

The value of a rehabilitation programme after critical illness

Suzahn Wilson¹, H. Stewart², H. Else², J. Thomas², J. Cross¹

HEE / NIHR Integrated Clinical Academic Programme

¹University of East Anglia

In partnership with ²West Suffolk NHS Foundation Trust

Size of the problem

Guidelines

Mixed Method Service Evaluation

Research Questions

- 1. What are the main concerns and challenges faced by critical care survivors after hospital discharge?
- 2. What are patients' experiences of a rehabilitation programme and how does this impact their recovery?
- 3. Do measures of exercise capacity, quality of life, and anxiety and depression change after attending a physical rehabilitation programme?

Qualitative Data

Grounded Theory Method (Glaser, 1978)

Inclusion criteria

- Adults
- Rehab group participants in the last 2 years
- Able to provide informed consent

Exclusion criteria

Ongoing conflicting treatment

Data Collection

- Semi-structured Interviews (n=8)
- Transcribed verbatim

Data Analysis

- Coding
- Constant comparative method
- Generates substantive and theoretical categories

Impact of Losing Independence



Quantitative Data

Collected from 2 years of audit data

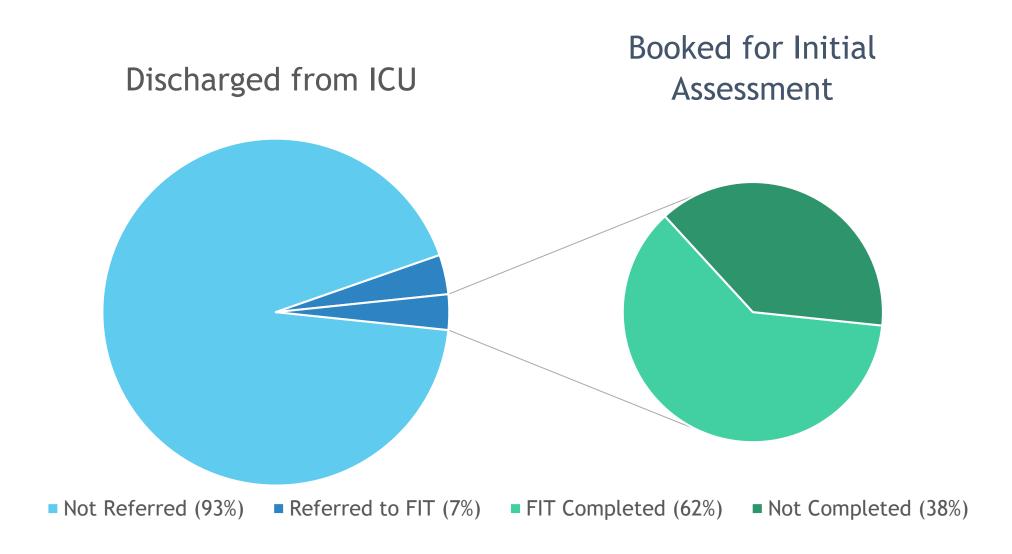
Outcome Measures

- ► 6 Minute Walk Test
- Short Form 36
- Hospital Anxiety & Depression Scale

Data Analysis

- Wilcoxon signed rank test
- p-value < 0.05</p>
 with 95% CI

FIT Referral and Completion figures



Results

	N Initial		Final
		Assessment	Assessment
Short form-36		Mean (SD)	Mean (SD)
Physical functioning	13	37.4 (27.2)	53.5 (23.8)
Physical Health	13	19.2 (38.4)	32.7 (38.7)
Emotional Stresses	13	46.2 (51.9)	53.8 (48.2)
Energy	13	46.8 (22.3)	69.2 (20.6)
Emotional Wellbeing	13	71.7 (19.1)	80.0 (16.7)
Social Functioning	13	53.8 (31.6)	72.1 (24.0)
Pain Levels	13	66.2 (31.1)	75.2 (29.8)
General Health	13	56.2 (25.6)	64.6 (20.3)
Circuminante quella distance (m)	0	220 5 (4/4 5)	407 2 (472 4)
Six-minute walk distance (m)	8	228.5 (161.5)	406.2 (162.4)
Hospital Anxiety and Depression Scale			
Anxiety	13	6.8 (4.7)	4.2 (2.8)
Depression	13	5.8 (4.3)	3.9 (3.9)

Results

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	N	Mean Difference (SD)	95% CI	p-value
Short form-36				
Physical functioning	13	16.1 (22.6)	2.5, 29.7	0.026
Physical Health	13	13.5 (19.4)	1.7, 25.2	0.038
Emotional Stresses	13	7.7 (45.5)	-19.8, 35.2	0.581
Vitality	13	22.5 (20.1)	10.3, 34.6	0.003
Emotional Wellbeing	13	8.3 (10.9)	1.7, 14.9	0.021
Social Functioning	13	18.3 (30.5)	-0.1, 36.7	0.070
Pain Levels	13	9.0 (15.4)	-0.3, 18.3	0.063
General Health	13	8.5 (13.9)	0.1, 16.8	0.046
Six-minute walk test (m)	8	177.8 (66.9)	121.8, 233.7	0.012
Hospital Anxiety and Depression Sca	ale			
Anxiety	13	2.6 (3.9)	0.3, 5.0	0.035
Depression	13	1.9 (3.0)	0.1, 3.7	0.021

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Capability

Physical restrictions

Education & information

Opportunity

Social support

Social isolation & accessibility

Motivation

Reflection & Goals

Emotions & Peer support

(Cane et al., 2012)

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IMPROVEMENT ENCOURAGING STRENGTHENING

IMPROVED

Use of Exercise Diaries

- Review of Recruitment Strategies
- Incorporate Behaviour Change Theory
- Development of Core Outcome Set

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References

- Agård, A. S., Egerod, I., Tønnesen, E. and Lomborg, K. (2012) 'Struggling for independence: a grounded theory study on convalescence of ICU survivors 12 months post ICU discharge', *Intensive Crit Care Nurs*, 28(2), pp. 105-13.
- Connolly, B., Douiri, A., Steier, J., Moxham, J., Denehy, L. and Hart, N. (2014) 'A UK survey of rehabilitation following critical illness: implementation of NICE Clinical Guidance 83 (CG83) following hospital discharge', BMJ Open, 4(5), pp. e004963.
- Dowdy, D. W., Eid, M. P., Sedrakyan, A., Mendez-Tellez, P. A., Pronovost, P. J., Herridge, M. S. and Needham, D. M. (2005) 'Quality of life in adult survivors of critical illness: a systematic review of the literature', *Intensive Care Med*, 31(5), pp. 611-20.
- ▶ Jones, C., Skirrow, P., Griffiths, R. D., Humphris, G. H., Ingleby, S., Eddleston, J., Waldmann, C. and Gager, M. (2003) 'Rehabilitation after critical illness: a randomized, controlled trial', *Crit Care Med*, 31(10), pp. 2456-61.