

# Improve Patient Outcomes with the New Intraoperative Hypotension Quality Measure

Approved by the Centers for Medicare & Medicaid Services (CMS) as a Qualified Clinical Data Registry (QCDR) measure within the Merit-Based Incentive Payment System (MIPS) reporting program, the Intraoperative Hypotension (IOH) quality measure supports an increasing desire for objective quality measurement and reporting.



**This IOH Measure encourages qualified anesthesia providers to maintain an intraoperative mean arterial pressure (MAP) above 65 mmHg in order to reduce the risk of adverse outcomes such as acute kidney injury and myocardial injury.**

ePreop is co-stewarding the IOH Measure with the Cleveland Clinic to promote awareness around non-emergent, noncardiac cases in which a patient's MAP falls below 65 mmHg for a cumulative total of 15 minutes or more.

## Studies Have Shown Strong Associations Between Intraoperative Hypotension (IOH) and Acute Kidney and Myocardial Injury



Intraoperative Hypotension is a prevalent issue among adult noncardiac surgery patients; an estimated 31.3% have experienced a MAP below 65 mmHg for 10 minutes or longer.<sup>1</sup> Studies have shown a strong association between IOH and increased risk of acute kidney injury and myocardial injury — the latter being a common cause of postoperative mortality within 30 days after surgery.<sup>2-4</sup> Increased risk of adverse outcomes is a function of both hypotension severity and duration.<sup>5</sup> MAPs below absolute thresholds of 65 mmHg or relative thresholds of 20% were progressively related to both myocardial and kidney injury. Noncardiac surgery patients are at increased risk of AKI and myocardial injury when their cumulative time below a MAP of 65 mmHg reaches or exceeds 13 minutes. When patients fall further below this threshold, even shorter durations are associated with increased odds.<sup>2</sup>

<sup>1</sup> Bijker, J., van Klei, W., Kappen, T., van Wolfswinkel, L., Moons, K., Kalkman, C. (2007). Incidence of Intraoperative Hypotension as a Function of the Chosen Definition. *Anesthesiology*, 107(2), 213-220.

<sup>2</sup> Salmasi, V., Maheshwari, K., Yang, G., Mascha, E.J., Singh, A., Sessler, D.I., & Kurz, A. (2017). Relationship between intraoperative hypotension, defined by either reduction from baseline or absolute thresholds, and acute kidney injury and myocardial injury. *Anesthesiology*, 126(1), 47-65.

<sup>3</sup> Sun, L.Y., Wijeyesundera, D.N., Tait, G.A., & Beattie, W.S. (2015). Association of Intraoperative Hypotension with Acute Kidney Injury after Elective Noncardiac Surgery. *Anesthesiology*, 123(3), 515-523.

<sup>4</sup> Walsh, M., Devereaux, P.J., Garg, A.X., Kurz, A., Turan, A., Rodseth, R.N., Cywinski, J., Thabane, L., & Sessler, D.I. (2013). Relationship between Intraoperative Mean Arterial Pressure and Clinical Outcomes after Noncardiac Surgery. *Anesthesiology*, 119(3), 507-515.

<sup>5</sup> Sessler, D., Bloomstone, J., Aronson, S., Berry, C., Gan, T., Kellum, J., Plumb, J., Mythen, M., Grocott, M., Edwards, M., Miller, T. (2019). Perioperative Quality Initiative Consensus Statement on Intraoperative Blood Pressure, Risk and Outcome for Elective Surgery. *British Journal of Anesthesia*, 122 (5), 563-574.

## Implement the Intraoperative Hypotension (IOH) Measure in Your Quality Improvement Activities

Measure participation goals include: (1) improving patient outcomes, (2) facilitating Merit-Based Incentive Payment System (MIPS) participation with decreased provider burden, (3) supporting quality improvement initiatives and (4) putting providers at the forefront of objective quality improvement programs.

Providers meeting the technical requirements can activate the IOH Measure within their ePreop software solution at no additional cost.



### PROVIDER BENEFITS

- Improve patient safety and care
- Serve as a leader in establishing and defining a new quality measure
- Contribute to patient safety and practice assessment improvement activity scores
- Reduced provider documentation burden — ePreop manages data collection, analysis, score calculations and submission

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Be a part of setting a new standard in the quality of intraoperative care.

To learn more about the Intraoperative Hypotension (IOH) Measure:

Visit: [provationmedical.com/ioh](https://provationmedical.com/ioh)