



Regional Blocks and Foot Surgery – Single Center Experience with Calcaneal Osteotomies

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Introduction

- Children with foot deformities who have pain that affects normal activities may require surgical osteotomies.

Methods

- We performed a retrospective review identifying 125 patients under 18 years-old having calcaneal osteotomies between July 2013 and June 2017.

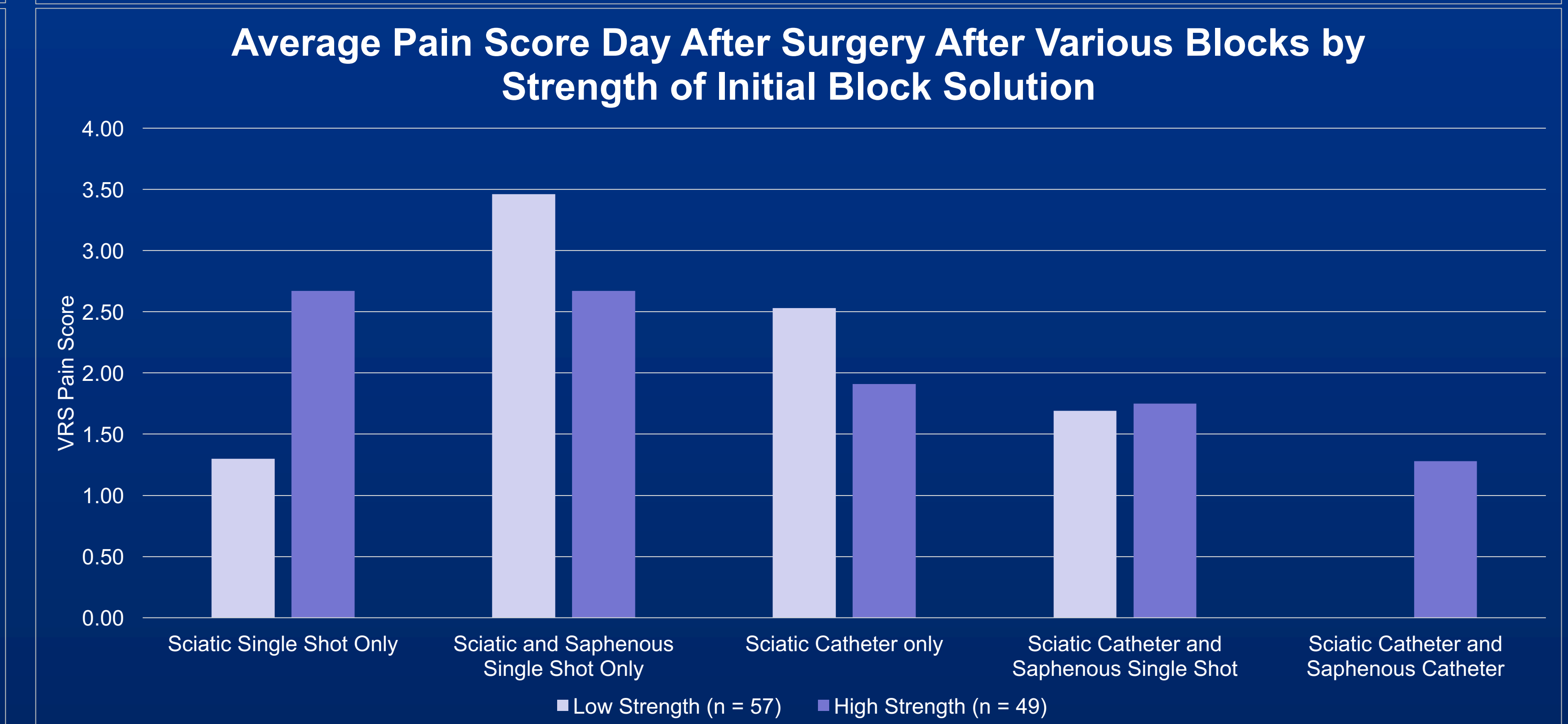
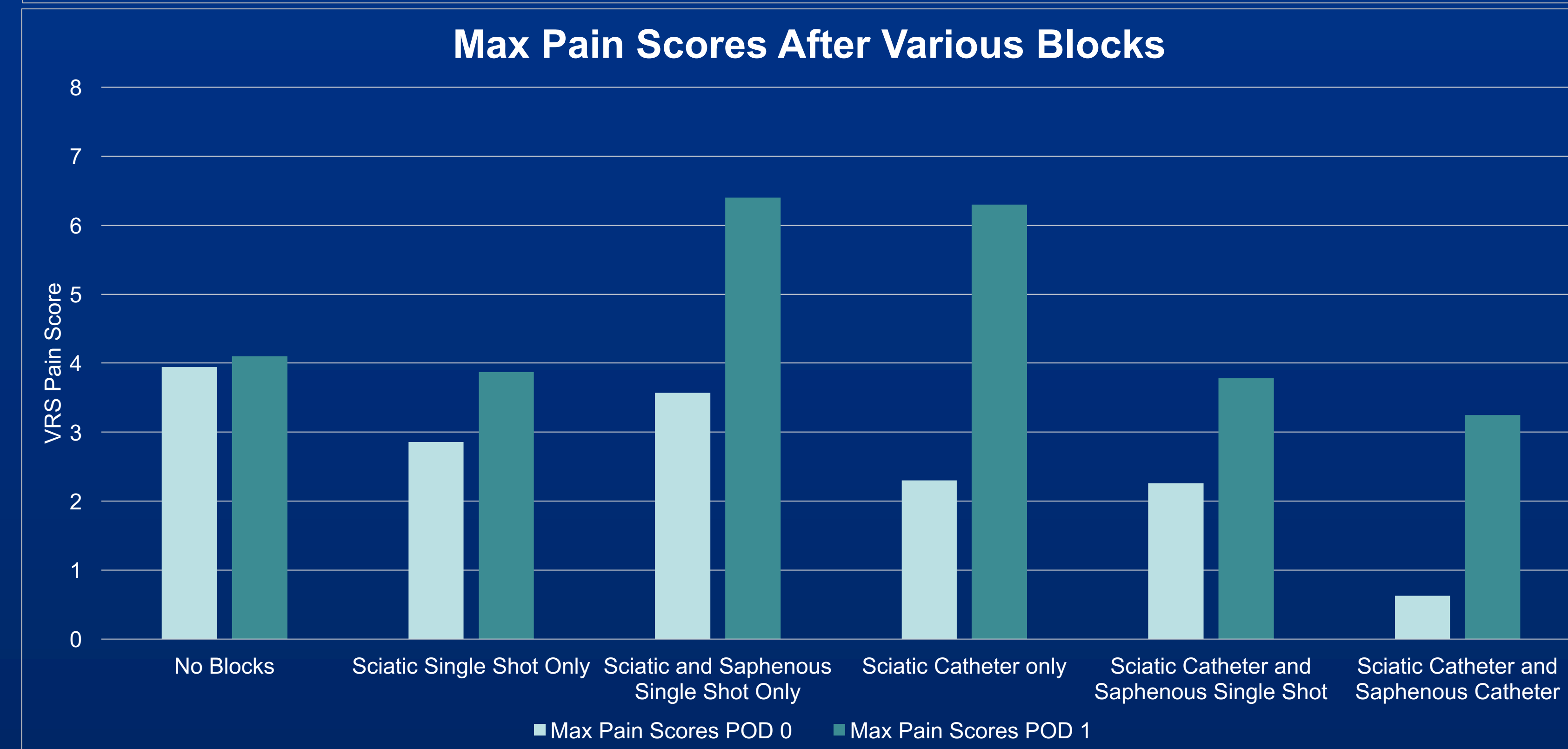
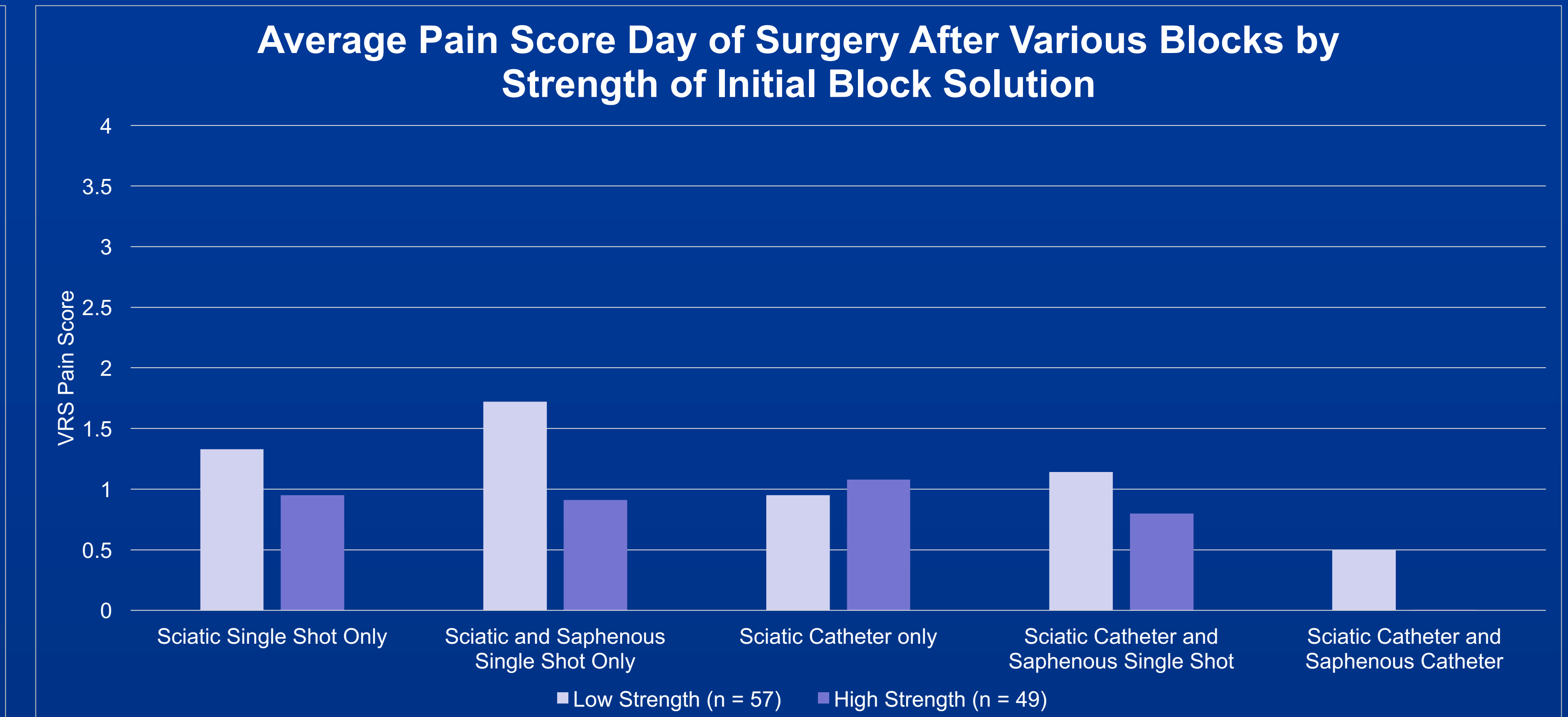
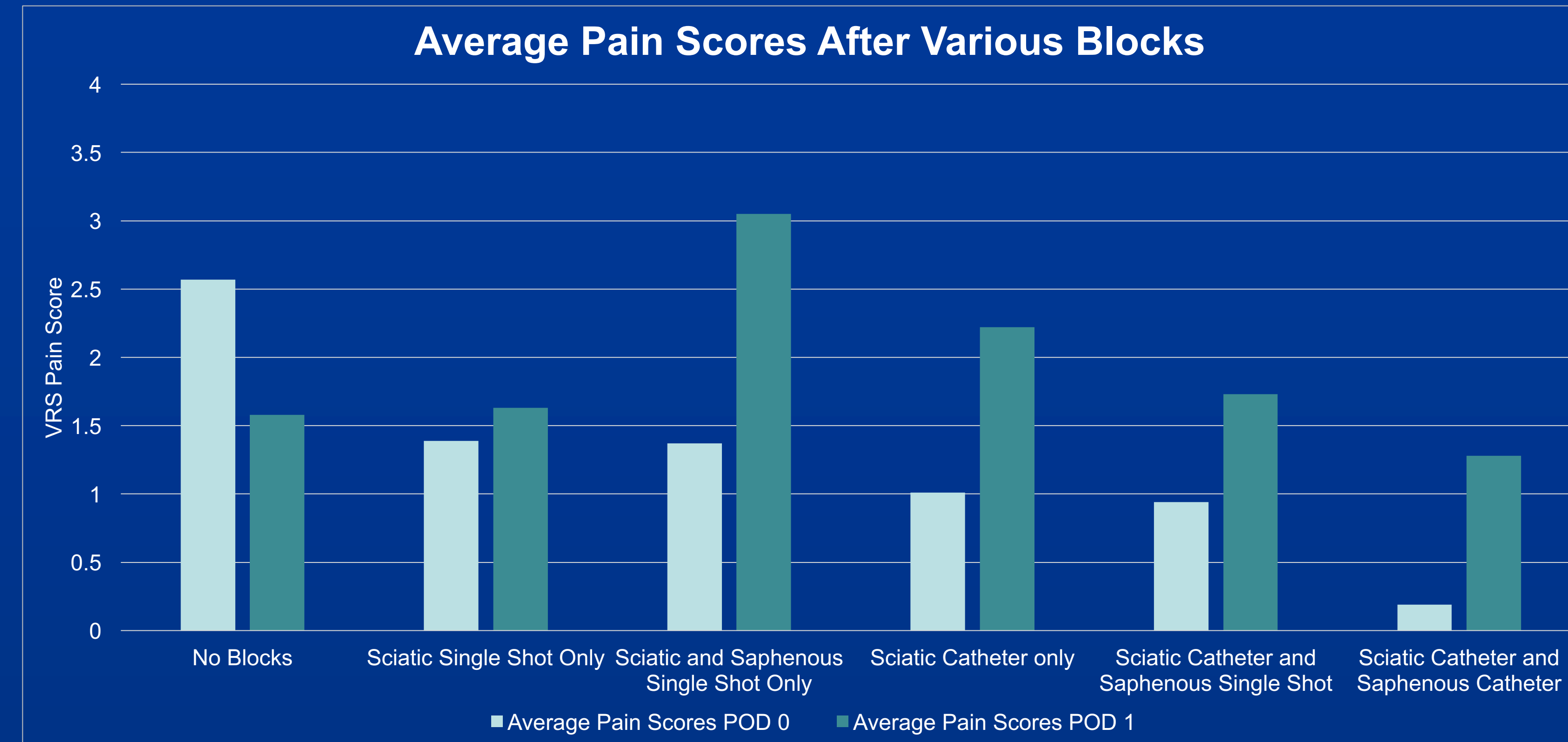
Results

- 109 patients had a combination of single-shot block(s) or catheter placement in the sciatic and/or saphenous nerve distributions.
- All blocks were performed with an initial bolus of ropivacaine 0.2% (“low strength”) or 0.5% (“high strength”).
- Average post-operative pain scores were lowest on both POD#0 and POD#1 in patients who received Sciatic and Saphenous catheters.
- Average and maximum post-operative pain scores were the highest on POD#1 in patients that received Sciatic and Saphenous single-shot blocks.
- Average post-operative pain scores on POD#0 were lowest in patients who received double catheters with an initial bolus of ropivacaine 0.5%.
- Average post-operative pain scores on POD#1 were lowest in patients who received double catheters with an initial bolus of ropivacaine 0.2%.

Discussion

- From our review, the placement of peripheral nerve catheters improved pain scores on PODs #0 and #1 for patients undergoing foot osteotomy surgery, and should be considered as part of a care map in this population.
- Further exploration with a larger sample size and assessment of post-operative opioid consumption is warranted.

Results



Proposed Care Map

Pre-op

- Communication with surgeon (via email or during morning huddle) to discuss surgical and anesthesia plans.
- Consider midazolam PO/IV for anxiolysis
- In children capable of taking PO, acetaminophen 15mg/kg PO
- In children >13 yo with history of motion sickness or PONV, scopolamine patch

Intra-op

- Monitored Anesthesia Care or General Anesthesia with LMA or ETT
- Regional blocks:
 - Popliteal/Sciatic catheter
 - Saphenous catheter
- Consider adjuncts for analgesia:
 - Acetaminophen 15 mg/kg IV (if not given in pre-op)
 - Ketamine 0.5 mg/kg IV
 - Dexamethasone 0.25 mg/kg IV (max 10 mg)
 - Ketorolac 0.5 mg/kg IV (max 15 mg)
 - Ondansetron 0.1 mg/kg IV (max 4 mg)

Post-op

- Regional catheter infusion(s):
 - Sciatic - Ropivacaine 0.2% @ 0.3 mL/kg/hr (max 8 mL/hr)
 - Saphenous – Ropivacaine 0.2% @ 0.2 mL/kg/hr (max 6 mL/hr)