THE EFFECTIVENESS OF SPECIALIST SEATING IN A HOSPITAL ENVIRONMENT

A clinical field trial in partnership with Saint Camillus' Hospital, Limerick, Ireland and Seating Matters.

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Seating Matters

Introduction

Guidance is available on many aspects of pressure injury prevention and postural management, however there has been little discussion on how to specifically address these issues in seated patients. This study has proven that with correct assessment and provision, specialist seating can reduce pressure injuries and improve posture and function.

Specialist seating has also been proven to reduce falls and patient handling by lessening the continual sliding and slipping from chairs. This research showed that continual postural correction of the patient in the chair was dramatically reduced.

Purpose of the Study

Staff at Saint Camillus' Hospital in Limerick, Ireland, identified a need to re-evaluate the seating systems used by their patients. They had received extensive clinical evidence based training to enhance their knowledge and recognised the benefit of individualised seating.

The 65-bed facility mainly cares for patients who are of maximum dependency, rehabilitation, stroke, respite, and continuing care. The clients have various seating and postural needs so maintaining and improving care is important.

The clinicians identified the need to design a Seating Programme to assist overcoming challenges they were facing caring for their patients. This included improving function, reducing pressure injury incidence, falls and time spent in bed as well other notable challenges.

The Seating Programme required each patient to have an individual Seating Assessment, followed by prescription of an appropriate chair. A chair set up was then carried out ensuring that the patient was supported correctly and sitting in a safe and comfortable position.

Clinical Field Trial

A clinical field trial was conducted in order to analyse the benefits of using therapeutic seating in a hospital setting. The clinicians identified the need to measure the following:

- Client's ability to carry out functional tasks.
- Time spent in bed.
- Risk of developing pressure injuries.
- Pain and discomfort.
- Risk of sliding and falls.
- Patient handling (postural correction).

Martina Tierney, OT with Nurse Mairead Duggan and participant of the trial.

Method

Clients using Seating Matters chairs were invited to participate in this study. Long term care patients from Saint Camillus' Hospital were recruited on a voluntary basis.

This clinical field trial involved a mixed methods approach to include qualitative and quantitative methods. 26 participants were recruited from Saint Camillus' Hospital. Each client had an individual Seating Assessment and provided with a Seating Matters chair which was set up to meet their individual need.

The clinical staff at the hospital revised their seating provision through their Seating Programme and began making changes and recording clients' seating and postural requirements. An element of the programme involved designing simple, yet very effective 'Seating Passports.'

These visual aids assisted in the collation of data for this clinical study. They were created for each chair user as a record of what their individual seating and postural needs are. These 'passports' assisted in the analysis of the use of the clinical seating for this clinical field trial.

Seating Passports.

The study revealed significant findings:

- 46% increase in functional tasks.
- 31% reduction in time spent in bed.
- 75% decrease in pressure injury incidence
- 75% decrease in pain / discomfort.
- 100% decrease in sliding / falls.
- 46% decrease in postural correction.

Cost Savings

€22,164	€50,235	€5,136
On Pressure Injuries	On Falls	On Bed Stays

Cost savings are based on average UK costs of treating a pressure injury and a fall as well as the daily cost of a HSE hospital stay.*

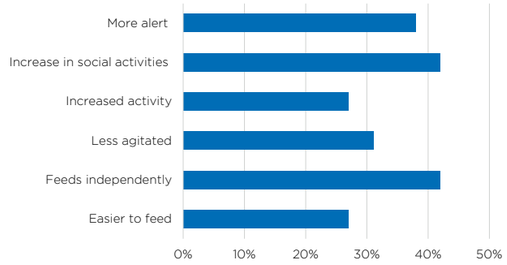
For possible cost savings for your facility refer to the back page.

Clinical Results

100%	75%	31%
Reduction in Falls and Sliding	Decrease in Pressure Injuries	Less Time Spent in Bed

Functional Activities

There was an overall increase in functional activity of 46%. The activities were measured using the following activity variables of the participants before and after.

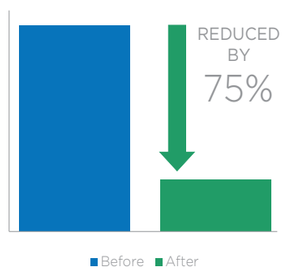


Time Spent in Bed

Participants were observed for the number of hours that they spent in bed during an average day. Participants were then observed for the amount of hours they sat out in their Seating Matters chair and how many hours they had bed rest. There was a 31% reduction in time spent in bed. It was a general observation that clients were much more agreeable to spend time in their Seating Matters chairs, than spending time in bed.

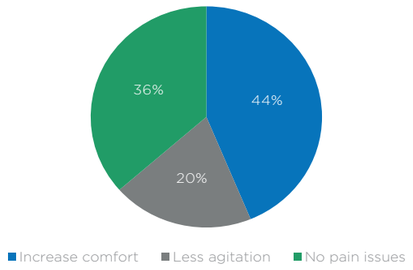
Pressure Injuries / Red Areas

Pressure Injury Staging Chart was used to measure pressure injuries of the participants ahead of the research. They were then analysed during the clinical field trial. The results have been significant. There was a 75% decrease in pressure injury incidence in clients who were using a Seating Matters chair. No new pressure injuries or redness occurred amongst the participants. Only one participant in the group with an existing pressure injury remained after the trial.



Pain / Discomfort

This was measured using qualitative data. An overall reduction in pain/discomfort was achieved by 75%. This was demonstrated by measuring; increase in comfort, less agitation and no pain issues. See diagram below.



Sliding/Falls

Quantitative research revealed there was a 100% decrease in the incidence of sliding/falls. Further qualitative research suggested that safety of the clients was greatly increased as well as less manual handling required. These significant findings indicate that using specialist seating is significant in assisting with the reduction of falls and sliding.

Postural Correction

Quantitative feedback revealed that there was a 46% reduction in postural correction. Qualitative findings further revealed that having the participants sat in a position where less postural correction was required, the client's posture also improved. In addition, it was reported that this helped to reduce manual handling for the caregivers significantly.

Reduction in Incidence of Chest Infections

There was one participant who suffered from reoccurring chest infections before sitting in his Seating Matters chair. He relied on antibiotics and pain medication to manage pain. This has been significantly reduced by at least 50%.

Use of Pillows/Blankets

Quantitative data was analysed to discover the decrease of pillows and blankets as support. This was reduced by 89%. One client remained using a pillow as a habit/ comfort.

Use of High Cost Cushions

From all the participants in the trial, only one required the use of an alternative air cushion. This client had an existing pressure injury before the trial and advice was given by clinicians to use a similar cushion to the mattress this participant was using. When necessary, it is possible to change the Seating Matters cushion as it is removable, however in most cases this is not required.

Conclusion

The clinical field trial revealed significant results proving that with a thorough Seating Assessment and correct seating provision, dramatic improvements can be made for the patient and carer. Clinical educational training is also beneficial for staff to help assist with evidence based care.

Expected Cost Savings for Your Facility

Example Hospital

Expected Cost Savings Per Year**

	£	€	$
Pressure Injuries	103,594	118,097	688,181
Falls	8,710	9,929	17,738
Bed Days	342,000	389,880	5,213,790
TOTAL	**454,304**	**517,906**	**5,919,710**

Seating Matters would like to thank St. Camillus' Hospital staff and participants for their involvement in this clinical field trial. Without their valuable input, this research would not have been possible.

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