

Abstract

Early cognitive rehabilitation to prevent long-term cognitive impairment in Intensive Care Unit (ICU) patients

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Background

In Denmark more than half of the patients admitted to the Intensive Care Unit (ICU), are alive at six months after discharge. Among the ICU survivors about 50% experience cognitive impairment such as decreased concentration, decreased awareness, impaired ability to plan and problem solve to such an extent that it inhibits everyday life. Cognitive and functional rehabilitation has traditionally been offered at 6-12 months after hospital discharge, corresponding to the time of recovery from critical illness. The benefit of early cognitive and functional rehabilitation during the ICU stay, however, has not yet been explored.

Hypothesis

Our hypothesis is that nurse-led early functional and cognitive stimulation (NLS) including task-orientated interventions during ICU admission may prevent long-term cognitive impairment in ICU survivors compared to ICU patients not receiving NLS.

Aim

The aim is to develop, pilot test, evaluate, and implement an NLS intervention for patients admitted to the ICU, which can be initiated and practised by nurses and supported by other professionals.

Method

By following the steps of the Medical Research Council (MCR)'s framework for development and evaluation of randomised clinical trials (RCT) for complex interventions, we hope to improve health in ICU survivors (Figure 1). The following studies are planned:

1. Study 1: Explore existing literature and ICU practice, and develop a program in collaboration with patients, families, and ICU clinicians (sub-study 1-4).
2. Study 2: Feasibility RCT, testing the feasibility of providing early initiated functional and cognitive stimulation during ICU stay, which can be supported by nurses (sub-study 5).
3. Study 3: Protocol for evaluating the effectiveness of the NLS-ICU program in a high-quality RCT, using patient important outcomes, and including health economy (sub-study 6, protocol development).
4. Study 4: Implementing the NLS-ICU program nationally and internationally through scientific networks, publishing and educating ICU clinicians, patients, and relatives (sub-study 7).

Figure 1: MCR model for NLS-ICU.

