

## Easier Repositioning and Improved Pressure Area Care: The Dolphin Therapy Support Surface and Eleganza 5 Combination Treated Skin Damage and Improved Comfort and Sleep

- ↑ Pressure ulcers healed or healing
- ↓ Pain reduced
- ↑ Safer repositioning

### Introduction

Tim\* (age 58) was admitted to hospital from home with sepsis caused by infected pressure ulcers.

His past medical history included:

- Paraplegia following injury 20 years earlier
- Multiple sclerosis

Following admission, he developed COVID-19 infection and became very unwell. He was bed bound in hospital, but at home could transfer himself to his wheelchair using upper body strength.

Tim had the following pressure ulcers recorded on admission:

- 2 x Category 4 to ischial tuberosities
- Category 4 to sacrum
- Category 3 to left hip

*\*Tim is not the patient's real name*

### Clinical Challenges

Tim was initially nursed on a standard electric profiling hospital bed and traditional alternating pressure mattress. He was at very high risk of further pressure damage - both deterioration of existing damage, and development of new, due to his acutely unwell condition.

Tim needed to be repositioned regularly, but it was causing him pain and overnight repositioning was disturbing his sleep. Three members of staff were required to reposition him, but he was in pain when moved, and not able to assist. This increased moving and handling risks for staff, and was unpleasant for Tim, with staffing levels often adding to the challenges.

Staff were finding it almost impossible to reposition Tim so he was off his wounds. With wounds on both ischial tuberosities and his sacrum, he was inevitably always lying on one wound at least.



## Patient Objectives

- **Treat existing skin damage**
- **Prevent further skin breakdown**
- **Improve pain management**
- **Improve comfort and sleep**
- **Achieve 'medically fit for discharge' status**

## Introduction of the Dolphin Therapy Fluid Immersion Simulation Support Surface and the Eleganza 5 Bed

Dolphin Therapy is a unique reactive support surface that simulates a fluid environment. Research has demonstrated that it maintains tissue symmetry,<sup>1</sup> minimises vascular occlusion,<sup>2</sup> and prevents tissue ischaemia.<sup>3</sup> Data collected from 5,000 patients has demonstrated that it is extremely effective at treatment of skin damage, with 62% of wounds healed or improved at the end of placement. It has also improved comfort, pain management and sleep in over 99% of patients who had these as an objective.<sup>4</sup>

After a meeting between Medstrom's Clinical Advisor, Tim, and the TVN and Ward Manager, they decided that a 'step up' to Dolphin Therapy would be the best course of action. One of the main concerns was that Tim was being nursed on his wounds. Dolphin Therapy's fluid simulation is evidenced to still heal and improve wounds, even when they are in direct contact with the surface; data from July 2021 to May 2024 showed these wounds healed or improved in 60% of cases, with 39% remaining static.<sup>4</sup> It was hoped that the 'step up' would prevent further wound deterioration and promote healing, and also improve pain management and comfort.

During the conversation, Tim said he felt his recovery was being slowed down because of lack of sleep. Frequent disturbances overnight for repositioning were making him tired during the day. Also, although he understood the reasons why, he didn't like the fact that three caregivers were needed to turn him; at home, he could get in and out of bed to his wheelchair independently, and he understandably wanted to be able to do more for himself.

Medstrom's Clinical Advisor suggested using the Eleganza 5 bed with Dolphin Therapy to help address these issues. Eleganza 5 is a specialist bed, often used in intensive care. However, it can also be of great benefit in a general ward with some of the challenges that patients like Tim face.

The bed has full platform electrically operated lateral tilt, up to 15° to both the left and right. It helps to reduce the amount of physical handling, and provides a more ergonomic position for caregivers to work at, as they are not stretching and bending over the patient. Dual-sided foot pedals allow the caregiver to tilt the bed without pressing a button, freeing up both hands. It can be moved to lower angles of tilt (approximately 5° to 7°) by one caregiver, which helps to off-load and redistribute pressure. This helps to reduce the amount of physical repositioning required, as well as the number of staff needed. For personal care, with two caregivers, the bed can be tilted to 15°.

An Eleganza 5 bed was therefore installed with the Dolphin Therapy surface. The staff tilted it by 5-6° to both the left and right to off-load pressure. This was extremely beneficial for both Tim and the caregivers; One caregiver instead of three could reposition Tim, with much less physical handling. This allowed Tim to sleep better, with much less disturbance, as well as freeing up staff time and reducing manual handling risks.

Once Tim's clinical condition started to improve, he asked if he could use the hand held nurse control to reposition himself. A risk assessment was carried out which concluded that it would be safe for him to do this. He was now also able to use the side rails to alter his own position, so he became much more independent and involved in his own care.

Tim was nursed on Dolphin Therapy for a total of 232 days before being discharged home. The Category 4 pressure ulcer on his sacrum had healed, and the two ischial tuberosity Category 4 ulcers and Category 3 hip ulcer had improved. He did not develop any new skin damage.



## Summary

The Dolphin Therapy surface was highly beneficial for Tim. However, it didn't address all of his challenges. It helped to protect and heal his skin, but it couldn't turn to aid repositioning. Although turning mattresses are available, they do not offer the same level of immersion as Dolphin Therapy, and Tim needed that very high level of support.

The addition of an Eleganza 5 bed addressed the off-loading, turning and repositioning challenges associated with Tim's care. It also gave him more independence and involvement in his care.

All objectives for Tim had been met; his sacral pressure ulcer had healed, and the others had improved, with no further skin breakdown. He was in less pain, due to both the Dolphin Therapy surface's immersive properties, and less hands-on care through using the lateral tilt on the bed. He was much more comfortable and sleeping better, with fewer direct nursing interventions needed. The 232 days on this specialist equipment combination was a long journey to recovery, but ultimately a successful one for both Tim and his caregivers.

The Ward Manager commented to Medstrom's Clinical Advisor:

"We are **very happy** with how this bed and mattress have worked for Tim.

"They've provided us with **additional support** to help us nurse him. It's fantastic that **all the wounds have either healed or improved** - I didn't expect that. It's also really good that Tim has been able to use the bed to **reposition himself**. I think that has **helped him psychologically** and played a positive part in his recovery."



**Discharged home**



**Increased independence**



**Psychological benefits**

## References

1. CT scans from St Joseph's Hospital, Tampa, Florida.
2. Worsley PR et al (2015). The effects of a fluid immersion mattresses; an evaluation of fluid immersion therapy for the prevention of pressure ulcers. 18th Annual Meeting of the European Pressure Ulcer Advisory Panel, 17th September 2015. Faculty of Health Sciences, University of Southampton.
3. Mayes KL et al (2012). Cost effective care without clinical compromise: Incorporating the Dolphin Fluid Immersion Simulation Mattress System into the postoperative care of patients undergoing myocutaneous flaps. Poster presented at Wild on Wounds National Conference, September 12 - 15, 2012, Las Vegas, NV.
4. Medstrom (2023). The effectiveness of Dolphin Therapy fluid immersion simulation support surface. Outcomes for over 3,000 highly complex patients. Available online: <https://www.medstrom.com/wp-content/uploads/2023/03/SM1153-Dolphin-Therapy-3000-Patient-Outcomes-Report-Rev1-Mar-2023-1.pdf>



**To discover more about Dolphin Therapy, Eleganza 5, and how Medstrom can support you, contact our Clinical Advisors 24/7/365 on:**

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