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Defining Dignity for Plus-Sized Patients

From Mechanical Ventilation to Hospital Discharge: How the Right Equipment Allowed Early Mobilisation and Faster Recovery

Reduction from 6 to 2 staff to reposition in bed

Improved well-being

Major improvement in mobility in one week

Introduction

Irene* (age 83) was admitted to hospital with severe COVID-19 infection. She weighed 120kg and had the following comorbidities:

- **Cellulitis**
- **Cardiovascular disease**
- **Dyslipidaemia**
- **Osteoarthritis**
- **Depression**

Prior to admission, Irene was able to walk short distances at home.

On admission both of Irene's legs were extremely swollen due to cellulitis and cardiovascular disease.

**Irene is not the patient's real name*

Clinical Challenges

Irene was admitted straight to the high dependency respiratory unit due to the severity of her COVID-19 infection. She spent two weeks on mechanical ventilation on the Trust's own standard sized hospital bed and dynamic mattress.

Although Irene wasn't classed as plus-size in terms of her weight, the nurses struggled to move her into a prone position in the narrow bed space. It took eight staff to move her into a prone position, which is the Trust's protocol. There was no overhead hoist available to use. Up to this point, Medstrom didn't know about Irene.

The day after Irene came off mechanical ventilation, she was stepped down to the respiratory care ward. On the same day, Medstrom's Clinical Advisor, who was in the ward with another patient, noticed she was struggling to move in bed and discussed this with the nursing staff.

Medstrom's Clinical Advisor commented:

> "Although Irene was below the maximum patient weight limit for the standard bed she was using, it was noticeable that **she was unable to turn in bed without help. Repositioning required six staff members**, and **after 4pm there were only four on duty**, meaning she didn't get repositioned until the next morning. The skin on her sacrum and buttocks had become red, and she was **deconditioned** from spending over two weeks immobile in bed. Her lung capacity was poor due to COVID-19 infection, so **she is tired easily**."

Early mobilisation was now critical for Irene; she was at risk of further deconditioning, which could cause her to lose her mobility altogether, and her skin was at risk of breaking down.

Patient objectives

- **Early mobilisation**
- **Reduce pain when mobilising**
- **Improve cardiovascular and respiratory function**
- **Improve skin condition and prevent breakdown**
- **Improve mental health**

Introduction of Medstrom's Bariatric Equipment Package

Medstrom's Clinical Advisor talked to Irene about what she wanted, and which pieces of equipment would help her to achieve that. She was very keen to get out of bed and mobilise, as she understood the implications of not doing so. She was also fed up with being in bed and thought getting up would make her feel better in herself.

After further discussion with the ward manager and physiotherapists, an equipment package was agreed to help meet Irene's objectives:

TurnCair 1000 Low Air Loss Surface: This provides a high specification of support surface for pressure redistribution, plus a TurnAssist feature that enables safe and dignified handling of patients and aids respiratory management.

The TurnAssist feature reduced the number of caregivers needed to reposition Irene in bed from six to two, as well as reducing manual handling risks.

The low air loss feature helped to keep Irene's skin drier and cooler when she was in bed, to help prevent skin breakdown and improve skin condition overall.

MMO 8000 Bed: This bed has a platform width of 110cm (compared to approximately 90cm for a standard bed). This gave a much better width for Irene to move safely and comfortably.

The bed's ultra-low height of 21cm allows 96% of the UK female population to mobilise safely. Once she was well enough to get out of bed the customisable, programmable optimum egress height allowed safe mobilisation to and from the bed at Irene's popliteal height[1] every time she got out of bed. This eliminates guesswork and allows safer mobilisation, reducing the risk of falls. The high height of the platform (83cm) provides a safe height for 98% of UK adults to work from without twisting or stooping, reducing manual handling risks.

Bariatric Rotunda: Irene was initially able to weight bear but not walk. The bariatric rotunda was therefore used to transfer her from bed to chair.

Riser-Recliner Chair: This aided standing, helping to reduce pain when mobilising. The profiling function was used for repositioning, offloading and leg elevation.

Bariatric Commode/Shower Chair: This allowed Irene to use the bathroom and have a shower for greater privacy, easier washing/showering and psychological benefits.

Staff were trained at time of installation and follow ups continued every other day to ensure the equipment was working well.

In-bed mobilisation became much easier due to the extra width of the bed and the TurnCair 1000 mattress. Irene was able to move herself using the bed controls, giving her more independence.

The equipment package benefited Irene in several major ways. In-bed mobilisation and repositioning became much easier. She was able to weight bear and transfer using the Rotunda to both the Riser-Recliner chair and the commode/shower chair, for physical and psychological benefits.

After using this package for less than a week, Irene was able to step down from the TurnCair 1000 to the P.R.O. Matt Extra Wide surface. She no longer needed the Rotunda as she was able to take a few steps from bed to chair.

She was then moved to a rehab care home, where Medstrom installed a Pro-Bario Active bed with a TurnCair 1000 mattress, so she could continue her progress before discharge home.

All objectives for Irene were met; she was able to mobilise straight away following the equipment installation. This helped to reduce further deconditioning, improve respiratory and cardiovascular functions which in turn improved her well-being and mental health. Her skin improved – her sacrum and buttocks were no longer red and the swelling in her legs had reduced, which made mobilisation less painful.

Summary

It was critical that Irene started mobilising as quickly as possible after transfer from two weeks of bed rest in HDU to the ward. It is well documented that deconditioning occurs quickly when a person is bed bound, with negative effects on maximal oxygen uptake, muscle strength, blood volume, bone density, respiratory function, continence and gut motility amongst other things starting to occur within days.[2]

The equipment provided helped Irene to mobilise more safely and comfortably in bed, and to get out of bed. Considering how unwell she had been, her ability to stand, transfer and then walk after just one week was a fantastic achievement.

Medstrom was able to provide a bariatric community bed with a support surface to enable Irene to be discharged from hospital and continue her journey to recovery.

References
1. Martindale D (2021). Calculating bed height for hospital patients using popliteal measurement. Nursing Times [online]; 117: 10.
2. Laidler, D (2021). Physiological results relating to inactivity. The Remote and Rural Healthcare Alliance. https://learn.nes.nhs.scot/49141/rrheal/nhs-highland-virtual-lectures/physiological-results-relating-to-inactivity

To discover more about Medstrom's range of solutions for dignified plus-size patient care and enhanced support for caregivers, contact Medstrom's Bariatric Product Specialists 24/7/365 on:

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