

Introduction

A 27-year-old gentleman was admitted from home into our organisation in January 2019 with an acute chest infection. The patient had complex needs with multiple comorbidities including cerebral palsy, hydrocephalus, epilepsy, asthma, carcinoma, peg fed and underweight.

In addition to this, the patient had two existing Category IV pressure ulcers (one infected to his right buttock and one to the back-left side of his head). The patient lived at home with his mother and had a full time carer.

On admission to MAU he was placed on a standard four section electric profiling bed frame and the Trust's dynamic deep cell mattress replacement system. Due to his physical condition and his medical instability there were challenges with repositioning, meaning he was at very high risk of further skin break down.

Previously, this patient had a Category IV pressure ulcer on his left buttock. The community team treated this with VAC Therapy and a PICO dressing. Due to the patient's complex conditions, this pressure ulcer took over 12 months to heal.

Following admission to hospital, the patient's condition unfortunately deteriorated and as a result he was transferred to ICU.

It was felt the current bed and mattress were not specialist enough to manage the complex needs of the patient. As a forward-facing Trust, access to specialist equipment for complex patients can be rented via the equipment service who hold knowledge of new technologies that are available.

Introduction of Multicare and Dolphin Therapy

After discussion with the nursing staff, contact was made with one of our specialist equipment suppliers, Medstrom Healthcare. We spoke with their Clinical Nurse Advisor to discuss this highly complex patient.

The Multicare ICU bed frame with Dolphin Therapy specialist surface was identified as being the most appropriate product combination that met the challenges of the patient's respiratory complications, skin integrity needs and challenging repositioning.

It was clear from the onset this product combination provided everything we needed to manage this patient clinically in addition to meeting the needs of the patient.

Discussion

The patient's medical condition improved with antibiotics and by utilising the lateral rotation feature of the Multicare to mobilise the secretions of the patient's chest. We believe this reduced the patient's stay in ITU as after only six days he was transferred to a general medical ward.

During his time on Dolphin Therapy, improvements and healing rates of the existing pressure ulcers were recorded.

As pressure ulcers were improving on Dolphin Therapy, we worked with our community Trust, Cheshire & Wirral Partnership, to agree a 3-month fixed period rental of Dolphin Therapy for the patient's home when the patient was discharged from hospital.

The Process

The process of ordering the combination of specialist products was easy. We had great support from the Medstrom Clinical Nurse Advisor who provided thorough training to ensure staff were confident how to use the products in both the acute and community setting.

All products were delivered within 4 hours in both settings. The service we received from Medstrom has been invaluable. Having the Medstrom Clinical Nurse Advisor visit regularly and provide detailed clinical reports helped to take the pressure off the equipment service and co-ordinate multidisciplinary teams.

Results

The Category IV pressure ulcers on the buttock and head healed in six months following use of Dolphin Therapy.

In comparison to traditional dynamic mattresses, Dolphin Therapy does not have a static head zone and provides fluid immersion simulation therapy to all areas, therefore staff felt this contributed to the healing rate on the head.

Due to the low noise level of Dolphin Therapy, staff also felt it improved the patient's concordance.

It is felt that the fast rate of healing of the two category IV pressure ulcers witnessed on Dolphin Therapy avoided significant incremental treatment costs associated with pressure ulcers.

The Multicare specialist bed helped manage the patient's medical conditions more effectively within the acute setting due to his repositioning needs.

Conclusion

The selection of Multicare and Dolphin Therapy from Medstrom has not only been beneficial from a patient outcome perspective, but has also provided a reduction in 'hands-on' nursing care due to the manual handling benefits that Multicare can offer.

The usage has been cost effective for the organisation. We believe the products reduced hospital stay and Dolphin Therapy improved the healing rate of the existing pressure ulcers. It is estimated using published costs of pressure ulcers¹ that the organisation saved around £80,000 for the healing of the category IV pressure ulcer in comparison with the patient's previous healing pressure ulcer on a traditional dynamic systems which took 12 months to heal.

Without the equipment service the organisation may not have accessed external organisations such as Medstrom to effectively manage complex patients.

Cat IV Buttock



Cat IV Head



References: 1. <https://www.nice.org.uk/guidance/cg179/resources/costing-statement-pdf-248688109>

Key Benefits of the Equipment Service Team

The function of the Equipment Service is to provide a high quality, efficient and cost effective service to wards and departments across the Trust by supplying appropriate equipment on a temporary basis to support clinical practice and to provide equal access. Occasionally a patient with complex clinical needs will require access to equipment that is not owned by the Trust. The equipment service within the Trust operates Monday to Friday 8.00am-7.00pm and Saturday 7.30am-2.30pm. There 6 staff members working 35hrs each and a Manager working 37.5hrs. Although not on call, the Manager can be contacted via switchboard at any time should the need arise. In this case study for example, the Manager was contacted after 6pm on a Friday evening due to their knowledge of external suppliers and appropriate equipment in the event of patients being admitted with complex clinical needs. The knowledge of the equipment service can often lead to patients needs being met within a shorter time frame, therefore delivering appropriate care sooner. This has a positive impact on patient and carer outcomes.