

# Observing the impact of sub-bandage pressure monitoring on venous leg ulcer patient outcomes



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## OVERVIEW

Venous Leg Ulcers (VLUs) are painful, chronic wounds that affect 560,000 people in the UK each year, costing the NHS £3.2 billion annually [1]. Delayed healing of VLUs is commonplace, with 56% of VLUs not healing in 12 weeks [2], and 29% of VLUs not healing within a year [3].

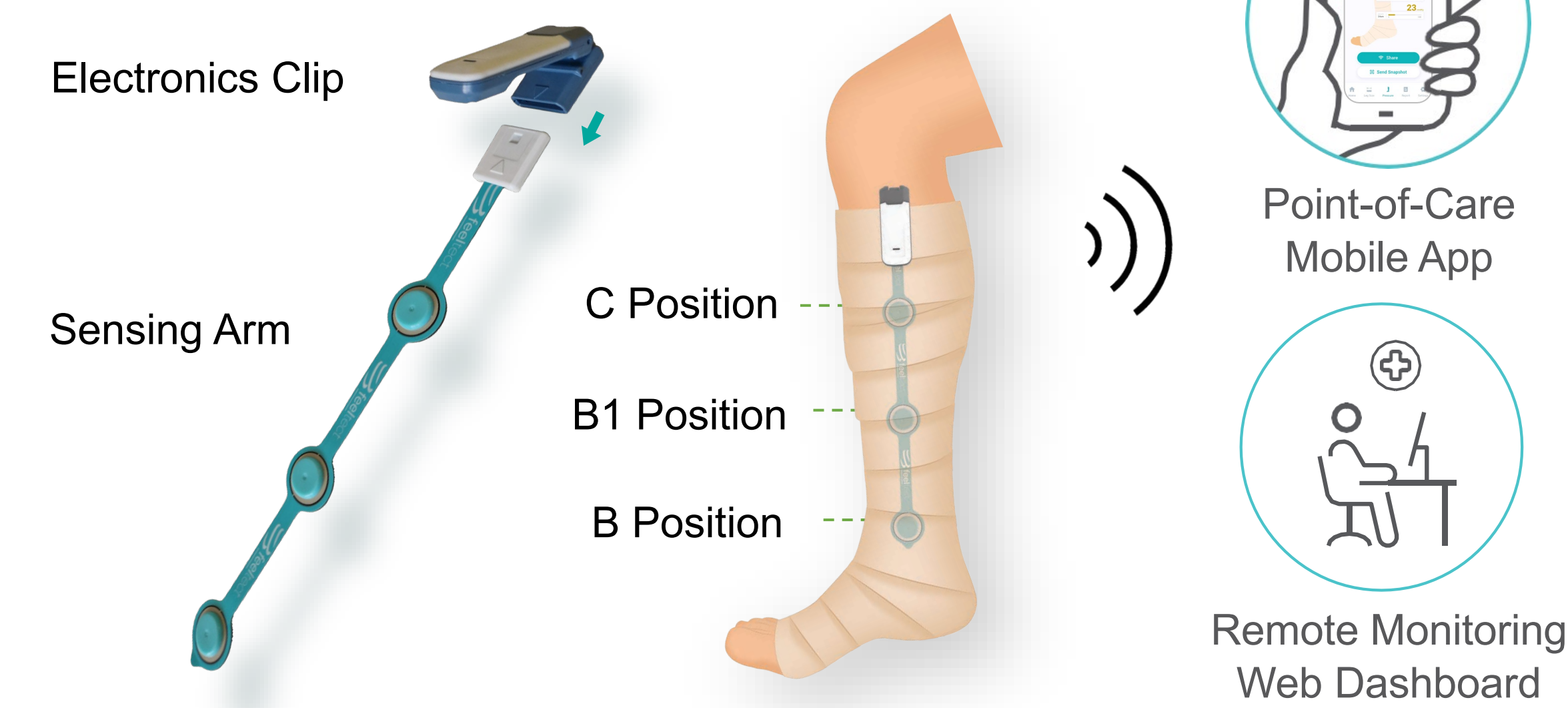
Compression therapy is the cornerstone of VLU treatment. However, even for experienced practitioners, the application of standardised pressure can be difficult to achieve due to variabilities in patients and products. Furthermore, pressure can be rapidly lost due to reduction of swelling or non-compliance, potentially reducing the efficacy of treatment.

The current study aims to assess the potential benefits of a pressure monitoring system (PMS) for the treatment of VLU patients.

## PRESSURE MONITORING SYSTEM (PMS)

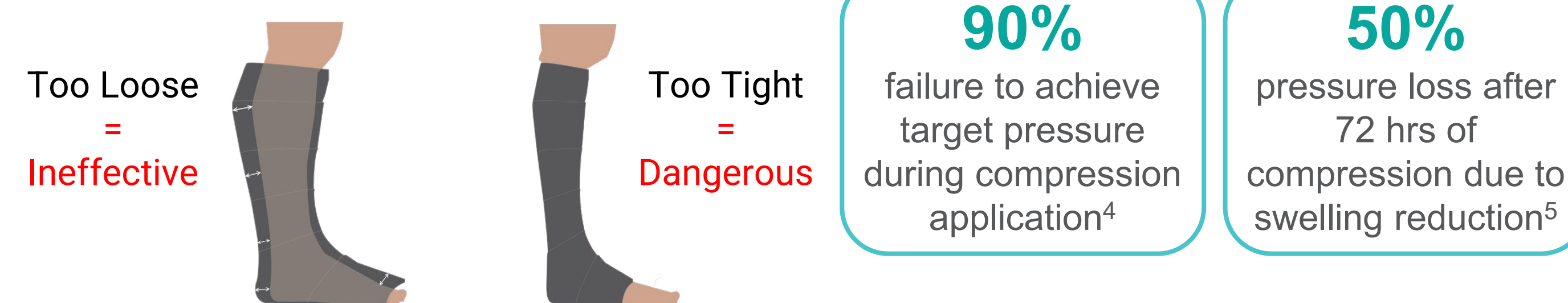
The PMS (Tight Alright, FeelTect) includes a wearable, pressure sensing device that can be used with existing compression products, and an associated digital platform (point-of-care mobile app, cloud database, and remote web dashboard) for storing and displaying captured pressure data.

### Pressure Monitoring System (PMS) Device



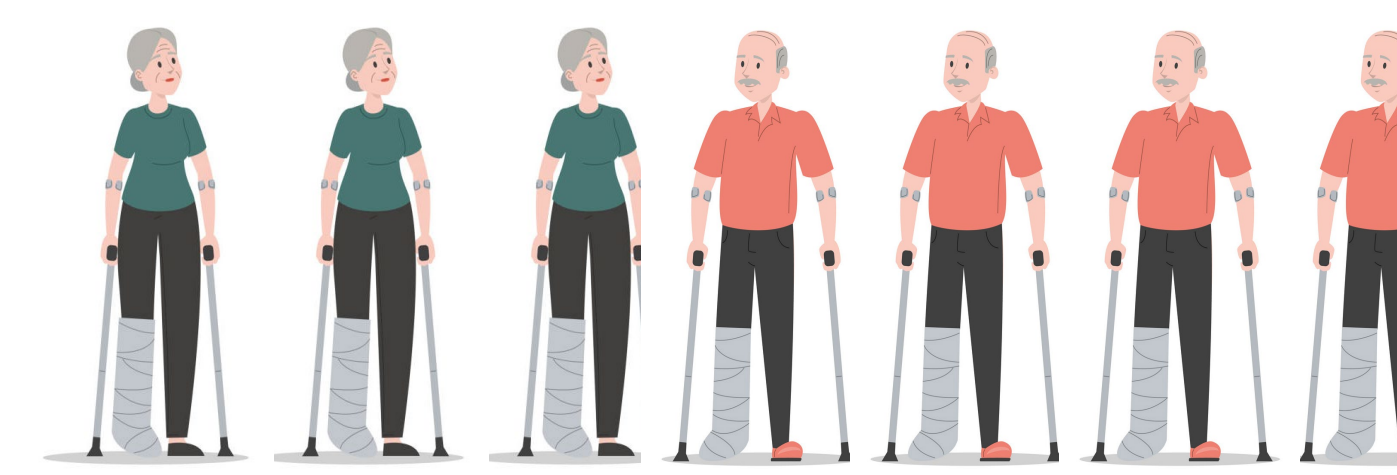
## CLINICAL NEED

A way to improve the application and maintenance of evidence-based pressure during compression therapy of venous leg ulcers, for improved healing outcomes and quality of life.



## STUDY BREAKDOWN

PARTICIPANTS & MATERIALS



- N=7 VLU patients
- >5 cm<sup>2</sup> wound area
- >6 weeks duration
- ABPI: 0.9-1.4

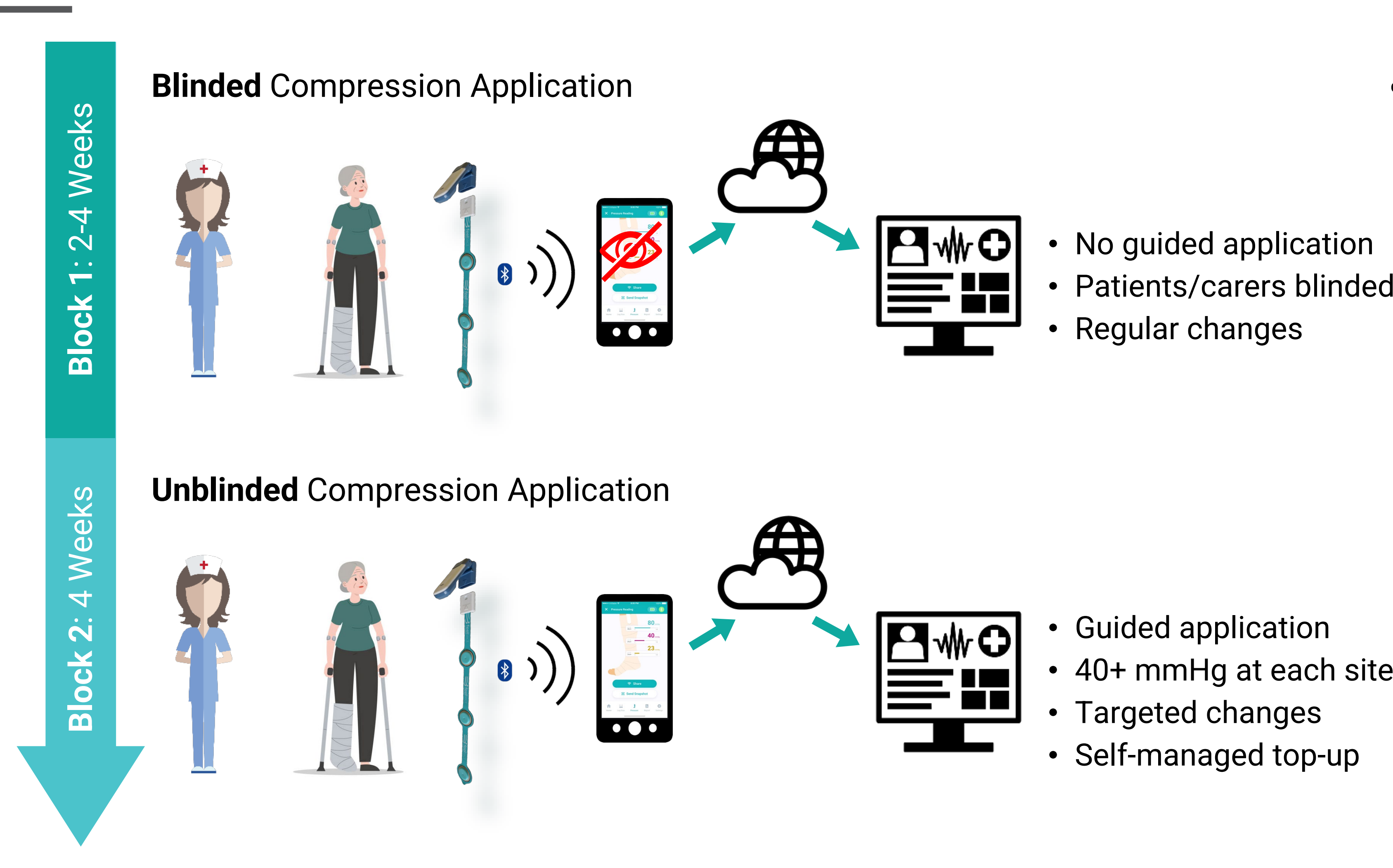


- Urgo KTwo Compression System (blinded block)
- L&R Actico (unblinded block)

PMS APPLICATION

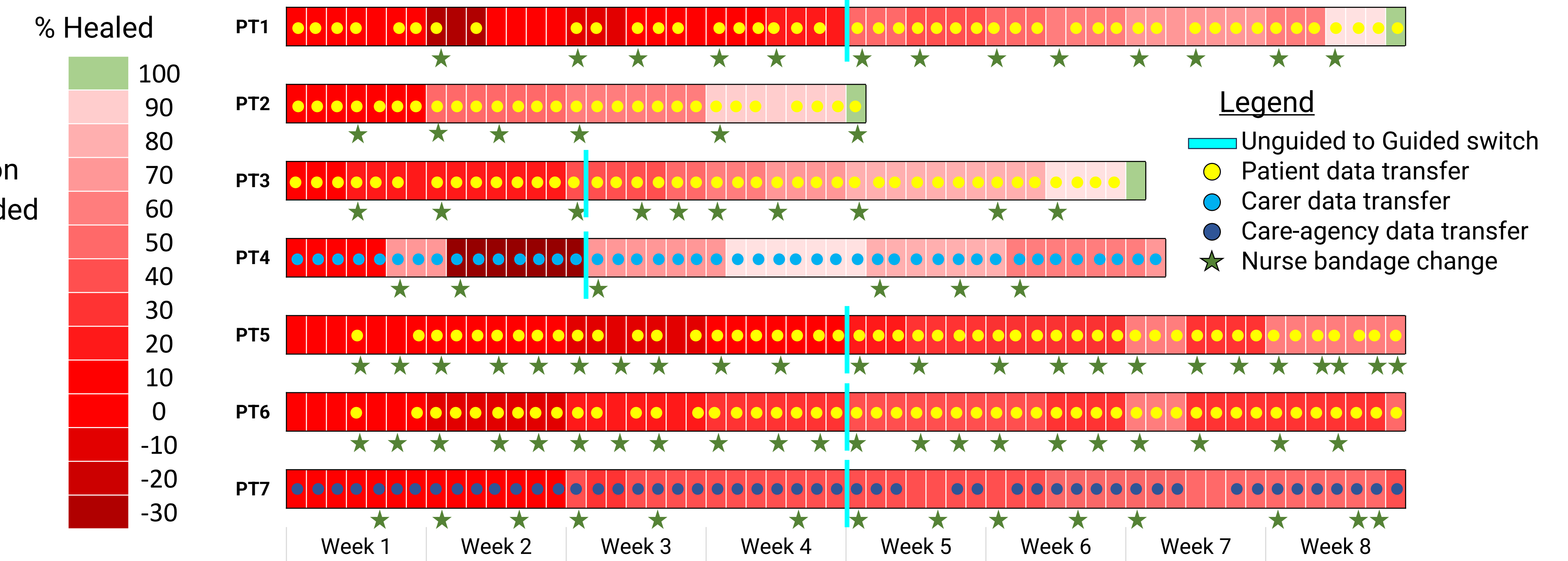
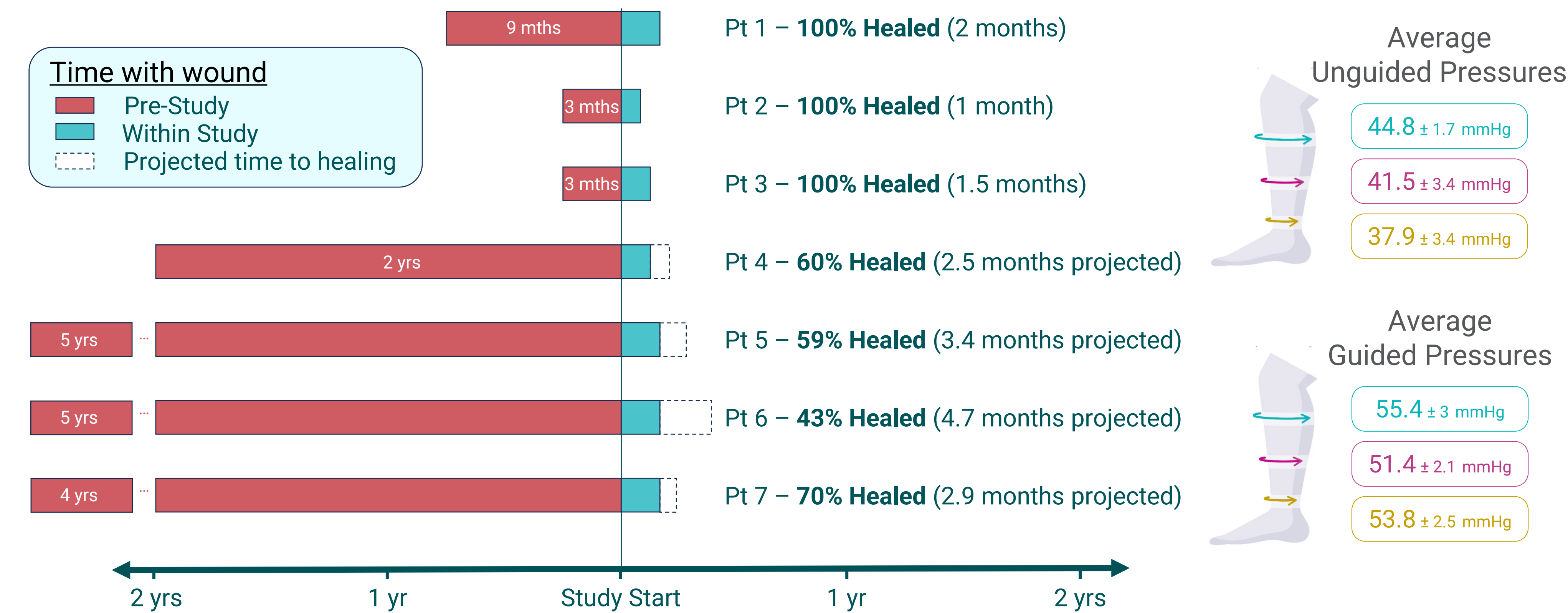


STUDY DESIGN



## RESULTS

Patient	Patient Information and PMS-Related Study Outcomes
PT1	Unguided pressures showed instances of high application. Patient capable of sending data and self-applied top-up.
PT2	Patient capable of self-applied top-up and removal.
PT3	Instance of excessive itching identified by drop in pressure at C position, leading to change in care pathway.
PT4	Patient had dementia/Alzheimer's, family carer supported data sharing and compression monitoring.
PT5/6	Bilateral wounds (pseudomonas). Patient had no internet but capable of sending data with provision of iPad with sim card.
PT7	Non-tech savvy, undiagnosed onset of dementia, external care agency capable of sending data with daughter's help.



## CONCLUSION

The current study demonstrates the practical application of a novel PMS for applying targeted pressure and remotely monitoring pressure during compression therapy, with potential benefits to supporting care pathways for VLU patients in primary care settings. A broad range of VLU patients and care providers were able to use the technology over an extended period, regardless of technological capabilities, with positive healing outcomes observed in each case.

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## REFERENCES

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