

A Model for Teaching Regional Anesthesia and Pain Management During Residency

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Learner Audience: Anesthesia Residents at the CBY, CA1 and CA2 level

Background: As Hospital Regulators and National Organizations set standards for patient comfort, safety and outcomes, the value of peripheral nerve blockade and pain management are being increasingly recognized. Anesthesiologists are called on for these skills and residencies are charged with producing expert level consultants in the area of regional anesthesia and pain management.

Needs Assessment: Many residency programs incorporate regional anesthesia teaching solely during cases encountered on general anesthesia rotations. This leaves exposure to various blocks and techniques to chance encounters and may generate difficulty achieving ACGME requirements.

Hypothesis: An organized curriculum would enhance resident experience and ensure meeting ACGME requirements while providing a consistent forum for targeted didactic teaching.

Curriculum Design: The Regional Anesthesia/Pain Management Core Curriculum consists of 4 separate rotations over 3.5 months spent at various facilities as detailed below:

Acute Pain Service: An introductory level 4 week rotation for CBY residents. It is a comprehensive overview of pain management concepts and interventions including peripheral nerve blockade. Residents spend 4 weeks on a dedicated Perioperative pain service in a tertiary care trauma center.

PACU Rotation: 2 week rotation for CA1 residents. Residents divide their time between managing postoperative pain in PACU and provision of preoperative block intervention in a busy tertiary care trauma hospital.

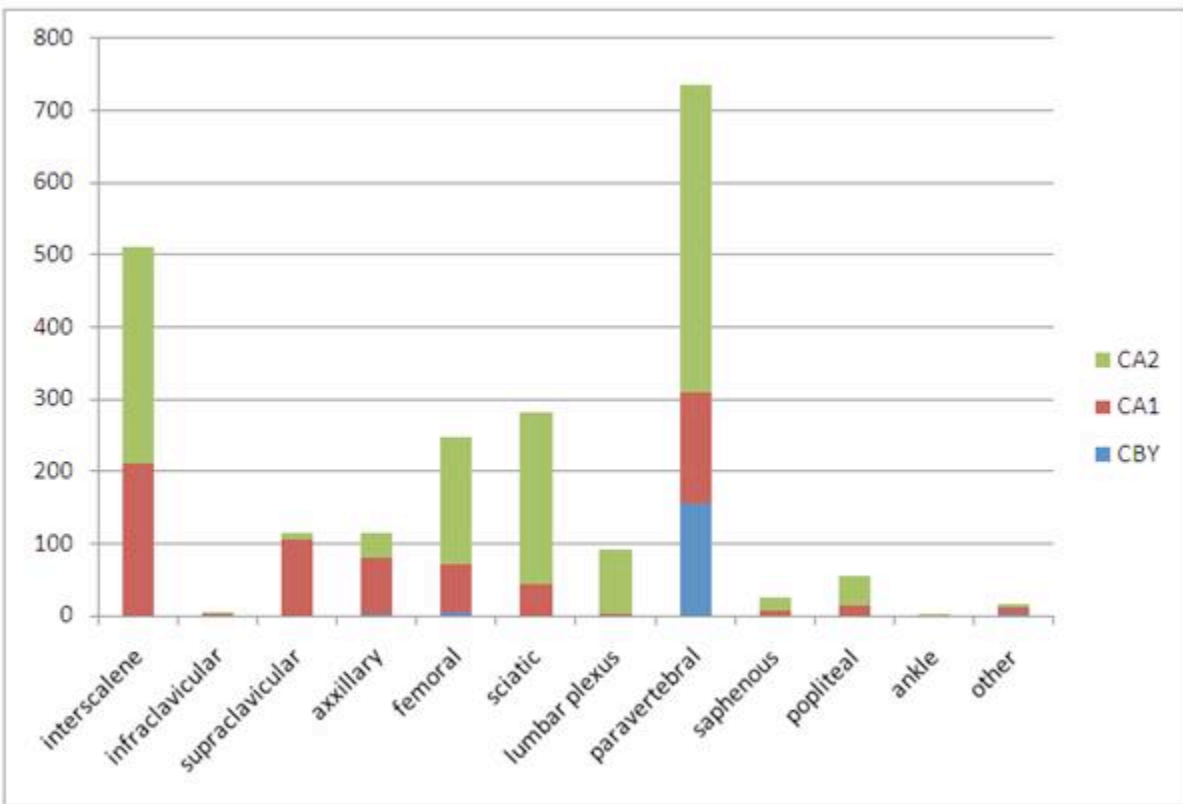
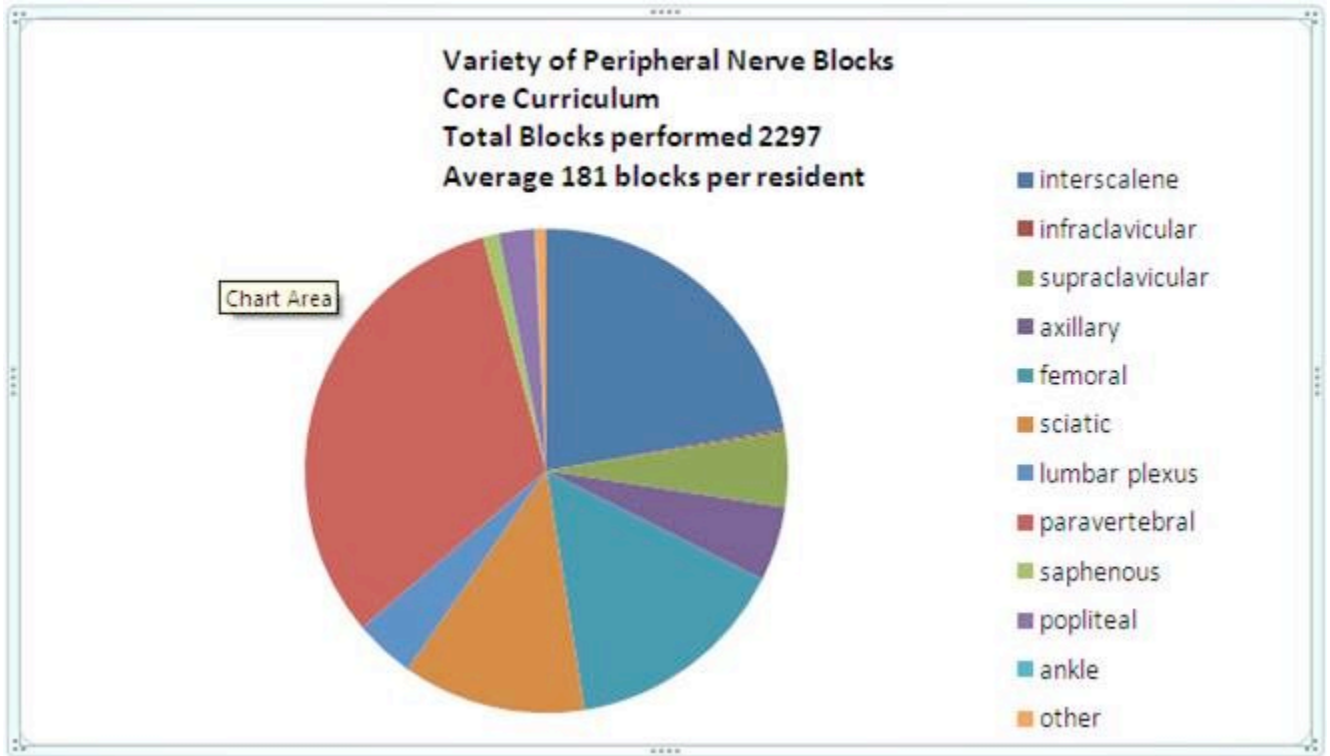
Regional Anesthesia: 4 week rotation for CA1 /CA2 residents at a busy ambulatory center with primarily orthopedic sports surgery cases. Residents assess and prepare patients for regional anesthesia, and conduct peripheral nerve blockade, while learning to effectively integrate peripheral nerve blockade into the anesthetic plan for painful orthopedic surgeries. Approximately 75% of blocks are conducted with ultrasound guidance.

Acute Pain: 4 week rotation for CA2 residents at a Facility that specializes in Orthopedic and Oncologic surgeries. Residents' are assigned to a dedicated pain service responsible for answering hospital wide consultations for the management of inpatient postoperative pain. Resident responsibilities include nerve blockade +/- catheter insertion using a variety of localization techniques, management of nerve block catheters as one component of a multimodal technique, daily inpatient rounds, 24 hour coverage call and lecture attendance.

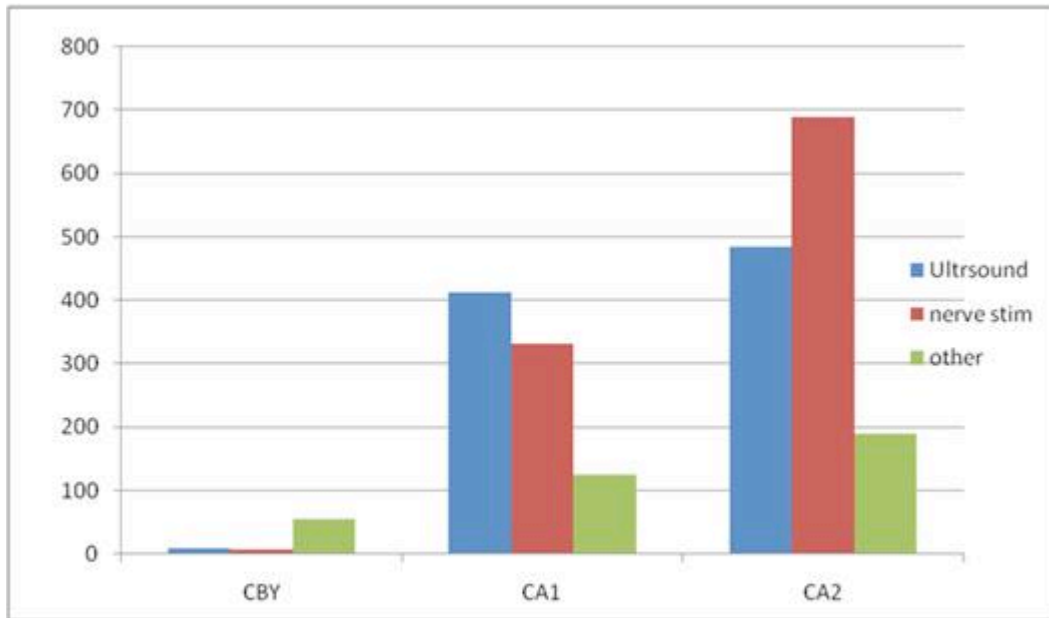
The curriculum design is spiral in nature and important concepts are repeated and reinforced regularly. CA3 residents have the option to take an additional 1 month elective at several UPMC facilities providing additional Peripheral Nerve Blockade techniques and pain management.

Outcome: Anesthesiology residents graduating from the University of Pittsburgh Medical Center have a high exposure to a wide variety blocks and techniques in regional anesthesia and pain management. Residents perform an average of 181 blocks during the core curriculum (See attached tables). Resident education benefits from an organized, progressive curriculum to teach expertise and technical proficiency.

Curriculum 19



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Blocks by localization technique