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Prevalence of intra-operative hypotensive episodes at SUNY Downstate Medical Center: a retrospective observational study.

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Background: Intraoperative hypotension (IOH) is a key surgical quality measure, impacting patient safety and outcomes. IOH is linked to ischemia, organ dysfunction, and complications like myocardial infarction, stroke, and acute kidney injury. Repeated episodes increase perioperative mortality and long-term risks. Accurate measurement in hypertensive populations remains challenging. This study aims to gather the prevalence of IOH in the SUNY Downstate community while considering the population's high prevalence of hypertension.

Methods: This retrospective study analyzed surgical cases at SUNY Downstate (March–September 2023) using electronic medical records. IOH was defined as (1) MAP <20% below preoperative MAP or (2) MAP <65 mmHg. Exclusions: missing MAP data, age <18, emergent procedures, ASA status <3, or no IOH episodes. Data analysis was conducted using Excel.

Results: Of 3,751 patients, 2,410 were excluded—886 had no IOH episodes, 296 were under 18, 291 had emergency procedures, 216 had ASA <3, and 721 had missing data. Among 624 patients with IOH, 54% were hypertensive preoperatively. IOH affected 42% of eligible patients. Of these, 616 had MAP drops >20% (avg. 1.6 episodes, 51 min duration), and 59 had MAP <65 mmHg (1.2 episodes, 26 min duration). IOH cases: 89.2% African American, 6.3% White, 1.8% Asian, 2.7% undisclosed.

Conclusion: Most IOH patients were hypertensive preoperatively. The racial distribution reflects SUNY Downstate's demographics, limiting conclusions on disparities. Compared to studies showing 29%–94% IOH incidence, Downstate had a lower rate. IOH tracking is crucial for risk assessment and management. Findings suggest most IOH episodes occurred in hypertensive patients. Further research is needed to examine IOH incidence across ethnicities.