It does not matter if you are admitted to an intensivist-led ICU ‘off hours’

Most patients admitted to ICU also have a “golden hour”, meaning that adequate early treatment may actually save lives. As ICU resources (both medical personnel and equipment) may be different between daytime and off hours, outcome may be different depending on the admission time. Meynaar et al. studied mortality in relation to admission time in three different non-academic intensivist-led intensive care units.

Off hours were defined as the hours between 10 pm and 8 am on weekdays and between 8 pm and 9 am during the weekend. Organizational characteristics of the three units all conformed with those of a level II or level III ICU. Data were collected from the minimal dataset endorsed by the Dutch National Intensive Care Evaluation (NICE) foundation. All adult patients admitted between January 1 2004 and December 31 2007 were eligible for inclusion. Patients admitted for burns and post cardiac surgery patients were excluded. Patients admitted for less than 8 hours were also excluded. A total of 6725 patients were included; 4553 during daytime and 2172 off hours. Elective surgery patients admitted off hours were significantly sicker than those admitted during daytime. Standardized mortality ratios were not significantly different between patients admitted during daytime or off hours. This was also true if medical patients, elective surgery patients or urgent surgery patients were evaluated separately. Logistic regression analysis confirmed that off-hour admission was not related to outcome.

This study supports the hypothesis that off-hour admission in intensivist-led ICUs does not necessarily result in an increase in mortality. If confirmed, this study may contribute to optimal intensive care unit organization. However, one should realize that although important, only mortality was evaluated as an outcome measure. Other measures of the quality of care should be taken into account.


What is the best delirium assessment tool in a mixed intensive care unit?

ICU-related delirium is a serious disorder and independently associated with increases in morbidity and mortality. The optimal screening method for use by nonpsychiatric personnel is still unknown. Van Eijk et al. compared the CAM-ICU and the intensive Care Delirium Screening Checklist (ICDSC) to a gold standard or reference rater (RR).

The CAM-ICU was administered by specially trained critical care study nurses. The patient’s bedside critical care nurse rated the ICDSC. The gold standard was a formal neuropsychiatric assessment by a trained expert in geriatrics, psychiatry or neurology. A total of 126 patients were included. Using the gold standard, 43 patients were diagnosed as delirious (34%) 29 as hypoactive, 5 as hyperactive, 8 as mixed and 1 as non-determined. Sensitivity and specificity for the CAM-ICU were 64% and 88% and for the ICDSC 43% and 95%. In patients with another cerebral disorder, sensitivity of the CAM-ICU was much higher (80 versus 31%). When intensivists and fellows in intensive care were asked if they thought the patient was delirious, the sensitivity and specificity were 63% and 100% respectively. The residents found sensitivity to be only 14%. In hypoactive patients the CAM-ICU had a higher sensitivity but a lower specificity than the ICDSC.

This study generalizes the applicability of the delirium assessment tools in ICU and shows that the sensitivity of the CAM-ICU is higher than the ICDSC. The authors state that the assessment tools performed better than the judgement of the physicians, but this is only true for the residents and not for the intensivists and fellows. Although extensive training is an absolute necessity, this study lends further support for the widespread introduction of the CAM-ICU as a screening tool for ICU-related delirium.