

## Problem Statement

- Spinal induced hypotension (SIH) is a complication of spinal anesthesia
- If not prevented or treated, SIH may lead to adverse events such as myocardial infarction, stroke, and cardiac arrest
- At a community hospital, approximately 20 total knee arthroplasties (TKAs) are performed each week and 90% receive spinal anesthesia
- One-third of these patients develop SIH
- Evidence shows that administering 4mg of ondansetron, 5 minutes prior to spinal anesthesia can prevent SIH by antagonizing the Bezold-Jarisch Reflex

## Purpose and Goals

### Purpose:

- Implement and evaluate the effectiveness of a SIH guideline supporting administration of 4mg of ondansetron, 5 minutes prior to spinal anesthesia in TKA patients

### Process Goals:

- 100% guideline compliance among anesthesia providers

## Methods

### Setting:

- Implemented over a 15-week period in the operating rooms of a community hospital

### Intervention:

- Guideline implementation

### Inclusion Criteria:

- TKA patients receiving spinal anesthesia

### Exclusion Criteria:

- TKA patients not receiving spinal anesthesia
- TKA patients with documented contraindication to ondansetron

### Implementation Strategies & Tactics

- Virtual and in-person education sessions, laminated guideline placed in each operating room, weekly compliance rate displayed in the anesthesia lounge

### Measures

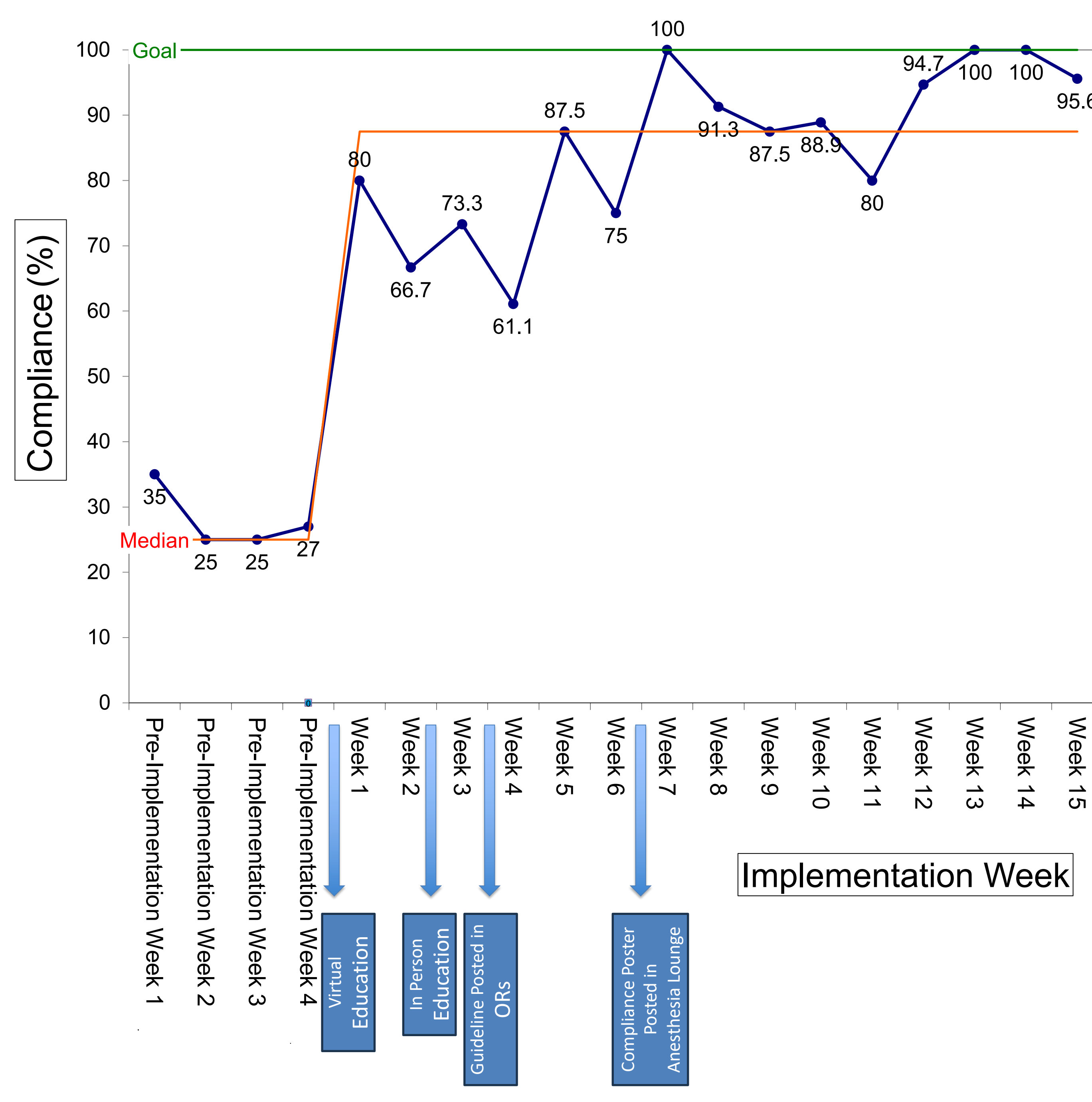
- Data collected via retrospective chart review of the electronic medical record and tracked via run-chart

## Results

### Patient Characteristics (N=285)

	n	%
Total Number of Eligible Patients	285	100
Number Included	262	91.9
Number Excluded	23	8.1
Not Receiving Spinal	23	100
Ondansetron Contraindication	0	0

### Compliance with Spinal Induced Hypotension Guideline in Total Knee Arthroplasty Patients



## Discussion

### Goal/Purpose Achievement:

- Median administration of ondansetron prior to spinal anesthesia increased from 25% to 87.5% after guideline implementation
- Compliance improved with education, reminders, and incentives
- Findings align with the literature. When paired with site specific strategies, guideline implementation can initiate and sustain evidence-based practice change

### Limitations:

- Limited number of staff who attended guideline education
- Variation in provider preferences
- Variation in anesthesia provider assigned during TKA

## Conclusion

### Implications for Practice:

- Implementing a SIH guideline to increase administration of ondansetron prior to spinal anesthesia is feasible
- As a result of this project, SIH and its complications may be prevented or reduced

### Sustainability:

- Provide annual education on SIH prevention
- Keep guideline posted in each operating room
- Promote champions to educate new staff on SIH prevention

### Next Step:

- Implement guideline in other populations receiving spinal anesthesia
- Measure reduction in SIH

## References and Acknowledgements



Special acknowledgement to Erin Story, DNP, CRNA who assisted with the planning and implementation of this project.