ASRA Guidelines for Regional Anesthesia Fellowships

A consensus document from the directors of regional anesthesia fellowship programs

Mission Statement:

The purpose of this endeavor is to develop a set of standards for subspecialty training in regional anesthesia.

These fellowship programs will ensure the ongoing development of regional anesthesia as a defined subspecialty.

Research activities, educational curricula, and, most importantly, clinical care will be emphasized.

Program Requirements for Fellowship Training in Regional Anesthesia:

Outline:

I. Scope and Duration of Training

II. Institutional Organization

III. Program Director and Faculty

IV. Facilities and Resources

V. The Educational Program

VI. Scholarly Activity

VII. Consultant Skills

VIII. Evaluation

IX. Board Certification

I. Scope and Duration of Training:

A) Scope of Training: Regional anesthesia training is a subspecialty focused on the perioperative management of patients receiving neuraxial or peripheral neural blockade

for anesthesia or analgesia. Fellowship training should be concerned with the development of expertise in the practice and theory of regional anesthesiology.

B) Duration of Training: The time required for subspecialty training in regional anesthesia shall be twelve months. There should be enough flexibility to allow the Program Director to tailor the program to meet the individual needs of their fellows. Specialized clinical rotations of less than 12 months may be made available but the minimum amount of training necessary to use fellowship in the diploma language is one year.

II. Institutional Organization:

A) Relationship to a Core Program: Institutions with subspecialty training in regional anesthesia must have a direct affiliation with an ACGME (or similar, e.g., RCPC or RCA) accredited residency in anesthesiology. If the institution in which the fellowship is based is other than the primary institution of an accredited residency, a written agreement linking the two, and an evaluation protocol consistent with ACGME (or equivalent) approved standards for residency programs must be prerequisites.

B) Institutional Policy and Resources: The fellowship must be recognized and approved by the institution's division of Medical Education.

III. Program Director and Faculty:

A) Program Director: The Director of the fellowship training program must be an ABA Board- Certified anesthesiologist (or equivalent, e.g., FRCPC, FRCA) who has completed one year of fellowship training in regional anesthesia, or is a dedicated and skilled practitioner of regional anesthesia. The Program Director must also have an academic and/or clinical affiliation with an ACGME (or recognized equivalent)

accredited institution.

B) Faculty: The majority of the faculty in the training program must be Board-Certified (or equivalent) in Anesthesiology. A division of the faculty in the training program must also demonstrate an expertise in regional anesthesiology and/or related disciplines such as acute pain medicine. The number of faculty in a program may vary based on the number of fellows in training; however a minimum of two regional anesthesia faculty must be maintained.

IV. Facilities and Resources:

A) Equipment: Suitable equipment for the performance of a wide variety of regional anesthetic techniques must be available. Such equipment must include nerve simulators, neuraxial and peripheral block supplies, catheter systems, and the basic requirements for conducting general anesthesia, according to the ASA standards.

Dedicated and acceptable on-call facilities must also be maintained if fellows are expected to take in-house calls.

B) Support Services: Appropriate support services, which may include, but are not limited to, anesthesia technical and pharmacy support should be available as needed by the program.

C) Library: A departmental library, or portion of the institutional library, dedicated to anesthesiology with literature specific to the practice of regional anesthesia must be maintained.

V. The Educational Program:

A) Clinical Education: The clinical program will serve as the cornerstone of the fellowship training in regional anesthesia. In order to achieve the necessary level of

expertise, fellows should be familiar with the indications, contraindications, techniques, and complications of the techniques listed on the following pages:

Basic Techniques:

- Superficial cervical plexus block
- Axillary brachial plexus block
- Intravenous regional anesthesia (Bier block)
- Wrist block
- Digital nerve block
- Intercostobrachial nerve block
- Saphenous nerve block
- Ankle block
- Spinal anesthesia
- Lumbar epidural anesthesia
- Combined spinal-epidural anesthesia
- Femoral nerve block

Intermediate Techniques:

- Deep cervical plexus block
- Interscalene block
- Supraclavicular block
- Infraclavicular block
- Sciatic nerve block: posterior approach
- Genitofemoral nerve block
- Popliteal block: all approaches

- Suprascapular nerve block
- Intercostal nerve block
- Thoracic epidural anesthesia

Advanced Techniques:

- Continuous interscalene block
- Continuous infraclavicular block
- Continuous axillary block
- Thoracolumbar paravertebral block: single injection or continuous
- Lumbar plexus block
- Combined lumbar plexus/sciatic block
- Continuous femoral nerve block
- Sciatic nerve block: anterior approach and parafemoral technique
- Obturator nerve block
- Continuous sciatic nerve block
- Continuous popliteal block: all approaches
- Cervical epidural anesthesia
- Cervical paravertebral block
- Maxillary nerve block
- Mandibular nerve block
- Retrobulbar and peribulbar nerve block

Fellows will be required to complete a formal rotation in acute pain management. This rotation will include multimodal analgesic techniques such as neuraxial and peripheral nerve catheters, local anesthetics and narcotic infusions, and non-narcotic analgesic

adjuvants. Indications, contraindications, side effects, potential complications, and daily management of patients on the acute pain service should be stressed.

Fellows should complete daily case logs to track their clinical experience. These logs should be reviewed regularly with the appropriate faculty advisor.

Fellows must be able to show competency in the following areas:

- demonstrate rational selection of regional anesthesia for specific clinical situations
- demonstrate effective anxiolysis of patients by both pharmacological and interpersonal techniques
- demonstrate cost-effective management decision
- demonstrate ability to rescue failed regional anesthesia techniques
- demonstrate effective management of isolated peripheral nerve and central neuraxial blocks with respect to the physiologic consequences both intraoperatively and postoperatively
- demonstrate successful use of a peripheral nerve stimulator for neuronal blocks
- demonstrate effective management of regional anesthesia in critically ill patients
- demonstrate knowledge of practice management principles as they relate to regional anesthesia

Exposure to regional anesthetic techniques involving pediatric and ambulatory surgery patients is strongly encouraged. Access to cadavers and/or electronic models would greatly enhance the educational program experience, as would exposure to advanced localization techniques for block placement (e.g., ultrasound), where feasible.

Physiologic and pharmacologic consequences of regional anesthesia must be stressed. Particular attention should be focused on the potential respiratory and hemodynamic

perturbations, which accompany performance of neuraxial and peripheral nerve blocks.

B) Didactic Educational Program: A didactic and educational program specifically dedicated to regional anesthesia practice must also be a part of fellowship training.

i) A lecture series or Grand Rounds, which covers topics relevant to, but not limited to, regional anesthesia, shall be held no fewer than 12 times per year. A "Journal Club" (current literature review) should be held at least once monthly. Fellows should present articles at least twice in twelve months under the supervision of an attending anesthesiologist. A case conference specifically designed for fellows and supervised, or given, by a qualified faculty member shall occur at least once per month.

ii) Fellows shall be expected to deliver a Grand Rounds lecture including a relevant literature review at least once during the course of the fellowship.

iii) Fellows should appreciate the practice of regional anesthesia from a multidisciplinary approach including joint conferences with surgical or medical colleagues.

iv) Fellows should have the opportunity to learn teaching techniques by educating junior residents during the academic year.

By completion of the accredited program, the fellow is expected to have a working knowledge base consisting of the following:

- understands general attributes of local anesthetic pharmacology
- understands specific clinical attributes of various local anesthetics, including onset, duration, motor/sensory differentiation, toxicity, and treatment
- understands principles and indications for various local anesthetic adjuvants, including epinephrine, phenylephrine, opioids, sodium bicarbonate, and clonidine
- understands principles of, and options for, regional anesthetic procedures

● understands complications of regional anesthetic techniques

● understands principles of regional anesthesia as they apply to pain management

● understands outcome studies related to the influence of regional anesthesia on perioperative outcome

● develops familiarity with major scientific studies related to regional anesthesia

VI. Scholarly Activity:

Expectations for Fellows: Fellows shall have the opportunity to participate in clinical and/or laboratory research and be given appropriate nonclinical time to fulfill these goals. There will be opportunities for the fellow to become involved in research already in progress, or to develop an original project. In either case, an appropriate attending anesthesiologist will be appointed to mentor and assist the fellow to facilitate these goals. The types of activities that would suffice as academic projects include a research paper and/or case report submitted to a peer-review journal and presented; a clinical chart review or a review article submitted to, and accepted by a peer-reviewed journal; a book chapter; or other endeavor.

Expectations for Faculty: The quality of the educational environment of the parent and integrated institutions is of paramount importance to the program. Adequate documentation of scholarly activity on the part of the program director and the teaching faculty at the parent and integrated institutions must be submitted at the time of the program review. Scholarly activity at affiliated institutions cannot account for or substitute for the educational environment of the parent and integrated institutions. Documentation of scholarly activities is based on:

1. Active participation of the faculty in clinical discussions, rounds, and conferences in a

manner that promotes a spirit of inquiry and scholarship. Scholarship implies an in-depth understanding of basic mechanisms of normal and abnormal states and the application of current knowledge to practice.

2. Participation in journal clubs and research conferences.

3. Participation in research, particularly in projects funded following peer review that result in publications or presentations at regional and national scientific meetings.

4. Active participation in regional or national professional and scientific societies, particularly through presentations at organizations' meetings and publications in their journals.

5. Offering of guidance and technical support (e.g., research design, institutional committee protocol approval, statistical analysis) for fellows involved in scholarly activities.

While not all members of a teaching faculty can be investigators, clinical and/or basic science research must be ongoing in the department of anesthesiology of the parent and integrated institution(s). The faculty, as a whole, must document active involvement in all phases of scholarly activity as defined above in order to be considered adequate to conduct a program of graduate education in anesthesiology.

VII. Consultant Skills:

A) Communication Skills: Fellows should possess communication skills sufficient to solicit and impart information. The fellow must be able to clearly delineate options available to the patient regarding regional anesthesia as well as the risks and benefits in a manner that is understandable to the patient.

B) Collaboration Skills: Fellows must be able to work in a team environment,

communicating and cooperating with surgeons, nurses, pharmacists, physical therapists, and all members of the perioperative team.

By the end of the fellowship, successful graduates will be able to:

- appreciate the roles of other members of the team
- communicate clearly in a collegial manner that facilitates the achievement of care goals
- help other members of the team to enhance the sharing of important information
- formulate care plans that utilize the multidisciplinary team skills, such as a plan for facilitated recovery

VIII. Evaluation:

A) As per ACGME Residency Guidelines, the attending faculty will be evaluated by the fellows twice annually.

B) Written evaluations of fellows by all faculty with whom they have worked shall occur quarterly. The results of these evaluations shall be recorded and reviewed with the fellows by the program director no less often than every six months.