



## ITU to Home: A Patient's Journey from Intubation to Mobile to Discharge Home

- ↑ **Safe in-bed mobilisation and turning while ventilated**
- ↑ **Early mobilisation following extubation**
- ↑ **Medically fit for discharge home**

### Introduction

Aaron\* (age 54) was admitted to ITU via Accident and Emergency having suffered a fall and cardiac arrest. It wasn't clear which happened first. A seizure was also suspected. He weighed 166kg and had the following comorbidities/past medical history:

- **Cardiovascular disease**
- **Hypertension**
- **Type 2 diabetes**
- **Diabetic leg ulcers**

Aaron was on the floor for approximately three hours before being brought to hospital, and he had a Category II pressure ulcer on admission, which staff thought had developed while he was on the floor.

Aaron was intubated and mechanically ventilated on admission to ITU.

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

### Clinical Challenges

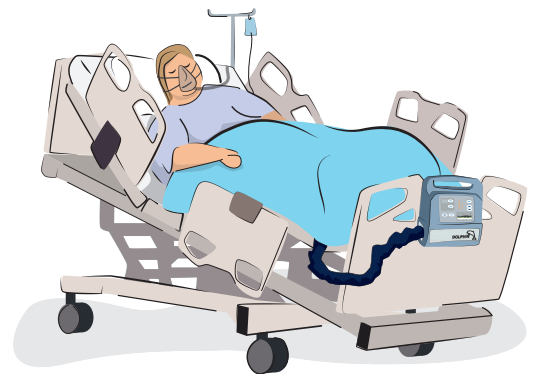
Aaron was haemodynamically very unstable and sedated, so was dependent on the unit staff for all movement and care. In-bed mobilisation was needed to limit deconditioning as much as possible.

Aaron's skin was very vulnerable. The Category II pressure ulcer was at risk of deteriorating, further skin breakdown was possible and the leg ulcers at risk of worsening.

Staff needed equipment that could move Aaron in a way that would protect both him and them. He needed to be turned and moved in a way that was safe for him, but which also minimised the risk of manual handling injuries to staff.

### Patient objectives

- **Stabilise and extubate when well enough**
- **Safe in-bed mobilisation**
- **Early mobilisation following extubation**
- **Prevent skin breakdown and heal existing skin damage**



## Introduction of Medstrom's Bariatric Equipment Package

### Stage 1: ITU

Medstrom's Clinical Advisor arranged for a Bari10A bed with a Turncair 1000 surface to be available on admission.

**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. This was particularly important for Aaron for safe movement, given all the equipment surrounding him.

The low air loss feature helped to keep Aaron's skin drier and cooler, to help prevent skin breakdown and improve skin condition overall.



**Bari10A Bed:** The Bari10A platform sections widen individually, giving a maximum platform width of 122cm (compared to approximately 90cm for a standard hospital bed). This provides extra space for the patient, but also means caregivers can shorten a section if they want to get closer to the patient to deliver care. This, along with the bed's top height of 86cm, makes caring for the patient safer and easier, reducing injury risks. A one-button cardiac chair enabled Aaron to sit up when he was well enough, offering both physical and psychological benefits.

Aaron's condition fluctuated during his admission. He was intubated for a total of about six weeks. During this time, he was given a tracheostomy. However, his condition improved and he was extubated successfully and the tracheostomy was removed.

The TurnCair 1000 was beneficial for regular turning as well as repositioning and nursing procedures. The surface was being used on turning cycles for 60 minutes between quarter and full turns. Medstrom's Clinical Advisor worked with the multi-disciplinary team throughout.

Heel offloaders were being used initially for Aaron's leg ulcers (this is standard hospital policy), However, because the TurnCair 1000 was able to fully rotate him, nursing assessment deemed that these could be removed, which they were.

### Stage 2: Step Down

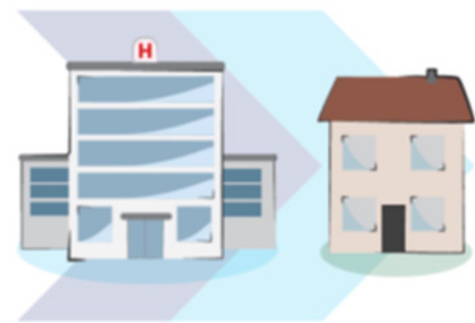
After Aaron was extubated, a discussion took place between the ITU team, Aaron and Medstrom's Clinical Advisor about his next steps. It was agreed that he should start to mobilise as soon as possible and sit out of bed. His bed was therefore changed to the MMO 8000 bed to allow increased flexibility for transfer and to improve his mobility in preparation for discharge from ITU.

**MMO 8000 Bed:** This bed has a platform width of 110cm for safe and comfortable movement.

The bed's ultra-low height of 21cm allows > 99% of the UK male population to mobilise safely. Once Aaron was well enough to get out of bed the customisable, programmable optimum egress height was set at his popliteal height<sup>1</sup> for safe bed egress. This eliminates guesswork and allows safer mobilisation, reducing the risk of falls. The electric height adjustment was also used to help Aaron stand, supporting his lower body, as his leg muscles were weak following the long time that he had been bed bound.

By the time Aaron was transferred to a general ward (approximately seven weeks after admission) he was eating and drinking, repositioning himself on the bed and transferring to a chair with assistance. He was discharged home two weeks later. His leg ulcers were improving, and his skin otherwise was intact.

All objectives for Aaron had been met; the equipment in ITU allowed him to be turned and mobilised in bed safely, there was no skin deterioration, the Category II pressure ulcer was healing and the step down to the MMO 8000 bed as soon as he was ready allowed early mobilisation out of bed.



**Safe repositioning**



**Skin improved**



**Early mobilisation**

## Summary

The bed and surface used in ITU when Aaron was critically ill allowed him to be moved safely, with less “pushing and pulling” by caregivers. This was better for him, due to the amount of equipment required to support him, and for the staff, reducing moving and handling risks.

The step down to the MMO 8000 bed as soon as Aaron was ready was key to getting him mobile and out of bed again quickly. It demonstrates how timely intervention at the right time for each patient can help to accelerate recovery and improve outcomes.

### Medstrom’s Clinical Advisor commented:

“It was so **fantastic to see Aaron improve** the way he did when he was finally extubated. Seeing him **sat up in a chair** when I walked into the unit was the **best feeling**. The right equipment makes such a difference when used to its full potential, and **Aaron’s determination** meant he **got home really quickly**. Overall, a **great achievement** for him.”

### References

1. Martindale D (2021). Calculating bed height for hospital patients using popliteal measurement. Nursing Times [online]; 117: 10.

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