

## Introduction

- 86% of patients report post-operative pain (1).
- Treatments focus on medications such as opioids (2,3).
- Research suggests immersive virtual reality (IVR) as an emerging tool that can be used to help reduce acute pain in a variety of patient populations(4,5,6,7,8,9).
- IVR uses a computer headset to make users feel present in a simulated environment.
- Encompass Health Rehab Hospital of Braintree is an inpatient acute rehab hospital that specializes in brain injury (BI), stroke, & ortho rehab. There is a need for non-pharmaceutical based treatments for patients to help reduce pain & improve quality of life (QoL).
- Occupational Therapy Practitioners (OTPs) can work to address acute pain by providing patients with meaningful experiences that are motivating & help to reduce pain. (10,11)

**Purpose:** Determine feasibility of using immersive virtual reality at Encompass Rehab Hospital of Braintree

**Aim 1:** Develop and implement an IVR training protocol for therapists

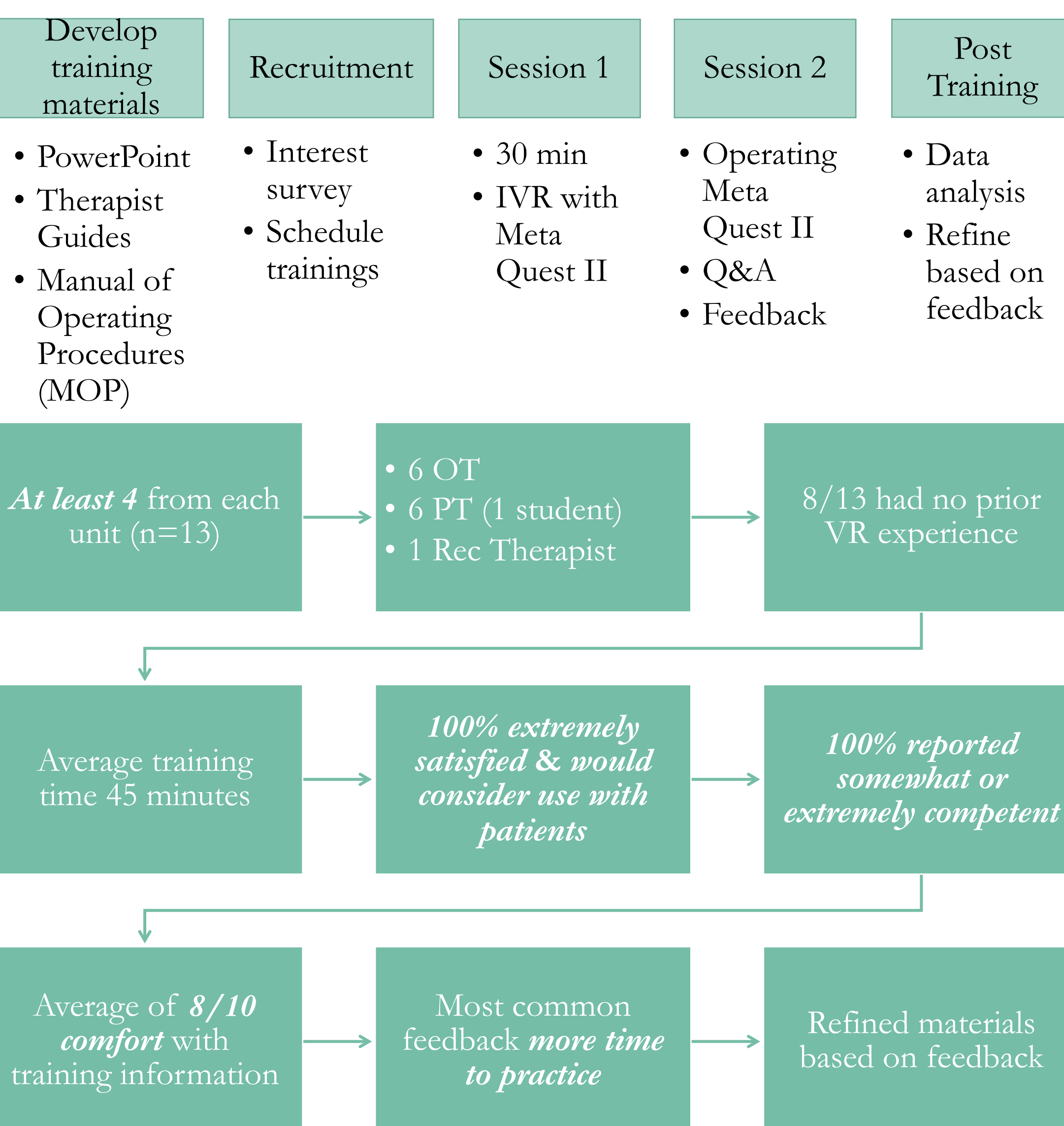
Create training materials    Train interested therapists    Create reference tools

**Aim 2:** Develop and trial patient IVR experiences to improve quality of life

Activity Analysis    Game Catalog    Patient Experiences

- This poster will address therapists' training and patient experiences

## Aim 1: Therapist Training



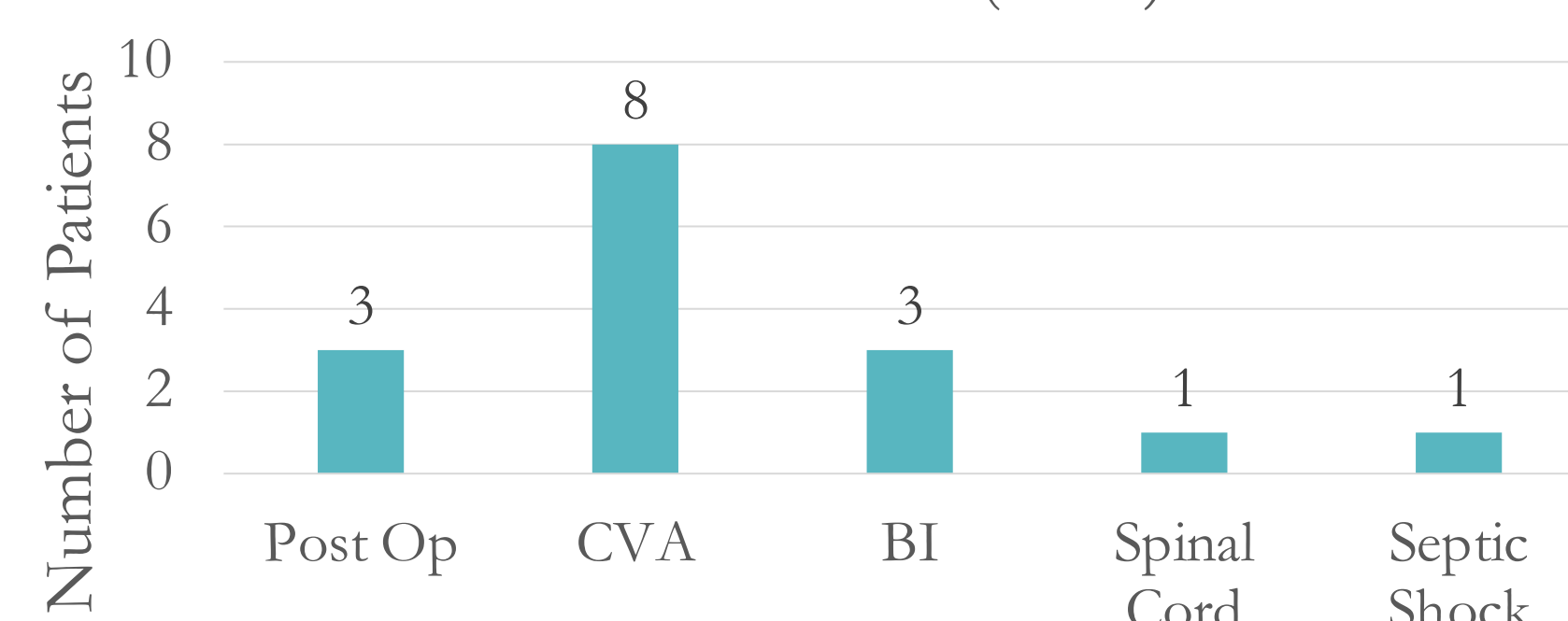
## Aim 2: Patient IVR Experiences



### Participants

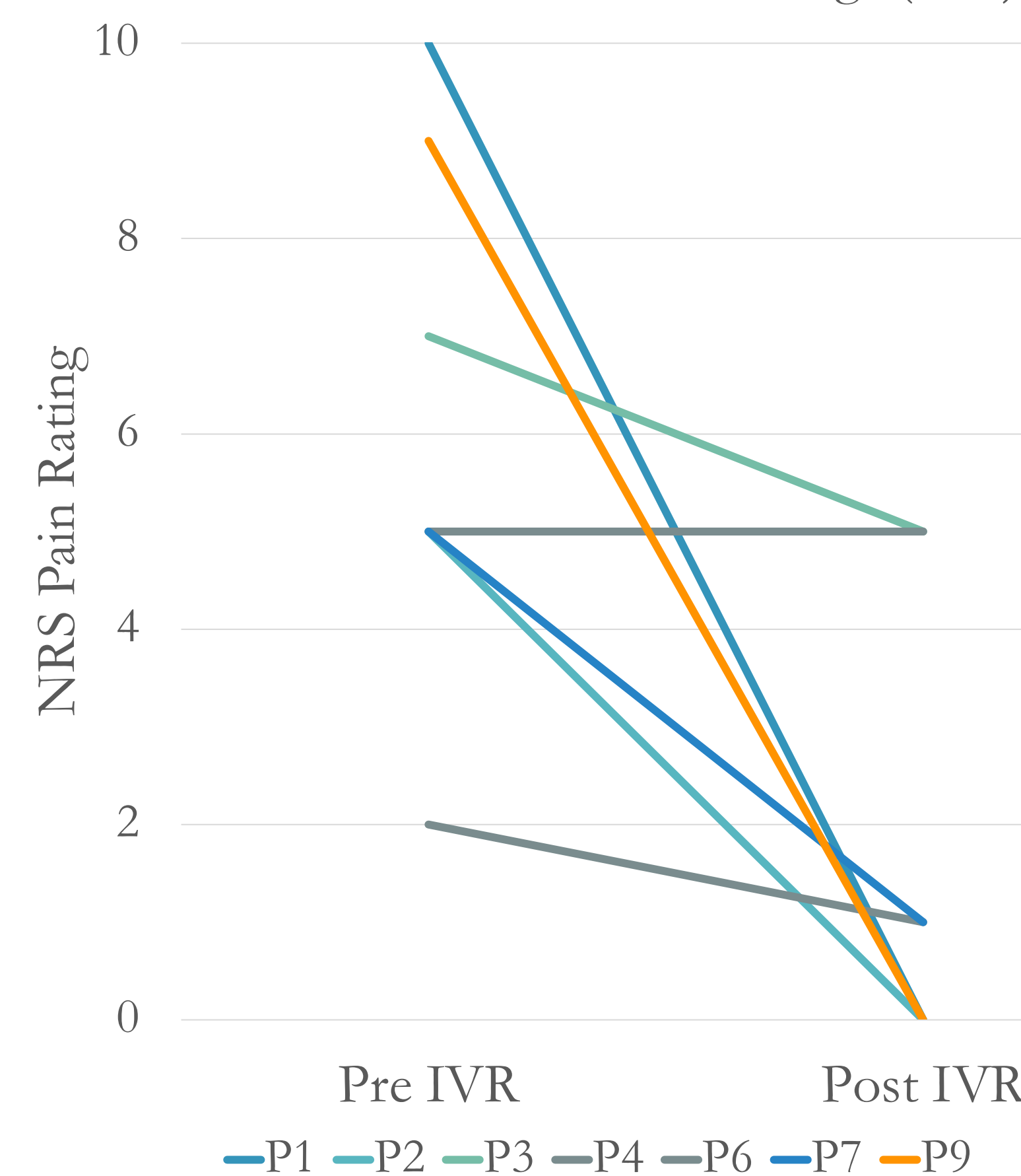


Patient Conditions (n=16)



Conditions

Pre/Post IVR NRS Pain Ratings (n=7)



### Results

Therapists reported **improved function, affect, & motivation** compared to standard therapeutic activities for all patients (n=16)

4 patients with **high anxiety** had **reduced symptoms** following IVR. 1 patient demonstrated improved affect for 36 hours post IVR

100% of patients said they felt **present** in IVR & **would use again** if given opportunity

7/16 patients reported pain at start of session

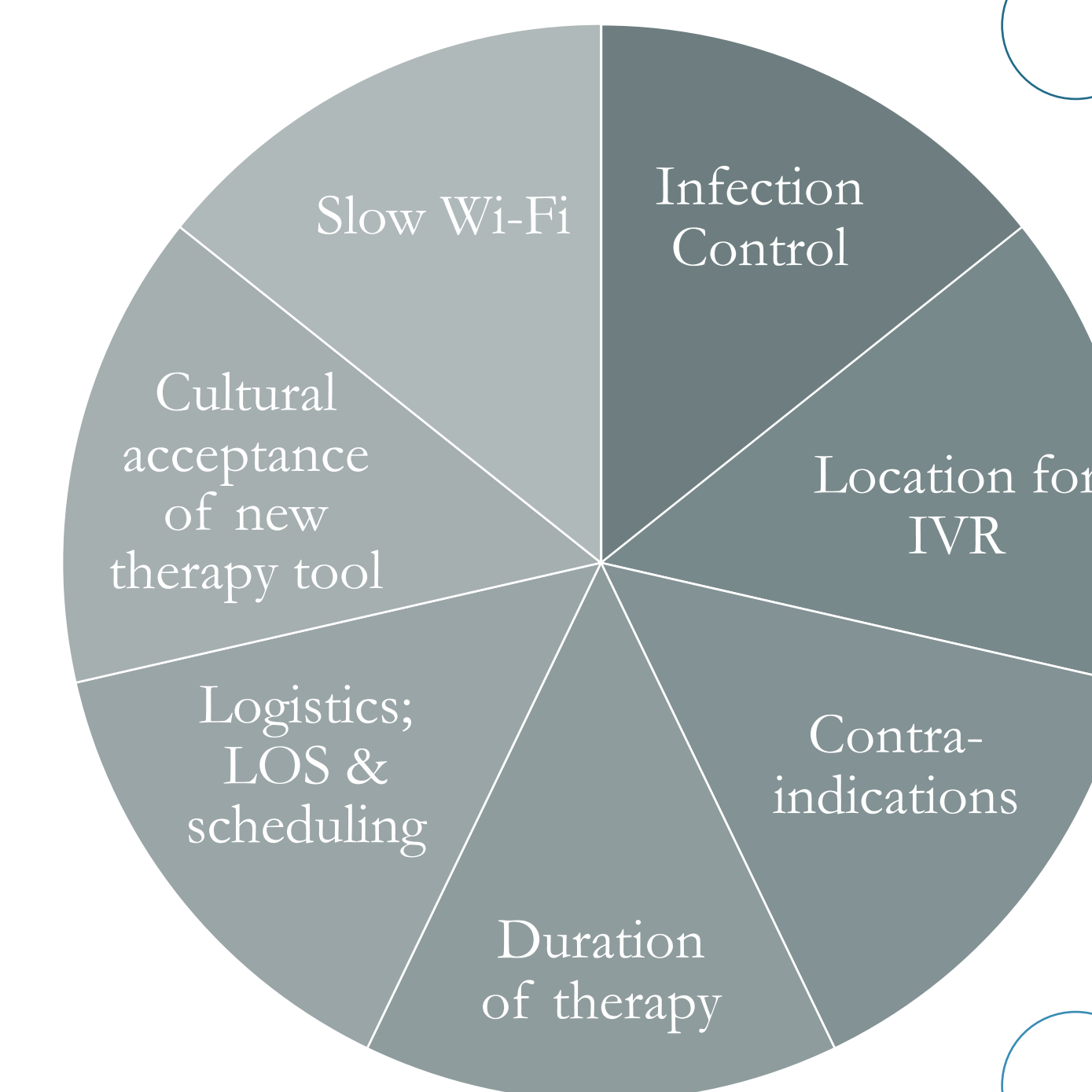
Patients' (n=7) **average change in pain=4.2 points on NRS (66% reduction)**

6/7 Patients reporting pre/post pain had a 2+ point drop on the NRS [**clinically significant change**]

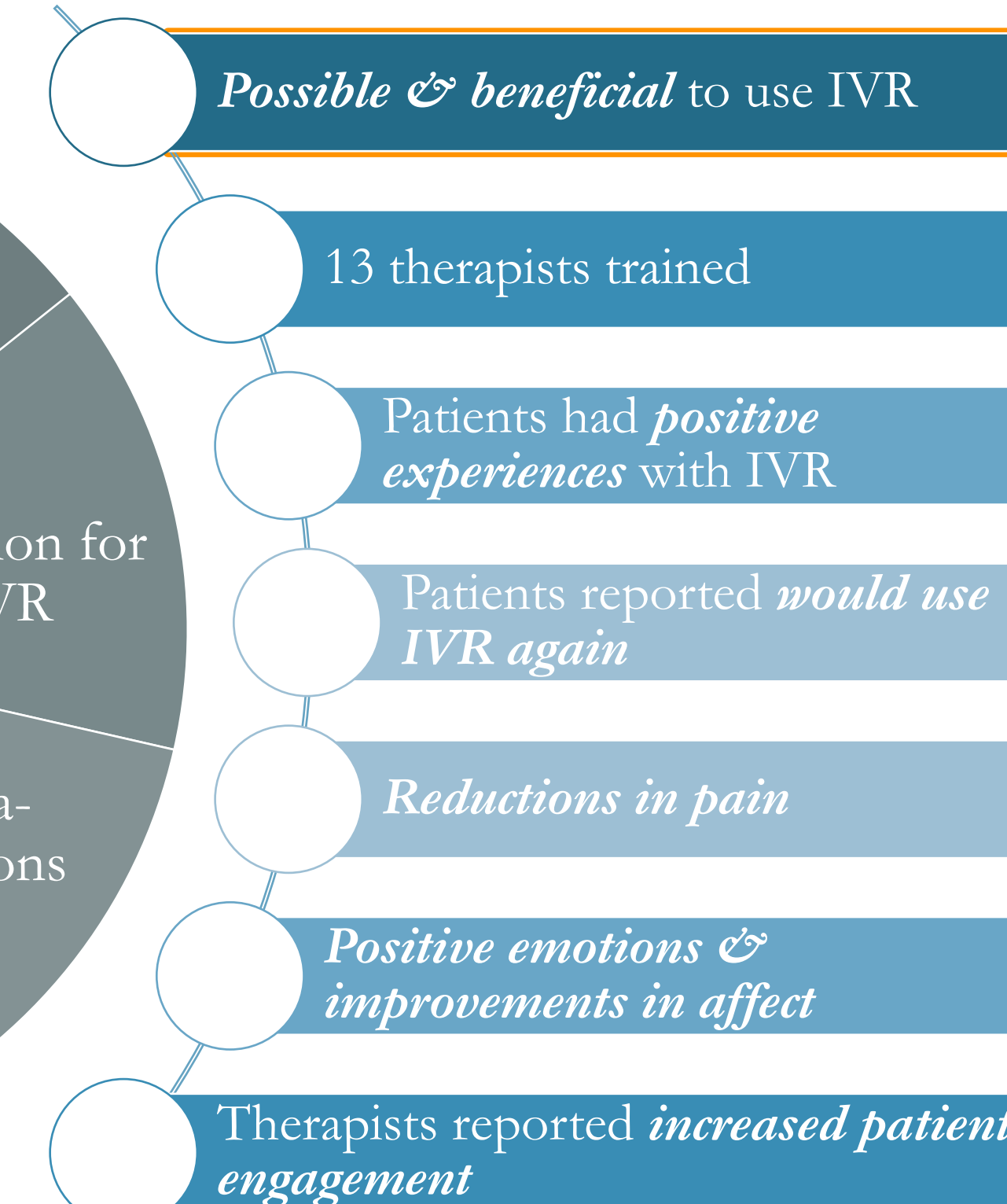
3/7 patients had **100% reduction in pain**

## Challenges and Outcomes

### Challenges to Practice



### Positive Outcomes



### Facilitators

MOP, therapist quick look tools, training ppt, & game catalog

Provide adequate information & evidence to therapists/patients to support learning & acceptance of IVR

## Conclusion

IVR can be an **effective tool** for therapists to use to **increase patient motivation to participate in therapy, reduce acute pain, & increase quality of life**

**Feasibility**

- Able to set up & implement IVR use in an inpatient acute rehab
- Logistical challenges can be overcome

**Outcomes**

- Clinically significant decrease in pain
- Increases in function, QoL, & participation during therapy

**Limitations**

- Small sample size of patients with pain
- Scheduling logistics

**Future Steps**

- Continue to train interested therapists
- Continue data collection of patient IVR experiences
- Explore other positive effects & duration of IVR use

### Acknowledgements:

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### IVR Game Menu



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### References

