AMERICAN **OSTEOPATHIC** ASSOCIATION

# Basic Standards for Residency Training in Surgery and the Surgical Subspecialties

**American Osteopathic Association**

**and the**

**American College of Osteopathic Surgeons**

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## SECTION I. INTRODUCTION

Definition

These are the Basic Standards for Residency Training in Surgery and the Surgical Specialties as approved by the American Osteopathic Association (AOA) and the American College of Osteopathic Surgeons (ACOS). These standards are designed to provide the osteopathic surgical resident with advanced and concentrated training in Surgery and the Surgical Specialties and to prepare the resident for certification examination in their discipline.

## SECTION II. MISSION

The mission of the osteopathic surgery and surgical specialties programs is to provide residents with comprehensive structured cognitive and procedural clinical education in both inpatient and outpatient settings that will enable them to become competent, proficient and professional osteopathic surgeons.

To train physicians to function as consultants in the surgery and the surgical specialties and to develop physicians qualified to teach basic osteopathic principles, to implement these concepts and to integrate them into undergraduate and postgraduate clinical programs.

## SECTION III. THE EDUCATIONAL PROGRAM GOALS

3.1 An organized, comprehensive, and effective curriculum must be documented and implemented, which meets or exceeds the model ACOS curriculum for general surgery and the applicable specialties. (ACOS model curricula are found at the ACOS website for each specialty)

3.2 The following components of the educational program must be based upon the ACOS model curriculum:

a. The didactic program must include contemporary surgical knowledge with special emphasis on surgical science. Instruction in medical ethics, interpersonal skills, and practice management must be included in the curriculum.

i. A variety of academic conferences and lectures must be documented, to include, formal didactic conferences, morbidity and mortality meetings, and journal club, as well as seminars, workshops, and conferences

ii. Each resident must complete the resident scholarly activity/scientific and research component (Reference Appendix Four.)

b. The clinical component must include operative experience complemented by pre-operative, intra-operative, and post-operative care of patients

i. The clinical component must include education and exposure to the evolving diagnostic and therapeutic methods.

ii. The operative experience for each resident must be documented in an AOA-approved format surgical operative log which reflects all assignments during the surgery or surgical specialty program.

iv. The surgical competence of each resident must be evaluated based upon the number of surgeries performed gained through direct participation.

v. The program must provide continuity of patient care through preoperative and post-operative clinics and inpatient contact.

3.3 AOA competencies: The residency program must require its residents to obtain competencies in the following areas to the level expected of a new practitioner. Toward this end, programs must define the specific knowledge, skills, and attitudes required. The program must provide educational experiences as needed for their residents to demonstrate these competencies (Reference Appendix Six):

a. Patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

b. Medical knowledge about established and evolving biomedical, clinical, and cognate (e.g. epidemiological and social-behavioral) sciences and the application of this knowledge to patient care.

c. Practice-based learning and improvement that involves investigation and evaluation of their own patient care, appraisal and assimilation of scientific evidence, and improvements in patient care.

d. Interpersonal and communication skills that result in information exchange and teaming with patients, their families, and other health professionals.

e. Professionalism, as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to a diverse patient population.

f. Systems-based practice, as manifested by actions that demonstrate an awareness of and responsiveness to the larger context and system of healthcare and the ability to call on system resources to provide care that is of optimal value.

g. Integration of osteopathic principles and osteopathic medical management throughout the training program. (See Appendix Six.)

3.4 The curriculum must contain the following educational components:

a. Overall educational goals for the program, which the program must make available to residents and faculty; and

b. Competency-based goals and objectives for each assignment at each educational level, which the program must distribute to residents and faculty at least annually, in either written or electronic form.

The program must integrate the following AOA competencies into the curriculum:

3.5 Patient care and procedural skills

a. Residents must be able to provide patient care that is compassionate, appropriate, and effective for the treatment of health problems and the promotion of health.

b. Residents must be able to competently perform all medical, diagnostic, and surgical procedures considered essential for the area of practice.

c. Residents must demonstrate competence in:

i. gathering essential patient information in a timely manner;

ii. synthesizing and properly utilizing acquired patient data;

iii. generating a differential diagnosis and properly sequencing critical actions for patient care, including managing morbidity and mortality;

iv. generating and implementing an effective management plan;

v. prioritizing and stabilizing multiple patients simultaneously;

vi. assessing post-operative recovery, recognizing and treating complications, communicating with referring physicians, and developing the physician patient relationship;

vii. analyzing patient outcomes; and,

viii. providing health care services aimed at preventing health problems and maintaining health;.

3.6 Medical knowledge

Residents must demonstrate knowledge of established and evolving biomedical, clinical, epidemiological and social behavioral sciences, as well as the application of this knowledge to patient care. Residents must also demonstrate competence in their knowledge of:

a. different medical practice models and delivery systems and how to best utilize them to care for the individual patient;

b. study design and statistical methods;

c. critical evaluation of pertinent scientific information

d. fundamentals of basic science as applied to clinical surgery, including: applied surgical anatomy and surgical pathology; the elements of wound healing; homeostasis, shock and circulatory physiology; hematologic disorders; immunobiology and transplantation; oncology; surgical endocrinology; surgical nutrition, fluid and electrolyte balance; and the metabolic response to injury, including burns.

3.7 Practice-based learning and improvement

Residents must demonstrate the ability to investigate and evaluate their care of patients, to appraise and assimilate scientific evidence, and to continuously improve patient care based on constant self-evaluation and life-long learning.

Residents are expected to develop skills and habits to be able to meet the following goals and expectations:

a. identify strengths, deficiencies, and limits in one's knowledge and expertise;

b. set learning and improvement goals;

c. identify and perform appropriate learning activities;

d. systematically analyze clinical practice using quality improvement methods, and implement changes with the goal of practice improvement;

e. incorporate formative evaluation feedback into daily practice;

f. locate, appraise, and assimilate evidence from scientific studies related to their patients' health problems; and

g. use information technology to optimize learning;

h. participate in the education of patients, families, students, residents and other health

professionals and if applicable, undergraduate medical students.

i. demonstrate the ability to practice lifelong learning, analyze personal practice outcomes, and use information technology to optimize patient care.

j. to incorporate evidence-based principles in their clinical practice.

3.8 Interpersonal and communication skills

Residents must demonstrate interpersonal and communication skills that result in the effective exchange of information and collaboration with patients, their families, and health professionals.

Residents must

a. communicate effectively with patients, families, and the public, as appropriate, across a broad range of socioeconomic and cultural backgrounds;

b. communicate effectively with physicians, other health professionals, and health related agencies;

c. work effectively as a member or leader of a health care team or other professional group;

d. act in a consultative role to other physicians and health professionals;

e. maintain comprehensive, timely, and legible medical records;

f. demonstrate an effective therapeutic relationship with patients and their families, with respect for diversity and cultural, ethnic, spiritual, emotional, and age-specific differences;

g. develop and demonstrate effective written communication skills;

h. involve patients in medical decisions;

i. demonstrate effective listening and non-verbal communication skills.

3.9 Professionalism

Residents must demonstrate a commitment to carrying out professional responsibilities and an adherence to ethical principles.

Residents must demonstrate:

a. compassion, integrity, and respect for others;

b. responsiveness to patient needs that supersedes self-interest;

c. respect for patient privacy and autonomy;

d. accountability to patients, society and the profession;

e. sensitivity and responsiveness to a diverse patient population, including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation;

f. sensitivity to their patients' pain, and emotional states;

g. the ability to discuss death honestly, sensitively, patiently, and compassionately;

h. a commitment to carrying out professional responsibilities and an adherence to high standards of ethical behavior; and

i. demonstrate continuity of care (pre-operative, operative, and post-operative); demonstrate sensitivity to age, gender, culture, and other differences; and demonstrate honesty, dependability, and commitment.

3.10 Systems-based practice

Residents must demonstrate an awareness of and responsiveness to the larger context and system of health care, as well as the ability to call effectively on other resources in the system to provide optimal health care.

Residents must:

a. work effectively in various health care delivery settings and systems relevant to their clinical specialty;

b. coordinate patient care within the health care system relevant to their clinical;

c. incorporate considerations of cost awareness and risk-benefit analysis in patient and/or population based care as appropriate;

d. advocate for quality patient care and optimal patient care systems;

e. work in inter-professional teams to enhance patient safety and improve patient care quality;

f. participate in identifying system errors and implementing potential systems solutions;

g. access, appropriately utilize, and evaluate the effectiveness of the resources, providers, and systems necessary to provide optimal patient care; and

h. practice cost-effective care without compromising quality, promote disease prevention, demonstrate risk-benefit analysis, and know how different practice systems operate to deliver care.

## SECTION IV: INSTITUTIONAL REQUIREMENTS

### A. Sponsoring Institution

4.1 The program director must be provided compensation and protected time for his or her educational and administrative responsibilities to the program.

### B. Resources

4.2 Resources must include simulation and skills laboratories. These facilities must address acquisition and maintenance of skills with a competency based method of evaluation.

4.3 Resources must include:

a. A common workspace for residents that includes computers at the primary clinical site;

b. Internet access to specialty-specific full-text journals and electronic medical reference resources for education and patient care at all participating sites;

c. On-line radiographic and laboratory reporting systems at the primary clinical site(s) and affiliated sites;

d. Software resources for production of presentations, manuscripts or portfolios;

e. There must be a program coordinator designated specifically for resident education support and programs with more than 20 residents must also have an assistant or associate program coordinator. (See Appendix II, B.2.1 for further clarification.)

f. Each resident should attend the Annual Clinical Assembly of Osteopathic Surgeons (ACA) at least once during their residency training program;

g. The base institution must provide financial resources for residents for educational materials or to attend any educational conferences that are required by the program director.

4.4 Prior to appointment in the program each resident must be notified in writing of the required length of the training program**.**

4.5 Each resident must utilize an approved data collection/log system.

**C. Participating Sites**

4.7 The program director must submit to the ACOS Residency Evaluation and Standards Committee (RESC) notification of any additions or deletions of participating sites routinely providing an educational experience required for all residents of one month or more full time equivalent. (See AOA Basic Document for Postdoctoral Training, Section V.5.2, Substantive Change)

**D. Discipline Specific Requirements**

**General Surgery**

4.8 The primary training institution must document at least 200 major procedures for each resident per year.

**Cardiothoracic**

4.9 The primary training institution must provide funding for ~~at least one (1)~~ EACH cardiothoracic trainee per training year.

4.10 The primary training institution must document at least 125 major procedures per resident per training year.

**General Vascular Surgery**

4.11 The primary training institution must provide for at least 150 vascular procedures per resident annually.

**Neurological Surgery**

4.12 The institution must provide institutional resources to train each resident per year of training.

**Plastic and Reconstructive Surgery**

4.13 The primary training institution and affiliated sites must provide funding for each plastic surgery resident positions.

4.14 The primary training institution and affiliated sites must document at least 300 major plastic surgery procedures per resident per year.

**Surgical Critical Care**

4.15 The surgical critical care unit of the primary training institution must serve as the primary clinical site and document an average daily census of 10 patients.

**Urological Surgery:**

4.16 The primary training institution must provide for a minimum of 200 major urological surgery procedures per resident per year.

4.17 Clinical facilities must contain equipment to perform diagnostic and therapeutic procedures including: flexible cystoscopy, ureteroscopy, percutaneous endoscopy, percutaneous renal access, extracorporeal shock wave lithotripsy, ultrasonography biopsy, laparoscopy, laser therapy, robotic surgery and urodynamic evaluation. Video imaging must be available to allow supervision and education during endoscopic procedures.

## SECTION V: PROGRAM REQUIREMENTS AND CONTENT

5.1 If available, ACOS surgical residency programs must administer an annual in-service examination to their residents that is appropriate and acceptable to the ACOS Resident Evaluation and Standards Committee (RESC). (See Appendix II, Section B.2.2 for in-service examinations accepted by the RESC to be administered to residents in specialty areas.)

### A. General Surgery

5.1 The length of the general surgery residency program must be 60 months which includes an AOA-approved OGME-1R year (Reference Appendix Two).

5.2 Fifty four (54) months of training must be scheduled at the primary or affiliated sites. (short courses of two-weeks or less are exempted)

5.3 The final twelve months of the 60 month program must be spent performing the functions as chief or co-chief resident under supervision, demonstrating advanced-level responsibilities in patient care

5.4 No more than a total of four months of the final 48 months may be allocated to non-surgical disciplines

5.5 At least 54 months of the 60-month program must be spent on clinical assignments in surgery, with documented experience in emergency care and surgical critical care.

5.6 42 months of these 54 months must be spent on clinical assignments in the essential content areas of surgery. The essential content areas are:

a. the abdomen and its contents;

b. the alimentary tract;

c. skin, soft tissues, and breast;

d. endocrine surgery;

e. head and neck surgery;

f. pediatric surgery;

g. surgical critical care;

h. surgical oncology;

i. trauma and non-operative trauma (burn experience that includes patient management may be counted toward non-operative trauma); and

j. the vascular system.

5.7 Didactic presentations or evidence of reading programs covering the topics of burn physiology and initial burn management, gynecologic surgery, neurological surgery, orthopedic surgery, cardiac surgery, and urology is required

5.8 No more than six months may be allocated to research or to non-surgical disciplines . (Gastroenterology is exempt from this limit if this rotation provides endoscopic experiences.)

5.9 No more than 12 months may be devoted to surgical discipline other than the principal components of surgery.

**Educational Program**

The Chief Year:

5.10 Clinical assignments at the chief resident level must be scheduled in the final 12 months of training in the program. Operative cases counted as the chief cases must be performed during the 12 months designated as the chief year.

5.11 The clinical assignments during the chief year must be scheduled at the primary clinical site or at participating affiliated site(s).

5.12 Clinical assignments during the chief year must be in the essential content areas of general surgery. No more than six months of the chief year may be devoted exclusively to only one essential content area.

5.13 Non-cardiac thoracic surgery and transplantation rotations may be considered an acceptable chief resident assignment as long as the chief resident performs an appropriate number of complex cases with documented participation in pre and postoperative care.

**Operative Experience**

5.14 All residents must enter their operative experience concurrently during each year of the residency in the case log system.

5.15 A resident may be considered the surgeon for logging purposes, as defined in the currently ACOS approved log system, only when he or she can document a dominant role in the following aspects of management:

a. determination or confirmation of the diagnosis

b. provision of preoperative care selection

c. accomplishment of the appropriate operative procedure

d. direction of the postoperative care.

5.16 With faculty and program approval, an ogme-5 resident may act as a teaching assistant (TA) to a more junior resident with faculty supervision. Up to 50 cases listed by the chief resident as TA will be credited for the total requirement of 750 cases. TA cases may not count towards the 150 minimum cases needed to fulfill the operative requirements for the chief resident year. The junior resident performing the case will also be credited as surgeon for these cases.

5.17 Each program is required to provide residents with an outpatient experience to evaluate patients both pre-operatively (including initial evaluation) and postoperatively. At least 75% of the assignments in the essential content areas must include an outpatient experience of ½ day per week.

5.18 Each resident must document, by program completion, participation, under supervision, a minimum of 750 major surgical procedures.

5.19 During the resident's final year, at least 150 major surgical procedures as senior chief (SC) must be performed and documented in the approved ACOS log system.

5.20 The program must provide didactic educational learning activities, as well as clinical learning experiences and hands on experience in the pre-operative, operative and post-operative care of surgical patients to include:

a. Diseases or dysfunction of skin and soft tissue, burns, wound care and breast. (25 majors are necessary to complete program.)

b. Diseases or dysfunction of the head and neck. (25 majors are required to complete the program.

c.. Diseases or dysfunction of the abdomen and abdominal wall. (100 procedures are required to complete the program.) To include:

i. Alimentary tract (72 majors are required to complete program);

ii. Liver (4 majors are required to complete program);

iii. Pancreas (3 majors are required to complete program);

iv. Spleen (3 majors are required to complete the program);

v. Biliary tree; and

vi. Abdominal wall;

d. Disease or dysfunction of the endocrine system. (8 majors are required to complete the program.)

e. Disease or dysfunction of the vascular system. (44 majors are required to complete the program.)

f. Disease or dysfunction of the thoracic cavity to include esophagus, lung pleura and cardiac, exclusive of pneumothorax

g. Operative and non-operative management of trauma, emergency surgery, interventions of surgical scope and surgical critical care:

i. Nonoperative trauma. (20 cases are required to complete program.)

ii. Operative trauma. (10 majors are required to complete program.)

h. Diseases and dysfunctions of gynecologic system

i. Endoscopy and laparoscopy:

i. Endoscopy. (85 upper endoscopies are required and 50 colonoscopies are required to complete the program.)

ii. Basic laparoscopy. (60 cases are required to complete the program.)

iii. Advanced laparoscopy. (25 cases are required to complete program.)

j. Diseases or dysfunction of the urologic system.

k. Pediatric surgical care. (20 major cases are required to complete the program.)

l. Plastic and reconstructive surgery.

5.21 General Surgery residency programs must administer the Annual ACOS General Surgery In-Service Examination to general surgery residents.

**B. Cardio-Thoracic Surgery**

5.1 Education in cardio-thoracic surgery must be provided in one of these three formats:

a. Independent Program (traditional format): 24 months of cardio-thoracic surgery education, preceded by a successfully completed general surgery residency program accredited by the AOA.

b. Joint surgery/cardio-thoracic surgery program (the 4+3 program): all seven years of the program must be completed in the same institution, and all of the years must be accredited by the AOA. Upon successful completion of the programs, this format provides the graduate with the ability to apply for certification in both surgery and cardio-thoracic surgery.

c. Integrated program: six years of cardio-thoracic surgery education (completed in one institution) following completion of an accredited MD or DO training degree.

i. The integrated curriculum must document six years of clinical thoracic surgery education under the authority and direction of the thoracic surgery program director. The sequencing of the thoracic surgery educational components must be integrated-such that the core surgical training precedes the specialty training.

ii. A minimum of 24 months and a maximum of 36 months of the program must include education in core surgical education, including pre- and post-operative

evaluation and care. The remainder of the curriculum must include education in oncology; transplantation; basic and advanced laparoscopic surgery; surgical critical care and trauma management; thoracic surgery; and adult and congenital cardiac surgery.

iii. The last year of the integrated program must comprise chief resident responsibility on the thoracic surgery.

Residents of cardio-thoracic surgery will:

5.2 Provide preoperative management, including the selection and timing of operative intervention and the selection of appropriate operative procedures;

5.3 Provide post-operative management of cardio-thoracic and cardiovascular patients;

5.4 Provide critical care of patients with cardio-thoracic and cardiovascular surgical disorders, including trauma patients, whether or not operative intervention is required;

5.5 Correlate the pathologic and diagnostic aspects of cardiothoracic disorders, demonstrating skill in diagnostic procedures (e.g., bronchoscopy and esophagoscopy), and to interpret specialty-specific imaging studies (e.g., ultrasound, computed tomography, roentgenographic, radionuclide, cardiac catheterization, pulmonary function, and esophageal function studies);

5.6 Demonstrate knowledge in the use of cardiac and respiratory support devices**;**

5.7 Have a minimum operative experience of 125 major cases annually;

5.8 Document operative experience which must include:

a. lungs, pleura, and chest wall;
b. esophagus, mediastinum, and diaphragm;
c. thoracic aorta and great vessels;
d. congenital heanomalies;
e. valvular heart diseases;
f. myocardial revascularization;
g. cardiac pacemaker implantation;
h. mediastinoscopy;
i. pleuroscopy;
j. flexible and rigid esophagoscopy and bronchoscopy;
k. endoscopic ultrasound;
l. endoscopic approaches to thoracic and esophageal diseases;
m. multidisciplinary approaches to the treatment of thoracic malignancy;
n. experience with endovascular stents; and
o. ventricular assist devices and robotics

5.9 Be assigned to nonsurgical areas (i.e., cardiac catheterization and esophageal or pulmonary function labs) for no more than three months during the clinical program, and this experience may not occur in the chief year;

5.10 Spend their chief year in the sponsoring institute or affiliated sites for the program. During this year, the resident must assume senior responsibility for the pre-, intra-, and post-operative care of patients with thoracic and cardiovascular disease.

The standards required of individuals for successful completion of a program in cardiothoracic surgery and to qualify for entrance into the certification process by the American Osteopathic Board of Surgery must be through one of two pathways: a cardiothoracic surgery (C) pathway or a general thoracic surgery (T) pathway.

5.11 At completion of the program each trainee must document participation in 250 major surgical cases which were performed by the resident as surgeon under supervision. (Endoscopy cases are required but will not be included in the total case log totals);

The documentation of cases for each pathway will be in the following categories:

a. Congenital Heart Disease:
    a. C – 20 cases (with at least 10 cases as primary surgeon)
    b. T - 10 cases
b. Adult Cardiac Disease:
    a. C – 150 cases (50 valve, 80 revascularization, 15 re-operative, 5 aortic, 15 other)
    b. T - 75 cases (20 valve, 40 revascularization, 5 re-operative, 15 other)
c. Diseases of the Lung, Pleura or Chest Wall:
    a. C - 50 cases (30 lung resections, 15 primary VATS, 20 other)
    b. T - 100 cases (50 lung resections, 30 primary VATS, 50 other)
d. Diseases of the Mediastinum:
    a. C - 15 cases (5 primary resections, 10 mediastinoscopy)
    b. T - 35 cases (10 primary resections, 25 mediastinoscopy)
e. Diseases of the Esophagus:
    a. C - 15 cases (10 resections, 5 other)
    b. T - 30 cases (20 resections, 5 surgery for benign disease and 5 other)
f. Surgical Endoscopy:
    a. Bronchoscopy
        i. C - 20 cases
        ii. T - 40 cases
    b. Esophagoscopy
        i. C - 10 cases

ii. T - 25 cases

**C. General Vascular Surgery**

General Vascular surgery training programs must follow one of the following pathways:

*Integrated program*

5.1 Residents complete 60 months of vascular surgery education following completion of an accredited DO degree.

a. 24 of the 60 months must include documented educational experiences including pre- and post-operative evaluation and care; critical care and trauma management; and basic technical experience in skin and soft tissue, abdomen and alimentary track, airway management, laparoscopic surgery, and thoracic surgery.

b. 36 of the 60 months must include documented educational experiences concentrated in vascular surgery.

c. The last year of the program must comprise chief resident responsibility on the vascular surgery service;

d. Residents must complete, at minimum, the last two years of vascular surgery education in the same institution.

e. No more than six months of the 60 month program may be dedicated to research**.**

*Independent Program*

5.2 Vascular surgery education in the independent format is limited to one of the following:

a. 36 months of education with progressive responsibility in a general surgery residency program and 36 months of education with progressive responsibility in vascular surgery, both within the same institution, accredited by the AOA. (A transitional year may not be used to fulfill any of the three year designated preliminary surgery requirement). (3+3)

b. A successfully completed general surgery residency program accredited by the AOA. During the general surgery residency, a maximum of 12 months credit toward a vascular surgery residency can be achieved as long as there is demonstration of 12 months of appropriate vascular surgery education during the totality of the general surgical training (60 months). This would shorten the subsequent required vascular surgery residency education to 24 months, instead of 36 months. In this format, the residents must complete, at minimum, the last 24 months of vascular surgery education at the same institution. (An affiliated institution where the program director at the primary institution has overall responsibility for the training program meets this standard.) (5+2)

c. Early specialization program (4+2 ESP). Four years of general surgery are completed before entering the vascular surgery residency. A maximum of 12 months of credit toward vascular surgery may be achieved during the four years of general surgery training, if approved by the review committee.

d. Before entering the program, each resident must be notified in writing of the required length of the educational program.

5.3 In an integrated program, residents must perform a minimum of 500 operations, to include 250 major vascular reconstructive procedures.

5.4 In an independent program, residents must perform a minimum of 250 major vascular reconstructive procedures.

5.5 Residents must receive education in the special diagnostic techniques for the management of vascular disease including angiography, ultrasound, CT scanning, MRI and MRA. They must be competent in the assessment of the vascular portion of such images.

5.6 Residents must have experience in the application, assessment, and limitations of noninvasive vascular diagnostic techniques.

5.7 Residents must receive instruction and become knowledgeable in the fundamental sciences, including anatomy, biology, embryology, microbiology, physiology, and pathology as they relate to the pathophysiology, diagnosis, and treatment of vascular disease.

5.8 Residents must have instruction in critical thinking, design of experiments and evaluation of data, as well as in the technological advances that relate to vascular surgery and the care of patients with vascular diseases.

5.9 There must be educational conferences to provide a review of vascular surgery as well as recent advances. Participation by both residents and faculty must be documented. Active participation by vascular surgery residents in the planning and production of these conferences must be demonstrated. The following types of conferences must exist within a program:

a. A review, held at least biweekly, of all current complications and deaths, including radiological and pathological correlation of surgical specimens and autopsies when relevant;

b. A course or a structured series of conferences to ensure coverage of the basic and clinical sciences fundamental to vascular surgery (a sole reliance on textbook review is inadequate);

c. Regular organized clinical teaching, that must include ward rounds and clinical conferences; and

d. A regular review of recent literature, that must include a journal club format.

**D. Neurological Surgery**

5.1 The educational program in neurological surgery is 84 months in length.

The neurological surgery training program must include:

5.2 Adult cranial procedures:

a. Craniotomy for brain tumors;

b. Craniotomy for intracranial vascular lesions;

c. For trauma;

d. Endovascular/interventional procedures for intracranial cerebrovascular and neuro-oncologic conditions;

e. Functional procedures;

f. Radiosurgery;

g. Pituitary and sellar tumors (endoscopic and microsurgical); and

h. Ventriculo-peritoneal (VP) shunt and other shunt procedures.

5.3 Adult spinal procedures:

a. Anterior cervical discectomy with instrumentation;

b. Cervical spine fracture/traumatic operative stabilization procedures;

c. Interventional procedures for spinal conditions;

d. Lumbar discectomy and laminectomy for degenerative and oncologic conditions;

e. Peripheral nerve procedures; and

f. Thoracic/lumbar instrumentation and fusions.

5.4 Pediatric procedures:

a. Craniotomy for brain tumor;

b. Spinal procedures and Chiari decompressions;

c. Laminectomy for dysraphism;

d. Laminectomy for spinal tumors;

e. Laminectomy for syringomyelia;

f. Correction of spinal deformity; and

g. VP/VA shunting and other shunt procedures.

5.5 Craniotomy for epilepsy for adult and pediatric patients;

5.6 Residents must demonstrate competence in their knowledge of neurosurgical emergencies and treating neurosurgical conditions including: cerebrovascular disorders; functional neurosurgery; neuro-critical care; neuro-oncology; pain; pediatric neurological surgery; peripheral nerve disorders; spinal disorders; and trauma;

5.7 Each resident must document by program completion, participation under supervision, a minimum of 400 major neurosurgical procedures. This spectrum must include craniotomies for trauma, neoplasms, aneurysms, and vascular malformations; endovascular intervention, transsphenoidal and stereotactic surgery (including radiosurgery); pain management; and spinal procedures;

5.8 Each resident must document by program completion, a minimum of 200 cases which must be cranial;

**E. Plastic and Reconstructive Surgery**

5.1 Residents must have specific clinical experience in the following:

a. Congenital defects of the head and neck, including clefts of the lip and palate, and craniofacial surgery;

b. Neoplasms of the head and neck surgery, including neoplasms of the head and neck, and the oropharynx;

c. Craniomaxillofacial trauma, including fractures;

d. Aesthetic (cosmetic) surgery of the head and neck, trunk, and extremities;

e. Plastic surgery of the breast;

f. Surgery of the hand/upper extremities;

g. Plastic surgery of the lower extremities;

h. Plastic surgery of the trunk and genitalia;

i. Burn reconstruction techniques;

j. Microsurgical techniques applicable to plastic surgery;

k. Reconstruction by tissue transfer, including flaps and grafts;

l. Surgery of benign and malignant lesions of the skin and soft tissues;

m. The physics and application of lasers in plastic surgery; and

n. The science and application of injectable materials.

5.2 Each resident must document at program completion, a minimum of 900 major surgical procedures during the last 36 months of the program**.**

5.3 The final twelve months of the program must be spent performing the duties as a chief or co-chief resident in approved institutions, under supervision, demonstrating advanced-level responsibilities.

*Independent Program*

5.4 The independent program in plastic surgery is 36 months.

5.5 Residents entering the independent program must complete 36 months of concentrated plastic and reconstructive surgery education after successful completion of one of the following prerequisites:

a. Completion of three AOA-approved years of general surgery which includes an AOA-approved common surgery OGME-1R year (Reference Appendix Two);

b. Completion of an AOA-approved otolaryngology program;

c. Completion of an AOA-approved orthopedic surgery program; or

d. Completion of an AOA-approved neurological surgery program.

5.6 Thirty (30) months of the independent program must be completed at the primary or affiliated institution(s).

*Integrated Program*

5.7 The integrated program in plastic surgery is 72 months.

5.8 Residents entering the integrated program must complete 72 months of plastic and reconstructive surgery education which includes an AOA-approved common surgery OGME-1R year (Reference Appendix Two).

5.9 The final 36 months of the integrated program must be completed at the primary or affiliated institution(s). (Short courses of two weeks or less will not apply).

5.10 The program curriculum must meet or exceed the ACOS model curriculum and must include:

a. Training in the basic sciences with structured learning and clinical experience in musculoskeletal biomechanics, surgical physiology and anatomy, fluids and electrolytes, shock and resuscitation, burn therapy, wound healing, pathology, microbiology, immunology, hematology, nutrition, laser safety, micro lab, facial plating, and advanced rhinoplasty; and

b. No more than 6 months of the independent program may include subspecialty electives including anesthesiology, craniofacial surgery, urological surgery, laser techniques, orthopedic surgery, pediatric plastic surgery, surgical oncology, oral and maxillofacial surgery, oculo-plastic surgery, dermatology, plastic surgery research, aesthetic surgery and gender reassignment surgery.

**F. Surgical Critical Care**

5.1 The educational program in surgical critical care must be 12 months in length.

5.2 Eight months of the twelve-month program must be dedicated exclusively to the management of adult critically ill surgical patients in the clinical setting.

5.3 No more than four-months of the twelve-month program may be assigned outside the base or affiliated institutions.

5.4 Prior to appointment to the program, trainee must have completed at least three clinical years in an AOA approved residency program in one of the following areas: general surgery, anesthesiology, neurological surgery, obstetrics and gynecologic surgery, orthopedic surgery, otolaryngology, cardio-thoracic surgery, general vascular surgery or urology.

5.5 Fellows must have supervised training that will enable them to demonstrate competence in the following critical care skills:

a. Circulatory: performance of invasive and noninvasive monitoring techniques, and the use of vasoactive agents and management of hypotension and shock; application of trans-esophageal and transthoracic cardiac ultrasound and transvenous pacemakers, dysrhythmia diagnosis and treatment, and the management of cardiac assist devices;

b. Endocrine: performance of the diagnosis and management of acute endocrine disorders, including those of the pancreas, thyroid, adrenals, and pituitary;

c. Gastrointestinal: performance of utilization of gastrointestinal intubation and endoscopic techniques in the management of the critically-ill patient; and management of stomas, fistulas, and percutaneous catheter devices;

d. Hematologic: performance of assessment of coagulation status, and appropriate use of component therapy;

e. Infectious disease: performance of classification of infections and application of isolation techniques, pharmacokinetics, drug interactions, and management of antibiotic therapy during organ failure; nosocomial infections; and management of sepsis and septic shock;

f. Monitoring/bioengineering: performance of the use and calibration of transducers and other medical devices;

g. Neurological: performance of management of intracranial pressure and acute neurologic emergencies, including application of the use of intracranial pressure monitoring techniques and electroencephalography to evaluate cerebral

h. Nutritional: performance of the use of parenteral and enteral nutrition, and monitoring and assessing metabolism and nutrition;

i. Renal: performance of the evaluation of renal function; use of renal replacement therapies; management of hemodialysis, and management of electrolyte disorders and acid-base disturbances; and application of knowledge of the indications for and complications of hemodialysis; and

j. Respiratory: performance of airway management, including techniques of intubation, endoscopy, and tracheostomy, as well as ventilator management.

5.6 Fellows must demonstrate competence in the application of the following critical care skills:

a. Circulatory: transvenous pacemakers; dysrhythmia diagnosis and treatment; the management of cardiac assist devices; use of vasoactive agents; and the management of hypotension.

b. Neurological: the use of intracranial pressure monitoring techniques and electroencephalography to evaluate cerebral function.

c. Renal: knowledge of the indications for and complications of hemodialysis, and management of electrolyte disorders and acid-base disturbances.

d. Miscellaneous: performance of the use of special beds for specific injuries, and employment of skeletal traction and fixation devices.

5.7 Fellows must demonstrate knowledge of the following aspects of critical care, as they relate to the management of patients with hemodynamic instability, multiple system organ failure, and complex coexisting medical problems:

a. Biostatistics and experimental design;

b. Cardiorespiratory resuscitation;

c. Critical obstetric and gynecologic disorders;

d. Critical pediatric surgical conditions;

e. Ethical and legal aspects of surgical critical care;

f. Hematologic and coagulation disorders;

g. Inhalation and immersion injuries;

h. Metabolic, nutritional, and endocrine effects of critical illness;

i. Monitoring and medical instrumentation;

j. Pharmacokinetics and dynamics of drug metabolism and excretion in critical illness;

k. Physiology, pathophysiology, diagnosis, and therapy of disorders of the cardiovascular, respiratory, gastrointestinal, genitourinary, neurological, endocrine, musculoskeletal, and immune systems, as well as of infectious diseases;

l. Principles and techniques of administration and management; and

m. Trauma, thermal, electrical, and radiation injuries.

5.8 Fellows must show ability to administer a surgical critical care unit and appoint, educate, and supervise specialized personnel; establish policy and procedures for the unit; and coordinate the activities of the unit with other administrative units within the hospital.

**G. Urological Surgery**

5.1 The length of the urological surgery training program is 60 months which includes an AOA-approved common surgical OGME-1R year and 48 months of urological surgery.

5.2 No more than six months of the urological surgery program may be spent in non-affiliated training sites.

5.3 Forty-two (42) months of the urological surgery program must be completed at the base institution or affiliated site(s).

5.4 The final twelve months of the urological surgery program must be spent as chief resident in approved institutions, under supervision, and demonstrating advanced-level responsibilities in the specialty.

5.5 No more than two months of the final training year may be spent by the resident in electives not at the base institution**.**

5.6 The curriculum must include didactic instruction in the following core domains of: voiding dysfunction, female urology, reconstruction, urologic oncology, calculus disease, pediatric urology, and reproductive and sexual dysfunction.

5.7 Residents must demonstrate knowledge of the following curricular topics: bioethics, radiation safety, biostatistics, epidemiology, geriatrics, infectious disease, renovascular disease, renal transplantation, trauma, plastic surgery, and urologic oncology.

5.8 Residents must demonstrate competence in the following core techniques: endo-urology; minimally-invasive intra-abdominal and pelvic surgical techniques (including, laparoscopy and robotics); major flank and pelvic surgery; perineal and genital surgery; urologic imaging including fluoroscopy, interventional radiology and ultrasound; and microsurgery.

5.9 Each resident must document by program completion participation, an average of 175 major surgical procedures per year.

5.10 Each urological surgery resident must take annual urological surgery in-service

examinations.

5.11 Residents must take the basic science course offered by the AUA during the OGME-2 or OGME-3 year of training.

## SECTION VI: PROGRAM PERSONNEL AND RESOURCES

### Program Director

6.1 The program director or DME must submit any change in program director for approval with the ACOS RESC.

6.2 Qualifications of the program director must include:

a. requisite specialty expertise and documented educational and administrative experience acceptable to the ACOS RESC;

b. current certification in the specialty by the AOBS or appropriate allopathic boarding agency or specialty qualifications that are acceptable to the ACOS RESC;

c. current medical licensure and medical staff appointment(s); and

**Duties of the program director must include:**

6.3 Review a resident's in-service examination score results in consultation with the resident;

6.4 Approve a site director of each participating affiliate site who is accountable for resident education and who has major clinical responsibilities at that site**;**

6.5 Ensure that each site director is board certified or board eligible in their surgical specialty;

6.6 Prepare and submit all requested information from the ACOS RESC as required by the deadline(s) mandated by the ACOS RESC;

6.7 Provide for review and receive approval by sponsoring institution's GMEC/DME before submitting to the AOA/ACOS information to include, but not limited to:

a. all applications for AOA accreditation of new programs;

c. changes in resident complement;

d. major changes in program structure or length of training;

e. progress reports requested by the ACOS RESC;

f. responses to all proposed adverse actions;

g. requests for increases or any change to resident duty hours;

h. voluntary withdrawals of AOA-accredited programs;

i. requests for appeal of an adverse action;

j. appeal presentations to ACOS RESC; and

k. proposals to AOA for approval of innovative education approaches (pilot programs).

6.8 Obtain DME review and co-signature on all program information forms, as well as any

correspondence or document(s) submitted to the AOA that addresses:

a. Program citations; and

b. Substantive changes/requests for changes in the program that would have a significant impact, including financial, on the program or institution;

6.9 Ensure resident completion and submission of the resident annual reports to the ACOS (To include the annual resident report checklist for program directors);

6.10 Complete and submit the program director's annual evaluation of the program;

6.11 Is encouraged to attend the ACOS Osteopathic Surgical Educators' Seminar at least once every two years;

6.12 Maintain unrestricted licensure to practice medicine at the primary clinical site/base institution.

6.13 The program director has the sole responsibility and authority to promote a resident and designate the resident as program complete.

6.14 The out-going program director must provide a summative evaluation for each resident in the training program to the incoming or interim program director within thirty days

## Specialty Specific Requirements of the Program and Program Director

### General Surgery

6.15 Qualifications of the general surgery program director and the faculty:

a. The program director must be certified in general surgery by the AOA through the American Osteopathic Board of Surgery (AOBS) or by the American Board of Surgery (ABS).

b. The program faculty must include the program director and additionally, at least one board certified/board eligible (by the AOBS or ABS) general surgeon on staff for each OGME-5 resident**.**

c. At least one of the faculty must be ~~AOA~~ board certified or board eligible in general surgery

6.16 A General Surgery program must consist of at least one full-time faculty member in addition to the program director for each approved chief resident position.

### Cardiothoracic Surgery

6.17 Qualifications of the cardiothoracic surgery program director and faculty:

a. The cardiothoracic program director must be certified in cardiothoracic or cardiovascular surgery, by the AOA through the AOBS, or by the American Board of Thoracic Surgery.

b. The program faculty must include at least two cardiothoracic or cardiovascular surgeons, one of whom may be the program director.

c. At least one of the faculty must be AOA-certified in cardiothoracic or cardiovascular surgery.

**General Vascular Surgery**

6.18 Qualifications of the general vascular surgery program director

a. The program director must be certified in general vascular or cardiovascular surgery by the AOA through the AOBS or by an ABS recognized certifying board.

b. The program faculty must include at least two general vascular or cardiovascular surgeons, one of whom may be the program director.

**Neurological Surgery**

6.19 The program director must be certified in neurological surgery, by the AOA through the AOBS, or by the American Board of Neurological Surgery (ABNS).

6.20 There must be a minimum of three neurosurgery faculty, one of whom may be the program director. One faculty member must be AOA-certified or eligible in neurological surgery, the other faculty members must be at least board-eligible in neurological surgery by the AOBS or the ABNS.

6.21 At least three (3) of the neurological surgery faculty members must perform a minimum of 200 major neurological surgery procedures per year in the teaching institution.

**Plastic and Reconstructive Surgery**

6.22 The plastic and reconstructive surgery program director must be Board certified in plastic and reconstructive surgery by the AOA through the AOBS or by an ABMS recognized certifying board.

6.23 There must be a minimum of three faculty, one of whom may be the program director.

6.24 One faculty member must be AOA-certified or eligible in plastic and reconstructive surgery.

6.25 The other faculty members must be board-eligible (AOBS or ABMS recognized) in plastic and reconstructive surgery.

**Surgical Critical Care**

6.26 The program director's qualifications must include:

a. Certification in one of these specialties (general surgery, anesthesiology, neurological surgery, obstetrics and gynecologic surgery, orthopedic surgery, otolaryngology, cardio-thoracic surgery, general vascular surgery or urology) by the AOA through the AOBS or the American Board of Surgery (ABS);

b. Successful completion of an AOA or ACGME-approved program in surgical critical care medicine;

c. Certification in critical care by the AOBS or the American Board of Surgery (ABS); and

d. Active ongoing practice in surgical critical care as a major focus of their clinical practice.

6.27 The length of the program director's appointment must be no less than 24 months.

**Urological Surgery**

6.28 The program director must be certified in urological surgery by the AOA through the AOBS or by an ABMS recognized certifying board.

a. There must at least two (2) clinical urology faculty devoting time to supervision and the teaching of the residents and who are committed fully to the educational objectives of the residency program.

b. A minimum faculty to resident ratio of 1 to 2 in the total program is required. The program director shall be counted as one of the faculty when determining the faculty ratio**.**

c. The other faculty member(s) must be at least AOBS or ABMS recognized certifying board-eligible in urological surgery.

## B. FACULTY

**Faculty Must:**

6.29 Maintain current certification in the specialty or be board eligible by the AOA or appropriate allopathic boarding agency;

6.30 Must possess current medical licensure and medical staff appointment(s) at the training site(s);

6.31 Regularly participate in organized clinical discussions, rounds, journal clubs and conferences.

6.32 Members of the faculty, as a group, must also demonstrate scholarship by one or more of the following:

a. peer reviewed funding

b. publication of original research or review articles in peer-reviewed journals, or chapters in textbooks;

c. publication or presentation of case reports or clinical series at local, regional or national professional scientific society meetings; or

d. participation in national committees or educational organizations.

6.33 The non-physician faculty must have qualifications in their field and hold base and/or affiliate institutional appointments

## SECTION VII: RESIDENT APPOINTMENT REQUIREMENTS

7.1 The length of education for each resident must not exceed the required length of the program except for approved medical leaves or required remediation.

7.2 Before accepting a resident who is transferring from another program, the program director must obtain written or electronic verification of previous educational experiences and a summative competency-based performance evaluation of the transferring resident. The summative evaluation must address all AOA core competencies and include strengths and weaknesses of the resident, disciplinary actions, remediations, awards, presentations, and publications.

7.3 The program director must provide timely verification of residency education and summative performance evaluations for residents who leave the program prior to completion. The summative evaluation must address all AOA core competencies and include strengths and weaknesses of the resident, disciplinary actions, remediations, awards, presentations, and publications.

7.4 The presence of other learners (including not limited to, residents from others specialties, subspecialty fellows, PhD students, and nurse practitioners) in the program must not interfere with the appointed residents' education.

7.5 The curriculum must advance knowledge of the basic principles of research, including how research is conducted, evaluation, explained to patients and applied to patient care.

7.6 Residents must meet the applicable requirements for scholarly activity/scientific research for their specialty.

7.7 Each resident should attend at least one ACOS annual clinical assembly during their residency training.

7.8 The resident is required to maintain and accurately complete records of their educational activities in the required surgical and educational log format.

7.9 The surgical logs must be reviewed and verified semi-annually by the program director.

7.10 The surgical logs must document the fulfillment of the requirements of the program, describing the scope, volume, and variety and progressive responsibility by the resident.

7.11 The resident is required to complete and submit all required documentation to the ACOS RESC by the due date determined by the RESC. All forms must be reviewed and signed by the program director prior to submission to the ACOS.

7.12 The scientific research paper or other research project submitted for credit towards the annual resident report must be approved by the program director and adhere to *The ACOS Trainer's Evaluation Format for the Resident Original Scientific Research Paper.*

7.13 Residents must review and sign the Program Director's Annual Resident Evaluation Report for Surgery.

7.14 Residents must attend and document participation in at least 75% of all program mandated educational offerings

7.15 To achieve approval/program completion by the ACOS RESC, a resident must spend the final two years of residency training in the same program. (Resident transfers resulting from participation in a residency program that has been discontinued or

otherwise approved by the AOA are exempt from the continuity of training policy for the final two years of residency training)

## SECTION VIII: EVALUATION

### A. Institutional Evaluation

8.1 The program, with the support of the base institution and/or OPTI, must document and implement an ongoing evaluation process that focuses upon improving the quality of osteopathic surgical education provided to their residents.

### B. Program Evaluation

8.2 The program must document formal, systematic evaluation of the curriculum at least annually and submit an annual report to the RESC addressing elements found on the "Dashboard."

8.3 The program must monitor and track each of the following areas:

a. resident performance;

b. faculty development;

c. graduate performance; and

d. program quality.

i. Residents and faculty must have the opportunity to evaluate the program confidentially and in writing at least annually.

ii. The program must use the results of residents' assessments of the program together with other program evaluation results to improve the program.

8.4 If deficiencies are found, the program will prepare a written plan of action to document initiative to improve performance. The action plan should be reviewed and approved by the teaching faculty and documented in meeting minutes. Further, any deficiencies identified by the RESC in the review of the "Dashboard" must also be addressed with an action plan.

8.5 Programs must incorporate the self-study evaluation process as a permanent part of their operation.

8.6 The program director and the faculty must be peer evaluated annually with respect to their teaching abilities, commitment to the program, and scholarly activities.

### C. Faculty Evaluation

8.7 At least annually, the program must evaluate faculty performance as it relates to the educational program.

8.8 These evaluations must include a review of the faculty's clinical teaching abilities, commitment to the educational program, clinical knowledge, professionalism and scholarly activities.

8.9 This evaluation must include at least annual confidential evaluations by the residents.

## D. Program Director Evaluation

8.10 The program director will be evaluated annually by the residents and fellows of the program.

8.11 The program director will be evaluated annually by the Director of Medical Education of the sponsoring institution.

## E. Resident Evaluation

### Formative Evaluation

The program must:

8.12 Use multiple evaluators (e.g. faculty, peers, patients, self, and other professional staff); and

8.13 Document progressive resident performance improvement appropriate to educational level. This evaluation must include:

a. manual dexterity

b. the ability to develop and execute patient care plans

c. progressive patient care responsibilities

8.14 The program director, with faculty input, must complete written evaluations of resident performance at least semi-annually. This must include evaluations from all affiliated training sites and elective assignments.

8.15 The evaluation of resident performance must be accessible for review by the resident, in accordance with AOA and base institutional policies.

8.16 At least semi-annually the resident must review the operative log data with the program director to ensure the balanced progress towards achieving experience with a variety and complexity of procedures.

### Summative Evaluation

8.17 The AOA Core and specialty specific competencies must be used as one of the tools to ensure residents are able to practice professional activities without supervision upon completion of the program and in a progressive manner during training.

8.18 The program director must provide a summative evaluation for each resident upon completion of the program. The summative evaluation must address all AOA core competencies and include strengths and weaknesses of the resident, disciplinary actions, remediations, awards, presentations, and publications.

8.19 Completed evaluations must be signed by the program director and the resident.

8.20 Copies of the semi-annual evaluations must be filed, made available to the resident upon request, and submitted to the RESC as necessary or requested.

8.21 Residents requiring remediation or counseling must be evaluated quarterly and documented.

8.22 Residents shall be considered program complete only upon endorsement by the program director and approval by the ACOS/RESC and the AOA.

The evaluation must:

8.23 Become a part of resident's permanent record maintained by the institution, and must be accessible for review by the resident in accordance with institutional policy;

8.24 Document the resident's performance and capabilities during the final period of education; and

8.25 Verify the resident has demonstrated sufficient competence to enter practice without direct supervision.

# APPENDICES

## APPENDIX ONE: Definition of Disciplines and Scope of Specialties

### General Surgery

The goal of a surgical residency program is to prepare the resident to function as a qualified practitioner of surgery at the advanced level of performance expected of a board-certified specialist. The program must encompass both didactic instruction in the basic and clinical sciences of surgical diseases and conditions, as well as education in procedural skills and operative techniques. The educational process must lead to the acquisition of knowledge and technical skills, and the ability to integrate the acquired knowledge into the clinical situation and the development of surgical judgment.

### Cardio-Thoracic (CT) Surgery

Cardio-Thoracic (CT) Surgery encompasses the operative, perioperative, and critical care of patients with pathologic conditions within the chest. This includes the surgical care of coronary artery disease; diseases of the trachea, lungs, esophagus, and chest wall; abnormalities of the great vessels and heart valves; congenital anomalies of the chest and heart; tumors of the mediastinum; diseases of the diaphragm; and management of chest injuries.

### Vascular Surgery

Vascular Surgery is the surgical specialty involving diseases of the arterial, venous, and lymphatic circulatory systems, exclusive of those circulatory vessels intrinsic to the heart and intracranial vessels. Specialists in this discipline must demonstrate not only the knowledge, skills, and understanding of the medical science relative to the vascular system, but also the acquisition of mature technical skills and surgical judgment.

### Neurological Surgery

Neurological Surgery is a medical discipline and a surgical specialty that provides care for adult and pediatric patients in the treatment of pain or pathological processes that may modify the function or activity of the central nervous system (e.g. brain, hypophysis, and spinal cord), the peripheral nervous system, (e.g., cranial, spinal, and peripheral nerves), the autonomic nervous system, and the supporting structures of these systems (e.g., meninges, skull and skull base, and vertebral column) and their vascular supply (e.g., intracranial, extra-cranial, and spinal vasculature). Neurological Surgery training encompasses ~~both~~ non-operative management (e.g., prevention, diagnosis (including image interpretation), and treatments such as neuro-critical intensive care and rehabilitation and operative management with its associated image use and interpretation (e.g., endovascular surgery, functional and restorative surgery, stereotactic radiosurgery, and spinal fusion, including its instrumentation).

### Plastic and Reconstructive Surgery

Plastic surgery residency programs educate physicians in the resection, repair, replacement, and reconstruction of defects of form and function of the integument and its underlying anatomic systems, including the craniofacial structures, the oropharynx, the trunk, the extremities, the breast, and the perineum. This includes aesthetic (cosmetic) surgery of structures with undesirable form. Special knowledge and skill in the design and transfer of flaps, in the transplantation of tissues, and in the replantation of structures are vital to these ends, as is skill in excisional surgery, in management of complex wounds, and in the use of osteopathic manipulative techniques. Plastic

surgery residency education trains physicians broadly in the art and science of plastic and reconstructive surgery. These residency programs develop a competent and responsible plastic surgeon with high moral and ethical character, capable of functioning as an independent surgeon. A variety of educational plans will produce the desired result.

**Surgical Critical Care**

Surgical Critical Care is a subspecialty of surgery that manages complex surgical and medical problems in critically-ill surgical patients. Graduate educational programs in surgical critical care provide the educational, clinical, and administrative resources to allow fellows to develop advanced proficiency in the management of critically-ill surgical patients, to develop the qualifications necessary to supervise surgical critical care units, and to conduct scholarly activities in surgical critical care. The goal of a surgical critical care fellowship program is to prepare the fellow to function as a qualified practitioner at the advanced level of performance expected of a Board-certified subspecialist. The education of surgeons in the practice of surgical critical care encompasses didactic instruction in the basic and clinical sciences of surgical diseases and conditions, as well as education in procedural skills and techniques used in the intensive care settings. This educational process leads to the acquisition of an appropriate fund of knowledge and technical skills, the ability to integrate the acquired knowledge into the clinical situation, and the development of judgment.

**Urological Surgery**

Urology is the specialty that evaluates and treats patients with disorders of the genitourinary tract, including the adrenal gland. Specialists in this discipline must demonstrate knowledge of the basic and clinical sciences related to the normal and diseased genitourinary system as well as attendant skills in medical and surgical therapy. Residency programs must educate physicians in the prevention and treatment of genitourinary disease, including the diagnosis, medical and surgical management, and reconstruction of the genitourinary tract.

## APPENDIX TWO: Policy and Procedures

The Resident Evaluation and Standards Committee (RESC) of the American College of Osteopathic Surgeons (ACOS) is charged with the responsibility of maintaining the highest standards of training within the training programs of the Osteopathic surgeon. Accreditation serves as an indication of quality by establishing standards against which all surgical residency training programs can be measured. A high level of reliance is placed upon information, data, and statements provided to the RESC by a program. The integrity and honesty of a program are fundamental and critical to the process. A compromise of integrity is considered to be an extreme offense. If the RESC or AOA determine that a program has knowingly provided false or misleading information, the RESC and/or AOA will take any action that it believes is reasonable and appropriate including, but not limited to, denying any pending application or taking other action deemed appropriate. Accredited institutions and programs agree to, and must meet or exceed, the *AOA Basic Documents for Postdoctoral Training* and the AOA's and ACOS's *Basic Standards for Surgery and the Surgical Subspecialties* throughout their entire period of accreditation.

By applying for and receiving accreditation, a program accepts the obligation to demonstrate compliance with the Basic *Standards for Residency Training in Surgery and the Surgical Specialties.* A fundamental component required for this demonstration is self-study evaluation. Self-study evaluation is an assessment of the entire program, conducted by faculty and residents, as well as by the sponsoring institution and the OPTIs. The process should involve the entire organization. The self-evaluation process provides an opportunity for the staff and faculty of the program to examine itself and to draft findings and recommendations for its own action. Programs are directed by their OPTIs to conduct at least one self-study evaluation at the mid-point of their period of accreditation. Improvements within a program should be due primarily to its internal efforts rather than due to an on-site evaluation by an outside team. The process of self-evaluation is expected to be a significant and ongoing experience. Programs must incorporate the self-study evaluation as a permanent part of their ongoing quality improvement program/ evaluation process.

While the RESC employs its own fact-finding methods to determine a program's compliance with accrediting standards, such as the report from on-site evaluation and review of information provided by third parties, the burden rests with the program to establish that it is in compliance with all the standards of accreditation. Moreover, the RESC's deliberations and decisions are made with the assistance of the written record of an accreditation review. Programs do not appear before the RESC so the provided documentation must be complete and provide the most valid picture of the program possible. Accordingly, a program must supply the RESC with complete documentation of the program's compliance with all accrediting standards if it is to be granted and maintain accreditation. Further, a program must supply the RESC with all reports, requests for information and documentation in a timely manner and meet all published deadlines, i.e. annual reports.

### Standards of Accreditation

This document describes the accreditation process and sets forth the base of essentials (i.e., standards of best practice) against which a program examines and evaluates itself. Each program determines its own training objectives, keeping in mind, however, that such objectives must be appropriate for a postdoctoral surgery residency training program and in accordance with the ACOS's and AOA's Basic Standards. The standards and accreditation process emphasize educational quality by also focusing on outcomes. Accordingly, the RESC directs its focus on outcomes related to the Osteopathic Principles and Practice Core Competencies (OPP, Patient Care, Medical Knowledge, Practice-Based Learning and Achievement, Interpersonal and Communication Skills, Professionalism, and Systems-Based Practice), and behaviors achieved by residents as a direct result of participation in an ACOS/AOA approved surgical residency training program.

The primary purpose of the RESC is to establish and maintain high educational standards and ethical practices among its accredited/approved programs and ensure program compliance to these standards.

The RESC evaluates each year of a resident's training based upon the evaluation and recommendation of the program director. Each year of training must be approved by the RESC before a resident will be considered to have successfully completed a residency training program approved by the ACOS and AOA. Successful completion is a prerequisite for eligibility for certification by the AOA through the American Osteopathic Board of Surgery (AOBS).

## A. PROCEDURES FOR CONTINUING APPROVAL OF ESTABLISHED PROGRAMS

1. A continuing residency program shall be evaluated through an on-site inspection, conducted by an AOA-approved inspector

2. To better monitor the quality of surgical residency programs program directors are required to complete and submit the program director's annual evaluation of the program form by a date specified by the ACOS, usually June 30. (Program directors will be informed by ACOS when the annual reports and other reports are due.) The data from the form creates the dashboard/scorecard and provides the RESC assistance in identifying programs which may be in need of special attention. Those programs not meeting minimum requirements as determined by the review committee for quality will be reviewed and monitored. The guidelines for programs not meeting the quality indicators are as follows:
   1) Programs receiving a 2 or less from staff regarding administrative responsiveness which includes failure to meet deadlines published and disseminated by the RESC;
   2) Average in-service scores on specialty in-service exams approved by the RESC in the specialties of GS, URO, NS and any in-service exam approved by the RESC in the specialties of PRS, SCC, GVS or CT, which were in the bottom 20% of those programs participating in the exams;
   3) Programs with <65% pass rate from certification boards;
   4) Programs with 2 or more transfers in or out of the program;
   5) Questionable numbers on OpLogs (GS < 150 >400) (URO <150 >600) (CT <125 >300) (PRS <200 >600) (NS <150 >550) (GVS <150 >400);
   6) Programs not advancing residents or who have residents in remediation programs; or
   7) Programs whose program directors receive a score of 2 or less based on resident evaluations.

2. ACOS RESC recommendations for continuing program approval will specify the number of years (1 0r 5; and for new programs after receiving their first full site visit after accepting residents, a focused site visit will be requested prior to the first resident completing the program, usually within 3 years) before another site visit is necessary. All recommendations from the RESC are forwarded to the AOA PTRC. The RESC adheres to the following criteria for continuing approval recommendations to the AOA PTRC:

   a. Approval with re-evaluation in five (5) years: The program attains a score of at least 95% on its program review Crosswalk.

b. Approval with re-evaluation in four (4) years: The program attains a score of 90% - 94% on the program review Crosswalk.

c. Approval with re-evaluation in three (3) years: The program attains a score of at least 85% - 89% on the program review Crosswalk. (Programs which have a break in training of more than one year will receive a focused site visit at the discretion of the RESC within six (6) months of accepting a resident and not be awarded more than three (3) years approval.)

d. Approval with re-evaluation in two (2) years: The program attains a score of at least 71% - 84% on the program review Crosswalk.

e. Approval with re-evaluation in one (1) year: The program has major deficiencies central to the quality of resident education and attains a score of less than 71% (70% or below) on the program review Crosswalk. The program is placed on probationary status without the ability to recruit and requires immediate corrective action. (See Critical Deficiency below)

f. Critical Deficiency – A "Critical Deficiency" is defined as a standard of such import as to automatically trigger a warning or probation status review by a Specialty College or the AOA PTRC when identified as a result of a site inspection. Any single critical deficiency requires urgent, if not immediate correction. Procedurally, after the completion of the inspection, a single critical deficiency would trigger a "warning or probation" status review by the specialty college and PTRC. The PTRC would then determine appropriate action. If found deficient, action inclusive of warning or probation, documented correction, and notification of trainees could occur.

The RESC has identified the following standards as "Critical":

Section IV.B Resources
- Standard 4.3

Section V. Program Requirements
- V.A. General Surgery
  - Standard 5.6
  - Standard 5.18
  - Standard 5.19
- V.B. Cardio-Thoracic
  - Standard 5.11
- V.D. Neurological Surgery
  - Standard 5.7
  - Standard 5.8
- V.G. Urological Surgery
  - Standard 5.9

Section VI: Program Personnel and Resources
- VI. A. Program Director
  - Standard 6.2
  - Standard 6.6
  - Standard 6.14
  - Standard 6.15
- General Surgery
  - Standard 6.17

g. Approval with reinspection in no more than three (3) years will be granted to a program seeking approval for the first time. This policy applies only to new programs following its initial one year of approval to accept residents and must be completed prior to any resident complete status.

h. Approval with reevaluation of no more than three (3) years will be recommended for programs previously placed and currently on probationary status.

A major deficiency fails to address one of the following standards and is annotated in the Standards and Crosswalk:

1. Qualified active program director and sufficient faculty who teach, evaluate, and support the program
2. Institution's support to run the program effectively
3. Sufficient operative experience for the residents that are enrolled
4. An effective planned curriculum that covers the scope of the specialty
5. An effective and comprehensive evaluation system for the residents and the faculty
6. An internal evaluation system for the program that focuses on improvement
7. Administration of the appropriate in-service exam for that subspecialty, i.e. ACOS general surgery in-service exam for general surgery, AUA exam for urology, ACOS neurological surgery discipline exam for neurological surgery, etc., and any other in-service exams receiving prior approval by the RESC.
8. A good balance of service and education – i.e. good education and good clinical experience
9. Evidence of osteopathic application

Deficiencies considered minor are administrative in nature and unrelated to the basic structure and quality of the training.

**NOTE:** In deliberation of deficiencies, the RESC will determine the significance of deficiencies in relation to the program.

3. Specialty affiliate may recommend re-inspection of a program at any time.
4. Deferral of approval may be conferred for lack of sufficient information that precludes an informed and reasonable decision. When approval is deferred, the program retains its current status until a final decision is conferred at the next meeting.
5. The PTRC shall take final action on all continuing postdoctoral programs. Such action shall be based on the recommendation of the ACOS/RESC.

**B. Interim program directors** may be approved by the ACOS RESC for a maximum of three (3) years. Failure of the Program to fill the program director vacancy may lead to a recommendation by the RESC for a site visit. An individual can be appointed as an interim program director of a program in transition when the individual is in compliance with the requirements in Section VI.

C. **Residency Transfers:** Residents who transfer from one surgical training program to another surgical training program during an OGME training year will only be able to seek approval of their training after submission of the following documentation to the RESC: a copy of a mutual agreement to be released from the residency contract; a copy of a mutual agreement for acceptance into the new residency program; resident's surgical logs documenting scope, volume and variety from the former residency program and the new program; evaluations of the resident from the former program director and the new program director for the training completed in each program; written justification for the transfer, and a written letter evaluating the level of training of the resident by the program director accepting the resident into the new program, if applicable. The combined training must be equivalent to and meet the same standards as an OGME year of training in a single program. ACOS files should include the documentation of this transfer.

## APPENDIX THREE: Resident Annual Report

### A. COMPONENTS OF THE ANNUAL RESIDENT REPORT

A.1 Annual resident reports are required for each training year and are reviewed by the RESC. Residents must submit an annual report within thirty (30) days of completion of each contract year. Residents not submitting their appropriate forms (Resident's Annual Evaluation Report of the Program Director, original scholarly activity/research paper, segregated totals (on AOA/ACOS form) within 60 days will be required to pay a late fee accrued annually before their training will be approved. The late fee applies to residents seeking AOA or ACGME training approval and is determined by the RESC and the ACOS Board of Governors. The annual resident report consists of the following documents:

A.1.a. ***Program Director's Annual Resident Evaluation Report for Surgery.*** This AOA/ACOS report form is completed by the program director. The program director must include a narrative progress report on the resident's competency in each year of training. The narrative must summarize the resident's progress in achieving the core competencies and provide a description and an evaluation of the resident's scholarly activity. Both the resident signature and the program director signature are required to document that the resident has been counseled concerning progress. Quarterly evaluations must be submitted with this annual report form if the promotion section of the form includes a recommendation from the program director that the training year not receive approval and/or that the resident not be advanced to the next level of training.

A.1.b ***Resident's Annual Evaluation Report of the Program Director***. This AOA/ACOS report form is completed by the resident and is held in strict confidence by the RESC. The RESC utilizes this form to evaluate the program director. ACOS staff notifies the RESC when a trend of negative evaluations develops for a particular residency program.

A.1.c ***Resident's Annual Report for Surgery*** (segregated totals). This AOA/ACOS form is completed by the resident and signed by both the resident and the program director to verify that the information reported is accurate. This report form documents the resident's surgical experience for the residency year. There is a different report form for each surgical specialty reviewed by the RESC. Segregated totals must reflect adequate scope, volume, and variety of procedures as defined by the ACOS/AOA standards. Residents in General Surgery, Plastic and Reconstructive Surgery, Neurological Surgery, Urological Surgery, and General Vascular Surgery must utilize the ACOS electronic data collection/log system to document and submit log data for the annual resident report.

A.1.d ***Scholarly Activity*** Resident will provide a narrative explaining the scholarly activity and documentation as necessary**.** (Section V, Appendix Three.)

A.2. Program directors will complete and submit the Annual Resident Report Checklist for Program Directors to the ACOS with the Residents Annual Report.

## APPENDIX FOUR: Guidelines for the Resident Scholarly Activity and Scientific Research Paper

**Scholarly Project**

Each resident will be expected to do a scholarly project of their choice annually in one of the following four areas. Before the resident begins the project the program director must approve the resident's project. These four areas are only general guidelines to allow for creativity. Examples are listed in each area. Residents will be expected to attend sessions for review and evaluation of their projects with their program directors which should include a discussion of study design techniques and analysis. It is recommended that reviews be done on at least a quarterly basis. It is imperative that written documentation of all aspects of the resident's scholarly projects be maintained in the resident files. Program directors need to be kept informed of the status of the resident's projects in order for a narrative description and evaluation of the scholarly activity to be included in the Program Director's Annual Resident Evaluation Report for Surgery.

**1. Clinical Research**

Examples include, but are not limited to, an original scientific paper, poster session at the ACA, literature review, case study or a new surgical procedure report

***Scientific Research Paper***

The length of the paper should be at least 1500 words, double-spaced, paginated with references required for all material derived from the work of others. It should be in proper format. An original scientific paper can be done over several years or throughout the entire residency as long as goals are met annually and the paper is completed before resident completes the training. (See current guidelines.) All other papers can only be submitted to fulfill the requirement for one year.

***Poster Sessions***

Poster Sessions are an in-depth exchange of information on a one-to-one basis, providing a medium for unusual or multiple clinical case presentations prepared with photographs, laboratory and/or radiological information. Documentation of this activity requires a photograph of the poster session and written statement that the poster was exhibited at the ACA by the resident who prepared the poster. A resident's folder for this activity should also include a written description of at least 250 words of the objective, methods, and summary of outcomes of the clinical case presented.

**2. Community-Based Effort**

***Quality Improvement Programs***

This may come in the form of a community-based quality improvement program. Residents may select a specific health improvement or disease prevention issue or need within a community. The resident must identify a population of interest within a community, summarize the problem and the population, review the current literature, perform a needs assessment, and design, implement, and evaluate an intervention to address the issue or need.

***Community Education***

An example of Community Education would be, but not be limited to, a well-planned lecture to a locally recognized community group or a presentation at a national level (e.g. ACA).

***Community Service***

An example of Community Service might be, but not be limited to, implementing a program and subsequently delivering medical care to an under-served or impoverished area or population. Medical mission trips would fall into this category.

Written documentation of the resident's community based efforts will be available and kept in the resident's file.

**3. Medical Education Quality Initiative**

Improvements in medical education have led to more effective training processes and programs for medical students, interns and residents. Residents who wish to pursue medical education research projects must identify a process or program need, review the current literature, perform a needs

assessment, and design, implement, and evaluate the proposed improvement project. An example of a Medical Education Quality Initiative would include, but not be limited to, preparing three lectures to be given in three different mediums to the house staff. Subsequently evaluating the resident's effectiveness as a lecturer and testing the knowledge retained by the attendees.

**4. Practice Improvement Outcome**

Practice Improvement Outcomes may include, but not be limited to, designing and completing a project for presentation at surgical grand rounds focusing on the root-cause analysis of a systems error occurring in the management of the patient.

Another example might be for the resident to review a published clinical practice guideline using an evidence-based approach and audit office charts to compare treatment, screening or diagnostic testing of patients with the recommendations of the guideline.

**Documentation**

Residents will provide ACOA a narrative description of the scholarly activity (research paper, poster, community education/service, etc.) with documentation as necessary. This narrative should be more detailed than the narrative provided in the Program Directors Annual Evaluation of the Resident and be signed by the program director. Scholarly activity will be filed and subject to review by site visitors during their review of a program for continuing approval.

**Scientific Research Paper**

**General Vascular Surgery, Plastic and Reconstructive Surgery, Surgical Critical Care, and Cardiothoracic Surgery**

The ACOS Residency Evaluation and Standards Committee (RESC) requires all residents to demonstrate the ability to synthesize and apply medical research data in their training. Writing an original scientific research paper is one method to evidence this training. Through this process, the resident may improve cognitive skills, and learn to manage and communicate medical information more effectively.

After completing the OGME 5 program in general surgery, a program director may require one of the following to be completed for the subsequent training years in General Vascular Surgery, Plastic and Reconstructive Surgery, Surgical Critical Care, and Cardiothoracic Surgery:

- Technique description
- Essay suitable for publication in a referenced journal
- Symposium presentation
- Poster presentation
- Original research project
    - Retrospective study
    - Prospective study

The scholarly activity must be approved by the program director and a narrative of the activity must be completed and submitted with the resident's evaluation of the program/program director and must relate to the resident's specialty (general vascular surgery or surgical critical care, respectively). Any document(s) submitted for approval must meet the criteria outlined in *The ACOS Trainer's Evaluation Format for the Resident Scientific Research Paper*.

Only one resident may receive credit for a paper or poster session submitted for the research project. (Reference Appendices Three and Four.)

## APPENDIX FIVE: General Guidelines for Osteopathic Medical Core Competencies BOT 7-2010, Effective 7-2011

**Core competencies integrated within the context of osteopathic principles and practice (OPP):** Osteopathic medicine defines itself in light of its osteopathic principles and practice. This philosophical and practical approach to patient care is the foundation upon which every one of the following enumerated osteopathic medical competencies is based and must be demonstrated to be integrated throughout the curriculum. Osteopathic principles and practice is the essential foundation to each and every aspect of the evaluation, diagnosis and care of our patients.

***Competency 1: Osteopathic Philosophy, Principles and Manipulative Treatment:*** Residents are expected to demonstrate and apply knowledge of accepted standards in OPP/OMT **appropriate to their specialty**. The educational goal is to train a skilled and competent osteopathic practitioner who remains dedicated to life-long learning and to practice habits in osteopathic philosophy and manipulative medicine. This competency is not to be evaluated separately, but its teaching and evaluation in the training program shall occur through Competencies 2-7 into which this competency has been fully integrated.

***Competency 2: Medical Knowledge and Its Application Into Osteopathic Medical Practice:*** Residents must demonstrate and apply integrative knowledge of accepted standards of clinical medicine and OPP in their respective osteopathic specialty area, remain current with new developments in medicine, and participate in life-long learning activities, including research.

**C2 Required Element #1:** This resident demonstrated competency in the understanding and application of clinical medicine to osteopathic patient care.

**The Resident:**

1. Completed COMLEX Part III and/or an In-Service Examination this year.
2. Demonstrated improved clinical decision-making and problem-solving abilities.
3. Attended seminars, CME programs, Grand Rounds, or Lectures.
4. Participated in a directed readings program and/or journal club
5. Completed OPP Competencies which may include but not be limited to the following:
    a. Performing critical appraisals of medical literature related to OMT and/or OPP.
    b. Completing OMT and/or OPP computer-based educational modules,
    c. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    d. Demonstrating the treatment of people rather than symptoms.
    e. Demonstrating understanding of somato-visceral relationships and the role of the musculoskeletal system in disease.
    f. Participating in AOA Clinical Assessment Program.

**C2 Required Element #2:** This resident must know and apply the foundations of clinical and behavioral medicine appropriate to his/her discipline with application of all appropriate osteopathic correlations.

**The Resident:**

1. Participated in research activities that allowed the critical evaluation of current medical and/or osteopathic information and scientific evidence.
2. Developed as a medical educator by giving presentations before peers and faculty, and participated in the instruction of osteopathic medical students.
3. Met specified standards of performance on medical procedures, indications and interpretations.
4. Participated in programmatic education on Life Long Learning.

5. Participated in lectures and workshops on behavioral psychosocial multi-cultural issues in his/her medical specialty, as appropriate.
6. Completed OPP Competencies which may include but not be limited to the following:
    a. Participating in OMT and/or OPP training at hospital and ambulatory sites.
    b. Performing critical appraisals of medical literature related to OMT and/or OPP.
    c. Participating in activities that provided osteopathic educational programs at the student and intern levels including osteopathic correlations.
    d. Demonstrating the treatment of people rather than symptoms.
    e. Participating in AOA Clinical Assessment Program

***Competency 3: Osteopathic Patient Care:*** Osteopathic residents must demonstrate the ability to effectively treat patients, provide medical care that incorporates the osteopathic philosophy, patient empathy, awareness of behavioral issues, the incorporation of preventive medicine, and health promotion

**C3 Required Element #1:** Gathered accurate, essential information from all sources, including medical interviews, osteopathic physical and structural examinations as indicated, medical records, diagnostic/therapeutic plans, and treatments.

**The Resident:**

1. Performed effective medical interviewing techniques.
2. Developed effective patient management plans.
3. Demonstrated the ability to request and sequence diagnostic tests and consultative services.
4. Demonstrated a caring attitude that is mindful of cultural sensitivities, patient apprehensions, and accuracy of information.
5. Conducted effective bedside rounds.
6. Demonstrative effective ability in the performance of an Osteopathic SOAP Note.
7. Completed OPP Competencies which may include but not be limited to the following:
    a. Performing of OMT through the assessment of his/her diagnostic skills, medical knowledge, and problem-solving abilities.
    b. Assuming increased responsibility for the incorporation of osteopathic concepts in his/her patient management.
    c. Demonstrating understanding of somato-visceral relationships and the role of the musculoskeletal system in disease.
    d. Demonstrating listening skills in interaction with patients.
    e. Utilizing caring, compassionate behavior and touch with patients.
    f. Participating in AOA Clinical Assessment Program.

**C3 Required Element #2:** This resident validated competency in the performance of diagnosis, osteopathic and other treatment and procedures appropriate to his/her medical specialty.

**The Resident:**

1. Completed a program for instruction and credentialing to validate competency in the performance of medical procedures, where appropriate.
2. Provided patient instructions on potential complications and known risks (informed consent).
3. Participated in beside teaching rounds.
4. Completed OPP Competencies which may include but not be limited to the following:
    a. Performing OMT through the assessment of his/her diagnostic skills, medical knowledge, and problem-solving abilities.
    b. Participating in activities that provided educational programs at the osteopathic student and intern levels including osteopathic correlations.

c. Demonstrating listening skills in interaction with patients.
d. Participating in AOA Clinical Assessment Program.

**C3 Required Element #3:** This resident provided health care services consistent with osteopathic philosophy, including preventative medicine and health promotion based on current scientific evidence.

**The Resident:**

1. Demonstrated effective skills in counseling patients and their families on health promotion and lifestyle activities related to good health maintenance.
2. Demonstrated effective skills in referring patients to non-for-profit and community service organizations that support health promotion and behavioral modification programs.
3. Demonstrated the ability to work with professionals from varied disciplines as a team to provide effective osteopathic medical care to patients that address their diverse healthcare needs.
4. Participated effectively in beside teaching rounds
5. Demonstrated OPP Competencies which may include but not be limited to the following:
    a. Performing a critical appraisal of medical literature related to OMT and/or OPP.
    b. Assuming increased responsibility for the incorporation of osteopathic concepts in his/her patient management.
    c. Utilizing caring, compassionate behavior and touch with patients.
    d. Demonstrating the treatment of people rather than symptoms.
    e. Demonstrating listening skills in interaction with patients.
    f. Participating in AOA Clinical Assessment Program.

***Competency 4: Interpersonal and Communication Skills in Osteopathic Medical Practice:*** Residents are expected to demonstrate interpersonal and communication skills that enable them to establish and maintain professional relationships with patients, families, and other members of health care teams.

**C4 Required Element #1:** This resident demonstrated effectiveness in developing appropriate doctor-patient relationships.

**The Resident:**

1. Demonstrated effective patient interviewing techniques.
2. Demonstrated ability in assessing the health of non-English-speaking, deaf, and non-communicative patients.
3. Involved patients and families in decision-making.
4. Used appropriate verbal and non-verbal skills (including touch) when communicating with patients, families, and faculty.
5. Demonstrated an understanding of cultural, gender and religious issues and sensitivities in the doctor-patient relationship.
6. Participated in videos, workshops, bedside/clinic/office teaching about interpersonal communications and osteopathic skills
7. Demonstrated OPP Competencies which may include but not be limited to any of the following:
    a. Demonstrating the treatment of people rather than symptoms.
    b. Demonstrating knowledge of and behavior in accordance with the Osteopathic Oath and AOA Code of Ethics.
    c. Demonstrating listening skills in interaction with patients.

**C4 Required Element #2:** This resident exhibited effective listening, written and oral communication skills in professional interactions with patients, families and other health

professionals.

**The Resident:**

1. Communicated medical problems and patient options at the appropriate level of understanding.
2. Maintained comprehensive, timely, and legible medical records.
3. Demonstrated respectful interactions with health practitioners, patients, and families of patients.
4. Elicited medical information effectively.
5. Demonstrated an understanding of resources available to physicians to assist with appropriate assessment of communication-impaired patients.
6. Worked effectively with others as a member or leader of a healthcare team.
7. Participated in workshops/videos, bedside/clinic/office teaching on effective oral/written communication skills.
8. Demonstrated OPP Competencies which may include but not be limited to any of the following:
    a. Utilizing caring, compassionate behavior and touch with patients.
    b. Demonstrating listening skills in interaction with patients.

***Competency 5: Professionalism in Osteopathic Medical Practice*:** Residents are expected to uphold the Osteopathic Oath in the conduct of their professional activities that promote advocacy of patient welfare, adherence to ethical principles, collaboration with health professionals, life-long learning, and sensitivity to a diverse patient population. Residents should be cognizant of their own physical and mental health in order to care effectively for patients.

**C5 Required Element #1:** This resident demonstrated respect for his/her patients and families and advocated for the primacy of his/her patient's welfare and autonomy.

1. Presented an honest representation of a patient's medical status and the implications of informed consent to medical treatment plans.
2. Maintained patient's confidentiality and demonstrated proper fulfillment of the osteopathic physician's role in the doctor-patient relationship.
3. Maintained appropriate and non-exploitive relationship with his/her patients.
4. Informed patients accurately of the risks associated with medical research projects, the potential consequences of treatment plans, and the realities of medical errors in medicine.
5. Treated the terminally ill with compassion in the management of pain, palliative care, appropriate touch and preparation for death.
6. Participated in course/program (compliance and end-of-life), workshops, lectures, bedside, and clinic/office teaching.
7. Participated in mentor/mentee sessions on professionalism, ethics, and cultural diversity
8. Demonstrated OPP Competencies which may include but not be limited to any of the following:
    a. Completing OMT computer educational modules.
    b. Assuming increased responsibility for the incorporation of osteopathic concepts in his/her patient management.
    c. Participating in activities that provided educational programs at the osteopathic student and intern levels including osteopathic correlations.
    d. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    e. Utilizing caring, compassionate behavior and touch with patients.
    f. Demonstrating knowledge of and behavior in accordance with the Osteopathic Oath

and AOA Code of Ethics.

**C5 Required Element #2:** This resident adhered to ethical principles in the practice of osteopathic medicine.

**The Resident:**

1. Demonstrated an increased understanding of conflicts of interest inherent in medicine and the appropriate responses to societal, community, and healthcare industry pressures.
2. Used limited medical resources effectively and avoided the utilization of unnecessary tests and procedures.
3. Recognized the inherent vulnerability and trust accorded by patients to physicians and upheld the highest moral principles that avoid exploitation for sexual, financial, or other private gain.
4. Pursued life-long learning goals in medicine, humanism, and osteopathic ethics.
5. Gained insight into the understanding of patient concerns and the proper relationship with the medical industry.
6. Participated in workshops, lectures, bedside, and clinic/office teaching.
7. Participated in a mentor/mentee program on professionalism.
8. Demonstrated OPP Competencies by participating in activities and educational programs at the osteopathic student and intern levels and osteopathic correlations as appropriate.

**C5 Required Element #3:** This resident demonstrated awareness and proper attention to issues of culture, religion, age, gender, sexual orientation, and mental and physical disabilities.

**The Resident:**

1. Became more knowledgeable and more responsive to the special needs and cultural origins of patients.
2. Advocated for continuous quality of care for all patients.
3. Prevented the discrimination of patients based on defined characteristics.
4. Demonstrated an increased understanding of the legal obligations of physicians in the care of patients.
5. Attended lectures/workshops on multicultural medicine.
6. Modeled competency to other residents and house staff.
7. Demonstrated OPP Competencies which may include but not be limited to any of the following:
    a. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    b. Utilizing caring, compassionate behavior and touch with patients.
    c. Demonstrating the treatment of people rather than symptoms.
    d. Demonstrating listening skills in interaction with patients.

**C5 Required Element #4:** The resident demonstrated awareness of one's own mental and physical health.

**The Resident:**

1. Demonstrated self-adherence to preventive care required of health professionals.
2. Had established some form of routine physical activity.

***Competency 6: Osteopathic Medical Practice-Based Learning and Improvement:*** Residents must demonstrate the ability to critically evaluate their methods of clinical practice, integrate

evidence-based traditional and osteopathic medical principles into patient care, show an understanding of research methods, and improve patient care practices.

**C6 Required Element #1:** This resident treated patients in a manner consistent with the most up-to-date information on diagnostic and therapeutic effectiveness (traditional and osteopathic).

**The Resident:**

1. Used reliable and current information in diagnosis and treatment.
2. Effectively used the medical library and electronically mediated resources to discover pertinent medical information.
3. Demonstrated the ability to extract and apply evidence from scientific studies to patient care.
4. Sought feedback on his/her presentations and reports.
5. Participated in evidence-based medicine Journal Clubs.
6. Demonstrated OPP Competencies which may include but not be limited to the following:
    a. Performing a critical appraisal of medical literature related to OMT and/or OPP.
    b. Meeting performance standards of OPP through the assessment of his/her diagnostic skills, medical knowledge, and problem-solving abilities.
    c. Completing OPP computer-based educational modules
    d. Participating in activities that provided educational programs at the osteopathic student and intern levels, including osteopathic correlations as indicated.
    e. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    f. Completing OPP computer teaching modules
    g. Demonstrating the treatment of people rather than symptoms.
    h. Demonstrating understanding of somato-visceral relationships and the role of the musculoskeletal system in disease.
    i. Participating in AOA Clinical Assessment Program.

**C6 Required Element #2:** This resident performed self-evaluations of clinical practice patterns and practice-based improvement activities using a systematic methodology.

**The Resident:**

1. Understood and participated in performance improvement/quality assurance activities at the hospital and ambulatory sites.
2. Applied the principles of evidence-based medicine in the diagnosis and treatment of patients (traditional and osteopathic).
3. Compared/studied the effectiveness of his/her practice patterns against the results obtained with other population groups in terms of effectiveness and outcomes.
4. Demonstrated OPP Competencies which may include but not be limited to the following:
    a. Performing a critical appraisal of medical literature related to OPP.
    b. Participating in activities that provided educational programs at the osteopathic student and intern levels, including osteopathic correlations as indicated.
    c. Participating in CME programs provided by COMS, the AAO, and the osteopathic specialty colleges.
    d. Completing OMT and/or OPP computer-based teaching modules
    e. Demonstrating knowledge of and behavior in accordance with the Osteopathic Oath and AOA Code of Ethics.
    f. Participating in AOA Clinical Assessment Program.

**C6 Required Element #3:** This resident understood research methods, medical informatics, and the application of technology as applied to medicine.

**The Resident:**

1. Participated in research activities as required by his/her respective osteopathic specialty colleges.
2. Demonstrated computer literacy, information retrieval skills, and an understanding of computer technology that applies to patient care and hospital systems.
3. Applied study designs and statistical methods to the appraisal of clinical studies.
4. Participated in Journal Clubs and evidence-based medicine programs.
5. Sought feedback on his/her presentations and reports.
6. Provided effective and thoughtful feedback to others on their presentations and conclusions.
7. Demonstrate OPP Competencies which may include but not be limited to any of the following:
    a. Performing a critical appraisal of medical literature related to OPP.
    b. Completing OMT and/or OPP computer educational modules
    c. Participating in activities that provided educational programs at the osteopathic student and intern levels, including osteopathic correlations as indicated.
    d. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    e. Participating in AOA Clinical Assessment Program.

***Competency 7: System-Based Osteopathic Medical Practice*:** Residents are expected to demonstrate an understanding of health care delivery systems, provide effective and qualitative osteopathic patient care within the system, and practice cost-effective medicine.

**C7 Required Element #1:** This resident understands national and local health care delivery systems and medical societies and how they affect patient care, professional practice and relate to advocacy.

**The Resident:**

1. Attended instruction in matters of health policy and structure.
2. Demonstrated an increased understanding of business applications in osteopathic medical practice.
3. Demonstrated operational knowledge of health care organizations, and state and federal programs.
4. Functioned as a member of the health care team in the hospital, ambulatory clinic and community.
5. Attended guest lectures/seminars with policy makers.
6. Attended hospital utilization review, quality and other administrative and multi-disciplinary meetings
7. Demonstrated OPP Competencies which may include but not be limited to any of the following:
    a. Performing a critical appraisal of medical literature related to OMT and/or OPP.
    b. Participating in activities that provided educational programs at the osteopathic student and intern levels, including osteopathic correlations as indicated.
    c. Participating in CME programs provided by COMs, the AAO, and the osteopathic specialty colleges.
    d. Completing OMT and/or OPP computer-based teaching modules
    e. Participating in AOA Clinical Assessment Program.

**C7 Required Element #2:** This resident advocated for quality health care on behalf of his/her patients and assisted them in their interactions with the complexities of the medical system

1. Identified and used local medical resources available to patients for treatment and referral.
2. Participated in advocacy activities that enhance the quality of care provided to patients.
3. Practiced clinical decision-making in the context of cost, allocation of resources, and outcomes.
4. Demonstrate OPP Competencies which may include but not be limited to any of the following:
    a. Assuming increased responsibility for the incorporation of osteopathic concepts in his/her patient management.
    b. Participating in AOA Clinical Assessment Program.

## ACOS GLOSSARY and ACRONYMS

### GLOSSARY

**ACOS model curricula:** These are updated and kept up to date on a regular basis by the ACOS. The specialty-specific curricula can be found and are available for review at the ACOS website.

**Affiliation**: An approved healthcare facility that provides a required educational experience for resident training. An institutional agreement is required for all affiliations.

**Affiliated Training Site**: Any hospital or other medical facility providing clinical experiences in a residency program.

**Approved-Program/Institution**: The program has been approved by the AOA (includes primary training institution and affiliations).

**Board eligibility**: A physician who has successfully completed an approved educational program and who has been found eligible for the certification process, as a time-limited designation.

**Chief resident**: A resident who is in the final year of training and who has been assigned senior responsibility/ies.

**Compliance:** A term that connotes a program that has demonstrated conformance with published standards in the AOA/ACOS basic standards.

**Critical Deficiency** – A standard of such import as to automatically trigger a warning, or probation status, review by the Specialty College Review Committee (RESC) or the AOA PTRC when identified as an actual deficiency as a result of a site inspection. Any single critical deficiency requires urgent, if not immediate correction. Procedurally, after the completion of the inspection, a single critical deficiency would trigger a "warning or probation" status review by the specialty college (RESC) and PTRC.

**Curriculum**: The sum total of learning activities for a subject or discipline which should include the cognitive, psychomotor, and affective components; recommended learning activities for the student; goals and objectives; measurement parameters; and recommended educational resources.

**Faculty**: Physicians and other healthcare professionals who provide didactic or clinical education for resident training.

**Full time or FTE**: A term used to describe the totality of faculty commitment to resident training and educational activities.

**Program Director**: The physician who is responsible for the administration of a residency program.

**Osteopathic institution:** A college of osteopathic medicine or an osteopathic hospital.

**Primary training institution**: The primary clinical training site responsible for, and providing the majority of, required clinical experience for an approved training program.

**Sponsoring institution**: The legal entity responsible for the support and conduct of training

programs, i.e., generally defined as a College of Osteopathic Medicine, an AOA-approved hospital, or a consortium of healthcare facilities.

**Major/Minor surgical cases:** These are defined in the specialty specific integrated totals reports and/or by the OPLOG system of the ACGME (or currently approved surgical logging system).

## ACRONYMS

| | |
|---|---|
| **ACA** | [ACOS] Annual Clinical Assembly |
| **ACS** | American College of Surgeons |
| **AOA** | American Osteopathic Association |
| **AOBS** | American Osteopathic Board of Surgery |
| **ACOS** | American College of Osteopathic Surgeons (ACOS), |
| **ACGME** | Accreditation Council for Graduate Medical Education |
| **ABS** | American Board of Surgery |
| **BOE** | Bureau of Osteopathic Education of the AOA |
| **COPT** | Council on Postdoctoral Training of the AOA |
| **DIO** | Designated Institutional Official |
| **DME** | Director of Medical Education |
| **PTRC** | Program and Trainee Review Council of the AOA |
| **OPTI** | Osteopathic Postdoctoral Training Institution |
| **RESC** | Residency Evaluation and Standards Committee of the ACOS |