The Risk Factors of Unplanned Endotracheal Extubation in an Adult Intensive Care Unit

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PURPOSE
Unplanned endotracheal extubation (UEE) is a frequent problem in the intensive care unit and represents an adverse event. It increases morbidity in the intensive care unit (ICU) resulting in prolonged hospital stays and increased costs. The purpose of this study is to investigate the risk factors of UEE in the ICU.

METHODS
This is a retrospective case control study. We collected 106 unplanned self-extubation cases for this study from January 2011 to December 2012 in a medical center in southern Taiwan.

RESULTS
The results show: (1) 106 unplanned endotracheal extubation occurred during the 24 month period, (2) the rate was higher in men than in women, and (3) mostly occurred in patients over the age of 70. The frequency of UEE was highest during day shifts (41.5%). Many events happened during the one hour before and after change of duty shifts (21.6%). Over half of these cases were been inappropriately restrained. 29.4% of the UEEs occurred during mouth care. After unplanned endotracheal extubation, 50.9% of the patients were re-intubated.

CONCLUSIONS
The risk factors for unplanned endotracheal extubation elucidated in this study could be used in improving quality control measures in medical administration, clinical practice, and nursing education.