



## Study: Physical Therapy for Respiratory Failure Did not Reduce Length of Stay



A randomised, assessor-blinded [trial of standardised rehabilitation therapy \(SRT\) for patients with acute respiratory failure](#) in a single ICU found that SRT did not affect hospital length of stay. The study, performed at Wake Forest Baptist Medical Center, North Carolina, USA, is published in [JAMA](#).

Lead author [Peter E. Morris, MD](#), of the University of Kentucky, Lexington, USA, told *ICU Management & Practice* in an email: “The previous quality improvement studies with improved outcomes led us to configure this prospective randomised study. The idea of exercise as an intervention for critically ill patients may still be pursued in other intervention conditions.”

300 patients requiring mechanical ventilation were randomly assigned to standardised rehabilitation therapy (SRT; n=150), which consisted of 3 sessions of therapy a day that included passive range of motion, physical therapy and progressive resistance exercise, continued until discharge from hospital. The SRT group received passive range of motion for 87% of the study days, physical therapy for 55% and progressive resistance exercise for 36% of the days. The usual care group received physical therapy during the week only when ordered by the care team, for 12% of the study days. The usual care group did not receive resistance training. The groups were followed up at ICU and hospital discharge and at 2, 4 and 6 months. 84 patients in the SRT group and 81 in the usual care group completed the 6-month follow up.

See Also: [Early Mobilisation: How, When and Who](#)

### Results

The median hospital LOS was 10 days for both the SRT group and the usual care group, and there was no difference in duration of ventilation or ICU care. Functional-related and health-related quality-of-life outcomes were similar for the 2 study groups at hospital discharge. For the SRT group physical therapy started earlier than for the usual care group.

Of the secondary outcomes measured, three scores were higher in the SRT group: Short Physical Performance Battery (SPPB) score, the Short-Form Health Surveys (SF-36) Physical Function score and the Functional Performance Inventory (FPI) score. The researchers suggest that emphasis in the hospital in the SRT group on lower extremity function may have “inclined the SRT group to have greater movement while in the outpatient setting.”

The limitations of the study are the high dropout (24%) following hospital discharge and the fact that there was no intervention following discharge.

The researchers conclude that the exercise dose required to affect outcomes remains unclear. Morris said that further consensus statements and possibly meta-analyses will help the field determine how much if any early rehabilitation therapy in the ICU to administer. He added that the focus may be placed a bit more in the recovery period in order for patients and healthcare systems to experience improvements. He acknowledged that examining the short term and long term benefits of ICU interventions will be a challenge to reach the correct balance of improved outcomes for patients and their families.

Source: [JAMA](#); Interview

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