

POSTER PRESENTATION

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Nurses' practice concerning weaning from mechanical ventilation in the intensive care unit

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Introduction

Weaning from mechanical ventilation is an important responsibility for ICU nurses [1].

Objectives

To identify weaning practices among ICU nurses.

Methods

A cross-sectional, self-administrated survey was developed. Consensus on content validity was achieved through a Delphi procedure among experts. The survey was distributed and collected during the annual congress of the Flemish Society of Critical Care Nurses (Dec. 2014).

Results

423 attendants completed the survey (response rate: 66%) of which 342 ICU nurses were included for further analysis. These are employed in general (73%) or university hospitals (27%) and are working in mixed (66%), surgical (18%) or medical (13%) ICUs.

Nurses working in university hospitals reported higher availability of weaning protocols (44% vs 29%; $p = 0.016$). 22% of nurses reported the availability of both weaning and sedation protocol. Protocols are paper-based (23%) or computer-assisted (5%) and in 20% of the cases never used. Nearly 20% of the nurses got some information or training about use of their protocol.

Most frequently chosen weaning modes are CPAP (77%), BiLevel/BIPAP (74%) and PSV (59%). Nurses report to autonomously change ventilation modes (68%), pressure support (PS) level (66%) and respiratory rate (49%). Before starting a spontaneous breathing trial (SBT) evaluation of respiratory status (83%), respiratory capacity (73%) and oxygenation (63%) are considered. Spontaneous breathing on T-tube (58%) is the most frequently chosen SBT

approach next to CPAP (57%) and PS ventilation with minimal PS (46%). Duration of first SBT between 30 and 120 minutes was found in nearly 50% of responses but it was not associated with the presence or absence of a weaning protocol ($p = 0.57$). Less than 30 minutes SBT was reported by 45% of nurses. In majority of the cases is SBT repeated 3 times per day (38%) and mostly at the daytime (99% vs. 37%).

SBT is considered successful if adequate gas exchange is maintained during the procedure (89%), and prematurely terminated in case of signs of exhaustion (89%), inadequacy of gas exchange (90%) or hemodynamic instability (66%). Prior to extubation almost all nurses (94%) indicate oxygenation as an important parameter.

When it comes to weaning, nurses are generally satisfied about the cooperation with MDs. Decision making in weaning is mostly taken by MDs (91%).

Conclusions

Less than half of nurses use weaning protocols. Variability in nurses' practical approaches to weaning appears to be considerable. Physicians are mostly involved in decision making on weaning.

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