

# Working Solutions

## Wednesday

Plenary 6

1115– 1215

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## Saving Time Through Hoist Choice?

**This Theory session is aimed at Adult and Child Care in a Community and Acute setting at Experienced Trainers and Strategic Advisors**

### Biography:

Mike Fray is Senior Lecturer in Healthcare Ergonomics at Loughborough University. He created the patient handling MSc programme. His research focuses on injury prevention, patient handling interventions, equipment design and safe systems. He has an international research profile that supports the development of evidence and has many book, journal and conference publications.

### Abstract:

**Aims:** The aim of this study is to compare three different hoisting devices to provide evidence as to which hoist requires the least amount of time and steps to carry out three basic patient transfers.

**Methods:** The study used 15 expert and/or very experienced participants in manual handling. Three familiar transfers were carried out: Bed to chair, Chair to wheelchair and Wheelchair to bed, with two overhead hoists and one floor-based hoist. Data was collected on time taken to complete the tasks, the activities needed to perform the tasks and subjective data on ease of use and a comparison of steps/time compared to normal hoisting.

**Results:** The hoist type was the determining factor on time taken as  $P = .000$ . There were no statistical significances in the time taken when analysing the tasks and Hoist\*Task, as  $P = .111$  and  $.250$  respectively. The Post hoc showed there was a difference in the means for the Mobile hoist when compared to the other hoist types as  $p = .000$ . Ease of use results showed the Ceiling Track (H-frame) scored on average 7 very easy compared to the Ceiling Track (Fixed) 1.6 and the Mobile Hoist 0.33. The time taken showed that the Ceiling Track (H-frame) scored on average 11.6 "quicker" compared to the Ceiling Track (Fixed) 3.3 and the Mobile Hoist 1.6. The Steps taken showed that the Ceiling Track (H-frame) scored on average 11 "quicker" compared to the Ceiling Track (Fixed) 5.6 and the Mobile Hoist 1.

**Conclusions:** The findings show that over 30 transfers a day Ceiling Track (H-frame) potentially saves 45.5 minutes, with the Ceiling Track (Fixed) saving 8.5 minutes a day when compared to the Mobile Hoist

### Objectives:

- Understand the development of a study to measure the time taken to complete a range of transfers
- Understand the use of task analysis in patient handling studies
- Be informed about the possible time savings with different hoist devices
- Consider the process of costing time in care settings