

Patterns of Intraoperative Hypotension (IOH) in Community Anesthesia Practice

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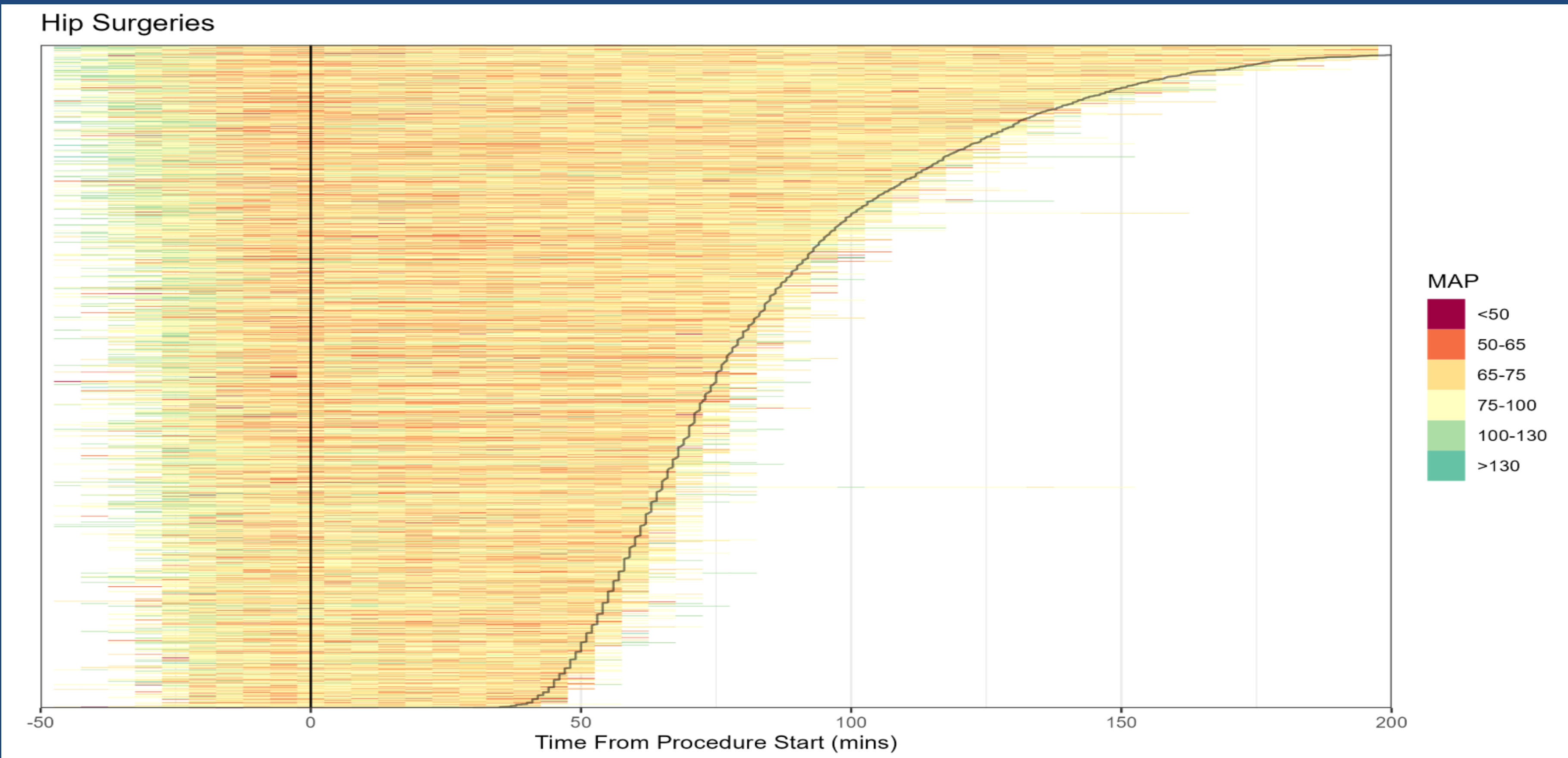
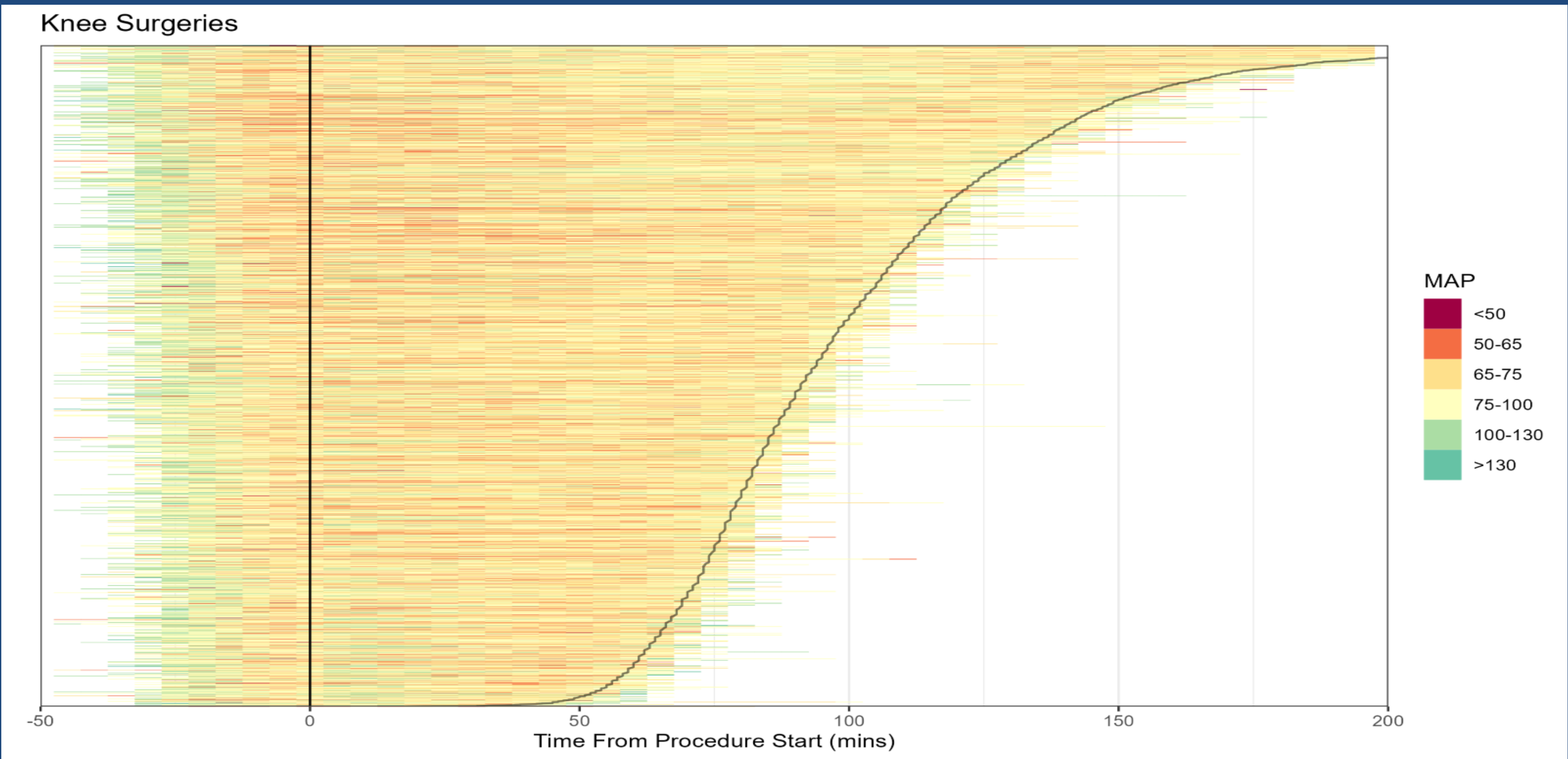
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Background / aims

- Intraoperative hypotension (IOH)
- Subset of perioperative hemodynamic instability
- Multiple adverse postoperative outcomes
- Significant incidence of IOH in both academic and community practice
- Few studies on timing of IOH

Methods

- National sample of community surgical centers – 45 facilities
- Focus on hip and knee replacement (more predictable surgical course)
- Nonemergent, noncardiac
- 2020, 2021
- 132,812 total surgical cases (3,100 hip and 4,253 knee replacements)
- MAP < 65 mmHg was considered hypotension



	Induction phase hypotension	Surgical phase hypotension
Overall sample (all surgeries)	• Younger (18 -39) and older age (65+) [vs middle age (40-64)] • Female sex • ASA IV • General anesthesia • Higher ABUs (esp if 15+) • There is variation in risk across body systems	• Younger age (18-39) • Female sex • ASA 1 • Neuraxial anesthesia • Lower ABUs (i.e. surgeries with less complex anesthesia) • All body systems have higher association with IOH than upper and lower abdomen, which have lowest risk
Hip and knee replacement surgery	• Female sex • Hip replacement [vs knee] • Patterns in age, ASA status, anesthesia type were not statistically significant	• Female sex • Neuraxial anesthesia • Hip replacement [vs knee] • Patterns in age and ASA status were not statistically significant

Results

- Among all surgeries, median TWA MAP < 65 mmHg was greater in the induction period than the surgical period
- Hips: TWA MAP < 65 mmHg was higher in the surgical than induction period
- Knees: TWA MAP < 65 mmHg was not significantly different in the induction and surgical periods

Discussion

- Tens of millions of surgical procedures occur in the community setting annually, expected to increase substantially
- Identifying patterns of hypotension may aid the clinician in mitigating and treating these episodes with better accuracy and success