Involving patients and clinicians in a pilot randomised clinical trial of spinal manual therapy versus nerve root injection for lumbar radiculopathy: protocol of a patient and public involvement project

Corina Ryf,1 Léonie Hofstetter,1 Lauren Clack,2,3 Milo A Puhan,4 Cesar A Hincapié1,4

ABSTRACT

Introduction A patient and public involvement (PPI) project will be embedded within the SALuBRITY pilot trial, a two parallel group, double sham controlled, randomised clinical trial. The study aims to compare the effectiveness of spinal manual therapy and corticosteroid nerve root injections, two methods commonly used to treat patients with lumbar radiculopathy. We aim to gather patients’ and clinicians’ perspectives and involve them in decisions related to the research question and objectives, proposed trial recruitment processes and methods, and proposed outcome measures.

Methods and analysis A small group of patients with lived experience of lumbar radiculopathy and primary care clinicians with experience in the treatment of patients with lumbar radiculopathy are involved. An initial kickoff event will prepare and empower the advisors for involvement in the project, followed by semistructured patient group and one-on-one clinician interviews. We will follow the Critical Outcomes of Research Engagement framework for assessing the impact of patient engagement in research. We will summarise and feedback PPI content to the patient and clinician advisors during a member-checking process to ensure accurate interpretation of patient and clinician inputs. Inductive and deductive thematic analysis will be used for the qualitative analysis of the interviews. Two surveys will be completed at different points along the trial to track the advisors’ and researchers’ experiences over the course of the PPI project. Any modifications to the SALuBRITY trial methods due to PPI inputs will be thoroughly documented and recorded in an impact log.

Ethics and dissemination The independent research ethics committee of Canton Zurich confirmed that ethical approval for this PPI subproject was not required. PPI results will be disseminated in a peer-reviewed journal and presented at conferences.

Strengths and limitations of this study

► This patient and public involvement (PPI) project is an important step for making research more relevant to end-users and facilitating research translation into clinical practice.
► Existing frameworks guide consultation and collaboration approaches and draw attention to relevant outcomes to evaluate the impact of PPI activities.
► Patient and clinician advisors will be supplied with detailed information about PPI in general and the future trial to be empowered for their contribution to the project.
► Sample size is small and inadequate for quantitative analysis but allows a pragmatic qualitative approach and recognition of multiple individual realities.

INTRODUCTION

Patients’ role in research has changed over the past decades from being study participants to getting engaged at different levels and in different stages of research.

The value of patient and public involvement (PPI) is increasingly recognised and prioritised by research regulators and funders,1–3 academic journals,4 and patient organisations.5 The INVOLVE initiative, established in 1996 and funded by the National Institute for Health Research (NIHR) of the UK, was taken over by NIHR Center for Engagement and Dissemination in 2020 and defines public involvement as research carried out ‘with’ or ‘by’ members of the public rather than ‘to’, ‘about’ or ‘for’ them.5 PPI represents an essential approach for keeping the research relevant to end-users (eg, patients and clinicians) and improving its translation into
real-world clinical practice by integrating patient and clinician perspectives on the relevant research topic.

Back-related leg pain affects about 200 million people worldwide, and was estimated to account for up to 35 million years lived with disability in 2017. Lumbar radiculopathy—arising from lumbar spinal nerve root compression or irritation—is characterised by low back pain (LBP) that radiates down the leg in a lumbar nerve distribution. With increased pain and disability, people suffering from back-related leg pain have poorer prognosis, quality of life and an increased use of health resources compared with people with LBP alone. Spinal manual therapy (SMT) and corticosteroid nerve root injection (NRI) are two common conservative treatment methods in routine clinical care, but there is uncertainty regarding their effects. To assist patients, clinicians and policy-makers with decision making on the treatment of lumbar radiculopathy based on high-quality evidence, the SALuBRITY pilot trial—a two parallel group, double sham controlled, randomised clinical trial—is being developed.

PPI in the development phase of a clinical trial can help to identify possible challenges in the collaboration of researcher with patients at an early stage, with all involved people facing beneficial impacts. Researchers profit from extended funding, better enrolment rates, and increased trust and advocates within the community under research. Patients describe empowerment, increased knowledge and confidence, which emphasise the wide societal benefits and the potential for research to act as a positive force in society. In recognition of these benefits—ultimately leading to improved quality and relevance of the research being conducted—we will carry out a PPI project nested in the SALuBRITY trial, aiming to improve the quality and relevance of the future trial.

Our goal is to enhance the quality of care and quality of life for patients with lumbar radiculopathy, which will be achieved in collaboration with patients and clinicians, whose lived experiences and expertise offer invaluable insights into lumbar radiculopathy and its treatment. Our general objectives are (1) to gather patients’ and clinicians’ perspectives and involve them in research discussions and decisions and (2) to assess the impact of PPI on the future SALuBRITY pilot randomised clinical trial investigating SMT and NRI in patients with lumbar radiculopathy. Specifically, we aim to answer the following questions:

- What is the impact of PPI on the relevance and quality of the SALuBRITY pilot randomised clinical trial?

METHODS AND ANALYSIS

Study design

We will involve a small group of patients (n=3–6) with lived experience of lumbar radiculopathy and primary care clinicians (n=3–4) that care for patients with lumbar radiculopathy. The different levels of involvement are distinguished, based on the flow of information between patients and the public, and professionals of the research team. We will use consultation and collaboration approaches as qualitative methods. Consultation is defined as the collection of information from patients and the public, usually with no back-and-forth interaction with the research team and shows potential for gathering the view of a larger group of individuals. Collaboration represents a bidirectional exchange, where decisions about research are shared and it requires commitment, openness and flexibility for all involved parties. Group meetings and one-on-one interviews will be organised to discuss the acceptability, sensitivity and relevance of the proposed methods, trial outcomes, and information in the context of potential trial patient participants and primary care clinician collaborators. To gather feedback on the language and content of patient trial documents, additional patients will be recruited one after another to participate in a think-aloud process until no new feedback is generated (a priori sample estimate, n=2–4).

Patient and clinician advisors

Purposeful sampling will be used to involve patient and clinician advisors for this project. This is a technique used in qualitative research, to gather individuals most knowledgeable about a topic of interest and supporting the intention to achieve depth of understanding until saturation is achieved. Patient advisors will be current or former patients of the chiropractic medicine polyclinic at Balgrist University Hospital in Zurich, Switzerland, or from other internal or external collaborating clinicians. Eligibility criteria are age between 18 and 65 years, lived experience of lumbar radiculopathy, and willingness to be involved as a patient advisor. Patients will be considered if they received at least one of the treatment interventions of interest (SMT or NRI), but patients who are experienced with multiple treatment modalities (such as chiropractic treatment, physiotherapy, massage, NRI, or surgery) will be preferred. Clinicians at the chiropractic medicine clinic at Balgrist University Hospital will be informed about the PPI project and will ask eligible patients for permission to be invited by the PPI team. On agreement, the potential patient advisor will be contacted and invited by a project lead for further information. Primary care clinicians in the surrounding region of Zurich will be contacted and informed about the PPI project. They will be considered eligible for involvement in this PPI project if they have experience providing primary care to patients with lumbar radiculopathy and are willing to be involved.
as a primary care clinician advisor. Patient and clinician advisors will not be incentivised to participate through any offer of monetary or other compensation for their involvement, but a small token of appreciation (gift card of small value) will be provided in thanks for their involvement after completion of the PPI activities.

**Stages of involvement**

The Critical Outcomes of Research Engagement (COREs) framework was designed for improving the quality and efficiency of research and maximising its societal impact. COREs will inform our PPI study design by drawing our attention to the ways in which patients and clinicians can be engaged during each of the specific research stages as well as relevant outcomes to evaluate the impact of PPI activities. Patient and clinician advisors will be involved mainly through consultation and collaboration approaches to gather their insights regarding recruitment strategy, patient and clinician information documents, aspects of trial methods, and outcome measures. Additionally, a patient advisor will be involved on the trial steering committee. Figure 1 provides our adapted CORE framework with details on advisors, types of involvement, desired outcomes and methods used, summarised by research stages.

**PPI activities**

**Kickoff meeting**

Patient and clinician advisors will meet for an initial, virtual kickoff event. The first part will provide information on how clinical research and PPI projects work and will clarify expectations of all involved parties. After splitting up into separate patient and clinician advisory groups, the second part of the kickoff event will familiarise the advisors with the planned PPI project tasks (see online supplemental appendix A). The kickoff event will facilitate the establishment of rapport among the advisors and the PPI project team, and also prepare and empower the patient and clinician advisors for involvement on the project. After the kickoff meeting, the expectations of the patients and clinicians will be summarised and fed back to all participants as a shared purpose statement to ensure accurate interpretation. Additionally, clinician information trial documents will be sent to the clinician advisors to give them enough time to review and prepare for their interviews.

**Individual and focus group interviews**

A patient advisory group meeting and individual semi-structured one-on-one interviews with clinician advisors will be conducted virtually. Brief vignettes covering key PPI topics will be used to introduce topics and initiate consultation and collaboration discussions. Open questions will be used to initiate discussions, with more structured questions prespecified, in case recalibration of the discussion is needed (see online supplemental appendix B). Each interview will be conducted by three members of the research team. One of them will take the lead as the moderator who will ask questions and guide discussion. The assistants will record the interview and take comprehensive notes, with any discrepancies in notes resolved by consensus.

**Think-aloud method**

A think-aloud approach, in which advisors speak their thoughts aloud while performing a task, will be used to collect feedback on patient trial information documents. The documents will be provided at the beginning of the meeting, and the patient advisors will be asked to verbalise their thoughts while reading it aloud. An assistant will take notes to contribute to the digitally recorded material. Discussion about ambiguous sections will take place after completion of the task. An instruction guide is provided in online supplemental appendix C.

**Data collection and analysis**

Demographics of all advisors will be collected by means of a short electronic questionnaire. Communication with patient advisors will be in German (eg, interviews, member-checking) as this is the primary language in the region and the data collected will be subsequently translated to English. As almost all clinicians in Switzerland are proficient in English (global academic language), clinician advisors will be interviewed in English. Instead of verbatim transcription, we will summarise and feedback PPI content to the patient and clinician advisors during a member-checking process to ensure accurate interpretation of patient and clinician inputs.

For the qualitative analysis of the interviews, thematic analysis will be performed according to Braun and Clarke’s six-phase guide: (1) familiarisation with data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes,
and (6) producing report.18 The vignettes (online supplemental appendix B) will provide guidance and represent key questions we aim to code around for the deductive approach of the thematic analysis. At the same time, we will use open coding which allows inductive thinking, to gather a broader view on the topic of interest and enable recording of unsolicited themes. Patient and clinician interviews will initially be coded separately. As both advisory groups follow similar interview guides, they will be mapped onto one another, exploring how codes and themes will manifest across both groups. Representative patient and clinician quotes will be identified.

Any modifications to the SALuBRITY pilot or future main trial methods as a result of PPI inputs will be thoroughly documented and recorded in an impact log (see online supplemental appendix D). In order to track the advisors’ and researchers’ experiences over the course of the PPI project, two surveys are meant to be completed at different time points along the trial.19 The first will be delivered after the kickoff meeting, the second after completion of all participation activities. The surveys are adapted to our project and provided in online supplemental appendix E. Descriptive statistics will be used to analyse the survey data.

The Guidance for Reporting Involvement of Patients and the Public (GRIPP2) reporting checklist will be used to enhance the quality and transparency of the PPI reporting.20

PPI in the design of this protocol
This is a protocol for a PPI project. No patients or members of the public were involved in the design of the protocol.

ETHICS AND DISSEMINATION
The independent research ethics committee of Canton Zurich confirmed that ethical approval was not required for this PPI project. The active involvement of patients or members of the public does not generally raise any ethical concerns for the people who are actively involved, as they are not acting in the same way as research participants. They are acting as specialist advisers, providing valuable knowledge and expertise based on their experience of a health condition or public health concern. Therefore, ethical approval is not needed for the active involvement element of the research, where people are involved in planning or advising on research.

Patient and clinician advisors will provide important end-user lived experience insights and advice—an important step for making research more relevant to end-users and improving its quality. This may facilitate its translation into clinical practice. Our dissemination plan for the PPI project will include publishing our results in a relevant peer-reviewed journal and presenting at conferences.

Author affiliations
1Department of Chiropractic Medicine, Balgrist University Hospital and University of Zurich, Zurich, Switzerland
2Institute for Implementation Science in Health Care, University of Zurich, Zurich, Switzerland
3Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich, Zurich, Switzerland
4Epidemiology, Biostatistics and Prevention Institute (EBPI), University of Zurich, Zurich, Switzerland

Contributors
Study conception: CAH; protocol design: CAH, LC, MAP, CR and LH; drafting the manuscript: CR, LH and CAH; critical revision of the manuscript: CR, LH, LC, MAP and CAH; supervision: CAH. All authors read and approved the final version of the manuscript.

Funding
The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests
None declared.

Patient and public involvement
Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication
Not applicable.

Provenance and peer review
Not commissioned; externally peer reviewed.

Supplemental material
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ORCID iD
Cesar A Hincapié http://orcid.org/0000-0002-7257-8122

REFERENCES
1 Selby JV, Beal AC, Frank L. The patient-centered outcomes research Institute (PCORI) national priorities for research and initial research agenda. JAMA 2012;307:1583.

Author affiliations
1Department of Chiropractic Medicine, Balgrist University Hospital and University of Zurich, Zurich, Switzerland
2Institute for Implementation Science in Health Care, University of Zurich, Zurich, Switzerland
3Department of Infectious Diseases and Hospital Epidemiology, University Hospital Zurich, Zurich, Switzerland
4Epidemiology, Biostatistics and Prevention Institute (EBPI), University of Zurich, Zurich, Switzerland

Contributors
Study conception: CAH; protocol design: CAH, LC, MAP, CR and LH; drafting the manuscript: CR, LH and CAH; critical revision of the manuscript: CR, LH, LC, MAP and CAH; supervision: CAH. All authors read and approved the final version of the manuscript.

Funding
The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

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ORCID iD
Cesar A Hincapié http://orcid.org/0000-0002-7257-8122

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1 Selby JV, Beal AC, Frank L. The patient-centered outcomes research Institute (PCORI) national priorities for research and initial research agenda. JAMA 2012;307:1583.


Appendix A – Kickoff Meeting

**Aim:** The kickoff meeting is designed for building the required capacity for the PPI project by offering information on how clinical research and PPI projects work and familiarizing advisors with the upcoming PPI tasks. The meeting will not only facilitate establishing rapport, but also prepare and empower patient and clinician advisors to be capable for high quality involvement on the PPI project.

**Schedule:**

<table>
<thead>
<tr>
<th>Speaker</th>
<th>Timeline</th>
<th>Patient and clinician advisors together</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAH, CR, LC, LH</td>
<td>5min</td>
<td>Welcome, introduction of project team member</td>
</tr>
<tr>
<td>LH</td>
<td>5min</td>
<td>Clinical trial research in a nutshell, explained based on the SALuBRITY trial</td>
</tr>
<tr>
<td>LC</td>
<td>5min</td>
<td>PPI introduction: Reasons why, consultation vs. collaboration approaches, expectations, aim for this PPI project</td>
</tr>
<tr>
<td>CR</td>
<td>10min</td>
<td>Introduction advisors, ice breaker</td>
</tr>
<tr>
<td>CR</td>
<td>10min</td>
<td>Expectations, shared purpose, next steps</td>
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<tr>
<td></td>
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<td>= 35min</td>
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</tbody>
</table>

10min break and split up in groups

<table>
<thead>
<tr>
<th>Timeline</th>
<th>Patient advisors</th>
<th>Timeline</th>
<th>Clinician advisors</th>
</tr>
</thead>
<tbody>
<tr>
<td>20min</td>
<td>Exchange of lived experience with lumbar radiculopathy</td>
<td>15min</td>
<td>Presentation of trial methods, i.e., outcomes, design, interventions/procedures</td>
</tr>
<tr>
<td>15min</td>
<td>Presentation of trial methods, i.e., outcomes, design, interventions /procedures</td>
<td>10min</td>
<td>Time for questions</td>
</tr>
<tr>
<td>10min</td>
<td>Time for questions</td>
<td>=35min</td>
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<tr>
<td>=55min</td>
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**Total duration:**

35 + 45 + 10min break = 1h 30 min

35 + 35 + 10min break = 1h 20 min
Appendix B – Interview Guide

Patient Advisors Interview Guide

Vignette 1: Research question

Introduction:
The research question and primary objective of the future main trial was presented in detail during the kick-off meeting and is briefly reviewed. For this vignette, a consultation approach is mainly taken, as background evidence and past clinical research clearly and compellingly points to the knowledge gap that the SALuBRITY trial aims to fill.

Opening question:
What are your thoughts on the importance and relevance of the trial’s main question?

“To compare SMT with NRI in patients with lumbar radiculopathy in terms of pain impact at 12-weeks after randomization and assess outcomes over a 1-year follow-up.”

Specific guiding questions:
None

Vignette 2: Proposed methods

Information about proposed methods with the double sham controlled, randomized study design presented in detail during the kick-off meeting.

a) Study design

Introduction:
The principle and purpose of the two study arms (group A receiving active SMT and sham NRI, group B receiving active NRI and sham SMT) as well as the importance of blinding of patients and managing clinician is presented again.

Opening question:
What are your thoughts on the proposed randomised double sham design?

Specific guiding questions:
- Thoughts on the principle of random allocation of the two trial active interventions?
- Thoughts on the principle of blinding of patients to the active intervention?
- Thoughts on the principle of blinding of the managing clinician?
- Thoughts on the treatment by another, “foreign” clinician?

b) Recruitment process and timings

Introduction:
The process from recruitment, screening, randomization, to the start of treatment is briefly outlined again.

Opening question:
What do you think about the proposed recruitment processes and timings?
Specific guiding questions:
- Thoughts on the proposed timings from primary care visit to initial trial telephone screen, to trial eligibility screening visit, to first treatment visit? Assumption 0-5days.

c) Discontinuation of pain medication
Introduction:
Rationale for discontinuing pain medication for 12-24 hours prior to each study visit is discussed.

Opening question:
What are your thoughts about the request for patients to discontinue their pain medication prior to trial study visits?

Specific guiding questions:
- Would you personally be willing to forego your pain medication during a 0-24 hour period if you were participating in such a trial? Why, or why not?

Vignette 3: Trial outcomes
a) Primary outcome
Introduction:
Information about proposed outcomes is presented to the patient advisors. The focus is put on the primary clinical outcome of the trial (i.e. pain impact, measured with the 3-item PEG scale), which is presented in detail. Other secondary patient-reported outcomes (i.e. physical function, quality of life, patient satisfaction with care, pain medication use, work disability, healthcare use) are presented briefly to the advisors to provide them enough information to discuss the relevance and importance of the proposed primary outcome.

Opening question:
What are your thoughts about the trial’s proposed outcomes?

Specific guiding questions:
- Do you think pain impact (measured with the PEG scale) is a relevant and important primary outcome?
- Thoughts on the most relevant pain location to assess pain impact (i.e. back pain, leg pain, or overall pain)?
- Do you think it is important to ask for the intensity of the pain?
- Can you think of other relevant outcomes that we have not covered yet?

b) Clinical course as measured by weekly SMS messaging
Introduction:
The idea of measuring clinical outcomes by weekly SMS messaging is presented to the patient advisors.

Opening question:
What are your thoughts about weekly SMS messaging as a way to measure primary outcomes?
Specific guiding questions:
- Would you feel comfortable with this way of measuring clinical course?
- Do you have experience collecting data this way?
- How optimistic are you about your ability to reliably provide data about clinical outcomes via SMS?

Clinician Advisors Interview Guide

Vignette 1: Research question
Introduction:
The research question and primary objective of the future main trial were presented in detail during the kick-off meeting and are briefly reviewed. For this vignette, a consultation approach is mainly taken, as background evidence and past clinical research clearly and compellingly points to the knowledge gap that the SALuBRITY trial aims to fill.

Opening question:
What are your thoughts on the importance and relevance of the trial’s main question?

Specific guiding questions:
- Could you imagine that the results of this trial would influence your clinical practice?
- Where do you see gaps in evidence that would be useful to guide your clinical practice and treatment of patients with lumbar radiculopathy?

Vignette 2: Proposed methods
a) Recruitment process and timings
Introduction:
The process from recruitment, screening, randomization, to the start of treatment is briefly outlined again. The trial clinician information form was provided to all clinician advisors after the kick-off group meeting to give them enough time to read and review it. The form contains a brief summary of the trial itself, information about the eligibility criteria, and the instruction about the referring process of potential participants. Different options/processes of referring mechanisms are presented.

Opening question:
What are your thoughts on the proposed recruitment processes and timings?

Pre-specified questions:
- Thoughts on improvements of the referring process?
- What are your thoughts on the clinician recruitment information package?

b) Discontinuation of pain medication
Introduction:
The research question and primary objective of the future main trial were presented in detail during the kick-off meeting and are briefly reviewed. For this vignette, a consultation approach is mainly taken, as background evidence and past clinical research clearly and compellingly points to the knowledge gap that the SALuBRITY trial aims to fill.
Opening question:
What are your thoughts about the proposal to have patients discontinue their pain medication 0 to 48 hours prior to study visits?

Specific guiding questions:
- What are your thoughts about the proposal to have patients discontinue their pain medication 12 to 24 h prior to study visits?

Vignette 3: Trial outcomes
a) Primary outcome
Introduction:
Information about proposed outcomes, with the focus on the primary clinical outcome of the trial (i.e. pain impact, measured with the 3-item PEG scale), is presented again.

Opening question:
What are your thoughts about the trial's proposed primary clinical outcome?

Specific guiding questions:
- Do you think pain impact (measured with the PEG scale) is a relevant and important primary outcome?
- Thoughts on the most relevant pain location to assess pain impact (i.e. back pain, leg pain, or overall pain)?

b) Non-inferiority margin
Introduction:
The non-inferiority approach aims to determine whether SMT is non inferior to NRI in terms of pain impact. The minimal clinically important difference (MCID) in most trials in literature regarding the pain numeric rating scale (NRS), is 1 point on a scale between 1 and 10. Proposed is a non-inferiority margin of 0.75 points on the PEG scale, meaning 75% of the MCID.

Opening question:
Do you think a between-group difference of up to 0.75 points on the PEG scale is ignorable?

Vignette 4: Referral Network
Introduction:
One of the main challenges of the SALuBRITY trial is the recruitment of the participants. Recruitment is taking place at primary care practices and through Balgrist internal network.

Opening question:
Do you have other ideas for recruitment of GP referral network?
Appendix C – Think Aloud Protocol

1. Introduction of interviewer, study title and importance
   
   Title: Involving patients and clinicians in a pilot randomised clinical trial of spinal manual therapy versus nerve root injection for lumbar radiculopathy: a patient and public involvement project
   
   Importance: Our goal is to enhance the quality and relevance of the SALuBRITY trial by collaborating and involving patients and clinicians, whose lived experiences and expertise offer invaluable insights into lumbar radiculopathy and its treatment.

2. Goal of think aloud protocol
   The think aloud protocol gives insights to the difficulties encountered while reading the patient trial information documents. It is not about judging your task performance, we rather aim for receiving information about the language, comprehensibility and potential missing information of the trial documents.

3. Explanation of the think aloud protocol
   In the think aloud protocol, we will ask you to simply say out loud whatever comes into your mind as you read aloud the patient study information document. The task will be video and audio recorded (through Zoom), and only the PPI project team will have access to the recording. One project team member will take notes to contribute to the digitally recorded material and may remind you to “keep thinking out loud or speaking your thoughts”, if you lapse into silence. Discussion about difficult or confusing sections will take place after completion of the task. It may help you to remember that you are teaching us about the quality of the documents from your perspective and advising us on how the documents could be better.

4. Give an example of the think aloud protocol
   I will give an example of the think aloud protocol to help you get familiarized with the process.
   
   Example: I read through a patient information document, we received from the research department of Balgrist about drinks containing polyphenol and the influence on the immune system and muscular growth.

5. General instructions
   Feel free to stop the task if you feel uncomfortable.
   Do you have any questions about the process?
   Please keep thinking out loud (or speaking your thoughts).
   You can begin the process.

6. Instructions after task completions
   Thank you for participating in this think aloud exercise.
   How did you feel while performing the task?
   Do you have any feedback related to the task?
   Do you have any questions or are there any parts of the document you want to talk about?
### Appendix D – Impact log

#### Patients

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<thead>
<tr>
<th>Vignettes</th>
<th>Advisor</th>
<th>Discussion</th>
<th>Impact</th>
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<tbody>
<tr>
<td><strong>Research question</strong></td>
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<tr>
<td>Key words: importance, relevance</td>
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<td><strong>Proposed methods</strong></td>
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<tr>
<td>- Study design</td>
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<tr>
<td>Key words: double sham, random allocation, blinding</td>
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<tr>
<td><strong>Proposed methods</strong></td>
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<tr>
<td>- Recruitment process and timings</td>
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<tr>
<td>Key words: time intervals</td>
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<td><strong>Proposed methods</strong></td>
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<td>- Pain medication</td>
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<td>Key words: 0-24h</td>
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<td><strong>Trial outcomes</strong></td>
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<td>- Primary outcome</td>
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<td>Key words: pain impact, pain location, intensity</td>
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<td><strong>Trial outcomes</strong></td>
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</tr>
<tr>
<td>- Clinical course by SMS</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

#### Clinicians

<table>
<thead>
<tr>
<th>Vignettes</th>
<th>Advisor</th>
<th>Discussion</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Research question</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key words: importance, relevance, clinical practice, gaps in evidence help guiding treatment</td>
<td></td>
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<tr>
<td><strong>Proposed methods</strong></td>
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<tr>
<td>- Recruitment process</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key words: clinician information form, recruitment process, timing, referring process</td>
<td></td>
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<td></td>
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<tr>
<td>Proposed methods</td>
<td></td>
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<tr>
<td></td>
<td>Pain medication</td>
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<tr>
<td></td>
<td>Key words: 0-24h</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial outcomes</td>
<td></td>
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<tr>
<td></td>
<td>Primary outcome</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Key words: pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>impact, pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>location, intensity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trial outcomes</td>
<td>Non-inferiority</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>margin</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Key words: 0.75</td>
<td></td>
<td></td>
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<td></td>
<td>points on PEG</td>
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<td></td>
<td>ignorable</td>
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</tr>
<tr>
<td>Referral Network</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Key words: GP</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>referral network</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix E– Evaluation PPI

The patient/caregiver and researcher partner surveys are designed to understand the actual experience of all involved participants, when researcher partner with patients and caregivers on a project, where patients and/or caregivers are members of the research team.

The patient/caregiver and researcher surveys serve as a template and the number of questions and surveys are adapted to our project.[14] The experience is collected after the kickoff meeting (initial survey) and after completing all participation activities of the PPI project (end project survey).

Initial Survey Advisors

<table>
<thead>
<tr>
<th>Survey Instructions</th>
<th>English</th>
<th>Deutsch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have you worked as a patient/clinician advisor on a research project prior to this one?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Please describe your experience as patient/clinician advisor.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was the research team introduced to you?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Did someone of the research team introduce you to the other project advisors?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Was the SAluIRITY patient and public involvement (PPI) project described to you before you started working with the team?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Was there enough time for you to learn about the SAluIRITY PPI project before you agreed to participate as patient/clinician advisor?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Was there enough time for you to get to know the other project advisors before the SAluIRITY PPI project started?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Were the communication tools explained to you before the SAluIRITY PPI started?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Did you and the research team discuss your role on the team?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Were the roles of the other members of the project team explained to you?</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Do you feel you are equipped to contribute to the SAluIRITY PPI project?</td>
<td>not at all</td>
<td>totally</td>
</tr>
</tbody>
</table>

(Place a mark on the scale above)
## End Survey Advisors

**Survey Instructions**

- **English**
- **Deutsch**

<table>
<thead>
<tr>
<th>How comfortable do you think you are now with your understanding of the SALubRITY patient and public (PPI) project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>very uncomfortable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>How comfortable did you feel speaking up in the meetings?</th>
</tr>
</thead>
<tbody>
<tr>
<td>very uncomfortable</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did you feel the team listened to you and absorbed your input?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did any of the researchers on the team have problems dealing with patient/clinician partners?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What was the nature of the problem?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did the research team work with you to accommodate for your challenges and ensure that it is easy for you to participate?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>In your opinion, did your insights and comments impact the decisions of the future SALubRITY trial?</th>
</tr>
</thead>
<tbody>
<tr>
<td>never</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Did you share your personal experience as a patient/clinician as part of your role as advisor on the SALubRITY PPI project?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What preparation would have been useful to have before being involved in this PPI project?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If you could start over again as a patient/clinician advisor, what would you do differently?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What 3 things did you learn from the experience as a patient/clinician advisor on a multidisciplinary team?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>What 3 things could the research team have done to improve your experience?</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
<tr>
<td>3</td>
</tr>
<tr>
<td>Question</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Do you feel the patient/clinician partnership was productive and enriched the quality and relevance of the SALuBRITY trial?</td>
</tr>
<tr>
<td>Do you have any concerns about partnering with researchers at this point?</td>
</tr>
<tr>
<td>What was most challenging when partnering with researchers?</td>
</tr>
<tr>
<td>Where do you think your involvement mattered the most?</td>
</tr>
</tbody>
</table>
## Initial Survey Researchers

**Survey Instructions**

<table>
<thead>
<tr>
<th>English</th>
<th>Deutsch</th>
</tr>
</thead>
</table>

- **Have you worked with patient and/or public advisor on a research project prior to this one?**
  - Yes
  - No

- **Please describe your experience with patient and/or public advisors.**

- **Did you establish a profile of the type of person you wanted as a patient/caregiver partner prior to looking for candidates?**
  - Yes
  - No

- **Was there enough time for the patients/clinicians to learn about the SALuBRITY PPI project before they agreed to participate as patient/clinician advisor?**
  - Yes
  - No

- **Was there enough time for the patient/clinician advisors to get to know the other project advisors before the SALuBRITY PPI project started?**
  - Yes
  - No

- **Do you feel you and your team are well prepared to work with patient/clinician advisors on this SALuBRITY PPI project?**

<table>
<thead>
<tr>
<th>not at all</th>
<th>totally</th>
</tr>
</thead>
<tbody>
<tr>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

(Place a mark on the scale above)
# End Survey Researchers

**Survey Instructions**  
- [ ] English  
- [ ] Deutsch

**How comfortable do you think patient/clinician advisors are with their understanding of the SALuBRITY PPI project?**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Uncomfortable</th>
<th>Comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>Scale</td>
<td>Scale</td>
</tr>
</tbody>
</table>

**Did the patient/clinician advisors speak up and contribute at most meetings?**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Uncomfortable</th>
<th>Comfortable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>Scale</td>
<td>Scale</td>
</tr>
</tbody>
</table>

**Did you feel you and the research team listened to and absorbed the inputs of the patient/clinician advisors?**  
- [ ] Yes  
- [ ] No

**Did any of the researchers on the team have problems dealing with patient/clinician partners?**  
- [ ] Yes  
- [ ] No

**What was the nature of the problem?**

- [ ]

**Did the patient/clinician advisors' comments during the member checking process affect the final outcome of the SALuBRITY PPI project?**  
- [ ] Yes  
- [ ] No

**Did you work with the patient/clinician advisors to accommodate for their challenges and ensure that it is easy for them to participate?**  
- [ ] Yes  
- [ ] No

**In your opinion, did the insights and comments of the patient/clinician advisors impact the decisions of the SALuBRITY trial?**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Never</th>
<th>Definitely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mark</td>
<td>Scale</td>
<td>Scale</td>
</tr>
</tbody>
</table>

**Did the patient/clinician advisors share their personal experience as a patient or clinician on the SALuBRITY PPI project?**  
- [ ] Yes  
- [ ] No

**Did you feel you and your team were well prepared to work with patient/clinician advisors on the SALuBRITY PPI project?**  
- [ ] Yes  
- [ ] No

**If you could start over again, what would you do differently?**

- [ ]

**What 3 things did you learn from the experience of partnering with patients/clinicians?**

1. [ ]

2. [ ]

3. [ ]
What 3 things could be done better to improve your experience?

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

Do you feel the patient/clinician partnership was productive and enriched the quality and relevance of the START study trial?  

○ Yes  ○ No

Do you have any concerns about partnering with patients/clinicians at this point?  

○ Yes  ○ No

What was most challenging when partnering with patient/clinician advisors?  

Where do you think patient/clinician involvement mattered the most?  

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