



LINET Group

The Impact of the Lateral Tilting Multicare ICU Bed on Nursing Productivity, Retention, Recruitment and Costs in a Neurosciences ICU



Study Result from Southampton University Hospital
Neurosciences Intensive Care Unit



University Hospital Southampton
NHS Foundation Trust

Summary research



ABSTRACT

Objective:

Evaluate LINET Multicare bed from perspective of saving nursing time, nursing safety and monthly rate of musculoskeletal injuries, hiring bariatric beds, staff vacancy, staff and patient's feedback, length of stay with rate of hospital acquired pressure injuries and Ventilator Associated Pneumonia

Method:

Qualitative and quantitative measurement.

Discussion:

Physically demanding nursing care, lack of nurses, and high rate of musculoskeletal injuries are the key factors contributing to increased operating costs. High quality working environment with state of the art beds may increase nurses and patient satisfaction. Feasibility, implementation and return of investment must be ensured.

Conclusion:

After one year of measurement and based on final evaluation it was decided to standardise the Neuro ICU with LINET Multicare.



INTRODUCTION

The Neurosciences Intensive Care Unit in University Hospital Southampton (UK) is a 13 bedded unit. It provides specialised intensive care for patients who have a severe illness or injury affecting their brain, spinal cord or peripheral nerves. 600-700 patients per year are admitted and cared for. Due to the nature of their health conditions, these patients are some of the most physically dependant and challenging; requiring between three and five staff to safely turn them on a two hourly basis unless risk assessed that less frequent turns would be appropriate.

Aim of the study

- A • Release time for direct patient care
- B • Reduce staff sickness absence (overall) focusing on musculoskeletal injuries
- C • Reduce vacancy rate
- D • Increase staff satisfaction
- E • Increase patient satisfaction
- F • Reduce patient complications including Pressure ulcers, Ventilator Acquired Pneumonias and reduce overall length of stay



METHOD

Equipment

- 10 Multicare Intensive Care beds - 5 with i-Drive
- 10 passive Clinicare Mattresses and 3 Virtuoso dynamic mattresses .
- All mattresses changed to Clinicare 100 HF in line with Trust mattress contract during the trial
- Head ring attachment to safely perform portable CT scans

Data Collection

An audit tool was developed to monitor and record relevant data to assess the impact of the beds within the unit. Amendments were made to this tool as the collection of data progressed to ensure the data being collected was relevant.

Data was collected for the period from Q1 2016/17 (prior to the bed installation) until Q1 17/18.



Criteria	Method	Source	Links to aim of the trial
Demand v actual staffing levels	Care Hours Per Patient Per Day	Safe care	A
Agency and bank shifts filled	Number/rate of those requested	Healthroster	A
Sickness absence (nursing staff); overall rate and musculoskeletal (%)	Overall rates (%) Monthly Quarterly	Healthroster	B
Bariatric bed hire	Number of days	Unit records	B
Registered nursing staff vacancy (%)	Overall rates (%) Monthly	Healthroster	C
Unregistered nursing staff vacancy (%)	Overall rates (%) Monthly	Healthroster	C
Staff feedback	Questionnaire to staff	Ward Based Survey	D
Patient feedback	Additional question on feedback survey	Current patient feedback process	E
Real length of stay	Monthly average days	Critical Care Minimum Data Set	F
Hospital Acquired Pressure Ulcers	Number/rate	Adverse Event Reporting System	F
Ventilator Acquired Pneumonias	Number/rate	Adverse Event Reporting System	F



RESULT

Key Findings

- LINET Multicare facilitates less intervention during the turning process.
- Patients can be turned by two nurses every 2 hours.
- LINET Multicare assists time to care, promoting maintenance of patient safety and observations at a 1:1 or 1:2 ratio.
- LINET Multicare assists to help improve health and wellbeing of staff and promotes retention, longevity and sustainability of the Trust's future workforce.

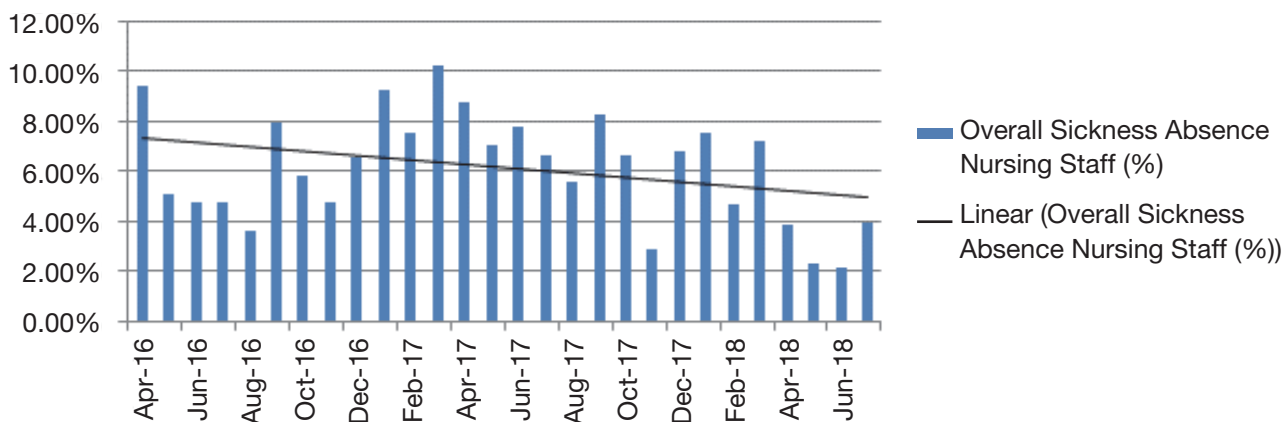
100% of staff believe Multicare beds have improved their health and well being at work.

93% of staff believe a return to a non specialist hospital bed, will impact on their health and well being.

Qualitative Measurement: Respondents were asked if Multicare had improved the factors listed in column 1 below

LINET Bed Audit				
Question	Yes		No	
	Actual numbers	%	Unanswered	%
Physical Health (i.e. Back pain)	45/46	98%	1/46	2%
Mental Health (i.e. stress)	32/46	70%	14/46	30%
Time Management	45/46	98%	1/46	2%
Patient turn time	44/46	96%	2/46	4%
Patient Safety	31/46	67%	15/46	33%
Positioning of patient (VAP)	34/46	74%	12/46	26%
Chest care	26/46	57%	20/46	43%
Other				

Overall Sickness Absence Nursing Staff (%)



1. Reducing Sickness Absence: overall rate and muscular-skeletal (%)

There was a greater decline in the reduction of sickness absence due to MSK and back pain/injuries.

2. Change in Staff Profile

Trust initiative is to encourage employees to work additional hours on the NHS professional’s staff bank (NHSP) as multi-post holders to reduce reliance on agency workers and therefore reduce temporary staffing costs. Data was gathered for the year preceding the introduction of LINET Multicare beds and the year following.

This suggests that substantive staff are more willing to work additional hours through the NHSP bank and there has been a reduction in the number of agency hours paid at a higher rate since LINET Multicare beds were introduced.

3. Staff and Patient Satisfaction



Staff: Reduction in back and other musculoskeletal injuries/aches and pains

- Fewer turns and overall bed functionality
- Fewer transfers between different beds
- Easier to move the bed – transferring patients to theatre utilising i-Drive power
- Releasing clinical time to provide care on the unit – turns are quicker/fewer staff required
- Less physical moving and handling



Safer for Patients

- Less manual handling
- No pressure area care issues
- Easy to obtain the correct tilt for patient positioning
- Less risk to tubes/lines etc when moving patients
- Patients feedback where possible stated beds were comfortable

4. Patient Complications

Hospital Acquired Pressure Ulcers

There have been no Hospital Acquired Pressure Ulcers since LINET Multicare beds have been introduced.

Staff overwhelmingly would not want the LINET Multicare beds removed from the Neurosciences Intensive Care Unit due to the benefits the functionalities give to both staff and patient.

Data within the report is powerful evidence of the impact LINET Multicare beds offered to reduce sickness absence for MSK and back injuries on the Neuro ICU in the Trust.





Multicare



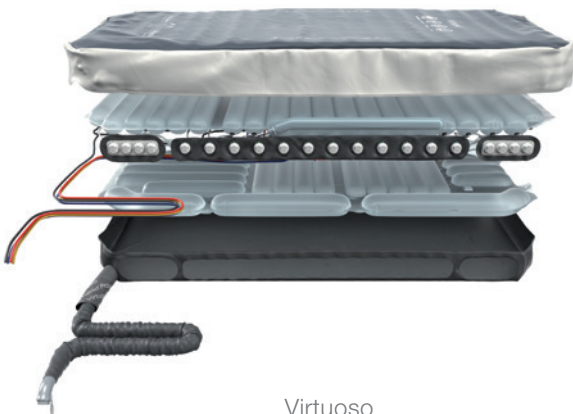
Eleganza 5



Eleganza 4



Eleganza 3XC



Virtuoso



OptiCare

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