Management of Pain & Comfortability in Plus-Size Patients

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INTRODUCTION

According to the NIHR Severe chronic pain has "adverse effects on all aspects of general health as well as on daily life" and reduces an individual's quality of life.[1]

28 million

Chronic pain affects between one-third and one-half of the population of the UK, corresponding to just under 28 million adults.[2]

Demographic risk factors include increased age, female gender and socio-economic factors.[2,3]

Clinical risk factors include: multi-morbidity; pain related disability; surgical and medical interventions; obesity and sleep disorders.[3]

Bi-directional relationships have been evidenced between pain and sleep and pain and mental health.[4,5,6]

CASE STUDY

This case study relates to a 40-year-old gentleman. Peter* spent two months in intensive care following an emergency Laparotomy, during which his wound dehisced requiring Negative Pressure Wound Therapy (NPWT). He underwent a Tracheostomy before being transferred to a surgical ward. Peter was fully mobile and independent prior to his hospital admission. He also had a high Body mass index (BMI).

Following discharge from intensive care he developed post-intensive care syndrome (PICS) which affected his neuro muscular, cognitive, and mental health status which led to him to becoming immobile and bedbound.

Whilst on the surgical ward he was nursed in a side room. Due to the ongoing effects of PICS Peter was experiencing pain and weakness in his arms and legs and was diagnosed with Neuropathy. Five staff were required to help move and reposition Peter due to pain and immobility, this lasted 2-3 months.

During this time, he was also having physiotherapy to help build the strength back in his arms and legs, this required 4 therapy staff. All of these factors caused Peter to be very low in mood; this had a significant impact on his recovery.

Identified at high risk of pressure ulcer development, Peter's Braden score was 10 when he was immobile, placing him at high risk of pressure ulcer development. Due to Peter's complex conditions, multiple teams were involved in his care, including tissue viability, surgical, therapy and neurology. Peter also spoke with the Trust Chaplin on a regular basis.

Figure 1. Dolphin Fluid Immersion Simulation Therapy

Figure 2. Bariatric Tilt-in-Space Chair

*Anonymised name

METHOD

A Fluid Immersion Simulation (FIS) Therapy mattress ***(Figure 1)*** in an extra wide width and a bariatric Tilt-in-Space chair ***(Figure 2)*** were commenced to help address Peter's complex needs in terms of pressure ulcer prevention, immobility and comfort, with their functions helping significantly with physical therapy, repositioning, skin checks.

The FIS Therapy mattress ***(Figure 1)*** creates a simulated fluid environment enabling the patient to become fully immersed and enveloped, thereby significantly reducing pressure, shear and tissue deformation, this in turn can contribute to increased comfort, all of which were considered, leading to the decision to use FIS therapy. Due to poor core strength and the previous chair causing pain in his buttocks, the Tilt-in-Space chair was provided with the aim to improve pain, comfort, and encourage mobility and movement.

RESULTS & OUTCOMES

The use of FIS Therapy contributed to a **significant improvement in comfort and pain** compared to the previous support surface, where he felt 'stuck inside the mattress'. The equipment also enabled Peter to **move more freely** and undertake his exercises, releasing staff to undertake interventions with other patients (see statistics below). This overall improvement significantly improved his mood, he felt empowered and more in control.

- Pain score decreased from 8 to 4
- Morphine doses (10mg) reduced from 4 times daily to once daily
- Physiotherapists required reduced from 4 down to 2
- Ward staff required reduced from 5 down to 2

A **total of 66 days was spent on the FIS Therapy**, the Tilt-in-Space chair continued to be used beyond stepping down from FIS Therapy. During this time, he experienced improved pain, comfort, sleep, compliance with care, mobility (within the bed and chair), along with an improved sense of wellbeing and mental status, which in turn improved communication and engagement with staff, contributing to improved clinical outcomes.

Peter's abdominal wound continued to heal during his hospital stay and **he remained pressure ulcer free** whilst on the FIS Therapy mattress. Peter stated that talking to the Chaplin also helped with his recovery but he confirmed that:

"FIS therapy is comfortable even when I'm on my back for a few hours, I have no pressure ulcers and no pain in my back".

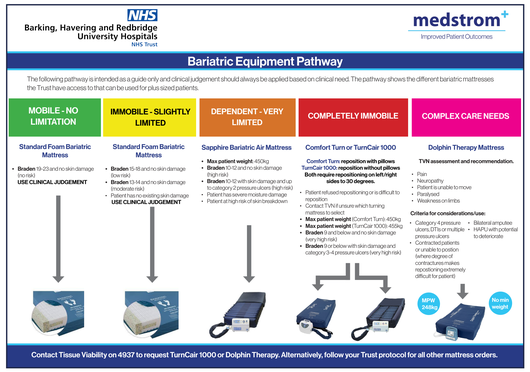

Figure 3. Bariatric Equipment Pathway

DISCUSSION & CONCLUSION

The importance of selecting the correct equipment to help achieve positive patient outcomes and improve quality of life cannot be underestimated. Not only from the patient's perspective but also from caregivers involved. The loss of independence and reliance on others can often make patients feel helpless and frustrated, so by improving clinical outcomes can only have a positive impact in their recovery.

In the case of Peter, the combination of FIS therapy and Tilt-in-Space chair not only contributed to him receiving safe, effective harm free care but also improved outcomes in relation to rehabilitation and overall health and wellbeing.
As a result of the positive outcomes achieved with this patient a bariatric equipment pathway has now been developed ***(Figure 3)***.

A patient's "can do" attitude is the best feedback we can receive as a team. By working together and individualising care we have seen huge improvements in progress, mental health, comfort and pain relief.

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