

## Assessment of Post-ICU Functional Outcome



Poor functional status is common after critical illness, and can adversely impact intensive care unit (ICU) survivors' abilities to live independently. Instrumental activities of daily living (IADL), which encompass complex tasks necessary for independent living, are a particularly important component of post-ICU functional outcome. Now new research indicates that survivors of critical illness commonly experience new or worsening IADL dependency that may improve over time.

"As part of ongoing efforts to understand and improve functional status in ICU survivors, future research must focus on risk factors for IADL dependencies and interventions to improve these cognitive and physical dependencies following critical illness," according to a systematic review to appear in the journal *Annals of the American Thoracic Society*.

Each year, millions of patients survive critical illness, but often experience new and persistent physical, psychiatric, and cognitive, impairments, collectively known as the "Post-Intensive Care Syndrome" (PICS). Each of these types of impairments is associated with long-lasting impairments in daily functioning.

Assessment of functional abilities after critical illness is crucial as functional impairments may interfere with the ability to live independently. Various approaches are available to assess functional outcomes after critical illness, including measures of strength and mobility, assessment of activities of daily living (ADLs). Activities of daily living involve one's ability to complete simple daily tasks such as bathing, dressing and feeding, whereas IADLs involve more complex tasks such as financial and medication management, driving, shopping, house cleaning, and meal preparation. IADL dependencies reflect higher order functional impairments due to the cognitive demands required for successful task completion.

Researchers conducted a systematic review of studies evaluating IADLs in survivors of critical illness. They searched the web for all relevant English-language studies published up to 2016. Sixteen studies (4,723 patients) published between 1999 and 2016 met eligibility criteria and were included in the analysis.

The review team observed that study definitions of impairment in IADLs were highly variable, as were reported rates of pre-ICU IADL dependencies (7% to 85% of patients). Eleven studies (69%) found survivors of critical illness had new or worsening IADL dependencies. In 3 of 4 longitudinal studies, survivors' IADL dependencies decreased over the follow-up period. Across multiple studies, no risk factors were consistently associated with IADL dependency.

"Our review suggests that various risk factors may increase ICU survivors' risk of post-ICU IADL dependencies, but there were few consistent associations with any of the variables reported. For example, older age was associated with post-ICU IADL dependency in three studies, while two studies did not find a similar relationship. IADL dependency was not consistently associated with illness severity or other markers of critical illness. This lack of consistent association may be because some studies were underpowered to demonstrate significant associations with pre-ICU or ICU factors and IADL dependency," the authors write.

The review team says more studies with rigorous methods are needed to determine if interventions will alter IADL dependency in ICU survivors.

Source: [Annals of the American Thoracic Society](#)

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Published on : Tue, 16 May 2017