

## ICU Delirium and Hospital Length of Stay

In this patient cohort, the majority of patients developed delirium in the ICU, and delirium was the strongest independent determinant of length of stay in the hospital. Further study and monitoring in the ICU of this complication and modifiable risk factors for its development are warranted. (see table below)

### Reference:

Ely EW, Gautam S, Margolin R, Francis J, May L, Speroff T et al. The impact of delirium in the Intensive care unit on hospital length of stay. *Intensive Care Med* 2001; 27:1892-1900. (see link on Reference page)

### Multiple Linear Regression Model: Predictors of Lengths of Stay in ICU and Hospital\*

Variable	Length of Hospital Stay (days)		
	Beta	95% C.I.	P Value
Intercept	1.82	-	-
Duration of Delirium #	1.18	1.05 -1.32	0.006
APACHE II	1.01	0.98-1.03	0.61
Age	1.00	0.99 – 1.00	0.38
Gender	1.22	0.84 – 1.75	0.30
Drug Days	1.13	1.01 –1.26	0.04

Using multivariate analysis, delirium was the strongest predictor of length of stay in the hospital (P=0.006) even after adjusting for severity of illness, age, gender, race, and days of benzodiazepine and narcotic drug administration.

\* Dependent variables were log transformed prior to analysis, but estimates have been back transformed into original scale for presentation. Beta coefficients can be interpreted as average stay in days (intercept) or expected difference in stay between patients with and without the listed condition; 95% C.I. = 95% confidence intervals; APACHE II = denotes Acute Physiology and Chronic Health Evaluation II score [21]; Drug Days = number of days that a patient received psychoactive medications designated in Methods

# Delirium with onset in the ICU (i.e., “ICU-onset” delirium), duration measured in days. The adjusted  $r^2$  for delirium in relation to the ICU stay was 0.37, and for the hospital stay the adjusted  $r^2$  was 0.55.