelronde, waarin je in 1 of 2 zinnen even kunt aangeven wie je bent.

Mapping before (20 min; 14:15 – 14:35)

Topic	Instructions/ questions
	Dan beginnen wij met de eerste fase- de **voor-fase.** Wat gebeurde er voor uw ziekenhuisbezoek? (kan beginnen bij eerste symptomen, afspraken make, met wie hebt u contact gehad?) Dingen die meer inzicht geven in uw ziekenhuiservaring zelf: • **Emoties:** Hoe hebt u zich gevoeld op een bepaald moment (positief en negatief)? • **Stappen:** Welke stappen of aanrakingsmomenten met het zorgsysteem waren belangrijk? • **Uitdagingen:** Zijn er bepaalde uitdagingen geweest die u tegen bent gekomen? • **Wensen:** Wat zou beter kunnen? • **Bewaren voor later:** Dingen die buiten deze map vallen waar wij later op terug kunnen komen Sticky notes: • **Hart:** Emoties • **Ster:** Aanrakingsmomenten met het zorgsysteem (kan bv ook gaan over een telefoongesprek of bezoek van een website) • **Pijl:** Acties (dingen die u of anderen hebben gedaan) • **Bubbel:** Gedachtes

Mapping during (20 min; 14:35 – 14:55)

Topic	Instructions/ questions
	Dan gaan wij nu verder met de **tijdens fase**. Wat gebeurde er allemaal tijdens uw ziekenhuisbezoek? Dingen die meer inzicht geven in uw ziekenhuiservaring zelf: • **Emoties:** Hoe hebt u zich gevoeld op een bepaald moment (positief en negatief)? • **Stappen:** Welke stappen of aanrakingsmomenten met het zorgsysteem waren belangrijk? • **Uitdagingen:** Zijn er bepaalde uitdagingen geweest die u tegen bent gekomen? • **Wensen:** Wat zou beter kunnen? • **Bewaren voor later:** Dingen die buiten deze map vallen waar wij later op terug kunnen komen Sticky notes:

	• **Hart:** Emoties • **Ster:** Aanrakingsmomenten met het zorgsysteem (kan bv ook gaan over een telefoongesprek of bezoek van een website) • **Pijl:** Acties (dingen die u of anderen hebben gedaan) • **Bubbel:** Gedachtes

BREAK (10 mins; 14:55 – 15:05)

Mapping after (20 min; 15:45 – 15:05)

Topic	Instructions/ questions
	Dan gaan wij nu verder met de **na-fase.** Wat gebeurde er na uw ziekenhuisbezoek? (dit kan gaan over herstel thuis, nazorg, met wie hebt u nog contact gehad, kan ook gaan over contact met de verzekeraar) Dingen die meer inzicht geven in uw ziekenhuiservaring zelf: • **Emoties:** Hoe hebt u zich gevoeld op een bepaald moment (positief en negatief)? • **Stappen:** Welke stappen of aanrakingsmomenten met het zorgsysteem waren belangrijk? • **Uitdagingen:** Zijn er bepaalde uitdagingen geweest die u tegen bent gekomen? • **Wensen:** Wat zou beter kunnen? • **Bewaren voor later:** Dingen die buiten deze map vallen waar wij later op terug kunnen komen Sticky notes: • **Hart:** Emoties • **Ster:** Aanrakingsmomenten met het zorgsysteem (kan bv ook gaan over een telefoongesprek of bezoek van een website) • **Pijl:** Acties (dingen die u of anderen hebben gedaan) • **Bubbel:** Gedachtes

Feedback and rounding off (15 min; 15:45 – 16:00)

Topic	Instructions/ questions
	Omdat dit is een eerste test geweest met deze methode zijn wij uiteraard ook benieuwd wat jullie van deze methode vonden • Zijn er dingen geweest die jullie lastig vonden om in te vullen? • Zou deze methode aansluiten bij de meeste ouderen of voorzie je problemen? • Wat zou je zelf verbeteren? • Zou je deze methode aanbevelen voor een groep-sessie of individuele sessie? (Dit heeft ook iets ermee te maken met in hoeverre deelnemers bereid zijn hun persoonlijke ervaringen te delen in het bijzijn van anderen) • Patient journey mapping helpt ons als onderzoekers om knelpunten in de zorg beter te begrijpen. Maar kan zo een map ook van waarde zijn voor de deelnemers zelf?

	○ Wat zou je met zo’n map doen? Zou je die aan anderen laten zien om te bespreken? • In de studie die wil uiteindelijk willen uitrollen willen wij ook graag het perspectief van mantelzorgers meenemen. Het idee wat wij hebben is om de map aan de deelnemer mee te geven zodat hij/zij deze met een mantelzorger kan bespreken. En de mantelzorger daarbij ook de mogelijkheid heeft om feedback of commentaar in te voegen. Is dat realistisch? (soort van huiswerk) Bedankt voor jullie deelname aan deze workshop, dit stellen wij zeer op prijs! Mochten jullie nog vragen achteraf hebben, aarzel dan niet om een email sturen. Presentjes uitdelen

Appendix 5: Participant Quotes

This appendix includes selected quotes from participants that provide further insight into their experiences and reflections during the co-design workshop. The quotes are grouped by theme to make them easier to read and to highlight recurring ideas and shared perspectives that emerged during the session. Several themes echo the design principles developed earlier in the project, particularly around clarity, cognitive load and emotional safety, while others reflect broader impressions of the workshop, such as atmosphere, usefulness and personal engagement.

Theme: Awareness and Reflection

“It is very important that you realise what happened. This [the journey mapping] makes me more aware of what happens.”
(Participant 2)

Theme: Feeling Heard and Recognised

“I found it interesting and pleasant because you are being listened to, there’s a sense of recognition.”
(Participant 3)

Theme: Group Size and Atmosphere

“What I found very good is that it was a limited group. I first thought it would be 6, 7, 8, 9 people, but that would have been too much.”
(Participant 1)

Theme: Value and Application of the Method

“Everyone who is admitted to the hospital receives an evaluation form to fill out after. The insights from this [journey mapping] could be used to fill out these evaluations. What did you like? What did you not like? How was your stay in the hospital? What did you miss during the period at home? (...) In the evaluation form, hospitals are only interested in the during phase, they don’t ask anything about the period after. That is very important.”
(Participant 2)

Theme: Cognitive Load and Visual Complexity

“But when it comes to the template on the table and all these stickers, I find it all a bit much. (...) I think, oh God, all these notes, what was it again?”
(Participant 3)

“And with all those shapes, you start thinking, oh, what was that again? For me, it’s a bit too many boxes, figures, and stickers, a bit too much to take in all at once.”
(Participant 3)

Theme: Simplicity and Clarity

“Moderator: If we were to ask questions to people next time, what kind of questions would you ask?
Participant: Simpler: What did you like? And what did you not like? What was a good feeling? What wasn’t a good feeling? But the period is important.”
(Participant 2)

“The easier to fill in, the more uncomplicated, the more information you will get, I am sure.”
(Participant 2)