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Volume 139
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Editorial

Best Practice Alerts: A Poke in the Eye or an Efficient Method for Safer Prescribing?

C. M. Brummett, Z. Wagner, J. F. Waljee119

Perioperative Medicine

CLINICAL SCIENCE

◆ **Patient-, Clinician-, and Institution-level Variation in Inotrope Use for Cardiac Surgery: A Multicenter Observational Analysis**

M. R. Mathis, A. M. Janda, S. Kheterpal, R. B. Schonberger, F. D. Pagani, M. C. Engoren, G. B. Mentz, D. C. Shook, J. D. Muehlschlegel, Multicenter Perioperative Outcomes Group122

While presenting patient comorbidities and characteristics are related to variability in inotrope use during cardiac surgery with cardiopulmonary bypass, the institution where surgery is performed and the attending anesthesiologist caring for the cardiac surgical patient are also factors associated with increased variability in inotrope usage.

◆ **Attributable Perioperative Cost of Frailty after Major, Elective Noncardiac Surgery: A Population-based Cohort Study**

R. McGinn, Y. Agung, A. L. Grudzinski, R. Talarico, J. Hallet, D. I. McIsaac.....143

In a linked administrative dataset of 171,576 patients age 66 yr or older undergoing elective, noncardiac surgery in Ontario between 2012 and 2018, 23,219 (13.8%) demonstrated frailty defined using a multi-dimensional frailty index. After adjusting for confounders, patients with frailty demonstrated an absolute cost increase of \$11,828 Canadian dollar (ratio of means 1.53; 95%

CI, 1.51 to 1.56). Among the various components of total 1-yr costs, postacute care costs had the largest relative increase.

◆ **Postoperative Transfusions after Administration of Delayed Cold-stored Platelets versus Room Temperature Platelets in Cardiac Surgery: A Retrospective Cohort Study**
A. M. Klompas, S. Zec, A. C. Hanson, T. Weister, J. Stubbs, D. J. Kor, M. A. Warner.....153

In an observational cohort of 713 adult cardiac surgical patients, 74% received room temperature versus 26% delayed cold-stored platelets, those receiving cold-stored platelets had a higher odds of transfusions in the first 24 h postoperatively (44% vs. 32%). However, there were no significant differences among those transfused in the total number of units transfused postoperatively, reoperation for bleeding, chest tube output, or clinical outcomes.

◆ **Comparison of a Modern Digital Mechanomyograph to a Mechanomyograph Utilizing an Archival Grass Force Transducer**
K. E. Michaelsen, S. Jelacic, S. T. Nguyen, K. J. Haththotuwegama, K. Togashi, A. Bowdle164

The hypothesis that the train-of-four ratios recorded by an archival mechanomyograph would be equivalent to those of a modern laboratory-built mechanomyograph was tested by comparing the train-of-four ratios measured by the two instruments in the contralateral arms of eight anesthetized patients during the onset and recovery from rocuronium neuromuscular blockade. A total of 767 paired train-of-four ratio data points were collected with the archival and new mechanomyography systems. The new laboratory-built mechanomyograph and the archival mechanomyograph obtained essentially interchangeable train-of-four ratio measurements, providing reassurance of comparability of past and future studies performed with these modern mechanomyography systems.

◆ Refers to This Month in ANESTHESIOLOGY

◆ Refers to Editorial

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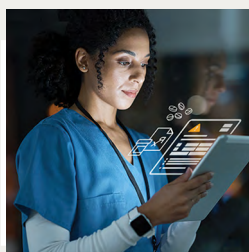
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◆ This article has a Video Abstract

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◆ This article has a Visual Abstract

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ON THE COVER: Overprescription of opioids after surgery remains common, and residual and unnecessarily prescribed opioids can provide a reservoir for nonmedical use. In this issue of ANESTHESIOLOGY, Rolfzen *et al.* tested the hypothesis that a decision-support tool embedded in electronic health records would guide clinicians to prescribe fewer opioids at discharge after inpatient surgery. In an accompanying editorial, Brummett *et al.* stressed the need for best practices and other interventions to ensure safer prescribing and help address the opioid epidemic. Cover illustration: A. Johnson, Vivo Visuals Studio.

- Rolfzen *et al.*: Best Practice Alerts Informed by Inpatient Opioid Intake to Reduce Opioid Prescribing after Surgery (PRIOR): A Cluster Randomized Multiple Crossover Trial, p. 186
- Brummett *et al.*: Best Practice Alerts: A Poke in the Eye or an Efficient Method for Safer Prescribing?, p. 119

BASIC SCIENCE


 **Epinephrine-induced Effects on Cerebral Microcirculation and Oxygenation Dynamics Using Multimodal Monitoring and Functional Photoacoustic Microscopy**

D. Zhang, W. Wang, X. Zhu, R. Li, W. Liu, M. Chen, T. Vu, L. Jiang, Q. Zhou, C. L. Evans, D. A. Turner, H. Sheng, J. H. Levy, J. Luo, W. Yang, J. Yao, U. Hoffmann.....173

Using a variety of high-resolution measurement techniques, the authors found that microvascular vasoconstriction continued after arterial blood pressure had been restored. There was decrease in oxyhemoglobin in the microcirculation that was associated with an unexpected increase in brain tissue oxygen. The vascular reactivity in aged brains was smaller in magnitude but more persistent than that seen in young brains.

Pain Medicine

CLINICAL SCIENCE

 **Best Practice Alerts Informed by Inpatient Opioid Intake to Reduce Opioid Prescribing after Surgery (PRIOR): A Cluster Randomized Multiple Crossover Trial**

M. L. Rolfzen, A. Wick, E. J. Mascha, K. Shah, M. Krause, A. Fernandez-Bustamante, J. S. Kutner, P. M. Ho, D. I. Sessler, K. Bartels.....186

In this cluster randomized multiple crossover trial, four hospitals were randomized to alternating 8-week periods with an electronic decision-support tool that recommended tailored discharge opioid prescriptions based on previous inpatient opioid intake. There was no difference in the primary outcome of oral morphine milligram equivalents prescribed at discharge. In the setting of extensive education and increasing awareness of the risks of overprescription, electronic opioid prescription guidance did not significantly reduce opioid prescribing.

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