

INFOGRAPHICS IN ANESTHESIOLOGY

Complex Information for Anesthesiologists Presented Quickly and Clearly

Twitch Monitor to Choose? Quantitative Intraoperative Neuromuscular Monitoring



Quantitative train-of-four (TOF) monitoring is recommended after neuromuscular blocking drug (NMB) administration.¹ In this issue of ANESTHESIOLOGY, Weigel

et al. describe a quality improvement project aimed at attaining documented quantitative TOF ratios ≥ 0.90 in all patients receiving NMB.²



300-bed urban teaching hospital with 28 anesthetizing locations

By combining principles of quality improvement and implementation science, evidence-based practices can be implemented in routine clinical care. Weigel *et al.* demonstrated $>90\%$ compliance with documented TOF ≥ 0.90 , which persisted after project completion.

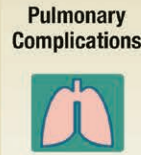
TOF $\geq 0.9^*$



73 m
[55,102]



3 days
[2,5]



94 of 4,138
(2.3%)



1,377 of 9,034
(15%)

Department Professional Practice Initiative



Monitors

Selection based on:

- Clinician feedback
- Projected costs in all anesthetizing locations



Instructional videos

- How to place electrodes
- Underlying technology
- Device menus



Reminders

- Automated charting reminders
- Department & individual emails



Performance

- Ongoing Professional Practice Performance metric
- Tied to credentialing

68 m
[49,95]

$P < 0.001$

PACU
LOS

2 days
[1,4]

$P < 0.001$

Hospital
LOS

23 of 1,817
(1.3%)

$P < 0.010$

Pulmonary
Complications

2,879 of 4,157
(69%)

$P < 0.001$

Sugammadex

LOS, length of stay; PACU, postanesthesia care unit.

*Percentage of cases with documentation of quantitative train-of-four ≥ 0.90 .

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1. Naguib M, Brull SJ, Kopman AF, Hunter JM, Fülesdi B, Arkes HR, Elstein A, Todd MM, Johnson KB: Consensus statement on perioperative use of neuromuscular monitoring. *Anesth Analg* 2018; 127:71–80
2. Weigel WA, Williams BL, Hanson NA, Blackmore CC, Johnson RL, Nissen GM, James AB, Strodbeck WM: Quantitative neuromuscular monitoring in clinical practice: A professional practice change initiative. *ANESTHESIOLOGY* 2022; 136:901–15