

## BP 01 Review - September 26, 2022

Dr. Kamal Maheshwari

Review BP 01 Measure Specification by selecting this [link](#)

### Review of new literature (last review October 2019)

#### Dr. Kamal Maheshwari

Overall there are many studies which support the association of hypotension and bad outcomes. MAP 65 is consistently used. Here are some examples below. Also data from Futier et al and POISE, VISION trial shows that hypotension is common in groups with worse outcomes. It is also clear that depth of hypotension has a much higher impact on outcomes. For example, few minutes below 55 may have a higher impact than many minutes 65→ 64.

1. Intraoperative Hypotension and Myocardial Injury After Noncardiac Surgery in Adults With or Without Chronic Hypertension: A Retrospective Cohort Analysis.

DOI,10.1213/ANE.0000000000005922.

Key result: Baseline blood pressure of the hypertensive patients was only moderately increased on average, and the event rate was low. Nonetheless, we were not able to demonstrate a difference in the harm threshold between normotensive and chronically hypertensive patients. Our results do not support the theory that hypertensive patients should be kept at higher intraoperative pressures than normotensive patients.

2. A randomized controlled feasibility trial of a clinical protocol to manage hypotension during major non-cardiac surgery. DOI, 10.1111/anae.15715

Key result: MAP <65 used as threshold and is common

3. Intraoperative hypotension is associated with persistent acute kidney disease after noncardiac surgery: a multicentre cohort study. DOI 10.1016/j.bja.2022.03.027

Key result: hypotension is associated with acute kidney injury. Especially MAP <55

**Appropriateness of rationale**

**Dr. Kamal Maheshwari**

It's appropriate to limit any time below 55 mmHG

**Evaluation of inclusion/ exclusion criteria**

**Dr. Kamal Maheshwari**

Looks ok

**Evaluation of definition of success or flagged cases**

**Dr. Kamal Maheshwari**

Looks ok

**Other feedback**

**Dr. Kamal Maheshwari**

We did work for CMS quality metric, Development and Evaluation of a Risk-Adjusted Measure of Intraoperative Hypotension in Patients Having Nonemergent, Noncardiac Surgery. 10.1213/ANE.0000000000005287

And we are asked to improve the risk-adjustment.

**Recommendation for BP 01**

	<b>Dr. Maheshwari</b>
Keep as is: no changes at all	<input type="checkbox"/>
Modify: changes to measure specifications (see below)	<input checked="" type="checkbox"/>
Retire: eliminate entirely from dashboard and emails	<input type="checkbox"/>

**Summary of recommended modifications (if applicable)**

There is some concern that high-risk patients will have worse outcomes, and hypotension is the mediator. Thus some sort of risk adjustment will be required. May be only age (carried a lot of information about comorbidities) and the surgical procedure (surgical risk). But that will make the metric complicated and we need to consider the risk and benefits of risk adjustment.

Also, the cumulative time is 20 minutes, which is a long period. Based on the pass rate, I suggest decreasing this time to 10 minutes or lower.