



DOES THE INTRODUCTION OF THE SARA *COMBILIZER*[®] REDUCE THE TIME TAKEN TO FIRST MOBILISATION IN INTENSIVE CARE?

McWilliams DJ, Lea TJ



Introduction

- Critical illness and intensive care admission is associated with significant physical and psychological dysfunction
- Muscle strength may decrease by as much as 20% after one week of bed rest, with an additional 20% loss of remaining strength each subsequent week
- A strong correlation between muscular weakness and prolonged mechanical ventilation has been observed
- Many patients surviving critical illness have significant physical and non-physical morbidity and undergo a lengthy convalescence.



Introduction

- There is a growing body of evidence to support programmes of early mobilisation within ICU
- When utilised, early mobility is associated with reduced ICU and hospital length of stay and improved functional outcomes.
- The exact definition of early mobility is still not defined, and actual ability to mobilise can be limited by
 - CVVH
 - airway stability
 - inotropes



Sara combilizer



A combined tilt table and chair which allows transfer out of bed with a transfer board / sheet to achieve either a sitting or standing position.



Sara Combilizer[®]

- Hypothesised the *Sara Combilizer[®]* will allow earlier mobilisation of patients previously deemed high risk / inappropriate
 - low attention / ↓GCS
 - Poor trunk stability
 - CVVH lines in groin
 - Ventilation via ET tubes



Sara Combilizer[®]

- Also allows standing position to be achieved whilst still ventilated
 - ↑ FRC
 - Weight bearing
 - TA stretches
 - Improved trunk stability
 - Postural management



Objectives

- This study aimed to assess whether the introduction of the *Sara Combilizer*[®] reduced time taken to mobilise, defined as sitting out of the bed for the first time.
- What affect this had on outcomes such as functional status and length of stay



Method

- All patients admitted to ICU ≥ 5 days.
- Baseline data collected from 1st April - 17th August 2012.
- The *Sara Combilizer*[®] was then introduced on the 20th August
- This was coupled with MDT training and education
- Data collected prospectively until 31st December 2012.



Outcomes

- Primary outcome
 - Time to first mobilisation
- Secondary outcomes
 - Mobility level at ICU discharge (MMS)
 - length of stay (ICU and Ward).



Results

	n=	Mean time to mobilise	Mean MMS	ICU LOS	Post ICU LOS
Pre Combilizer	77	10.6 days	3.9	17.5	25.3
Post Combilizer	83	7.6 days	4.6	15.0	16.9
		p<0.0025	p<0.05	P= 0.072991	p<0.05

MMS

- 1 – Passive Movements, Active exercise, chair position in bed
- 2 – Sit on edge of bed
- 3 – Hoisted to chair (incl. standing Hoist)
- 4 – Standing practice
- 5 – Transfers with assistance
- 6 – Mobilising with or without assistance
- 7 – Mobilising > 30m



Conclusion

- Following its introduction the *Sara Combilizer*[®] allowed earlier mobilisation of patients admitted to intensive care (7.6 vs 10.6 days)
- This earlier mobilisation was associated with a higher overall level of mobility within ICU and appeared to be associated with reductions in hospital length of stay.
- This trial took place as part of a wider rehabilitation service improvement project a randomised controlled trial is needed to assess the validity of these findings.

