

## Training Residents & Fellows in Ultrasound Guided Regional Techniques

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**Learner Audience:** residents, post anesthesia residency graduates, program directors.

**Background:** Ultrasound guided regional anesthesia is gaining grounds as an acceptable method to performing nerve blocks. Moreover several advantages to the use of ultrasound have been pointed out(1). Hence the need for regional anesthesia programs to adapt and train resident and fellows to this emergent technology. The Regional Anesthesia & Acute Interventional Postoperative Pain Division regroup all faculty with regional expertise at all the UPMC facilities under the supervision of the department of Anesthesiology at the University of Pittsburgh. That included those with special expertise in ultrasound guided techniques. In an effort to standardize the methods used across the department to develop ultrasound skills required for the residents and fellows a specific ultrasound curriculum was developed.

**Needs Assessment:** The Department of Anesthesiology at the University of Pittsburgh Medical Center is responsible for providing all Anesthesia related service to 11 Hospital across the UPMC system. In most these facility residents and fellows rotate to acquired the necessary practical training and didactic knowledge. Therefore the standardization across multiple facilities is required.

**Hypothesis:** The development of a specific curriculum across the department of Anesthesiology to train residents and fellows in ultrasound guided techniques for regional techniques including a core didactic curriculum and workshop complemented by a coordinated the specific site curriculum and avoid unnecessary duplication.

**Curriculum Design:** On a practical point of view the residents are formally initiated to ultrasound guided techniques during their CA-2 regional anesthesia rotation while the fellows received a similar introduction at another site to avoid having trainees unnecessarily for blocks. In both instance, the initiation take place performing superficial peripheral nerve blocks such as interscalen, supra and infraclavicular, axillary and femoral blocks. Prior to this rotation, CBY can get informal expose to the use of ultrasound during their acute pain rotation. From the formal introduction curriculum included both a practical exposure and didactic lectures. This is completed by a core of didactic lectures and practical workshops under the direction of the senior experts in ultrasounds. Beside continuing to practice what they have learned during their formal introduction month rotations, the trainees rotate to other sites that allow them to be introduce to the use of ultrasounds for deeper blocks such as the sciatic blocks and more specialized indications such as paravertebral blocks and TAP blocks.

**Outcome:** In 2008-2009 a total of 3,482 blocks were performed using an ultrasound guide technique. This represented an increase 36% from the previous year

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3. Reg Anesth Pain Med. 2007;32:448-54
- 4.Anesth Analg. 2009;108:1977-80.
- 5.Anesth Analg. 2009;109:1691-4.
- 6.Ultrasound guided regional anesthesia and pain medicine LW&W Ed. Paul Biegeleisen, 2009.