

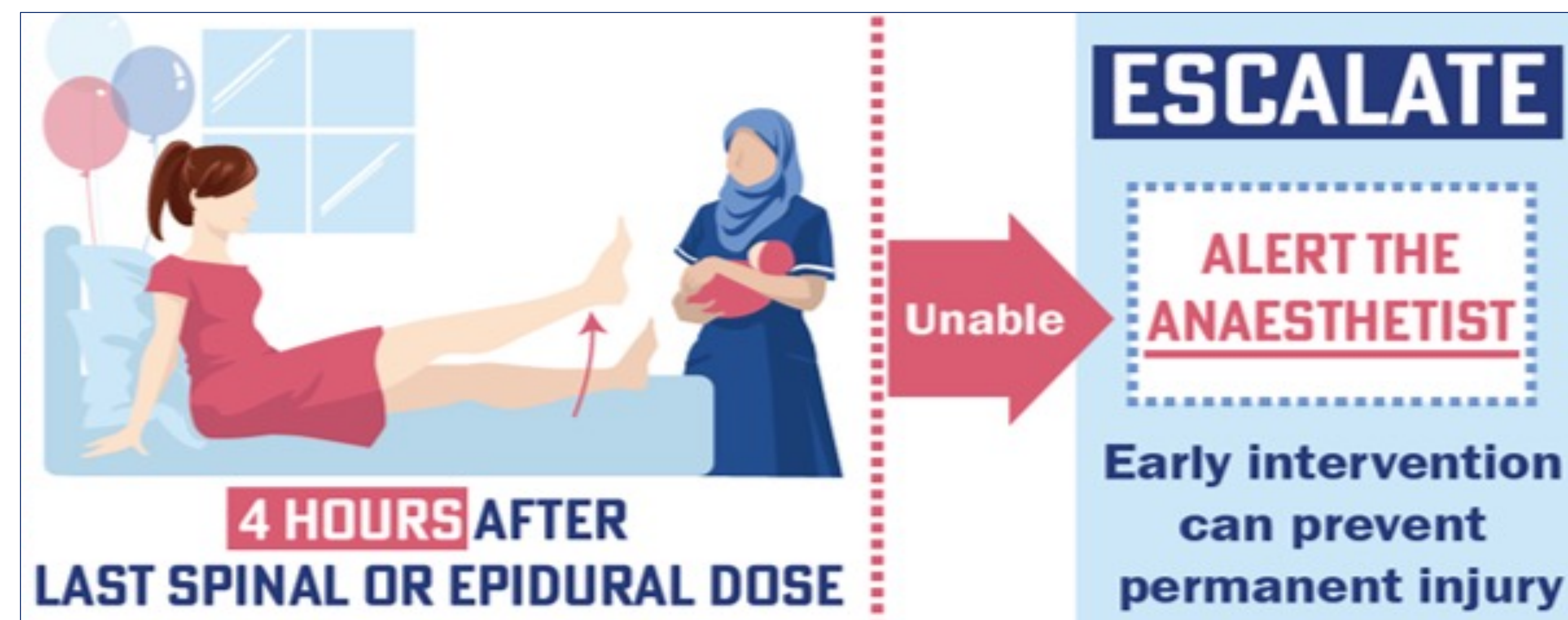
Comparison of Motor Block Regression Times Following Spinal and Epidural Anesthesia for Cesarean Delivery – *a retrospective cohort analysis*

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Introduction:

- Inability to perform straight leg raise (+SLR) 4h after neuraxial anesthesia has been recommended as a time trigger for review by an anesthesiologist for serious complications



- However, when implementing this threshold, we have found too many reviews are triggered

Hypothesis:

- Median time to motor block regression is significantly greater than 4h after spinal anesthesia

Method:

- 200 patients undergoing scheduled or unscheduled deliveries under single shot spinal (n=100) or epidural anesthesia (n=100)
- Start time: time of intrathecal injection or epidural top-up
- End time: time of +SLR
- All sensory and motor evaluations performed as per institutional protocol

Primary Outcome:

- Median time to block regression

Secondary Outcomes:

- Median time to +SLR stratified by spinal dose
- Median time to full sensory recovery

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Results:

Primary Outcome: Median time to block regression

- **Spinal 5.8h** [4.2-6.7] vs. **Epidural 4.0h** [3.2-5.3]
- HR 0.55; 95% CI 0.41-0.73, $p<0.001$

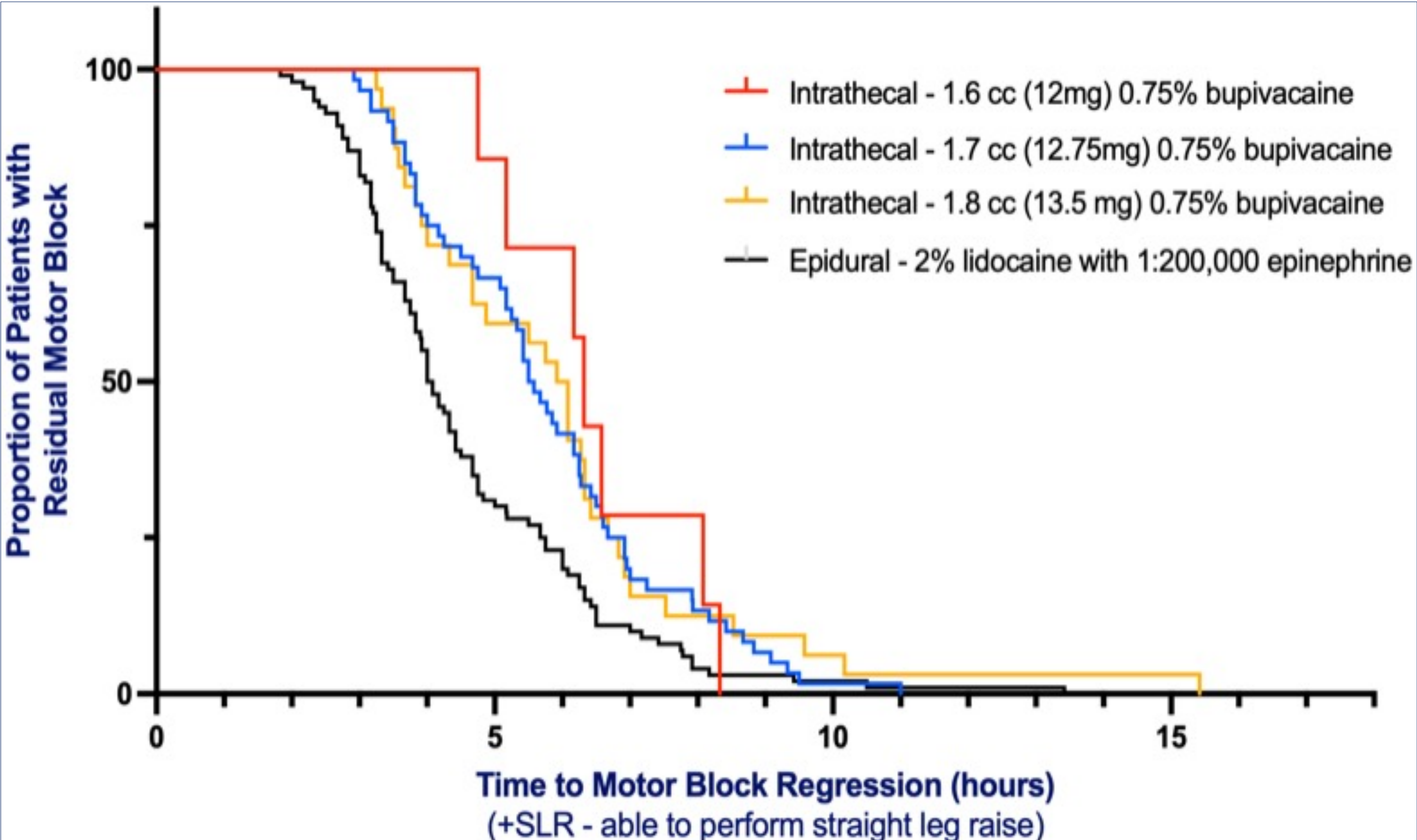
Secondary Outcomes:

- Stratified by bupivacaine dose ($p=0.81$, Figure 1)

Dose	Median Times	Min - Max Times
1.6 mL	6.3h	5.2-8.3h
1.7 mL	5.5h	4.0-11.0h
1.8 mL	6.0h	3.9-15.4h

- Median [IQR] time to sensory block regression
 - **Spinal 9.6h** [8.0-11.1] vs. **Epidural 7.0h** [5.9-8.4]
- No neurologic complications

Figure 1: Time to +SLR



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Discussion:

- Using 12-13.5 mg of bupivacaine, > 50% of patients following spinal anesthesia continued to have significant motor block at 4h
- Motor block after spinal anesthesia has significantly longer median time to recovery compared to epidural anesthesia
 - Previous reports suggest regression after spinal anesthesia is more rapid compared to epidural anesthesia¹⁻⁶
 - Inform patients of expected time to block regression (spinal vs epidural)
- Institutions should consider using their own hospital data and dosing, to determine what time thresholds should be utilized

References:

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