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# Refining the TeleRehabilitation Decision Support System for stroke patients: a patient-centric approach

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## Introduction

Stroke, the leading cause of adult disability in the developed world, often results in balance and mobility issues, affecting 85% of survivors.[1]

Current post-stroke balance rehabilitation programmes lack comprehensiveness and individualisation, leading to high dropout rates and poor patient outcomes.

This project aims to enhance balance rehabilitation in older adults post-stroke by gathering feedback from clinicians and stroke survivors, to refine the Telerehabilitation Decision Support System (TeleRehab DSS) for stroke-tailored, individualised, and comprehensive balance rehabilitation.

TeleRehab DSS is an AI-supported platform that uses augmented reality to deliver a remote, physiotherapist-led balance rehabilitation.

## Methods & Participants

Two focus groups were conducted at University College London between February- June 2023:

**Study design**: Qualitative hybrid (virtual and face-to-face) focus groups

**Data collection**: 5 semi-structured interview question and open-ended discussion.

**Data analysis**: Reflexive and inductive thematic analysis approach[2] was used. Responses were recorded and transcribed verbatim, and then open and axial coding was completed using Nvivo12 to achieve code and meaning saturation of themes and sub-themes.

**Reporting guidelines:** Standards for Reporting Qualitative Research (SRQR).

### Clinicians Focus Group (n=9)

- **Sex**: 78% female
- **Ethnicity**: 100% White European
- **Profession**: 7 physiotherapists and 2 neurologists
- **Years of Experience**: range 2-37, mean 15
- **Specialty Area:** Neurology and/or vestibular
- **Delivery format:** 89% face-to-face

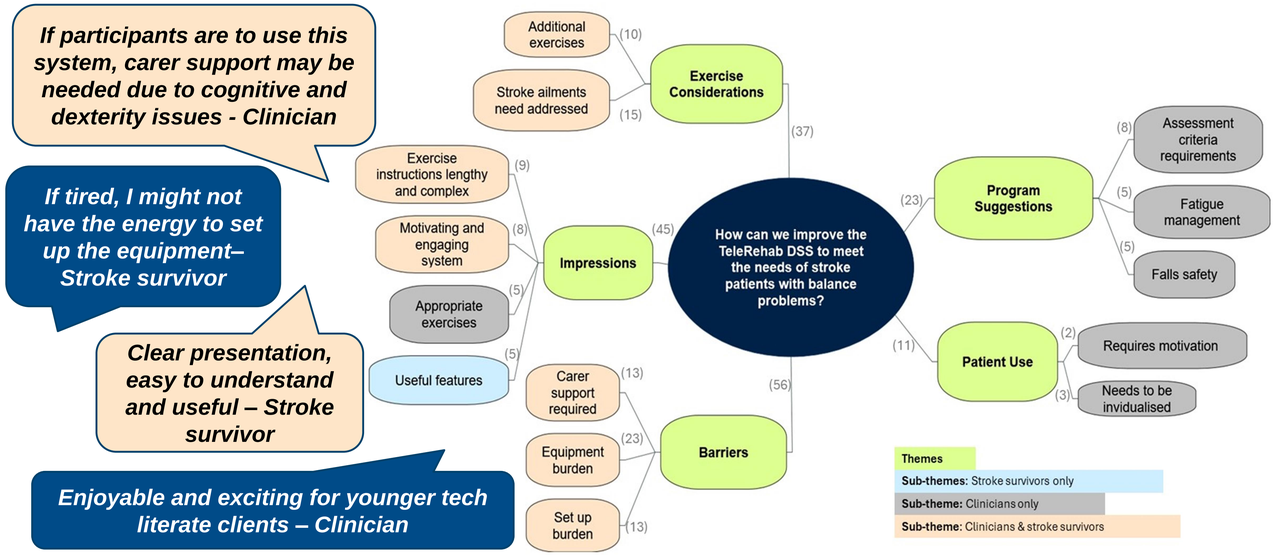
### Stroke Survivor Focus Group (n=7)

- Sex: 57% female
  Age: 50-80 years
- Ethnicity:86% White European
- Stage post-stroke: Chronic
- Delivery format: 43% face-to-face


**Figure 1**. Braun and Clarks (2008)[2] 6 phase analytic thematic analysis approach

## Results

5 common themes, and 14 sub-themes were identified across both focus groups (Figure 2).




## Conclusions & Future Implications

**F**indings indicate that stroke survivors and clinicians have mixed opinions about the TeleRehab DSS, with suggestions for improvement including:

- ✓ Additional exercises
- ✓ Simplify instructions that are clear to follow
- ✓ Individualise programs to address stroke-specific needs and disabilities.
- ✓ Implement technology that is simple to set-up

These findings will contribute to refining the TeleRehab DSS for implementation within the proof-of-concept study.

Future focus groups should ensure equal and inclusive representation in terms of ethnic diversity.

## References

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2. Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706QP063OA

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