

Can Pressure Monitoring Influence Non-Concordant Patients and Carers in Their Decision Making with Regards to Repositioning and Pressure Ulcer Prevention in the Community



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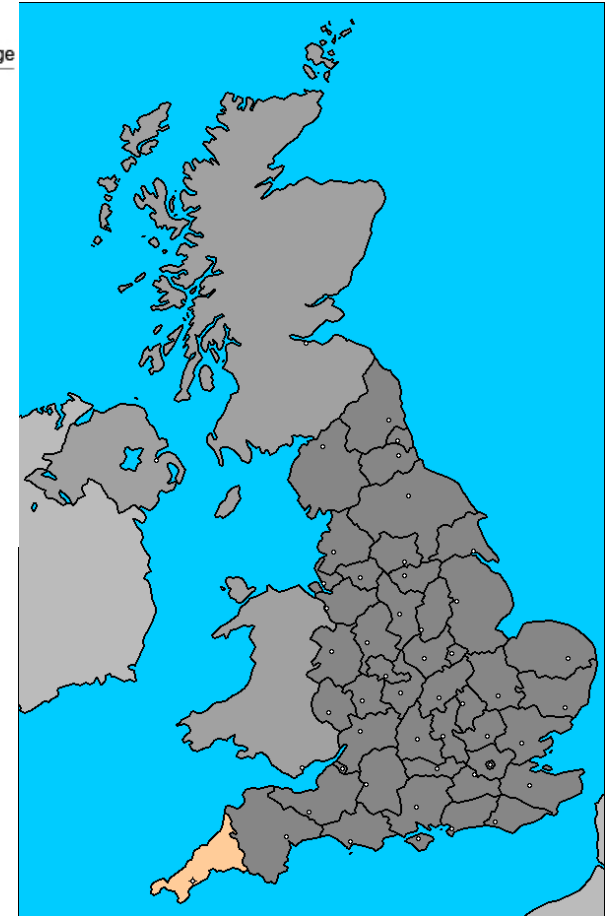
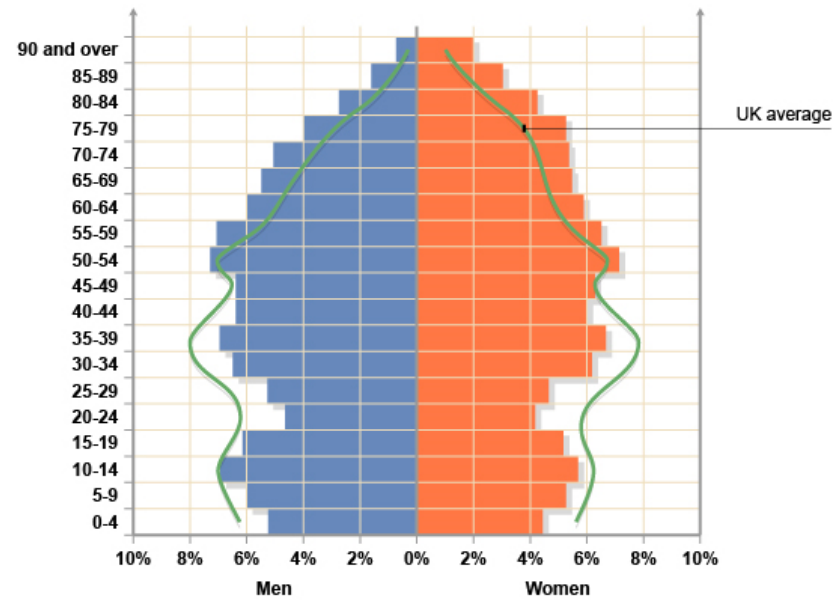
Thank you to the Regional Innovation Fund

Burdett Trust Nursing Charity

SUMED

Background

- Higher than average elderly population, total population 525,000
- Between 5-7 Category 3-4 pressure ulcers develop/month
- 50% of these patients classified as non concordant by nurses.
- High number of patients reported as being in chairs for 24 hours.

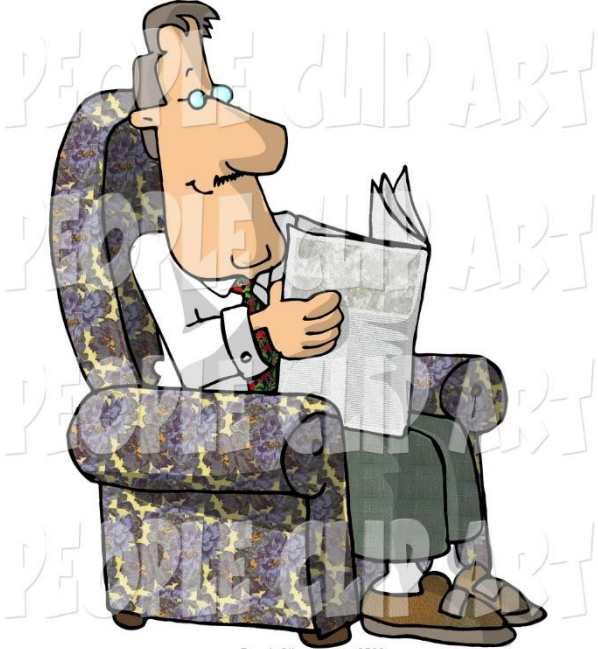


Objectives

- Can pressure ulcers be reduced following use of the pressure monitor (PM)?
- Can PM facilitate patient decision-making in avoiding specific positions
- Can the PM identify positions which are not compatible with healing
- Is the PM easy to use, is the PM acceptability and comfortable



Pressure Map or Pressure Monitor



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"He's been kind enough to stand in for us, until we can afford a new x-ray machine."



Non-Concordant

- Hippocrates described the importance of compliance over 2000 years ago
- Concordance – nature of interaction between the clinician and the patient. Negotiation between equals
- Does the Pressure monitor have the ability to provide a visual image which increases understanding and equalises the relationship between the clinician and patient



Method

Recruitment

- Referral to the Tissue Viability Team
- Patients over 18 living in their own home (including nursing home)
- High risk of developing pressure ulcers using the Rockwood Frailty Index of 5 or above or with existing pressure damage which is deteriorating or static
- The patients either were refusing, reluctant to use equipment or current equipment was not effective or uncomfortable.

Data

- Data analysis will follow usual convention: quantitative analysis assisted by SPSS to explore the differences between T1, T2 and T3 time-points. Qualitative data will be analysed thematically.
- Collected at Baseline, pressure map removal and 4 week follow up

Method - Cont

Intervention

- Pressure sensor pad set up on pressure relieving equipment following risk assessment and remained there for a number of days
- Data collected electronically via the ForeSite PT system
- Results fed back to patient immediately and the following day with training and alteration in positioning, repositioning or equipment

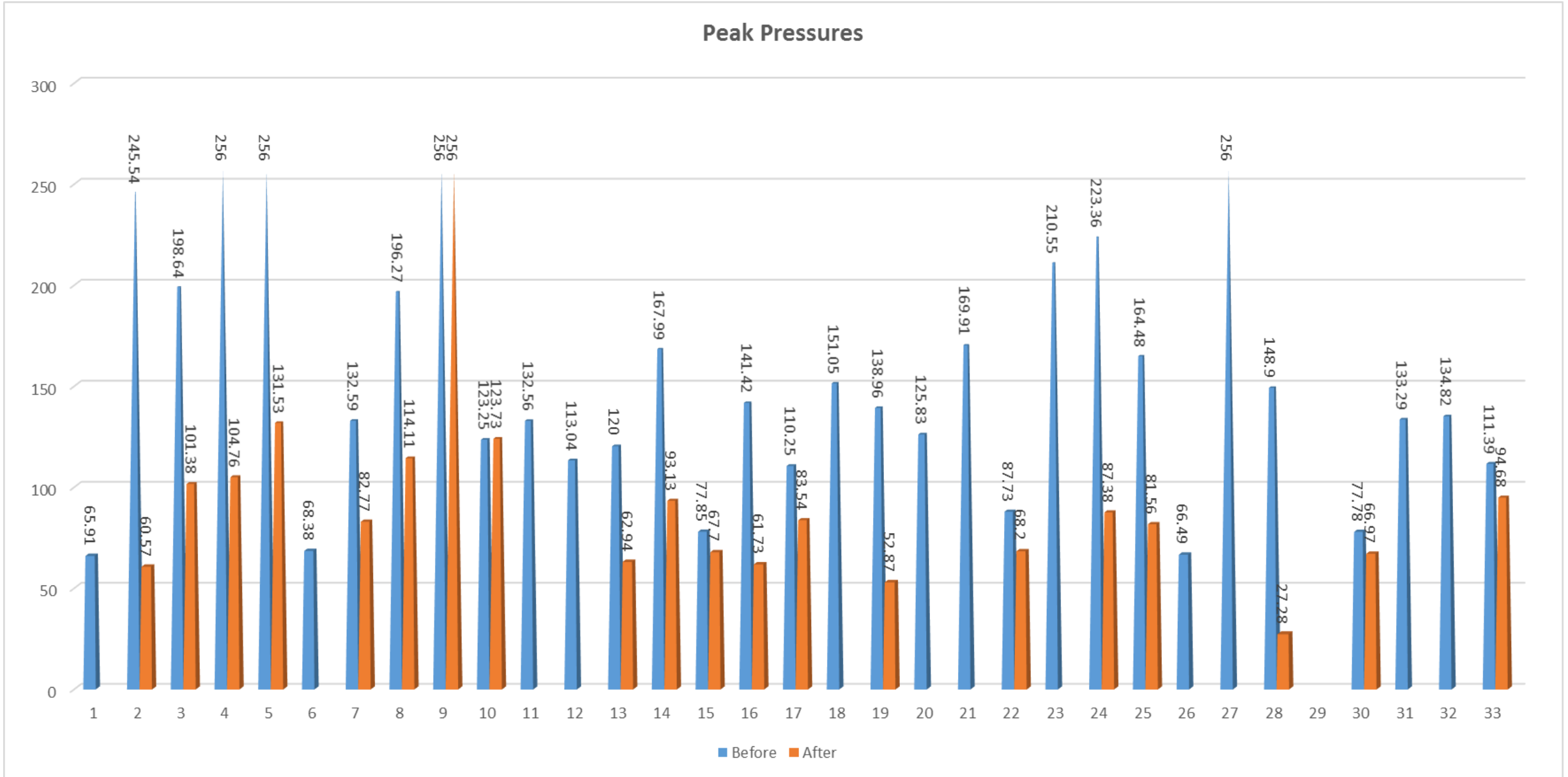
Data Analysis

- Quantitative information including demographics, medical history, medication and pressure ulcer details
- Qualitative analysis using patient/carers questionnaires
- Wound size at beginning and completion
- Collect Average Pressure/Peak Pressure/Surface Area cm²

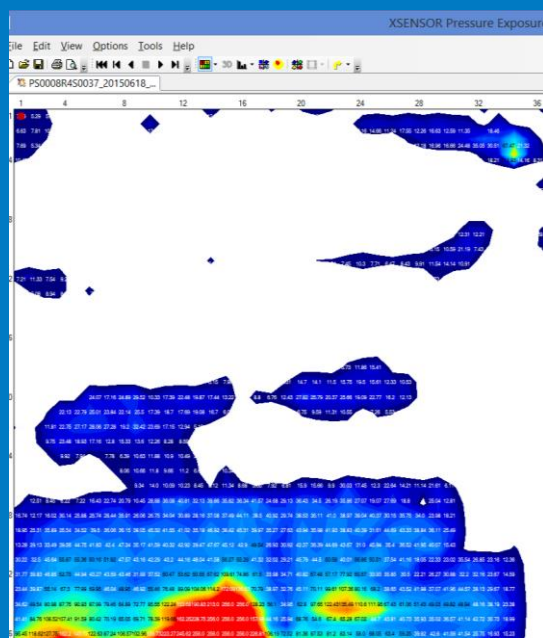
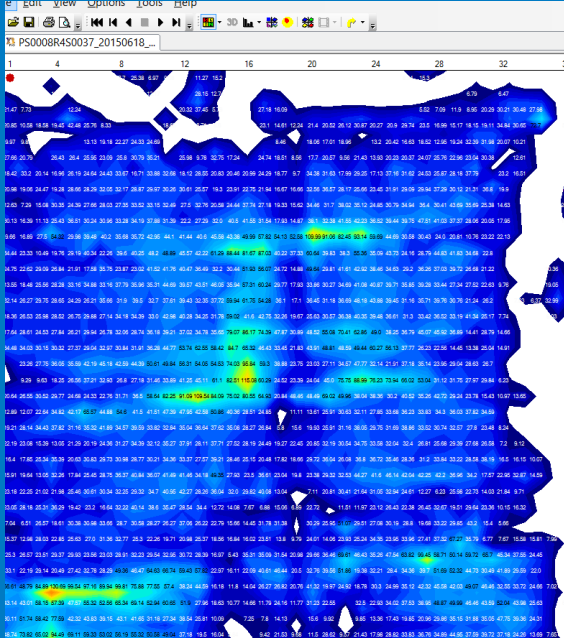
Results



Results – Peak Pressures Before and After PM



Case Study: Patient 1



• Before intervention:

- Grade 3 pressure ulcer for 2 years (misdiagnosed)
- Sleeping in the chair
- Foam cushion, upgrade to dynamic air cushion



• After Intervention:

- Monitored for 48 Hours
- Upgraded to Static Air Cushion
- Sleeping in bed on dynamic replacement
- Review of Seating



Beginning of Monitor:

Peak Pressure: 103mmHg

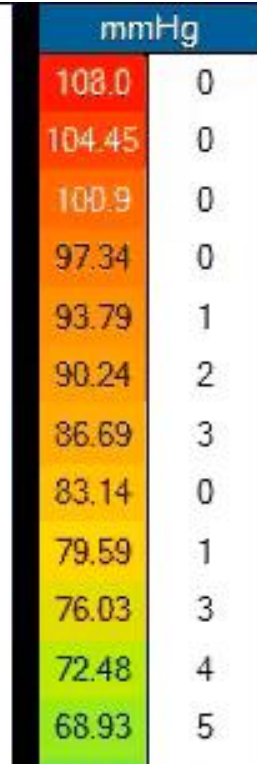
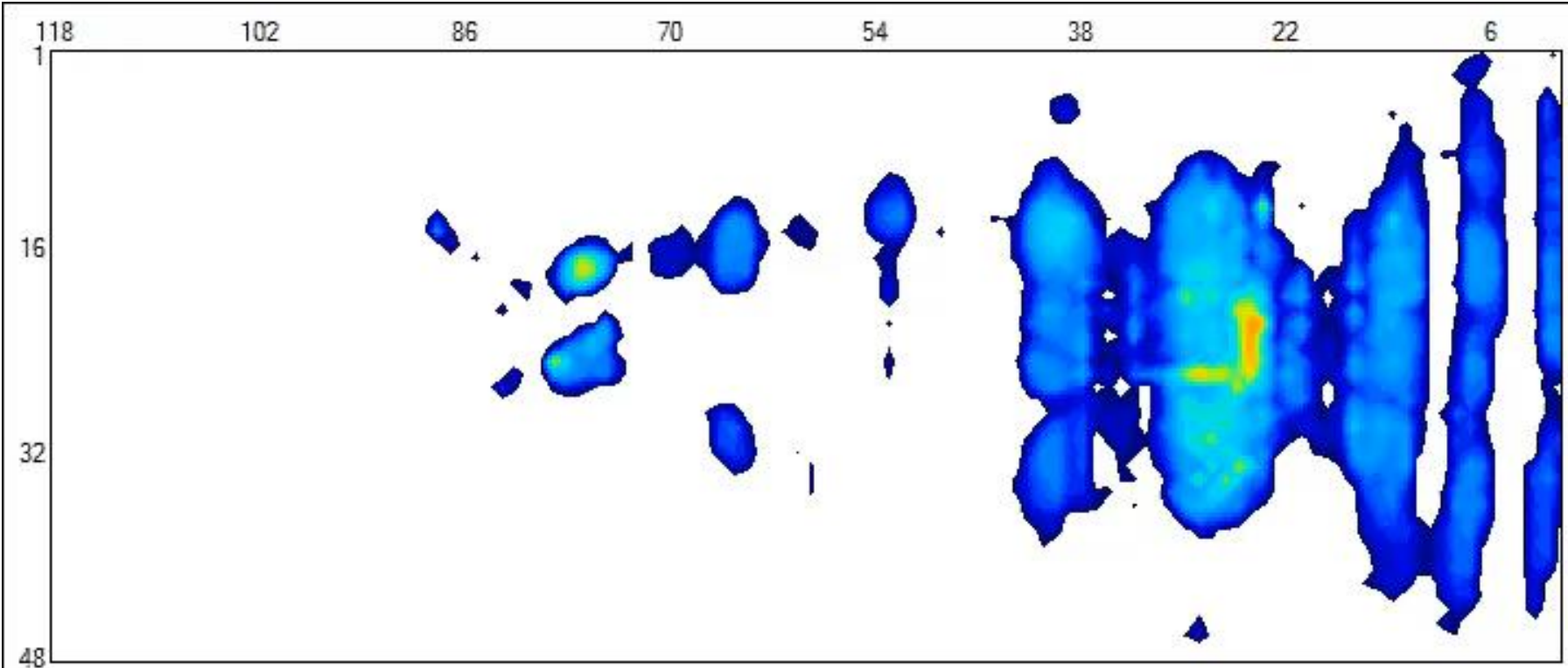
**Average Pressure:
36mmHg**

During Monitor:

Peak Pressure: 256mmHg

Average Pressure: 42mmHg

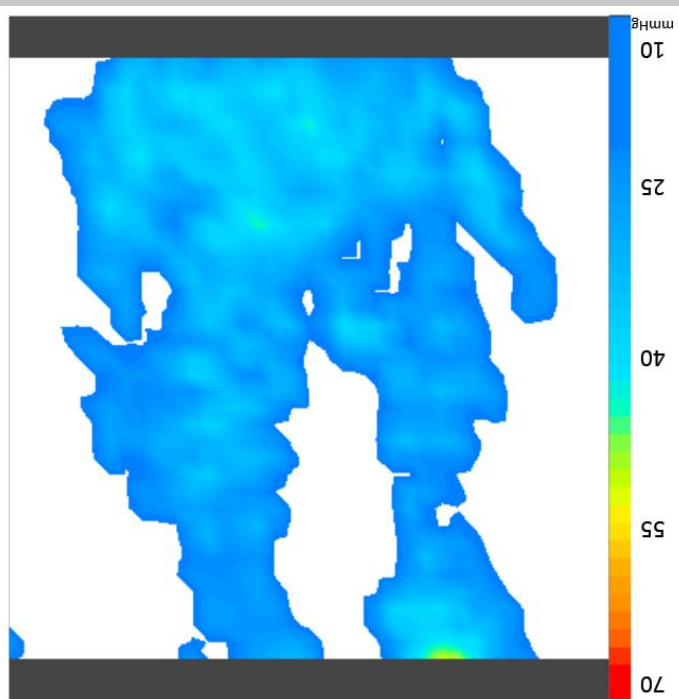
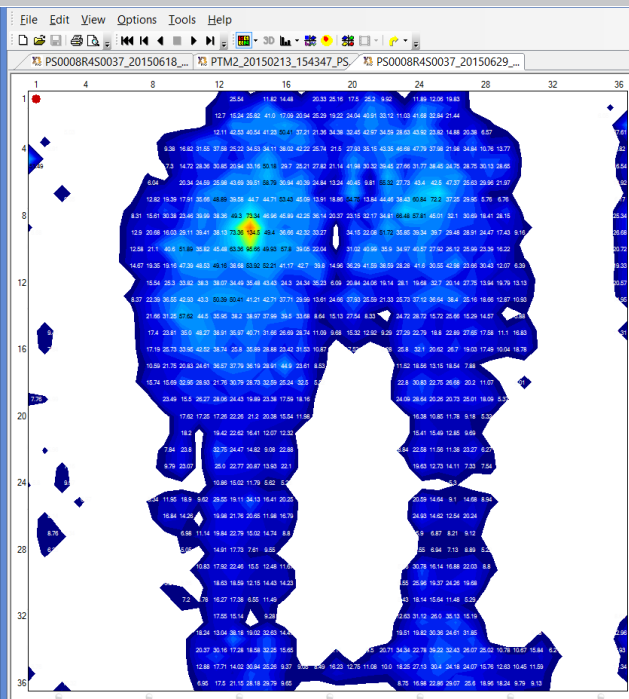
Dynamic Replacement



Sensor/Group	Value
PSMBED:118...	
Avg Pres.	26.15
Peak Pres.	93.97
Min Pres.	5.0
Area (cm ²)	2840.22

General Notes

Case Study: Patient 2



Before intervention:
Peak Pressure:
127mmHg

Average Pressure:
23.5mmHg

After intervention:
Peak Pressure:
48.32mmHg

Average Pressure:
21.54mmHg

Pre intervention:

- Grade 3 Pressure ulcer
- Young disabled women
- Wheelchair bound during the day for 12 hours
- Prior to monitoring had been upgraded to static air which was over inflated

Intervention:

- Post monitoring Static Air with Adjustments
- Negative pressure to Wound
- Dynamic Replacement to bed – reduced to static foam after monitoring

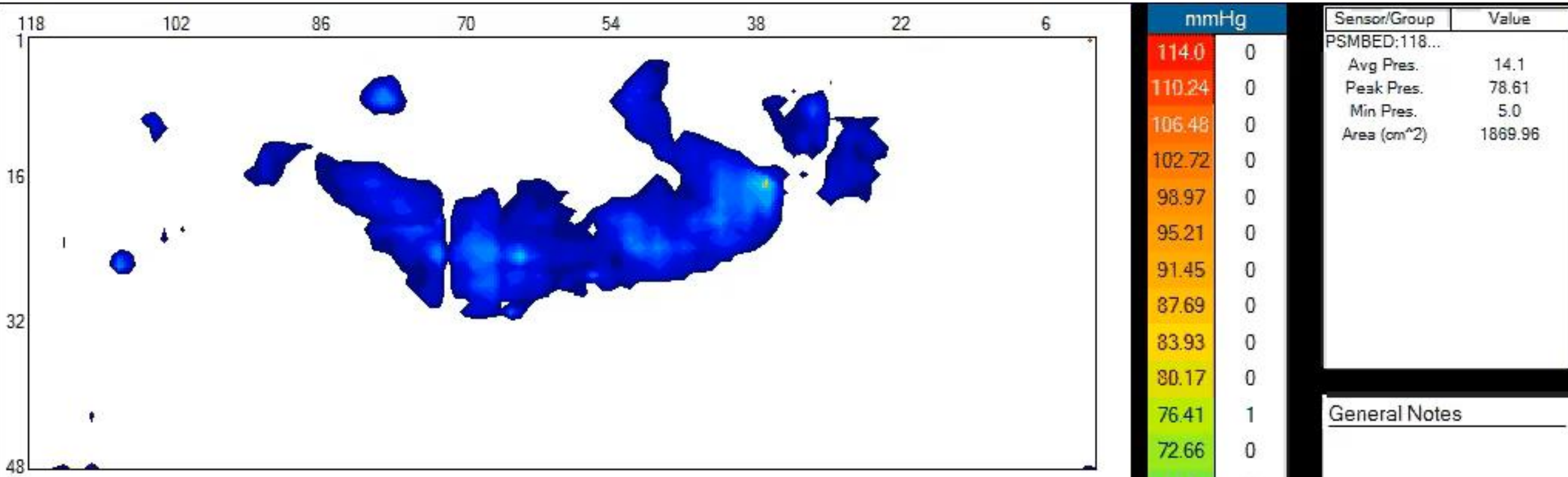
Before:



After:



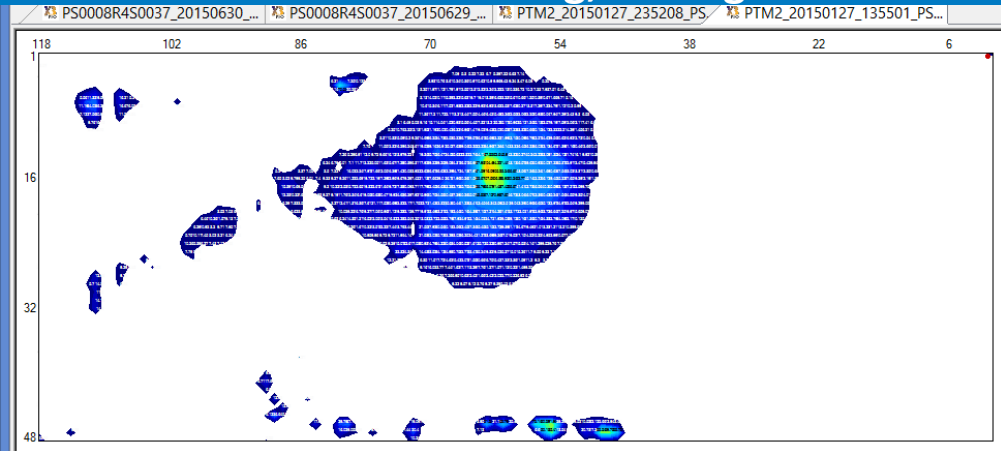
Static Foam Mattress



Case Study: Patient 3

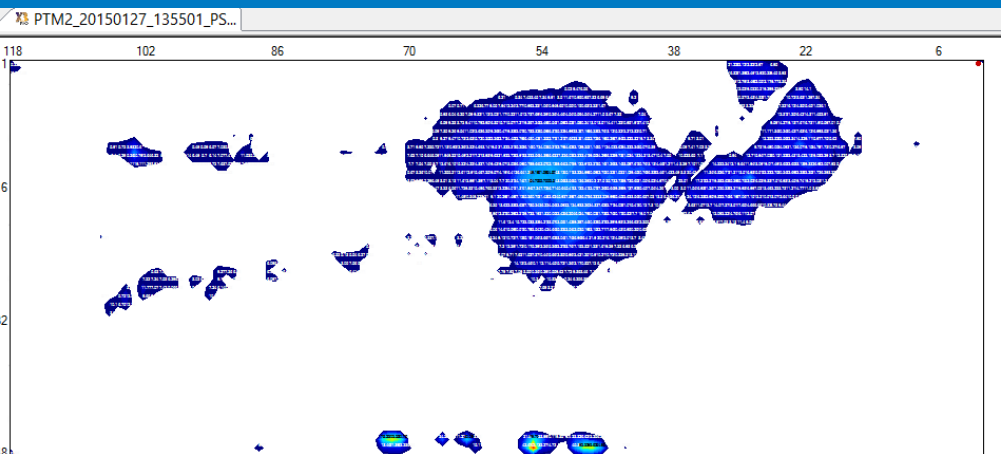
Before intervention:

Peak Pressure: 116.09mmHg, Average Pressure:25mmHg



After intervention:

Peak Pressure: 54.15mmHg, Average Pressure: 14.35mmHg



Before Intervention:

- Paraplegic for 30 years
- Expert Patient
- Totally self caring
- Visco foam mattress in double bed
- Slide Board to transfer to Wheel chair
- Previous cellulitis, grade 2 to heel
- Grade 3 Pressure Ulcer
- Reluctant to change treatment of equipment
- Reluctant to use foot protector
- Sitting in Wheelchair for 12 hours

After Intervention:

- No Longer sitting up in bed unsupported
- 30 degree tilt at night
- Mattress remained the same
- Continued to use foot protector
- Upgrade cushion in wheelchair



Before: 27/3/15



**After:
Healed 19 May 2015**

Objectives:



“The ForeSite PT System continually monitors interface pressures and provides clinicians, patients & carers with visual information”

- Can pressure ulcers be reduced following use of the pressure monitor (PM)?

86% of patients where change of equipment is complete, pressure ulcers improved or healed following use of the PM

- Can PM facilitate patient decision-making in avoiding specific positions

100% of patients/relatives agreed to changes as a result of using the PM where necessary

- Can the PM identify positions which are not compatible with healing

94% of positions were identified as not compatible with healing. 5% identified as compatible, no change required

- Is the PM easy to use, is the PM acceptable and comfortable

Why haven't we had this before, its amazing

Can we buy one

Its slippery

Its too bright

“So it wasn't my fault”

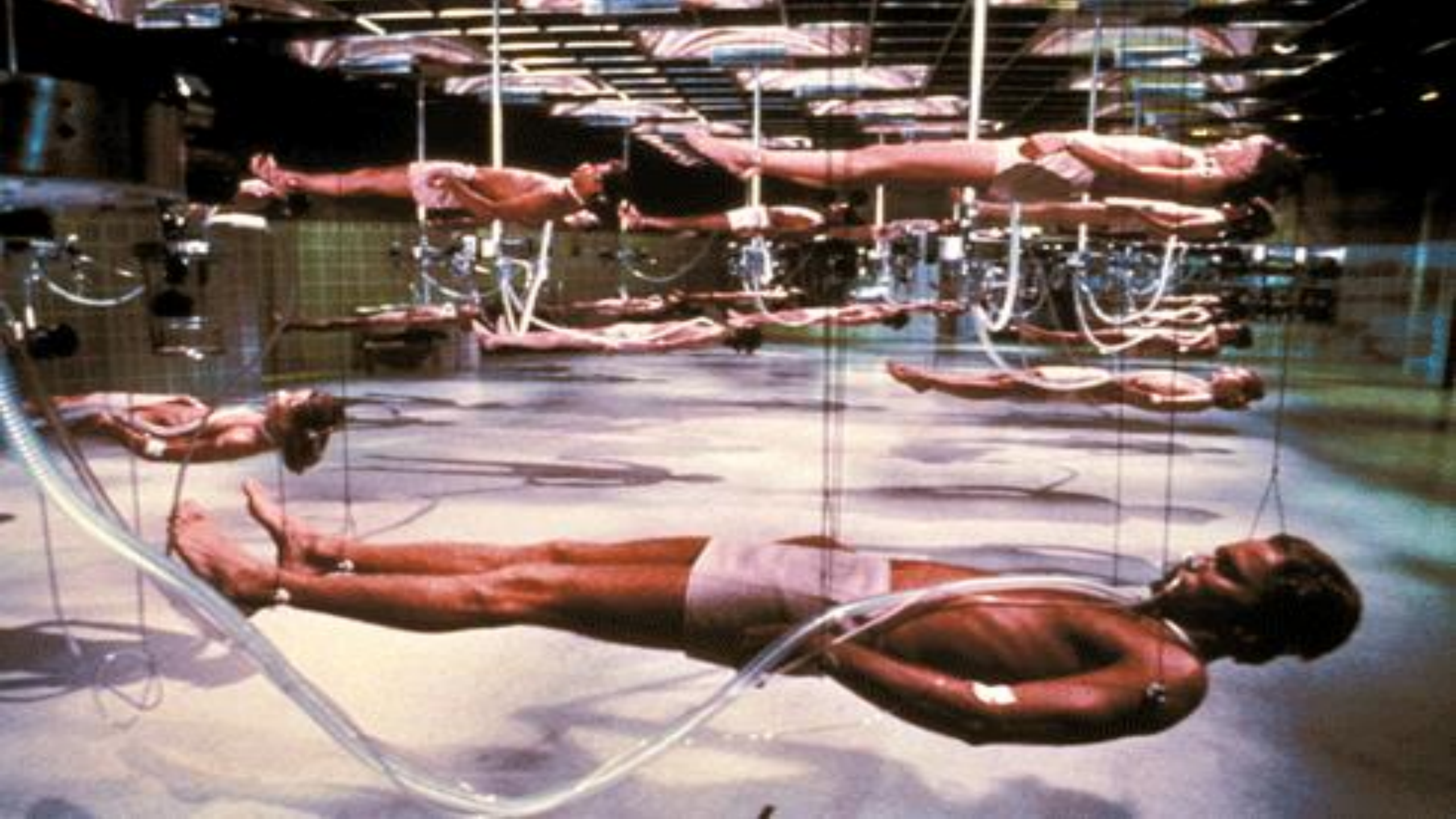
Can Pressure Monitoring Influence Non-Concordant Patients and Carers in Their Decision Making with Regards to Repositioning and Pressure Ulcer Prevention in the Community?

Monitoring of interface pressures in the patient's home appears to facilitate patients adjusting their positions according to images on the monitor with **73% of patients healed, 13% Healing, 46% within 12 weeks**

This technology has the potential to:

- Reduce community acquired pressure ulcers
- Reduce hospital admissions
- Reduce Community Nurse visits associated with pressure ulcers, providing nurses with real time information to inform decision making
- Enhancing quality of life for patients and their carers
- **Identify potential reason for non-concordance which may in the future inform future care, current clinical pathways and risk assessment tools**







You are the master of your destiny.
You can influence, direct and control
your own environment. You can make
your life what you want it to be.

Napoleon Hill